



**Coordinating Group on Alien Pest Species
(CGAPS)**

Annual Report
January 1 — December 31, 2023

Submitted to:
Hau'oli Mau Loa Foundation
Hawai'i Community Foundation
Hawai'i Department of Land and Natural Resources-Division of Forestry & Wildlife
Hawai'i Invasive Species Council
National Park Service-Pacific West Region
USDA Forest Service
U.S. Fish and Wildlife Service-Pacific Islands Office
University of Hawai'i-Pacific Cooperative Studies Unit

Introduction

Acronym Index

BIISC: Big Island Invasive Species Committee
CBP: DHS Customs and Border Protection
CGAPS: Coordinating Group on Alien Pest Species
CTAHR: UH College of Tropical Agriculture and Human Resources
DAR: DLNR Division of Aquatic Resources
DLNR: Department of Land and Natural Resources
DOFAW: DLNR Division of Forestry and Wildlife
DOD: Department of Defense
EPA: Environmental Protection Agency
HAL: Hawai'i Ant Lab
HCAF: Hawai'i Conservation Alliance Foundation
HDOA: Hawai'i Department of Agriculture
HDOT: Hawai'i Department of Transportation
HGG: Hawai'i Green Growth
HIBP: Hawai'i Interagency Biosecurity Plan
HPWRA: Hawai'i-Pacific Weed Risk Assessment
KISC: Kaua'i Invasive Species Committee
LFA: Little Fire Ant
MISC: Maui Invasive Species Committee
MoMISC: Moloka'i-Maui Invasive Species Committee
NPS: National Park Service
OISC: O'ahu Invasive Species Committee
PCSU: UH-Pacific Cooperative Studies Unit
RCUH: Research Corporation of the University of Hawai'i
ROD: Rapid 'Ōhi'a Death
SCTLD: Stony Coral Tissue Loss Disease
TNC: The Nature Conservancy
UH: University of Hawai'i
UHF: University of Hawai'i Foundation
USDA APHIS: U.S. Department of Agriculture-Animal and Plant Health Inspection Service
USDA ARS PBARC: USDA Agricultural Research Service Pacific Basin Agricultural Research Center
USDA FS: USDA Forest Service
USFWS: U.S. Fish and Wildlife Service
VIDA: Vessel Incidental Discharge Act

Overview of CGAPS

Two significant reports (NRDC TNCH 1992; OTA 1993) found that Hawai'i had the nation's worst invasive species problem due to gaps in prevention, detection, and control programs. These reports concluded that these gaps could be closed through increased communication, cooperation, and public participation. In 1997 the Coordinating Group on Alien Pest Species, "CGAPS", (pronounced "C-GAPS") formed as a partnership of agencies and non-governmental organizations working together to close the gaps in Hawai'i's biosecurity programs. In short, we "see the gaps" and try to fill them.

CGAPS has five full-time, grant-funded staff employed through the Research Corporation of the University of Hawai'i (RCUH): Andrew Porter, Aquatic Legal Fellow; Stephanie Easley, Terrestrial Legal Fellow; Ambyr Miyake, Statewide Rapid 'Ōhi'a Death (ROD) Outreach Coordinator; Kailee Lefebvre, Planner; and Christy Martin, Program Manager. CGAPS also has interns and student employees on occasion.

The CGAPS Steering Committee and staff advance the [HISC & CGAPS 2025 Joint Strategy](#) to reach our vision, that "Hawaii's natural environment, agriculture, economy, and the health, lifestyle, and culture of its people are protected from the impacts of invasive species." CGAPS also hosts quarterly meetings to facilitate information-sharing and networking for anyone interested in working together on biosecurity.

Visit www.cgaps.org for staff contacts and more information.



The CGAPS mission is to coordinate and catalyze action among government and non-government partners to prevent and manage invasive species in Hawai'i, as well as communicate key issues to the public.

Acknowledgement of CGAPS Support

Mahalo to the CGAPS Steering Committee and staff, the Hawai'i Invasive Species Council (HISC) and staff, and our communities for working to advance the [HISC & CGAPS 2025 Joint Strategy](#).

Each year the CGAPS Steering Committee selects a Deputy Chair for the calendar year, who then serves as Chair the following year, and then Chair Emeritus in the third year, and this 3-year rotating Chair structure is always comprised of an individual from State, Federal, and non-governmental organizations (such as academia, Bishop Museum, etc.) to maintain these differing perspectives. Mahalo to 2023 CGAPS Chair David Smith (Hawai'i Department of Land and Natural Resources-Division of Forestry & Wildlife) and Deputy Chair Susan Cordell (USDA Forest Service- Institute of Pacific Islands Forestry) for taking on these roles! An individual from the NGO community will be sought for the 2024 Deputy role.

CGAPS staff and projects are entirely grant-funded and this report is provided in partial fulfillment of grant requirements. Mahalo to Hau'oli Mau Loa Foundation (herein the Foundation), the Hawai'i

Resilience Fund, and the Robert Emens Black Fund at the Hawai'i Community Foundation (HCF), HISC, U.S. Department of Agriculture Forest Service (via Department of Land and Natural Resources-Division of Forestry & Wildlife pass-through), National Park Service (via Hawai'i-Pacific Islands Cooperative Ecosystem Studies Unit agreement #P17AC01216 Mod2), and the U.S. Fish and Wildlife Service.

The University of Hawai'i at Mānoa (UH) Office of Research Services and the University of Hawai'i Foundation (UHF) administered core CGAPS funds through the Pacific Cooperative Studies Unit (PCSU). Mahalo to CGAPS Principal Investigator Shaya Honarvar and the PCSU staff. ROD funds were administered through the College of Tropical Agriculture & Human Resources (CTAHR) with Drs. Mike Melzer and J.B. Friday at PIs, and the Legal Fellows through the William S. Richardson School of Law. A heart-felt thank you and "a hui hou" to now-retired Professor Denise Antolini of the William S. Richardson School of Law served as PI of the Legal Fellows program for many years and mahalo also to Environmental Law Program Co-Directors David Forman, and Richard Wallsgrove for continuing at PIs. The Hawai'i Conservation Alliance Foundation also served as a fiscal sponsor for some CGAPS projects, and we are grateful to Emma Anders and the HCA Staff and also to Celeste Conners and the Hawai'i Green Growth (HGG) team for being excellent project partners. Last but not least, thank you to the staff of UHF, ORS, and RCUH for your behind-the-scenes support. We are grateful for this support network and proud to share the accomplishments of the past year.

CGAPS Steering Committee
Hawai'i Department of Agriculture
Hawai'i Department of Land and Natural Resources (Division of Aquatic Resources and Division of Forestry and Wildlife)
Hawai'i Conservation Alliance Foundation
Hawai'i Invasive Species Council
Invasive Species Committees of Hawai'i
The Nature Conservancy
U.S. Department of Agriculture (Animal and Plant Health Inspection Service and USDA Forest Service)
U.S. Department of Defense-Naval Facilities Engineering Command Pacific
U.S. Department of Homeland Security-Customs and Border Protection
U.S. Fish and Wildlife Service
University of Hawai'i-College of Tropical Agriculture and Human Resources
Valued Emerita

HISC & CGAPS 2025 Joint Strategy Progress

The CGAPS Steering Committee is comprised of management-level participants from agencies and NGOs, with decades of experience and a deep understanding of the issues and gaps. In 2002, the legislature established the Hawai'i Invasive Species Council which provided the framework for engaging the appointed executives of the state agencies. In 2019, these two networks joined together to assess the greatest needs from the 2017-2027 Hawai'i Interagency Biosecurity Plan to create the five-year HISC & CGAPS 2025 Joint Strategy. In 2022, the working groups continued to make progress on the Strategies. Most Strategies have a Working Group chaired by a lead agency participant and HISC and CGAPS staff provide planning and meeting coordination support, and at times lead work on some Key Actions.

For each Strategy, the Key Actions are listed in the left column, and progress made in 2022 is listed in the right column with the following terms:

Achieved / Nearly complete: key action is complete or nearly complete

Ongoing: work that was done to support a key action that is perpetual in nature

In process: advances that were made and that are progressing towards completing an Action

No opportunity for progress: no significant progress was made in 2022

Strategy 1: Prevention & early detection/rapid response for new terrestrial invasions

Objective: Keep Hawaii's top invasive species threats from arriving and establishing in the state, by identifying and addressing high-risk pathways and major modes of introduction, and by improving early detection/rapid response.

Lead/Chair: HDOA & CTAHR. Support by Stephanie Easley, CGAPS & Leyla Kaufman, HISC.

Key Actions:

1. HDOA, HISC, and other partners collaborate on generating a non-regulatory Hawai'i Prevention Priority List to guide prevention and rapid response.
2. Assess capacity to detect, mitigate and/or treat each species on the Hawai'i Prevention Priority List, including procedures, training, and technology.
3. Conduct risk analyses and risk assessments along known and high potential pathways for invasive species introductions.

Progress:

Ongoing. Led by HDOA, a non-regulatory Hawai'i Prevention Priority List was developed in 2020. In 2021, a Pathways task group reviewed, validated, and updated the list to make it representative of the highest priority species across all taxa. The list has become a living document.

In process. CGAPS and HISC coordinating multi-agency meetings related to biosecurity in preparation for the 2024 Festival of Pacific Arts and Culture (FestPAC), including re-gaining fumigation capacity as a treatment for wood-boring and other types of pests, creating biosecurity protocols for the movement of goods and canoes.

Ongoing:

- HISC continued support of the Hawai'i-Pacific Weed Risk Assessment (HPWRA) screener to assess plant risk.
- CGAPS and HDOA worked with a contractor to conduct a pathway analysis between Hawai'i and W. Australia.

Key Action:

4. Address regulatory gaps for terrestrial invasive species in Hawai'i to address high-risk pathways and other modes of introduction.

Progress:

In process. An update to HAR Chapter 4-72 was proposed and approved to enter rulemaking in February, 2023 and it passed the Small Business Regulatory Review Board in May. After some delays, this rule was approved by the Governor for public hearing which is anticipated in January, 2024.

No opportunity for progress:

- No progress in 2023 on addressing firewood as a pest vector. Awaiting rulemaking on 2022 draft firewood quarantine rule to be added to HAR Chapter 70.
- No progress in 2023 on rulemaking for draft language provided in 2022 for a subsection to HAR Chapter 70 to prevent the introduction of citrus diseases into Hawai'i that mirrors federal quarantine requirements.
- In 2022, CGAPS contractor Rachel Neville submitted petitions for federal import restriction of a list of high-risk plants. However, USDA APHIS looks to the state to see if the same species are regulated domestically, which they are not. In February 2019 CGAPS' petition to add Restricted Plant Rules and a List including these plants as HAR Chapter 4-70A was heard and sent by the Board of Agriculture (BOA) to be heard by the Advisory Committee on Plants & Animals. It has not been agendized.
- No progress in 2023 on draft language provided in 2021 for rulemaking on the Noxious Weed Seed Administrative Rules and Species List, HAR Chapter 4-67 and the Noxious Weed Administrative Rules and Species List HAR Chapter 4-68.

5. Continue to support adoption and implementation of Myrtaceae import restriction (domestic and foreign) and apply this approach for the protection of additional key native and economically important plant species.

Nearly complete. No progress in 2023. The only remaining open pathway is foreign imports of cut flowers and foliage that contains myrtle family plants. USDA APHIS would need to add this into their manual on cut flowers and there is no established petition process for this.

6. Fund and fill key positions listed in the HIBP to enforce existing and new Administrative Rules and Hawai'i Revised Statutes. [link to Obj 6]

No opportunity for progress. CGAPS provided support to evaluate and suggest enforcement options

Key Actions:

7. Support HDOT to make the Māmalu Poepoe airports pilot project permanent to enhance monitoring and detection of the Federal Aviation Administration approved list of invasive species (disease spreading mosquitoes, fire ants, coconut rhinoceros beetle, and Africanized bees). [link to Obj 2]
8. Identify and provide Best Management Practices (BMPs) for reducing pest risk at critical control points in systems, such as airports, harbors, and procurement contracts.
9. Strengthen early detection and rapid response (EDRR) capacity on each island for regulatory agencies and partnership projects, including mobilizing species-specific teams for high-risk terrestrial incursions.
10. Support HDOA in implementing transitional inspection facilities and opportunities to inspect other high-risk commodities.
11. Support HDOA to promote and achieve clean nursery operations (e.g., treatment requirements, incentives). [link to Obj 2 & 7]

Progress:

Ongoing.

- HISC and CGAPS staff submitted requests for Congressionally Directed Spending funds secured in 2022 allowed the expansion to seaports and Pohahkuloa Training Area, the addition of Japanese Beetle to the target list, and collaboration with other states.
- CRB detected in May in an airport trap in Līhu'e, Kaua'i, the first detection outside of O'ahu.
- Secured DOD Readiness and Environmental Protection Integration (REPI) funds to support the program through 2025.

Ongoing.

- The 2021 PPA 7721 project to provide new pest BMP training for the nursery industry was completed in May with an additional training provided at the fall Landscape Industry Council of Hawai'i conference.
- CGAPS, HISC and the Public Outreach Working Group created and shared BMPs for the safer movement of materials following the August wildfires on Maui.

Ongoing.

- CGAPS and HISC staff and partners worked with decisionmakers in support of EDRR capacity.
- CGAPS and HISC staff filled coordination roles for interagency EDRR work, including LFA, CRB, coqui, and others.
- HISC-supported 643PEST.org facilitated the sharing of reports and data for response.

No opportunities for progress. Key positions in HDOA, including the Plant Quarantine Branch Manager, remain open despite open recruitment in 2022 and 2023. This position is key to advancing several prevention priorities.

In process. CGAPS assisted HDOA with reviewing and proposing a rule change for HAR Ch. 72 to address some gaps in nursery regulation. After several months of delay, these draft rules will move to public hearing in 2024.

Key Actions:

12. Maintain and strengthen the Pest Risk Committee and other mechanisms for federal and state agencies to share data, effective practices, lessons learned and informal observations.

13. Track and report annually on status of Hawai'i Priority Prevention List species (e.g. not established, prevented at source; detected & intercepted, established). [link to Obj 2]

Progress:

Ongoing.

- The Hawai'i Risk Assessment Committee (HI-RAC) continues to meet and be a valuable way to share sensitive information across jurisdictions.
- Site visits and meetings in preparation for FestPAC strengthened relationships and communications.

No opportunity for progress. The departure of the HDOA Plant Industry Administrator in June has left this in flux. In 2021, the Working Group Chair initiated part of this action for Strategies 1 and 2 and in 2022, HDOA began looking into retrieving domestic interception data from its databases. A federal request had not been initiated for interception data for foreign imports is needed.

Strategy 2: Inter/Intra-island movement of terrestrial invasive species

Objective: Keep Hawaii's top invasive species threats from spreading within Hawai'i (inter- and intra-island), by identifying and addressing high-risk pathways and major modes of introduction and spread, and by improving early detection/rapid response for new populations.

Lead/Chair: HDOA & CTAHR. Support by Stephanie Easley, CGAPS & Leyla Kaufman, HISC. The Working Group for Strategies 1 and 2 are combined to maximize HDOA and other partners' participation and develop projects that address both the prevention and intra-state spread of high-risk invasive species.

Key Actions:

1. HDOA, HISC and other partners collaborate on generating a Hawai'i Limited Distribution Priority List of high-impact localized invasive species to address inter-island and intra-island movement.

Progress:

Ongoing. Led by HDOA, a non-regulatory Hawai'i Limited Distribution List was developed in 2020. In 2021, a Pathways task group reviewed, validated, and updated the list. The list has become a living document.

Photo: A site visit to Dr. Mike Melzer's fumigation chamber for treating mulch and other host material infested with CRB. Preparations for FestPAC include working with federal and state regulatory agencies to get fumigation facilities that meet federal fumigation standards and other regulatory approvals. Hawai'i has not had approved fumigation facilities for a number of years.



Key Actions:

2. Include an assessment of the Hawai'i Limited Distribution Priority List to support HDOA in developing and executing a clean nursery program that reduces inter/intra-island movement of invasive species. [link to Obj 1]
3. Conduct risk analyses and assessments to identify and prioritize pest pathways and high-risk gaps for movement of terrestrial invasive species within Hawai'i.
4. Identify and implement cost-effective tools, technologies, and methods that improve management of priority pathways by state agencies and private companies.
5. Clarify HDOA authority and determine capacity needed to assess and inspect high-risk non-agricultural commodities and cargo and develop voluntary initiatives to mitigate risk.
6. Work with ISCs to increase County support for prevention and rapid response of invasive species not known to occur on their island(s). [link to Obj 6]

Progress:

In process.

- CRB Interim Rule expired on June 30, 2023 and because the permanent rule (chapter 72) was delayed, a second Interim Rule was passed in October.
- CGAPS continued to work with HISC and the AG on a draft of HISC administrative rules which provides new mechanisms of control and eradication for all departments of the HISC and the counties of Hawai'i to control and eradicate identified invasive species on public and private land.
- Supported the rulemaking process for chapter 72.

Ongoing. The HPWRA continued to be used to screen plants. To date, 2,319 plants have been screened.

In process. The pathway analysis between Western Australia and Hawai'i was initiated and will be completed in the spring of 2024..

Ongoing.

- HISC is exploring new detection technology for coqui, mosquitos, and swarm traps.
- MISC and HAL completed treatment of LFA across 175 acres of forest in Nāhiku using a helicopter and specially-adapted applicator and an insect growth regulator. Initial surveys have found no LFA but the site will be surveyed regularly for years before eradication can be declared.

No opportunity for progress. An AG's opinion is needed due to different interpretations. HDOA leadership would need to request this and initiate the capacity assessment.

Ongoing.

- In 2023, CGAPS and HISC staff worked with the ISCs on messaging for response work on LFA, CRB, and coqui.
- CGAPS and HISC supported communications on O'ahu and a resolution calling for a lead office, engagement, and a report on actions was introduced in December.

Key Actions:

- 7. Support HDOT implementation and 2022 update of the Statewide Noxious and Invasive Pest Program Strategic Plan in cooperation with public and private stakeholders.
- 8. Create standardized contract language for BMPs to minimize the spread of invasive species and incorporate into contracts by state agencies and other partners.
- 9. Promote the use of the State Pest Reporting System. [link to Obj 7]
- 10. Track and report annually on status of species on the Hawai'i Limited Distribution Priority List (e.g. prevented at source, detected & removed, established, other).

Progress:

No opportunities for progress. The program is still successfully operating with contractors from SWCA Environmental Consultants. There appears to be little support or even awareness within the agency.

Ongoing.

- [BMPs](#) were developed and shared in response to the Maui wildfires but they are not “standardized contract language”
- Supported HDOA in the creation of CRB BMPs and contract language.

Ongoing. Continued use of 643-PEST and 643PEST.org as a call to action for campaigns and pest alerts. In 2023 there were 1902 reports submitted online (851 in 2022, 642 reports in 2021, and 551 reports in 2020).

No opportunity for progress. The departure of the HDOA Plant Industry Administrator in June has left this in flux.

Strategy 3: Aquatic biosecurity

Objective: Prevent the introduction and spread of aquatic non-native species (ANS) into, between, and around the Hawaiian islands, by reducing species movement through ballast water, biofouling, intentional import and release, and unintentional modes of introduction.

Lead/Chair: DLNR DAR. Support: Andrew Porter, CGAPS, Chelsea Arnott, HISC.

Key Actions:

- 1. Conduct risk assessments to identify and prioritize aquatic pest pathways and risks into and within Hawai'i.

Progress:

In process.

- CGAPS participated in national SCTLTD transmission team meetings to support prevention actions and track progress on research being conducted on vessels as a pathway.
- CGAPS prioritized dumping of marine aquariums (including illegal species) with the discovery of six species in DOD waters, in two or possibly three separate releases. At least two species have the ability to spread via biofouling and possibly other vectors.

Key Actions:

2. Develop aquatic rapid response plans to address high-risk vessels.
3. Establish a vessel inspection program in Hawai'i harbors with the maritime industry and government partners, including a framework to co-regulate commercial vessels related to ANS as incidental discharges regulated under VIDA.
4. Develop framework and associated rules to manage ANS risks from non-commercial vessels (those not exempted and not covered under VIDA).
5. Fund and establish an aquatic biosecurity team to perform vessel ballast water and biofouling risk assessments within Hawai'i. [link to Obj 6]
6. Identify and implement tools, technologies, and methods that improve detection and/or management of priority species and pathways. [link to Obj 1 & 2]
7. Increase awareness of key private stakeholders of their role and opportunities to help address aquatic invasive species introduction and spread. [link to Obj 7]

Progress:

In progress. CGAPS and DAR continued to work with the AG to finalize draft interim rules to require additional actions by vessels from SCTL D-affected areas.

Ongoing. CGAPS worked with legislators to introduce bills that would give DAR additional authorities to regulate all incidental discharges, a necessary step to allow DAR to regulate or co-regulate when VIDA is enacted. These additional authorities are also necessary for regulating all the vessel-related ways that SCTL D may be transported to Hawai'i. Both bills did not advance past the Senate Water and Land committee.

In process. The SCTL D interim rule would apply to non-commercial vessels.

Ongoing. Maintained support for one civil service position established in 2021, one grant-funded position, and one intern. A team of at least ten will be needed to achieve this Action.

Ongoing.

- CGAPS organized and facilitated bi-monthly multi-agency meetings in support of DOD's pulse coral eradication, including addressing aquarium dumping as a pathway and identifying appropriate survey and control techniques and technologies.
- DAR received REPI funds for a response coordinator and eDNA work on priority species.
- DAR and CGAPS continued to participate in U.S. Coast Guard pre-consultation meetings on VIDA enforcement.

Ongoing: CGAPS and DAR held an Alien Aquatic Organism Task Force (AAOTF) meeting to discuss SCTL D and the proposed draft emergency rules to get feedback from participants including vessel operators, U.S. Coast Guard, and others. The meeting was recorded and shared with AAOTF participants that were not present.

Key Actions:

8. Research and develop a list of high-risk aquatic animals and prohibit their introduction to Hawai'i.
9. Establish a baseline for aquatic biosecurity and initial measures for tracking effectiveness at preventing introduction and spread of ANS.

Progress:

No opportunity for progress: A short list was formulated in 2022 but conditions for requesting rulemaking have not been favorable.

Ongoing.

- Bishop Museum continued to make progress on organizing presence and survey data into a database
- Measures for preventing SCTL and addressing pulse coral developed by CGAPS for Hau'oli Mau Loa Foundation.

Strategy 4: Large-scale control of high-impact invasive species

Objective: Implement at least one new large-scale control or eradication project for an invasive species population with highly significant ecological, economic, and/or health impacts in Hawai'i, and build momentum for action on other widespread high-impact species (e.g. mosquitoes, rats, marine algae).

Lead/Chair: DLNR. This Strategy does not have a working group. Instead, HISC and CGAPS staff and networks are participating in new (novel) large-scale control projects that meet the intent of this strategy and that have already been prioritized for action by agencies.

Key Actions:

1. Identify and prioritize at least five established invasive species (aquatic or terrestrial vertebrates, invertebrates or plants) with populations that have highly significant ecological, economic and/or health impacts and where large-scale projects could be implemented in the next 10 years (e.g. mosquitoes, rodents, marine algae).
2. Research and identify tools, technologies, and methods that are proven effective (or have high potential) for large-scale control or eradication of at least three priority invasive species by 2021.

Progress:

Achieved. In 2020, HISC and CGAPS staff identified rodents, mosquitoes and the diseases they carry, little fire ants (LFA), coqui frogs, and invasive algae as top invasive pests that have critical momentum and that require novel control technologies that would be difficult to implement without significant help. While there are other high-priority invasive species, viable options for novel technologies for large-scale control are either not known or are beyond the ten-year horizon of this strategy.

Ongoing.

- CGAPS and HISC staff continued to participate in the Steering and Public Engagement subcommittees for the "Birds, Not Mosquitoes" project which achieved most regulatory approvals in 2023.
- MISC and HAL concluded successful aerial control of LFA across 175 acres in Nāhiku.

Key Actions:

3. Select first pilot/ demonstration large-scale eradication project and identify political, regulatory, funding, social, cultural, and other barriers/opportunities to implementation with possible ways to reduce barriers and leverage opportunities.
4. Develop and implement a model community engagement plan (BMP) for the first large scale control or eradication project(s) and make it available for future large-scale projects. [link to Obj 7]
5. Work with partners to implement at least one large-scale project and initiate planning for at least one more.
6. Ensure the large-scale impact is sustained, including regular monitoring and follow-up. [link to Obj 6]
7. Assist lead agencies to evaluate the large-scale project(s), including model community engagement, evaluation and follow-through.

Progress:

Key Actions 3 & 4 for BNM are in process.

- BNM continued its monthly meetings, and permitting and planning continues to be on track for implementation.
- Community engagement for BNM continued with in-person small-group meetings and larger stakeholder meetings, outreach events, and successful legislation for Hawaiian Honeycreepers Day in 2023 and 2024 Year of the Forest Bird.
- Community engagement with schools and students viewed as particularly important as some elected to testify in permitting and other regulatory hearings.

In process. Lessons learned from the Lehua rodent eradication are informing current projects, including BNM. Aerial LFA control in other locations may be the next project.

In process. Partners remain engaged and Steering Committee structure ensured engagement of new leaders.

No opportunity for progress. This step will be initiated once the project is successfully implemented.

Strategy 5: Pacific regional biocontrol center

Objective: Increase the capacity and scope of biocontrol work in Hawai'i by creating a Pacific regional biocontrol center with planning for new facilities, base funding, and core staff in place. With existing capacity, release biocontrol agents for at least three top priority established invasive species and annually assess, prioritize, and advance critical biocontrol projects.

Support: Christy Martin for CGAPS, Chelsea Arnott for HISC. Monthly partners teleconference meetings have been held since February 2020.

Key Actions:

1. Build a broad coalition to support the building and long-term maintenance of Pacific regional biocontrol facilities that can test potential classic biocontrol organisms across different taxonomic groups.
2. Develop a feasibility assessment for raising capacity of new Pacific regional biocontrol facilities for Congressional delegates and agency use.
3. Identify and secure lines of potential funding, site(s) and designs for climate-resilient containment facilities, including options for natural hazard mitigation. [link to Obj 6]
4. Maintain and develop new regional and international partnerships to strengthen regional biocontrol capacity and success of exploration missions.
5. Secure funding and increase biocontrol staff for both state and federal biocontrol projects. [link to Obj 6]
6. Test at least eight biocontrol agents, and release five by 2025.
7. Evaluate and harmonize the biocontrol regulatory process for greater efficiency.

Progress:

Ongoing.

- HISC staff hosts monthly meetings to coordinate between key agencies and partners.
- Held an Executive Briefing via videoconference to share progress and discuss next steps with coalition partners.
- In 2023, eleven letters of support from local, county, state, regional, and national organizations were provided with appropriations submittals.

Ongoing. Appropriations requests included request for funds to complete a feasibility assessment for USDA PBARC, resulting in committee report language but unfunded by Congress.

Ongoing.

- Drafted and submitted appropriations requests via CGAPS and DLNR.
- Worked with DLNR DOFAW to submit a request for Congressionally Directed Spending funds that did not get selected for funding..

Ongoing: Maintained regional partners secured through the Pacific Ecological Security Conference (PESC) and national and international partners through the North American Invasive Species Management Association (NAISMA) in 2022. Participated in regional USDA FS meetings related to biocontrol in 2023.

In process. Drafted and submitted appropriations requests for biocontrol facilities feasibility and USDA PBARC facility which is moving up on the funding list.

In process. Supported the advancement of agents through the regulatory process (miconia caterpillar, tibouchina beetle, *Aprostocetus nitens*, a second biocontrol for the gall wasp and an agent for coffee berry borer).

No opportunity for progress. Work on revising previously mentioned prevention rules have been the priority in 2022.

Key Actions:

- 8. Build and maintain public support for 21st century biocontrol practices. [link to Obj 7]
- 9. Measure effectiveness of released biocontrol agents over time (>5 years) and track the number of biocontrol agents in pipeline and released annually.

Progress:

Ongoing. CGAPS, HISC, and outreach partners conducted messaging, social media, and outreach including a webinar for Hawai'i Invasive Species Awareness Month.

Ongoing.

- On track to meet target number of releases.
- The 2022 survey results showed that 3 in 4 residents support the use of biocontrol (74%) and an increase in funding for new facilities and work in Hawai'i (77%).

Strategy 6: Increased and diversified funding for invasive species priorities

Objective: Increase & diversify funding for invasive species priorities to secure at least \$100M annually through county, state, federal, regional, and private sources, including \$90M for operational and personnel requirements and \$10M for essential facilities (in support of other Strategies).

This Strategy does not have a Chair or Working Group. HISC and CGAPS staff continued to pursue new funding opportunities, and partners in the Working Groups continued to focus on opportunities that align with each Strategy.

Key Actions:

- 1. Work with a diverse group of advocates to increase State general funds to DLNR, HDOA, UH, HDOH and HDOT for implementing HIBP actions (e.g. staff, electronic databases, adopting new technologies).
- 2. Secure additional HISC project funding to support specific critical new initiatives in the HIBP and 2025 Strategy, including risk assessments.
- 3. Secure a funding mechanism (public and/or private) to provide at least \$1 million annually for emergency response to new terrestrial or aquatic incursions.

Progress:

Ongoing.

- CGAPS and HISC participate in Hawai'i Green Growth (HGG) meetings and work with HGG staff on messaging and strategies for implementing the HIBP.
- CGAPS, HISC, and partners continued to build and diversify its network of advocates on each island but there were no general fund increases for HIBP implementation in 2023.

Ongoing. In each 2022 and 2023, HISC received \$5,750,000 in recurring general funds and an additional \$1,500,000 non-recurring funds, \$500K of which was a "plus-up" to the HISC budget for HAL (not a new initiative, but one that had lost a core funding source).

No opportunity for progress. No viable path for an emergency response mechanism and fund in 2023.

Key Actions:

4. Increase annual support from all four counties to ensure stable and effective Invasive Species Committees (ISCs), ROD response and other priority invasive projects.
5. Double private discretionary funding to support CGAPS' ongoing and new invasive species initiatives (estimated at \$700K per year). [link to Obj 10]
6. Build a relationship with visitor industry decision-makers and develop mutually beneficial projects.
7. Investigate existing and new lines of federal funding for invasive species work.



Photo: DOD Readiness and Environmental Protection Integration (REPI) program staff visited DLNR projects that received REPI funding, including DAR's native urchin hatchery. .

Progress:

In process.

- Communications with each county is primarily through the island ISC and CGAPS and HISC provided support and advice in 2023.
- CGAPS, HISC, and partners worked with Councilmember Kia'aina to initiate a working relationship with City & County of Honolulu. CGAPS provided language that resulted in the introduction of CR23-308 in December.

Ongoing. Re-established communications with two grant foundations in 2023 and received an increase in 2024 funds from Hau'oli Mau Loa Foundation.

Ongoing. There was no available CGAPS and HISC staff time to develop proposals and implement new/fundable projects. However, FestPAC biosecurity planning has provided a platform to communicate needs and gaps to organizers including Department of Business, Economic Development, and Tourism.

Ongoing.

- HISC and DLNR staff coordinated a request and received several million for agency and partnership work on invasive species from the Department of Defense REPI funds, including supporting OISC work on LFA, DAR work on SCTL and other invasives, etc.
- Partners coordinated a site visit to HDOA's biocontrol facility in support of a funding request to DOD Office of Local Defense Community Cooperation.
- CGAPS participated in a DOD workshop hosted by INDOPACOM to identify priority invasive species research and development needs for the region which were incorporated into DOD's call for proposals for environmental program funding. Partners will submit a proposal for these funds in January, 2024.
- Facilitated the DOD application for newly available Aquatic Invasive Species Early Detection/Rapid Response funds which was not funded in round 1.

Key Actions:

- 8. Identify invasive species management as a priority use for DLNR’s forest carbon offset program and secure annual commitment in addition to annual appropriations to HISC funds and Watershed Partnership Program Grants.
- 9. Secure capital funding for essential facilities. [link to Obj 5]
- 10. Repeat funding analysis conducted by LRB in 2015 to assess progress.

Progress:

In process. CGAPS worked with partners in Pacific RISSC, DAR, and U.S. Territories to initiate interest in agencies and among several legislators in a resolution or bill to designate urban and native forests as “critical natural infrastructure”.

In process. Annual appropriations requests submitted but yet to receive funds for biocontrol facilities.

No opportunity for progress. HISC continued to assess options for collecting these data.

Strategy 7: Engaged and supportive community

Objective: Raise or maintain strong awareness and support (70% in polls) for key invasive species issues and expand, diversity, and mobilize a network of allies to achieve 2025 Strategies.

Lead/Chair: CGAPS. Support: Ambyr Miyake, CGAPS, Elizabeth Speith, HISC.

Key Actions:

- 1. Provide quality, timely, accessible information to community, decision-makers and allies.
- 2. Develop resonant/ targeted messages (related to the core values of the audiences) and use effective methods/channels.
- 3. Increase adoption of specific biosecurity behaviors at ports of entry, especially airports. [link to Obj 1 & 2]

Progress:

Ongoing. HISC, CGAPS, and partners provided current, timely, accurate, and accessible information.

Ongoing. CGAPS and HISC staff continued to co-chair the Public Outreach Working Group, CGAPS chaired the LFA Outreach Working Group, and participated in the ROD Outreach Working Group and other events, all with outreach specialists from each county, using social marketing concepts and practices.

Ongoing.

- The airport biosecurity display installed in January, 2023.
- HISC’s Port of Entry Monitoring Program (formerly Māmalu Poepoe) continued work with port managers on monitoring.
- ROD messaging at the airport continued to focus on reducing spread.

Key Actions:

4. Identify and engage influencers in different sectors, industries, and groups who can champion invasive species priorities.
5. Increase CGAPS & partner understanding and use of social science and raise capacity for the effective use of social science concepts and social marketing for invasive species messages.
6. Increase political will to support policy and funding needs.
7. Coordinate statewide or regional strategies and messages across lead agencies and partners; provide communications/coordination support for agencies and partners for key issues.
8. Evaluate effectiveness of communications periodically and use these lessons to improve future initiatives.

Progress:

Ongoing.

- In 2023, CGAPS' advocacy project partnered with Birds, Not Mosquitoes and worked with schools to teach civic engagement, the importance of Hawaiian honeycreepers, and the threats to their survival. Students provided moving testimony in a variety of hearings.
- The spread of LFA and CRB on O'ahu brought new attention and new partners.
- Pacific Island partners, National Invasive Species Council, Sierra Club, and others were engaged as champions.

Ongoing. Public Outreach Working Group meetings and annual outreach campaigns such as Stop the Ant Month allow the Working Group to assess messages, audience groups, delivery methods, and ways to reduce barriers to desired behavior adoption.

Ongoing. HISC and CGAPS staff continued to meet with local, regional, and national decision makers and agency leadership related to the 2025 Strategy.

Ongoing.

- CGAPS staff continued to provide support to DAR related to policy and capacity needs for VIDA and SCTL D.
- HISC and CGAPS staff continued as part of the core team of the Pacific Regional Invasive Species and Climate Change (Pacific RISCC) management network.
- HISC and CGAPS coordinated needs assessments and messaging around invasive pest issues and the HIBP.

Achieved. Planned and conducted a statewide awareness and opinion survey in 2022 and results informed messaging in 2023.

Strategy 8: HISC engagement across sectors

Objective: Improve HISC's engagement and support across key sectors (agriculture, conservation, economy, health, tourism, transportation, and culture/way of life), and systems (terrestrial and aquatic), as measured by engagement in HISC activities and effective use of HISC tools (e.g. funding, policy resolutions, testimony).

Lead: HISC staff, Council members or designees, and working group chairs. As Strategy 8 is an internal HISC Strategy, progress on key actions are not included in this report.

Strategy 9: Strong CGAPS network

Objective: Include representatives across the diverse invasive species community of practice in the CGAPS Network and actively engage all partners needed to implement this 2025 Strategy.

Lead: CGAPS staff and Steering Committee members.

Key Actions:

1. Continue to engage and support CGAPS partners by assessing and improving current network communications, including general meetings, list-serve, website, information sharing and other network activities.
2. Provide and socialize a simple description of what CGAPS does and how it relates to HISC with all CGAPS participants, especially Steering Committee members.
3. Challenge the CGAPS Steering Committee to actively lead, implement and/or support elements of the 2025 Joint Strategies (Objectives and/or Key Actions) most relevant to their positions and agencies.
4. Identify and recruit additional public and private sector partners needed to implement the 2025 Joint Strategies, using various meeting formats, venues and other engagement mechanisms.

Progress:

Ongoing.

- Four quarterly general meetings were held, two via video conference, and two as hybrid. All were well-attended, averaging fifty participants from across Hawai'i.
- Meeting dates were planned at the start of the year, a practice that started at the beginning of 2021.
- Listserve participation increased slightly and an assessment of the network is planned for January 2024.

In process. The simple “we see and fill the gaps” description works well, but there is ongoing confusion not just between HISC and CGAPS, but also including the ISCs. The newest participants and decisionmakers have the most difficulty.

Achieved. Three Steering Committee members are leading Working Groups for Strategies, while others are leading or supporting Key Actions or elements of the plan.

Ongoing.

- Continued to expand CGAPS and HISC networks and increase focus on the HIBP through Hawai'i Green Growth and projects.
- The fourth quarter CGAPS meeting was held in a conference room at the State Capitol and several legislators and staff joined the meeting.
- CGAPS and HISC staff and partners participated in a number of town halls and public meetings with legislators and continued networking at in-person conferences and events.

Key Action:

- Track member participation and periodically gather input on their satisfaction with the CGAPS network and opportunities for adaptive management.

Progress:

Ongoing. There is steady participation by all key partners. A partners survey will be conducted again in 2024.

Strategy 10: Stable CGAPS funding and staffing

Objective: Secure committed, consistent annual contributions from CGAPS partners to provide core support for two staff and core operations (est. \$250K per year, not including project funds).

Lead: CGAPS staff, Steering Committee members.

Key Actions

- Review CGAPS funding needs with the Steering Committee and request/secure annual contribution commitments from all members.
- Work with the CGAPS Steering Committee to assess the potential core funding mechanisms, contributors, and amounts to ensure CGAPS financial security and continuity after 2022 (when HMLF 11-year commitment ends).
- Secure additional annual commitments from active CGAPS partners outside the Steering Committee.
- Complete the first eleven years of partnership with HMLF and agree on future partnership priorities by 2022.
- Present CGAPS “value proposition” and funding needs to the Environmental Funders Group (EFG) to seek core funding and/or project support.

Progress:

Achieved. The annual funding spreadsheet was shared at the first and third quarter Steering Committee meetings with the request for support and proposed new benchmarks for Hauoli Mau Loa Foundation which includes increasing the number of contributors or amounts from existing contributors.

Ongoing.

- The best available core funding mechanism continues to be value/performance-based contributions from multiple partners.
- Achieved. Hauoli Mau Loa Foundation committed to an additional five years of support including for a benchmark for CGAPS to build support.

No opportunity for progress. Additional non-recurring funds from a new source were provided from within the Steering Committee, but not new annual funds from a new funding partner.

Achieved. CGAPS and the Foundation Board met in 2023 and agreed to a new 5-year time frame, partnership priorities, and benchmarks.

Achieved. Although this presentation was made in 2021, and no additional opportunities have been available since, CGAPS will continue to work with participants of the EFG to build interest primarily in core support so that projects may be implemented.

Key Actions:

- 6. Explore feasibility of permanent funding for one CGAPS position in a partner institution's budget (e.g. faculty specialist at UH).
- 7. Provide annual CGAPS budget and financial report to the Steering Committee, especially tracking core support from partners.

Progress:

No opportunity for progress. Adding to the UH budget for faculty specialist positions was not a priority topic with UH or legislators in key committees in 2023.

Achieved. CGAPS support remained steady in 2022 compared to 2021.

Photo: The second quarter CGAPS general meeting was the last all-videoconference meeting before returning to a hybrid format for the third and fourth quarter meetings. The hybrid format is favored based on CGAPS community responses to surveys.

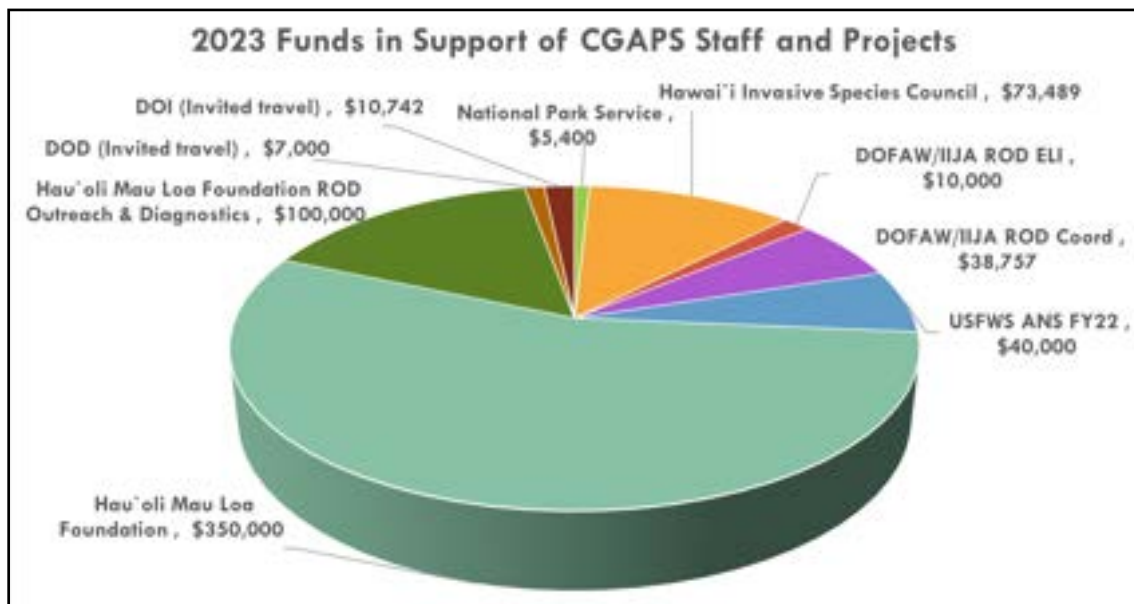


Fig. 1. Total funding committed for CGAPS staff and projects in 2023 was \$635,388. The slight increase in funding levels from \$627,105 in 2022 and \$629,450 in 2021 is due to federal funding provided for travel to Guam and D.C. Note that grants are awarded and become available at different times of the year. Therefore, funds are counted in the calendar year when the majority of funds will be expended.

HISC Project: Stop The Ant Month

Funded through a grant to CGAPS from HISC, the annual Stop The Ant Month campaign was held again in October with the ISCs and HAL outreach staff as the lead for communications in each county and statewide message planning and other logistics facilitated by Kailee under Christy’s guidance. Planning began with assessing the previous year’s campaign and messages. As requested by HDOA in 2022, the ISCs and HAL were the lead for receiving and identifying ant samples. The calls-to-action were as follows:

- Request a free ant collection kit
- Collect and submit ants for ID
- Everyone’s help is needed find LFA or other new and harmful ant species before they become established.

Monthly planning meetings and preparations started in July, included updating the Stop The Ant website, writing and coordinating a news release with DLNR, tailoring letters for legislators to share, ordering kit supplies, drafting and contracting radio or print ads, and designing and scheduling social media posts, and other tasks. Partners were featured on several radio and television programs. The discovery of LFA in a plant bought from a local nursery by the Waimānalo Neighborhood Board Chair, followed by several social media posts caught the attention of Windward O’ahu legislators, which also drove public and media attention.

The total estimated reach for the campaign is estimated at one million, meaning that one million people encountered Stop the Ant messages or materials during the campaign. Some campaign metrics include:

- BIISC ran a total of 412 radio ads on 4 stations for a reach of 72,593 for \$2,286.91.
- MISC ran a total of 315 radio ads on 2 stations for a reach of 54,128 for \$2,176.00.
- KISC ran radio ads 70 radio ads with 2 stations for a reach of 106,017 for \$1523.56.
- OISC ran 1 Sunday ad with a QR code leading to the kit request page in the Honolulu Star Advertiser newspaper with a reach of 292,335 for \$1,335.08. (Radio is extremely expensive on O’ahu and past campaign buys have not had the desired reach per cost.
- From October 1 through November 30, there were 4,352 Stop the Ant website users (4,471 in 2022).
- In October social media engagement increased from 6 to 8% on partners’ Facebook posts and from 6 to 9% on Instagram posts despite the same number of posts as 2022.
- In addition to the kits requested in October, thousands more were made available at garden and hardware stores, libraries, and outreach events around the state.
- A total of 10 samples submitted by the public were confirmed to be LFA, all were on O’ahu.

Kits Requested	October STA 2021	October STA 2022	October STA 2023	Oct Samples Submitted 2023
Hawaii Island	68	126	203	26
Maui County	23	135	35	4
Oahu	224	340	302	40
Kauai	18	98	300	15
TOTALS	333	684	840	85

Table 1. Radio and print ads ask people to request a free ant collection kit be mailed to them. Although kits are available year-round, participation increases during Stop The Ant (STA) Month in October and there are usually a higher number of samples submitted in October and November.

Hau'oli Mau Loa Foundation Projects

From 2011 through 2022, Hau'oli Mau Loa Foundation partnered with CGAPS to protect Hawaii's natural environment by funding projects that bolster Hawaii's ability to prevent the arrival and establishment of new invasive species. After an 11-year program review of successes and remaining or ongoing issues, the Foundation committed to another five years of support for projects that "move the dot" on invasive species prevention. The CGAPS Steering Committee uses the 2025 Strategy and the HIBP to prioritize prevention projects that would not otherwise be possible or funded by agencies. Project funding is awarded at the end of a calendar year and may be single- or multi-year, and some projects (including funding for some CGAPS staff) are funded through multiple sources. The progress and final report summaries of projects are provided below.

Support for Hawai'i Green Growth (annual)

Funding provided by the Foundation through CGAPS (grant #22-1208-17-404) supported the general operating cost of the Hawai'i Local 2030 Hub, a UN-designated sustainability hub, which includes facilitation of the [Hawai'i Green Growth](#) (HGG) local network, HGG staff, and network projects that drive progress on the Aloha+ Challenge goals. Invasive species priorities are a part of several of the [Aloha+ Challenge](#) goals, including Natural Resource Management (the implementation of the Hawai'i Interagency Biosecurity Plan is one of the measures), Local Food, Smart & Sustainable Communities, and even Green Workforce & Education.

The HGG annual meeting and working group meetings provided spaces to discuss biosecurity topics that may otherwise be outside of participants' regular duties. HGG staff continued to maintain and improve the Aloha+ Challenge Natural Resource Management and Invasive Species Target Dashboard metrics. HGG also continued to engage county and state leaders to ensure that the goals of the Aloha+ Challenge are not lost in the shuffle of changing administrations. This future-proofing strategy has been a missing element in enacting so many multi-year plans and priorities. HGG also works in different spaces such as the United Nations which helps carry and convey the serious impacts and existential threat of invasive species on islands.



Governor Green and Hawai'i Island Mayor Roth speak with the youth panel at the Hawai'i Green Growth annual meeting.

Testing In-Water Cleaning Technologies (2018 – 2019; 2023; extended through 2025)

This project (#17-1213-12-294) is a multi-year grant administered by HCAF that was initially delayed due to the passage of the Vessel Incidental Discharge Act in December 2018, which will preempt state regulations related to biofouling once federal regulations come into force. In 2022, the EPA proposed discharge standards which gave some indication of the types of data available related to the in-water cleaning of biofouling from vessel hulls. In the fall of 2023, EPA posted proposed supplemental rules related to in-water cleaning of biofouling, further

clarifying the agency’s likely direction but the “standards” did not include numerical discharge standards for in-water cleaning technologies or water quality. EPA is expected to post its final discharge standards in 2024.

Research in the fall of 2022 showed that ballast water is capable of carrying and spreading SCTL, that the most commonly-installed ballast water treatment system is 50% effective at mitigating the pathogen, and a second study on the ability of the pathogen to be transported via vessel biofilm is underway. The Foundation’s flexibility on the timing of this grant is deeply appreciated and CGAPS will continue to work with national, regional, and local partners to identify the best use of these funds related to testing in-water cleaning technologies, which may also involve answering questions related to reducing SCTL risk.

Preventing New Invasives—Pathway Risk Analysis (2022; 2023; extended through 6/30/24)

This project (#20-1209-14-354) is nearly complete but an extension was requested and granted through the spring of 2024. CGAPS contracted a former USDA APHIS agriculture trade and pest specialist to conduct a pathway risk analysis between Hawai’i and Western Australia. There has been an unusual number of pests, including the Queensland longhorn beetle, that have arrived and established in Hawai’i in recent years, yet with no clear pathway or trade connectivity between the two areas.

CGAPS Legal Fellows (annual)

The CGAPS Legal Fellows (#22-1208-15-402 with additional support from DLNR) is a collaborative project between the UH William S. Richardson School of Law and CGAPS. The work of the Legal Fellows is crucial in helping CGAPS, HISC, and partners with legal research and potential policy changes to support better invasive species prevention and response programs. The Legal Fellows also assist the Environmental Law Program through occasional talks, working with Legal Interns and Externs, and other special projects. Educating this community of next-generation leaders in invasive species issues helps us meet longer-term goals of CGAPS.

As the CGAPS Aquatic Legal Fellow, **Andrew Porter** kept his focus on Strategy 3 (Aquatic Biosecurity), including ballast water, biofouling, and coral disease issues that can be vectored by vessels. Andrew worked closely with the DAR Ballast Water and Biofouling Coordinator, Elizabeth Monaghan, on issues related to ballast water and biofouling including the EPA’s roll out of its proposed regulations under the Vessel Incidental Discharge Act of 2018 (VIDA), a variety of issues related to Stony Coral Tissue Loss Disease (SCTL), and emerging aquatic invasive species (AIS) issues at Joint Base Pearl Harbor-Hickam.

Andrew started out 2023 in the legislative session with two important bills aimed at enhancing and streamlining DLNR’s ability to regulate vectors for the introduction of AIS. First, House Bill 755/ Senate Bill 468 was drafted and proposed



Andrew Porter (second from left) assisted in planning the retirement celebration for Professor Denise Antolini from the UH William S. Richardson School of Law. Denise pioneered the Legal Fellows program and many of the current and former Fellows and partners were in attendance.

to grant DLNR the authority to prevent and respond to the threat of AIS from all discharges incidental to the normal operation of a vessel (incidental discharges) that relate to AIS. HB 755 also sought to clarify state law's relationship to VIDA, and provide for state penalties sufficient to discourage future violations of AIS regulations.

Second, House Bill 760 was drafted and proposed to 1) grant DLNR rulemaking authority to include any rule deemed necessary to implement the purposes of section 187A-5; 2) expand the Board of Land and Natural Resources' (BLNR) authority to temporarily adopt, amend, or repeal certain rules by formal action at a publicly noticed meeting if the BLNR finds that such adoption, amendment, or repeal is necessary to implement effective and adaptive management measures in response to new or previously benign aquatic nuisance species, in light of newly available technology, or in light of newly available data; 3) create new fines for violations of rules pertaining to DLNR's prevention of or response to previously benign aquatic nuisance species; and 4) authorize DLNR to prevent or respond to threats from aquatic nuisance species from all discharges incidental to the normal operation of a vessel, not just ballast water and hullfouling.

Andrew assisted in drafting HB 755 and HB 760 as well as drafting comments for both DLNR/DAR and CGAPS. Andrew attended the hearings for these two bills that did not pass but did succeed in engaging new legislators in marine invasive species issues.

Andrew and Christy met with DOT staff and presented on VIDA and the implications for the State's role in implementation and enforcement. Specifically, Andrew is working to develop a legislative and regulatory framework to mirror federal regulations developed by the EPA and USCG for incidental discharges to avoid irregularities in state-federal co-enforcement of VIDA regulations caused by the delays inherent in the HRS Chapter 91 rulemaking process.

In November the EPA posted for public comment their re-proposed regulations for incidental discharges under VIDA. Under the re-proposed regulations, it was good to see that the EPA implemented many of the comments and suggestions offered by CGAPS and colleagues from West Coast states. However, there were still many issues in the re-proposed regulations. Andrew, Stephanie, Christy, and Lizzy worked with colleagues from West Coast states to formulate official comment letters on the re-proposed regulations for DLNR and CGAPS. Once the EPA's regulations are finalized, the USCG will begin working on VIDA implementation and enforcement regulations. Andrew attended the USCG's preliminary quarterly planning meetings to work with the USCG on developing a vessel reporting database to facilitate effective multi-agency communication and enforcement actions.

Andrew continued to work with DLNR and the Attorney General on draft regulations in preparation for the petition to the Board of Land and Natural Resources (BLNR) to enter rulemaking to mitigate the likelihood of introduction and spread of SCTL by vessels. Part of this effort was to work with the USCG to determine the number of vessels voyaging to Hawai'i from a SCTL infected area and the amount of ballast water from this area discharged in Hawai'i state waters. Andrew and DAR are hoping to have a finalized and approved draft of the emergency rule to present to the BLNR in February of 2024. Andrew also continued to work with the U.S. Coral Reef Task Force's (USCRTF) working groups on coral disease, transmission, and Pacific preparedness. Andrew's white paper on current federal regulations available to prevent the introduction and spread of SCTL is currently under peer review with members of the USCRTF.

Andrew has also participated in the Pearl Harbor AIS Octocoral Working Group which conducts biweekly informational meetings to provide updates, plan, and coordinate actions on the invasive octocoral *Unomia* and the other aquarium-release species within its infestation zone. Since the inception of this multi-agency working group, researchers have discovered a number of other AIS within the area of concern.

Finally, Andrew was provided with many opportunities for outreach and engagement to present on ballast water, biofouling, and the threat of SCTLD, including at events hosted by the University of Hawaii's William S. Richardson School of Law. These opportunities included an informal gathering of environmentally-focused members of the Hawai'i State Legislature and an event organized by Ninth Circuit Judicial Historical Society.

In addition to her work with the team on VIDA, **Stephanie Easley** continued in her role as the CGAPS Terrestrial Invasive Species Legal Fellow. In 2023, Stephanie continued to focus on providing support for regulations and activities that prevent the introduction or spread of high impact invasive species.

Stephanie continued working with HISC staff and the Office of the Attorney General to prepare draft administrative rules to carry out the HISC statutes (chapter 194, Hawai'i Revised Statutes (HRS)). It has been a long and intensive process. Chapter 194 HRS authorizes the departments of the HISC to control and eradicate designated invasive species on private and public property, which raises many statutory and constitutional issues that must be navigated with the Deputy Attorney General's assistance. HISC has been operating without administrative rules for more than 20 years and Stephanie hopes that new HISC administrative rules will be adopted in 2024.

Stephanie continued to participate in and provide support to the Prevention & Early Detection/Rapid Response (EDRR) Working Group. Stephanie participated in a variety of Working Group task groups, most of which utilized Stephanie's research and drafting skills. These responsibilities provided Stephanie the opportunity to assist HDOA, under the leadership of Dr. Helmuth Rogg, in reviewing and revising its out of date administrative rules.

As part of the Prevention/EDRR Working Group task to prevent the spread of CRB within O'ahu and to other islands, Stephanie assisted HDOA in preparing a full revision and update of chapter 72, Hawai'i Administrative Rules (HAR). HDOA's proposed revision included a provision that, for the first time, authorizes HDOA to prevent plants and other merchandise that is infested with a pest from being sold to the public. It also includes a new provision that requires businesses that transport or process CRB host material in a CRB infested area to use best management practices to prevent the spread of CRB within and across islands. Stephanie provided CGAPS testimony in support of the proposed chapter 72 amendments to the Advisory Committee on Plants and Animals, the Board of Agriculture, and the Small Business Regulatory Review Board, where the amendments were unanimously approved at each meeting. She also supported community and other groups and the Invasive Species Committees in reviewing the proposed rules and other options available to prevent and control CRB on other islands.

Stephanie continued to assist HDOA with the development of an administrative rule to require firewood imported into the State to be heat treated and labeled to prevent the introduction of invasive forest pests. As part of that process, she continued to assist HDOA



CGAPS and HISC staff work together to implement the 2025 Strategy. L-R:: Stephanie Easley, Christy Martin Leyla Kaufman, Chelsea Arnott, and Kailee Lefebvre. Missing from CGAPS are Ambyr Miyake and Andrew Porter, and from HISC Jack Reef, Elizabeth Speith, and Chuck Chimera.

in preparation of an updated version of chapter 70, HAR, the Plant Import Rules, in the early part of 2023. Unfortunately, at this time HDOA has no plans to move forward with the revised version of chapter 70, HAR.

Stephanie also utilized her background in legislative drafting to assist in preparing an appropriations request seeking federal congressional funds for the Pacific Regional Biocontrol Facilities and submitted this request on behalf of CGAPS.

She also monitored and provided written and oral testimony during the 2023 Legislature Session in support of House Bill 755, relating to aquatic nuisance species, House Bill 1149, relating to coconut rhinoceros beetle, and House Bill 1150, relating to invasive species, including little fire ant, among others. She also monitored invasive species-related requests before the Board of Agriculture and provided testimony when appropriate. Stephanie also monitored federal bills regarding amendments to the Lacey Act and reviewed language proposed in Senate Bill 1614 which attempted to (but did not) address a technical construction issue in the language, based on the ruling in a 2017 case. A second issue was that the proposed language did not clearly preserve the state's authority to regulate species such as snakes. She and Christy met with staff at the Association of Fish and Wildlife Agencies to convey serious issues with proposed language and prepared a memo that became DAR's position.

Throughout the year, Stephanie provided responses to requests from local and State legislators related to invasive species prevention. These responses included providing draft language at the request of a member of the Honolulu City Council for a resolution supporting the role of the City and County of Honolulu in controlling high impact invasive species and in supporting the O'ahu Invasive Species Committee and responding to legislator requests for information and legislative language for programs to license plant nurseries to prevent the spread of high impact invasive species through the nursery and plant sale pathway.

In support of the William S. Richardson School of Law, Stephanie was a guest speaker in the Legislation class during the spring and fall semesters.

Capacity Support for CGAPS Program Manager and Planner (annual)

The Foundation provides core support for CGAPS (grants #20-1209-13-353, #21-1208-19-379, #22-1208-16-403), including most of the salary and fringe for Planner Kailee Lefebvre. In 2023, HISC funds were secured to provide several months' of salary, fringe, and operating costs for partial support of this position in 2024. Hau'oli Mau Loa Foundation funds also supported a portion of the salary and operating costs for CGAPS Program Manager Christy Martin, with additional funds received from DLNR DOFAW, NPS (#P17AC01216 Mod2), USFWS, and HISC, and several agencies supported travel to meetings outside of Hawai'i.

Kailee Lefebvre continued as CGAPS Planner and worked on several projects in 2023, focused primarily on Strategies 7 (Engaged and Supportive Communities), 9 (Strong CGAPS Network), and 2 (Inter/Intra-Island Movement).

One of Kailee's biggest projects from 2022 came to a close as the interactive biosecurity



Monthly Legal Fellows and Friends meetings provided opportunities to network and share project updates. Despite her retirement, Denise continued to facilitate these meetings, this one with DLNR Chair Dawn Chang and Deputy Laura Kaakua. 2022 CGAPS Legal Intern Evan Miyaki (upper left) is currently a Legal Fellow with DAR and former CGAPS Legal Fellow Kathryn Stanaway (top right) has a civil service position with DOFAW.

display was installed at the Daniel K. Inouye International Airport on January 27, 2023. The display aims to educate the public about the importance of biosecurity, some of the current threats, and actions they can take to prevent the movement and establishment of invasive species. The display also highlights some of the people working on biosecurity including a game where the participant acts as an Agricultural Inspector. This is a permanent display in the new terminal of the airport. A joint press release was issued by DLNR.

In addition to Foundation funds for staff support and the contract to Bishop Museum for overall design and installation, CGAPS received CHANGE Framework Grant (Grant ID: 21HCF-111171, CHANGE Sector 4N3) from the Hawai'i Resilience Fund and the Robert Emens Black Fund of the Hawai'i Community Foundation for the period of August 1, 2021 through July 31, 2022, and extended through January 31, 2023. A final report was submitted in February, 2023.

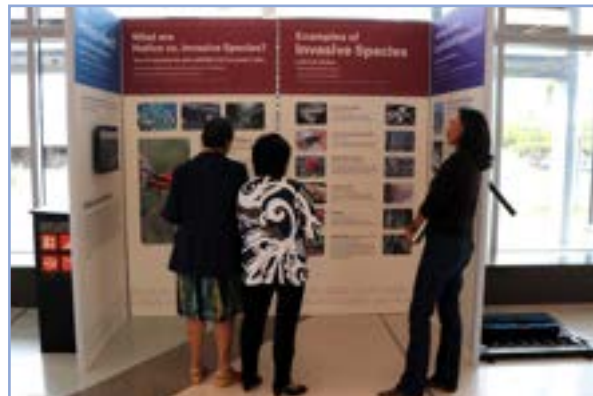
For the past 2 years, Kailee has taken the lead on a student civics project that educated classes about a chosen native species and how they can use their voice at the legislature to protect it. This resulted in the passing of a bill to designate 'ōhi'a lehua the State endemic tree in 2022. Due to the program's success, Kailee continued the project leading up to the 2023 legislative session with a focus on the native Hawaiian honeycreepers. The students advocated for a resolution to designate a Hawaiian Honeycreepers Celebration day on August 8, 2023. She worked with bird conservation partners across the state to provide presentations on the honeycreepers and their threats, the legislature, and how to participate. In 2023, Kailee gave eight classes in addition to the eight she conducted in the fall of 2022 and under her guidance, students reached out to legislators, provided written and oral testimony, were featured in local news, and conducted their own community outreach. Students also started a fundraiser and stretched their advocacy further by providing testimony in support of mosquito control efforts at a Board of Land and Natural Resources meeting.

Overall, there were more than 2,000 students and 20 teachers, seven of which participated in the previous year, from schools across the state, resulting in more than 2,000 written testimonies submitted for the three hearings for the resolution. Seven classes provided oral testimony including one class that attended the hearing in-person at the Capitol. The resolution was adopted on April 24 after unanimous support. To follow up, Kailee assisted coordinating events and social media campaigns in each county leading up to Hawaiian Honeycreeper Celebration Day on August 8, 2024. Although some events were conducted, all attention turned to Maui as the wildfires devastated communities.

Upon recognition of the importance and increasing demand for conservation-centric



Bishop Museum Exhibits staff installed the biosecurity display in the middle of the night when the airport was closed.



L-R: DLNR Chair Dawn Chang, HDOA Chair Sharon Hurd, and Christy Martin inspect the biosecurity display in preparation for media interviews. Photo by Dan Dennison

civic education in the classrooms and the success and support for these initiatives, Kailee wanted to continue the project for a third year. However, due to the number of hours spent in meetings coordinating with partners and presenting in classrooms, she decided to employ a train-the-trainer method. Kailee consulted with a few teachers and together they decided to modify the structure so that the teachers would teach their own classes from curriculum provided by Kailee. Most of the project would be independent of Kailee's time besides occasional check-ins, with the focus of students' 2024 advocacy on a bill to designate a kāhuli (native tree snail) representative for each island, a bill which is already being proposed in partnership with DLNR. At a year-end check-in, the classes were on schedule for the 2024 legislative session.

Kailee helped with annual projects led by CGAPS, HISC, and partners through planning, logistics, and content creation for the 'Ōhi'a Love Fest, ROD Outreach Workshop, Stop the Ant Month, and Hawai'i Invasive Species Awareness Month (HISAM). She assisted with coordination and planning of an Invasive Pest Conference in Honolulu and Na Makahiki o Na Manu Nahele: the Year of the Forest Bird campaign. She also attended and gave a presentation at the International Congress of Biological Invasions conference in Christchurch, New Zealand. She attended other in-person events like the Hawai'i Green Growth Local 2020 Annual Partnership Event, the Landscape Industry Council of Hawai'i Conference, Hawai'i Weed and Restoration Workshop, and the Pacific Entomological and Botanical Conference. In November, she helped draft a briefing document and accompanied Christy for meetings with all four Hawai'i congressional offices in Washington D.C.

Kailee also continued to provide support for the Coconut Rhinoceros Beetle Response by assisting with the development of a statewide communications plan. For the O'ahu LFA Response, Kailee helped Hawai'i Ant Lab staff conduct surveys to delimit new infestations, treat known infestations, and coordinate bi-monthly incident-command style meetings. She also coordinated meetings between partners and assisted DOFAW with tracking biocontrol projects as they move through the regulatory process.

In support of the CGAPS partnership and community, Kailee continued to coordinate the logistics for the quarterly CGAPS General and Steering Committee meetings and monthly staff meetings. In 2023, CGAPS began having hybrid meetings with an in-person option for the first time since COVID and plan to continue this in 2024. She also maintained the listserve and continued to work on the CGAPS website.



Kailee Lefebvre was invited to speak about her student civics work at several local events and also presented at the International Congress of Biological Invasions conference in New Zealand.



Kailee and Christy scheduled and met with Hawaii's congressional delegates or their staff following the ISAC meeting in November. Briefing topics included updates and needs regarding invasive marine species in Pearl Harbor, biocontrol facilities, and other issues.

As the Program Manager and Information Officer, **Christy Martin** is responsible for public and policy maker outreach and media-related duties (50%); staff direction and supervision, partnership coordination, and partner project support services (25%); grants and reports, planning, and project management (20%); and other duties as assigned (5%). In this position, Christy continued to supervise and guide the CGAPS staff, contractors, and projects, work with fiscal staff and administrators on procurement and contracting, and assist the CGAPS Chairs, Steering Committee, and the Working Groups, to advance action on the Strategies.

Christy monitored and provided testimony on five bills during the legislative session, one of which successfully provided \$500K for the Hawai'i Ant Lab (HAL). This is the second year of legislative funding for HAL via an increase to the HISC budget. Meetings with legislators were held during and outside of session on priority issues and legislation, and speaking at legislators' requests during legislator-hosted Town Halls on LFA and other invasive pests. Concerns about LFA and other invasive species also led to new relationships on O'ahu with the Waimānalo and several other neighborhood boards, the KEY Project leadership and staff, Councilmember Kia'āina, and several other groups. A significant amount of time was also devoted to communications related to rulemaking for HDOA's HAR 4-72, as described by Stephanie in the Legal Fellows section. Christy also met with and briefed Lt. Gov. Sylvia Luke, Congresswoman Tokuda and staff from each of Hawaii's congressional offices, focused on the need for biocontrol facilities, the octocorals and other invasive species in Pearl Harbor, little fire ants, and other invasive species issues.

Christy continued to facilitate work and reporting on the Pono Nurseries outreach project, a USDA Plant Protection Act grant secured by CGAPS in 2021 which provided support for the ISCs outreach specialists to conduct in-person and webinar trainings to the nursery industry on preventing, detecting, and reporting high-risk species across the state. A total of 110 people from 30 different businesses and organizations completed the 1.5-hour training, 61% were from nurseries or botanical gardens, 19% were master gardeners or hobbyists, and 18% were from other agricultural businesses, related agencies, conservation, and extension. A pre-training survey found that more than half were "unlikely" at best to be able to identify key pests such as spotted lanternfly, but a post-training follow-up survey found that 99% reported being "likely" or "very likely" to identify key pests. This and other information were collated with help from HISC staff Elizabeth Speith and included in the final report after the grant period ended on May 31, 2023.

Christy also supported partners and advanced the Strategies by organizing and facilitating a new bi-weekly multi-agency meetings to guide and inform the Pearl Harbor octocoral response, and by working with Stephanie and Leyla to coordinate the federal/state biosecurity planning and preparation for the Festival of Pacific Islands Arts and Culture (FestPAC) which Hawai'i will host in June, 2024. Christy continued to co-chairing with Elizabeth Speith the Public Outreach Working Group, as part of the engagement subcommittee for the Birds, Not Mosquitoes landscape-scale mosquito control project, as the strategic communications lead for the Pacific Regional Biocontrol Facilities, and as



Christy was asked to step in as the biosecurity coordination lead for FestPAC by Benton Pang, who had been coordinating efforts until the pandemic delayed the festival and Benton had since stated a new position at USFWS. Leyla Kaufman, Stephanie, and Christy work together to organize meetings, and occasional festival logistics briefings are held in the Governor's conference room.

part of the ROD Outreach Working Group, and other projects.

By partner agencies' requests and with travel support provided by agency partners, Christy participated as one of the facilitators discussing and prioritizing marine invasive species issues and needs in the Pacific region, first as part of a DOD INDOPACOM Invasive Species Forum in July, then in the Policy track at the Guam Biosecurity Workshop in November. These two regional workshops and a third workshop organized and hosted in the spring by the Office of Insular Affairs have been excellent learning and sharing events among islanders with tangible outcomes for Hawai'i. The Guam Biosecurity Workshop Policy track included a number of marine biosecurity talks at the request of Pacific Territories who had largely been excluded from many of EPA's meetings and webinars. Topics included Vessel Incidental Discharge Act, SCTL, and the EPA's Supplemental Notice which was open for public comments at the time. Christy used the comments that had been collaboratively developed with Pacific Coast partners and modified them to include concerns from Pacific Territories. These modified comments were shared with and used verbatim by the All Islands Committee, several Territories, and DLNR.

The Pacific Regional Invasive Species and Climate Change (Pacific RISCC) continued to focus attention and advance knowledge, understanding, and communication on the synergistic effects of climate change and invasive species. As part of the core team that spans the U.S.-affiliated islands in the Pacific, Christy supported the planning and hosting of webinars and written pieces to continue to merge these two separate communities and sciences. At the invitation of the North American Invasive Species Management Association (NAISMA), Christy and Pacific RISCC Coordinator Dr. Elliott Parsons researched and wrote an article on the role of invasive grasses and shrubs in wildfires in Hawai'i which is also intertwined with a changing climate.

As part of the UH PCSU and RCUH community, Christy highlighted the University's role in invasive species work through lectures, presentations, informal advising, and other communications and collaborative projects with students, faculty, and staff. Christy helped PCSU design and host an outreach display and materials at the first UH Research Day at the Legislature. Of the many talks and presentations of 2023, a presentation on RCUH's role in protecting natural and cultural resources given to the RCUH staff and Board of Directors was the most gratifying. Many expressed their deep appreciation at seeing how impactful RCUH is as a team. A full list of the staff's outreach work is listed in the Outreach & Media section of this report.

With the help of HISC's nomination in 2022, Christy was appointed to the Invasive Species Advisory Committee (ISAC)

which provides advice for consideration by the National Invasive Species Council. As part of this appointment, Christy co-chaired a subcommittee that met several times each month to research and produce a white paper on Underserved Communities. Christy also participated in a second subcommittee to draft a white paper on National Priorities. These and a third white paper on how invasive species threaten climate adaptation efforts will be published to the NISC website in spring of 2024. At the November in-person meeting, Christy was nominated and became ISAC Vice Chair.



Most of the 13-member Invasive Species Advisory Committee were able to participate in the November meeting to finalize three white papers that provide information and advice to federal agencies.

ROD Emergency Special Funding Projects (2019, 2020, 2021, 2022, 2023)

HMLF has provided special additional support for emergency response work on ROD, which is deeply appreciated (grants #18-1212-22-321, #20-1209-15-355, #21-1208-22-392, #22-1208-18-405; grant #19-1211-13-338 was spent down and termed in 2023). Most ROD funds are administered by the University of Hawai'i Foundation and Office of Research Services because UH plays a key role in the research, response, and extension work on ROD. A portion of the funds supported Ambyr Miyake and her work as the ROD Statewide Outreach Coordinator and a portion provides partial support for a lab technician housed at USDA ARS to process the thousands of samples submitted for ROD pathogen testing. In 2023, Eva Brill, our long-time lab tech moved to be closer to family. The work was covered by others at ARS until a new tech could be hired.

Ambyr Miyake continued in her seventh year as the Rapid 'Ōhi'a Death (ROD) Statewide Outreach Coordinator, under the supervision of CGAPS, with Drs. Mike Melzer and J.B. Friday as Principal Investigators. Ambyr is responsible for coordinating and implementing the public engagement goals and actions in the [2020-2024 ROD Strategic Response Plan](#). Ambyr worked closely with Charlotte Godfrey-Romo, the Hawai'i Island ROD Outreach Specialist, Kim Rogers, the Kaua'i ROD Outreach Specialist, and J.B. Friday, the CTAHR Extension Forester, to plan and conduct outreach projects.

In 2023, gatherings began to be hosted as in-person events again after the last few years of mostly virtual outreach events. Ambyr attended more than 20 in-person events that reached 5420 people from across the state. One of the main objectives of the coordinator position is to engage new partners to increase outreach capacity and reach across the state. Ambyr focused her time on several large events and workshops throughout the year. This past year Ambyr coordinated and hosted several key events such as the ROD outreach table at the Merrie Monarch Festival, the annual ROD Outreach Workshop, 'Ōhi'a Love Fest, and 'Ōhi'a-free Wreath Making Workshops.

The ROD educational booth was held in a different area of the International Craft Fair section of the MMF and we had great interaction and feedback from festival attendees. The 4-day event allowed us to interact and reach over 3000 attendees. In addition to direct outreach at the event, the ROD outreach team also wrote and contracted two different radio public service announcements that were broadcast on KWXX and KAPA, the two radio stations with the largest reach on Hawai'i Island. Ambyr worked with HDOA to install the illuminated 'ōhi'a quarantine sign at the HDOA kiosk in the Daniel K. Inouye Honolulu Airport to remind travelers that 'ōhi'a plant materials—including lei—cannot leave Hawai'i Island without a permit.

The ROD Strategic Response Plan public engagement strategy calls for extending our reach by training the trainers that already conduct related outreach or are likely to conduct outreach about 'ōhi'a if provided with the information and tools. For this train-the-trainers approach, Ambyr worked with partners to organize and host the 6th annual ROD outreach workshop as a two-day training in Hilo. In addition to providing basic information about 'ōhi'a and ROD, the 45 participants from across the state also worked together to assess, plan, and coordinate ROD outreach messaging.



Conservation groups partnered and helped staff several outreach booths at the Merrie Monarch Festival. L-R, Luka Zavas with Birds, Not Mosquitoes, Melissa Kunz and Kulle Fezzaroy with USDA FS, Charlotte Godfrey-Romo with UH CTAHR, Elizabeth Speith with HISC, and Ambyr Miyake at the ROD booth.

Survey results from the workshop were overwhelmingly positive with participants saying that they thoroughly enjoyed it, learned a lot of new skills that they could use in their work, and had a great time networking with other educators.

The 7th annual 'Ōhi'a Love Fest was held from November 4th-18th as statewide mini-festival with events on each island. Ambyr and the team partnered with numerous agencies and organizations to host 5 separate events on Kaua'i, O'ahu, Maui and in Kona and Hilo on Hawai'i Island. The 2023 theme was Ka 'Upena O Ke Ola, meaning the net of life. This theme and offerings were a representation of the interconnectedness of all flora and fauna from mauka to makai. Participants learned from the various organizations all about 'ōhi'a love, invasive species, planting and wreath-making workshops, and more, leaving with the tools and resources they need to take action in their communities to help combat ROD across the state. More than 3,500 people attended, most as the result of a statewide social media campaign on Instagram and Facebook.

In December, Ambyr planned and hosted 4 in-person 'ōhi'a -free wreath making workshops with a total of 100 attendees. The workshops covered basic information about the importance of 'ōhi'a, ROD and how it can spread, proper permitting, the art of wreath making, and the use of alternative foliage. Most of the attendees of the workshops have never made a wreath before and were very excited to participate.



Opening and intention-setting of the ROD Outreach Workshop in Hilo.



Ambyr partnered with DLNR DOFAW O'ahu Branch to host a holiday 'ōhi'a-free wreath workshop for DLNR staff and partners in conservation. This fun networking event included 'ōhi'a protection, ROD prevention, and responsible gathering information.

CGAPS Staff Outreach & Media

Staff participated in a number of in-person and videoconference or webinar outreach opportunities in 2022. The following is a list of events where Ambyr Miyake (AM), Stephanie Easley (SE), Andrew Porter (AP), Kailee Lefebvre (KL), and Christy Martin (CM) conducted outreach to the public or stakeholder groups via presentations, workshops, booths at community events, or via radio, print, television, or social media stories.

- 1/6 Presentation (KL): *Honeycreeper Advocacy* for Moanalua Middle School
- 1/10 Event (AM): ROD display for Legislative Reception at the Capitol
- 1/13 Presentation (KL): *Honeycreeper Advocacy* for Kapaa Elementary School
- 1/19 Presentation (KL): *Honeycreeper Advocacy* for Moanalua Middle School

- 1/24 Event (AM): Legislative Meet and Greet, Capitol, O'ahu
- 1/26 Presentation (KL): Honeycreeper Advocacy for Mountainview Elementary School
- 1/26 Presentation (CM): *Urgent Biosecurity Needs* for legislative infobriefing on invasive species and [Civil Beat article on the briefing](#) on 1/27
- 1/28 Media (CM): Interview on the development and installation of a new biosecurity display at DKI International Airport. [Media release](#) and stories in several outlets.
- 1/31 Presentation (KL): Honeycreeper Advocacy for Highlands Intermediate
- 2/1 Presentation (KL): Honeycreeper Advocacy for Highlands Intermediate
- 2/7 Event (CM): PCSU Projects display at UH Research Day at the Capitol.
- 2/9 Event (AM, CM): ROD display at Ag Day at the Capitol
- 2/10 Media (CM): [Protecting Hawai'i from pests aim of new airport exhibit](#). UH News
- 2/16 Presentation (SE): Hawai'i Invasive Species Awareness Month Webinar on Invasive Plant Sales
- 2/16 Presentation (CM): 2023 Pacific Regional Biocontrol Facilities, an executive briefing on status and needs
- 2/17 Presentation (KL): Honeycreeper Advocacy for Kihei Charter School
- 2/17 Panel (CM): Let's talk about the mongoose- modern biocontrol and why we need it. Webinar for Hawai'i Invasive Species Awareness Month
- 2/25 Event (KL): Ola Ka I, Ka Makana Ali'i, O'ahu
- 3/21 Presentation (KL): Honeycreeper Advocacy for Pomaikai Elementary School
- 4/4 Presentation (CM): Marine invasive species for Ocean Awareness Training
- 4/7 Presentation (CM): Pacific Islands forest resilience opportunities: a natural and cultural history perspective from Hawai'i for the Pacific Islands Forest Resilience Roundtable
- 4/9 Media (CM): Interview. [Maui experts hope to catch up in battling coqui, little fire ants, micona](#). Maui News
- 4/12 Event (AM): Merrie Monarch Festival, Civic Auditorium, Hawai'i Island
- 4/13 Event (AM): Merrie Monarch Festival, Civic Auditorium, Hawai'i Island
- 4/21 Presentation (KL): Capitol tour and legislator meet and greet with Papahana o Kaiona school
- 4/25 Workshop (AM): 'Ōhi'a Lehua Day Lei Making Workshop, KEY Project, O'ahu
- 4/25 Presentation (CM): [Hawaii's Biosecurity Framework](#) for HISC Brown Bag Presentation Series
- 5/1 Event (AM): City and County Lei Day, Kapiolani Park, O'ahu
- 5/4 Presentation (KL): Student Advocacy project for International Congress on Biological Invasions Conference in Christchurch, New Zealand
- 5/12 Presentation (CM): Biosecurity in Hawai'i and as a Pacific partner. Presentation with Darcy Oishi and Chelsea Arnott for the DOI Territorial Climate and Infrastructure Workshop
- 5/18 Workshop (AM): ROD Outreach Workshop, CTAHR Komohana Office, Hawai'i Island
- 5/19 Workshop (AM): ROD Outreach Workshop, CTAHR Komohana Office, Hawai'i Island



Ambyr was interviewed by Hawai'i Public Radio at Ag Day at the Capitol

- 5/19 Presentation (KL): Student Advocacy project for ROD Outreach Workshop
- 5/23 Media (CM): Interview. [Navy partners with state and federal agencies to stop invasive species](#). Navy Region Hawai'i
- 5/24 Media (CM): Interview. [New invasive species imperils Hawaii's aquatic environment](#). The Garden Island
- 6/8 Event (AM): Student Leadership Conference, Convention Center, O'ahu
- 6/17 Event (KL): Kaua'i Ag Festival
- 6/28 Event (AM): Hawai'i Conservation Conference – Roundtable Forum, Convention Center, O'ahu
- 7/12 Workshop (AM): Lei Making Workshop for Ag Discovery Day, UH Mānoa, O'ahu
- 7/17 Presentation (CM): *Marine biosecurity prevention technology* at the Invasive Species Forum for DOD INDOPACOM
- 8/3 Presentation (CM): Q&A on *little fire ants* for Key Project community meeting
- 8/5 Media (CM): Interview. [Little fire ant numbers are 'at tipping point'](#). KHON 2
- 8/8 Presentation (CM): *Island resilience: engaging PICTs on biocontrol* for Inspire Session panel at the Ecological Society of America conference
- 8/10 Presentation (AM): Invasive Species Conference, Blaisdell Hall, O'ahu
- 8/10 Presentation (KL): Invasive Species Conference, Blaisdell Hall, O'ahu
- 8/13 Event (AM and KL): Honeycreeper Celebration Day, Honolulu Zoo, O'ahu
- 8/21 Presentation (CM): *Regulatory gaps* for Town Hall on invasive species in Waimānalo
- 8/27 Event (CM): Staffed the Birds, Not Mosquitoes display at Ho'olau Kanaka hula and community event
- 8/28 Media (CM): Interview. [Can we save our native forests?](#) Panel on PBS Insights
- 8/29 Presentation (CM): *RCUH's role in protecting natural and cultural resources* for RCUH administrative staff
- 9/18 Presentation (CM): *Intro to LFA* for Windward Town Hall at Parker Elementary
- 9/19 Presentation (CM): *RCUH's role in protecting natural and cultural resources* for RCUH Board of Directors
- 9/29 Presentation (CM): *HPWRA and Plant Pono* for UH landscape and class
- 9/30 Presentation and Event (CM): *Plant Pono* presentation and display at the Honolulu Botanical Garden plant sale
- 10/4 Presentation (CM): *Non-profits (and why to consider working with an invasive species NGO)* for the UH Marine Option Program class
- 10/10 Presentation (CM): *Intro to Policy* for UH Botany 350
- 10/10 Article (CM): [The tragedy in Lahaina: how invasive grasses and shrubs are fueling the wildfire crisis in Hawai'i](#). Co-authored with Elliott Parsons for the NAISMA Newsletter
- 10/10 Presentation (CM): *Intro to LFA* for Lanikai community Town Hall
- 10/13 Media (CM): Interview. [Navy works with local partner to eradicate invasive species](#). Navy Region Hawai'i News
- 10/17 Presentation (CM): *CGAPS priority updates and new measures* for Hauoli Mau Loa Foundation Board of Directors
- 10/19 Presentation (AM): NAISMA Conference, Lincoln, NE



Christy and Josh Fisher of USFWS staffed the Birds, Not Mosquitoes outreach table at the Ho'olau Kanaka event on O'ahu.

10/23 Media (CM): Interview. [O'ahu invasive species group says little fire ant needs more funding, regulations](#). HPR The Conversation

11/4 Event (AM): Arbor Day/'Ōhi'a Love Fest, Maui Nui Botanical Gardens, Maui

11/15 Event (AM): Ag Awareness Day, Pearl City Urban Gardens, O'ahu

11/18 Event (AM): O'ahu 'Ōhi'a Love Fest, Honolulu Zoo, O'ahu

11/22 Presentation (CM): *Hawaii's biosecurity framework* for CPN/ AEN legislative briefing

11/23 Media (CM): Interview. [Environmentalists sound alarm after live coconut rhinoceros beetle larvae found on Maui](#). Hawaii'i News Now

11/23 Media (CM): Interview. [Live CRB found on Maui, experts argue more needs to be done](#). KHON 2

11/24 Media (CM): Interview. ['Bad actor' nurseries targeted by officials over little fire ant infestations](#). Honolulu Star Advertiser

11/27 Presentation (CM): *Marine biosecurity: pathways* for Policy Track at the Guam Biosecurity Training

12/1 Workshop (AM): Wreath Making Workshop, USFWS Honolulu Office, O'ahu

12/4 Presentation (CM): *Intro to LFA* for Kailua Town Hall

12/11 Workshop (AM): Wreath Making Workshop with DLNR staff and partners, Peacock Flats, O'ahu

12/13 Workshop (AM): Wreath Making Workshop with KISC, Kokee Meadow, Kaua'i

12/15 Workshop (AM): Wreath Making Workshop, CTAHR Komohana Office, Hawai'i Island



L-R: Chelsea Arnott, Stephanie Easley, Rep. Scot Matayoshi, Rep. Lisa Kitagawa, and Chris Frohlich of the Hawaii'i Ant Lab discuss the many new LFA infestation at one of several Town Halls that Windward O'ahu legislators organized and hosted. Each of the meetings were well-attended.



Hinahina at James Campbell National Wildlife Refuge in 2023.

This report was submitted by January 31, 2024 in compliance with grant agreements. The report was drafted by CGAPS staff with HISC staff providing some information on progress towards the Strategy. Nothing in this document requires any agency to expend funds that have not been appropriated and allocated. For more information about this report, please contact Christy Martin at christym@rocketmail.com.