



## Quarterly Report to the MISC Committee

*FY 2009, First Quarter*

*July 1 to September 30, 2008*

# Manager's Report

During the 2006 and 2007 meetings of the Hawai'i Conservation Conference, staff from each of the Invasive Species Committees attended all-ISC workshops to talk story and learn about the different challenges and strategies each ISC faces. Each year, there was a unanimous sentiment that we should all come together for a unified work trip on one of the islands. This year we pulled it off by gathering on the island of Kaua'i, thanks to excellent planning and hosting by the Kaua'i Invasive Species Committee (KISC).

A total of 63 staff from BIISC, OISC, KISC, MoMISC, MISC, HISC, and DLNR camped, worked, played, and generally had a productive and enjoyable four days in Koke'e State Park. Target species work focused on smokebush, ginger, and strawberry guava, under the able direction of Katie Cassel from the Koke'e Resource Conservation Program. Over 36,000 invasive plants were controlled! Team building activities included a poker-oriented geo-cache game, a short hike on the Kalalau Trail, some late-night song (?) fests, and an exercise designed to test our creative problem-solving skills while saving the world from invasive species.

The experience helped strengthen staff's understanding that MISC is part of a statewide effort and reaffirmed the importance of our work. It also demonstrated just how much can get done when many hands pull together. Although we won't be able to repeat the full experience next year, we hope to show what we can accomplish during the work trip planned for the miconia conference next May. If you are able to join us, look for a lot of willing hands and a much stronger sense of unity among the ISCs. Mahalo KISC and KRCP!



# Quarterly Highlights

## MISC FIELD TIME SUMMARY

- July 1-3: Crew to Honomanū for pampas grass control
- July 5: Makawao Paniolo Parade
- July 1: Carl Polk begins work with the Hāna crew
- July 8-11: Crew to Honomanū for pampas grass control
- July 9: Teya to O'ahu for HISC meeting
- July 9-11: Brooke to GIS training on O'ahu
- July 10: Early Detection Workshops for Hāna crew & Kīpahulu community
- July 15: ArcGIS training for staff
- July 24: Teya to O'ahu for Established Pest Working Group meeting
- July 28: Jared Barros & Stephanie Kowalski join the Pi'iholo crew  
Teya & Lissa to O'ahu for CGAPS meeting
- July 29-31: Teya, Lissa, Lori, & Mike attend Hawai'i Conservation Conference
- July 29-Aug 1: Crew to Honomanū for pampas grass control

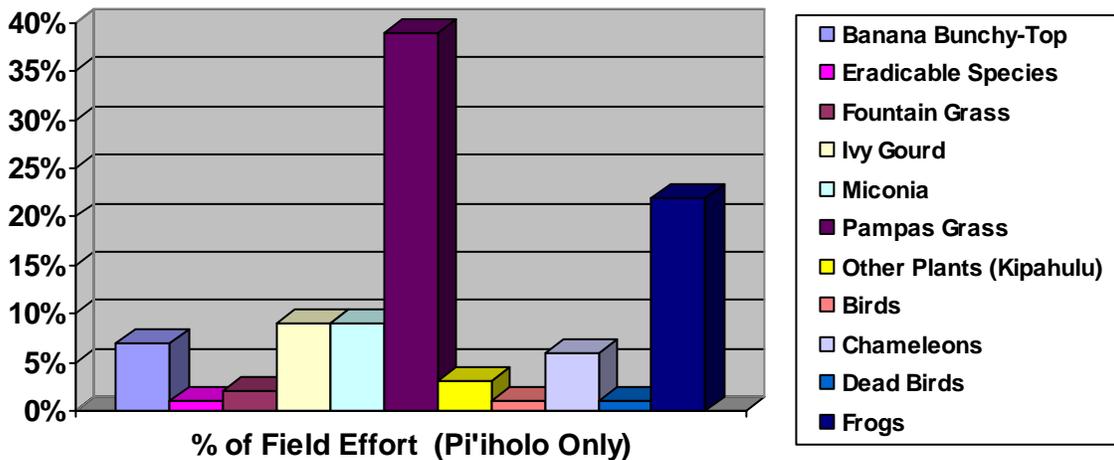
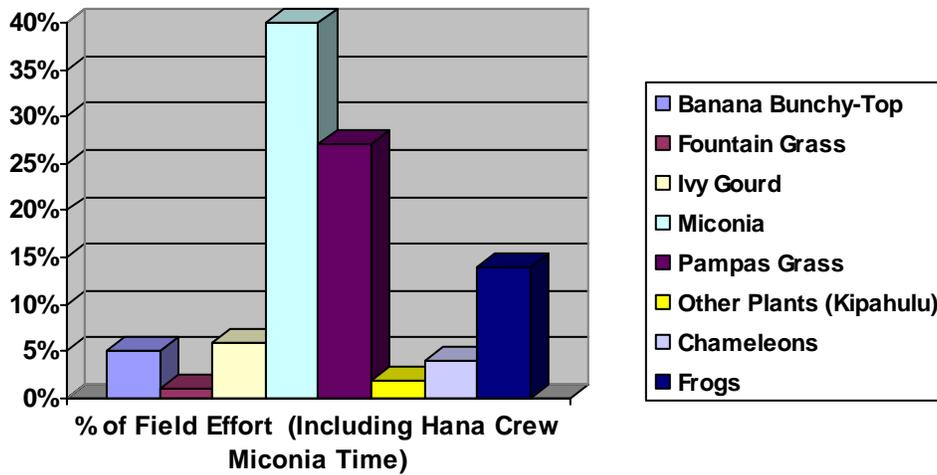
- Aug 4-6: Wilderness First Aid Training



- Aug 7: Miconia conference planning meeting
- Aug 8: MISC Meeting
- Aug 8: MISC hosts Representative Maizie Hirono at Pi'iholo
- Aug 11-14: Dave & Russ to Lāna'i for ivy gourd control
- Aug 12: Elizabeth attends RCUH personnel/training meeting
- Aug 13: Early Detection Workshop for Pacific Whale Foundation
- Aug 14: Early Detection Workshops for WMMWP & the public in Lahaina
- Aug 16: Ke'anae Ho'olaule'a
- Aug 25: Basic heliops training for Stephanie K, Jared, and Carl P.
- Aug 29: Russell Suzuki retires
- Aug 25-29: Crew to Honomanū for pampas grass control  
Crew to Kīpahulu Valley to assist NPS with weed control



- Sept 2: Miconia conference planning meeting at Ke'anae
- Sept 3: Teya to O'ahu for HISC meeting
- Sept 4 & 5: CPR refreshers
- Sept 8-9: Adam R. conducts rappelling operations on Kaua'i
- Sept 9-12: All staff to Kaua'i for ISC's retreat/work trip
- Sept 16: Lissa to O'ahu for Public Outreach Working Group meeting
- Sept 16-19: Dave & Adam K. to Lāna'i for ivy gourd control
- Sept 22-26: Interagency front-country pampas sweeps on the slopes of Haleakalā
- Sept 22: Brad Ogle & Tricia Rodriguez join the Pi'iholo crew
- Sept 23: Teya gives presentation to the Cattlemen's Association  
Lissa attends MALP meeting
- Sept 27-29: MISC management staff retreat at Hōlua cabin in Haleakalā crater
- Sept 29: Basic heliops training for Brad Ogle & Tricia Rodriguez
- Sept 30: ArcGIS training for staff



# PR & Education News

## MISC IN THE NEWS

MISC's monthly Kia'i Moku column highlighted the impacts of invasive algae in July. The article was timed to correspond with recent International Year of the Reef activities. The August article featured the successful eradication of *Parkinsonia* from Maui. The September article, written by committee member Lloyd Loope, was the first of a two part series focusing on the impact of strawberry guava in Hawai'i. Teya provided information regarding how MISC responds to reports of coqui frogs in one of the "Check it out" columns in The Maui News in September. MISC's third Kia'i Nā Moku O Maui Nui newsletter was published this quarter. This edition focuses on early detection and eradicable species and includes features on Forest and Kim Starr, Haleakalā Ranch, and our CTAHR "landlord," Harold Keyser.



## REACHING OUT TO THE COMMUNITY

For the third consecutive year MISC participated in the upcountry Independence Day festivities by putting together a float for the Makawao Paniolo Parade. Staff member Chris Radford dressed as a rabbit and rode in a cage in the back of the truck to highlight the message "Keep your pets contained." Our papier mache veiled chameleon followed him in the trailer while an animated 13' coral snake threatened to attack the crowd. Meanwhile MISC staff handed out magnets and pens to the crowd. MISC was awarded "Most Unusual Entry" for the third year in a row.



MISC participated in the Ke'anae Ho'olaule'a in August. The community event provided an opportunity to highlight the work that MISC is doing on miconia and to help increase awareness in Ke'anae of the upcoming miconia conference in May 2009. There was information available regarding coqui frogs in response to several coqui frog reports in the area over the last several months. Approximately 140 people stopped by MISC's table.



## MISC IN THE CLASSROOM

Classroom visits this quarter provided an opportunity for outreach to approximately 260 high school students on Maui. Lissa spent one day talking to students at King Kekaulike High School about native ecosystems and the impact of invasive species using information on what characteristics make a plant invasive from the Hō'ike curriculum. Lissa adapted another Hō'ike activity, "Survivor Island," for sophomores at Maui High. After hearing background information on invasive species, students developed strategies for managing a miconia infestation.

## EARLY DETECTION PROGRAM

The PBIN/MISC Early Detection Program concluded training for Maui conservation organizations with an August workshop for the Pu'u Kukui team and the West Maui Mountains Watershed Partnership. There was a workshop in Kīpahulu for the general public and a workshop in Mā'alaea at Pacific Whale Foundation. PWF staff and members of the general public attended. Thirty-six people attended early detection workshops this quarter.



# Plant Updates

## PAMPAS GRASS

Four trips were made into Honomanū this summer working from 3,700 to 4,100 feet in elevation. During these trips 47 acres were surveyed from Honomanū stream to the cliffs of Ko'olau Gap. A total of 1,975 plants were controlled, a quarter of which were mature. Additionally, 670 seed-head plumes were



removed preventing millions of seeds from germinating. Thanks to good-weather windows, we were able to get back into Kaua'ula during two separate helicopter operations and controlled 248 plants, half of which were mature. The annual inter-agency front country sweeps on the slopes of Haleakalā covered 2,275 acres. Eight other agencies contributed to the 2008 survey effort. Two mature plants were found.



## FOUNTAIN GRASS

There were no new populations of fountain grass discovered this quarter. No mature fountain grass plants were found at any Maui locations during the past two quarters. We still have not been successful in our attempt to find out when the Mākena Golf Course site will be excavated. MISC's monitoring of this site has been on-going since the report of fountain grass by Bob Hobdy in December 2006. There is always a chance that plants could still be found at this site due to seed bank disturbance from earth moving equipment. The last plant found at the site was controlled by MISC staff in February 2008. No fountain grass plants were found at the Kahakuloa site. Rappel surveys at this site are ongoing.

Fountain grass control efforts on Lāna'i were augmented by the presence of the MISC vertebrate crew conducting BBTV surveys. DLNR staff member John Neizman discovered and reported a new fountain grass site in the Honopū area during ungulate surveys. The vertebrate crew was able to take immediate action and controlled 500 plants at this new site.

## IVY GOURD

One mature plant was controlled in Kīhei this quarter makai of Puanani Nursery. No other fruiting ivy gourd plants were controlled. The number of plants controlled in all size classes continues to steadily decline island-wide.

Two visits were made to Lānaʻi this quarter to control ivy gourd. Little to no fruiting was found during field surveys at all known locations. There was minimal seedling germination probably due to decreased rainfall. Immature plants were numerous, but control efforts were facilitated by die-back of other plant cover.

## RUBBER VINE

No new plants have been found during surveys of existing sites. A new site with one mature plant was found and controlled by MISC field crew during ivy gourd monitoring in Kīhei. Lack of permission remains an obstacle at known sites in the central Maui area.

## ERADICABLE SPECIES

The Osage orange site on Haʻikū Road continues to produce many root suckers. MISC field crew controlled over two hundred root runners (sprouts) during monitoring this quarter. We are glad there is only one site on Maui! *Macaranga tanarius* seedlings in potted plants were controlled at Kīhei Nursery in Waikapū, even though our geographical focus for this species is East Maui only.

## MICONIA

Ground-based control of miconia continued to target semi-residential properties in lower Nāhiku where work was begun last spring. Several remaining sweep areas continue to be problematic due to access and permission difficulties. Several non-resident owners in the area have proved difficult to locate/contact.



Additional sweeps focused on the Keʻanae and Koʻolau Gap areas of the miconia infestation. Ground sweeps along streams in low elevation Koʻolau were augmented by helicopter work, resulting in numerous plants found. Successful ground-based sweeps were also initiated in areas adjacent to Keʻanae School, the Wailua Lookout, and makai of Hāna Highway in Keʻanae. Two mature plants were treated by the ground crew in the vicinity of Keʻanae Arboretum. As always, steep terrain and dense canopy in some of these areas made progress challenging.

The area known as Waikani was swept in a single day. The unit is a large, but it consists mostly of a plantation eucalyptus forest that was covered quickly. The operation treated two plants close to the highway that were both approximately four meters tall.

Aerial operations concentrated on both core and outlier infestations. Eight days of aerial operations with two reconnaissance and spray helicopters were conducted in July and August. September aerial operations were broken into a number of single aircraft recon operations that searched the outlier units requiring 18-month revisits. An unexpected infestation with two plants was located and treated less than 200 meters from the Haleakalā National Park boundary in Kipahulu. The location, intensively searched aerially and also visited by ground crew in the past, was reported by an East Maui hunter.



**PLANT DATA JULY 1 TO SEPTEMBER 30, 2008**

**Maui**

	<b>Plants Controlled</b>			<b>Acres</b>
	<b>Mature</b>	<b>Immature</b>	<b>Total</b>	<b>Inventoried</b>
<b>Priority Target Species</b>				
<i>Miconia calvescens</i>	210	22,057	22,267	7,324.78
<i>Cortaderia spp.</i>	556	2,573	3,129	12,067.31
<i>Pennisetum setaceum</i>	0	0	0	74.64
<i>Coccinia grandis</i>	166	46	212	450.11
<i>Arundo donax</i>	0	0	0	2.15
<i>Cryptostegia grandiflora</i>	1	0	1	1.22
<i>Macaranga tanarius</i>	0	4	4	15.17
<i>Maclura pomifera</i>	0	224	224	1.91
<i>Verbascum thapsus</i>	0	0	0	22.19
<b>Grand Totals:</b>	<b>933</b>	<b>24,676</b>	<b>25,609</b>	<b>19,937.56</b>

**Lānaʻi**

	<b>Plants Controlled</b>			<b>Acres</b>
	<b>Mature</b>	<b>Immature</b>	<b>Total</b>	<b>Inventoried</b>
<b>Priority Target Species</b>				
<i>Pennisetum setaceum</i>	220	292	512	3.79
<i>Coccinia grandis</i>	46	377	423	251.73
<i>Macaranga mappia</i>	3	0	3	13.67
<b>Grand Totals:</b>	<b>269</b>	<b>669</b>	<b>938</b>	<b>269.19</b>

**BANANA BUNCHY TOP**

Two activities this quarter stand out from our routine efforts to control BBTV in Maui County. First, was a major suppression effort at a heavily infested farm in Kula. Several thousand infected banana plants were removed from the Kula farm. The second activity was an island-wide survey of Lānaʻi. The Lānaʻi survey yielded very positive results - no BBTV was found.



In Maui County, bunchy top continues to be managed in Pukalani, Makawao, Kula, Kihei, Kahului, Lahaina, and on Molokaʻi. No BBTV has been found on Lānaʻi or Kahoʻolawe.

- This quarter MISC crews spent 168 hours visiting 124 properties on Maui. Most of these visits were spent following up on, or treating, known sites.
- A total of 21 sites on Maui were found to have bunchy top this quarter. Eleven of these sites were treated by the end of the quarter.
- On Lānaʻi, the crew spent 191 hours surveying for BBTV and visited 595 properties.

# Vertebrate Status

## COQUI FROGS

The “Coqui-free” nursery certification program is up and running! Of the 29 businesses that participated in the certification process, 26 met the standards for certification and are now considered “Coqui-free” businesses. MISC will continue to work with the three businesses that did not meet the standards to assist them in becoming “Coqui-free.” Businesses that met the standards received a packet of advertising materials and a congratulatory letter of acceptance. Advertising materials and activities associated with the program include: stickers, decals, a certificate of participation, a banner for display, radio PSAs, a program website ([www.coquifreemaui.org](http://www.coquifreemaui.org)), and informational materials about the program and coqui control.



Of the 14 known coqui population centers on Maui, seven are currently considered eradicated. No coqui calls have been heard for a year or more at these sites. Mop-up continues at four coqui population centers. These four locations have few to no coqui and we are hopeful that they will be on our eradicated list soon. Unfortunately, reintroduction continues to be a major hurdle at two of the remaining seven sites. As a result, it seems unlikely that eradication will be achieved at these sites unless reintroduction ceases. Māliko gulch is the last, and largest, infested area known on Maui.

Work in Māliko Gulch continues with increased surveys throughout the gulch and drench applications of citric acid. Survey efforts have revealed that pockets of coqui now exist from Kaluanui Road to Hāna Highway. Plans to control these pockets are underway and efforts should begin next quarter. Our first major effort was made to remove coqui from the top of the gulch. Drench applications were made from Kaluanui Road to the first major natural feature in the gulch, about a quarter mile downstream. Drench applications were also made at the bottom of the gulch near Hāna Highway, where a pocket of coqui was recently discovered. All known or reported “hotspots” in the residential portion of the infestation were also treated.



This quarter the number of new reports and the amount of citric acid used increased significantly from previous quarters (e.g. 42% increase in new reports and 68% increase in citric acid used). It appears that this spike in activity may be due to ideal weather conditions for detection of coqui frogs. Coqui are typically more vocal during warm (>70F), wet weather. After a particularly dry spring, trade showers returned to expected summer levels in July. Also, the temperature this quarter was typically in the high 70s making for ideal coqui calling conditions. Fortunately, many of the new reports were in areas where MISC is already working.

- This quarter MISC received 25 new frog-related reports and all have had appropriate follow-up. MISC received an average of 14.5 new reports per quarter for the first two quarters of the year.
- Crews made 125 separate visits to 66 frog-infested areas and/or suspect locations this quarter.
- MISC crews spent 389 hours at a variety of locations working on frog control.
- 17,956 lbs. of citric acid were used this quarter. MISC used an average of 5,718 lbs. of citric acid during each of the first two quarters of the year.

### **VEILED CHAMELEONS**

This quarter MISC crews focused chameleon efforts in Makawao on the areas where veiled chameleons are most likely to be found. By utilizing our cooperative relationship with area residents we hope to change our search schedule to a less frequent re-visit interval, fine-tune the focus of our searches, and encourage resident reporting. To help focus and streamline our efforts, crews recorded search time and vegetation density while in the field. These variables, in addition to site prioritization based on locations where animals have been recovered, will be integrated into the database that guides our efforts. A total of 175 veiled chameleons have been recovered during 4,479 search hours since the inception of this project in 2002. Thirty-one have been turned in by the public.

- This quarter 49 properties were searched over the course of nine evenings.
- No veiled chameleons were found during the 126 hours of effort. No veiled chameleons were turned in this quarter.

### **MITRED CONURES**

An estimated 13 conures remain at the Huelo Point location and 24 are believed to remain in a separate location to the west. Twelve conures were controlled this quarter through cooperative control efforts by DOFAW. To date, 143 birds have been removed from the area.

### **OTHER VERTEBRATES**

A poison arrow frog (*Dendrobates auratus*) was recovered from Wailuku in July and turned over to Bishop Museum. Rabbits also continue to be reported in Haiku. None have been recovered.

## **MoMISC Activities**

At its last quarterly meeting, the MoMISC committee voted to add albizia (*Falcataria moluccana*) as a new priority target. An estimated 10-15 acres are infested; with approximately 1,000 trees all 50-100 feet in height located in a remote gulch on private property. This quarter MoMISC focused on preparing the albizia site for upcoming work. Kamalani Pali and John Neizman (DOFAW) cut an access road into the site where we marked/sprayed nearly 900 trees for control. Initial control of this site will be a multi-agency project conducted by MoMISC partners. MoMISC also expanded surveys for long-thorn kiawe in west Moloka'i to determine its distribution along the west-end coastline. One long-thorn kiawe site was treated at a residence where it had been intentionally planted. MoMISC continued aerial surveys for miconia in the Pu'u Ali'i, Oloku'i, Kaulahuki and Mapulehu areas. A roadside survey of central and east Moloka'i was conducted for bo tree (*Ficus religiosa*). The committee wants to analyze the distribution and assess possible control strategies.