

**Title: Outreach and Public Education on Invasive Species:
Maui and Lānaʻi**

Organization: Maui Invasive Species Committee

Award: \$24,000



The outreach goal for the Hawaiʻi Invasive Species Council is to educate public and private sectors about invasive species in order to positively affect perception, action and funding for invasive species. MISC's strategic plan for engaging the public includes a comprehensive media program, participation in community events, involvement with the landscape industry, and a strong education program. Outreach has been crucial for developing county support and for gaining access to private property. Outreach and education activities for Molokaʻi are reported separately but were covered by the same grant.

HISC Outreach Working Group: Measures of Effectiveness

Agency adoption of rules and policies against invasive species:

- MISC staff continued to work with the Maui Conservation Alliance to develop a mechanism to address recalcitrant landowners – those who refuse to allow access to private property for invasive species work. During meetings with the Maui County Council, council members reacted positively to the concept of developing a county ordinance that would provide access for high-priority species. The ordinance would be the first of its kind in the state.
- Staff participated in a HISC-sponsored legislative workshop and meeting, which focused on understanding the legislative process and identifying future legislative priorities.
- As appropriate, MISC provided information on invasive species issues to the Legislature and Maui County Council.

Adoption of Codes of Conduct by businesses:

- The Maui Association of Landscape Professionals (MALP) has already adopted a Code of Conduct for plant sales. MISC's outreach professionals regularly attended meetings and participated in MALP events.
- In 2003, MISC initiated an annual award to recognize individuals and businesses involved in the landscape industry who work to stop the spread of invasive species. In cooperation with the County of Maui and MALP, MISC presented the 8th annual Mālama i ka ʻĀina award to entomologist Mach Fukada for his years of early detection work and commitment to protecting Maui County from invasive species.
- One of the HISC Weed Risk Assessment (WRA) Specialists is housed at MISC's headquarters. MISC regularly fields calls from the public, including members of the landscape industry, about which plants might be invasive. The WRA Specialist is an excellent onsite resource for meeting this public need.
- Twenty-nine Maui plant growers and providers are now considered coqui-free under MISC's Coqui-free Certification Program.



*Entomologist Mach Fukada received the
2010 Mālama i ka ʻĀina award*

Track number of print and broadcast media mentions:

Print Media: There were 22 articles in *The Maui News* or local newsletters mentioning invasive species, MISC targets, or MISC. Additionally, MISC staff and committee members authored 11 articles for the Kia'i Moku column in *The Maui News* for a total of 33 mentions during FY2011.

- "Biological enemy to stinging caterpillar to be set free on Maui." Kia'i Moku column: *The Maui News*, July 11, 2010.
- "Aquarium fish bill advances in council: Measure aims to add transparency to trade that lacks regulation." *The Maui News*, July 15, 2010.
- "Wasps used to control pesky caterpillars: Parasitic insects released in Haiku to eradicate invasive stinging larvae." *The Maui News*, August 4, 2010.
- "Noxious tumbleweed rolls on Maui." Kia'i Moku column: *The Maui News*, August 8, 2010.
- "State makes progress removing invasive seaweed." *The Maui News*, August 20, 2010.
- "Brown tree snake detection workshop offered." *The Maui News*, August 24, 2010.
- "Ulupalakua Cares set for Sept. 5." *The Maui News*, August 25, 2010.
- "Government partnership smells a rat and wants action." *The Maui News*, August 30, 2010.
- Pampas grass is an invasive, prolific plant." Kia'i Moku column: *The Maui News*, September 12, 2010.
- "Used in reforestation, albizia now poses threat." Kia'i Moku column: *The Maui News*, October 10, 2010.
- "Little fire ant infestation eradicated: new bait kills off dangerous pest." *The Maui News*, October 11, 2010.
- Ad soliciting nominations for Mālama i ka 'Āina award. *The Maui News*, November 7, 8, 13, 14, 2010.
- "Rauvolfia vomitoria: a growing problem." Kia'i Moku column: *The Maui News*, November 14, 2010.
- "MALP seeks nominations for 'Āina awards." Hawai'i Landscape, November / December, 2010.
- "Haleakala park supporters honored." *The Maui News*, December 1, 2010.
- "Archive planned at national park: Superintendent gives public update on upcoming plans." *The Maui News*, December 5, 2010.
- "Keep an eye out for predatory veiled chameleons." Kia'i Moku column: *The Maui News*, December 12, 2010.
- "Public encouraged to report invasive species." Letter to the Editor: *The Maui News*, December 13, 2010.
- "Man who identified little fire ants wins association honor." *The Maui News*, December 24, 2010.
- "Red-vented bulbul can alter ecosystems." Kia'i Moku column: *The Maui News*, January 9, 2011.
- "MISC is helping to protect Maui County." Letter to the Editor: *The Maui News*, January 31, 2011.
- "New gardens director to infuse more native culture." *The Maui News*, February 7, 2011.
- "Banana bunchy-top virus poses threat to plants in Hawaii." Kia'i Moku column: *The Maui News*, February 13, 2011.
- "Release of pet birds poses threat to ecology." Kia'i Moku column: *The Maui News*, March 13, 2011.
- "Battle begins to prevent dengue fever." *The Maui News*, April 8, 2011.



"Release of pet birds poses threat to ecology."

- "Rats run amok on isles." Kia'i Moku column: *The Maui News*, April 10, 2011.
- "Suspected dengue cases up." *The Maui News*, April 14, 2011.
- Thank-You Letter. *The Maui News*, May 1, 2011.
- "Banana bunchy top virus." Maui Master Gardener Newsletter, May 1, 2011.
- "Rodent threat continues in Hanawi reserve area." Kia'i Moku column: *The Maui News*, June 12, 2011.

Broadcast Media:

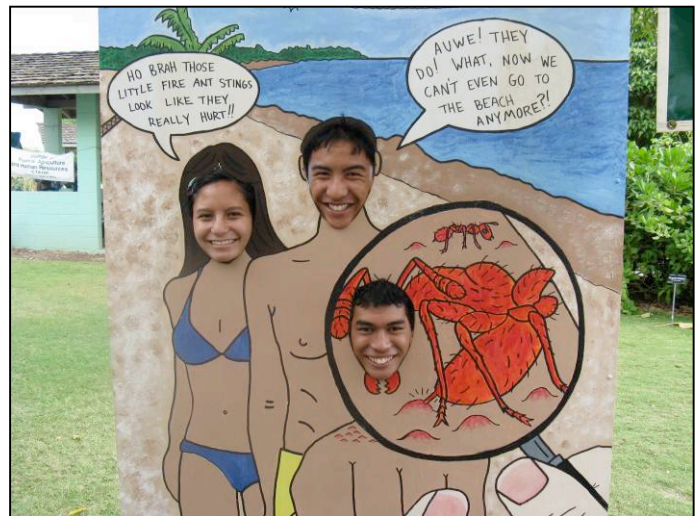
- MISC is working with videographers Masako Cordray and Chris Reickert to produce an educational video and Public Service Announcements to educate the public about the threat posed by the little fire ant. Footage has been produced from the Hawai'i Island, Maui, and Tahiti.
- Staff worked with a video team from JITNOT Productions, which is creating pro-bono 60-second and 30-second PSAs about miconia. Footage was obtained from Hāna work sites and narration was provided by Richard Ho'opi'i.

Number of "hits" on invasive species web page:

- MISC developed and launched a statewide informative website about the little fire ant: www.lfa-hawaii.org

Number of education materials produced:

- Approximately 1,000 copies of the MISC newsletter were mailed, emailed, or hand-distributed. The newsletter highlighted the work of the Moloka'i Invasive Species Committee, with special emphasis on efforts to control albizia.
- Twenty ant detection kits were distributed to residents on Lāna'i.
- MISC promoted the Hō'ike o Haleakalā website and curriculum project with a listing in the Maui Family Magazine Teacher's Field Trip and Resource Guide. An estimated 2,000 copies were distributed on the island.



Little fire ant photo op for fairs

Number of people reached through talks and displays:

- Audience for presentations: 411. Informational presentations were given to the Orchid Society, Mālama Hamakua Community Watershed Action Group, and the Hāna community. A presentation on pampas grass was given at the Hawai'i Conservation Conference and a separate poster featured work on fountain grass on Lāna'i.
- Community events: 5,732 people. MISC participated in ten community events across the island, including: the Makawao Fourth of July parade, Maui Swap Meet, 'Ulupalakua Cares, Maui County Fair and Parade, Arbor Day, MALP Lawn & Garden Fair, Milagros' fundraiser, Maui Agricultural Festival, and the East Maui Taro Festival.

Number of invasive species educational programs and community events implemented by staff:

- MISC's educational program reached 1,694 students during classroom visits. Educational activities occurred at 13 schools, two community centers, the Keiki Eco-Conference, and the Hāna Digital Bus. Students ranged in age from 1st grade through community college.
- MISC continued to develop and promote the Maui-based Hō'ike o Haleakalā science curriculum. A professional development workshop on the curriculum attracted seven teachers. The teachers were required to create a portfolio documenting that they used the curriculum to teach six lessons. Development of a new module, which is focused on invasive species, is progressing. A separate workshop based on the draft curriculum solicited input from teachers on proposed activities; one activity requires students to create a timeline showing the rate of introduction of invasive species, and another requires use of Google Earth to model the spread of the *Erythrina* gall wasp.
- Workshop training: 130 participants. In cooperation with the County of Maui, Hawai'i Department of Agriculture, and Hawai'i Department of Land and Natural Resources, MISC helped provide community training on how to identify and report sightings of snakes and invasive vertebrates.



Teaching the teachers: workshop at MISC

Number of volunteers recruited and/or referred to invasive species projects:

- Volunteer activities varied in length from one day to one week with a total of 112 participants. In November 2010, students from Seabury Hall helped control invasive species in the Waikamoi area, and in February 2011, a different group of Seabury Hall students participated in the Hāna miconia winterim trip. A group of 15 interns from Haleakalā National Park assisted with fire ant surveys.
- Individuals occasionally volunteered on regular work days, most often controlling miconia or working on coqui frogs.
- Several members of the community regularly assist with coqui frog control efforts by loaning their equipment, mowing infested areas, or providing storage facilities for citric acid.

Additional HISC objectives:

Staff promoted the following key outreach messages:

- Protect Hawai'i - this is a common theme throughout MISC's monthly newspaper articles in *The Maui News*.
- Report a Pest (643-PEST) - this number is included on MISC's little fire ant outreach materials.
- Don't sell or buy a pest - newspaper articles typically include this message.
- Keep pets contained - one newspaper article focused specifically on not releasing pet birds.
- Plant native species - MISC's latest display for public events highlights the use of native plants as an alternative to planting invasives.
- Biocontrol messages were incorporated into presentations and outreach displays and biocontrol was the feature of an article on stinging nettle caterpillar.

MISC's outreach program effectively targeted all priority target audiences:

- Decision makers: Personal visits to Maui County legislators and county council members helped ensure they have relevant information about invasive species issues. One legislator even published his own handout about invasive species for dissemination to his constituents using information from MISC.
- Special Interest Groups: MISC has developed positive working relationship with members of the landscape industry through the Maui Association of Landscape Professionals and by having a regular presence at community events. MISC is strengthening its connection to the farming and ranching communities by participating in the Axis Deer Working Group.
- Students: The Hō'ike curriculum has provided a natural pathway for "teaching the teachers" about invasive species issues and also for direct interactions with Maui's students.
- General Public: In addition to MISC's extensive presence in the community via events, newspaper articles, and presentations, one of MISC's most effective ways of communicating about invasive species occurs during field work in the community. Much of MISC's work takes place on private residences, which, by necessity, often includes an educational component. For banana bunchy top virus work alone, staff visited over 3,000 properties. Maui County residents exhibit a high degree of awareness about invasive species.



Not-so-little fire ant visits the Maui Orchid Society

MISC and MoMISC are projects of the Pacific Cooperative Studies Unit - University of Hawai'i. In addition to HISC funding, activities outlined in this report were supported by funding from the County of Maui, U.S. Fish & Wildlife Service, National Park Service, U.S. Forest Service, private foundations and individuals.