

# Hawai'i Predator Control and Wetlands Workshop 2024

## NOTES AND IDENTIFIED ACTIONS



Art by Tlell Wolf

April 16-18th, 2024 - Maui Arts and Cultural Center



For more information about Wildlife Acoustics, sign up to their newsletter [here](#).

## Hui members

- Helen Raine – Pacific Birds Habitat Joint Venture
- Megan Lamson – Hawai‘i Wildlife Fund and Department of Land and Natural Resources (DLNR) - Division of Aquatic Resources (DAR), Kona
- T.J. Haltigan – U.S. Dept. Agriculture Animal and Plant Inspection Service, USDA-APHIS
- Afsheen Siddiqi – DLNR Division of Forestry and Wildlife
- Alex Dutcher – Hallux Ecosystem Restoration
- Scott Fisher – Hawai‘i Land Trust
- Carrie Harrington – U.S. Fish & Wildlife Service (USFWS)
- Liat Portner – Ecosystems Extension Program, NREM, UH Mānoa
- Robin Knox – Save the Wetlands Hui
- Mike McFarlin – Archipelago Research and Conservation
- Joy Browning - USFWS
- Clay Trauernicht – Dept. of Natural Resources and Environmental Management, UH Mānoa
- Tyler Bogardus – Dept. of Agriculture, APHIS Wildlife Services
- Monica Iglecia – Pacific Birds Habitat Joint Venture
- Natalie Myers – Pacific Birds Habitat Joint Venture

## Organizing partners

- Pacific Birds Habitat Joint Venture
- Hawai‘i Wildlife Fund (HWF)
- Dept of Natural Resources and Environmental Management, UH Mānoa
- Hawai‘i Dept of Land and Natural Resources (DLNR) – Division of Forestry and Wildlife (DOFAW)
- University of Hawai‘i
- Pulama Lāna‘i Natural Resources
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Department of Agriculture – Animal and Plant Health Inspection Service, Wildlife Services (USDA APHIS-Wildlife Services)
- Hallux Ecosystem Restoration
- Archipelago Research and Conservation
- Hawai‘i Land Trust (HILT)
- Save the Wetlands Hui

This document provides a summary of the actions that were outlined and discussed for the wetland portion of the workshop. We welcome your feedback, additions and edits, particularly where important actions have been missed. You will notice that in some cases, an individual or organization is indicated to take the action forward. In other cases, we are looking for leads on a topic – please volunteer!

As a reminder, here is the workshop [agenda](#):

## **Session 1: Community Resilience, Flood Control and Wildlife Habitat.**

*Session Lead: Robin Knox*

Actions:

- Develop collaborative projects on each island as a showcase for what is possible that is place-based.
    - Select sites
    - Develop a protocol
- Pacific Birds can lead through Statewide Wetland Group.**
- Promote one site per year as a wetland learning lab for Pacific Birds, and visit as part of a one-day island-based wetland symposium.
  - Ensure Hawaiian place names are used, as they are culturally important and instructive and that only native plants are used in restoration.

## **Session 2: Recognizing and Minimizing Waterbird Threats.**

*Session Lead: Lindsey Nietmann*

A) Avian Influenza:

Actions:

- Update plan – check contacts, process to report AI, add in marine mammals:  
**Joshua Fisher**
- Revisit botulism network to ensure it is still operational can be repurposed for AI:  
**Helen Raine**
- Create two-page outreach document to send out to everyone in the event of an outbreak:

**Lindsey Nietmann and Joshua Fisher**

- Share response protocol with the community in advance:  
**Joshua Fisher**

B) Powerline Collisions and Vehicle Collisions:

Actions:

- Powerline collision risks for waterbirds. Disseminate information about this issue (e.g., write an article for The Wildlife Society and other sources).  
**Marc Travers, ARC Kaua'i**
- Roadside Collisions: DOFAW meeting with DOT and carry out a literature search and summary.  
**David Smith and Afsheen Siddiqi**

### Session 3: Lo'i and Loko i'a.

*Session Lead: Afsheen Siddiqi*

Actions:

- Provide list of Hawaiian names for wetlands:  
**Robin Knox**
- Identify actions and strategy to get community/kanaka back onto the 'āina )  
**NEED A LEAD.**
- Develop two pager on the value of lo'i to waterbirds with addendum of best management practice.  
**Pacific Birds will develop a Scope of Work for a contractor, who will then engage wider wetland / lo'i / loko i'a community.**
- Develop a master list of permits currently required, and a process to alleviate hurdles of USFWS permitting, esp. for predator control, and other agency permits:  
**Carrie Harrington for USFW. NEED A LEAD for other agencies.**
- Understand what incentives the community wants to have waterbirds on their land.  
**NEED A LEAD**
- Develop strategy on how to incentivize getting waterbirds on your lo'i. Explore other farming incentives on mainland and liaise with NRCS.  
**NEED A LEAD**
- There are opportunities to create lo'i on small plots, even within larger areas but we need to :
  - Identify locations
  - Ensure they are climate safe

- Fix the ‘auwai
  - Develop action plan for the above.
  - Could include leasing fed / state lands that are currently fallow
- **Other needs:**
    - Organizing and deploying a roving team that can complete predator control, or fund a position to do it
    - Allow exemptions from the concept of the 100 ft buffer around nests
    - ‘Grow’ kalo farmers not birds (i.e. invest in getting farmers back onto the land – the birds will follow)

**Session 4:** Conservation of ‘alae ‘ula. Results, discussion, and action.

*Lead (General): Afsheen Siddiqi, Helen Raine*

*Lead (‘Alae ‘ula re-introduction feasibility and outreach – Eric VanderWerf, Hoku Cody)*

1) Question: Do we need more research?

Answer	#
No	15
Yes	7
Don’t Know	2
It depends	3

2) Question: If research is needed, what should it focus on?

Responses:

- How to include community in waterbird recovery
- How to expand existing population range of birds / Understanding range and distribution of waterbirds to new watersheds / Finding new sites where waterbirds can thrive, and how to connect isolated populations x 2
- Improving breeding success / Why is there such low fledging success and chick survival? Where are juveniles recruiting to? How will their movement and dispersal patterns change with climate impacts?
- Find more cost-effective methods for predator control
- What is the salinity tolerance for ‘alae ‘ula (for translocation) x 2
- Impacts of water quality
- Understanding impacts of invasives such as pickleweed vs effort to remove it... which invasives can we live with?
- Impacts of climate change and how to encourage nesting on higher ground that will not flood

3) Question: What outreach would be appropriate for lo'i farmers

- BMPs, training and resources
  - Develop and share and host on a website best practices, resources and training for those that are interested in having birds on their land
  - Develop lo'i BMPs for conservation needs of 'alae 'ula that are compatible with farmers' practices
  - Demystify effective, passive management of 'alae 'ula
  - Provide facts to communities in general, where farms exist or are planned.
- Incentives
  - Create incentives or inform farmers of existing incentive programs for providing habitat to waterbirds.
  - Support lo'i farmers explicitly by setting enabling conditions.
  - Make agreements with lo'i farmers and kanaka to conserve the land and culture. Could learn from the practice at Kawainui.
- Research
  - Do a preliminary study on how presence of 'alae 'ula affects kalo and farmers. Seems like it could be a perceived issue for farmers, and they need to be heard.
- Listening
  - Take advice from farmers.
  - Site visits; have actual conversations on how we can help each other
  - Conservation should be kanaka led. The issues sought to be addressed through conservation are directly tied to the dispossession of kanaka maoli
  - Hold community events to discuss the importance of this species led by kanaka. Involve local community in reintroduction.
  - Not "outreach", it's a conversation with the farmers discussing pros and cons for the individual farmers and the bird.
- Management
  - Work on daylighting more wai and 'auwai
- Permitting:
  - Remove restrictions and regulations on how to interact with 'alae 'ula as a farmer and build trust.

## Session 5: Pacific Birds Strategic Plan for Hawai'i Wetlands.

Our audience was split as follows:

Affiliation	%
Federal	13
State	23
Non Profit	40

Student	7
Other	17

**Preferred Next Steps to implement the Pacific Birds Plan**

<b>Next steps</b>	<b>%</b>
Create sub-island partnerships	64
Focus on sites important for 'alae 'ula reintroduction	4
Look at top twenty sites in order of climate resilience	32

**Options to implement the Strategies in the Plan, in conjunction with partners, as captured by MentiMeter process**

**Strategy 1 – Facilitate more extensive and effective predator control**

- Promote fences, examine sites best suited for them
- Training of interns
- Create and share species specific BMPs based on science
- Funding and provision of equipment, traps, fencing, predator control capacity
- Secure funding for wetland/lo'i/loko i'a predator control coordinator
- Fund farmers with birds to do control
- Advocate for programs and policy that support predator control
- Promote appreciation for boots on ground labor
- Educate the community prior to implementation
- Increase community support for cat control
- Connect key stakeholders
- Support knowledge/technology transfer, fill research gaps
- Manage central place for sharing of knowledge and practices
- Coordinating across extensive areas to accommodate species range (so that you don't create pockets of « sanctuaries » for predators)
- Streamline restoration efforts with permitting, so work can begin

**Strategy 3: Facilitate Invasive Plant Management**

- Create space for knowledge exchange (workshop, websites)
- Action planning - prioritize major invasive plants (e.g., mangrove) / Identify priority invasive plants to manage

- Workforce development. Have a mentor mentee program for the young people doing the heavy work
- Develop a list of reasons to eliminate specific species that can be used in future grant writing
- Record positive outcomes of invasive removal
- Facilitate funding avenues
- Support efforts replanting endemic species.
- Validate removal efforts by using the birds to legitimize those efforts
- Improve bio security between sites/islands
- Offer machinery or equipment shared use/training that can remove them in masses
- Research on downstream effects of various herbicide chemicals.
- Sponsor workdays with local non profits
- Concentrate efforts to restore a smaller-scale designated spot, and work outwards, rather than spreading resources thin and not having effective change.
- Information to community on best plants, offering private consultation on plants.

**Strategy 4 – Transfer of Science and Knowledge: Advance conservation community knowledge on wetland management techniques.**

- Sponsor workdays for local non profits
- Organize site visits
- Identify and fill research gaps
- Create research working groups
- Facilitate annual wetland management workshop (include farmers)
- Coordinate researchers/grants with wetland managers/grants.
- Facilitate community group collaboration and knowledge sharing with researchers and researchers
- Get kanaka in the space, sponsorships, internships especially for young. Have cultural practitioners; more native people bringing native knowledge in all level positions
- Conversations with local nurseries and farms on their own invasive management
- BMPs for lo'i managed to support conservation of waterbirds
- Increase knowledge of at-risk species for knowledge exchange and guided management efforts
- With partners, highlight native practices; collate and publish indigenous ag/aqua practices/knowledge that can be cited in grants
- Start considering ike kupuna (e.g. hydrology of important sites) as science too.
- Individual consultation with landowners and practitioners, workshops, training



## **Strategy 4 - Transfer of Science and Knowledge: Increase banding / tracking to understand bird movement / population dynamics / habitat use**

- Capacity building; help create a more robust volunteer program; bring in the young people. Sponsorships, opportunities, get them in the picture, especially kanaka  
Increase number of paid positions doing this work
- Hands on training and permit facilitation for banders, secure funding for statewide coordinator
- Partner with universities and schools
- Involve community to help, it's a great way to get them invested in these animals and develop a feeling of loyalty and obligation
- Enhance biannual bird counts and enhance wetland bird counts.
- Grad student project to track hatch years from successful/at capacity sites. Where do they want to disperse to?
- Dig into older Hawaiian resources to understand movement from a traditional lens of understanding the movements of the birds

## **Strategy 6 – Outreach: What is needed?**

- Need to identify funding sources to support outreach/education/volunteer coordinator positions at wetlands - many grants support the work but not this. If they do, it's short term, need long term
- A single location/site to continually share educational material. Everyone can collaborate and add to this information. Both island specific, and Hawai'i as a whole.
  - Outreach materials explaining the impacts of predators on bird populations
  - Narratives to share with the public to increase connection to our wetlands and support for native species.
  - Walk stories. Develop elevator talking points for that we can share with that common language
  - Share fact sheet on native species
- Framing outreach in Traditional Ecological Knowledge. Amplify educational materials in Olelo Hawaii (STW Hui workbooks, stickers, calendars, valentines)
  - Kula Kaiapuni (Hawaiian Immersion) has 'āina based project education. These are the exact young people that need to be reached and inspired.
  - Additional resources - "Waters of Kane". A game/demonstration to teach the public and students about the flow of water into groundwater dependent ecosystems. Can be used at events, schools, etc.
- Community outreach for any translocation projects. DLNR has a koloa outreach plan
- Research, document and share and advocate lo'i as habitat (where appropriate)
  - Showcase lo'i sites that benefit cultural practices and benefit waterbirds.
  - Success rates. How much work (time & money) needed to get here. How does this compare to how state/feds do in terms of management
- Help with designing surveys or other tools to identify stakeholders and target audiences

- Connecting nonprofit community leaders/farmers/cultural practitioners and wetland site managers to increase public or permitted access. Site managers creating practical spaces in eco restoration.
- Volunteer opportunities, and recreation opportunities
  - Community workdays to invite people to come see the wetland
  - highlight the volunteer events that e.g. Alakoko host, that even tourists have been coming to

### **Strategy 6: Outreach: Improving access to wetlands – What is needed?**

- Appropriate community access starts with understanding how the space was used before and facilitating how these practices can be restored when appropriate
- Community days and mentorship between those currently working in wetland restoration and those who need/ want more exposure to the topic
  - Quarterly access days to the public to restricted wetland sites
  - It depends on the function of the space that will help dictate how you can conduct yourselves with the community.
  - Consider asking community members to form a community wetlands action group.
  - Managed access, led by someone on specific days, monitored, with people there providing outreach and helping others get involved
  - Volunteer events are a great way to balance public access while minimizing disturbance to birds
- Fencing needs to be presented in a way that ensures public access. In Waihee Coastal Dunes, you have to mālama to camp there.
- Create observation platforms to keep distance from waterbirds while allowing public to view them
- Ask what access is, and honor that first, t&e birds second. Maybe there's a permitted take to ensure access
- Offer space for small groups and families to manage on their own within a larger site.