



MORE ‘ALALĀ RELEASED INTO WILD AFTER EXTENSIVE PREDATOR TRAINING



Stuffed ‘Io (native Hawaiian hawk) attached to a pulley system used to “fly” over aviary during ‘Alalā predator training program. Photo credit: Hawai‘i Department of Land and Natural Resources

(Hilo) – Anyone close to the flight aviary in the Pu‘u Maka‘āla Natural Area Reserve recently would surely have wondered about all the ruckus. The distinctive calls of the ‘Alalā (native Hawaiian crows) fill the air, along with the screech of Kapono, the Pana‘ewa Rainforest Zoo’s resident ‘Io (native Hawaiian hawk).

Both the ‘Alalā and the ‘Io are endangered, endemic Hawaiian forest birds, but the ‘Alalā have been extinct in the wild for over a decade with the last wild ‘Alalā seen in South Kona more than 15 years ago. A remarkable and intensive conservation restoration project being conducted by The ‘Alalā Project, a collective of government and non-government agencies and organizations, is working to restore a self-sustaining breeding population of the crows to their native forest homes. Project partners include the San Diego Zoo Global’s Hawai‘i Endangered Bird Conservation Program, the Hawai‘i Dept. of Land and Natural Resource’s Division of Forestry and Wildlife and the U.S. Fish and Wildlife Service.

A year ago, eleven ‘Alalā were reintroduced into the natural area reserve, where they are now thriving and doing quite well despite a challenging year. Their survival skills were tested through multiple storms including Hurricane Lane, the Kīlauea and Lower East Rift Zone eruptions, and, as always, seasonal weather patterns. “The Hawaiian forest, as well as the ‘Alalā, are very resilient,” explained Alison Greggor, PhD., a post-doctoral research associate from the SDZG’s HEBCP, “They have survived really well over this past year and it will be exciting to see this continue.”

This fall, two separate groups (cohorts) of birds were targeted for release into the same natural area reserve as the eleven but at different locations. On September 24, two females and three males were released, and on October 10, two males and three females were released to make a total of ten in this new cohort.

In December 2016, a reintroduction program was halted after challenges posed by winter storms and predation on ‘Alalā by ‘Io. Biologists put their heads together and made some modifications to the reintroduction program. They changed the timing of the releases to avoid winter storms, and they carefully selected habitat for release sites. They also determined which birds to release together by including both sexes in the group and considering the group dynamics. In addition, they developed an extensive predator-training program.

Prior to the start of the anti-predator training, a team of a half dozen staff from the ‘Alalā Project gathered to get instructions from the zoo’s Dr. Alison Greggor. She handed out assignments, which included videotaping the birds’ activity and commenting on ‘Alalā behaviors during the introduction of ‘Io sounds and sights into their flight aviary. Greggor explained, “We will look at the videos to see how individual birds and the cohort respond to the audio and visual stimuli...we want to be certain no bird is left behind.”

Scientists have found that many animals, including the ‘Alalā don’t recognize their predators if they don’t have anyone to learn from. According to Greggor, “These birds, raised in captivity, have never encountered predators in the wild or had the chance to learn from their parents or their peers about the dangerous predators in their own backyards. We provide that learning opportunity by mimicking biologically relevant scenarios that they’d get had they been born in the wild.”

The predator aversion training lasts for less than 25 minutes. With the observers having synchronized their watches or cell phones the observation period begins. Initial observations depict how the birds act before any of the stimuli are presented. At the 18-minute mark, the action begins when the birds hear the recorded screech of an ‘Io, as a stuffed ‘Io attached to a pulley system “flies” over the open-air roof of the flight aviary. Jackie Gaudioso-Levita, The ‘Alalā Project coordinator and a wildlife biologist with DLNR/DOFAW, cut the string beginning the stuffed ‘Io fly-over. She remarked, “Predatory events have sights, sounds, and cues coming from different directions...so we try and mimic all of those components together.”

Next, the team plays ‘Alalā alarm calls. Greggor explained, “The alarm calls communicate, danger, danger, danger. While the recording plays we present Kapono in a side chamber of the aviary. He flaps his wings and then we start playing distress calls that go from the danger alert to help me, help me, help me. At that point, a stuffed American Crow is put under the ‘Io’s feet so we complete the full picture from the approach of a predator to a full-on perceived attack.”

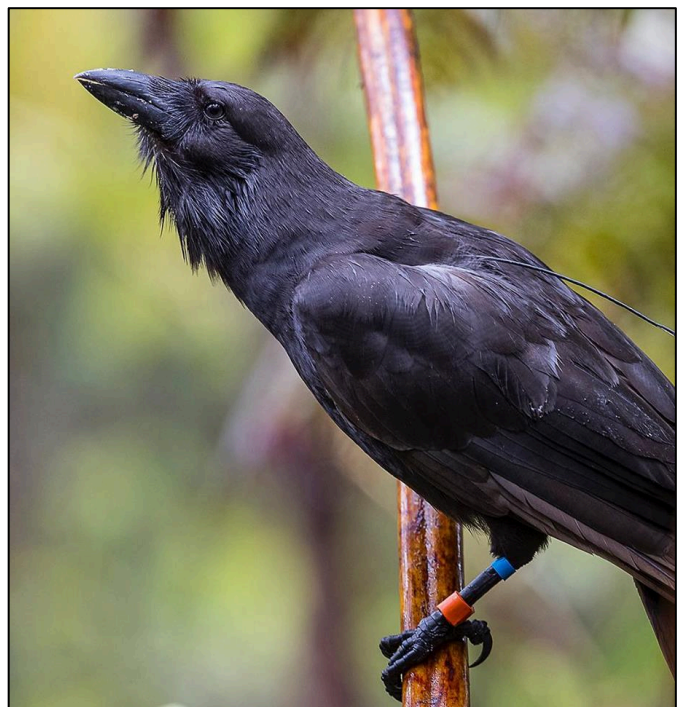
Predator recognition and aversion are tactics that have been utilized by other reintroduction efforts, especially those in which captive individuals are released, without knowing any predatory threats. To get the best response from the ‘Alalā, team members worked cooperatively with reintroduction experts Tom White of U.S. Fish and Wildlife Service and Debra Shier of San Diego Zoo Global to develop a sequence of stimuli. “We wanted an experience that would instill in those birds a very real fear and recognition of a deadly predator,” says Tom White, a wildlife biologist with the U.S. Fish and Wildlife Service’s Puerto Rican Parrot Recovery Program.

Project team members feel very fortunate to have Kapono from the Pana‘ewa Rainforest Zoo. The ‘Io is glove-trained, and this allows the best mimic of a natural predatory scenario without any actual hurt to the birds. In addition to Kapono, the stuffed ‘Io was loaned to the project from the

Bernice Pauahi Bishop Museum in Honolulu, while the stuffed American Crow was gifted to the project from the Yale Peabody Museum of Natural History, over 5,000 miles away. Gaudioso-Levita commented, “Between the collection of props, live and recorded stimuli, and advice from experts afar, training the ‘Alalā is a concerted and innovative collaborative effort.”

Scientists determined which birds were ready to release into the wild based on their response to these anti-predator trainings, as well as training on wild foods, and if they passed their health exams. Birds that were chosen for release were moved to the flight aviary for a few months to acclimate to the sights and sounds of the Hawaiian forest. Then each cohort was transferred to a smaller aviary two weeks prior to the release. On September 24th during the first of the 2018 releases, it took 53 minutes for the first bird to finally venture outside the aviary doors. All but the last one flew away; this final bird strolled off to meet the others already exploring their new home. After the release, the birds have been tracked and fed routinely by the field team. These daily efforts will be continued as long as needed.

This article is a composite of news releases by the State of Hawai‘i Department of Land and Natural Resources (DLNR) released on September 29, 2017, September 14, 2018, and September 25, 2018.



Male ‘Alalā, “Mana'olana”, from 2017 release group.
Photo courtesy of San Diego Zoo Global.

Single-use Plastics: Bad for the Birds (and People Too)



A Laysan albatross nests in a field of marine debris at Midway Atoll Refuge. Photo courtesy Andy Collins/NOAA Office of National Marine Sanctuaries.

A human-created catastrophe exists in the ocean and is killing marine birds and other wildlife. Hawaii is located in the North Pacific Gyre where an estimated 100 million tons of plastic circulates. Much of this marine debris ends up in the Northwestern Hawaiian Islands and is never thought of by the tourists and residents in Hawaii. However, this waste litters beaches in Papahānaumokuākea Marine National Monument and kills marine mammals and birds through entanglement and ingestion. In 2017, 100,000 pounds of marine debris were removed from Papahānaumokuākea Marine National Monument.

Stark images of dead albatross with stomachs full of plastics are filmed on Midway Atoll in Chris Jordan's sobering documentary *Albatross*. Albatross are particularly prone to eating plastics as they skim their beaks across

the water to feed. However, almost all seabird species ingest plastic either mistaking it as food or consuming it as micro-plastics through the food web. Plastics don't fully degrade; instead photo-degradation creates micro-plastics, which may be consumed by marine life, including fish (Lusher et al. 2013, Murphy et al. 2017, Romeo et al. 2015) that may be eaten by humans. These micro-plastics have even been found in drinking water (Morrison and Tyree 2017) and sea salt (Yang et al. 2015). Pollution of micro-plastics is not restricted to marine ecosystems. Aerial pathways for dispersal have been identified through marine birds, with micro-plastics identified in seabird guano (Provencher et al. 2018), and by mosquitos, with a laboratory study that documented ingestion by mosquito larvae and transfer to adults (Al-Jaibachi et al. 2018). So it is likely that those unseen plastics in the middle of the ocean can end up in our soils, drinking water, and near-shore waters.

Chris Jordan poses the question in *Albatross* "Do we have the courage to face the reality of our time and allow ourselves to feel deeply enough that it transforms us and our future?" Surfrider and 5 Gyres are two organizations leading an effort to reduce marine debris by working both globally and locally to encourage bans of single-use plastics—plastics that are only used once before being thrown away or recycled. Last spring in Hawaii three progressive statewide bans were rejected by the legislature: a ban on single-use food containers, another on plastic straws, and the third on plastic bags. The majority of 1,615 testimonies were in support of the ban on single-use food containers, but the ban was rejected with an opposition that feared higher costs to consumers and businesses. However, bans on polystyrene foam containers have been passed locally in Maui and on the Big Island with the Maui ban going into effect on December 31, 2018 and the Big Island ban on July 1, 2019. Although, the ban on plastic straws failed in Hawaii, laws preventing the sale of plastic straws have been passed elsewhere, such as with the City of Seattle, which demonstrates the feasibility of such laws. Bans on plastic bags have existed for Maui and Kauai since 2011 and the Big Island since 2013. This July, the City and County of Honolulu began requiring businesses on Oahu to charge consumers 15 cents per bag. In 2020 no plastic bags will be allowed for distribution in Honolulu to consumers with the exception of the loopholes provided to farmer's markets and for takeout foods.

Hawaii has made some headway to reduce plastics and marine debris, but there is a lot more work to be done. As a bird lover and a concerned citizen, you may ask yourself

how can you help? First, you can support legislators that oppose single-use plastics. You can also reduce your own waste by saying no to plastic bags, straws, and takeout containers and support restaurants that do the same. The Oahu Surfrider organization certifies local restaurants as Ocean Friendly if they do not use polystyrene, only provide reusable silverware on-site, recycle, and do not supply plastic bags for takeout. These restaurants are listed on the Oahu Surfrider website and display an "Ocean Friendly Restaurant" sticker. You can also bring your own bags when you shop and carry reusable water bottles and coffee cups. In addition, participation in beach cleanups helps prevent human-generated trash from becoming part of a seabird's diet or entering the ecosystem as micro-plastics.

Article compiled by Jennifer Stahl, Hawaii Audubon Society, Office Manager.

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DOWNED SHEARWATERS AND PETREL FLEDGLINGS

From mid-November to December, shearwaters and petrels fledge in the Hawaiian Islands. This is the time the birds leave their burrows and take their first flight out to sea. They will remain at sea for over a year until they return to the Hawaiian Islands to breed. As birds head to sea for the first time, they may become confused by artificial lights and end up on the ground as sea-bird "fallout". These birds may get exhausted, hit by a car, or in an area where they can't obtain lift to fly.

If you find a downed bird, please contact the appropriate facility for your island (see below). It is preferred that birds get released near the location they are found. Staff can assess birds on-site to determine health status and release healthy birds. If necessary, birds can be taken to a facility for nutrition and hydration or to recover from injuries. Please do not give birds food or water or release birds prior to them receiving an evaluation by staff to determine if there are injuries.

If birds need to be moved from the location where they are found and dropped off at a rehabilitation center, please provide your name, contact information, and location where the bird was found.

Bird Rescue Contacts By Island:

Oahu

During business hours call Hawaii Wildlife Center (808-884-5000). If needed, 24/7 drop-offs may be made at listed facilities, with the exception of James Campbell, which is open business hours (M-F, 8AM-5PM).

- Sealife Park, 41-202 Kalanianaʻole Highway #7, Waimanalo, HI 96795
- Feather and Fur, 25 Kaneohe Bay Drive, Kailua, HI 96734
- Hawaii Humane Society, 2700 Waialae Ave, Honolulu, HI 96826
- James Campbell National Wildlife Refuge, Kahuku, HI 96731

Kauai

Call Save Our Shearwaters (808-635-5117) for assistance. During business hours drop-offs can be made at Humane Society. Other drop-off locations, including 24/7, may be found at <https://saveourshearwaters.org/>.

Maui/ Molokai/ Lanai

Call Maui Nui Seabird Recovery (808-573-BIRD) for 24/7 assistance. They will pick up birds.

Big Island

Call Hawaii Wildlife Center (808-884-5000).

Upcoming Events and Field Trips

EVENTS

World Migratory Bird Day

When: Saturday November 3, 2018

Where: James Campbell National Wildlife Refuge, O'ahu, 56-795 Kamehameha Highway, Kahuku, HI 96731

Information: Hawaii Audubon Society and U.S. Fish and Wildlife Service will host the World Migratory Bird Day.

Please check website for updates on schedule.

Morning:

8:30 AM - Surfrider Beach Cleanup

9:00 AM - refuge habitat restoration

9:00 AM – refuge bird tour

Afternoon:

1:00 PM refuge bird tour, including show-and-tell of predator-proof fence and seabird burrows

3:00 PM Presentation on migratory bird research

Symphony of the Hawaiian Birds

When: Wednesday November 14, 2018, 7 PM

Where: Neal S. Blaisdell Center, Honolulu

Information: The Hawaii Symphony Orchestra presents "*Ohana Concert: Symphony of the Hawaiian Birds*."

At this Ohana Concert, maestro Dr. Jeffrey Boeckman will lead a 60-minute program that takes concertgoers on a journey through the sounds of endangered and extinct Hawaiian birds. Six new compositions and videos/animations about Hawaiian birds created by local composers and artists will be featured.

Tickets: General admission of \$15 for adults and \$5 for students with ID

EVENTS

Hawaii Audubon Society's Annual Meeting and Members Dinner

When: Wed., Nov. 28, 2018, 6 PM–9 PM

Where: Waikiki Yacht Club

Invitation: This event is open to the public.

Please join the Hawaii Audubon Society's Board of Directors for a delicious buffet dinner, no-host cocktails, and a fascinating presentation by local journalist and author Susan Scott.

Susan will discuss writing her latest book, "Hawaii's White Tern, Manu-o-Kū, An Urban Seabird" in her talk entitled: "It Takes a Hui: How citizen scientists, researchers, government employees, educators, wildlife groups, writers, photographers, tree trimmers, birders, office workers, condo dwellers and others have come together to help Honolulu's White Tern." Susan's book will be on sale at this event.

Tickets: \$35 for members and \$40 for non-members. Please purchase tickets at: <http://www.hawaiiaudubon.org/2018-annual-meeting>

Location: The Waikiki Yacht Is located at 1599 Ala Moana Blvd (at the Waikiki end of Ala Moana Park Drive. Free parking is available in public parking lots in Ala Moana Park or along Ala Moana Park Drive.



Upcoming Events and Field Trips

FIELD TRIPS

Beginning Birding

When: Saturday November 17, 2018, 7:30 AM

Where: Kapiolani Park, O'ahu. Meet at the Louise Dillingham Memorial Fountain.

Leaders: Madison Furlong (HAS Volunteer)

Description: Learn basic birding techniques that will prepare you to bird on your own or participate in a Christmas Bird Count where the data you collect may be used by scientists for bird population status.

What to bring: Please consider bringing a hat, a small notebook for writing down species encountered, and binoculars. Bushnell has good quality binoculars in a range of models that are affordable, such as 8x42 or 10x42 models.
<https://www.bushnell.com/Products/Binoculars/?Intests=Wildlife&sort=price-low&page=1>

RSVP: Please email madison.furlong@gmail.com.

Kona Coast Boat Trips

When: Saturday December 29, 2018 6 AM-2:30 PM

Where: Kona Coast on Big Island

Leader: Lance Tanino (Commercial Bird Guide)

Description: Join us on an 8-hour open ocean adventure in search of marine wildlife (seabirds and marine mammals) off the Kona coast on a comfortable 46-foot boat. Birding and marine wildlife will be the priority. However, fishing lines will be set for trolling, and you'll have an opportunity to reel in a pelagic fish if you are interested.

RSVP: Email Lance.Tanino@gmail.com to sign-up and/or for more information and questions.

Cost: \$170/person

Christmas Bird Count

The Christmas Bird Count (CBC) is a bird census started by conservationists on Christmas Day in 1900 to replace a holiday tradition where competitors killed as many furry and feathered critters as possible. Scientists use data collected by CBCs to determine status and health of bird populations.

Below are CBCs in Hawai'i ordered by island. For details, contact local organizers listed below.

Big Island

Volcano: Sat, Dec 15, 2018, Thane Pratt,
Thane-linda@earthlink.net, 808-443-8160

North Kona: Sat, Dec 22, 2018, Lance Tanino, Lance.Tanino@gmail.com, 808-495-6545

Hilo: Sat, Jan 5, 2019, Sherman Wing,
shermanwing1@gmail.com, 303-324-9636

Kaua'i

Kapa'a (E Kaua'i): Wed, Dec 19, 2018, Lucy Carr,
cbckauai@gmail.com, 808-639-1388

Waimea (W Kaua'i): Sat, Dec 22, 2018, Michelle Hookano, michelle.hookano@kokee.org, 808-335-9975

Maui County

Hana (Koki State Park): Tues, Dec 18, 2018, Barry Solomon, barry.solomon428@gmail.com, 808-868-0418

Iao Circle: Fri, Dec 28, 2018, Sonny Gamponia,
sgamponia@gmail.com, 808-244-0727

Haleakala Circle: Fri, Jan 4, 2019, Sonny Gamponia, sgamponia@gmail.com, 808-244-0727

Lanai (Boat Harbor): Wed, Dec 19, 2018, Sonny Gampon, sgamponia@gmail.com, 808-244-0727

Moloka'i (Topside & Kalaupapa): Tues, Dec 18, 2018, Arleone, nene@hawaii.rr.com, 808-553-5992

O'ahu

Honolulu: Sun, Dec 16, 2018, Peter Donaldson, pdnldsn.bird@mac.com

Waipio (Central O'ahu): Sat, Dec 29, 2018, Amanda Talpas, amandataltas@gmail.com, 808-373-6364, or Dick May, mayhi02@hotmail.com

Kealia Pond National Wildlife Refuge Boardwalk

Yolanda Solorio, a volunteer for HAS, conducts regular guided tours at Keālia Coastal National Wildlife Refuge on Maui. Participants are provided information on the wetland and migratory birds in the area as they walk along Keālia boardwalk. On the walk, you may cross paths with seasonal visitors, such as the little Pacific Golden Plover, who flies non-stop every summer from Alaska to the refuge. Quite a feat of nature! The boardwalk traverses ponds that are home to fish, birds, insects, and invertebrates. It runs parallel to the beach, with its coral reefs, and nesting turtles, and points straight to the awe-inspiring West Maui Mountains. On her afternoon walks, folks come for the birds, and stay for the sunsets. It is Maui, after all!



Bird sighting at Kealia Pond Field Trip on September 6, 2018. Photo courtesy of Cristina Solorio.

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



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