



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

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Testimony Presented Before the  
Senate Committee on Agriculture and Environment  
and  
Senate Committee on Water and Land  
Wednesday, April 14, 2021 at 1:30 p.m.

By  
Nicholas Comerford  
Dean, College of Tropical Agriculture & Human Resources  
University of Hawai'i at Mānoa

### HCR 69 HD1 – REQUESTING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO SUBMIT A PETITION TO LIST THE PUEO AS A THREATENED OR ENDANGERED SPECIES UNDER THE ENDANGERED SPECIES ACT

Chairs Gabbard and Inouye, Vice-Chairs Nishihara and Keith-Agaran, and members of the Senate Committee on Agriculture and Environment and Senate Committee on Water and Land:

Thank you for the opportunity to testify in support of HCR 69 HD1. This resolution requests the Department of Land and Natural Resources to petition the U.S. Secretary of the Interior, through the United States Fish and Wildlife Service (USFWS), to protect the pueo, also known as the Hawaiian short-eared owl (*Asio flammeus sandwichensis*) as a threatened or endangered species.

Listing the pueo as a threatened or endangered species by the USFWS would increase federal protections for the population on O'ahu. There are several considerations that must be met for the USFWS to decide to list the species. In particular, they must determine if there are significant factors that preclude the species' continued existence throughout all or a significant portion of its range.

Studies began at the University of Hawai'i at Mānoa in 2017 that will contribute to the USFWS evaluation for listing, but further studies will likely be needed, and we note that the genetics study that will begin this fall is likely critical to determine whether this is a distinct population segment. Below is a summary of the studies to date, as well as ongoing studies.

- **2017–2019 Surveys.** Developed standardized survey protocol and implemented for the island of O'ahu, where pueo are state-listed as Endangered. Trained Hawaii Division of Forestry and Wildlife personnel across islands on protocol in 2019.
- **2017–present Community Reporting Website.** Developed community-science reporting and educational website, pueoproject.com. This website allows reporting of

sightings of pueo, provides educational materials, and has been successful in increasing engagement with communities across the Hawaiian Islands.

- **2017–present Nesting Ecology.** Initial studies of nesting ecology showed pueo using diverse ecosystem types to nest, including high elevation native wet forest, estuarine wetlands, grasslands, shrublands, and agricultural lands. Limited observations also suggest a potentially high rate of nest abandonment, and impacts from feral dogs and cats to nesting success.
- **2018–present Home Range.** Used VHF transmitters to evaluate site fidelity and home range on O‘ahu. Novel results include use of urban beach parks for foraging in addition to grasslands and shrublands, with occasional forays to forested areas, roosting in trees as well as ground-roosting, and relatively small home ranges with a high degree of site fidelity compared to continental populations (though transmitter batteries have failed, re-sights of banded individuals suggest they continue to use the same area multiple years in a row).
- **2018–2020 Occupancy.** Study on Maui evaluated factors influencing pueo occupancy, including foraging resources (rodents, invertebrates, birds, bats), elevation, and vegetation height. Vegetation height influenced detection probability, and elevation and the mass of available prey influenced occupancy (though results were varied among models and relatively weak due to a low number of pueo detections).
- **2019 Mortality.** Evaluated trends in pueo mortality data from 1993 to 2018 (N = 105 records). Results are consistent with previous studies that highlighted trauma as a key source of mortality, and suggest the importance of further investigation into strategies to minimize car and wind turbine strikes, as well as potential interactions with other factors such as rodenticide, competition with invasive barn owls, and emaciation. This study also highlighted the importance of state-wide reporting and database systems to collate key information for rare and threatened species.
- **2020–present Population Trends.** eBird-based study of population trends over time in the Hawaiian Islands. Results should be ready to share by this summer.
- **2020–present Movement.** GPS transmitter study to determine movement of O‘ahu pueo within (and potentially among) islands. Study has been delayed due to need to test/develop solar transmitter attachment to address charging concerns (as well as Covid and personnel delays). GPS-VHF battery-based GPS will be arriving in March and will provide ~3 months of movement data.
- **2020 – present Biocultural Knowledge and Value.** Review of the Hawaiian newspaper articles from ~1840-1940 to identify Indigenous ecological knowledge as well as biocultural values indicated through stories, chants, religions/cultural practices, and observations. Results should be ready to share by this summer.
- **2021 (beginning in fall) Genetics.** Study will assess population genetics of pueo and phylogenetics of the global metapopulation of Short-eared owls.

We support the consideration of pueo for listing, but we note that the data needed for evaluation of both threats to existence and population status (declining, stable, or increasing) are potentially lacking, and are likely to hinder the listing decision. However,

the consideration for listing will have the advantage of bringing this issue to the forefront.

DAVID Y. IGE  
GOVERNOR OF  
HAWAII



SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FIRST DEPUTY

M. KALEO MANUEL  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
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COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
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HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

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Testimony of  
SUZANNE D. CASE  
Chairperson

Before the Senate Committees on  
AGRICULTURE AND ENVIRONMENT  
and  
WATER AND LAND

Wednesday, April 14, 2021  
1:30 PM

State Capitol, Via Videoconference, Conference Room 229

In consideration of  
HOUSE CONCURRENT RESOLUTION 69, HOUSE DRAFT 1  
REQUESTING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO  
SUBMIT A PETITION TO LIST THE PUEO AS A THREATENED OR ENDANGERED  
SPECIES UNDER THE ENDANGERED SPECIES ACT.

House Concurrent Resolution 69, House Draft 1 requests that the Department of Land and Natural Resources (Department) petition the United States Secretary of the Interior, through the United States Fish and Wildlife Service (USFWS), to protect the pueo (Hawaiian short-eared owl, *Asio flammeus sandwichensis*) as a threatened or endangered species. **The Department supports this resolution and offers the following comments.**

Federal listing follows a strict process and analysis. Under the federal definitions, a species is listed as either an endangered species or threatened species depending on its status and the degree of threat it faces. An "endangered species" is one that is in danger of extinction throughout all or a significant portion of its range. A "threatened species" is one that is likely to become endangered in the foreseeable future throughout all or a significant portion of its range. A species is added to the federal list when it is determined to be an endangered or threatened species because of any of the following factors: (1) the present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) the inadequacy of existing regulatory mechanisms; (5) other natural or manmade factors affecting its survival.

Due to its wide range and cryptic nature, no comprehensive population estimates have been conducted for pueo. The Department recommends further studies be conducted to increase our

understanding on pueo distribution, population trends, genetics, and limiting factors. At this time, the lack of information is the greatest challenge in the conservation of this species. A listing petition may move such research and inventory up in priority.

Thank you for the opportunity to comment on this measure.

The Kawaihapai Ohana

Thomas T Shirai Jr – Po’o

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Waialua, HI 96791

Email: [Kawaihapai@hawaii.rr.com](mailto:Kawaihapai@hawaii.rr.com)

April 10, 2021

Public Hearing

Wednesday, April 14, 2021 / 1:30PM

Senate Committee on Agriculture & Environment (AEN)

Chair – Senator Mike Gabbard

Vice Chair – Senator Clarence K Nishihara

Senate Committee on Water & Land (WTL)

Chair – Senator Lorraine R Inouye

Chair – Gilbert S.C. Keith-Agaran

**RE: Testimony of Support for HCR 69 HD1 & HR 58 HD1 (Requesting the Department of Land & Natural Resources to Submit a Petition to list the Pueo as a Threatened or Endangered Species Under the Endangered Species Act)**

Aloha Chair Nakashima & Committee Members,

I am testifying as an individual and Po’o of The Kawaihapai Ohana which is recognized as a Native Hawaiian Organization by The Department of Interior’s Office of Hawaiian Relation and one of the first to be on this listing in 2007. I am a descendant of a Piko Ohana of Waialua and lifetime resident of Mokule’ia serving my fourth consecutive term on the North Shore Neighborhood Board Sub-District 1 (Mokule’ia to Ka’ena Point). I’m recognized by SHPD as a Lineal Descendant of Kawaihapai Ahupua’a for my Kuleana to Malama Iwi Kupuna along with serving 2 terms on the Oahu Island Burial Council. I also served on the Office of Hawaiian Affairs Native Hawaiian Historic Preservation Council and DLNR Ka’ena Point Advisory Committee. Lastly I’m a member of the Mokule’ia Community Association.

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| Kawaihapai Ohana   |  | Established:<br>2001                     |
| Summary: Protection and preservation of our iwi, kupa, cultural & historical sites with their applicable mo’okole (stories) of Waialua with a primary emphasis of the northwest coastline of Waialua that encompasses the ahupua’a of Kamamani, Makoleia, Aukun, Kikahi, Kawaihapai, Keiua & Kaona. The ultimate emphasis is ahupua’a of Kawaihapai. |  | Originally Registered:<br>12/19/2007     |
| Islands: O’ahu   | Mokaa: Waialua   | Ahupua’a: Northwest Coastline of Waialua |
| Contact: Mr. Thomas T. Shirai Jr.<br>Po’o<br>P.O. Box 601<br>Waialua, HI 96791<br>(808) 637-6690   | E-mail:<br><a href="mailto:kawaihapai@hawaii.rr.com">kawaihapai@hawaii.rr.com</a><br>Website:<br>None Listed |  |

Updated: September 23, 2020

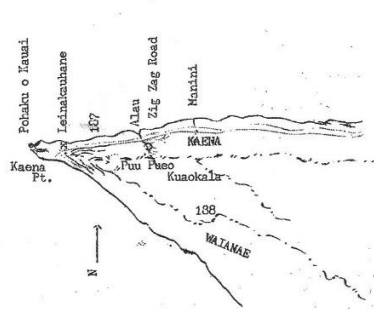
23



North Shore Neighborhood Board

As an individual and Po'o of The Kawaihapai Ohana I am testifying in Strong Support of HCR 69 HD1 &

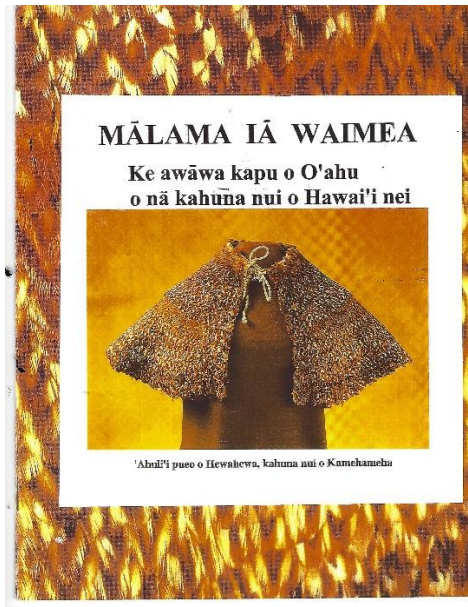
HCR 58 HD1. Geographically Pueo once inhabited many places throughout Hawaii along with their mo'olelo and Waialua has a deep relationship to the Pueo not only as an Aumakua or Endangered Species but are considered part of our Ohana just like Mano (shark). The mountain where Kuaokala Ridge and the USAF Ka'ena Point Tracking Station overlooking Ka'ena Natural Area Reserve (NAR) is named Pu'u Pueo and has a few Pueo that are still habitants of the area.



Pu'u Pueo also overlooks Leina Ka Uhane also located within the Ka'ena NAR (Natural Area Reserve). As a point of information the entire Ka'ena NAR which is Grant 1665 once was my Ohana Aina. Later it was reduced due to a greedy rancher who used the pohaku from the cultural sites within the Ka'ena Complex to make cattle pens. Secondly it was later acquired by the Army during WWII via Declaration of Taking and Executive Order. Later it was transferred to the Territory of Hawaii and eventually State of Hawaii.







**Listing the Pueo as a threatened or endangered species per the Endangered Species Act is a step in the right direction.**

**Mahalo for the opportunity to provide Testimony of Strong Support for HCR 69 HD1 & HR 58 HD1.**

**Thomas T Shirai Jr**

**Mokule'ia Waialua**



*Hawaii's Thousand Friends*

335 Hahani Street #342132 \* Kailua, HI 96734 \* Phone/Fax (808) 262-0682 E-Mail: [htf3000@gmail.com](mailto:htf3000@gmail.com)

April 14, 2021

COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard Chair

Senator Clarence K. Nishihara, Vice Chair

COMMITTEE ON WATER AND LAND

Senator Lorraine R. Inouye, Chair

Senator Gilbert S. C. Keith-Agaran, Vice Chair

HCR 69 HD1

REQUESTING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO SUBMIT A PETITION TO LIST THE PUEO AS A THREATENED OR ENDANGERED SPECIES UNDER THE ENDANGERED SPECIES ACT

Hawaii's Thousand Friends, a non-profit organization dedicated to ensuring that growth is reasonable and responsible and that planning and land use decisions protect natural and cultural resources and human health and are implemented in conformity with the law, strongly supports listing of the pueo as a threatened or endangered species under the Endangered Species Act (ESA).

The endemic pueo, known as the "bird of wisdom" and considered `aumakua or ancestral guardian by many Hawaiian families, were once widespread throughout the islands but are thought to be declining.

NatureServe an international network of databases, whose mission is to provide the scientific basis for effective conservation action, lists the pueo as T2 Imperiled Subspecies. Reasons listed for status are: 1) small range on main Hawaiian Islands, 2) threatened by loss of habitat, predation of eggs and young by alien mammals, and 3) possibly disease ("sick owl syndrome") a recent phenomenon possibly caused by pesticide poisoning or food shortages.

According to NatureServe the pueo needs better protection especially on Oahu, surveying all possible habitats on Oahu and monitoring the population statewide.

Once prevalent throughout O`ahu including Ewa Beach and Kapolei area the O`ahu Pueo is the only pueo in the state **listed as endangered by the State.**

According to the Pueo Project conducted by the College of Tropical Agriculture and Human Resources and the Department of Natural Resources and Environmental Management (April 2017 to March 2018) the O`ahu Pueo population is estimated at **807 individuals.**

Under the Endangered Species Act (ESA) once a species becomes listed as "threatened" or "endangered," it receives special protections by the federal government.

Among the conservation benefits authorized for threatened and endangered plants and animals that are listed under the ESA are: protection from being jeopardized by federal activities; protection of critical habitat being destroyed or adversely modified; restrictions on take and trade; a requirement that U.S. Fish and Wildlife develop and implement recovery plans and authorization to seek land purchases or exchanges for important habitat; federal aid to State conservation departments with cooperative endangered species agreements.

According to the International Union for Conservation of Nature (IUCN) Hawai'i is the world's biggest extinction hotspot for birds.

From 1837 to the 1900s four O`ahu endemic birds went extinct – O`ahu `o`o, O`ahu `akialoa, O`ahu `akepa and O`ahu nukupu`u. Two other possibly extinct birds are the O`ahu `alauahio and Oloma`o.

Please pass HCR 69 HD1 to help prevent the extinction of Hawaii's endemic pueo.

**HCR-69-HD-1**

Submitted on: 4/7/2021 12:36:52 PM

Testimony for AEN on 4/14/2021 1:30:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Victoria Anderson   | Individual          | Support                   | No                        |

Comments:

Please pass this important resolution.

**HCR-69-HD-1**

Submitted on: 4/7/2021 7:29:26 PM

Testimony for AEN on 4/14/2021 1:30:00 PM

| <b>Submitted By</b>     | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|-------------------------|---------------------|---------------------------|---------------------------|
| Christopher Hendrickson | Individual          | Support                   | No                        |

Comments:

I support HCR69 HD1

**HCR-69-HD-1**

Submitted on: 4/8/2021 10:23:43 AM

Testimony for AEN on 4/14/2021 1:30:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Dana Keawe          | Individual          | Support                   | No                        |

Comments:

I strongly support hcr69 hd1