

# KAHO'OLAWE

KO HEMA LAMALAMA | Newsletter of the Kaho'olawe Island Reserve Commission | Summer 2021



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Welcome to *Ko Hema Lamalama*, the newsletter of the Kaho'olawe Island Reserve. Uncle Harry Mitchell interpreted this name as **the southern beacon**, which served as a source of light to weary travelers voyaging beyond the pillars of Kahiki. Let *Ko Hema Lamalama* aid us in sharing a source of light from Kaho'olawe and the restoration of Hawaiian culture across Hawai'i nei. *This issue is made possible by supporters like you. Mahalo for helping us share Kaho'olawe.*



## From the Director...



Executive Director  
Michael K. Nāho'opī'i

Established by the State legislature in 1993 to oversee the management and use of the Kaho'olawe Island Reserve, the Kaho'olawe Island Reserve Commission (KIRC) consist of seven-member commission appointed by the Governor. Based on the KIRC's governing legislation, Hawaii Revised Statutes Chapter 6K, Commissioners can serve for a term not to exceed eight years. Potential new commissioners are recommended to the Governor through specific nominating groups identified in our statute. On July 1, 2021, the KIRC will be welcoming two new Commissioners.

Dr. Benton Pang will be taking the seat reserved for a representative of Native Hawaiian Organizations. Benton is the president of the O'ahu Council of the Association of Hawaiian Civic Clubs and will be representing over 60 Hawaiian Civic Clubs throughout Hawaii and the United States.

Benton holds a doctorate from the University of Hawaii in Hawaiian ethnobotany (the study of traditional knowledge and customs of people concerning plants and their uses) and the ecological restoration of dryland forest ecosystems. He was mentored by both Dr. Isabella Abbott and Dr. Charles Burrows, both former Commissioners that represented Native Hawaiian Organizations and native Hawaiian leaders in the fields of Hawaiian ecology and native Hawaiian practices. Benton is currently the Invasive Species Team Manager in Hawaii for the US Fish and Wildlife.

Benton will be taking the seat of departing Commissioner Hokulani Holt, a kumu hula who has been connected to Kaho'olawe since the early "stop the bombing" movement. She is currently Director of Ka Hikina o Ka Lā, a specialized program at the University of Hawaii Maui College funded by the National Science Foundation that integrates native Hawaiian cultural knowledge and practices into modern scientific technology and instruction.

Ms. 'Anela Evans will be taking one of the three seats designated for a representative of the Protect Kaho'olawe Ohana. Ms. Evans has a deep connection to Kaho'olawe as a long-time PKO member and a former KIRC employee. As a PKO member, she had led numerous community groups to Kaho'olawe for both cultural and work-related projects. She had also planned and coordinated several PKO trips to Kaho'olawe ensuring the safe and meaningful use of the Reserve. As the KIRC Volunteer Coordinator, she recruited volunteers and facilitated their work trips to Kaho'olawe with the KIRC. While at the KIRC, she was also trained in unexploded ordnance avoidance procedures, emergency safety procedures and boat operations. 'Anela is currently a Cultural Practitioner with the Four Season Resort on Lanai.

'Anela will be taking the seat previously held by Dr. Jonathan Ching, D.Arch, a long time PKO member and cultural practitioner responsible for perpetuating the annual makahiki ceremony on Kaho'olawe.



*Dr. Benton Pang, President, O'ahu Council of the Association of Hawaiian Civic Clubs*



*Ms. 'Anela Evans, Member of the Protect Kaho'olawe 'Ohana*

A handwritten signature in black ink, which appears to read "M.K. Nāho'opī'i".

## Ho'okāhi e pō'ino, pau pu i ka pō'ino.

*One meets misfortune, all meet misfortune.*

Said of those who are important to the community - when misfortune befalls one, it is a misfortune for all.  
Every member of the group is important.

“Ōlelo No'eau #1066, Source: Mary Kaweena Pukui, 'Ōlelo No'eau: Hawaiian Proverbs & Poetical Sayings

▲ KIRC and Base Camp Staff securing 'Ōhua on the beach in Honokanai'a after a wave shoved the vessel over a rock at Lae 'O Kealaikahiki caused a breach in the hull.



The 'Ōhua is the KIRC's 38-foot landing craft and has been the KIRC's lifeline between Maui and Kaho'olawe since 2008. Under most conditions, the 'Ōhua's is able to land right on the beach and drop the bow (front of the vessel) cargo ramp onto the sand for easy offloading. Everything, including staff, volunteers, food, fuel, plants, equipment and supplies has been loaded onto her deck in Kīhei, to cross the 'Alalākeiki channel and traverse the north coast before being unloaded on the beach in Honokanai'a.

In April, on the morning of a full moon with a negative tide, during what should have been a routine Monday run to exchange volunteer groups, disaster struck when a wave pushed the 'Ōhua over a submerged rock near Lae 'o Kealaikahiki (Kealaikahiki Point) breaching the hull and causing water to rush in. The KIRC crew didn't miss a beat though and were able to land the vessel on the sand in Honokanai'a, safely offload all of the incoming people and cargo onto the beach, and bring on additional pumps and hoses from camp to pump the water out of the flooding bilge.

Unfortunately, the breach was too large and the pumps couldn't keep up. The crew eventually needed to beach the vessel to locate the hole and plug it, using sealant and wooden shims, just enough to stem the inflow of water and, hopefully, get 'Ōhua back to Maui. While the 'Ōhua crew was working on the beach, the rest of the KIRC staff was working behind the scenes with NOAA and DOFAW to launch NOAA's vessel, Koholā and extract the KIRC staff and volunteers who had been on island over the weekend.

With the extreme high tide created by the full moon, the crew was eventually able to float the boat off the beach. After an initial two hour trial around the bay, the patch and pumps seemed to be working and the crew made the decision to head back to Maui. While in the Reserve, the crew stayed close to shore just in case something gave way in the bilge and they had to ground the vessel again. Thankfully though, the patch and pumps held, and after dropping off their

passengers in Kīhei, the Koholā crew returned to the Reserve and escorted 'Ōhua and her crew across the 'Alalākeiki channel. Over the next few weeks, 'Ōhua was repaired and back on the water, ready in time for the May access.

Reflecting on the incident, KIRC staff's ability to stay composed and focus in the face of adversity. We were reminded of the fact that every member of the Kaho'olawe community is essential to the work on island. Access can't happen without 'Ōhua, access can't happen. As the 'Ōlelo No'eau goes: *Ho'okāhi e pō'ino, pau pu i ka pō'ino - One meets misfortune, all meet misfortune.* From the crew remaining calm in the face of adversity to our friends at NOAA and DOFAW jumping in to help at a moments notice, we are grateful for the village that keeps this ship afloat!



The Koholā, a class II vessel from NOAA's Small Boat Fleet, escorting 'Ōhua across the 'Alalākeiki channel.

# MA KA HANA KA 'IKE



In 2019 the KIRC was awarded a Marine Educational Training (MET) grant from NOAA's Pacific Island Regional Office (PIRO). The major goal of the project is to provide marine science students from local Maui high schools with experiential education and hands-on training in marine resource conservation and management based in both marine science and Native Hawaiian knowledge and culture. The hope is that such an experience at a young age will inspire students to seek out further education in fields related to marine resource conservation and management, and prepare them for employment and community leadership in the future.

The KIRC partnered with Maui High School's science program and conducted 5 workshops for all 200 plus marine science students, covering everything from the importance of cultural knowledge of an area (Traditional Ecological Knowledge) to western science survey techniques and general statistical analysis. The workshops were preparing students for a Kaho'olawe huaka'i (trip) over spring break. Enter COVID-19.

Finally, after a year of quarantine, canceled trips, and extended deadlines, in March of this year, 5 students and 2 teachers participated in the first of three accesses to Kaho'olawe to couple the classroom work with the field implementation of marine science in a cultural reserve and a marine managed area.

During the access, students were able to see firsthand the direct connection of a mauka to makai relationship and contributed in healing the island directly by planting over 600 native plants and grasses. While planting, the students learned about the important role that native vegetation plays in reducing run off and preventing sediment from entering into the near shore coral ecosystem, as well as it's role in protecting the island itself from high surf erosion and sea level change.





# MA KA HANA KA 'IKE



▲ “Before” shots of a barren hardpan area along the Pu‘umoiwi Bypass road mauka of Kaneloa gulch.

▼ “After” shot of burlap bags filled with pōhaku laid out by volunteers in the roadside work site



## PLANTING THE SEED

The hardpan on Kaho‘olawe is one of the many scars that remind us of the island’s long history of human misuse and abuse. Before being used as a bombing target and live-fire training range by the U.S. Navy and its allies, goats had been allowed to roam reproduce freely on the island for nearly 150 years. What started as a small herd of maybe a dozen gifted to Chief Kahekili of Maui by British Captain Vancouver and placed on the island in 1793, became an uncontrollable force of more than 50,000 by the mid-1800’s. Considered to be one of the most destructive alien invasive species ever introduced to the Hawaiian islands, feral goats have had a tremendous impact on Kaho‘olawe’s ecosystems. After almost two centuries of uncontrolled grazing by these and other ungulates, nearly 30% of the island’s surface is barren hardpan.

Mauka hardpan areas present both an opportunity and a challenge in the restoration and revitalization of Kaho‘olawe. The blank canvas provides an area where introduced natives, once established, can form a natural kīpuka where the plants can survive, thrive and propagate.

**KĪPUKA:** Variation or change of form (puka or hole), as a calm place in a high sea, deep place in a shoal, opening in a forest, openings in cloud formations, and especially a clear place or oasis within a lava bed where there may be vegetation.

Source: *Ulukau Hawaiian Dictionary*.



# IN WORKING ONE LEARNS

The challenge though is the lack of top soil, which means native seeds and seedlings can't be physically outplanted into the ground. To overcome this obstacle, the Restoration team has applied several traditional and practical approaches utilized in other dry areas for reintroducing native species into these harsh landscapes.

One of those methods is the creation of kīpuka pōhaku (rock) using rocks and gravel, gathered and bagged from a quarry in Honokanai'a, that are then transported to mauka planting sites. KIRC staff and volunteers then empty the bags and shape the larger pōhaku into rings with the smaller pieces and gravel filling the center, creating a small depression where seeds and seedlings can be planted. The larger exterior pōhaku provide a barrier to the erosive forces of wind and water, while the smaller pieces and gravel provide a nutrient-rich substrate for growth.

This past February, volunteers helped the Restoration staff to layout native seed in kīpuka pōhaku in several barren mauka areas, before walking away with their fingers crossed. In April, the staff was overjoyed to see the fruits of their labor had paid off; several little 'ōhai and a'ali'i now existed where once there was nothing but rock.

*Top: A'ali'i, 'ōhai and kāwelu seeds in a kīpuka pōhaku*  
*Middle: Kāwelu seeds placed upright in kīpuka pōhaku to encourage spreading of the seed by wind*  
*Bottom: 'Ōhai sprouted in April from seed planted in February.*



▲ *Volunteers placing native seed produced by plants from Kaho'olawe in kīpuka pōhaku*

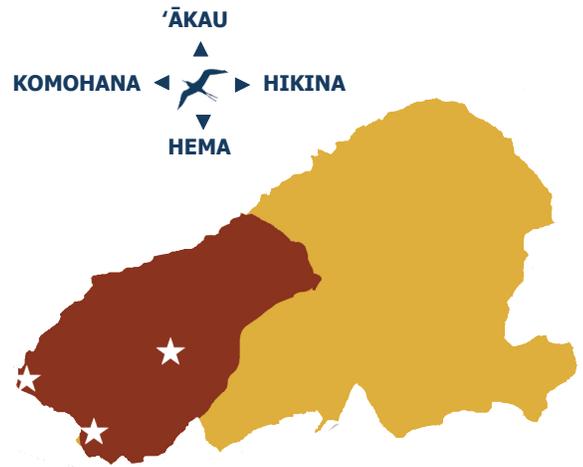


## FROM FIRE TO FINDINGS

After the February 2020 brush fire that scorched one third of Kaho'olawe, six vegetation plots were installed to observe vegetation regrowth (post-fire succession) at three sites affected by the fire. Native seeds previously collected from Kaho'olawe were distributed in the plots to record germination.

Unfortunately, the plant cover of non-native buffel grass (*Cenchrus ciliaris*) and mission grass (*Pennisetum polystichum*) increased at two of the vegetation plot sites as expected. These grasses are fire adapted, meaning fire plays an active role in their life cycle. They actually promote wildfire and re-sprout readily after an area has burned.

On a more positive note, although there seemed to be no germination of the native seeds scattered in the vegetation plots after the 2020 fire, several other native species did come in naturally among the invasive grasses after the fire, including 'uhaloa (*Waltheria indica*), 'Ilima (*Sida fallax*) and Koali kua hulu (*Merremia aegyptia*).



Locations of the Fire Vegetation Plots on Kaho'olawe at the Kealialalo Ephemeral Wetland (right), the Ranch Era Cistern (center) and Kealaikahiki (left) are indicated by the white stars. The red color shows the total area burned by the February 2020 Fire.



▲ Cistern Fire Vegetation Plot 3 in 2020 (left) and then in 2021 (right) with Koali kua hulu among the invasive grasses. Cistern Subplot 3 in 2020 (left) and then in 2021 (right) with Koali kua hulu predominant among the invasive grasses. ▼



▼ *Ma'o (Hawaiian Cotton) regeneration at Kaukukapapa Coastal Wetland*



▼ *'Ilima thriving at Kaukukapapa coastal wetland.*



▲ *Ma'o or Hawaiian Cotton survey sites at the Kaukukapapa Coastal Wetland (top) and Kealaikahiki (bottom).*

Prior to the 2020 fire, Kaho'olawe had the largest Ma'o, or Hawaiian Cotton (*Gossypium tomentosum*), Shrubland in the State of Hawai'i. Additional vegetation plots were set up at the Kaukukapapa coastal wetland area and near the ignition point of the wildfire at Kealaikahiki to study Ma'o survival and regeneration.

Data recorded after the first year showed that 56% of the Ma'o survived and/or were able to regenerate after the fire.

▼ *Ma'o thriving at Kaukukapapa coastal wetland.*



# MAHALO

## to our current Members and Donors!

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**Aloha Kaho'olawe** is a campaign to support restoration and access. We invite participation via membership, partnerships and legislative support. By building consensus that there is value in the historical, cultural, ecological and community building resources shared through Kaho'olawe, we aim to share this special place now and for generations to come.

### BENEFACTORS (\$100 to \$499)

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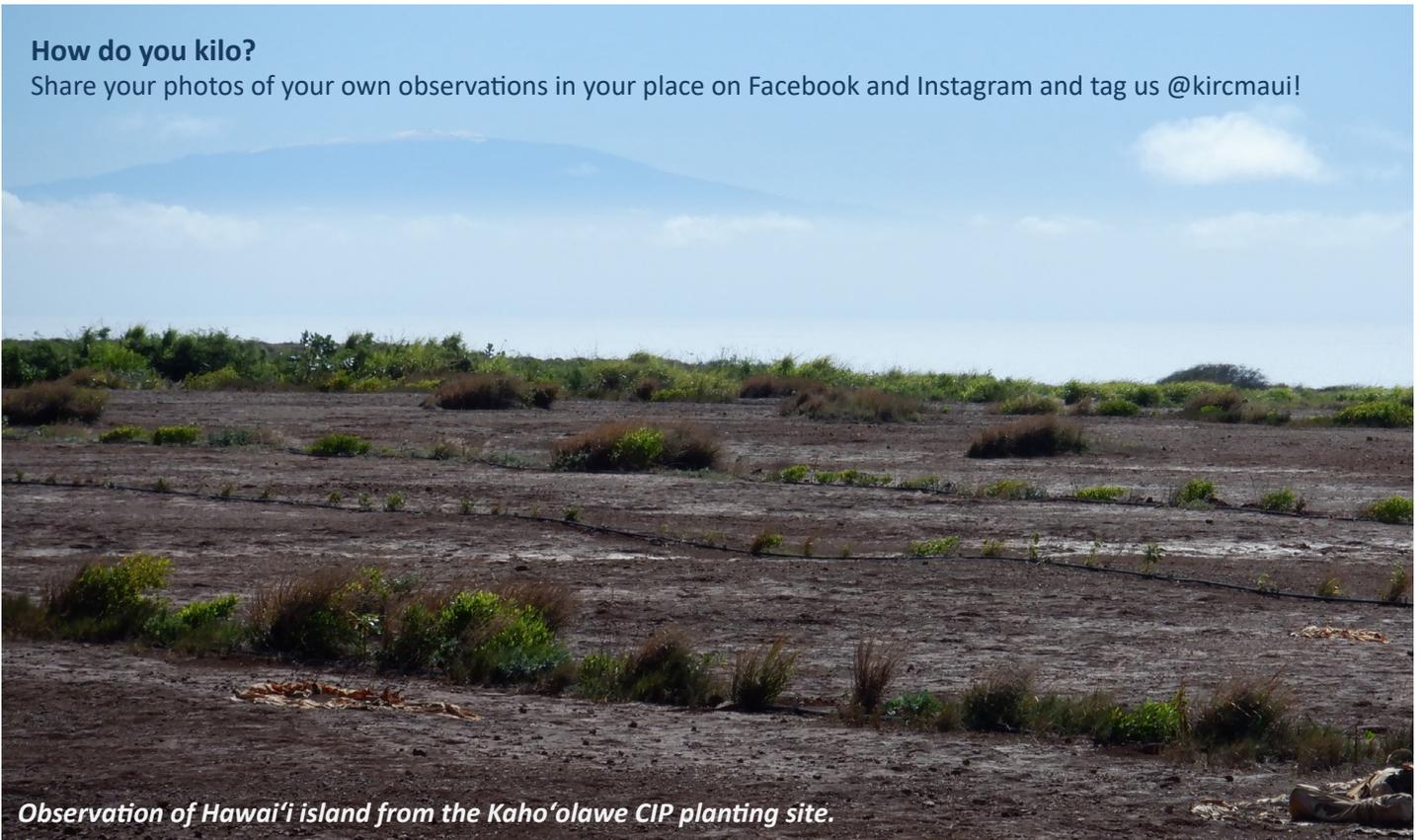
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### How do you kilo?

Share your photos of your own observations in your place on Facebook and Instagram and tag us @kircmaui!



*Observation of Hawai'i island from the Kaho'olawe CIP planting site.*



Individual donations are critical to the KIRC's efforts to protect, restore and preserve Kaho'olawe. Consider becoming a member today!

Benefits Include	Patron	Benefactor	Sustainer
Kaho'olawe Card Set	✓		
VIP access to Maui Ocean Center	✓	✓	
KIRC Logo Tee or Hat ( <i>while supplies last</i> )	✓	✓	
KIRC Logo Sticker ( <i>while supplies last</i> )	✓	✓	✓
Subscription to Ko Hema Lamalama	✓	✓	✓
e-News Enrollment	✓	✓	✓
Mahalo	✓	✓	✓

## Kau ka 'ōnohi ali'i i luna.

*The royal eyes rest above.*

A rainbow - a sign that the gods are watching the chiefs - is now visible.

'Ōlelo No'eau #1614, Source: Mary Kaweena Pukui, 'Ōlelo No'eau: Hawaiian Proverbs & Poetical Sayings



'Ānuenue (rainbow) observed by KIRC staff from aboard the 'Ōhua on a return trip from Kaho'olawe to Maui.

Send this completed form with your donation to:  
811 Kolu Street, Suite 201 | Wailuku, HI 96793.

Checks may be made payable to Kaho'olawe Rehabilitation Trust Fund. You can also give online at [kahoolawe.hawaii.gov/donations.shtml](http://kahoolawe.hawaii.gov/donations.shtml).

### CONTACT INFORMATION:

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Comments:

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 Printed on recycled paper.

## ABOUT THE KIRC

The Kaho'olawe Island Reserve Commission (KIRC) was established by the Hawai'i State Legislature in 1994 to manage the Kaho'olawe Island Reserve while held in trust for a future Native Hawaiian sovereign entity. The KIRC has pledged to provide for the meaningful and safe use of Kaho'olawe for the purpose of the traditional and cultural practices of the native Hawaiian people and to undertake the restoration of the island and its waters. Its mission is to implement the vision for Kaho'olawe Island in which the *kino* (body) of Kaho'olawe is restored and *nā po'e o Hawai'i* (the people of Hawai'i) care for the land. The organization is managed by a seven-member Commission and a committed staff specializing in five core programs: Ocean, Restoration, Culture, Operations and Administration.

## COMMISSIONERS

- Protect Kaho'olawe 'Ohana: Joshua Kaakua* (UH, College of Engineering)
  - Protect Kaho'olawe 'Ohana: Jonathan Ching* (Land and Property Manager, Office of Hawaiian Affairs)
  - Protect Kaho'olawe 'Ohana: Michelle Miki'ala Pescaia* (Interpretive Park Ranger, Kalaupapa National Historic Park)
  - County of Maui: Saumalu Mataafa (Executive Assistant, Department of Management, County of Maui)*
  - Department of Land & Natural Resources: Suzanne Case* (Chairperson, Department of Land & Natural Resources)
  - Native Hawaiian Organization: Hökūlani Holt* (Director, Ka Hikina O Ka Lā & Coordinator, Hawai'i Papa O Ke Ao, UHMC)
  - Office of Hawaiian Affairs (OHA): Carmen Hulu Lindsey* (Trustee, OHA)
- Michael K. Nāho'opi'i, Executive Director

