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GOVERNOR OF  
HAWAII



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COMMISSION ON WATER RESOURCE MANAGEMENT

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LAND  
STATE PARKS

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

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Testimony of  
SUZANNE D. CASE  
Chairperson

Before the House Committee on  
WATER & LAND

Thursday, March 18, 2021  
8:30 AM

State Capital, Via Videoconference, Conference Room 430

In consideration of  
**HOUSE CONCURRENT RESOLUTION 69 / HOUSE RESOLUTION 58  
REQUESTING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO  
SUBMIT A PETITION TO LIST THE OAHU PUEO AS A THREATENED OR  
ENDANGERED SPECIES UNDER THE ENDANGERED SPECIES ACT.**

House Concurrent Resolution 69 / House Resolution 58 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 O'ahu pueo, also known as the Hawaiian short-eared owl (*Asio flammeus sandwichensis*) as a threatened or endangered species; and that certified copies of the concurrent resolution be transmitted to Chairperson of the Board of Land and Natural Resources and the Program Manager of the Endangered Species Recovery Committee. **The Department provides the following comments.**

The Department lists the population of pueo on the Island of O'ahu as endangered under Hawaii Administrative Rules Chapter 13-124. Although no population census of the species has occurred to date, records from the Hawaii Audubon Christmas Bird Counts and anecdotal evidence have demonstrated a potential decline of the species in the Hawaiian Islands. Extensive loss of habitat owing to development, and conversion of large tracts of undeveloped pastureland to residential and recreational uses, especially on O'ahu, are thought to be contributors to the species decline. In addition to habitat destruction, the introduction of mammalian predators including cats, dogs, pigs, and mongoose are potential threats to this ground-nesting species.

The Department believes that listing the pueo as a threatened or endangered species by the USFWS would increase protections for the species and align the protections afforded to pueo by both Federal and State governments. However, the Department notes that the USFWS must consider best available science and data to determine if there are significant factors that preclude the

species' continued existence throughout all or a significant portion of its range. For USFWS to list only the O'ahu population of pueo as threatened or endangered, this population would need to meet the definition of a "distinct population segment" as defined in the 1996 joint USFWS-National Marine Fisheries Service policy (61 FR 4722: February 7, 1996). The Department further notes that the population of pueo on O'ahu has not been recognized as a genetically distinct population segment from the other Hawaiian Islands and no population estimates have been conducted to date. Reliable population estimates for a low-density species, such as the pueo, are difficult to ascertain and requires significant effort. Further, the Department notes that relatively little information is available about the biology, habitat needs, greatest threats, or distribution of the pueo. Without the data to support the O'ahu population as a distinct population segment and supporting evidence of the decline of the species, the USFWS may find the petition not warranted due to the lack of substantial information.

Therefore, the Department recommends further studies be conducted on the pueo to increase our understanding on the population trends, distribution, genetics, and threat assessment, so that an informed petition on its Federal listing can be made. At this time, the lack of information and data is our greatest challenge in the conservation of this species.

Thank you for the opportunity to comment on these measures.



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

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Testimony Presented Before the  
House Committee on Water and Land  
Thursday, March 18, 2021 at 8:30 a.m.

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

HCR 69/HR 58 – REQUESTING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO SUBMIT A PETITION TO LIST THE O'AHU PUEO AS A THREATENED OR ENDANGERED SPECIES UNDER THE ENDANGERED SPECIES ACT

Chair Tarnas, Vice Chair Branco, and members of the House Committee on Water and Land:

Thank you for the opportunity to provide testimony in support of the intent of HCR 69 and HR 58 requests that the Department of Land and Natural Resources (DLNR) petition the U.S. Secretary of the Interior, through the U.S. Fish and Wildlife Service (USFWS), to protect the O'ahu pueo, also known as the Hawaiian short-eared owl (*Asio flammeus sandwichensis*) as a threatened or endangered species; and that certified copies of this Concurrent Resolution be transmitted to Chairperson of the Board of Land and Natural Resources and the Program Manager of the Endangered Species Recovery Committee.

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 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 Hawai'i 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.

Overall, 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.



2021  
BOARD OF  
DIRECTORS

March 16, 2021

Elizabeth Reilly  
President

Committee on Water & Land  
Hawaii State House of Representatives  
Hearing on March 18, 2021 at 8:30 a.m.  
Conference Room 430/Videoconference

Allen Tateishi  
Vice President

Dianne Gleib  
Secretary

**RE: Support for HCR69 / HR58**

Marian Grey  
Treasurer

Aloha Chair Tarnas, Vice Chair Branco, and WAL Committee Members,

Dean Takebayashi  
Director

Livable Hawaii Kai Hui **strongly supports** HCR69 and HR58 to direct the Department of Land and Natural Resources to petition for the O'ahu pueo's inclusion in the Endangered Species Act.

Gary Weller  
Director

Kendrick Chang  
Community Outreach

The Hui emphasizes conservation of Hawai'i's natural and cultural resources. Naturally, this extends to local biodiversity and our beloved pueo. The O'ahu pueo, sometimes spotted flying across our East Honolulu home, is not only an endemic species with a dwindling population, but it is also a prominent figure in Hawaiian culture and an 'aumāku of many Hawaiian families.

Dylan Ramos  
Communications &  
Operations

**Website**

[www.hawaiikaihui.org](http://www.hawaiikaihui.org)  
[www.kaiwicost.org](http://www.kaiwicost.org)

As residents of Maunaloa, we strive to stem the ecological and cultural impacts of ongoing development over our natural spaces. This is especially important when it comes to protecting the pueo, which can occupy a variety of habitats but are elusive to scientific studies of their breeding biology. Such uncertainty, paired with a clear trend of population decline, makes conservation efforts all the more important.

**Like us on Facebook**  
Livable Hawaii Kai Hui  
Aloha Aina O Kamilo Nui  
Ka Iwi Coast

The Endangered Species Act would provide much-needed protections and incentives to save the O'ahu pueo before it is too late.

Livable Hawaii Kai Hui is a 501c(3) non-profit, community organization serving East Honolulu since 2004. We strive to promote sensible growth, respect for cultural & natural resources and upholding the integrity of the East Honolulu Sustainable Communities Plan.

Mahalo piha,

Dylan Ramos  
Communications & Operations  
Livable Hawaii Kai Hui

**HCR-69**

Submitted on: 3/16/2021 10:57:24 PM

Testimony for WAL on 3/18/2021 8:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Thomas T Shirai Jr	The Kawaihapai Ohana	Support	No

Comments:

Aloha Chair Tarna \* Committee Members,

I am testifying as an individual and Po'o of The Kawaihapai Ohana. I'm serving my fourth consecutive term on the North Shore Neighborhood Board (Sub-District 1 Mokuleia to Kaena) encompassing 20 years participation. The Kawaihapai Ohana is recognized by the Dept of Interior as a Native Hawaiian Organization while individually I'm recognized by SHPD and NAGPRA as a Lineal Descendant of Kawaihapai Ahupuaa for the caring of Na Iwi Kupuna. My Ohana is a Piko Ohan of Waialua Moku and along with the Mano and Mo'o the Pueo is part of our Ohana therefore strongly support HCR 69 and HR 58 to protect the Pueo. The Mountain overlooking Kaena Natural Area Reserve is called Puu Pueo where they still exist today. Like some other places the Pueo and their habitat includes Waialua Moku. Thank you for your time and opportunity to present testimony STRONGLY SUPPORTING HCR 69 & HR 58. Malama Pono.

Thomas T Shirai Jr

Mokuleia, Waialua



*Hawaii's Thousand Friends*

335 Hahani Street #342132 \* Kailua, HI 96734 \* Phone/Fax (808) 262-0682 E-Mail: [hft3000@gmail.com](mailto:hft3000@gmail.com)

March 18, 2021

COMMITTEE ON WATER & LAND  
Rep. David A Tarnas, Chair  
Rep. Patrick Pihana Branco, Vice Chair  
Committee Members

HCR 69/HR 59

REQUESTING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO SUBMIT A PETITION  
TO LIST THE OAHU 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 the O`ahu Pueo as a threatened or endangered species under the Endangered Species Act.

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**.

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**.

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 with two others possibly extinct the O`ahu `alauahio and Oloma`o.

Please pass these resolutions to help prevent the extinction of the O`ahu Pueo known as the "bird of wisdom" and considered `aumakua or ancestral guardian by many Hawaiians families.

**HCR-69**

Submitted on: 3/16/2021 9:48:14 PM

Testimony for WAL on 3/18/2021 8:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Roberts Leinau	Individual	Support	No

Comments:

Extinction is forever. Please do all you can to preserve the diminishing number of Pueo we have left. Mahalo



**HCR-69**

Submitted on: 3/17/2021 10:53:13 AM

Testimony for WAL on 3/18/2021 8:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
John Bond	Kanehili Cultural Hui	Support	No

Comments:

Please see attached PDF

**HCR-69**

Submitted on: 3/18/2021 12:51:40 AM

Testimony for WAL on 3/18/2021 8:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Sharlene Chun Lum	Individual	Support	No

Comments:

Please support this effort to recognized the Oahu Pueo as a treasure that should be listed as threatened or endangered in the Endangered Species Act. Pueo are considered `aumakua or ancestral guardian by many Hawaiians families. Unlike most owls, pueo are active during the day and are commonly seen hovering or soaring over open areas. When this happens, many feel blessed.

Due to its nesting habits the species is vulnerable to habitat loss at any season due to conversion of open habitats to recreation, housing and resort development and are key factors in decline. Too many native birds have become extinct. We do not want this to happen to the Pueo.

Please take action now to protect the Pueo.