HAWAII AUDUBON SOCIETY

‘ELEPAIO

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For the Protection of Hawai‘i’s Native Wildlife

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Reintroduction of ‘Alalā to Pu‘u Maka‘ala Natural Area Reserve, Hawai‘i Island, in 2016

In 2016, the ‘alalā (Hawaiian crow, *Corvus hawaiiensis*), a species not seen in the wild for 14 years, will be reintroduced into its natural forest home on the island of Hawai‘i, as part of a long-term project to restore this critically endangered species to the wild. As of March 2016, 114 ‘alalā exist, all in breeding facilities managed by the San Diego Zoo Global, but there have been no confirmed sightings of the species in the wild since 2002. The first release will be in September, to Pu‘u Maka‘ala Natural Area Reserve (NAR), with continued releases planned for years to come. As there is much that remains unknown about the factors that will influence reintroduction success, an adaptive management approach will be used to identify and manage threats, if and when they emerge.

Lilinoe. Photo: San Diego Zoo Global

The ‘alalā is a significant species on Hawai‘i island for a number of reasons. ‘Alalā are highly regarded in Hawaiian culture, and are considered by some Hawaiian families as ‘aumakua (a family guardian). ‘Alalā are omnivorous, and feed on over 30 species of native fruits, as well as nectar, flowers, insects, and eggs and nestlings of other birds (Banko et al. 2002). Critically, ‘alalā may play a vital role in maintaining plant species diversity in native forests. ‘Alalā are thought to be the primary seed disperser of large-fruited plants such as hō‘awa (*Pittosporum hosmeri*), and to also play a role in the seed germination of species such as ‘oha kēpau (*Clermontia hawaiiensis*) and ‘ōhelo (*Vaccinium reticulatum*) (Culliney et al. 2012). Hence it is expected that restoration of ‘alalā will have a major benefit of restoring some of the key ecological processes that support Hawai‘i’s native ecosystems.

In the 19th century, ‘alalā were found in mid-elevation (300-2500 m) native ‘ōhi‘a (*Metrosideros polymorpha*) and ‘ōhi‘a-koa (*Acacia koa*) forests on the slopes of Hualālai and Mauna Loa on the island of Hawai‘i (Banko and Banko, 1980). Population declines were first noted in the 1890s, and by the 1970s only ~76 birds were known to survive (Scott et al. 1986). Habitat loss and degradation, introduced mammalian predators, and introduced disease all played a role in the decline, although the primary causes of their extinction in the wild remain uncertain (U.S. Fish and Wildlife Service, 2009). Research suggested that these relict ‘alalā populations had both low adult survival, and low reproductive success (Banko and Banko, 1980; Duckworth et al. 1992), with this combination likely accelerating the decline to their extinction in the wild in 2002.

Captive breeding began on a limited basis in the 1970s, and with only 12 birds remaining in the wild by 1992, attempts were made to bolster the wild population by releasing captive-reared ‘alalā. A total of 27 juveniles were released between 1993 and 1999, however, 21 of these birds eventually died. Necropsies were carried out for 15 of these (unpubl. data). Seven were suspected to have been either predated or scavenged by ‘io (Hawaiian hawk, *Buteo solitarius*), five died of disease (toxoplasmosis, 2; bacterial infection, 2; fungal infection, 1), and one was predated by a cat or mongoose (and also tested positive for toxoplasmosis). The cause of death could not be determined for the remaining two, and a further six birds went missing but were never located. No further releases occurred after 1999, and the remaining six birds were returned to captivity. The management of the species then shifted towards securing the captive population, maintaining genetic viability of the species, and restoring native habitat.

Fortunately, the captive breeding program has had some great successes. At the Keauhou and Maui Bird Conservation Centers, innovative management techniques such as artificial incubation of eggs, hand-rearing of chicks, video monitoring of breeding behaviors, and fostering of eggs and chicks have increased the population from a low point of less than 20 birds in the 1990s to 114 birds today. During this period, partners such as the Three Mountain Alliance, Hawai‘i Volcanoes National Park, Kamehameha Schools, U.S. Fish and Wildlife Service, and the State of Hawai‘i have preserved and restored habitat at various sites across the island of Hawai‘i, and it is now possible to reconsider reintroducing the ‘alalā to the wild.

Pu‘u Maka‘ala NAR is an 18,705 acre (7570 ha) state-managed reserve in the Puna and South Hilo districts of Hawai‘i. It was established in 1981, with a focus on ecosystem-level management and restoration. The reserve contains some of the most pristine wet and mesic native forest on the island of Hawai‘i, including both ‘ōhi‘a and koa forest types (DLNR, 2013). Three critically endangered bird species are present - Hawai‘i creeper (*Oreomystis mana*), Hawai‘i ‘ākepa (*Loxops coccineus*), and ‘akiapōlā‘au (*Hemignathus munroi*) (DLNR, 2013). A structured decision-making process was undertaken by the ‘Alalā Recovery Team to assess possible release sites, and Pu‘u Maka‘ala was chosen as the preferred release site due to its high values for a range of criteria, including a large area of contiguous forest, a dense understory to provide cover from ‘io, an abundance and variety of known ‘alalā food plants, and ease of access for management.

In addition to the ongoing protection of the reserve, management of the site will be bolstered by a small mammal control program to reduce numbers of feral cats (*Felis catus*) and mongoose (*Herpestes auropunctatus*), as well as rodents (*Rattus* spp.). This aims to have a dual effect of reducing toxoplasmosis presence in the environment (cats are the primary vector, and this was a known cause of mortality in the 1990s releases), and reducing the probability of predation of ‘alalā by introduced mammals. Should ‘alalā become established and breed at the site, then an intensification of control around nest sites may also be required. Recent ‘io surveys found Pu’u Maka’ala to have fewer detections of ‘io per station (DLNR, unpubl. data), in comparison to ‘io surveys conducted in 2007 near the 1990s release site (Gorresen et al. 2008). Pu‘u Maka‘ala also has a denser understory than the 1990s release site. It is believed that ‘alalā may have become more vulnerable to ‘io attack during the previous release program due to fragmented and open understory (Banko et al. 2002). Prior to release, ‘alalā will undergo anti-predator training as an additional precaution, to ensure they recognize ‘io as a potential predator and respond appropriately.

All released ‘alalā will carry lightweight transmitters with a combined GPS and VHF function to provide detailed information on location, dispersal and interactions between the released birds. Supplementary food will be provided for all released birds for as long as necessary, to provide support for birds while they are learning to forage for themselves in the wild. Intensive monitoring will ensure that any issues (e.g. disease, weight loss) are quickly identified and responded to, and the reintroduction program will be continuously reviewed to respond to new information and any new threats that are identified.

Reintroducing a critically endangered species that is extinct in the wild is always a complex and challenging process, but all partners are committed to the ‘alalā reintroductions for the long-term. The upcoming releases of ‘alalā back into the wild is an exciting event for the restoration of both the forest and the cultural heritage. The reintroductions will bring fresh challenges, and the partners are optimistic that these challenges can be met and managed to restore ‘alalā to the wild where they belong once more.

‘Alalā chicks. Photo: San Diego Zoo Global

This summary was jointly written by partners coordinating the reintroduction, which include the San Diego Zoo Global (SDZG), the U.S. Fish and Wildlife Service (USFWS), the State of Hawai‘i Department of Land and Natural Resources Division of Forestry and Wildlife (DOFAW), together with the Pacific Cooperative Studies Unit (PCSU), Hawai‘i Volcanoes National Park, Three Mountain Alliance, and Kamehameha Schools. The funding for species captive propagation and release comes from USFWS, DOFAW, and SDZG. Contributions are also being generously provided by the National Fish and Wildlife Foundation, the Gordon and Betty Moore Family Foundation, the Marisla Foundation, American Forests, and numerous anonymous donors and in-kind contributors from the community.

More information can be found about the project at http://alalaproject.org, or you can follow the latest news on social media: https://www.facebook.com/alalaproject/ or https://instagram.com/p/BCgR2XzqU33/

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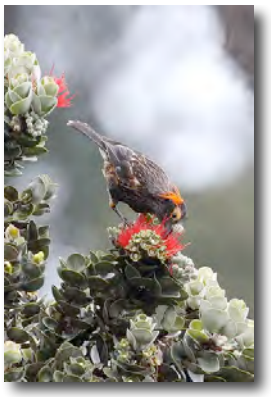
Rapid ʻŌhiʻa Death: A Slow Fire in Hawaiiʻs Native Forest

J. B. Friday, Extension Forester, University of Hawaiʻi, jbfriday@hawaii.edu

Rapid ʻŌhiʻa Death is the worst threat to Hawaii's native forests that biologists working today will see in our lifetimes.

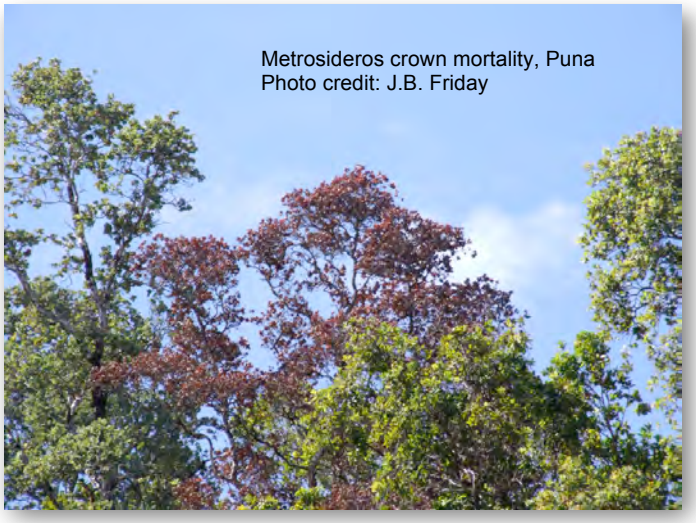
This new fungal disease has spread over tens of thousands of acres of ʻōhiʻa forest on Hawaiʻi Island since 2013, probably killing millions of ʻōhiʻa trees. Originally found in lower Puna, the disease has spread to Hilo and up the Wailuku River watershed and south through Volcano, Kaʻu, and to South Kona. So far there have been no confirmed reports in Kohala or Hamakua, nor on any of the other Hawaiian Islands.



ʻAkohekoha on ʻōhiʻa
Photo Credit: C. Robby Kohley
©Maui Forest Bird Recovery

Dr. Flint Hughes of the US Forest Service in Hilo has found that almost all ʻōhiʻa trees are dead in the forests most severely affected by Rapid ʻŌhiʻa Death. If the disease becomes as severe in high-elevation ʻōhiʻa forests as it can be in lower Puna, it poses a severe threat to native bird habitat, as most forest birds depend on the ʻōhiʻa forest, both for nectar and for nesting cavities in giant old ʻōhiʻa trees. Endangered birds such as the ʻakepa and Hawaii creeper are the most threatened, but even more common birds such as the ʻiʻiwi may become endangered if they lose significant areas of habitat.

The fungus *Ceratocystis fimbriata* was confirmed as the pathogen by Dr. Lisa Keith of the USDA Agriculture Research Service in 2014, after it was initially isolated from wood from a dead ʻōhiʻa tree by Brian Bushe of the UH CTAHR Agriculture Diagnostic Service. Different strains of this fungus cause plant disease on many cultivated and wild plants worldwide, including coffee, cacao, plane trees, oaks, and, ominously, *Eucalyptus* and *Acacia* species. The outbreak in Hawaiʻi is the first time the fungus has been observed on ʻōhiʻa or any species of *Metrosideros*. Dr. Keith has compared the DNA of Hawaiʻi isolates of the fungus to worldwide databases and it appears that the ʻōhiʻa strain is unique. Although it was probably introduced on a diseased plant of some other species, so far no match has been found.



Metrosideros crown mortality, Puna
Photo credit: J.B. Friday

Wildlife in peril in the ʻōhiʻa forest

University of Hawaiʻi at Mānoa biologist Sheila Conant on how the loss of the ʻōhiʻa forest would impact Hawaii wildlife.
https://vimeo.com/157463020

The symptoms of the disease are readily apparent to casual observation, and landowners in Puna have sadly watched tree after tree die. The fungus destroys the vascular system of the tree, and when it does all the leaves in the crown of the tree turn brown at once. After a couple of weeks leaves begin to fall, leaving only the fine, dead branches. The quickness of death of previously healthy trees earned the disease the nickname "Rapid ʻŌhiʻa Death." The fungus grows in the xylem, the sapwood of the tree, not on the bark, leaves, or flowers. If an infected tree is cut into with an ax, dark vertical streaks can usually be seen in the wood. If a tree is felled, cross sections of the trunk of the tree show a radial pattern of dark stains in the sapwood. Sometimes there is a strong smell like over-ripe fruit as well.

The spores of *Ceratocystis* species are sticky and do not blow in the wind like spores of other fungi. They do stick to cutting tools like machetes and chainsaws, and in other countries the disease is spread by workers who do not clean their pruning tools in moving from plant to plant. In Hawaiʻi, wood boring beetles, particularly ambrosia beetles, attack dying and dead trees. The frass produced by these beetles contains infected sawdust and can spread the disease downwind for miles. At longer distances, for example across the island or inter-island, the disease is spread by people moving infected wood or plants or contaminated tools. The soil in badly infected forests also may be infected with the fungus from frass drifting down from infected trees.

Radial pattern of dark stains in sapwood. Photo credit: J.B. Friday

To limit the spread of the disease on island, anyone who goes into an ʻōhiʻa forest is being asked to decontaminate afterwards, especially if they are travelling to a pristine area. Rubbing alcohol (70% isopropyl alcohol) is readily available and a quick spray disinfects tools (chainsaws need to be disassembled and thoroughly cleaned of sawdust before spraying with rubbing alcohol). Shoes need to be cleaned with a brush, and spraying rubbing alcohol on the soles is a good precaution. Vehicles should be cleaned underneath with a pressure washer to remove any mud (especially in the wheel wells) and vacuumed clean of any mud inside. Untreated ʻōhiʻa wood products such as post, poles, and firewood should not be moved into new areas. Kiln-drying kills the fungus, so moving lumber and flooring does not pose a

risk. Seedlings, especially larger woody seedlings in pots, do pose a risk and should not be planted into pristine areas. The Hawai'i Department of Agriculture instituted a quarantine in August 2015, banning movement of any 'ōhi'a product off of Hawai'i Island unless a permit is issued (see: http://hdoa.hawaii.gov/blog/main/reportingohiawilt/ for more information).

Landowners with infected 'ōhi'a trees may slow the pace of the disease by felling the trees, making them less attractive to beetles. Where practical, covering the felled logs with a tarp will help prevent any beetles already in the wood from spreading.

The Rapid 'Ōhi'a Death team is working hard to map the distribution of the disease. Anyone who suspects seeing the disease outside of the Hilo – Puna area, especially on neighbor islands, is welcome to notify the author. Now that the pathogen and symptoms are widely recognized, it is hoped that outbreaks in new forests or on other islands can be stamped out quickly, preventing the spread of the disease.

Lab tests in Dr. Keith's lab have shown that the fungus grows slowly at lower temperatures. Forest managers are hoping that although the disease has been found as high as 5,000 feet in elevation, the fungus won't cause as much of a problem in these forests as it does in warm, wet lower Puna.

'Ōhi'a – *Metrosideros* ***polymorpha*** – is a famously variable species, and forest landowners hope that within all this diversity there are some genetic resistance to the disease. Dr. Elizabeth Stacy of UH Hilo and her students have begun raising many 'ōhi'a seedlings of different varieties to inoculate with the fungus and look for resistance. The folks at the UH Mānoa Lyon Arboretum have begun a seed collection and banking program to preserve 'ōhi'a's genetic diversity in the case of loss of large areas of 'ōhi'a forests. Contributions to the Arboretum's efforts can be made at http://friendsoflyon.com/ohialove/ (hashtag #OhiaLove). Photos of the disease and updates on efforts to manage it are posted at www.rapidohiadeath.org and can be followed at www.facebook.com/RapidOhiaDeath.

Bird Observations: February/March 2016

Submitted by Lance Tanino

Feb. 08 - A second PIED-BILLED GREBE was photographed together with the initial PBGR continuously observed for past few months (Gret Dicey).
Feb. 09 - A winter-plumaged RED PHALAROPE was observed offshore of eastern Ni'ihau (Robin Baird, Daniel Webster).
Feb. 13 - A PIED-BILLED GREBE was seen at Kahawainui Stream ditch in La'ie, O'ahu (Kurt Pohlman).
Feb. 20 - TUFTED DUCK still being seen at Kuilima WWTP (Kurt Pohlman). First found in January (Satoko Lincoln).
Feb. 26 - OSPREY still being seen in Pearl Harbor area (Pete Donaldson). First seen at JCNWR on 1.12.2016 (Eric VanderWerf & Robby Kohley). First at Pearl Harbor on 1.18.2016 (Marti Kawasaki).
Mar. 8 - BLACK-LEGGED KITTIWAKE (adult) found in poor health at Eastern Island, Midway Atoll N.W.R. (Kristina McOmber)
Mar. 14-16 - BONAPARTE'S GULL (first-spring) at PHNWR-Honouliuli Unit and Pouhala Marsh (Alika Campbell, Kurt Pohlman, m.ob.)
Mar. 21 - NORTHERN HARRIER (2nd-cycle male) at Kahuku, Oahu (USFWS - Rachel Rounds, ph. Jackson Letchworth, Sheldon Plentovich, Bill O'Neill)

Research Update: 'Alae 'ula Tracking Project

Starting in 2014, Charles van Rees, a Ph.D candidate in Biology at Tufts University began color-banding 'Alae 'ula (Hawaiian gallinules, *Gallinula galeata sandvicensis*) as part of his dissertation research on the effects of landscape change on wetland connectivity for waterbirds. In collaboration with the U.S. Fish and Wildlife Service and with support from Hawai'i DOFAW, the Livable Hawai'i Kai Hui, and Waimea Valley he has been surveying O'ahu's freshwater wetland habitats for marked 'alae 'ula and monitoring the survival and location of marked birds to understand their movement behaviors. Better knowledge of the movement patterns of this shy and endangered bird will help wildlife experts secure its future in Hawaii.

2015 was a big year for the project: an additional 82 birds were tagged at five new locations (making for a total of 189 birds tagged at 9 wetlands), and Charles started a collaboration with researchers at the Molecular Ecology Lab in Anchorage, Alaska to investigate the genetic relationships between the 9 'alae 'ula populations he had sampled on the island. van Rees and his collaborators extracted DNA from a couple pinfeathers taken from birds during banding, and compared the gene pools of birds from different wetlands to estimate how often birds moved and bred between them. These data will give a long-term look at the connectivity and migration between O'ahu's 'alae 'ula populations, and will be submitted for publication in 2016.

The project also had its first reported 'Alae 'ula movement: bird #7856, nicknamed "Lele," who was born at the Keawawa wetland in Hawai'i Kai in 2014, was spotted at Enchanted Lakes in Kailua in January 2015. Lele's movement was reported by a birdwatching volunteer who was looking for banded birds in the area. The 2016 field season of `Alae `ula research starts in mid-May of this year. Visit our **Citizen Science** section to be involved.

Inaugural Hawai'i Island Festival of Birds
September 24-25, 2016
Kailua-Kona, Hawai'i Island
Website: https://hawaiibirdingtrails.com/
To VOLUNTEER at the Hawaii Audubon booth contact hiaudsoc@pixi.com OR CALL (808) 528-1432 to volunteer.

Hawai‘i Audubon Society
Kona Pelagic Tour: March 26, 2016

By Lance Tanino, HAS Board Member for Hawai‘i Island,
Photo Credits: Max Schwenne

We (14 participants) had a very successful day on the water off Kona coast, Hawai‘i Island. We encountered at least 12 bird species (photo analysis forthcoming), 3 marine mammal species, and 5 fish species.

We started under dark gloomy, cloudy skies and under flash flood watch conditions, however, all participants including boat crew, Capt. Charlie and Shawn were too full of positive energy to let that deter us from having a bad day. As we boarded, a gigantic rainbow shield protected us from the dark clouds on the horizon. More rainbows were seen clearing a path for our glorious adventure awaiting us with improving ocean conditions with each hour. We charged forward soon after sunrise armed with a spacious 46-foot boat, binoculars, expert bird photographers, trolling rods with attractive lures, and wildlife enthusiast excitement.

In our first 30 minutes on the water, we observed a distant Masked Booby frequently plunge-diving from great heights, our first migrant species were three Red Phalaropes out of a minimum of 36 for the day, second migrant species, a lone Buller's Shearwater (migrant), and steady northerly flights of migrating Sooty Shearwaters (third migrant species) numbering one to three at a time.

Steady flights throughout the day averaged approximately 9 Sooty Shearwaters per hour headed north. We also averaged about 4 Red Phalaropes per hour. Our fourth migrant species, Leach's Storm-Petrels accompanied us throughout the day. Our fifth migrant, a Mottled Petrel (M-pattern on topside, dark belly on thick body, and thick black bar on underwings) flew close to the boat. With mostly glassy conditions, it was a wonderful opportunity to observe seabirds resting on the water including a small Sooty Shearwater raft (flock of seabirds resting on the wa-

ter together), subadult Brown Booby on a buoy and another one actively fished at water surface, and small flock of Brown Noddies including a first-summer plumaged individual.

And those were just the birds, we also had encounters with fish and marine mammals. We hooked up on a marlin and spearfish. We got very close to hauling in the marlin, however, it got away. We quickly brought in the spearfish. Some of us brought home filets or had half-price off at Bite Me Fish Market Bar & Grill. The panko-crusted plate was ono-licious.

The Pacific Humpback Whales were probably the most uncooperative species of the day. A few got very brief views of this large mammal. We also had short views of a small Rough-toothed Dolphin pod near a buoy, however, the best marine mammal encounter was a very large pod of Short-finned Pilot Whales. Adults and young appeared to be resting at the surface, periodically surfacing to breathe all around the boat.

Seabird species (12)
http://ebird.org/ebird/view/checklist?subID=S28590838

Mottled Petrel (1)
Wedge-tailed Shearwater (9)
Buller's Shearwater (1)
Sooty Shearwater (80)
Leach's Storm-Petrel (14)
Band-rumped Storm-Petrel (3)
Storm-petrel sp. (white-rumped; 3)
White-tailed Tropicbird (2)
Masked Booby (1)
Brown Booby (2)
Red Phalarope (36)
Red-necked/Red Phalarope (2)
Brown Noddy (6)
Brown/Black Noddy (1)
Sooty Tern (1)

Fish species (5)
Marlin sp. - 1
Spearfish sp. - 1
Small Tuna ('Aku/Small 'Ahi?) - Several observed jumping out of water feeding on smaller prey
Flying Fish sp. - few
Remora - 1 attached to Spearfish

Marine Mammal Species (3)
Pacific Humpback Whale - 2
Short-finned Pilot Whale - 15+
Rough-toothed Dolphin - 3

Baby White Tern, Manu o Kū
Photo Credit: Eric Vanderwerf, Pacific Rim Conservation

Citizen Science Opportunities

Oʻahu Island-wide White Tern Census: Manu o Kū
Calling all citizen scientists! Join Pacific Rim Conservation in an island-wide census of the White Tern population on Oʻahu. The information will be used to help avoid tree trimming with tern nests in them. Pacific Rim Conservation has developed an online form at http://bit.ly/1Rz34eO to submit observations about White-Tern nests on O'ahu that will help to assess the population size. The last time this survey was done in 2003, there were 694 birds on O'ahu; let's see how much larger the population is today. Mahalo for your help! https://www.pacificrimconservation.org/

Oʻahu Island-wide ʻAlae ʻula Tracking Project
The ʻAlae ʻula Tracking Project is seeking volunteer bird-watchers interested in helping to report banded ʻAlae ʻula (Hawaiian gallinule/moorhen) at freshwater wetlands on Oʻahu. Over 150 birds have been banded at 9 wetlands on the island, including National and State wildlife refuges, golf courses, and private residences. These birds are suspected to be moving between habitats in search of breeding territories, but to date little is known about the movement behaviors of this shy and secretive bird. Volunteers are needed to survey possible ʻAlae ʻula habitats and report sightings of color-banded individuals. Sightings may be submitted via http://sites.tufts.edu/hawaiianmoorhen/, the project's web-based platform or by e-mail to Alaeulaconservation@gmail.com.

Volunteers may also learn more about the project, where to go to find banded ʻalae ʻula, and what to look for when spotting birds at the URL above. If you or someone you know has seen unbanded ʻalae ʻula at a location not reported on the website, please report the area to Charles van Rees at the address above, and we could add the site to the study. Mahalo!

Fall 2015 Hawaiʻi Audubon Society Student Scholarship Winner
Amy Hruska, PhD Student
Department of Botany
University of Hawaiʻi at Mānoa

Understanding the effects of dispersal limitation on native plant recruitment in Oʻahu forests

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Thank you for your concern and commitment to protecting Hawaii's native wildlife and ecosystems.

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Upcoming Events, Field Trips, & Volunteer Opportunities

For full descriptions of our Events, Field Trips and Volunteer Opportunities, go to our website: http://www.hawaiiaudubon.org/

EVENTS

Manu o Kū Festival
'Iolani Palace Coronation Lawn
Saturday May 14, 2016, 11 am to 3 pm
In celebration of the Centennial of the Migratory Bird Treaty

To VOLUNTEER, contact hiaudsoc@pixi.com, subject line: Manu o Kū Festival volunteer.

FIELD TRIPS

Celebrate International Migratory Bird Day & Global BIG Day with Hawai'i Audubon
Saturday, May 14th, 7 am to noon, Kona, Big Island
Leader: Lance Tanino, HAS Board Member

Meet at 7am at Honokohau Marina (north end), Kona, Big Island. We will walk to Aimakapa Pond, carpool to Kealakehe WWTP, and seawatch from Keahole Point. Bring sunscreen, water, snacks, lunch, binoculars, spotting scope, field guides. For more information contact Lance Tanino, email: lance.tanino@gmail.com.

Just a Summertime Low Low Tide: Paikō Lagoon Wildlife Sanctuary
Saturday, June 4th, 8:00 – 10:00 am, East Honolulu
Leader: Alice Roberts, HAS Board Member

Visit Paikō during mid-summer at very low tide (-0.4'). Learn about the many native plants at the waters edge. We may see some stay behind shorebirds as well as a resident pair of Hawaiian Stilts, year round 'Iwa, Egrets & Herons, lots of urban birds & ducks. Please RSVP to Alice with your name and phone number at 808-864-8122.

TOUR Keauhou Bird Conservation Center, Hawai'i Island

- Saturday, June 4, 2016, 9:00 am to 12:00 pm
- $10 contribution to KBCC per person requested
- Learn more about the successful breeding efforts of the 'alalā (Hawaiian Crow) and the upcoming release
- For more information contact hiaudsoc@pixi.com

VOLUNTEER OPPORTUNITIES at Hawai'i Audubon Society

Contact hiaudsoc@pixi.com OR CALL (808) 528-1432 to volunteer.

INTRO TO BIRDING TRAINER(S): Experienced birders with teaching experience needed to give classes to help new members learn basic birding skills and to prepare them for the Christmas Bird Counts.
SCHOOL PROGRAMS: Help set up school programs and presentations about habitat and bird life in response to requests from local schools. Teaching experience is a plus!
EVENTS & PROGRAMS: Help organize speaking engagements and/or outings for members and the public.
HAWAI'I AUDUBON DISPLAYS: Volunteer to help answer questions and explain our mission to the public at this event, plus sell some of our great products. Be the face of Hawai'i Audubon!
DIGITAL 'ELEPAIO: Help HAS bring our 'Elepaio Journal archive into the digital age. Volunteers with scanning equipment can work from home, scanning and saving older issues for posting at our website. Great job for history buffs!

HAWAIʻI AUDUBON SOCIETY
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HONOLULU, HI 96813-4709

www.hawaiiaudubon.org
(808) 528-1432
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