

## **Report on HISC Grant FY2023 (Jan 2023- Feb 2024) for Detection & Control of Invasive Species on the Island of Hawai'i: BIISC Community Engagement Program**

*Submitted by BIISC Manager Franny Brewer June 2024*

Project Goal: *BIISC will work to create an engaged and educated community that understands the impacts of invasive species, implements personal strategies to prevent and mitigate IS, and is supportive of strong biosecurity.*

### Summary of Activities:

Community Engagement is the backbone of our program, addressing a wide range of issues and supporting extremely varied projects across the spectrum of invasive species. The team works to build relationships and trust with our community by responding to community-identified needs. We provide hands-on training to the public on identifying, preventing, and controlling a range of pests from weeds to invertebrates, and offering specialized training to key front-line organizations including HDOT road crews, Hawaii County gleaners, Master Gardeners, the Hawaii Community College Agriculture program, and school maintenance staff. The CE team handles upwards of 350 requests per year to identify plants, insects, and diseases and provide assistance and advice. CE staff stay apprised of the rapid shifts in our ever-changing social media environment, constantly adding to their skill sets to ensure BIISC is able to reach a wide range of people through these key information channels. Our team produces high-quality online and print materials, and supports partners throughout the state with expertise on graphic design and audience engagement strategies. We provide professional development and lead classroom activities for K12 teachers, summer programs, school science nights and other opportunities to reach our island keiki and their families. This work pays off: in 2023, we found new populations of two of our most high-threat target species (devil weed and rubbervine) from community members who recognized plants from our materials that were in their own backyards.

The new Invasive Plant Prevention Team (IPP) at BIISC is a hybrid team integrated with both Community Engagement and Plant Control. IPP staff lead the Plant Pono program for the island, which includes managing content for the statewide PlantPono.org website. In addition to early detection of new plant species, IPP staff work to prevent the spread of invasive species through the horticulture industry. In a 2015 report, the US Forest Service identified live plant imports as the most important pathway for introduction of new pests and diseases. Our Plant Pono program seeks to reduce the importation and sale of invasive plant species and encourages local production of non-invasive plants over imported varieties to reduce pest importation risk. To accomplish these

goals, Plant Pono employs a two-pronged approach: incentives and relationship building with nurseries (supply), and education to the public (demand). In 2023, IPP piloted a new program offering native planting classes at endorsed nurseries across the island to support the nursery businesses and raise excitement and knowledge about native plants in local communities. The pilots were a huge success, with rave reviews from both the attendees and the hosting nurseries (who reported an average of 2.3 additional plants being purchased by each class attendee). Thanks to support from HISC and HTA, the classes are being developed into a permanent part of the Plant Pono program in 2024.



*The BIISC Community Engagement team, in partnership with Forestry & Wildlife staff, offered a native plant wreath-making class in December 2023 teaching about Rapid Ohi'a Death and avoiding the use of lehua.*

In 2023 the CE team was understaffed due to leadership changes at BIISC as the long-time team leader transitioned to BIISC Manager. Despite that challenge, the team met and often exceeded nearly all of the outcomes proposed in the 2023 HISC grant agreement. Building capacity was a focus this year, with the addition of a new IPP technician and a half-time outreach assistant, plus offering a TCBES internship to a UH-Hilo grad student. Project goals for 2023 specifically addressed Hawaii Interagency Biosecurity Plan implementation tasks and tasks identified in the BIISC 2018-2023 Strategic Plan, developed and approved by twelve county, state, and federal agencies and community partners. Below is a summary of the progress on the Outputs & Outcomes listed in the grant Agreement (color coding: green=met/exceeded, yellow=approaching, red=not met).

### Community Support & Education Outputs & Outcomes

Expected Outcome	Actual Outcome
At least 2,000 residents will be engaged in trainings delivered via webinar or similar online platforms. At least 12 trainings will be offered in topics such as management of common invasive species including little fire ants, albizia, rat lungworm disease, common weeds, and invertebrate pests.	2073 community members attended one of 44 in-person or online educational opportunities provided by BIISC in LFA control, Albizia control, Rat Lungworm prevention, Pest ID & Control, Plant ID, Pono Planting, or general invasive species during the grant period. An additional 1990 residents were reached through thirteen K12 efforts either in the classroom or at community or school events catering to students & families.
BIISC will participate in at least 6 public events to provide booth/tabling to communities to promote our work. Social media will include a minimum of 2 original posts per week on two social media channels (annual min total of 108) highlighting key invasive species issues and messages, a bimonthly newsletter (annual total of 6), and at least 4 blog posts on biisc.org sharing relevant information regarding invasive species.	More than 5,000 residents were reached through tabling at 24 community events. BIISC created and shared over 250 social media posts, including video and “story” posts, during the grant period - more than twice the number anticipated. This success can be attributed to the addition of a half-time student hire at the end of 2022 that greatly added to our capacity. We also met our goal of 6 emailed newsletters which reached nearly 2000 accounts, with an average open rate of 55%. On BIISC.org, which received 115K page views during the grant period, we added 5 new content pages or blogs to address rabbits, CRB, OFB, sweet potato bug, and general insect ID.
Herbicide recommendations for 5 common invasive tree species (findings from previous trials) will be published and promoted, and trials for most effective homeowner strategy to control <i>Rubus ellipticus</i> (a common invasive) will be launched in partnership with a local community.	Recommendations for 9 tree species were posted on the BIISC.org website as a result of herbicide trials done by BIISC staff. A partnership with the upper Puna community of Fern Forest was developed to begin trials of rubus control methods. The community was provided a high quality rack card fitting their specifications, and BIISC supplied an article for the community newsletter. Sites were scoped in late 2023 and study design prepared in early 2024, and this project also provided us an opportunity to offer an internship to a TCBES grad student.

We will revise the TLSB rack card and the QLB rack card and web page as directed through the working groups for those species. We will host at least two webinars and/or community talks on high-profile IS work being done by partners. We will participate in HISAM as a member of the planning committee and will create and/or host a minimum of 4 webinars for HISAM. We will also be key partners in Stop the Ant month and produce graphics and media for ST A.	A new TLSB rack card was designed by BIISC staff in early 2023, promoting the TLSB app developed by CTAHR researchers under Mark Thorne. The QLB working group was polled and no changes were needed to this rack card in 2023, but a CRB rack card was created in late 2023 in response to the CRB island detection. In 2023 BIISC hosted 7 webinars, including 4 as part of HISAM, and created and shared the “Mythbusters” graphics used statewide to promote HISAM 2023. BIISC contributed to STA and designed a “History of LFA on Hawaii Island” social media promotion for STA month.
We will respond to 400+ annual direct requests from our community for pest/plant ID, resources for IS mitigation and control, and assistance with IS issues.	During the grant period, BIISC staff responded to over 430 requests for assistance from members of the public for help with identification of unknown species, recommendations for control, and advice or guidance with responding to invasive species issues.

#### Plant Pono/Invasive Plant Prevention Outputs & Outcomes

Expected Outcome	Actual Outcome
Annual survey of at least 37 nursery businesses will document an absence of invasive plant inventory at participating nurseries and a reduction of invasive inventory in non-participating nurseries. New species found for sale will undergo the risk assessment process and, if warranted, be considered for the No-Grow list and/or Target Eradication lists.	IPP staff surveyed 51 nurseries in 2023. Only two surveyed nurseries were surveying a “No Grow” plant (night-blooming jasmine). <i>Leea indica</i> was added to the consideration list for the next round of No Grows (scheduled to be completed every 3-4 years as species are phased out).
At least 12 new species profiles will be added to the website (one per month), and at least 4 new blog posts will be created to promote the use of non-invasive plant	Only 2 blog posts and 11 species profiles were added. The IPP is a new team launched in 2023 with just one staff, who had a full plate handling all of plant early detection and Plant Pono. An additional IPP team member was hired in late 2023 to build capacity.
Under the PP brand, we will offer a native plant planting/use in landscaping workshop.	As we secured a Kaulunani Grant to purchase native trees, the IPP team was able to offer 6 total classes for Native Hawaiian Plant Month. In April 2023, the Plant Pono team offered classes at endorsed nurseries in Hilo, Kona, Ka’u, Puna, North Kohala, and at the State Tree Nursery in Waimea (in coordination with DOFAW). Each workshop hosted 20 attendees who learned about Hawaiian ecology and culture and the threats of invasive species, then engaged in hands-on re-potting of native plants and were given care cards with instructions on proper incorporation into the

	home landscape.
After a year of collaboration with CTAHR and Mala'ai, we will release and promote materials for Share Plants, Not Pests, a program aimed at home gardeners to prevent the spread of invasive plant pests and diseases.	Two <i>Share Plants, Not Pests</i> videos were completed in late 2022 and were posted on the PlantPono.org website. Throughout 2023 the outreach staff collaborated with community partners such as the HI Island School Garden Network and the Hawaii Seed Growers Network to promote the resource to target audiences.

### HISC Funding Priorities

The *HISC & CGAPS 2025 Joint Strategy: In Support of the Hawai'i Interagency Biosecurity Plan* provides a guideline for how to plan and prioritize efforts in invasive species work across the state. As the team with the most diverse variety of tasks related to all levels of invasive species prevention and mitigation, our Community Engagement program seeks to support all five of the priority areas: 1)Prevention & Early Detection/Rapid Response for New Invasions, 2)Management of the Inter/Intra-Island Movement of Invasive Species, 3)Implementation Large-Scale Control of Widespread, 4)High-Impact Invasive Species, Increase Pacific Regional Biocontrol Research & Capacity, and 5)Maintain an Engaged & Supportive Community.

The last listed priority - #5 - is actually the first priority of this team, as we believe that the success of all of the other goals can only flow from the success in that area. Our Community Engagement team works incredibly hard to use all tools at our disposal to meet all audiences and sectors where they are. Our longstanding and popular albizia, little fire ant, and rat lungworm workshops were designed in direct response to expressed community needs, and new educational opportunities are added as needed: 2022 "Backyard Pests," to help longtime residents and newcomers alike identify and control common weeds and insects pests found in their home landscapes, and in 2023, "Grow Native" to help residents become familiar and comfortable with using native plants in backyard landscaping.

Programs like this help us not only with Priority #5, but with Priority #1 (Early Detection)& #2 (Prevent intra-island movement) as well: by increasing familiarity with common pests, we train the community to be on alert to unusual sightings. Through constant presence and contact with the community, we increase trust and credibility. By teaching proper control methods, we decrease the movement of pests around the island. Reporting of new species is always stressed and BIISC provides multiple avenues for reporting, from using 643pest.org to direct messaging via Facebook or Instagram. With the discovery of Coconut Rhinoceros Beetle on Kauai in early 2023, we leaned heavily into our well-developed social media and email network to spread awareness, which became even more crucial with the detection of CRB on our island in late 2023. More than 3 dozen reports of suspect larvae came to BIISC in the late days of 2023 (mostly turning out to be Oriental flower beetle, OFB). Staff responded to every single report, sometimes driving across the island on a weekend to pick up larvae we considered highly suspect.

We promote positive messaging and education about large-scale control efforts, like IIT for mosquitoes (Priority #3), and utilize our trusted networks to help get the word out to correct misinformation. This same approach is used for Priority #4. Efforts to support classical biocontrol range from writing supportive comments for all EAs for new releases to painstakingly correcting Facebook posts in local gardening groups about supposed biocontrols run amok: no, mongoose are not a biocontrol (you can check out our quick history of the mongoose introduction in our Biocontrol Mythbusters webinar for HISAM 2023!) As dedicated members of the Hawaii Invasive Species Awareness Month planning team we assist with the production of informational webinars and keenly focus on promoting direct contact between the public and the researchers working on these efforts.



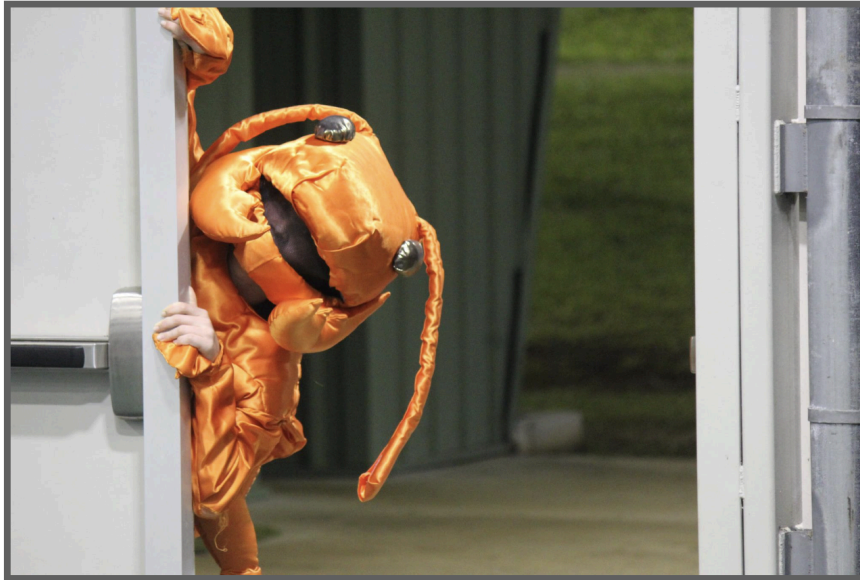
Biosecurity is a running theme in all of our outreach efforts, which include periodic updates to our island State and County legislators. We will continue to support the implementation of the 2017 Interagency Biosecurity Plan and any and all efforts to protect our community from invasive species.

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## Revitalize Puna

Updated on 11/02/2023 2:09 PM

Photos from our various Revitalize Puna events



*This screenshot from the Hawaii County Kilauea Eruption Recovery website shows our Little Fire Ant popping in to surprise attendees. After the devastating eruption in 2018, the County launched a multi-year effort to provide a range of supports to the entirety of the underserved Puna district. BIISC has been a strong participant from the beginning, helping to direct the Natural Environment Resource Capacity Area team to advocate for more attention and response to invasive species issues in Puna and the whole island and providing a popular resource table at quarterly Puna Activation events to help residents with the many invasive species affecting Puna.*