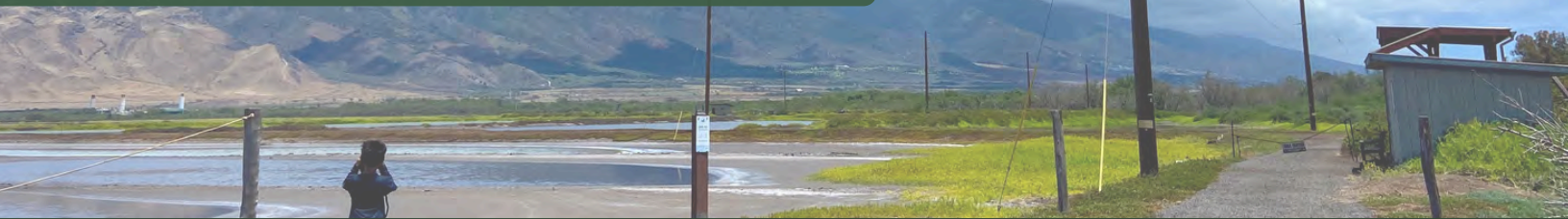


Keālia Pond National Wildlife Refuge

SPRING 2025 NEWSLETTER



NEW PROJECTS: Introducing the Pulelehua Trail!

The Native Plant Pollinator Garden surrounding the Keālia Pond NWR Visitor Center now has a walking trail called the Pulelehua Trail. Pulelehua is the Hawaiian word for butterfly. The trail features over 40 species of native Hawaiian plants and is the perfect location to observe the close relationship between native plants and pollinators. The trail was established through efforts made by Refuge staff and volunteers. A map (pictured below) created by a U.S. Fish and Wildlife Service Directorate Fellow, Elise Gustilo, allows visitors to have a self-guided experience through the trail. The map shares various facts and cultural uses for each plant. The Refuge is seeking volunteers to assist with the completion of the trail. If you are interested in contributing, please reach out to kealiapondnwr@fws.gov for more information.

We are looking forward to completing this trail with interpretive signage and gravel paving to make it a valuable resource for visitors and our communities!



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Nesting Season News

Updates from the Refuge Manager



Ae'o simple shell and rock nest on mudflat



'Alae ke'oke'o "floating" nest

“'Alae ke'oke'o require high water to create viable nesting sites”

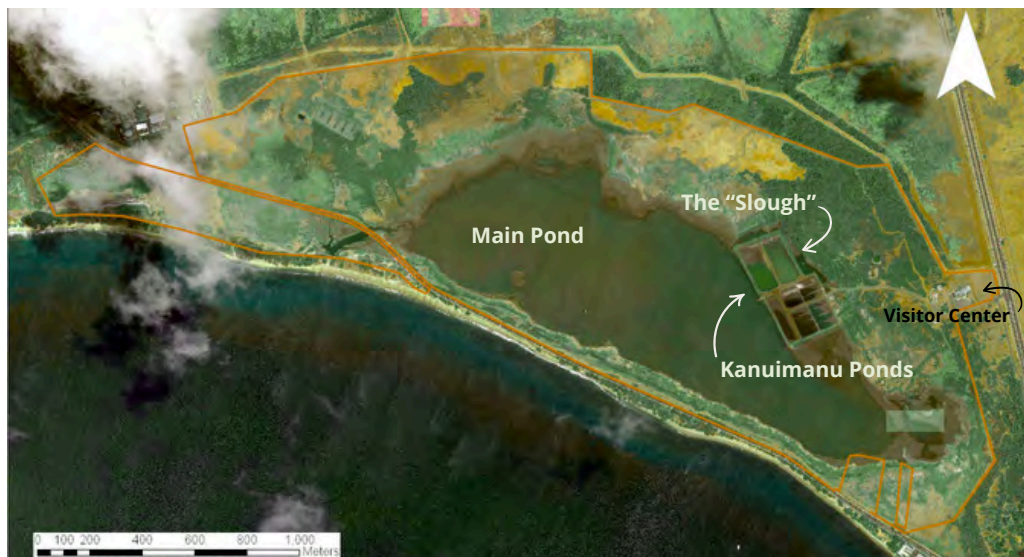
-Bret Wolfe, Refuge Manager

Story continued on next page

WHAT DO AE'O AND 'ALAE KE'OKE'O REQUIRE TO NEST?

The Ae'o (Hawaiian Stilt) at Keālia Pond tend to nest from May through August on mudflats, shorelines, or small islands. Their simple nests are usually a small pile of rocks and shells near shallow water. 'Alae ke'oke'o (Hawaiian Coots) on the other hand, build elaborate floating nest structures. They use sticks and leaves anchored to aquatic plants or along flooded shoreline vegetation. With high water, they can nest year-round. However, if pond levels are too low they won't even attempt to nest. Unfortunately, with Maui's extended droughts, diminished water flow through Waikapu Stream, and limitations with pumping from wells, the Refuge has had years without any suitable nesting habitat for the 'alae ke'oke'o.

Another factor influencing nesting of waterbirds is the salinity, or salt levels, of the water. Salinity in the Main Pond (see map) can change greatly between the wet and dry seasons, ranging from nearly fresh, to several times the salinity of seawater (35parts per thousand (ppt)). The Kanuimanu Ponds, located on the East side of Keālia Pond (see map), has even more extreme salinity, rising as high as 5 to 6 times that of seawater over time. While the ae'o and migratory shorebirds can tolerate high salinity, the 'alae ke'oke'o prefer water with lower salinity than the ocean. This has limited viable nesting areas for 'alae ke'oke'o for large parts of the year. Facing continued droughts and limited water levels, Keālia Pond staff are experimenting with options for creating more nesting habitat for the 'alae ke'oke'o.



Nesting Season News

Updates from the Refuge Manager (Cont.)

MANAGEMENT ACTIONS

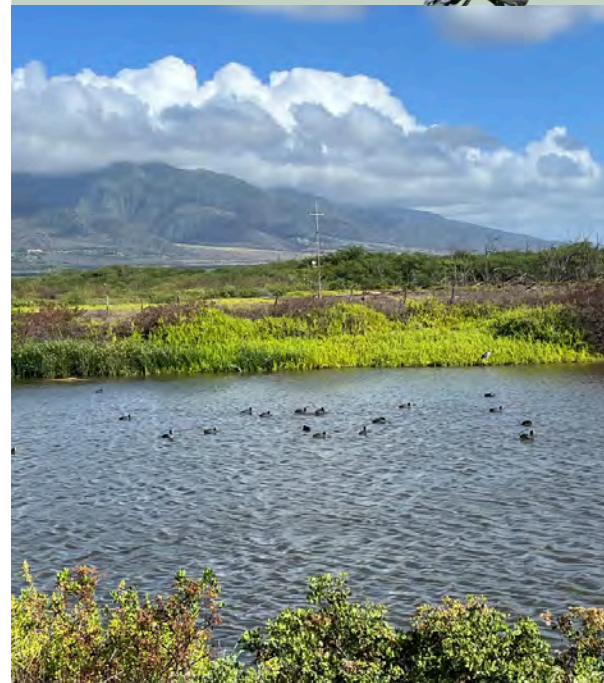
Our first action was damming the area we call the slough (see map on previous page) and filling it with fresh well water. The water remains fresh here and the confined area allows staff to quickly raise the water to a suitable depth. Additionally, inspired by a partner organization, staff began installing floating platforms made from PVC pipe to provide additional nesting sites (see photo below). These efforts were rewarded in the 2024 nesting season when 21 'alae ke'oke'o chicks fledged in the slough, with many using the new floating platforms.

Our second action was flushing out salt from the Kanuimanu Ponds by pumping in fresh well water then emptying it into the Main Pond using a portable pump. Our hypothesis was that if we reduced the salinity to below seawater the 'alae ke'oke'o may start using these areas. We concentrated on one pond at first and flushed it out at least five times, reducing the salinity from 150 part per thousand (ppt) to less than 30, seawater being 35 ppt. Sure enough, in 2025 we've observed as many as 40 'alae ke'oke'o using the Kanuimanu Ponds, where before it was extremely rare to see even a single bird using this area. We hope to see them start nesting soon!



New nesting platforms made from PVC for 'Alae ke'oke'o.

INFORMED MANAGEMENT ACTIONS IMPROVE NESTING OPTIONS FOR 'ALAE KE'OKE'O



'Alae ke'oke'o using the Slough area!

Meet Keālia Pond's Invasive Species Strike Team member



Josh showing a student group the different traps used on the refuge



Image of a live trap used on the refuge. Every active trapping day, these traps are set early in the morning and checked in the evening along a system of sites called "trap lines".

WHAT DOES AN INVASIVE SPECIES STRIKE TEAM MEMBER DO?

Josh Lewis is the Invasive species strike team member at Kealia Pond NWR. His main job is to reduce the damage that invasive predators have on our native birds and the rare ecosystems we are working to restore. The conservation strategies that he focuses on include fencing and trapping. Josh is also involved in maintaining our restoration sites and acts as the Refuge heavy equipment manager.

WHAT ARE KEALIA POND'S MOST THREATENING INVASIVE SPECIES?

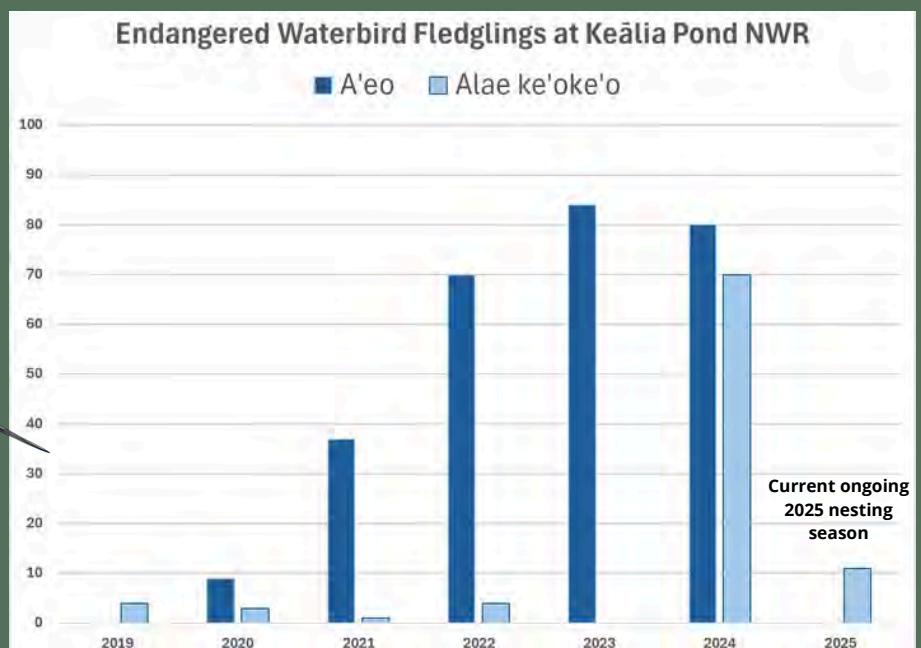
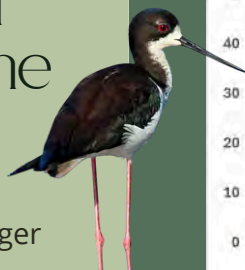
The main invasive species that threaten the endangered Ae'o (Hawaiian Stilt) and 'Alae ke'oke'o (Hawaiian Coot) include the mongoose, feral cats, and rats. These predators eat the chicks and eggs of the endangered birds. Two ungulate species, the Axis deer and the Eurasian Polynesian pigs, also endanger bird survival by rooting around in the wetland nesting habitat and destroying native vegetation.

MANAGEMENT IN ACTION

In 2019 a fence was built around the refuge perimeter to prevent deer and wild pigs from entering the refuge. Now, Josh focuses on trapping and removing invasive species where nesting occurs to protect vulnerable eggs and chicks. These combined efforts have already resulted in increased survival of endangered chicks.

"Trapping is one of the most important and effective conservation strategies on the refuge"

-Bret Wolfe, Refuge Manager



Earth Day 2025!

BRINGING THE COMMUNITY TOGETHER THROUGH ALOHA 'ĀINA

This April, we hosted a vibrant Earth Day Celebration at Keālia Pond! We welcomed other conservation organizations including the Audubon Society of Hawaii, Maui Forest Bird Recovery Project, and ReTree Hawaii who joined us with their own creative and informational materials. Throughout the day we had over 120 community members and visitors attend!

During the day we had many engaging activities. ReTree volunteer, Sonny Gamponia, led a plant walk titled "Ecological Gardening Using Native Plants" to showcase the success of native plant restoration at the Refuge. Keiki and families enjoyed the numerous crafts which included rock painting, bird games, making clay bird models, and decorating recycled pots and planting Ma'o! In the evening we led a special sunset bird tour.

This was a wonderful opportunity to bring people out to the pond after hours to observe sunset bird activity!



Image of ReTree Ecological gardening walk



Image of Earth Day Ma'o planting craft



Image of visitors during the sunset bird walk

Appreciating Our Volunteers!



VOLUNTEER APPRECIATION DINNER!

Keālia Pond National Wildlife Refuge relies on our incredible and dedicated volunteers for so much of the work that we do. Each volunteer brings unique knowledge, motivation, and passion to this place.

In late May, Refuge staff and Kupu members hosted an appreciation event for all volunteers. Dinner was provided by The Friends of Keālia Pond National Wildlife Refuge (NWR). Attendees were able to partake in a photo booth, learn about other volunteer opportunities, and most importantly meet and talk story with one another. It was an evening filled with laughter, creating new memories, and most importantly, celebrating the many accomplishments of all the volunteers at Keālia Pond NWR! Mahalo nui to all volunteers!

“We couldn’t do anything without our volunteers!”

-Allyssa Morris, Visitor Services Manager



Posing at the photo booth!



Volunteer gifts, hand made by refuge staff and KUPU members!

Volunteer Appreciation Dinner - Photo Highlights



SHARING GRATITUDE!

SHARING GRATITUDE!

Upon entering the event, volunteers received Ma'o Leis specially made by Keālia Pond Staff.

REFRESHMENTS

Volunteers enjoyed food and beverages courtesy of the Friends of Keālia Pond.

PHOTO BOOTH!

Volunteers posed by a photo booth with fun Keālia Pond themed props. They later received printed photos from the event.



REFRESHMENTS



PHOTO BOOTH!

VOLUNTEER HIGHLIGHT!

ANDY FOX



Andy Fox is an energetic and passionate volunteer, dedicated to continuous growth and sharing the benefits of native plant restoration with all communities.

Andy grew up on the East Coast, constantly moving from state to state with his family. He eventually ended up in Washington DC for medical school and later specialized in Pediatrics. Andy's work took him around the country and the globe until he finally landed in Maui where he practiced as a pediatrician for over 20 years.

Andy has always loved being outside through gardening and hiking, but first turned to the conservation field when he started volunteering at Haleakalā National Park. After inspiring conversations about the importance of native plants, Andy helped start the ReTree organization. ReTree's goals include planting more trees, restoring areas to native habitat, promoting fire resilience, and building community engagement.

In 2020, ReTree began its collaboration with Keālia Pond and has seen incredible restoration progress here. Andy has spent countless hours on the refuge planting native plants, weeding, watering, and learning. He is especially inspired by the opportunities to share knowledge and resources with the community. He hopes that this work can help spread native plants across Maui!

VOLUNTEER POSITION:
ReTree and Keālia Pond NWR
Pollinator Garden volunteer

FAVORITE PLANT:
'Iliahi

FAVORITE VOLUNTEERING TASK:
Planting native plants!

MEET OUR KUPU MEMBERS!

Where are you from and what is your educational background?

I grew up in Salinas, California. During Covid in 2020, I started collecting houseplants which inspired me to study botany. I obtained my Bachelors of Science in Botany at Cal Poly Humboldt located in Northern California.

Why do you do Mālama 'Āina work?

I believe that it is important to restore and care for our ecosystems because 'Āina is the only home that we have. Many of the native plants that I work with have important cultural significance and are keystone species for the dry tropical ecosystem at Keālia pond. Thus, I do mālama 'āina work to promote biodiversity for years to come.

What is your favorite part about your position here at Keālia Pond?

My favorite part about working at Kealia Pond is interacting with all of our amazing volunteers and visitors. I enjoy meeting people from all over the world who are visiting Maui as well as local community members.

What are your goals after your term?

After my term, I plan to seek a position at a botanical research lab in Hawaii. I plan on entering graduate school to obtain my masters degree in the next two years.

KATHERINE ROMAN



KUPU POSITION:
Greenhouse Manager

FAVORITE PLANT:
'āhinahina (Silversword)

FAVORITE PLACE ON MAUI:
I'ao Valley

WHAT IS KUPU?

Kupu's Mission is to empower young adults to serve communities through character building, service-learning, and environmental stewardship opportunities.

SEBASTIAN UNGER



KUPU POSITION:
Restoration Technician

FAVORITE PLANT:
WiliWili

FAVORITE BIRD
White Tailed Tropic Bird

**KUPU'S CONSERVATION LEADERSHIP
DEVELOPMENT PROGRAM (CLDP)**

A paid, entry-level conservation career program. The CLDP matches members with a Host Site (partner organization) that best aligns with their conservation interests.

Where are you from and what is your educational background?

I grew up in the central valley of California in a small town called Davis. I started college pursuing a degree in political science but through important mentorship found a passion for ecology and land stewardship. This lead me to pursue a degree in Ecology and Evolutionary Biology from the University of California, Santa Cruz. Since then I've lived a vagabond lifestyle the last few years, working odd jobs and traveling domestic and abroad.

Why do you do Mālama 'Āina work?

Growing up as the son of an Ecologist and a Botanist, there was a sense of duty instilled in me to engage with the land, although it wasn't until later in life that I found my own path to do that through conservation work. I'd like to think I still practices these values and believe in advocating for the ecosystems that need protection. I enjoy helping restore land that has suffered from decades of land misuse.

What is your favorite part about your position at Keālia Pond?

I have really enjoyed deepening my relationship with this place and observing the different scenes, textures and scents. I enjoy continuously learning more about Keālia Pond's birds and plants. The connection I have developed with this land continues to inspire my art, poetry and music.

What are your goals after your term?

I love the conservation community. I would like to continue working seasonal research and field-work jobs that take me to different states and countries. Eventually, I would love to dive deeper into a specialization and pursue a masters in field mycology.



FIELD TRIP UPDATES!

We Hosted
over 1,400
students this
school year!



The education team at Keālia Pond NWR hosted 1,409 students during the 2024-2025 school year.

Students were able to engage in activities focused on wetland ecology, habitats, endangered species, bird watching, native plant restoration, and more. If you are interested in learning more about field trip opportunities contact

Allyssa Morris, Visitor
Services Program
Manager at
Allyssa_
Morris@fws.gov



Special mahalo to all the homeschool groups and following schools for bringing keiki to the Refuge this school year:

Carden Academy, Makawao Elementary, Hawai'i Tech Academy, Pūnana O' Leo preschool, Pomaika'i Elementary, Lokelani Intermediate, Kihei Charter School, Kamali'i Elementary, Kihei Elementary, Paia Elementary, Lihikai Elementary, Pukalani Elementary, Waihe'e Elementary, Haiku Elementary, Maui Waena Intermediate, Doris Todd Christian, Kamehameha Schools Maui, and St. Anthony School.

Ongoing events and information



KEĀLIA POND NATIONAL WILDLIFE REFUGE

The 704-acre Keālia Pond National Wildlife Refuge was established in 1992 to provide sanctuary for two endangered Hawaiian waterbirds, the 'ālae ke'oke'o and the Hawaiian stilt ae'o. It is one of the few natural wetlands remaining in the Hawaiian Islands, and the largest lowland wetland in Maui.

UPCOMING EVENTS!

FIRST SATURDAY AT KEĀLIA POND

The first Saturday of every month, 9:00am - 3:00pm. Free guided tours with staff through the Native Pollinator Garden and Kanuimanu Wildlife Viewing Ponds. The first tour is 9:30am, the second tour is at 1:30pm. All day Keiki (kids) educational crafts and activities!

VOLUNTEER OPPORTUNITIES:

Out-planting Native Hawaiian Dry Land Forest Ecosystem Plants

Help restore native habitat on the refuge. Typical duties consist of outplanting, invasive species removal, and propagating in the greenhouse. Tools are provided. Snacks provided by Friends of Keālia Pond. Every Thursday, 9:00am - 12:00pm. Sign up: <https://handsonmaui.galaxydigital.com/>

Volunteer: Native Pollinator Garden

Help enhance the visitor experience in the Native Pollinator Garden. Responsibilities include trimming plants, basic trail maintenance, and weeding. Tools are provided. Snacks provided by Friends of Keālia Pond. Every Friday, 9:00am - 11:00am. Sign up: <https://handsonmaui.galaxydigital.com/>

For more information, contact:

Keālia Pond National Wildlife Refuge, Milepost 6 Maui Veterans Highway (Highway 311)

P.O. Box 1042

Kīhei, Hawai`i 96753

KealiaPondNWR@fws.gov

(808)-875-1582

Refuge Hours

-The **Refuge** is open M-F from 7:30 a.m. to 5:00 p.m. It is closed on weekends and federal holidays.

-The **Visitor Center** is open M-F from 9:00 a.m. to 3:00p.m. It is closed on weekends and federal holidays.

-The **Keālia Coastal Boardwalk** is open seven days a week and on federal holidays from 6:30 a.m. to 7:00 p.m.

Entrance is free at all locations.

Support Keālia Pond NWR!

If you are interested in supporting Keālia Pond NWR with a donation, please visit our friends group website at:

<https://friendsofkealiapond.org/>