



‘ELEPAIO

Journal of the
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For the Protection of
Hawai‘i’s Native Wildlife

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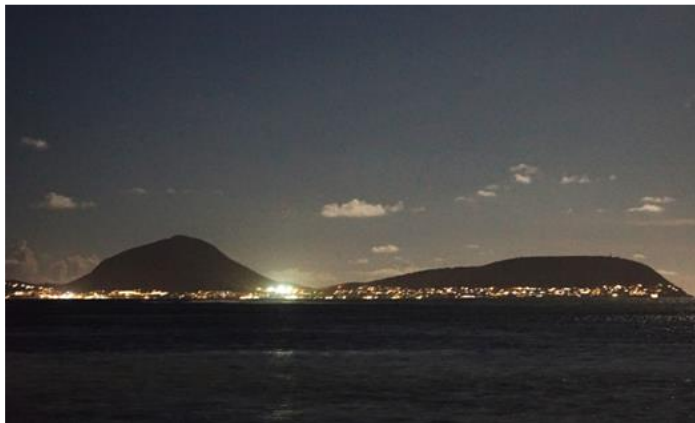
Light Pollution and Seabird “Fallout Season”

- Please Kokua

It’s that time of the year again when shearwaters and petrels fledge in the Hawaiian Islands. You can help increase their chance of survival while also saving money on your energy bill.

Between September and December, shearwater and petrel fledglings leave their nests and take their first flight out to sea. As they head to the open ocean for the first time, they may become distracted and disoriented by artificial lights, which they mistake for moonlight.

As a result, they may collide with buildings or vegetation, get hit by a car, or get stranded in an area where they cannot obtain lift to fly. They end up on the ground as seabird “fallout”, where they become easy prey for mongooses, cats, off-leash dogs, and other predators.



Artificial lights from sport stadiums, street lamps, and buildings in residential areas are often brighter than the moon, photo credit Susanne Spiessberger.

WHAT CAN YOU DO TO PREVENT FALLOUT

The Department of Land and Natural Resources (DLNR) summarizes what you can do to reduce the impact of civilization on the birds (<https://dlnr.hawaii.gov/blog/2017/11/15/nr17-183/>):

- turn all outdoor lights so that they are facing down to the ground, and use downward lighting for signs;
- turn off decorative and unnecessary lights as much as possible;
- replace bare spotlights, floodlights, and unshielded lights with seabird friendly lighting styles (including shielding the lights to prevent them from facing upwards and using non-white or lower wattage lamps);
- place floodlights and security lights on motion detectors so that they are not on all the time;
- shield outdoor lights with commercially available or home-made glare reducing shields;
- close curtains at night to help reduce overall glow and glare;
- keep dogs and cats indoors so that they are not able to attack and kill grounded birds outside.

WHAT CAN YOU DO TO HELP

Find guidelines on what to do when you find a young seabird on the ground, and how to determine if it actually needs to be rescued on the following DLNR website: <https://dlnr.hawaii.gov/wildlife/seabird-fallout-season/>

If you determine that the downed seabird needs rescue, please contact the appropriate facility for your island: <https://dlnr.hawaii.gov/wildlife/downed-wildlife-contact-details/>

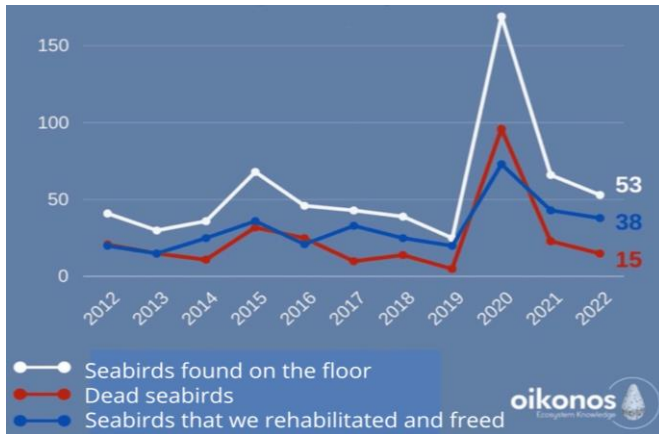
OIKONOS INITIATIVE

HAS partner organization Oikonos Ecosystem Knowledge

recently published an article about their conservation efforts on Robinson Crusoe Island, 700 miles off the coast of Central Chile on <https://www.oikonos.org/blog/solutions-to-light-pollution-affecting-pink-footed-shearwaters-and-many-more-species-in-robinson-crusoe-island>:

When bright streetlights were installed on the waterfront in 2020, a high number of Pink-footed Shearwater chicks were found grounded and vulnerable. In a collaboration with the Municipality of Juan Fernández, the Office of Sky Quality Protection of Northern Chile, and Aladdin Lighting, streetlight filters were installed along the coast.

The filters reduce the blue light spectrum that affects biodiversity and people, thus minimizing the damage caused by light pollution. Oikonos illustrates the success of this project in the following graph.



Casualties dropped significantly after the filters were installed in 2022.

FREEMAN SEABIRD PRESERVE MEASURES



New seasonal sign, designed by Greg Hester Graphics.

At our Freeman Seabird Preserve (FSP), we started a series of seasonal signs this year to educate and inform the public what is going on with the wedgies year-round. The sign for the upcoming November-December season explains how artificial lights are harmful to Wedge-tailed Shearwaters.

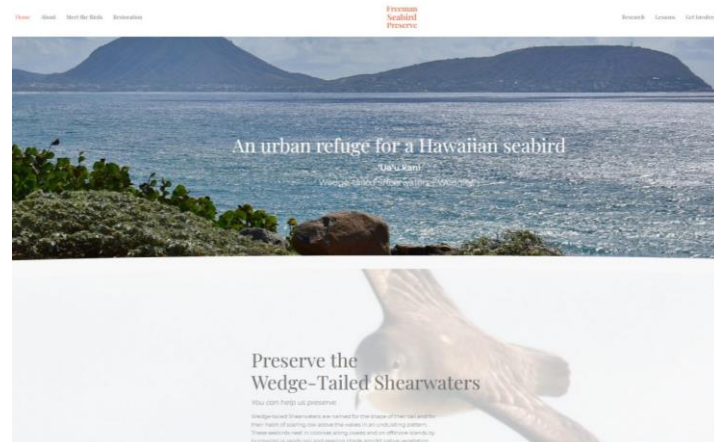
FSP UPDATE

In the field of conservation, we all too rarely receive good news and encouraging numbers. But thanks to a lot of caring people who contributed thousands of volunteer hours since 2007, our fourteenth yearly chick census on September 14 revealed that a record 322 chicks hatched. That is 76% of the 423 active nests we counted in July!



Lots of flags mean lots of chicks! This is how volunteers mark each spot where they locate a chick, photo credit Susanne Spiessberger.

Find more information about birds and plants on the preserve, lesson plans to download, and much more on the new website: <https://freemanseabirdpreserve.org>.



Screenshot of our new FSP website

Fieldwork Volunteer Opportunity

FSP is generally closed to public visitation to protect sensitive nesting habitat. Reservations may be arranged for individuals or groups that would like to help restore Hawaiian coastal vegetation and seabird nesting habitat. In November and early December, Wedge-tailed Shearwater adult birds and chicks leave the Preserve to forage at sea for several months before returning in the latter part of March to nest. While the birds are absent from FSP, volunteers are needed for habitat restoration. Activities include maintenance of native plants and artificial landscape features, along with the removal of invasive plants, trash, and debris. Please bring drinking water, sun and rain protection, gloves, weeding tools, and clippers or loppers, if you have them. We also have gloves and tools to share.

When: January through March, Saturdays from 8 to 11 am

Where: Freeman Seabird Preserve, located in Southeast O‘ahu at Black Point. For more information, go to <https://freemanseabirdpreserve.org>.

KŌLEA UPDATE

The 2022-2023 Kōlea Count Citizen Science Project is in full swing, and we are just about to wrap up the “Arrival” season (July 1 to November 30), during which the birds return from Alaska. In the next season, from December 1 through March 31, you can participate in a “Big Count” for large areas such as campuses, golf courses, parks, as well as in a “Little Count” for small areas such as backyards or schoolyards; go to koleacount.org and follow the guidelines. A volunteer survey project, which monitors the plover population at the National Memorial Cemetery of the Pacific (Punchbowl), shows that numbers are slightly up from around 70 last year to about 80 this year. From the 30 birds that plover expert Oscar Wally Johnson, PhD, and volunteers equipped with GPS trackers and/or leg bands in April of this year, 22 made it back to Punchbowl.

Also back again this year is “Mr. X”, named after the area he calls home (Section X of Punchbowl Cemetery). He must have at least 120,000 miles on his wings and is heading towards breaking the record for the oldest known kōlea (he

is at least twenty years old).



Mr. X, marked by Wally Johnson 20 years ago, lost the leg band on his right side over the years, photo credit Susanne Spiessberger.

MANU-O-KŪ UPDATE

By HAS Vice President Rich Downs

How the manu-o-kū are able to thrive in our urban environment is something we’re trying to understand as we continue to study this amazing bird. One of their traits that suits them well to living among us and the other creatures we attract, such as pigeons, is their ability to adapt.



White Tern (red circle) between two pigeons (blue circles), photo credit Rich Downs.

Like the White Tern population, the pigeon population in the greater Honolulu area continues to grow. In years past it seemed that we seldom saw terns and pigeons in the same tree. But as their numbers increase the terns seem to be

accommodating themselves to the presence of other bird species that are also looking for places in trees to lay their eggs and raise their young.

A White Tern survey volunteer came across an example of the terns' ability to adapt to this change in their environment when they spotted a White Tern incubating an egg in a tree high above Kalakaua Avenue, with a pigeon perched on either side. We often see terns chasing pigeons out of their nesting trees, but some seem to be taking the approach of "If you can't beat 'em, join 'em".

In the following, HAS Treasurer and former President John Harrison reflects on the passing of Fern Duvall, an icon in the Hawai'i conservation field, and includes a compilation of statements from colleagues and friends.

Aloha Fern

By John T. Harrison III, PhD

Many of you know that we lost a gentle giant of Hawai'i conservation last February, when Fern Duvall, PhD, passed away. For those like myself who worked in the Hawai'i natural resource management community, Fern's reputation was legendary, but his own self-description of his authority was characteristically modest. He wrote in comments to the Fish and Wildlife Service in 2008 that he based his conclusions, "primarily upon my professional training in Zoology, Ecology, and Animal Behavior as well as my professional work experience starting in 1984 for the State of Hawai'i's Department of Land and Natural Resources (DLNR), Division of Forestry & Wildlife (DOFAW), first overseeing the statewide Captive Propagation Program for Endangered Hawaiian Birds until 1996, and subsequently as a Wildlife Biologist to the present."

When Fern took over the Pōhakuloa facility housing the effort to bring 'Ālalā back from the brink of extinction, he inherited a challenging task. As described by his friend and colleague, Sheila Conant, University of Hawai'i (UH) Professor Emerita, PhD, "the aviaries were small and primitive, and Fern had a modest budget. It was a war zone: helicopters flying a few hundred feet above, explosions nearly every day. The birds' behavior clearly indicated they

were severely stressed." Achieving success in incubating and hatching was the reward for Fern's tireless efforts to secure new facilities at Olinda, where he laid a foundation for the work that prevented the extinction of the species.

Though he is recognized for this signal achievement, Fern was so much more than a gifted aviculturist. Scott Fretz, PhD, DOFAW Maui District Manager and one of Fern's co-workers, notes that, "everyone knew that if you were going to be doing any kind of conservation work on Maui, Fern was one of the first people you were going to have to talk to...He knew the plants and animals. Not just their names, he knew their role in nature, how they affected other species and how they affected us." Fern's depth and breadth of knowledge was the achievement most frequently noted by his colleagues in memorials. Pat Hart, PhD, a close friend and Professor of Biology at UH Hilo specializing in the conservation of Hawaiian forests and forest birds, described Fern as "a scientist/naturalist of the first order...a rockstar Biologist." Hanna Mounce, PhD, Research and Management Project Coordinator for the Maui Forest Birds Recovery Project described Fern as, "this biological Yoda, who we all looked up to." Jay Penniman, Project Manager for the Maui Nui Seabird Recovery Project (an organization that was conceived by Fern back in 2006) noted, "he was gifted with a connection to the natural world." And he was praised as "the best naturalist I have ever known" by both Keith Swindle of the U.S. Fish and Wildlife Service and by Sheila Conant.

I first encountered Fern in my capacity as a charter member of the State of Hawai'i Endangered Species Recovery Committee (ESRC), an advisory board comprising representatives of Federal and State agencies having major responsibilities for endangered species management, along with a representative of the University of Hawai'i College of Natural Sciences and non-governmental representatives with scientific and cultural expertise relevant to natural resource issues. We were holding our July 16, 2004 meeting at the DLNR Kahului Baseyard on Maui, prior to a brutal 4-wheel drive excursion up a dry streambed to the West Maui site of the proposed Kaheawa Windfarm. We all were

suitably dressed for the site visit, so it was no surprise to see Fern stroll into the meeting in his iconic cargo pants, DLNR shirt, and baseball cap (Figure 1).



Figure 1. Fern (foreground), with the ESRC in the West Maui Mountains, August 3, 2004, photo credit John Harrison.

At that and many subsequent ESRC meetings and site visits, I came to appreciate both the boundless depths of Fern's ecological and natural resource knowledge, but more engagingly, his wry humor and the quiet authority with which he made his contributions. His was the quietest voice in the room, but when he spoke, everybody listened. I think part of the deference he received was due to his unabashed advocacy for the birds, plants, and ecosystems he wanted to survive and prosper in the face of human challenges, but there was something more compelling in his presence. I think his friend and colleague, David Duffy, PhD, Professor of Botany at UH Mānoa, captured it best in this recent observation. "Talking to him slowed life down into a thoughtfulness that was not about posturing or gain but rather about the good between people."

In 2008, I was privileged, as President of Hawaii Audubon, to honor Fern with the Charles Dunn Lifetime Achievement Award at the Society's Annual Awards Dinner. This is a recognition bestowed "to an individual who has made a major contribution to the Society and its goals for a long period of time." We were indeed fortunate to have Fern continuing his contributions for many years after that. Fern's vision to save Maui's forest birds was to create what he called a Mauna Lei of trees around Haleakalā, and over the

years, he led his team, planting hundreds of thousands of trees on the mountain. That work, and his vision, will continue. As Pat Hart so eloquently concluded at Fern's memorial service, "the afterlife is the good you have added to the world, the memories that people hold for you, the love you spread, the lands you have preserved, and the birds and plants you have helped save from extinction. By that measure, I would say that Fern will live on for a very long time!"

*** END ***

Thousands of Seabirds!

By Colleen Soares, PhD

I've been reading old 'Elepaio journals from the 1950s to the 1970s and Pacific Rim Conservation articles. I was especially interested in past seabird research. It was an interesting, insightful journey. History is a wonderful tutor. This educational journey was spurred on by a recent wondrous experience. At 5am on August 28, I hustled out to Makapu'u lighthouse trail for the sunrise at 6:15 with Gwen, my good friend, hiking buddy and early riser. Waiting for the sunrise, we looked down and saw thousands of Great Frigatebirds ('iwa) and Boobies or *Sula* ('a) flying low over the ocean. I felt as though I had leaped into an enchanted world. Is this real, I thought?

I had to start some research. So over eight days, I read diligently and drove out to Makapu'u Point. Each time I witnessed this same phenomenon. From the top of the trail, looking down to the water with binoculars, there were hundreds - thousands - of birds flying from the direction of two bird sanctuaries offshore, Mānana and Kāohikaipu, and from further west, Moku Manu and beyond. Great Frigatebirds ('iwa) and Boobies or *Sula* ('a), flew low over the ocean around Makapu'u. There were no doubt other seabirds, such as Black (noio kōhā) and Brown Noddies (noio) and Sooty Shearwaters that are abundant on the offshore islets. Looking down from above, it is difficult to identify without binoculars or a good telephoto. The 'a were easier. During the eight observations over the weeks, the *Sula* often flew in flocks of 5 to 10. 'A, boobies/*Sula*, have white and brown color morphs.

They may appear as two different birds. Some are white with dark wings and some are brown. They are the same species. Young birds are also brown. ‘Iwa hunt for fish on the surface, such as flying fish and squid. They do not dive like ‘a since their feathers are not waterproof. Perhaps ‘iwa fly with the *Sulas* in order to snatch a snack from *Sula* beaks, as the names frigates and ‘iwa remind us. Frigates were sailing ships used by the British navy, and by pirates, because they were fast and maneuverable. ‘Iwa means thief in Hawaiian.

There are more than a million each ‘a and ‘iwa worldwide. In Hawai‘i, there are 10,000 breeding pairs of ‘iwa in the Hawaiian chain. They nest in the Northwest Hawaiian Islands and roost on islets in the Main Hawaiian Island (MHI), although nesting chicks have been seen on MHI islets. I watched for several hours as thousands of birds flew in from the East. Numbers dwindled by 8am when the sun got warm. Then, a few of them fished under the cliff face, while most disappeared! But where do they go? Each time I drove back to town, I stopped and searched for the birds, and saw none. This was indeed a mystery.

A sailing friend came up with an answer. Kaulana has sailed around the south Pacific on Hōkūle‘a voyages and watched many birds. He said the young fledged birds fly out to connect with older birds in order to learn the ropes at sea. Anthropomorphically, we could say that the young ones fly along the shore to join the seasoned, experienced birds who are flying out to sea to fish. As a mother, a parent, I like his story very much. In my crowded mind, it makes perfect sense and solves the mystery. It appeared that they all headed out to sea after the point because, driving home, I saw no big flocks of birds on Kaiwi side. I’m on my way soon to see them come back from their day of fishing.

We don’t often see this in Hawai‘i, but years ago, sailing in the South Pacific, on the milk-run leg from Tahiti to Samoa, I saw huge numbers of birds flying and nesting on small islets. I walked carefully through thousands of eggs on the ground (and picked up a few for breakfast), and came face-to-face with feisty keiki sitting precariously in naupaka bushes. It was indeed magic and wondrously real.

Birds in Hawai‘i Today – Book Review

By Colleen Soares, PhD

I think that Chuck Stone had fun writing *Birds in Hawai‘i Today*. He combines poems, photos by Jack Jeffrey, and scientific information in a readable and in-depth overview of Hawaiian birds. The poems are different and fun. They give information about the birds, such as these stanzas about the Pacific Golden Plover or kōlea.

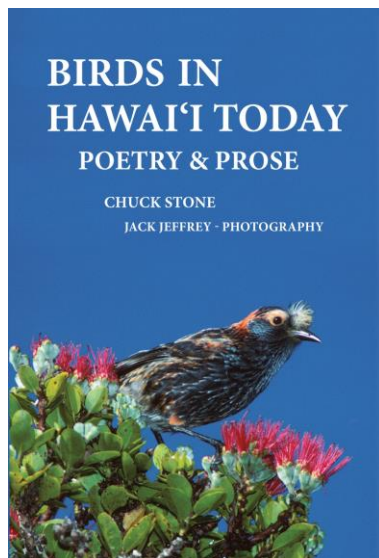
*These shorebirds fly three thousand miles
Nonstop to Hawai‘i in three days,
Their ground speed forty mph
Half their fat burned along the way.*

....

*At night, Kōlea roost in groups
On rooftops, hillsides, lava flows.
They’re vulnerable to cats, Barn Owls,
And other nightlife we all know.*

Others give an aesthetic view, such as the White Tern or manu-o-kū.

*This lovely, foot-long, snow-white tern
With its translucent wings and tail
On effortless and buoyant flight
Seems angelic, beyond this vale.*



Stone was a research biologist in Hawai‘i Volcanoes National Park for fifteen years, working with scientists in various fields and adding to his expertise. Award-winning photographer Jack Jeffrey’s beautiful pictures add to this work and round out the scientific information with aesthetic enjoyment of the poems.

This work is a readable and comprehensive overview of Hawaiian birds.

Hawaii Audubon Society Membership and Donations

The mission of the Hawaii 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 Hawaii Audubon Society.

Going forward, all annual memberships end on Dec 31. As a courtesy, all 2022 memberships (new or renewed this calendar year) will expire Dec 31, 2023. See details on <https://hiaudubon.org/membership>.

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

- \$15 Hawaii Audubon Society Student Membership
- \$25 Hawaii Audubon Society Regular Membership
- \$40 Hawaii Audubon Society Family Membership
- \$100 Hawaii Audubon Society Supporting Membership

Or, make a tax-deductible donation in any amount on <https://hiaudubon.org/donate/>.

International membership is now only \$25.

All members will receive by email the bimonthly 'Elepaio journal, with peer-reviewed scientific articles and local environmental news and activities. To request the 'Elepaio by mail (**not available to international members**), send us an email.

Mahalo for your support and commitment to protecting Hawai'i's native wildlife!

Announcements

For regular updates, check out hiaudubon.org/events and/or our *social media sites*

123rd National Audubon Society Christmas Bird Count

The following dates were available to us at the time of print. Find more information on <https://www.audubon.org/conservation/join-christmas-bird-count> and check our website for updates.

Big Island

North Kona: Saturday, Dec 17, 2022. Contact Lance Tanino, lance.tanino@gmail.com, (808) 495-6545

Volcano: Sunday, Dec 18, 2022. Contact Alex Wang, axwang12@gmail.com

Maui

'Iao: Monday, Dec 19, 2022

Haleakalā National Park: Monday, Dec 26, 2022

Hana: Friday, Dec 30, 2022

Lana'i: Thursday, Dec 15, 2022. Contact for any of the four: Sonny Gamponia, sgamponia@gmail.com, (808) 244-0727

Kaua'i

Lihu'e: Monday, Jan 2, 2023. Contact Jennifer Rothe jennifer.a.rothe@gmail.com

O'ahu

Honolulu: Sunday, Dec 18, 2022. Contact Pete Donaldson, pdnldsn.bird@mac.com (preferred), (808) 456-5662 (h), (808) 371-4447 (c)

Waipio: Monday, Jan 2, 2023. Contact Dick May, (808) 375-2439, rmayhi02@hotmail.com

BIG ISLAND TALK, NOVEMBER 17, 5:30-7:30 PM

President Susan Scott and VP Rich Downs will talk about "83 Years and Counting: The Hawaii Audubon Society in 2022"; at 73-970 Makako Bay Drive; Hale Iako Building, NELHA Research Campus, Kailua-Kona. Hosted by Nicole and Mike Carion, the Society's Big Island ambassadors. RSVP: Mpcarion@gmail.com

KEEP CATS SAFE INDOORS

Keep Cats *and* Birds Safe

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Hawaii Audubon Society
850 Richards St, Suite 505, Honolulu, HI 96813
office@hiaudubon.org
<https://hiaudubon.org>





HAWAII AUDUBON SOCIETY
 850 RICHARDS ST, SUITE 505
 HONOLULU, HI 96813-4709

<https://hiaudubon.org>
 office@hiaudubon.org

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