

Hawai'i Invasive Pest Communication and Networking

The Situation

Hawai'i, the capital of endangered species in the world, is vulnerable to species invasion, which exerts a greater impact on loss of biodiversity, natural habitats, and agriculture production. Many agencies in Hawai'i are dedicated to working on the complex issues of invasive species and play a role in their respective mandates (i.e., policy making, regulation, research and/or Extension).

There is a need for one common forum that brings all agencies together to communicate recent invasive species concerns and interlink their roles in managing them. Coordinated efforts by each partner strengthen UHM CTAHR Cooperative Extension because Extension professionals can then learn the most updated information and deliver it to their clientele.

Extension's Response

CTAHR Cooperative Extension led the statewide Invasive Pest Working Group (IPWG), which brought key stakeholders who work in invasive pest management (e.g., Hawai'i Invasive Species Council, Island Invasive Species Committees, and state and federal agencies) to a collective forum to discuss current issues and provide updates on research and Extension outcomes of key invasive pest initiatives.

From August 2020 to November 2022, 13 half-day webinar mini-conferences provided a platform for IPWG members to exchange their knowledge and transfer information to a diverse group of participants, including pest management professionals, agricultural producers, and those working with our natural resources. The short agenda and other descriptions of the mini-conferences are presented in Table 1. These mini-conferences were interactive, well attended, and covered a wide variety of topics. They also had great diversity of participants (Figure 2), with a median attendance of 92 and max of 149.

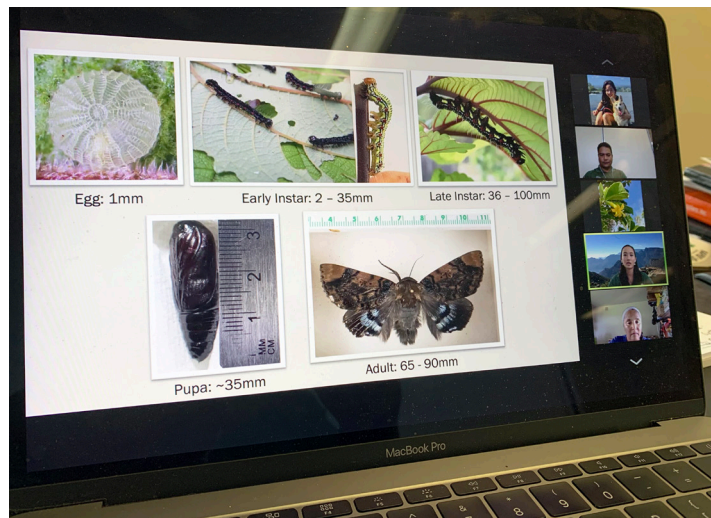


Figure 1. CTAHR Dept. of Plant and Environmental Protection Sciences graduate student (green inset) reporting the confirmation of Ramie moth on Maui for the first time in this Invasive Pest Mini-Conference series.

Impacts/Outcomes

Based on some participant feedback (23% of 456), these mini-conferences were greatly impactful in learning new information and sharing them with others (Figure 3), thereby magnifying its effect in Hawai'i and beyond. Major impacts of the mini-conferences were:

- 16% and 32% increases in public pest reports using 643pest.org in 2021 and 2022, respectively. Thus, demonstrating participants had a better understanding of submitting potential invasive species to agencies.

- Enhanced awareness of

7 confirmed, new detections facilitated early detection and rapid responses on the other islands.

- Participants demonstrated an increased understanding of quarantine pest regulations and increased preparedness to look out for pests that are not known to occur in Hawai'i.
- Growers, pest control, and conservation professionals demonstrated an increased awareness of IPM recommendations of key invasive pests.
- New and innovative research findings for stakeholders to adopt and implement new management strategies.
- Stimulation of new research ideas and collaboration within the state and with mainland researchers.

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Collaborators: Statewide IPWG Members

CTAHR Extension and Research Faculty

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Key Partners

Coordinated Group of Alien Pest Species, Hawai'i Ant Lab, Hawai'i Department of Agriculture, Hawai'i Department of Land and Natural Resources, Hawai'i Invasive Species Council, Island Invasive Species Committees (O'ahu, Big Island, Maui, Kaua'i and Moloka'i), O'ahu Army Natural Resource Program, U.S. Department of Agriculture – Agriculture Research Service, U.S. Forest Service, U.S. Geological Survey and many others.

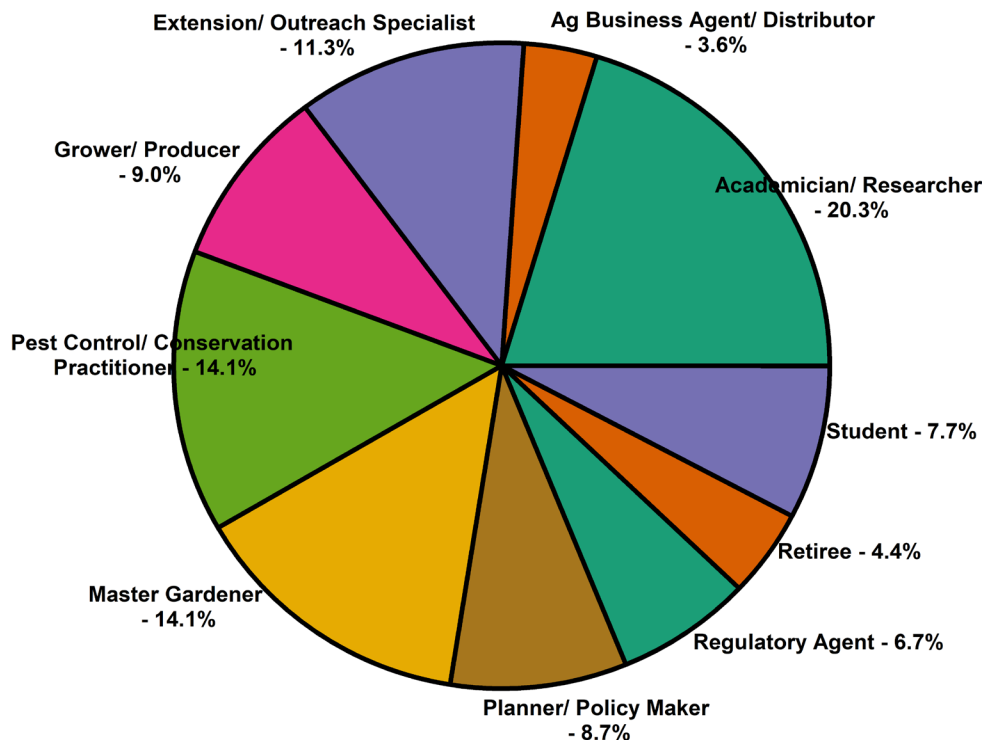


Figure 2: The diversity of participants that ranged from key stakeholders (planners, policy makers, researcher and Extension agents) to end users (growers, pest control, and conservation practitioner) in the last five mini-conferences held in 2022 (N= 389).

Table 1: UHM CTAHR-hosted Invasive Pest Mini-Conferences

No.	Date	Agenda	Attendance	Recording Views*
1	22-Aug-20	Two-lined spittlebug (TLSB), landscape and turfgrass pests, little fire ant eradication on Maui	50	-
2	15-Oct-20	643pest, Invasive ants, Coffee berry borer (CBB) on Kauai, Trap-Jaw ant, Olive fruit fly, new snail pest	32	4
3	15-Dec-20	Birds NOT Mosquito, Rapid ohia death (ROD), Coconut rhinoceros beetle, Rose-ring Parakeets, Nairo thrips, coffee leaf rust (CLR) in Hawaii	38	6
4	18-Feb-21	Hawaii Interagency Biosecurity Plan, Queensland longhorn beetle (QLB), Ramie moth, CBB biocontrol	55	2
5	22-Apr-21	Quarantine pests: burrowing nematodes and Brown tree snake, Passionvine hopper, Devil weed	72	-
6	17-Jun-21	Brown marmorated stink bug, Threats to honeybee, Extension strategies - California, Exotic pests of taro	65	18
7	1-Aug-21	Japanese beetle, Asian giant hornet, Laurel wilt disease, TLSB	98	31
8	18-Nov-21	Invasive species detection, Restricting importation of harmful plants, Miconia distribution on Oahu, Flagship of pest plant	110	31
9	26-Jan-22	Parasitoids of invasive bark beetles, New ant parasitoid, Ambrosia beetles and ROD, CLR, Avocado lace bug management	149	50
10	23-Mar-22	Hawaii Ant Lab, Cricket evolution, Invasive trees, QLB, Hala scale	92	17
11	25-May-22	Forest weeds biocontrol, Invasive fruit flies, Asian citrus psylla biocontrol, Parasitoid symbionts for fruit fly biocontrol, MyIPM Hawaii Smart phone app	92	31
12	10-Aug-22	Island Invasive Species Committee presentations	109	43
13	9-Nov-22	Hawaii Department of Agriculture presentations	102	21

*Number of views in full or partly until Feb 28, 2023

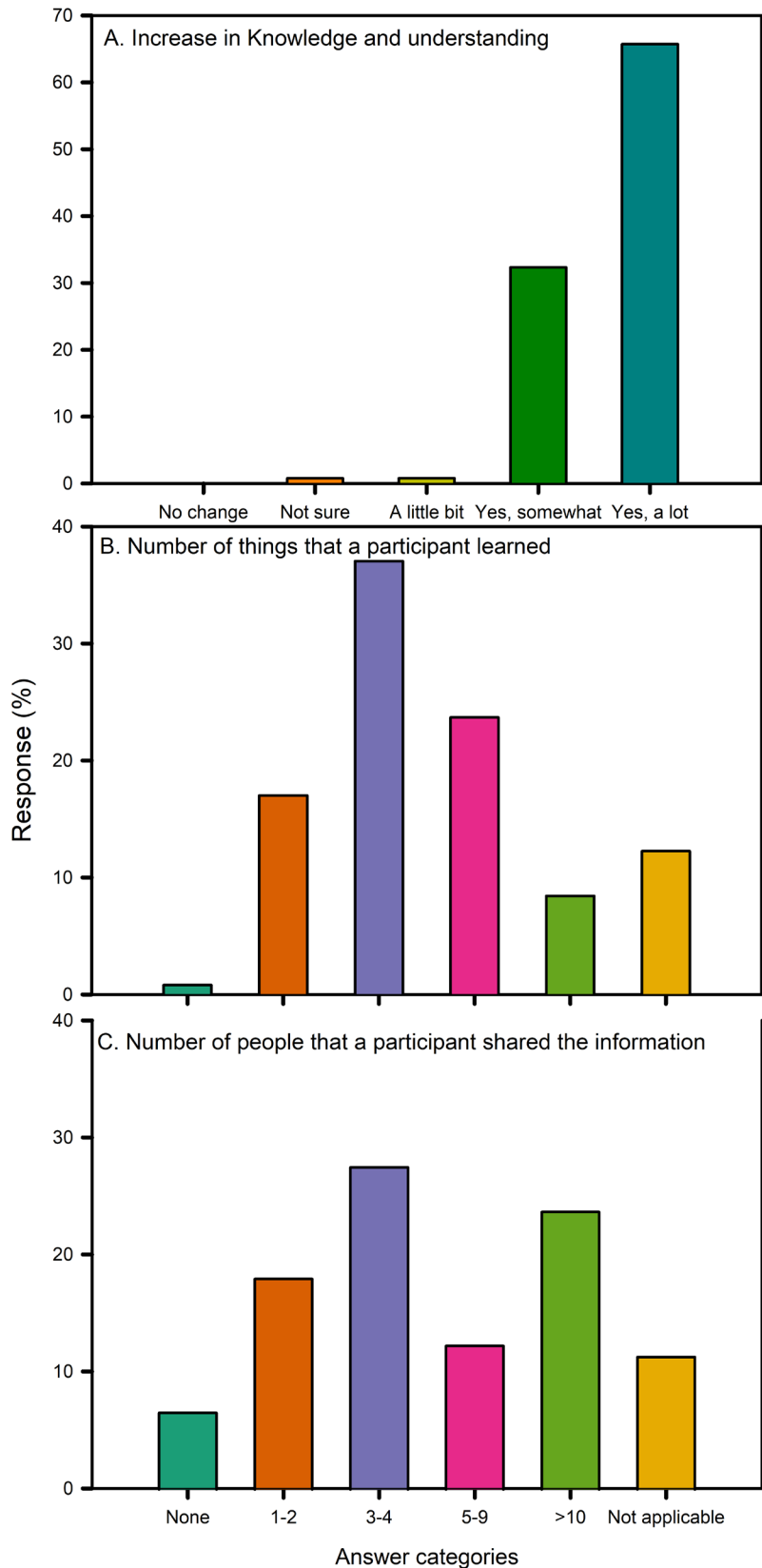


Figure 3: An impact report of Invasive Pest Mini-Conferences held during 2020-22: (A) 98% of participants surveyed increased their knowledge and understanding of topic area; (B) 54% learned 1-4 new things, while 32% learned 5 to 10+ new things; (C) 45% intended on sharing the learned information with 1-4 people, and 36% intended on sharing the learned information with 5 to 10+ people.