

Moloka'i/Maui Invasive Species Committee (MoMISC): Highlights

In FY 2009, funds from the Hawaii Invasive Species Council supported work on Moloka'i to achieve the goals and objectives of the HISC Response and Control Working Group. MoMISC was successful in continuing its efforts to eradicate 7 of its 8 priority target species: albizia, giant reed, Australian tree fern, Barbados gooseberry, fountain grass, New Zealand flax, rubber vine and tumbleweed. MoMISC also concentrated on responding to reports from the public to address a wide variety of pest issues affecting human health and the environment.

HISC Response and Control Measures of Effectiveness:

- 1) Number of species detected and evaluated for feasibility of eradication.
- 2) Prioritization processes identified and in place.

In FY2009, the MoMISC committee evaluated and added albizia (*Falcataria moluccana*) as a priority species for eradication from Moloka'i. Common to most other islands and featured in the movie "Jurassic Park," initial suppression of this large invasive tree began in March 2009 at the only known population on Moloka'i.



MoMISC and partners preparing for a day of albizia control.

MoMISC also conducted a survey for bo tree (*Ficus religiosa*) to determine spread and feasibility of removal. This *Ficus* is now spreading because of the recent introduction of a pollinating wasp. Unfortunately, control of bo tree at this time is not feasible in part due to fiscal constraints. Any considerations for adding a species to MoMISC's target list is determined through an evaluation process by the MoMISC committee.

HISC Response and Control Measures of Effectiveness:

- 1) Number and area of priority invasive species eradicated and/or controlled.
- 2) Number and names of species, habitats, ecosystems, agricultural, and managed areas protected because of control efforts.

MoMISC continued to work on eradicating eight invasive species. Survey and treatment activities also focused on sixteen other plant or animal species and covered over 14,644 acres, which included aerial surveys for *Miconia calvescens*. MoMISC assisted partner agencies, Hawaii Department of Agriculture and USDA Plant Protection & Quarantine, in the distribution surveys and monitoring of traps for stinging nettle caterpillar and light brown apple moth throughout Moloka'i. MoMISC recorded all data for the traps. MoMISC continued to collect,

voucher, and submit pest specimens to Bishop Museum botanists and the Maui HDOA entomologist. MoMISC's FY2009 species highlights included:

- No detection of miconia during aerial surveys covering over 5,000 acres.
- No fountain grass was found. There has been zero detection of fountain grass on Moloka'i for more than 4 years.
- A single pampas grass clump was detected and removed from a residence before flowering. The clump had been grown from seed ordered through the postal service. Prior to that, pampas grass on Moloka'i was at zero detection for over 8 years.
- Initial suppression of MoMISC's newest target, albizia, was completed. Over 330 acres were surveyed and over 483 hours spent on chemical treatment and maintenance of 885 mature and 1000 immature trees at Moloka'i's only known population.
- Over 568 acres were surveyed and 126 hours were spent treating banana bunchy top disease.
- Over 6,500 acres were surveyed and 363 hours were spent monitoring for early detection of the agricultural pests, stinging nettle caterpillar and light brown apple moth.

HISC Response and Control Measures of Effectiveness:

1) Implementation of the priority response and control actions of the Aquatic Invasive Species, West Nile Virus, coqui frog, and red imported fire ant plans.

In FY2009, reports from the public of being stung by "jellyfish-like" organisms in the designated swimming area at the Kaunakakai harbor prompted MoMISC to take immediate action to protect human health.

- A total of 380 mangrove jellyfish were removed from the Kaunakakai pier in partnership with the DLNR Division of Aquatic Resources.
- There were zero detections of the coqui frog on Moloka'i.
- There were zero detections of red imported or little fire ants.



MoMISC staff assisting with removal of mangrove jellyfish.

Other activities:

- MoMISC continued to support work done in the East Moloka'i Watershed Partnership as well as work done in The Nature Conservancy's Kamakou and Mo'omomi preserves.
- MoMISC continued to educate, survey, and control banana bunchy top disease with partners from the College of Tropical Agriculture and Human Resources (CTAHR) because it is important to our community to control this agricultural threat.
- MoMISC was instrumental in assisting partner agencies US Fish and Wildlife Service, USDA Plant Protection & Quarantine, HDOA Plant Quarantine in the education, outreach, and implementation of their projects, one of which included the eradication of rats from Mokapu Island.
- MoMISC continued to facilitate positive relationships with all major landowners by assisting with information and help in managing their lands for invasive species.

- MoMISC continued to provide updates to the community with articles in the Nature Conservancy's Nature's Newsflash and the Moloka'i Dispatch. MoMISC maintains pest information at the Moloka'i airport, Young Brothers pier office, Moloka'i post offices and several other locations island wide.
- MoMISC continued to be involved on the Moloka'i Earth Day Committee and participated in the annual event.
- MoMISC's Field and Data Technician were called to assist the Maui Fire Department in collecting, recording and mapping burn areas during the recent Moloka'i wildfire.
- MoMISC facilitated a cultural protocol for The Nature Conservancy's Moloka'i South Slope Aerial Shoot for feral ungulates which resulted in the dispatching of over 2,000 feral goats with no adverse community reaction.

HISC Public Outreach Measures of Effectiveness:

1) Agency adoption of rules and policies against invasive species.

MoMISC's Field and Outreach Coordinator recommended and was successful in getting several private and government projects to incorporate invasive species protocols in their projects. A current DOT bridge project for Moloka'i valued at \$7.4 million dollars was conditioned to incorporate HDOT's invasive species protocols in its project. A part of the agreement includes \$20,000 dollars for mitigation of accidental invasive species spread from the project.

2) Number of educational materials produced.

MoMISC has only two full time staff, but provides outreach and data management services as well. Despite limited time to create outreach products, a recent survey contracted by US Fish and Wildlife showed that the residents of Moloka'i ranked the highest in the state in their knowledge of invasive species and protecting the environment. MoMISC has produced the following products, many of which can be downloaded off the www.hear.org website:

- Over 40 MoMISC pest fliers, including new target species and other pests of concern
- Several power point presentations for educational outreach for public and private groups, MoMISC/MISC meetings and Maui Community College botany class.
- Invasive species outreach materials for the Moloka'i Airport kiosk as well as the MoMISC Invasive Species Board at the Kaunakakai harbor. Sample topics included "Stop Buying and Stop Planting" and "Here / Not Here," a showcase of pests on island and pests for prevention.
- A display and interactive invasive species game for the annual Earth Day event.

3) Number of people reached through talks and displays.

In FY2009, MoMISC reached over 3,000 people through public and private displays and presentations.

4) Number of volunteers recruited and/or referred to invasive species projects.

MoMISC prioritizes its time in working to foster long-standing assistance from other conservation partners and their professional trained staff. By facilitating positive professional partnerships, MoMISC's small staff is able to be successful in fulfilling its mission.

- MoMISC was successful in securing over 847 contributed partner hours.