



**INVASIVE SPECIES OUTREACH & EDUCATION IN MAUI COUNTY
HAWAI'I INVASIVE SPECIES COUNCIL
FINAL REPORT – FY15**



Starting them young: Ecosystem Jenga at the Ha'ikū Ho'olauleā

INTRODUCTION & OVERVIEW

Public awareness and concern inspire people to report new or suspect plants and animals, help secure access to private property, and generate support for invasive species work and funding. MISC and MoMISC have developed robust programs to educate and engage the public about invasive species issues. HISC funding for this project sought to reach a broader range of stakeholders, including those likely to move or detect species moving interisland, and to retain highly trained outreach and education staff. These objectives were fully met.

Staff on Maui and Molokai used a broad array of strategies and approaches to educate and engage the public, including: production and dissemination of printed materials; broadcast media; public events and presentations; classroom visits and teacher trainings; and workshops for targeted stakeholders. Outreach efforts worked to maintain and build positive relationships with local, state and federal elected officials. Staff participated in statewide outreach processes, including efforts to enhance statewide coordination, expand stakeholder engagement, and ensure that efforts are culturally inclusive. Specific activities helped continue to build awareness about the threat posed by little fire ants (LFA).



LFA magnet

Overall, outreach and education activities had significant reach into local communities:

- Print media: more than 26,500 readers
- Radio and television broadcasts: more than 232,400 listeners/viewers
- Websites: six websites had 70,410 hits
- Public events: 10 events, including interactions with 2,115 people
- Presentations: 20 events with a combined audience of 974 people
- Classroom visits/lessons: 10 schools and 1,062 students
- Internships: hosted five different interns

PRINT MEDIA

Deliverables: Publish 12 monthly articles in the *Maui News*; 5-10 other mentions; annual newsletter; articles in The Nature Conservancy's *Newsflash*.

Accomplishments: A total of 44 articles, letters to the editor, and announcements related to invasive species activities or events were printed in local papers and newsletters, including 3 articles in The Nature Conservancy's *Newsflash*, and 12 monthly articles in the *Maui New*. News mentions included articles about little fire ants, including the need for pesticides; coqui frogs; state agricultural inspectors; and events recognizing community efforts on invasive species. The Hānaside newspaper sponsored an effort to raise awareness about little fire ants in East Maui by offering a raffle prize (trip to Las Vegas) to residents who surveyed their properties for LFA. The contest reached an estimated 900 people. MISC switched to an online shorter newsletter to reduce its carbon footprint.

The 12 monthly Kia'i Moku columns, written by MISC's PR Specialist, covered: threats posed by argentine ants to endemic insects of Haleakalā; seabirds and Hawaiian ecosystems; impacts of invasive species on cultural practices; a public report leading to a new miconia location; rapid

‘ōhi‘a death; the native butterfly mapping project; hydrological impacts of invasive species; benefits to albatross of removing *Verbesina* from Midway Atoll; early detection surveys on Haleakalā; fencing projects to remove ungulates; iguanas on Maui; and using locally grown plants for Holiday decorations.



The Maui News

Cultural practice of sharing island bounty hampered by invasive species

Aunty Penny Martin is a lei-maker on Molokai. She was talking story one day with a friend visiting from Hawaii Island, and the conversation turned, as it often does, to lei-making.

The friend had a lime-green hydrangea growing in her yard and offered to bring her some. “As a lei-maker, the hydrangea are the best for making lei po‘o (lei for the head),” said Aunty Penny. “I was really excited to see.”

MISC and MoMISC also used email “blasts” to communicate with concerned members of the community, including about efforts to control little fire ants and coqui frogs. These emails reached at least 470 people.

BROADCAST MEDIA

Deliverables: Produce revised version of 28-minute LFA video; produce 3 LFA Public Service Announcements (PSAs); produce 2-3 radio LFA pieces.

Accomplishments: MISC completed an updated LFA video and PSAs. Broadcast was scheduled for 2016. Outreach efforts included both statewide and local television stations and local radio stations. Television broadcasts included stories about the LFA Huelo infestation, repeat broadcasts of the original LFA video and PSAs. Radio broadcasts included: interviews on two local radio shows; coverage on Hawai‘i Public Radio about coqui frogs; and 32 runs of three different LFA PSAs on Pacific Radio Group. Combined, these broadcasts reached more than 232,400 listeners/viewers.

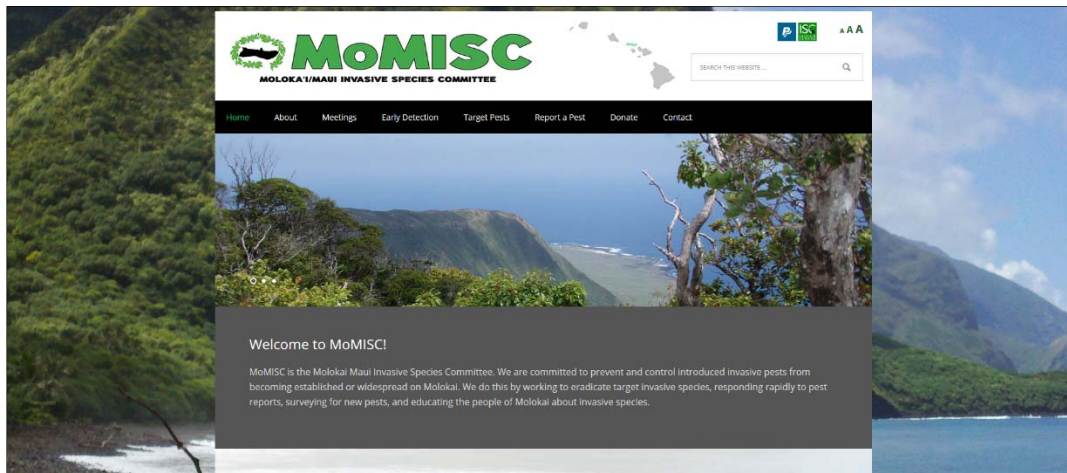


New LFA video on MISC's YouTube site

WEBSITES

Deliverables: Maintain/ update websites and social media platforms; estimated hits of 7,500.

Accomplishments: MISC and MoMISC maintained seven different Internet sites: primary websites for MISC and MoMISC (www.mauinvasive.org and www.momisc.org); sites dedicated to little fire ants (www.lfa-hawaii.org) and to the coqui-free nursery program (www.coquifreemaui.org); Facebook and YouTube pages; and the Hō'ike o Haleakalā curriculum (www.hoikecurriculum.org). Total hits for these websites was estimated at 70,410.



MoMISC website

OUTREACH EVENTS

Deliverables: Displays at 5-7 community events; reach estimated 2,000 people.

Accomplishments: MISC and MoMISC participated in ten events, including: the Mayor's declaration of "LFA- Spot the Ant, Stop the Ant" month; Maui County Agricultural Festival; East Maui Taro Festival; Ha'ikū Ho'olaule'a; Maui Association of Landscape Professionals Lawn & Garden Fair; Maui County Fair; Arbor Day; Hawai'i Farmers Union United Convention; and Molokai Earth Day. MISC recognized the Plant Quarantine Inspectors of the Maui Branch of Hawai'i Department of Agriculture as the "Most Valuable Player" at the annual Hawai'i Invasive Species Awareness Week ceremony. MoMISC maintained display boards with invasive species information at the Molokai Airport, Kaunakakai Harbor, and posted flyers at four post offices on the island. In total, these events reached at least 2,115 people.



Mayor's proclamation: Spot the Ant, Stop the Ant

PRESENTATIONS & WORKSHOPS

Deliverables: Give 4-6 presentations on invasive species topics; reach estimated 200 people.

Accomplishments: MISC and MoMISC staff gave 20 presentations to diverse stakeholder groups, including: realtors; landscapers; arborists; farmers; gardeners; utility workers; health volunteers; community service organizations; tourism officials; Hawaiian environmental rights practitioners; and community associations. Topics included: general invasive species awareness; little fire ants; coqui frogs; early detection techniques; plant health; cultural issues; and the importance of public cooperation. Molokai staff also participated in the 'Aha Moku Advisory Council, which enhances the opportunity to ensure that traditional knowledge and cultural perspectives are incorporated into outreach messaging and events. Overall, these presentations reached an estimated 974 people.

MISC staff continued to collaborate in the Maui Mauka Conservation Awareness Training for nature-based tour operators. This is a joint project with East Maui Watershed Partnership and Maui Forest Bird Recovery Project, which provides early detection and communication tools for tour guides about East Maui species, environments and threats. The project held five trainings for a total of 70 participants. MISC also helped organize and facilitate an introductory workshop for conservation professionals on rapid 'ōhi'a death, which included 45 participants.



















Tour guide training and opening slide of presentation



EDUCATIONAL MATERIALS

Deliverables: Complete invasive species curriculum module; promote curriculum to local teachers and schools.

Accomplishments: Three of five units are complete and online at www.hoikecurriculum.org: From Evolution in Isolation to Globalization; Invasive Species Impacts: Why Care; and Biology and Ecology. The remaining two units, Management; and Policy & Ethics are nearing completion. A total of 16 different classroom activities are now available. Some examples include: weed risk assessment bingo, and a strategy exercise using data on the wiliwili gall wasp invasion and Google Earth.

Weed Assessment Bingo #2			
Grows up to 30 feet tall 	Quality of climate match: high 	Requires specialist pollinators 	Wind dispersed 
Species suited to tropical climate 	Tree 	Allergen/toxic to humans 	Produces milky sap 
Requires full sun 	Native to tropical & subtropical Americas 	Likely to be dispersed by humans 	Deciduous & non-deciduous varieties 
Wind tolerant 	Used in lei-making 	Easily propagated 	Matures within 5 years 

Biology and Ecology - Hō'ike o Haleakalā

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EDUCATIONAL PROGRAMS

Deliverables: Conduct estimated 30 school-based activities; visit 10 different schools; reach estimated 1,000 students in Maui County; conduct 1-2 teacher trainings based on the Hō'ike o Haleakalā curriculum.

Accomplishments: Staff conducted activities during 27 classroom visits or outdoor field trips with students from 10 different schools across the islands. Lessons used materials from the Hō'ike o Haleakalā curriculum, including testing new ones from the invasive species module. Other materials used included MISC videos and games (e.g., "Ecosystem Jenga"); working with students to develop an invasive species reporting App; and staffing tables at leadership and career opportunity days. In total, MISC shared invasive species messages with 1,062 students from across the island. MISC staff also cooperated with staff from Haleakalā National Park on a conservation-oriented teacher development workshop.



Outdoor classroom with MISC's PR Specialist

LANDSCAPE INDUSTRY

Deliverables: Present annual Mālama i ka 'Āina award; participate on board of Maui Association of Landscape Professionals (MALP); Support Weed Risk Assessment (WRA) technician and Biodiversity Information Network (HBIN) staff.

Accomplishments: In partnership with MALP and the County of Maui, MISC recognized Angela Kay Kepler for her work on invasive species by presenting her with the annual Mālama i ka 'Āina award. Ms. Kepler has written numerous books about plants in Hawai'i, including a definitive book on bananas, and has been a strong proponent of protecting native biota from invasive species. Outreach staff continued to participate on the MALP board. MISC provided office space for and supervised WRA and HBIN staff; this arrangement enhanced communication among the different projects about public inquiries and reports on invasive species. The Weed Risk Assessment technician also served as a local botanical expert, assisting with identification of unknown plants.



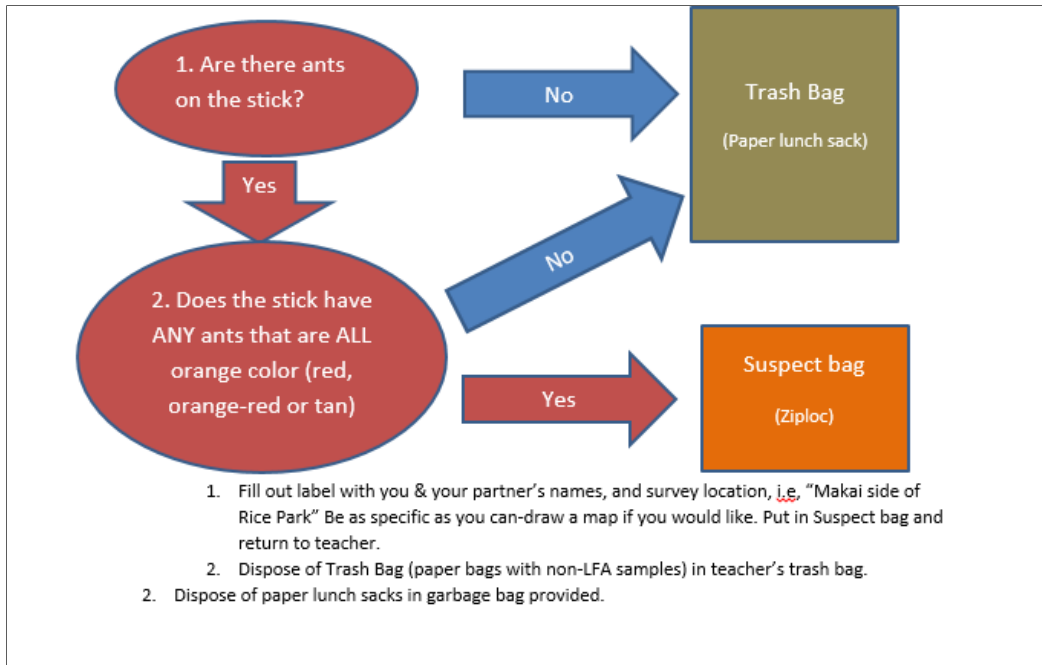
Mālama i ka 'Āina award winner with representatives (L-R) from MALP, MISC and County of Maui

VOLUNTEERS RECRUITED

Deliverables: Lead at least two volunteer field trips; host at least two AmeriCorps interns; collaborate with Haleakalā National Park internship program.

Accomplishments: MISC led two different service outings with local students: a two-day field trip to Hāna focused on finding and removing miconia plants. The second operation involved a day-long little fire ant survey, conducted by students from Seabury Hall (6th through 12th grade).

MISC and MoMISC supervised interns from the Pono Pacific and AmeriCorps programs. Molokai worked with two interns, while MISC had three interns; one worked on miconia and the other two joined the coqui crew. MISC hosted a morning presentation and activity with the Haleakalā National Park internship program.



A portion of LFA sampling instructions for teachers

PEOPLE REACHED

Deliverables: Reach estimated 24,000 people via print and broadcast media, school activities and community events.

Accomplishments: Reached estimated 333,461 people. This estimate certainly includes some duplication; the same individual might have seen a video, heard a radio piece, read a newspaper article, or visited a webpage multiple times. However, other components of the MISC and MoMISC outreach and education program are seriously undercounted. For example, no estimates are available for statewide television broadcasts. Additionally, field staff interact with thousands of residents and visitors each year, sharing invasive species messages and materials when they are in the community conducting survey and control operations.

An island-based, comprehensive, multi-media strategy, tailored for different ages, cultures, and interests, remains critical to ensuring that the most effective messages reach all segments of communities on Maui and Molokai.