

Title: Kauai Invasive Species Committee Detection & Control

Organization: Kaua'i Invasive Species Committee, Pacific
Cooperative Studies Unit, UH

Award: \$568,394



Introduction: The Kaua'i Invasive Species Committee (KISC) is a voluntary partnership of government, private, non-profit organizations, and individuals working together to: prevent the introduction of potentially damaging pest species to the island, eliminate recently arrived (incipient) pests before they spread beyond control, manage established pests in order to reduce their negative impacts, and educate and involve the public as to the magnitude of the invasive species problem and the need for control programs. KISC functions as an island-wide rapid response team that helps coordinate and fill gaps in the multi-agency effort to prevent the establishment of new pests. KISC has also evolved an early detection program that is continuously monitoring Kauai for threats that have evaded port detection and risk becoming new invasions. Priority is focused on species that are recognized as having the greatest potential to harm human welfare, agriculture, and native biodiversity, and where the use of limited resources is most likely to be successful.

Achievement Highlights in 2019

Early detection:

KISC's plant early detection program::

- KISC began investigation of *Flindersia brayleyana*, *Heterotheca grandiflora*, *Juncus effuses*, *Morella cerifera*, *Paulownia tomentosa*, and *Pueraria montana var. lobata*: Delimiting surveys with opportunistic control are continuing. The 2020 goal is to evaluate feasibility of control based on delimiting surveys for early detection taxa and add appropriate targets to priority list for control actions.
- Partnership with Kokee based invasive species organizations continues with delimiting early detection species in or near high value habitat areas.

KISC's invertebrate and vertebrate early detection highlights:

- A total of 6 coconut rhinoceros beetle traps and 8 swarm traps were monitored monthly in partnership with Mamalu Poepoe, with no species of interest detected.

Priority target species control

Control and eradication efforts centered on 10 plant species and one invertebrate species.

- *Miconia*: Survey and control of *Miconia* is focused on three primary areas of the Wailua District; Wailua River State Park (WRSP), Wailua Homesteads, and the Game Management Area (GMA) in the Halele'a Forest Reserve. Ground crews ground surveyed 224 acres, aerial surveyed 909 acres and controlled 1,268 immature plants. 1 mature plant was detected and controlled about 400m from edge of current infestation buffer, extending the infestation buffer area. Survey and control efforts were focused around the recently detected mature tree.
- *Long Thorn Kiawe*: Ground crews surveyed 243 acres and controlled 935 plants.



Immature Miconia detected in extended infestation area.

- *Continued survey and control of 8 priority plant species: Arundo, Barbados gooseberry, bingbing, false kava, fountain grass, ivy gourd, turkey berry, and velvetleaf glorybower:* 269 acres were surveyed and 1316 individual plants were treated.
- *Little Fire Ant:* KISC assisted HDOA and the Hawaii Ant Lab with continued eradication efforts at Kauai's only established little fire ant infestation site in Kalihiwai. 25 acres were surveyed using 2,910 vials. The last detected little fire ant at the infestation site was in the fall 2019 survey, in the last known hotspot of the original infestation site.

Rapid Response. KISC's ability to quickly respond to reports of new invasive introductions helps to prevent establishment of new species on island.

- *Coqui:* 13 coqui frogs were controlled in 2019 at 7 distinct locations. In late 2018, multiple life stages were detected at one location, initiating the next control phase with citric acid used for population control. Treatment was completed in the first quarter 2019, no coqui frogs have since been detected at the location, monitoring will continue into 2020.
- *Little Fire Ant:* A new Kauai infestation of little fire ants was detected in October 2019 in the Kileaua area. In partnership with HDOA and HAL, KISC surveyed 15 acres to determine the extent of the infestation and treated 2.9 acres. Treatment will continue at the second little fire ant infestation site every 6 weeks until the population is brought down to undetectable levels.
- *Mongoose:* No mongoose reports reached the response threshold defined in the Kauai Mongoose Standard Operating Procedures. Tracking tunnel lines were deployed at two high priority areas with suspect mongoose reports that did not warrant the full trapping grid response. No mongoose were detected during the tracking tunnel surveys.
- *Rapid Ohia Death:* KISC continues to work with DOFAW on ROD detections on island. To date 223 trees have been sampled, *C. huliohia* was detected in 47 trees and *C. lukuohia* was detected in 53 trees and both were detected in 1 tree. KISC is part of the rapid response effort to delimit the surrounding trees and develop site management strategies. The Kauai ROD rapid response plan was finalized in 2019.

Additional Activities in 2019

KISC continued evaluating all target species management sites (221 total) to increase efficiency: 63 sites have been deemed extirpated, 7 new sites have been added to regular revisit scheduling, 78 sites remain active, and 7 sites are retired; all other sites require additional outreach, logistical planning, or species assessments. Revisit schedules and site status is based on biological information and control efforts: initial control date, last treatment date, life stage controlled, regeneration rate, last detection date, soil seedbank, and reproductive maturity age.

Partner collaboration: KISC is a project of the Pacific Cooperative Studies Unit (PCSU) with the University of Hawaii. KISC continued to work closely during 2018 with the Pacific Missile Range Facility, Hawaii Army National Guard, UH-CTAHR, DLNR-DOFAW, The Nature Conservancy, Hawaii Department of Agriculture, US Department of Agriculture, Hawaii Department of Transportation, the County of Kauai, Koikee Conservation Resource Conservation Program, National Tropical Botanical Garden, Kauai County Farm Bureau, and US Fish and Wildlife Service offices on Kauai and Oahu.

Contact Information

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