

Title: O'ahu Island Invasive Species Detection and Control
Organization: O'ahu Invasive Species Committee
Award: \$ 208,042



Introduction: Ten years ago, the O'ahu Invasive Species Committee was founded by a group of volunteers concerned about the spread of miconia and fountain grass on O'ahu. These pests had already wreaked havoc on other islands' ecosystems, but were only just beginning to work their way into the farms and forests of O'ahu. Since then OISC has worked to prevent ecosystem-changing invaders from damaging the forests, watersheds, agricultural systems, economy and quality of life on O'ahu through on-the-ground fieldwork and public education and outreach. HISC supplied 32% of OISC's total budget for 2012. The rest of OISC's budget was leveraged with federal sources and other state sources.

Achievements in FY12

Priority invasive species eradicated and/or controlled

To make the most of limited resources, OISC focuses its activities where there is the greatest return for the effort invested, working to stop invasive species before they become established. OISC's partners and steering committee choose those species that have the potential to disrupt vital ecosystem services, threaten Hawai'i's food sustainability or severely degrade the quality of life on O'ahu. In 2012, OISC continued to stop the spread of an erosion-promoting tree, prevented a population of coqui frogs from naturalizing on state lands in Waimānalo, performed early detection for little fire ant, and controlled a rangeland weed that is toxic to livestock.



OISC field crew removing a mature miconia tree from a steep slope in Makiki Valley

Specific accomplishments from January 1, 2012 include:

- Surveyed 2,468 acres and removed 3 mature and 708 immature miconia (*Miconia calvenscens*) trees from the southern Ko'olau Range, preventing this species from expanding into O'ahu's watersheds.
- Removed 19 coqui frogs from around O'ahu in cooperation with the Hawai'i Department of Agriculture.
- Conducted surveys for little fire ant at 45 sites around O'ahu in cooperation with HDOA. None have been found. Early detection will be the key to eradication of this stinging ant.
- Prevented cane ti (*Tibouchina herbacea*) from spreading along the northern Ko'olau summit.
- Completed removal of O'ahu's only known infestation of Cape Ivy (*Delairea odorata*). The area is located in the mid-elevation forest of the Wai'anae Mountains.
- Removed 582 Himalayan blackberry plants over 39 acres in Pālolo. The infestation area is in the transition zone between disturbed and mostly native forest. OISC's work here protects the native forests at the summit of the Ko'olau Range.
- Removed 1,769 lasiandra plants (*Tibouchina urvilleana*) from state forest reserve land within the Mānoa trail complex. All other known sites are monitored and controlled by OISC—preventing this state-listed noxious weed from establishing.
- Removed 37 ornamental pampas grass plantings from golf courses and private residences. Pampas grass is a priority for OISC because it can form dense thickets with ample fuel for brush fires. It is important to remove this species from cultivation because it disperses easily into natural areas by

- wind. On O'ahu, OISC has removed pampas grass the summit of the Ko'olau Range and from the forests of Kīpapa Valley.
- Worked with Lyon Arboretum to remove a highly invasive species—spiked pepper (*Piper aduncum*) from the Lyon collection and to survey the Arboretum grounds to control plants that have spread from the original display.
 - Conducted surveys and control on public and private land for Siam weed (*Chromolaena odorata*)—in cooperation with the O'ahu Army Natural Resources Program. Siam weed is a major pest on Guam and is toxic to livestock.

Prioritization processes identified and in place:

The O'ahu Early Detection program was formed in 2006 as a collaboration between the O'ahu Invasive Species Committee and the Bishop Museum in response to the need for island-wide, comprehensive data on newly introduced invasive plants to support rapid response control programs. OED documents newly introduced plant species and assesses the threat of invasiveness of introduced plants to Hawai'i's environment and agriculture and the feasibility of eradication and control given the species' distribution.

OED's work ensures that public dollars supporting invasive species control are used efficiently and effectively by helping agencies prioritize species and set realistic goals. In 2012, the O'ahu Early Detection program continued its partnership with the island's botanical gardens to survey their collections and alert the managers to species that may be spreading or potentially invasive. OED uses a combination of collection records and on-the-ground surveys for this work.

Species detected and evaluated for feasibility of eradication:

In 2012, OED identified and assessed 92 plant species. Many of these were found on OED surveys but a significant number also came as submission from partners and the public. Of these, 7 represented new state records, 13 were new naturalized records, and 10 were new island records.

Species, habitats, ecosystems, agricultural, and managed areas protected because of control efforts.

In FY12, OISC's ongoing miconia work protected the important watershed functions of the Ko'olau Range. The entire Ko'olau Range provides good habitat for miconia and once it takes over, miconia's shallow root system can increase erosion. The northern Ko'olau forests and the agricultural areas of Kahuku are protected from Siam weed. OISC's partnership with HDOA protected the Waimanālo area from a coqui frog infestation that would have been uncontrollable, had the animal established itself on the vertical valley walls. The native forests of the summit and the future Poamoho Natural Area Reserve are protected from cane ti infestations due to the efforts of OISC and its partners. OISC's work with miconia, lasiandra and spiked pepper protect Mānoa Valley and the extensive trail complex there. The dry forests and endangered species of the Wai'anae summit are protected from *Delairea odorata*, a vine that plagues the upper-elevation forests of the Big Island. Finally, OISC is protecting the quality of life in residential and agricultural areas by aggressively looking for little fire ant.

For more information, please contact:

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