



## Hōlanikū (Kure Atoll) State Wildlife Sanctuary Winter Habitat Restoration

by Beverly Beebe (MS in Marine Science)

DLNR-Kure Atoll Conservancy Volunteer, Oct 2022-Feb 2023

For the 2022-2023 winter season, the Kure Atoll Conservancy ([KAC](#)) and the Hawai‘i Department of Land and Natural Resources, Division of Forestry and Wildlife ([DLNR-Sanctuaries](#)) selected and sponsored a habitat restoration team for Hōlanikū or Kure Atoll, an uninhabited coral atoll in the central North Pacific Ocean ([UNESCO](#)), about 1400 miles northwest of Honolulu ([DLNR-Intro-Video](#)). Kure Atoll, Hōlanikū in Hawaiian ([UH-Hilo](#)), is the oldest and most remote of the Northwestern Hawaiian Islands (NWHI), and protected within Papahānaumokuākea Marine National Monument ([PMNM](#)). Hōlanikū is also the northernmost coral atoll in the world and close to the Darwin Point, where the atoll will eventually subside faster than the coral will grow in cooler water, as plate tectonics slowly move the atoll to the northwest on the Pacific Plate ([PMNM-Kure](#)).

On the sunny morning of October 20, 2022, a three-person habitat restoration team left Honolulu aboard a small cargo ship, the *Imua*. Five days later, on the rainy afternoon of October 24, the *Imua* arrived at Kure Atoll. The *Imua* crew then launched and piloted a small boat through sheets of rain, into a natural gap in the circular coral reef, and across the normally picturesque 6-mile-wide lagoon ([PMNM-Kure](#)). Despite the heavy rain and surf, a nearby pod of dolphins appeared as if to welcome us.

After landing on Green Island, the only permanent and managed Hōlanikū island ([PMNM-Kure](#)) and the home of Kure Atoll State Wildlife Sanctuary ([DLNR-Sanctuaries](#)),

the small habitat restoration team disembarked and, with the help of the friendly *Imua* crew, unloaded numerous 5-gallon buckets of food and supplies. For more than three months, we would live and work within this State Wildlife Sanctuary, and be based in the biological field station or “camp.” Green Island, which comprises 209 acres, has restricted access—“No Landing” signs are strategically placed around the island on its beaches ([DLNR-Intro-Video](#)).

Although President Theodore Roosevelt preserved Kure Atoll within the Hawaiian Islands Bird Reservation in 1909, and Kure was declared a bird sanctuary in 1959, the US Coast Guard operated a LORAN (long range navigation) radar station on Green Island from the 1960s until 1992 ([PMNM-Kure](#), [LORAN](#)). Kure Atoll has been managed by Hawai‘i as a State Wildlife Sanctuary since 1993 ([KAC-History](#)). The military left behind facilities that now include a decommissioned airport runway; a pier; a cinderblock building with space for a kitchen, pantry, satellite communications, and sleeping; a storage shed; and a cistern. A 4-bedroom bunkhouse and an outhouse were later constructed within the biological field camp. Solar panels and batteries provide most of the power, and the cistern and many rain catchments provide water that is filtered as needed for drinking and washing.

Using cooperative and adaptive management, including partnerships with Nā Maka Onaona and community-based organizations throughout the Main Hawaiian Islands, the

native culture and natural ecosystems of Hōlanikū have been largely restored, thanks to the knowledge, foresight, and hard work of many who care ([PMNM-Cooperation](#), [KAC-Work](#), [PMNM-Partners](#)). The habitat restoration and protection have enabled at least 18 species of seabirds (over 100,000 nesting birds) to gradually return to Hōlanikū ([KAC-Work](#)). About 100 each of endangered Hawaiian Monk Seals (*Neomonachus schauinslandi*; [IUCN-HMS](#)) and critically endangered Laysan Ducks (*Anas laysanensis*; [IUCN-LADU](#)) now reside in the Sanctuary, where Green Sea Turtles (*Chelonia mydas*) rest on beaches and 155 fish species (56% endemic) have been identified in coral reefs ([KAC-Work](#)).



Laysan Albatrosses, 📷 Beverly Beebe.

Unfortunately, marine debris remains a huge problem, partly due to Hōlanikū's location in the central North Pacific and currents that steadily deposit refuse on its shores and reefs ([PMNM-Kure](#)). Fortunately, while on Green Island, we observed no Monk Seals entangled in marine debris. As time and energy allowed, our small team removed as many plastic hazards as possible, particularly dangerous derelict fishing lines and gear, such as the conical plastic pieces of [hagfish](#)

traps. Sadly, in the NWHI archipelago, birds on Kure Atoll have been found to ingest the highest amount of plastic ([DLNR-Intro-Video](#)), and we often saw the remains of seabirds, especially albatross chicks, that contained a variety of plastic, e.g., bottle caps.

*Verbesina encelioides*, or golden crownbeard, is an invasive plant that needs to be eradicated from Hōlanikū in order to restore and maintain suitable natural nesting habitats for seabirds ([DLNR-Intro-Video](#)), such as the Laysan Albatross or mōlī (*Phoebastria immutabilis*) and the Black-footed Albatross or ka'upu (*Phoebastria nigripes*) ([DLNR-Seabirds](#)). Much of the habitat restoration team's time and effort was directed at finding, removing, and treating *Verbesina* plants and sites to prevent its propagation ([KAC-Verbesina](#)). Some native or indigenous plant species were also targeted; for example, nohu (*Tribulus cistoides* or puncture vine), which produces bur-like spikes that can injure bird feet, and a parasitic vine (*Cassytha filiformis*) that can kill important native plants, especially beach naupaka (*Scaevola sericea*).



Black-footed Albatrosses, 📷 Beverly Beebe.

The seabird species we lived among on Hōlanikū varied over time ([DLNR-Seabirds](#)). Shortly after arriving in late October/early November, Wedge-tailed Shearwaters or 'ua 'u kani (*Ardenna pacifica*) were fledging, and Bonin Petrels (*Pterodroma hypoleuca*) were arriving and searching for nests. During the day, we encountered a nesting pair of Tristram's Storm-petrels (*Oceanodroma tristrami*), and



after dark, we saw many silhouettes in the air and heard many songs. At first, we saw no albatrosses, but we soon saw one, then another of each species, Laysan and Black-footed. Gradually, the albatross populations grew and grew, mates found each other, and their large eggs appeared and hatched throughout the island. And before long, we were lucky enough to see at least one juvenile Short-tailed Albatross (*Phoebastria albatrus*)!



Adult Laysan and juvenile Short-tailed Albatross,   
Beverly Beebe.

Early in our stay on Kure Atoll, Brown Noddy or noio kōhā (*Anous stolidus*) adults and juveniles were plentiful, even around camp, but most left before we did in early February ([DLNR-Seabirds](#)). White ‘fairy’ Terns or manu-o-kū (*Gygis alba*) and Black Noddies or noio (*Anous minutus*) were nesting when we left; by then, many Great Frigatebirds or ‘iwa (*Fregata minor*) had already fledged, although many juveniles remained in the naupaka and soared along the beaches, sometimes dipping into the ocean or picking up (then dropping!) objects on the beach. As we prepared to leave, we were still seeing juvenile Red-footed Boobies or ‘ā (*Sula sula*) in the air and on the naupaka, and juvenile Brown (*Sula leucogaster*) and Masked (*Sula dactylatra*)

Boobies (‘ā) in the air and on the plains. Red-tailed Tropicbirds or koa ‘e ‘ula (*Phaethon rubricauda*) were courting in the air, often squawking and flying backwards, and sometimes discovered on the ground near naupaka. We departed before the arrival of Sooty Terns or ‘ewa ‘ewa (*Onychoprion fuscatus*).

In 2014, Hōlanikū received 28 Laysan ducks from Midway Atoll ([DLNR-LADU](#); [Cynthia Vanderlip](#)). Throughout our winter season, we enjoyed the few surviving “founders” and their many friendly descendants, and tended to their injuries or illnesses as best we could in the biological field camp. Aware of the potential for deadly botulism outbreaks, we regularly monitored these critically endangered ducks, and the seeps and water catchment “guzzlers” provided for them. Almost 10 years later and after years of planning, on February 7, 2023, a small US Fish and Wildlife Service team arrived from Midway Atoll with 24 additional Laysan Ducks—the same day, we departed on the *Imua*, but not before happily helping relocate and release these new Hōlanikū residents!

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## KEEP CATS SAFE INDOORS

### Keep Cats *and* Birds Safe

#### KŌLEA COUNT UPDATES

by HAS President Susan Scott

Pacific Golden-Plover expert Wally Johnson returned to his hometown of Bozeman on April 11 after two weeks of tirelessly attempting to recapture the last four Punchbowl kōlea carrying satellite transmitters as tiny backpacks.

Retrieving the tags is part of the volunteer survey project which monitors the plover population of around 70 birds at the National Memorial Cemetery of the Pacific, see past ‘Elepaio issues, e.g., 82:5, pg. 34. Several HAS volunteers met Wally at 4:30 am day after day on Punchbowl to set up mist nets, all of which the tagged kōlea carefully avoided. They also stayed out of range of USFWS Josh Fisher’s attempts to capture them with a net gun.

Other species weren’t so aware of the mist nets. We spent considerable time untangling bulbuls, mynahs, mockingbirds, doves, a Ring-necked Parakeet, and several Red-crested Cardinals.

The batteries in the plovers’ satellite tags are now spent - so even though four birds still carry the devices, they will send

no more location data. If recovered, the \$1,500 devices can be recharged and used again.



*Angry Bird’s revenge: USFWS biologist Josh Fisher freed the Red-crested Cardinal from accidentally being caught in a mist net, 📷 Susan Scott.*

Most kōlea left Hawai‘i on their usual day, April 26 and 27 with some stragglers leaving in May. Observations of birds here in June will be ones that did not migrate (“summering-over”). The new 2023-2024 citizen science season of observing and reporting season will start July 1: <https://www.koleacount.org/report/>

**BRAKE for birds!** There is no excuse for running over a plover. Given a second or two, they will hop out of the road.



*Susan Scott created this collage in memory of Gloria.*



Bluestone is a Lanikai townhouse complex with lawns that annually host four kōlea. Gloria arrived on the lawn near the exit gate in October of 2017.

For six years, the friendly plover greeted residents from August through April. This spring, a careless driver ran her over. Please slow down and give our remarkable native plovers time to move from the street where they forage for insect pests. A lot of little kids are playing, biking, and roller skating on the same road.

### SONG FEST AT FREEMAN SEABIRD PRESERVE (FSP)

by Alice P S Roberts,

HAS BOD Member & FSP Volunteer Coordinator

On the 4 Wednesday evenings in April, small groups of our most die-hard volunteer WEEDers were invited, as rewards for all their hours of hard work, to gather at FSP before sunset to watch our Wedge-tailed Shearwaters fly in.

Robynn and I locked the gate at 6:30 pm. The birds kept flying even after we could barely see. Many flew close to us, around us, over us, a few even brushed a head or 2, and we often got to feel "the wind beneath their wings."

We sat on the new coco mats, which were poofy soft with the lawn grass growing below and up through them. These 4 nights were during a complete cycle of the moon - how would each phase affect the birds?

The birds started returning in mid to late March. They came to re-set up housekeeping, re-establish their breeding pair bonds, & have sex. We did not have clickers but it seemed like there were more fly-ins the first 2 nights.

Some birds circled several times before flying right to their homes or plopping down nearby - like ducks their legs are set back - not great for walking but great for swimming. FYI: Wedgies have waterproof feathers and pink webbed feet. Once in their homes, the Chorus of Moans began; the 3rd Wednesday night seemed the loudest. They'd sing for a couple hours, even as we were leaving. Sometimes loud squabbles would occur - we can only guess why.

They make many different sounds including the legendary abandoned baby cry that has caused folks all over the island



*Wedgies with Koko Head in the background, 📷 Susanne Spiessberger.*

in past times to call the police!

On the last 3 nights, volunteer Mark set up his telescope for us to look at the stars Hōkūle'a, Sirius, Orion's belt nebula, & the planets Venus and Mars, and on the last night the moon.

Other Observations:

Alyssa's geolocators showed that our birds are house faithful except for one - how neat is that? She had put 25 geolocators and 25 control bands on 50 birds; recovered so far 23 and 22.

Tony reported one Tuesday, before a huge forecasted storm, more birds than usual flew in & they were much earlier. What did they know? How did they know?

After 4 years, it seemed to Robynn and me that there was less bird activity this year, but as always it was very exciting!

If any of you would like to volunteer to WEED in the 2024 season (Jan-Mar) contact HAS.

\*\*\*END\*\*\*

### MORE FREEMAN SEABIRD PRESERVE UPDATES

Oikonos Ecosystem Knowledge Co-founder and Executive Director Michelle Hester and volunteers finished laying and pegging the Oikonos-sponsored anti-erosion coconut fiber mats (these are the new coco mats Alice mentioned in her above article). Volunteers planted native plant seeds beneath some parts of the porous mats.



Coconut fiber mats ready to be laid, 📷 Alice Roberts.

The purpose of the mats us to prevent dust and dry dirt from FSP’s open areas blowing onto houses in the neighborhood. Volunteers also built 12 new tile nests, refurbished 10 old tile nests, and reorganized and dismantled old mounds.

### MANU-O-KŪ (MOK) UPDATES

by HAS VP Rich Downs

One major goal of the White Tern Citizen Science Project is to perform a complete census of the O‘ahu MOK population. Here are some highlights of this year:

- 4,124 observations were submitted on <https://www.whiteterns.org/> in 2023
- 2,411 observations reported active breeding
- 2,050+ trees were surveyed (documented)
- 850 currently have an egg or a chick
- 208 breeding trees were added to database
- 6 volunteer training sessions were conducted
- development of new survey tool using ArcGIS products was completed
- the Manu-o-Kū Hotline (808-379-7555), received 64 calls for rescues
- 27 chicks were successfully reunited with parents
- 36 chicks were transported to Feather & Fur Animal Hospital in Kailua or the Hawai‘i Wildlife Center Satellite at the Honolulu Zoo
- The call volume for rescues over the past 30 days up 300% over same period in 2022!

The project also continues targeted outreach in Waikiki and at events like 8th Manu-o-kū Festival, Honolulu Zoo Party for the Planet, and the Punahou Sustainability Fair.



This White Tern chick fell from a tree and was rescued by Rich Downs, 📷 Susanne Spiessberger.

Advocacy efforts include consulting with tree trimming companies to help them avoid disturbing nesting terns while doing necessary tree work and partnering with UH Mānoa during the fall 2023 semester to evaluate humane methods to deter cats from climbing trees where terns are known to nest.

### Albatross

They are so wide of wing—  
a seven-pound bird has a seven-foot wingspan—  
that they can glide high in the sky  
without flapping;  
or just above the waves,  
seeking squid for eating.

When they land on land they crash,  
stumbling into bushes to break their fall.  
Goony birds observers have called them.

But when they mate  
they dance and dance and dance,  
then go back to soaring.

—Joseph Stanton

from *Prevailing Winds*:

<https://www.google.com/search?client=firefox-b-1-d&q=joseph+stanton+prevailing+winds>

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The mission of the Hawai'i Audubon Society (HAS) is to foster community values that result in the protection and restoration of native wildlife and ecosystems, and conservation of natural resources through education, science and advocacy in Hawai'i and the Pacific. Founded in 1939, HAS is an independent nonprofit 501(c)(3) organization and does not receive dues paid to the National Audubon Society. Thank you for supporting your local Hawai'i Audubon Society.

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Please choose your membership level on our website <https://hiaudubon.org/membership>:

\$15 Hawai'i Audubon Society Student Membership

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**New** international membership ('Elepaio by email only) is now \$25; for international **renewals** requesting a print version, the fee is \$38.

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### Announcements

For regular updates, check out [hiaudubon.org/events](https://hiaudubon.org/events) and/or our social media sites.

#### Kōlea Count – New Season!

From July 1 to November 30 is Arrival Date season. Report your first kōlea sighting of 2023/24! Please follow the instructions on <https://www.koleacount.org/report/>



Susanne Spiessberger

### Hawai'i Island Festival of the Birds

On October 21, 2023 at the Grand Naniloa Hotel in Hilo. Visit our table and support native bird hospital care and conservation efforts!

This year's theme is *Hawai'i's Amazing Biodiversity*. For more information, go to <https://birdfesthawaii.org>

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**Noticed anything different? To honor the Hawaiian culture and show support of perpetuating the Hawaiian language, the HAS Board decided to use Hawaiian spelling and added an 'okina to the organization's name.**

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#### NEW MEMBERSHIP MANAGEMENT SYSTEM

We are currently updating our donor/membership management and payment systems (we are now accepting credit cards in addition to PayPal payments) and apologize for any inconvenience this might cause.

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