

Title: Detection & Control of Invasive Species in Maui County
Organizations: Maui & Moloka'i Invasive Species Committees
Award: \$280,000



Introduction: Invasive species threaten Maui County's life-giving watersheds, agricultural sustainability, extraordinary biological diversity, and quality of life. HISC funding supported detection and control work on 33 plant species, 3 vertebrate species, 4 invertebrate pests, and 1 plant disease. Work conducted by staff from the Maui Invasive Species Committee (MISC) and Moloka'i Invasive Species Committee (MoMISC) benefited from strong partner support.

Achievements in FY14

- **Number of species targeted for detection and control activities:** 48 (proposed = 28) MISC and MoMISC conducted survey and control operations for the following species proposed for FY14 funding: (Maui) *Coccinia grandis*, *Cortaderia spp.*, *Cryptostegia grandiflora*, *Erica lusitanica*, *Maclura pomifera*, *Miconia calvenscens*, *Pennisetum setaceum*, *Silybum marianum*, and *Verbascum thapsus*; (Moloka'i) *Arundo donax*, *Cryptostegia madagascariensis*, *Cyathea cooperi*, *Falcataria moluccana*, *Ficus religiosa*, *Miconia calvenscens*, *Montanoa hibiscifolia*, *Pennisetum setaceum*, *Pereskia aculeata*, *Phormium tenax*, *Rosa multiflora*, *Salsola kali*, *Ulex europaeus*. Staff also worked on 20 other early detection plant species. Plants were removed using manual or chemical control methods. Early detection and/or control work also targeted six invasive vertebrates: coqui frogs, veiled chameleons, mitred conures, rosey-faced lovebirds, brown anole, and rabbits; three invertebrate pests: *Wasmannia auropunctata*, *Oryctes rhinoceros*, and *Rhynchophorus ferrugineus*; and two plant diseases: banana bunchy top virus and hala scale.
- **Number of individual targets detected and controlled:** 33,783 plants; 1,000s of coqui frogs, and 3,620 banana trees for BBTV.
- **Number of acres surveyed:** 58,460 acres surveyed, including aerial operations for *Cortaderia spp.* and *Miconia*; more than 150 acres were treated.
- **Overall effort expended:** 13,433 hours, including 723 partner-contributed hours and 1,191 volunteer hours.
- **Trends for target species:** With the exception of miconia and pampas grass on Maui, the number of mature targeted invasive plants declined on all islands. Outlier populations of miconia on Maui are in decline. Mature pampas plants controlled increased due to exceptional weather, allowing helicopter access to remote locations on West Maui. All individual coqui frog reports had prompt and successful responses. The number of reported new coqui sites tripled over previous years indicating increased introductions to the islands. Coqui frog population centers continued to decline. Ongoing response and control efforts occurred in and adjacent to state lands in Māliko Gulch but significantly more resources are needed to contain this population. No veiled chameleons have been detected since 2008. Mitred conure numbers are declining. The Waihe'e little fire ant site was declared eradicated after MISC staff spent several weeks burning a huge wood pile. MISC helped detect two new infestations on Maui, one of which triggered the discovery of LFA on O'ahu.
- **Inter-island movement of pest species:** Working with Dr. Lloyd Loope and with funding from the Hawai'i Tourism Authority, MISC launched an initiative to review pathways for the spread of the little fire ant and explore options for improvement.
- **Widespread vertebrate pest species:** MISC assisted with the Maui Deer Working Group efforts to complete axis deer population surveys.

- **Partner agency participation:** In addition to serving on the ISC Committees, partners joined staff in the field and helped secure funding for the projects.

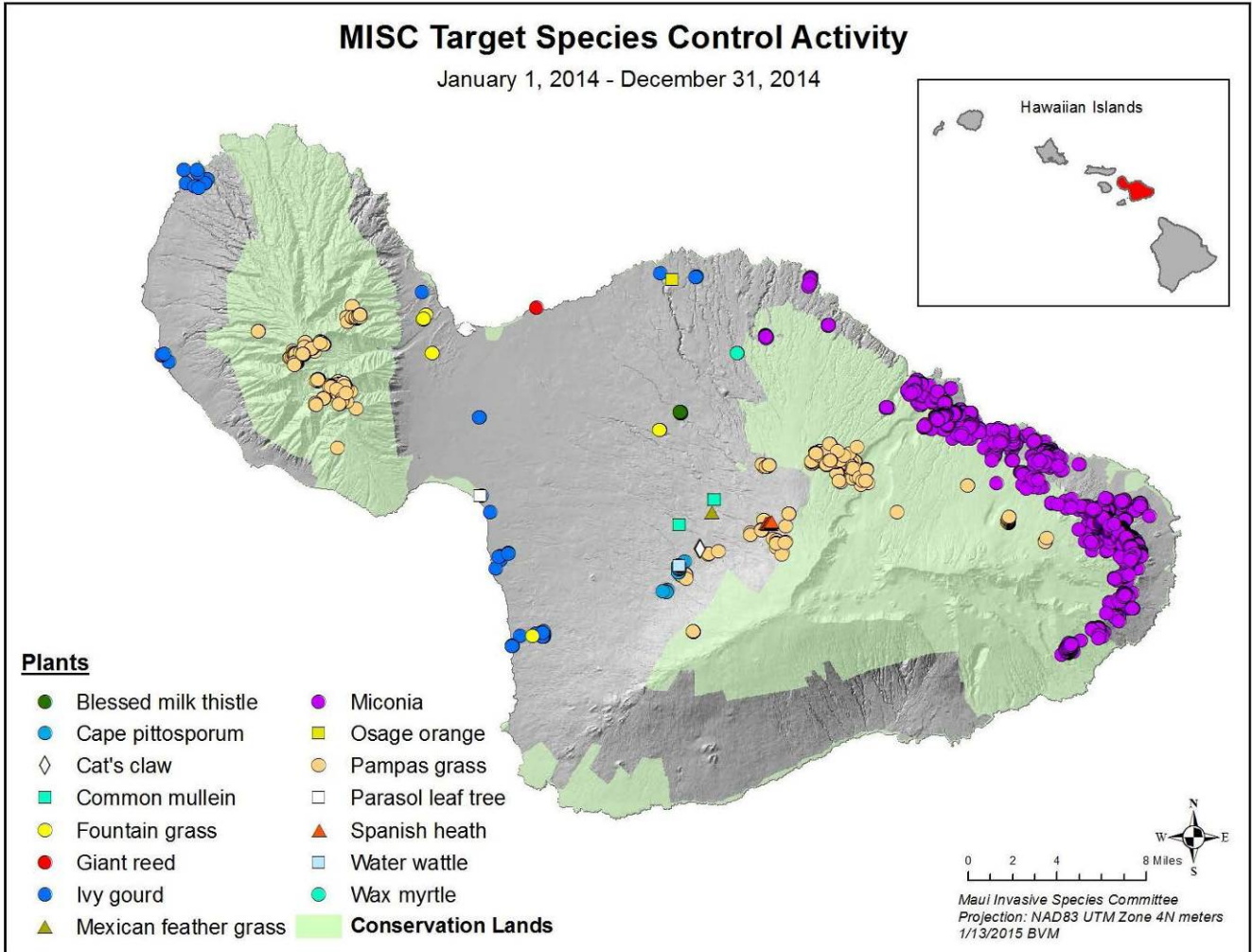
Additional Information

MISC and MoMISC are projects of the University of Hawai'i – Pacific Cooperative Studies Unit.

Contact Information

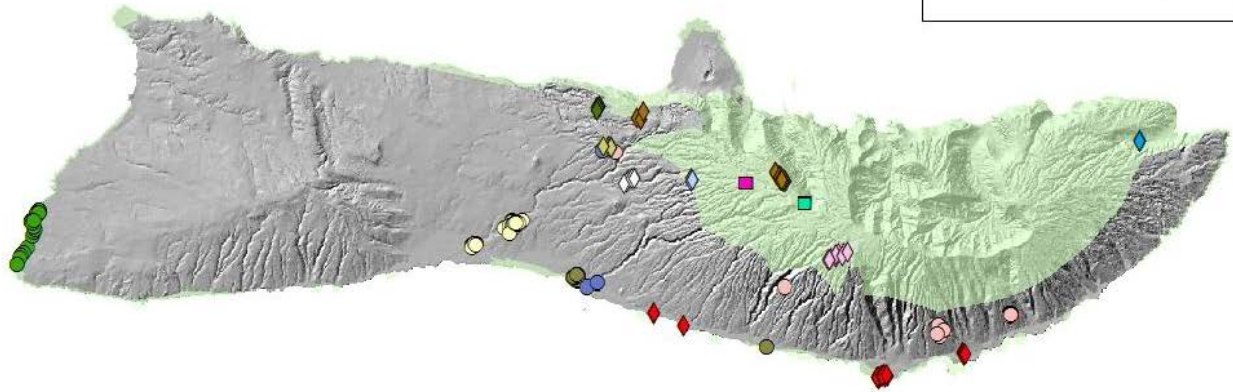
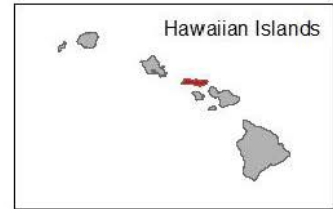
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MoMISC Target Species Control Activity

January 1, 2014 - December 31, 2014



Plants

- | | |
|------------------------|--------------------|
| ◆ Albizia | ◇ New Zealand flax |
| ◆ Australian tree fern | ■ Palm grass |
| ◆ Barbados gooseberry | ● Quail bush |
| ● Bo tree | ◆ Rubber vine |
| ◇ Cat's Claw | ◆ Tree daisy |
| ○ Fireweed | ○ Tumbleweed |
| ● Long thorn kiawe | ◇ Wood rose |
| ■ Multifloral rose | |

Conservation Lands



0 1.75 3.5 7 Miles

1/8/2014 KTP

