

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

Annual Report
January 1 — December 31, 2024

Submitted to:
Hau'oli Mau Loa 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 (partial)

AG: Department of the Attorney General
BIISC: UH Big Island Invasive Species Committee
CBP: DHS Customs and Border Protection
CGAPS: UH Coordinating Group on Alien Pest Species
CRB: Coconut rhinoceros beetle
CTAHR: UH College of Tropical Agriculture and Human Resilience
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: UH 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: UH Kaua'i Invasive Species Committee
LFA: Little Fire Ant
MISC: UH Maui Invasive Species Committee
MoMISC: UH Moloka'i-Maui Invasive Species Committee
NGO: Non-governmental organizations
NPS: National Park Service
OISC: UH 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
UH: University of Hawai'i
UHF: University of Hawai'i Foundation
USCG: U.S. Coast Guard
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. The Coordinating Group on Alien Pest Species, "CGAPS", (pronounced "C-GAPS") was formed in 1995 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; Christy Martin, Program Manager; and the Planner position which is currently vacant. CGAPS also occasionally employs contractors, interns, and students.

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 multi-agency meetings to facilitate information-sharing and networking.

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 staff and Steering Committee, 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. The Steering Committee maintains the 3-Chair structure so that it is comprised of an individual each from a State agency, Federal agency, and a non-governmental organization (such as academia, Bishop Museum, etc.) to maintain these differing perspectives. Mahalo to 2024 CGAPS Chair Susan Cordell (USDA Forest Service-Institute of Pacific Islands Forestry), Chair Emeritus David Smith (Hawai'i Department of Land and Natural Resources-Division of Forestry & Wildlife) and Deputy Chair Dexter Kishida (Hawai'i Department of Agriculture) for taking on these roles! Individuals from the NGO community and State will be sought for 2025, as Dexter had to step down at the close of 2024 and David moves out of the Emeritus Chair position.

CGAPS projects and staff salaries 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, multiple agreements), HISC (agreement #C42861), Department of Land and Natural Resources-Division of Forestry & Wildlife (agreement #C44156 and from DOD Readiness and Environmental Protection Integration [REPI] #C31641 as 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 (agreement #F23AP02580).

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) under the College of Natural Sciences. Mahalo to CGAPS Principal Investigator (PI) Shaya Honarvar and the PCSU staff. ROD funds were administered through the College of Tropical Agriculture & Human Resilience (CTAHR) with Drs. Mike Melzer and J.B. Friday as PIs, and the Legal Fellows through the William S. Richardson School of Law Environmental Law Program with Co-Directors David Forman and Richard Wallsgrove as 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 UH, UHF, and RCUH for 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 Resilience
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 key state agencies. In 2019, these two networks worked together to assess the most pressing needs from the 2017-2027 Hawai'i Interagency Biosecurity Plan to create the five-year HISC & CGAPS 2025 Joint Strategy. Most Strategies have a Working Group chaired by a lead agency and HISC and CGAPS staff provide planning and meeting coordination support, and at times lead work on some Key Actions.

For each of the 10 Strategies, the Key Actions are listed in the left column, and progress made in 2024 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 2024

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: Focus on FestPAC with support by Stephanie Easley and Christy Martin, CGAPS & Leyla Kaufman, HISC/USFWS

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:

Achieved. Led by Hawai'i Department of Agriculture (HDOA), a non-regulatory Hawai'i Prevention Priority List was developed in 2020. In 2021/2022, a Pathways task group reviewed, validated, and updated [the list](#) to make it representative of the highest priority species across all taxa. The list is a living document.

Ongoing:

- CGAPS and HISC coordinated multi-agency meetings with scenario-based discussions in preparation for the 2024 Festival of Pacific Arts and Culture (FestPAC). An After-Action Report was produced and is in review.
- HISC continued the Port of Entry Monitoring Program.

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 produce a [pathway risk analysis for ramie moth](#).

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.

- CGAPS supported HDOA by providing an update to Hawai'i Administrative Rules (HAR) chapter 4-72 which was approved to enter rulemaking in February, 2023. After delays, the draft rule was approved by the Governor for public hearings which occurred in January, 2024. In April a Senate Resolution ([SR163](#)) passed, urging HDOA to complete rulemaking and adopt. The Small Business Regulatory Review Board heard and approved the hearing report in November, and the last step in the process will be for Governor's signature. Adoption of these rule amendments could improve regulatory tools for pathways prevention including inter-, and intra-island movement. Note that there is no set or compulsory timeline for rulemaking steps.
- In an Invasive Species Advisory Committee (ISAC) white paper on islands and invasive species, CGAPS recommended federal agency actions to address high risk pathways for islands like Hawai'i.

No opportunity for progress:

- No progress again in 2024 on entering rulemaking on 2022 draft firewood quarantine rule to be added to HAR chapter 70. Bills to mitigate risk of imported firewood were introduced and heard but did not pass.
- No progress again in 2024 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. Bills to give HDOA this authority to enforce federal interstate quarantines were heard but did not pass.
- No progress on CGAPS' petition to add Restricted Plant Rules and a list of prevention plants as HAR chapter 4-70A was heard by the Board of Agriculture (BOA) on February 2019 and sent to be reviewed by the Advisory Committee on Plants & Animals. It has not been agendized. In 2022 CGAPS contractor Rachel Neville submitted petitions for federal import restriction of this same 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.
- No action in 2024 on rulemaking on updates provided in 2022 to 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) produced at HDOA's request and with agency participation.

Key Actions:

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.
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]
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/rapid response (EDRR) capacity on each island for regulatory agencies and partnership projects, including mobilizing species-specific teams for high-risk terrestrial incursions.

Progress:

Nearly complete. No progress again in 2024. Despite direct communications on the urgency of the issue, USDA APHIS estimated it would still take a year to accomplish. The only remaining open pathway is foreign imports of cut flowers and foliage that contains myrtle family plants. USDA APHIS needs to add this restriction into their manual on cut flowers and there is no established petition process for this.

In process.

- [Act 231](#) provided HDOA \$10M in non-recurring funds for biosecurity, including Plant Quarantine Inspectors, specialists, and [general funds](#) also increased.
- UH hired a Pesticide Education and Invasive Species Management Agent.

Ongoing. DOD Readiness and Environmental Protection Integration (REPI) funding will support the program through 2024-2025. Congressionally-directed spending (CDS) funding secured in 2022 allowed the expansion to seaports and Pōhakuloa Training Area, and addition of Japanese Beetle to the target list. HDOA, HISC, and CGAPS staff participated with other States in pest surveillance and response training. Progress made on a new 5-year strategy for the program.

Ongoing.

- BMPs developed and posted in previous years continue to be accessed and requested.
- BMPs for airports and harbors were developed by Leyla Kaufman before she left HISC for USFWS. The new Port of Entry Monitoring coordinator will provide in 2025.

Ongoing.

- EDRR partner capacity maintained on each island.
- CGAPS, HISC, and partner staff filled coordination roles for interagency EDRR work on LFA, CRB, coqui, etc.
- HISC-supported 643PEST.org facilitated the sharing of reports and data for response.
- UH research continued to identify new invasive species records and used the fire-weed risk screening system.

Key Actions:

- 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]
- 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:

In process. HDOA and a larger coalition made progress on this HIBP action, including a [site visit to New Zealand](#) with legislators to learn about their use of transitional facilities and how they manage inspections

In process. Resolution [HCR24/HR14](#) passed and called on HDOA to draft a [plan for an invasive pest placard program](#) similar to the Hawaii Department of Health's restaurant program. Bills to institute a registration framework for nurseries and more proactive language for lease contracts for HDOA lands were introduced and heard but did not pass.

Ongoing. The Hawai'i Risk Assessment Committee (HI-RAC) continued to meet. Preparations for FestPAC led to additional discussions and site visits which included participants from HDOA, CBP, APHIS, UH, USFWS, HISC, and CGAPS.

No opportunity for progress. The departure of the HDOA Plant Industry Administrator in June 2023 and the ongoing vacancy and HDOA personnel shifts 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.

Photo: Governor Green and First Lady held regular meetings with all FestPAC leads. FestPAC Festival Director Aaron Salā ensured that biosecurity was a standing agenda item.



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

Objective: Keep Hawaii's top invasive species threats from spreading within Hawaii (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: 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, inter- and intra-state spread of high-risk invasive species. Support by Stephanie Easley, CGAPS & Leyla Kaufman, HISC/USFWS

Key Actions:

1. HDOA, HISC and other partners collaborate on generating a Hawaii Limited Distribution Priority List of high-impact localized invasive species to address inter-island and intra-island movement.
2. Include an assessment of the Hawaii 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]



Photo: Pest response planning with partners working on CRB, LFA, and coqui.

Progress:

In process. Led by HDOA, a non-regulatory Hawaii Limited Distribution List was developed in 2020, a Pathways task group reviewed, validated, and updated the list in 2021. Additional updates were made in 2024. [The list](#) is a living document.

In process.

- Act 231 supported an invasive ant specialist and capacity at HDOA. HDOA has restarted its surveys and treatment at O'ahu nurseries. Act 231 also supported some coqui and other nursery work statewide.
- CGAPS and HISC staff worked with the DLNR AG to draft administrative rules for HISC which will provide additional legal tools for partner agencies including counties. The draft rules moved quickly through [public hearings](#) and is awaiting Governor's signature.
- Previously mentioned on page 3, Governor's signature on chapter 72 would allow HDOA to stop the sale of pest-infested merchandise, on a case-by-case basis. Also previously mentioned on page 5 is the resolution and the resulting report on a placard program that could be used in nurseries and similar locations.
- The Board of Agriculture (BOA) passed a third [interim \(1-year\) rule](#) in October to help stop the movement of CRB from O'ahu. The first CRB Interim Rule expired on June 30, 2023 and a second Interim Rule was passed in October 2023. All interim rules are 1-year in duration and are intended to provide time for permanent rules to be put in place.
- BOA passed an [interim rule](#) in March that authorizes HDOA to restrict the movement (quarantine) of plant materials infested with LFA, but only applies to O'ahu.

Key Actions:

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]
7. Support HDOT implementation and 2022 update of the Statewide Noxious and Invasive Pest Program Strategic Plan in cooperation with public and private stakeholders.

Progress:

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

Achieved. Planning for FestPAC included identifying and providing access to locally-sourced plant materials and protocols for assessing and mitigating spread of local pests such as LFA and CRB with materials.

Ongoing.

- HISC funds supported CTAHR research and development of coqui listening device.
- HISC Port of Entry Monitoring continued to support the development of mosquito sound traps at CTAHR.
- Multiple partners continued to test and successfully use detector dogs for LFA, CRB, devil weed, and other priority species.
- Multiple partners continued to test the use of drones in detection and control of pests such as CRB, coqui, LFA, and others.
- HAL provided LFA detection and control training to private pesticide companies.

No opportunity for progress. HDOA leadership would need to request an interpretation of their authority and initiate the capacity assessment.

Ongoing.

- CGAPS, MISC, and partners participated in planning meetings with Maui County Department of Agriculture.
- CGAPS, HISC, ISCs, and HAL met with O'ahu City & County directors and program managers resulting from [Resolution 23-308 CD1 FD1](#) signed in January 24, 2024, and Honolulu Youth Commission [Resolution 23-008](#) calling for enhanced support and engagement on invasive species control.

Ongoing. The program is still successfully operating via contractors and subject-matter experts as trainers. There appears to be little awareness of this program in the agency.

Key Actions:

- 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:

Ongoing.

- [BMPs](#) and draft contract language developed in 2023 continued to be requested and shared with partners.
- CRB BMP messages were updated by multiple partners.

Ongoing. 643-PEST (phone) and 643PEST.org (online) were promoted. There were 1553 online reports submitted in 2024 (1902 in 2023, 851 in 2022, 642 in 2021, and 551 online reports in 2020). No phone data available.

No opportunity for progress. The departure of the HDOA Plant Industry Administrator in June 2023 and the ongoing vacancy 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. Quarterly meetings did not resume in 2024. DAR, CGAPS, and partners have been meeting more frequently, focused on particular key actions and species.

Key Actions:

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

Progress:

Ongoing. DAR continued to collect, analyze, and follow up on ballast water reporting data.

In process.

- CGAPS and DAR continued to work with the Department of the Attorney General (AG) on a draft permanent administrative rule to mitigate the risk of Stony Coral Tissue Loss Disease (SCTLD). The draft rule is under review by the Legislative Reference Bureau prior to submitting the request to enter rulemaking.
- CGAPS coordinated briefings with state and federal regulatory agencies and partners regarding the increase in illegal marine aquarium species and ways to address.
- CGAPS and DAR continued to participate in the national SCTLD transmission team meetings to support prevention actions and track progress on research being conducted on vessels as a pathway.

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:

No opportunity for progress. Under VIDA, [EPA's discharge standards](#) were finalized on October 9, 2024 and USCG has not yet proposed regulations, thus this action is on hold.

In process. VIDA authorized co-enforcement. DAR, CGAPS, and partner states continued working with USCG on a co-enforcement framework.

In process. The SCTL 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. DAR estimated that a team of ten will be needed to achieve this Action.

Ongoing.

- CGAPS continued to facilitate multi-agency meetings to support the U.S. Navy's attempt to eradicate pulse coral and five other marine aquarium species from Pearl Harbor. Partners received grants to develop new tools.
- CGAPS and partners at USGS National Wildlife Health Center and Bishop Museum secured a NFWF grant to (in part) update DAR's rapid response plan
- DLNR secured REPI funds for a rapid response coordinator for DAR, currently in recruitment.
- CGAPS and NOAA co-lead a new national working group on invasive soft corals

Ongoing: DAR and CGAPS held an Alien Aquatic Organism Task Force (AAOTF) meeting with local USCG staff, vessel operators, and other stakeholders to provide updates on SCTL and the proposed draft rules.

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 continued to be unfavorable.

In process: Bishop Museum reviewed and organized its survey and documentation data, available on [new webpages](#). DAR drafted an updated process for reporting and documenting new marine species which is under review.

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 five-year horizon of this strategy.

Achieved. Due to the complexity and effort, two species and their control tools were prioritized: mosquitoes (specifically *Culex* sp.) using the incompatible insect technique, and little fire ant using aerial delivery of a pesticide for use in areas with waterways but that is not yet labeled for use on fire ants.

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.

Photo: The 2024 HCA Innovation Award was given to the Birds, Not Mosquitoes partnership. Agency/ NGO leads received plaques on behalf of many working on this project.

Progress:

In progress.

- [Birds, Not Mosquitoes](#) (BNM) continued its monthly subgroup meetings and key agency leadership meetings.
- In 2024, all remaining regulatory approvals were received and releases started on Maui and planning underway for releases on Kaua'i.
- MISC and HAL completed little fire ant aerial control across 175 acres via helicopter in 2023 and monitoring surveys in 2024 found no LFA. Additional work underway to use drones and secure a pesticide label elsewhere.

In process.

- BNM drafted and continues to update its engagement strategy.
- BNM community engagement subcommittee planned and contracted a public awareness and opinion survey showing increases in awareness and support.

In process. Partners remain engaged and regular executive committee meetings continued to foster engagement and decision making by leads of agencies and NGOs.

Ongoing.

- BNM partners are conducting monitoring to support expanded use.
- MISC continued the prescribed LFA monitoring surveys devised and recommended by HAL.

No opportunity for progress. This step will occur once projects are deemed successful and repeatable. However, the BNM project partners won the HCA Innovation Award.



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.

Progress:

Ongoing.

- Coalition was built and is maintained via the monthly Biocontrol Working Group facilitated by HISC staff.
- Continued engagement with broader partners on Pacific regional programs and needs.

Ongoing. CGAPS drafted and submitted appropriations requests which included funds to complete a feasibility assessment and build out for USDA PBARC, resulting in committee report language but unfunded by Congress. Appropriation provided to DLNR DOFAW who also submitted.

In process.

- Army Natural Resources Program, UH, DLNR, HDOA, and CGAPS worked with the U.S. Department of Defense Office of Local Defense Community Cooperation (OLDCC) to develop a project which received approximately \$1.5M for phase 1 planning for a UH/HDOA facility on O'ahu. Future proposals are non-competitive and can include mobile containment units.
- UH, HISC, REPI staff, and others discussed the use of REPI funds to support facilities and capacity for CRB biocontrol research, including a new mobile containment unit, if necessary. Talks and planning ongoing.
- Act 231 provided HDOA with planning funds for biocontrol facilities.

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) and the National Forum on Biological Control in 2024.

Key Actions:

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.
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:

No opportunity for progress. Funds received for planning may support requests for additional staff.

In process. Provided testimony in support of the advancement of agents through the regulatory process.

No opportunity for progress. HDOA would need to prioritize work and rulemaking for this Action.

Ongoing. CGAPS, HISC, ISCs, UH, and partners conducted messaging, social media, and outreach, and DOFAW maintained BiocontrolHawaii.org.

Ongoing.

- Regulatory approval process for several biocontrols slowed in 2024, with no new agents approved and released.
- Effectiveness measures ongoing for several released biocontrols, including strawberry guava biocontrol.

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).

Progress:

Ongoing.

- CGAPS and HISC participated in Hawai'i Green Growth (HGG) on HIBP messaging.
- CGAPS, HISC, and partners continued to build and diversify networks of advocates on each island, however, there were no general fund increases expressly for HIBP implementation in 2024. Previously mentioned, HDOA successfully advocated \$20M which was line-item vetoed to \$10M in non-recurring funds and \$3M in recurring funds via [Act 230](#).

Key Actions:

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.
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.

Progress:

Ongoing. In each 2022, 2023, and 2024 HISC received \$5,750,000 in recurring general funds. An increase was requested but not approved as part of the administrative package. However, an additional \$1,500,000 was added by the legislature as non-recurring funds through Act 230.

Achieved. In January, 2024, DAR began collecting the Ocean Stewardship User Fee passed in 2021 as [Act 43](#), 5% of which may be used as a response fund for aquatic invasive species.

No opportunity for progress. No viable path for annual emergency response mechanism and fund for terrestrial species again in 2024.

In process. Communications with each county is primarily through the island ISCs and in some cases the CRB Team. Previously mentioned City & County of Honolulu [Resolution 20-308, CD1, FD1](#), calling on departments to engage with and support invasive species efforts, led to an introductory meeting with agency heads, CGAPS, HISC, OISC, and MISC. However, no increase in annual support in 2024.

Ongoing. The increased funds allocated by Hau'oli Mau Loa Foundation in 2024 were again allocated for 2025 projects. This target continued to be extremely challenging to meet.

No opportunity for progress. Relationships built and maintained. However, there was no available CGAPS and HISC staff time to develop proposals or to manage new projects if funding were received.

Ongoing.

- REPI funds secured by DLNR for projects in 2023-2024, developing new projects.
- UH and partners secured DOD OLDCC funding, previously mentioned.
- CGAPS coordinated partners' federal grant applications to address different aspects of the pulse coral response and co-led the drafting and submittal of an application. More than \$3 million in grants secured.
- CGAPS drafted and submitted appropriations requests for USDA ARS PBARC for biocontrol facilities and DOD for pulse coral eradication, but was unsuccessful.

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:

No opportunity for progress. Through Pacific RISCC and the ISAC, CGAPS and partners continued to message on the confluence of invasive species and climate change and that addressing invasive species is essential for meeting adaptation goals

In process. Appropriations requests submitted and the proposed PBARC/USDA FS biocontrol facilities continued to move up on the ARS facilities construction priority list.

No opportunity for progress. As documented in the [2015 LRB report](#), the collection of these data is extremely onerous, even for LRB staff.

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 and HISC. Support: Ambyr Miyake, CGAPS

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 timely, accurate, and accessible information in a variety of forums including [webinars](#) and events for Hawai’i Invasive Species Awareness Month (HISAM), information provided to legislators for Stop The Ant Month, and more.

Ongoing.

- CGAPS and HISC staff continued to co-chair the Public Outreach Working Group, CGAPS led the LFA Outreach Working Group and ROD Outreach Working Group which included outreach specialists from each county, using social marketing concepts and practices.
- A new Don’t Let it Loose Hawai’i campaign was developed and launched with partners to focus on responsible marine aquarium ownership.

Ongoing.

- HDOA and ROD messaging featured at several airports.
- HISC’s Port of Entry Monitoring Program continued work with port managers on monitoring.
- HDOA continued work on a declaration app for travelers.

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.

- CGAPS partnered with DOFAW and Bishop Museum on an Hawaiian tree snail advocacy project to teach civic engagement, the importance of Hawaiian tree snails, and the threats to their survival, resulting in [Act 004](#).
- The ongoing spread of LFA, CRB, and coqui brought new attention, new partners, and influencers.
- Pacific Island partners, National Invasive Species Council, Sierra Club, and others remained engaged as champions on a variety of issues.

Ongoing. Public Outreach Working Group meetings and annual outreach campaigns such as Stop the Ant Month allow the Working Group to assess messages, audiences, delivery methods, and ways to reduce barriers to desired behavior adoption. Social marketing concepts used to craft marine aquarium owner messages.

Ongoing. For a variety of reasons, biosecurity was more of a hot topic with policy makers in 2024.

Ongoing.

- HISC staff continued to lead interagency coordination and communication, and developed MOUs. Partners developed species-specific multi-agency plans.
- CGAPS staff continued to support DAR related to VIDA, SCTLTD, and the U.S. Navy’s work on pulse coral.
- Partners helped develop new CRB communications.
- Coordinated information and action at the nexus of climate and invasives through Pacific Regional Invasive Species and Climate Change management network ([Pacific RISCC](#)). Also, Pacific RISCC, BIISC, and the CRB Team organized a Pacific regional [CRB symposium](#) via videoconference.
- Elevated regional and island-specific messages in regional workshops and the ISAC.
- HGG and partners continued to highlight the HIBP as part of the Aloha+ Challenge.

Achieved. A BNM survey in 2024 and evaluations for Stop The Ant, HISAM, ROD outreach events showed the effectiveness of messages and effort.

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.

Progress:

Ongoing.

- Four quarterly general meetings were held, two via video conference, two as hybrid, averaging 40-50 participants from across Hawai'i and occasionally from outside of the state.
- CGAPS listserve subscribers increased slightly, website visitors increased by 15% and views were up 11%.

Ongoing. The simple “we see and fill the gaps” description works well, but there is ongoing confusion not just between HISC and CGAPS, but also about the ISCs. New participants and decision makers have the most difficulty.

Ongoing. Large interagency projects such as planning for FestPAC and implementing pest responses were met while agency staff changes and vacancies limited progress in other areas.

Key Actions:

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

Progress:

Ongoing.

- Continued to expand CGAPS and HISC networks and increase focus on the HIBP through Hawai'i Green Growth and projects.
- Again in 2024 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.

Ongoing. Key partners were surveyed as part of the FestPAC After-Action Report. All lead regulatory partners agreed that the multi-agency coordination and focused planning efforts were beneficial and contributed to each agency in being as prepared as possible.

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:

1. Review CGAPS funding needs with the Steering Committee and request/secure annual contribution commitments from all members.
2. 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).
3. Secure additional annual commitments from active CGAPS partners outside the Steering Committee.

Progress:

Achieved. The annual funding spreadsheet was shared at the first and third quarter Steering Committee meetings with the request for support. Additional funds were secured through existing contributing agencies from several sources although they do not appear in the 2024 pie chart because they have not yet been placed in accounts.

Achieved. The best core funding mechanisms are contributions from multiple partner agencies combined with grants or contributions from private foundations at \$500K. Hau'oli Mau Loa Foundation's commitment to an additional five years of support through 2028 is critical to CGAPS' work.

No opportunity for progress. Additional non-recurring funds from new sources were provided from within the Steering Committee, but no new annual funds from a new funding partner.

Key Actions:

- 4. Complete the first eleven years of partnership with HMLF and agree on future partnership priorities by 2022.
- 5. Present CGAPS “value proposition” and funding needs to the Environmental Funders Group (EFG) to seek core funding and/or project support.
- 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:

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

Achieved. This presentation was made in 2021. However, no additional opportunities have been available to build interest in core support.

No opportunity for progress. UH discontinued creating faculty specialist positions in 2024. New options will be needed.

Achieved. CGAPS support remained steady and provided adequate core support and project funds.

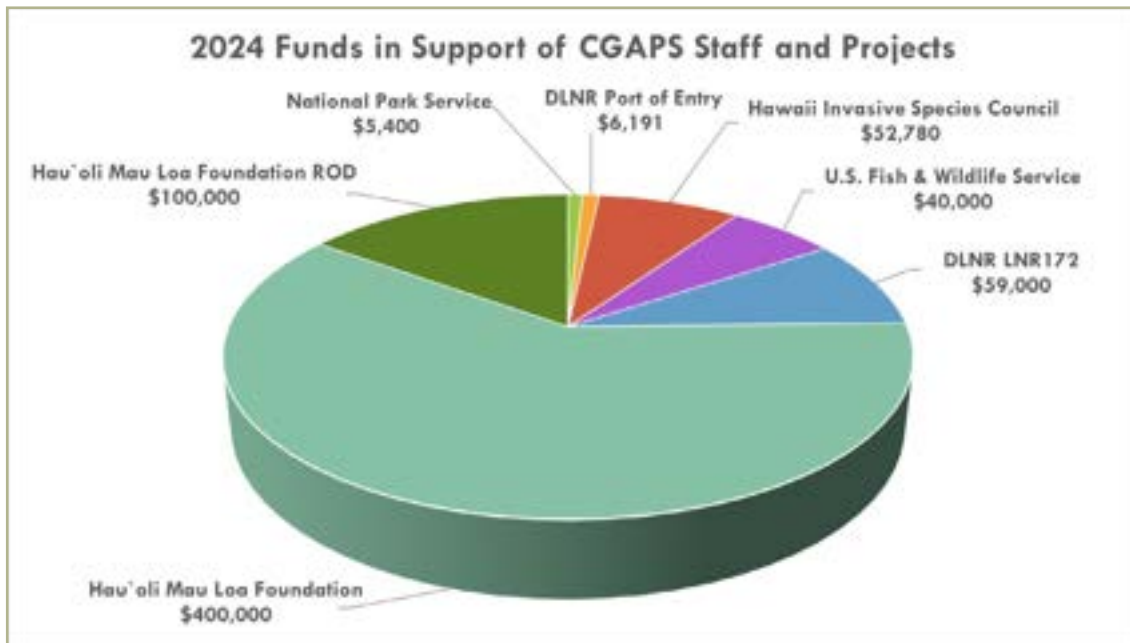


Fig. 1. Total funding committed for CGAPS staff and projects in 2024 was \$663,371. Funding in 2023 was \$635,388 and \$627,105 in 2022. Note that the chart reflects only the grants of the majority of funds were expended during the 2024 calendar year. At the close of 2024, a new award was received and will be reflected in next year’s report.

HISC Project: Stop The Ant Month

Funded through a grant to CGAPS from HISC (agreement # C42861), the annual Stop The Ant Month campaign was held again in October with outreach staff from DLNR DOFAW, the ISCs, HAL, and CGAPS. Statewide message planning and other logistics were again facilitated by CGAPS. As in previous years, planning began with assessing the previous year’s campaign and confirming messages with partners. HDOA’s 2022 request that the ISCs and HAL be the lead for receiving and identifying ant samples continued, as were the calls-to-action:

- Request a free ant collection kit (via the Stop the Ant website)
- 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 included updating the Stop The Ant website, writing and coordinating a [news release](#) with DLNR, tailoring information for legislators to share, ordering kit supplies, drafting and contracting radio and print ads, designing and scheduling social media posts, and other tasks. top The Ant Month was featured in several radio, [e-news](#), and television [news programs](#), and social media [feeds](#). The ongoing spread of LFA in 2024 also drove public and media attention. The estimated reach of the campaign was nearly one million, meaning that people encountered Stop the Ant messages or materials in person (direct outreach to 3,734) or via media during the campaign. Media metrics include:

- BIISC ran 368 radio ads on 4 stations for a reach of 70,000 for \$1,994.
- MISC ran 162 radio ads on 2 stations for a reach of 54,000 for \$2,025.
- KISC ran 245 radio ads with 6 stations (reach unknown) for \$1571.
- OISC ran 1 Sunday ad in the Honolulu Star Advertiser for \$2513 and one in Midweek for \$2304 with a QR code leading to the kit request page for a combined reach of 577,270.
- October social media posts reached more than 39,215 via 20 posts on Facebook and Instagram with the vast majority of engagements through the latter.
- The public submitted a total of 175 kit samples in October/ November, 4 were confirmed to be LFA, all were on O’ahu.

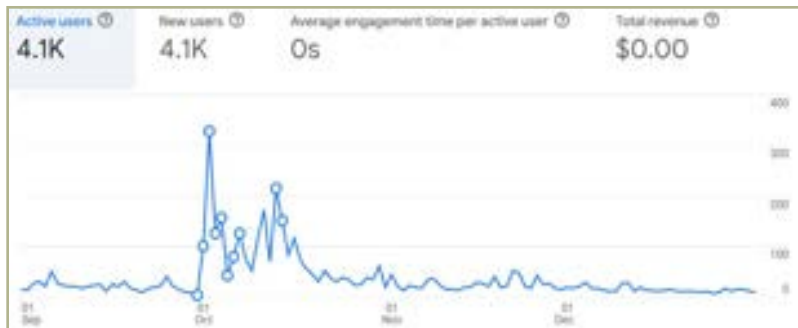


Figure 2. From October 1 through November 30, there were 3,199 Stop the Ant website users (4,352 in 2023). These analytics show September 1-December 31 for comparison to campaign effort.

Kits Requested	2021 Annual Count (Oct STA Count)	2022 Annual Count (Oct STA Count)	2023 Annual Count (Oct STA Count)	2024 Annual Count (Oct STA Count)	Samples Submitted Oct/Nov 2024	Return Rate during Oct/Nov 2024
Hawaii Island	92 (68)	185 (126)	307 (203)	295 (179)	38	21%
Maui	65 (23)	197 (138)	70 (34)	112 (63)	24	38%
Oahu	270 (224)	430 (340)	1144 (294)	878 (374)	88	8%
Kauai	25 (18)	111 (98)	350 (300)	289 (62)	25	16%
TOTALS	432 (333)	900 (684)	1871 (832)	1574 (678)	175	21%

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

This section of the annual report focuses on invasive species prevention projects funded by Hau'oli Mau Loa Foundation, the first of a new five-year natural environment protection partnership between the Foundation and CGAPS. The CGAPS Steering Committee uses the 2025 Strategy and the HIBP to prioritize projects that could not otherwise be carried out 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 #23-1206-19-431) provided partial support for the general operating cost of the [Hawai'i Green Growth](#) (HGG) staff and 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.

HGG continued its critical function of engaging county and state leadership to ensure that the goals of the Aloha+ Challenge remain priorities through the years. The working groups and annual meetings provided spaces to meet and share biosecurity messages and priorities with a wider audience than CGAPS staff typically interacts with. HGG staff continued to maintain and improve the Aloha+ Challenge Natural Resource Management and Invasive Species Target Dashboard metrics. HGG also worked in different spaces such as the United Nations which helped carry and convey the serious impacts and existential threat of invasive species on islands, and the solutions that can come from islands.



The annual HGG meeting brought partners together to discuss and problem-solve barriers to implementing the Aloha+ Challenge Goals.

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

This project (#20-1209-14-354) is complete. CGAPS contracted a former USDA APHIS agriculture trade and pest specialist to conduct a pathway risk analysis between Hawai'i and Western Australia. Unfortunately, several of the newly arrived species are not widely documented, even in their native range, nor have they been documented as pests elsewhere. These factors, combined with a lack of detailed federal interception data resulted in a shift in the project target species focus. The beginnings of a pathway assessment for the Queensland longhorned beetle (QLB) was produced to better document this species, although it has not been posted.

Instead of the Western Australia connectivity risk assessment, HDOA, CGAPS, and Dr. Nic Liquido, the contractor, decided to focus ramie moth (*Arcte coerulea*), a new pest of mānaki (and other native and non-native nettle species) that was recently detected on Maui and for

which an arrival pathway is unknown. Native to Asia, this species has a significant amount of information available and a risk analysis was produced. Summary paragraphs are provided below, while the [full report](#) is posted on the CGAPS website:

...*A. coerulea* could lead to the extinction of vulnerable and endangered native nettles and the native insects that feed on them.

The introduction of *A. coerulea* to Hawai'i is extremely ambiguous because of the complete absence of commodity importation pathways. The likelihood of *A. coerulea* arriving as eggs or larvae on leaves of its hosts is negligible. *Boehmeria* spp., the primary hosts of *A. coerulea*, are processed as fiber crops. The leaves of *B. kazinoki* and *U. dioica* while edible raw or cooked are not common delicacies. The likelihood of anyone bringing contraband nettle leaves for food consumption is negligible.

Arctia coerulea may have arrived in Hawai'i as adult hitchhikers on ripe or overly ripe host fruits. They may have hitchhiked in cargo containers for personal effects or in checked-in or carry-on luggage unintentionally containing ripe or rotting host fruits, e.g., bananas, papayas, etc. A single gravid *A. coerulea* female arriving in Hawai'i as a hitchhiker could start a successful founding population. Thus, it is recommended to request USDA-APHIS-PPQ for access to the port-of-entry interception databases on Noctuidae and Erebidae (PestID, 2024) and assess the likelihood of adults of *A. coerulea* arriving in Hawai'i as hitchhikers. In addition, the current inspection requirements and procedures at the ports of entry of USDA-APHIS-PPQ and the USDHS-CBP should be reviewed and re-evaluated to prevent the arrival of hitchhiking pests in Hawai'i.

CGAPS will draft and submit the request for interception data and this risk assessment to USDAAPHIS in 2025.

Communications on Marine Invasive Species (2024-2025)

A portion of this project, #23-1206-20-432, has been completed. This project is in response to the discovery that multiple illegal marine aquarium releases had been made into Pearl Harbor (likely from at least two separate releases in different locations) and the discovery by DAR of additional species of non-native corals that appear to have been purposefully "outplanted" into the environment. In 2024 Hannah Chang was contracted to help develop messaging and design a new logo for a campaign aimed at marine aquarium owners. Hannah is a UH Mānoa undergraduate student who was in the Marine Option Program (MOP) class and heard Christy's 2023 presentation on marine invasive species. Hannah's experience as an artist and marine illustrator made her a perfect fit for this project, and with the information she gained, she was able get her MOP Certificate.

The planning phase included discussing the situation, audience, possible messages, barriers (to people doing the preferred behavior), and needs. The simple "Don't Let it Loose" message was selected and meetings were organized to assess whether the message was trademarked (it was not). Hannah and Christy met with the national non-profit behind this message and an agreement was made that Hannah would produce a marine aquarium logo with the "Don't Let it Loose Hawai'i" message and unique URL that could be modified and used by other states or territories if they choose. Hannah and Christy also met with Bishop Museum exhibits and marine invertebrate



One of two Don't Let it Loose Hawai'i logos designed by UH Mānoa student and marine artist Hannah Chang.

collections staff to discuss a possible new exhibit that Hannah could contribute to. This portion of the work was placed on hold until 2025 due to scheduling related to FestPAC and other planned exhibits. However, Hannah produced the logo and made it available via Canva and also laid out messages and materials for use by DAR and partners. CGAPS purchased the “DontLetItLooseHI.org” URL which now points to DAR’s re-designed web pages on this issue. The contract was complete in the summer, and Hannah participated and was recognized during the media event at the launch of the campaign in October.

During the planning of the media campaign launch, Waikīkī Aquarium’s communications firm led the drafting and obtained Don’t Let it Loose proclamations for the City and County of Honolulu and the State of Hawai‘i. CGAPS will investigate the possibility of working with this firm to achieve the remaining part of this project.

Testing In-Water Cleaning Technologies (2018 – 2019; 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 2024 the Environmental Protection Agency (EPA) published its final discharge standards, and the U.S. Coast Guard will have less than two years to develop, propose, and adopt regulations based on EPA’s standards. Discussions were initiated in October with a conference call with lead collaborators from the U.S. Maritime Administration and the Maritime Environmental Research Center.

CGAPS Legal Fellows (annual)

The CGAPS Legal Fellows (#23-1206-17-429) 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. The Legal Fellow Program has educated the community of next-generation leaders in invasive species issues for years. Former Legal Fellows have become legislators, managers at State agencies, and other leaders in conservation in Hawai‘i.

Andrew Porter, CGAPS Aquatic Legal Fellow, kept his focus on vessel-related invasive species issues including ballast water, biofouling, and coral disease. Andrew worked closely with the DAR Ballast Water and Biofouling Coordinator, Elizabeth Monaghan, Pacific region and West Coast partners, and on national working groups.

Andrew continued to support DAR by working with Elizabeth, DAR managers, and the Office of the Attorney General (AG) on a SCTL emergency rule which DAR



CGAPS Legal Fellows Stephanie Easley (right) and Andrew Porter (4th from right) supported DAR on marine invasive species issues. Hybrid meetings like this Aquatic Organism Task Force (AAOTF) meeting in May provided opportunities to meet local USCG enforcement officers and engage vessel operators and stakeholders on SCTL and VIDA updates.

decided to advance as a permanent rule. Even though VIDA will preempt all state rules related to ballast water, biofouling, and other discharges, the decision was made because enacting the rule will provide some support if the State decides to petition the EPA for an emergency regulation under VIDA, once in full force and effect. Andrew revised the SCTL rule and the documents which passed DAR review and will be reviewed by the Legislative Reference Bureau for final formatting review before submission to the Board of Land and Natural Resources with a request to enter rulemaking. In May of 2024, Andrew helped organize a meeting of the Alien Aquatic Organism Task Force to present the proposed SCTL rule to stakeholders to gain stakeholder input and insight into the development of the rule.

Andrew also continued to work with multiple groups to prevent the introduction and spread of SCTL. Andrew participated in meetings of the U.S. Coral Reef Task Force Coral Disease Working Group and the SCTL Transmission Team. Andrew worked with members of NOAA, EPA, and the USCG to develop a white paper outlining current regulations and recommendations for mitigating the vessel-related spread of SCTL. A recent study found some Pacific coral species are susceptible to SCTL infection. While SCTL has not yet been detected outside of the Caribbean basin, its spread toward the Panama Canal is concerning. Andrew plans to work with jurisdictions throughout the Pacific to develop a set of uniform regulations to prevent the introduction and spread of SCTL in the Pacific as well as early detection and rapid response plans so the Pacific is prepared to respond if SCTL develops in the islands.

In October 2024, EPA released its final regulations for incidental discharges under VIDA. The final rules incorporated several of the suggested changes in CGAPS' collaboratively-developed comment letter submitted in December 2023. Most notably, the final rule prohibits in-water cleaning of macrofouling on vessel hulls without the use of an effluent capture system, and that States would regulate this activity under the Clean Water Act's National Pollution Discharge Elimination System (NPDES) permitting authority. This gives the individual states control over regulating the discharge of in-water cleaning with capture systems, meaning that Hawai'i, through the Department of Health, can make such regulations as stringent as necessary to protect Hawai'i's harbors and state waters. However, EPA's final rule did not also require the use of the best available technology for vessels cleaning microfouling (systems for in-water cleaning of hulls that capture and treat effluent) OR to provide numerical discharge standards for metals, including copper, chemicals, hull coating particulate matter, and biological material (including the possibility of pathogenic microbes). Therefore, when VIDA comes into force, the state will no longer be able to restrict or prohibit the in-water cleaning of biofilms (the slime layer comprised of microbes) from vessel hulls that fall under VIDA.

Andrew also participated in quarterly and working group meetings with USCG to plan for co-enforcement of VIDA. Meeting topics included states' current enforcement procedures and data sharing needs.

Andrew also participated in the bi-monthly Hawai'i Octocoral Working Group meetings. Andrew and Christy worked together to draft a summary of state statutes and rules to help Joint Base Pearl Harbor-Hickam mirror state regulations regarding prohibited and regulated species. Andrew also drafted a memorandum on how the federal Lacey Act may be used to prevent the movement of invasive aquarium trade species to Hawai'i.

Stephanie Easley continued in her role as the CGAPS Terrestrial Invasive Species Legal Fellow. In 2024, Stephanie continued to focus on providing support for regulations, legislation, and activities that prevent the introduction or spread of high impact invasive species.

Throughout 2024, 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). Once the final draft was complete, the rules went

quickly through the rulemaking process in 2024. In May, HISC gave preliminary approval for the rules to move forward. In June, the Small Business Regulatory Review Board (SBRRB) unanimously approved the rules to move forward to public hearing. The public hearing was held in September. In November, HISC voted unanimously to give final approval to the rules. In December, SBRRB unanimously agreed to pass the rules on to the Governor for adoption. Stephanie prepared the final draft of the rules and the submittals for preliminary and final approval of the rules by HISC, participated in the HISC meetings, and helped prepare HISC staff for the public hearing and the SBRRB reviews. Once approved by the Governor, the rules will provide the departments of HISC, the counties, and their agents authority to control or eradicate designated invasive species on private and (in the case of HISC departments and their agents) public property. HISC has been operating without administrative rules for more than 20 years and the adoption of these rules will provide HISC departments and counties an important tool to control and eradicate high impact invasive species. Stephanie also prepared a step-by-step document on the HISC rulemaking process to assist future efforts to amend or adopt administrative rules for HISC.



In support of the HISC, CGAPS Legal Fellow Stephanie Easley worked with HISC Coordinator Chelsea Arnott and the AG to develop draft HISC’s administrative rules. Once approved to enter rulemaking, the process through public hearings and a review of comments by the HISC took six months. The rule now awaits Governor’s signature.

Stephanie also worked to support the adoption of the amendment and update of HDOA’s administrative rules (chapter 72, Hawai’i Administrative Rules). HDOA’s proposed amendments include 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 at the public hearing in January and public meetings of the Board of Agriculture in October and the SBRRB in November, where the amendments were unanimously approved. The Governor signed the chapter 72 amendments on January 10, 2025, after a nearly 2-year rulemaking process. Although accomplishments beyond the 2024 calendar year are not included elsewhere in this report, this event is too significant for omission here.

In other administrative rules activities, in March Stephanie provided CGAPS testimony at a public meeting of the Advisory Committee on Plants and Animals for an interim rule to prohibit the intransit movement of agricultural commodities on O’ahu from little fire ant quarantine areas to non-quarantine areas. Further, in October Stephanie provided CGAPS testimony at a public meeting of the Advisory Committee on Plants and Animals regarding HDOA’s interim rule to prevent the movement of certain CRB host material from O’ahu to other islands. CGAPS’ testimony requested HDOA expand the interim rule to include green waste management in cooperation with the counties and to expand the area designated as a infested with CRB to include the island of Kaua’i. CGAPS suggestions were not adopted at that time.

In the first half of the year, 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, including working with HISC staff to organize a Biosecurity Task Group for FestPAC which was held in Honolulu in June. FestPAC is the world's largest cultural heritage celebration of indigenous Pacific Islanders. The event brought together over 2,100 delegates and thousands of visitors from 26 Pacific nations and jurisdictions. This exciting event presented biosecurity challenges for Hawai'i as the host county and for the participants when they returned from Hawai'i back home. Participants brought a large variety of natural materials as cultural heritage items, costumes, handicrafts, and other items. Additionally, wa`a voyaged and were shipped to Hawai'i for the Festival. Stephanie and HISC staff planned and organized Task Group meetings with representatives from key regulatory and non-regulatory agencies and organizations to discuss and coordinate biosecurity actions to prepare for and prevent introductions of invasive species at the Festival.

Also as part of the Prevention/EDRR Working Group, Stephanie participated in a task group that produced a draft response plan for Japanese beetle, an invasive pest of many plant species. Once finalized, the plan is intended to set out the roles, responsibilities, and specific action steps needed to prevent the introduction and establishment of Japanese beetles in Hawai'i through coordinated monitoring and response. The response plan has been submitted to HDOA for final review.

Stephanie also monitored and provided written and oral testimony during the 2024 legislative session. In particular, Stephanie provided testimony in support of House Bill (HB) 2758 and Senate Bill (SB) 3237, commonly called the biosecurity omnibus bills, which contained many important initiatives to prevent the introduction and spread of invasive species in Hawai'i. She also provided testimony on other invasive species-related bills, including HB2131 - relating to two-lined spittlebug, HB2139 - containing a variety of invasive species prevention measures, and HB2644 - relating to little fire ants, SB2558 - imposing a penalty for selling invasive plants or plants infested with an invasive species, and SB2560 - relating to invasive species control on leased agricultural lands, and a variety of other bills and resolutions.

Throughout the year, Stephanie utilized her background in legislation and legislative drafting to respond to requests from legislators related to invasive species prevention. These responses included providing draft legislative language at the request of members of the State Legislature to prepare bills and amendments to prevent or control high impact invasive species.

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, #23-1206-18-430), including partial salary and fringe for the Program Manager and most of the salary and fringe for the Planner. In 2024, HISC funds (C42861) also provided partial support for this position and a DOFAW grant (REPI funds) provided travel support for training (C31416). 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 NPS (#P17AC01216



Photo: CGAPS Legal Fellow Stephanie Easley (second from left) joined partners and volunteers at KEY Project in putting together ant collection kits for the detection of LFA and other harmful ants such as RIFA.

Mod2), USFWS (F22AP00133), and HISC (C42861), and several agencies supported travel to meetings outside of Hawai'i.

Kailee Lefebvre continued as CGAPS Planner, supported through FY24 HISC funds and Foundation funds, but she resigned in July when her family relocated to the continent. In her last six months with CGAPS, she worked on several projects focused on Strategies 7 (Engaged and Supportive Communities), 1 (Prevention), 2 (Inter/Intra-Island Movement), and 9 (Strong CGAPS Network)

Kailee continued to lead her student civics project that educated classes about a chosen native species and how to use their voice at the legislature to protect it. Successes include passing an Act designating 'ōhi'a lehua the State Endemic Tree in 2022, a resolution that designated a Hawaiian Honeycreepers Celebration Day in 2023, which led to the designation of the Year of the Hawaiian Forest Bird, signed in January, 2024. Kailee worked with teachers from previous years and DOFAW outreach staff to guide advocacy for kāhuli (Hawaiian tree snails). She coordinated presentations on the kāhuli and their threats, the legislature, and how to participate, letting teachers take more of a lead. Upon hearing of Kailee's resignation, teachers in the program asked if CGAPS might continue to offer this program when the new planner is hired, and DOFAW outreach staff responded that they would take the lead. At the close of 2024, DOFAW was planning advocacy in support of community forests.



Kailee Lefebvre and student advocates for kāhuli from Le Jardin Academy on a field trip to the State Capitol as part of the civics education and conservation advocacy project she developed.

With her background in the CRB Response, HISC requested Kailee's participation in a training trip to Oregon with HISC and HDOA staff to learn about their Japanese beetle response program. REPI funding supported the expansion of the Port of Entry Monitoring Program to include trapping in and around sea ports and the addition of Japanese beetle as a detection target.

Kailee again helped with planning, logistics, and content creation for Hawai'i Invasive Species Awareness Month (HISAM) webinars which had record engagement despite fewer webinar offerings than previous years. She also assisted with the initial planning for the ISAC meeting in Honolulu in October and helped the Hawai'i Ant Lab and OISC with surge capacity on LFA infestations.



Kailee Lefebvre (left) helped HAL and OISC survey for LFA in Lanikai. Much of the neighborhood either had LFA or would be in the adjoining "buffer zone". Treatment 7 of 8 had been applied by the end of 2024.

In support of the CGAPS partnership and community, Kailee continued to coordinate the logistics for the quarterly CGAPS Steering Committee meetings and General Meetings which were held as hybrid meetings. Without

her logistics help, CGAPS has returned to all remote meetings during the second half of 2024. Kailee also maintained the listserve and CGAPS website content. Initiating recruitment for the Planner position was delayed until November due to scheduling. At the close of 2024, the position description was still undergoing review by RCUH.

Christy Martin continued as the Program Manager and Information Officer, 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, Stephanie, and Leyla Kaufman (who resigned from HISC to coordinate invasive species projects for USFWS) continued to coordinate and facilitate the federal/state biosecurity planning and preparation meetings for FestPAC which Hawai'i hosted in June, 2024. At the close of 2024, this team was finalizing an After-Action Report to document the planning, communications, and biosecurity measures that successfully detected and prevented entry of pests into Hawai'i. Once released, a link will be provided on the CGAPS website.

Christy and Stephanie worked together to monitor and provide testimony on more than 18 bills and resolutions during the 2024 legislative session, each hearing an opportunity to share information about gaps in authorities and programmatic needs. Meetings with legislators and County Council members were held during and outside of session on priority issues and legislation. Christy continued to participate at legislator and council member-hosted Town Halls on LFA and other invasive pests. Christy also continued to work with staff from each of Hawaii's congressional offices on the need for biocontrol facilities, funding needs to eradicate the octocorals and other invasive marine species in Pearl Harbor, the threat of SCTLD and lack of proven tools to mitigate the risk to Hawaii's corals, and other invasive species issues.

In 2024, Christy continued to facilitate the bi-weekly multi-agency meetings to guide and inform the U.S. Navy on its octocoral and manjano anemone response in Pearl Harbor. Work in 2023 revealed that tarps/smothering and hand-removal were effective (but temporary) and that only 9 of the 80 acre footprint of pulse coral were funded for "eradication". The goals in 2024 were to organize additional grants to increase capacity and develop and test tools for use across the 80+ acre footprint of the pulse coral, and the as-yet unknown extent of the anemone. Through the working group, opportunities were identified and collaborative proposals were submitted with five new awards for different projects. Several of the awards were related to marine invasive species priorities that CGAPS highlighted at the 2023 DOD INDO PACOM Invasive Species Forum, the Guam Biosecurity Workshop and the third Climate and Infrastructure workshop organized and hosted in the spring by the Office of Insular Affairs in 2024. Unfortunately, appropriations requests developed and submitted to congressional offices by CGAPS did not result in dedicated funding for the other 71 acres. However, year-end funds swept from other projects have resulted in contracts and control work re-starting at the end of 2024 on both the octocorals and manjano areas.

Christy worked with partners to plan and launch a new marine Don't Let it Loose Hawai'i campaign the last week



After more than a year of planning meetings, it was a relief to attend and enjoy FestPAC. Governor Green and Christy Martin (photo).

of October. In the fall, partners at the Waikīkī Aquarium, HDOA, DLNR DAR, the U.S. Navy, and others reviewed and agreed upon the campaign messages and updated or developed new information resources including a new URL and landing pages at DAR, new web pages for the Waikīkī Aquarium, and updating HDOA's Amnesty Program page content. DLNR's Communications Office was engaged and partnered to host a media event on October 27 that launched the campaign, the centerpiece being a new aquarium display containing samples of the illegal marine aquarium species from Pearl Harbor including pulse coral, Kenyan tree coral, hammer coral, the corallimorph (ID still in progress), and manjano anemone.

Christy continued to co-chair the Public Outreach Working Group with HISC's Elizabeth Speith, as part of the public engagement subcommittee for the Birds, Not Mosquitoes landscape-scale mosquito control project, and as part of the ROD Outreach Working Group, and other projects. With the Planner position vacant, Christy again took on the facilitation of October Stop the Ant Month. Collaborative work in the Pacific region. As the lead on strategic communications in support of the Pacific Regional Biocontrol Center, Christy was an invited speaker at the first National Forum on Biological Control. Previous work with Pacific Island Countries and Territories on biocontrol need was included in a new paper by [Hoffmann et al.](#) published in *NeoBiota* in April.

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 participated in guiding and implementing Pacific RISCC activities, including webinars, research summaries, and workshops. A workshop held at the Hawai'i Conservation Conference focused on how severe storms facilitate the movement of invasive species. This was followed by the first in-person workshop of the Pacific RISCC core- and science-team members from across the Pacific, held on O'ahu.



Pacific RISCC planned and hosted a workshop at the Hawai'i Conservation Conference that explored how storms exacerbate invasive species issues.

In this second year appointed to the ISAC, Christy continued as Vice Chair and participated in a subcommittee chaired by fellow ISAC member Dr. Laura Brewington that drafted a white paper on invasive species and islands. Christy also worked with HISC and [National Invasive Species Council](#) (NISC) staff to plan a field meeting in Honolulu October 21-23, attended by ISAC members, NISC staff, NISC agency leads, local agency and NGO personnel, and members of the public attended. The islands white paper was approved by the full ISAC on the final day of the meeting. It would not have been possible to host this meeting in Hawai'i—to convey the magnitude of invasive species impacts to islands and islanders—without the support of the Foundation. As 2024 comes to a close, the final editorial review was complete and was sent for layout. It will be posted on the NISC website as soon as it is ready.

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. A more complete list of the staff's outreach work is listed in the Outreach & Media section of this report.

ROD Emergency Special Funding Projects (2019, 2020, 2021, 2022, 2023, 2024)

HMLF has provided special additional support for emergency response work on Rapid 'Ōhi'a Death (ROD), which is deeply appreciated (grants #18-1212-22-321, #20-1209-15-355, #21-1208-22-392, #22-1208-18-405, #23-1206-21-433). 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 Xiaohua Wu, the lab technician housed at USDA ARS to process the thousands of samples submitted for ROD pathogen testing.

Ambyr Miyake continued in her eighth year as the 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 2024, Ambyr participated in 16 in-person events that reached about 2000 people from across the state. One of the main objectives of the coordinator position is to engage new partners to increase outreach capacity and extend the reach of the ROD messages. Ambyr focused her time on several large events and workshops throughout the year. Ambyr coordinated and hosted several key events such as the ROD outreach table at the Merrie Monarch Festival, the annual ROD Outreach Workshop, the ROD Science Symposium, and 'Ōhi'a-free Wreath Making Workshops.

Although Ambyr was on maternity leave during the 60th Annual Merrie Monarch Festival (MMF) she still planned and coordinated the ROD educational booth which was positioned in a different location among the lei vendors in the Craft Fair section of the MMF. Ambyr coordinated the volunteer schedule and they reported great interactions and feedback from festival attendees. The 4-day event allowed the team to interact and reach over 3000 attendees. In addition to direct outreach at the event, the ROD outreach team also wrote and contracted two radio public service announcements that were broadcast on KWXX and KAPA, the two radio stations with the largest reach on Hawai'i Island. Ambyr also worked with HDOA to again switch one of their illuminated pest report signs with the 'ōhi'a quarantine sign near 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 who 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. Survey results from the workshop were overwhelmingly positive with participants saying that they thoroughly enjoyed it, learned a lot of new skills



With Foundation funds, Ambyr Miyake and partners organize and host an annual ROD Outreach Workshop which uses a train-the-trainers approach to extend the reach of outreach messages.

that they could use in their work, and had a great time networking with other educators.

The ROD Science Conference was held in Hilo in July 2024. Ambyr led the coordination of the conference. It was a 2-day conference that targeted land managers, researchers, and outreach folks who deal with ROD regularly. There were about 85 people in attendance on day 1 and about 45 attendees on day 2. This conference was to bring together those working on ROD and to strategize our next 5-years, to include in the development of our 2025-2030 Strategic Response Plan (SRP). This will be the ROD project's 3rd SRP since the beginning of the project. The purpose of the SRP is to outline what has been accomplished, what needs to be done, and the budget that it takes to complete these tasks. The SRP writing committee is working diligently to have a completed and comprehensive plan in place for the upcoming 2025 Legislative session.



The ROD Outreach Team discussed the next five year strategy and needs.

In December, Ambyr planned and hosted 2 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 had never made a wreath before and were very excited to participate.

CGAPS Staff Outreach & Media

Staff participated in a number of in-person, videoconference/webinar and hybrid outreach opportunities in 2024. The following is a list of events where Ambyr Miyake (AM), Stephanie Easley (SE), Andrew Porter (AP), 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. A partial list of Kailee Lefebvre's (KL) events is included.

- 1/12 Media event (KL): Proclamation signing by Governor Josh Green declaring 2024 "Makahiki o na manu nahele": year of the forest birds, O'ahu
- 1/25 Presentation (AM): SNIPP Training Workshop for HDOT staff at Ke'ehi Lagoon, O'ahu
- 1/25 Media interview (CM): [Honolulu Council urges more action from the city to fight invasive species](#) story by Hawai'i Public Radio
- 1/26 Booth (AM): ROD display for legislative info briefing on



Kailee Lefebvre (second from left) joined DLNR and Birds, Not Mosquitoes partners as Governor Green proclaimed 2024 "Makahiki o Na Manu Nahele", Year of the Forest Bird.

- Invasive Species, O'ahu
- 1/26 Presentation (CM): *Partners and who does what, where*, for Legislative Info Briefing on Invasive Species, hybrid
- 2/8 Booth (AM): ROD display for Ag Day at the Capitol, O'ahu
- 2/15 Presentation (AM): SNIPP Training Workshop for HDOT staff, Lanai City
- 2/20 Presentation (AM): ROD for Koko Head Elementary, O'ahu
- 2/20 Presentation (CM): *Hawai'i response to pulse coral (*Unomia stolonifera*)* for US Coral Reef Task Force-coral disease and disturbance working group, videoconference
- 2/22 Presentation (AM): SNIPP Training Workshop for HDOT staff, Moloka'i
- 2/23 Presentation (CM): *Hawai'i response to pulse coral (*Unomia stolonifera*)* for Atlantic and Gulf Rapid Reef Assessment (AGRRA) [Unomia Learning Exchange](#), videoconference
- 2/28 Media interview (AM): [Battling invasive fungus to save native Hawaiian trees](#) in USDA Forest Service Pacific Southwest Region article
- 2/28 Presentation (CM and SE): [Biosecurity bills at crossover](#) for HISC Brownbag webinar series
- 2/28 Article (CM): Contributed to [Climate change preparedness and resilience](#) article published by The Nature Conservancy
- 3/7 Article (CM): [UH expert co-authors studies guiding U.S. invasive species group](#) for UH News
- 3/8 CGAPS General Meeting (AM, AP, CM, KL, SE), hybrid
- 3/13 Presentation (CM): *Dispelling myths and a bad rap: telling the modern biological control story* for National Forum on Biological Control, Annapolis.
- 4/9 Presentation (CM): *Monitoring and preventing invasions* for NREM 491, O'ahu
- 4/18 Presentation (CM): Natural history of Hawai'i for ANTH/SUST 204, O'ahu
- 4/19 Panel (CM): *Community engagement on invasive species* for [Connecting Voices: Fostering Community Engagement in Research](#), UH Mānoa Faculty Puwalu Research Forum, hybrid
- 4/28 Media interview (CM): [Governor backs effort to stem the tide of invasive species in Hawai'i](#) in Civil Beat
- 5/5 Media interview (CM): [North Shore seeing 'advanced infestation' of coconut rhinoceros beetle. experts on what to do](#) for KHON 2 News
- 5/15 Presentation (AP): VIDA and SCTLDD preparation update for AAOTF, hybrid
- 5/15 Presentation (CM): *Underserved communities and invasive species: ISAC white paper summary* for USDA Environmental Justice Community of Practice, videoconference
- 5/16 Presentation (CM): *Underserved communities and national priorities: ISAC white papers for* [Seat at the table: Hawai'i as part of the national conversation](#) HISAM, webinar
- 5/26 Panel (CM): *Dispelling myths and a bad rap* for [Overcoming barriers to implementing biocontrol](#) for invasive plants and invertebrates in the Asia-Pacific Region for FAO Asia-Pacific Forest Invasive Species Network, webinar
- 5/30 Presentation (SE, CM): [The people vs. invasive species](#) for HISAM, webinar



Ambyr Miyake participated as a trainer for ROD issues for HDOT's State Noxious Invasive Pest Program (SNIPP) trainings.

- 6/20 CGAPS General Meeting (AM, AP, CM, KL, SE), hybrid
- 6/23 Panel (CM): *Invasive plants and U.S. policies on plants* for American Society of Plant Biologists conference, O'ahu
- 7/18 Presentation (AM): ROD outreach for Science Symposium, Hilo
- 7/19 Presentation (AM): ROD outreach next steps for Strategic Planning, Hilo
- 8/1 Panel (CM): *Marine biosecurity: pathways, examples, and opportunities* for the 3rd DOI Territorial Climate and Infrastructure Workshop, hybrid
- 8/1 Workshop (CM): Discussion facilitator for *How to severe storms affect invasive species*, Pacific RISCC workshop at HCC, O'ahu
- 8/6-8 Workshop (CM): Discussion facilitator for strategic planning for Pacific RISCC, O'ahu
- 8/13 Media interview (CM): [Experts discuss key threats invasive species pose to Hawai'i](#) on Spotlight Now on Hawai'i News Now
- 9/6 CGAPS General Meeting (AM, AP, SE, CM), videoconference
- 9/10 Presentation (CM): *Natural history of Hawai'i and the challenge of invasive species* for PEPS 601, O'ahu
- 9/11-12 Workshop (CM): Discussion facilitator to summarize 2-day Pacific region [CRB Symposium](#) organized by the CRB Team, Pacific RISCC, and BIISC
- 9/17 Presentation (AM): ROD for Honolulu Community College Hawaiian Studies Program, O'ahu
- 9/18-19 Presentation and workshop facilitation (AM): ROD (multiple presentations) for ROD Outreach Workshop, Hilo
- 9/24 Presentation (CM): *Little fire ants* for Papakōlea community meeting, O'ahu
- 9/28 Presentation (CM): *CGAPS, invasive species, and 4 gaps that could use some help* for Conservation Council for Hawai'i annual meeting, O'ahu
- 10/1 Presentation (CM): *Underserved communities and invasive species: ISAC white paper* at the North American Invasive Species Management Association (NAISMA) annual conference, Missoula
- 10/1 Workshop (CM): Discussion facilitator for *How do we implement climate-smart invasive species management?*, hosted by several RISCCs at the NAISMA annual conference, Missoula
- 10/1 Media (CM): [October is stop the ant month](#), news release drafted with partners and released by DLNR.
- 10/8 Media interview (CM): [Navy to Launch Large-Scale Removal of Invasive Octocorals, Supports "Don't Let it](#)



Andrew Porter, Christy Martin, and Stephanie Easley at the Conservation Council for Hawai'i (CCH) Annual Meeting and Award Ceremony where Christy was honored with the CCH Koa Award of Excellence (photo by CCH). Christy also received the North American Invasive Species Management Association's (NAISMA) Advocacy Award for her work at the national level.



HISC, CGAPS, Pacific RISCC, and colleagues at the North American Invasive Species Management Association (NAISMA) Annual Conference. L-R, Elizabeth Speith, Christy Martin, Ben Hoffmann, Phil Andreozzi, Ambyr Miyake, Chelsea Arnott, Elliott Parsons, and Laura Brewington.

- ["Loose" Campaign](#) interview 10/8 for story posted on 10/23 in Navy Region Hawai'i News
- 10/9 Presentation (CM): *Non-profits (and why to consider working with an invasive species NGO)* for the UH Marine Option Program class, O'ahu
- 10/17 Display (CM): LFA and citizen science for 'Iolani STEM+ teachers workshop, O'ahu
- 10/21-23 Meeting (CM): Facilitation for Invasive Species Advisory Committee and National Invasive Species Council field [meeting](#), and [media](#) attention, hybrid
- 10/24 Media (SE): [Hawai'i agriculture board advances new rules to fight invasive species](#), testimony quoted in Star Advertiser article
- 10/28 Media interview (CM): Campaign launch week, interviews for Don't let it loose Hawai'i, focused on responsible marine aquarium ownership. DLNR [press release](#), media stories from [Hawai'i News Now](#), [Hawai'i Public Radio](#), others
- 10/29 Presentation (CM): *Marine invasive species: pests, pathways, and policies* at the North Pacific Marine Sciences Organization (PICES) annual conference, Honolulu
- 10/30 Presentation (CM): Facilitate presentation, [Marine bioinvasions and the marine aquarium vector](#), presented by Dr. James T. Carlton, webinar
- 10/30 Presentation (CM): LFA for Makiki community meeting
- 11/2 Booth (AM): ROD display at the Arbor Day Expo at Maui Nui Botanical Gardens, Maui
- 11/4 Presentation (AM): ROD presentation at SEEQS school, O'ahu
- 11/4 Article (CM): [Illegal aquarium dumping spurs new awareness campaign](#), submitted to UH News
- 11/21 Presentation (CM): *HPWRA and Plant Pono* for ARCH 634, Honolulu
- 12/4 Workshop (AM): 'Ōhi'a-free wreath making workshop at Peacock Flats, O'ahu
- 12/6 CGAPS General Meeting (AM, AP, CM, SE)
- 12/17 Presentation (AM): Advocacy presentation at SEEQS School, O'ahu
- 12/18 Workshop (AM): 'Ōhi'a-free wreath making workshop with USFWS, O'ahu



Dr. Sam `Olu Gon, III opened the ISAC/NISC meeting with an `oli.



Partners worked together to launch the "Don't Let it Loose Hawai'i" campaign which included a sneak peek at a the Waikīkī Aquarium's new exhibit containing pulse coral and other marine aquarium species invading Pearl Harbor.

This report was submitted by January 31, 2025 in partial fulfillment of multiple grant agreements. The report was drafted by CGAPS staff with HISC staff providing some information on progress towards the 2025 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.