



Quarterly Report to the MISC Committee

FY 2007, Third Quarter

January 1 to March 31, 2007

Manager's Report

Allow me to engage you in a bit of history. In late 1999, MISC hired its first staff. The field crew consisted of one field supervisor and four field workers and focused exclusively on plants. The Hāna miconia operation was run by DOFAW with only enough resources to focus on the core infestation. An ISC presence on Moloka'i and Lāna'i were far off concepts. MISC's start-up budget was around \$600,000.

Fast forward - today, we have 22 field-focused staff, which includes two crews in Makawao, the Hāna crew and two full-time staff on Moloka'i (MoMISC). We make regular work trips to Lāna'i. MISC works on plants, vertebrates, plant diseases, and cooperates in early detection activities for West Nile Virus and avian influenza. We are working across the entire 35,000-



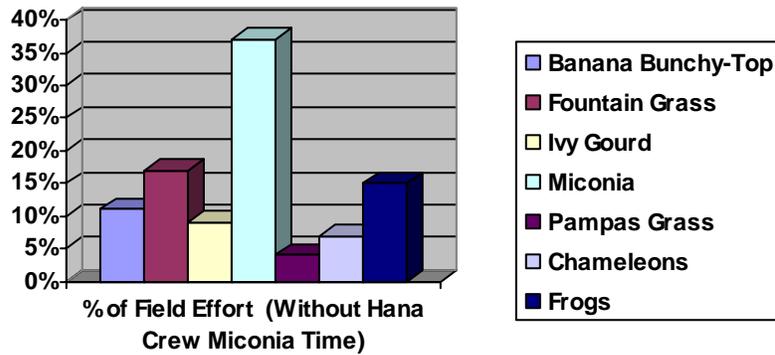
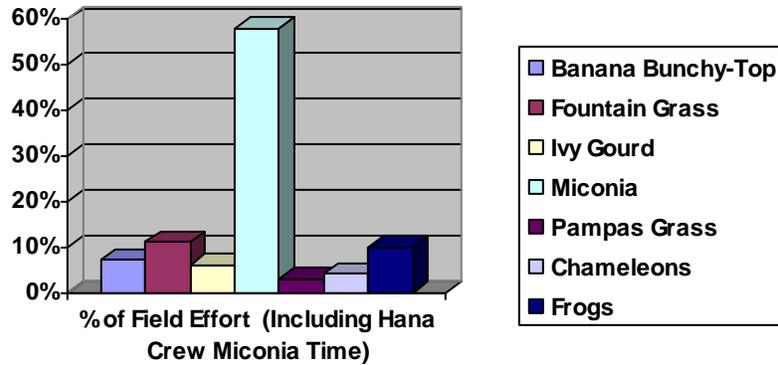
acre miconia footprint and both miconia and pampas grass control require extensive aerial operations. For the next fiscal year, we expect the MISC budget to break \$1.5 million.

Some of the apparent growth in funding results from a transfer of responsibility for managing the Hāna ground operation as opposed to an increase in available dollars; however, the statistics also reflect real growth and, more importantly, concrete accomplishments on the ground. What's not obvious from the numbers is that our funding sources or amounts have never been stable. The effort to secure adequate funds to keep the work going is non-stop. As one funding source dries up, another must be found to replace it. Would it be better to have the work of the ISCs simply folded into government agencies to ensure more constant funding?

At least for now, I don't think so. MISC has shown a remarkable ability to pool and leverage the resources of multiple partners. Our strong partner support comes from direct grants but also in many less visible ways – drafting funding proposals, providing letters of support, and offering guidance during the local and state funding process. Huge progress has been made statewide and locally in recognizing the importance of invasive species. MISC has played a key role in helping to elevate public awareness of invasive species issues. We maintain a level of flexibility that I suspect would be hard to duplicate within most government agencies. All of which means that the efforts to keep the dollars flowing in will continue into the foreseeable future. As we move through the current budget cycle, I want to take this opportunity to say “Mahalo” to each of you for the initial vision of the Maui Invasive Species Committee and for your ongoing mana'o and kōkua.

Quarterly Highlights

MISC FIELD TIME SUMMARY



ACTIVITY HIGHLIGHTS

- Jan 4: Teya attends Superferry meeting on O'ahu
- Jan 8: Teya attends CGAPS Steering Committee meeting on O'ahu
- Jan 11: Teya to the Big Island to assist with BIISC Interviews
- Jan 12: Teya attends Superferry meeting on Maui
- Jan 17: Joy attends Hāna Career Day
- Jan 29: Joy attends HISC PR/Outreach Working Group meeting on O'ahu
- Jan 30: Teya gives presentation to legislative committee on miconia economics
- Jan 31: Teya participates in miconia video filming on O'ahu
- Jan 31: Shannon Wianecki's last day as the Hō'ike Outreach Liaison

- Feb 5: David Bakke from the U.S. Forest Service visits
- Feb 7: Teya attends CGAPS meeting on O‘ahu
- Feb 9: MISC Meeting – Other Islands
- Feb 12: MoMISC Meeting
- Feb 12-14: Seabury Winterim student volunteer trip to Hāna
- Feb 13: Pi‘iholo Safety Inspection by RCUH, insurance agent & broker
- Feb 16: Rappelling refresher training for Hāna-based staff
- Feb 20-23: All staff trip to Lāna‘i for fountain grass survey & control
- Feb 23: Teya attends OHA grants workshop
- Feb 27: Department of Health presentation on West Nile Virus for MISC staff
- Feb 27: Field Worker Interviews

- Mar 1-2: Adam conducts rappelling training for OISC on O‘ahu
- Mar 2: Joy & Jeremy give miconia presentation at Hāna library
- Mar 5-7: Rappelling refresher training for Pi‘iholo-based staff
- Mar 9: Joy attends HISC PR/Outreach Working Group meeting on O‘ahu
- Mar 10: Ha‘ikū Community Association Fair
- Mar 19: Vertebrate crew member Chris Candito transfers to the plant crew
- Mar 21: Mike attends Wets Nile virus dead bird training on O‘ahu
- Mar 22: Teya & staff to Hāna budget hearings
- Mar 27: Teya to Kona for NPS Listening Session
- Mar 27: Lori attends budget hearings on Moloka‘i
- Mar 27-29: Stephanie, Carl & Chris Radford attend Pesticide Training
- Mar 27-29: Mike, Adam, Russ, Darrell & Chris C. attend chainsaw training
- Mar 30: Aaron Kogan’s last day at MISC



PR & Education News

MISC IN THE NEWS

Have you seen the latest Kia‘i Moku column in The Maui News? MISC began this monthly column last summer and it is proving to be one of our best public relations accomplishments. The monthly articles have covered an array of species. This quarter we highlighted the vertebrate crew’s work with coqui frogs in Māliko Gulch (Jan.), little fire ants (Feb.), and crewmember Darrell Aquino’s find of bingabing or *Macaranga mappa* in East Maui (March). The column runs on the second Sunday of every month. We have been very fortunate to have The Maui News donate the space. Mahalo Maui News!



The Mālama i ka 'Āina Award (presented in November 2006) wrapped up with a few additional articles about the award winner in the DLNR-DOFAW newsletter, Maui Nui Botanical Gardens newsletter, and a front page story in Hawai'i Landscape. Congratulations again to William Jacintho, MCC teacher and Beef and Blooms nursery owner.

We also had excellent coverage in The Maui News regarding MISC's need to raise funds for its miconia operations in Hāna. The headline article "Miconia fighters face funding cut" covered almost half the page!

REACHING OUT TO THE COMMUNITY



On March 2, MISC held a free public lecture for the East Maui community about how to identify miconia, what to do if they find it on their property, to give an update on the progress of MISC's operations, and to address any public concerns. Joylynn and Jeremy Gooding gave the presentation at the Hāna Public Library. The event was well advertised via newspaper and posters that were placed in Hāna town, at the entrance to Lower Nāhiku Road and in Ke'anae. Overall response from the attendees was good. When asked why they attended the lecture, most people stated they were there to become educated about the topic and one individual attended because she had concerns about our aerial operations.

ENVIRONMENTAL EDUCATION

This quarter, the Hō'ike o Haleakalā project saw a major change with Shannon Wianecki handing the torch off to Lissa Fox as Shannon looked forward to pursuing her writing career on a full-time basis. As part of Lissa's orientation, Shannon and Lissa visited three King Kekaulike high school classes with the Weed Warriors activity. A copy of the curriculum was mailed to Lāna'i and six people attended a follow-up Hō'ike workshop on Lāna'i. Joy and Lissa also did two class visits with an impressive group of seventh graders from Kamehameha School. Lissa met with Laurie Furumoto (USGS/HEAR) about updating the DOE Benchmarks listed in the curriculum to correspond with new DOE standards.

VOLUNTEERS

In February, MISC hosted a group of high school students from Seabury Hall during their Winterim session. The group of 12 students and two teachers spent four days in Hāna learning about and controlling miconia. The Seabury Winterim was a great success - two



Plant Updates

PAMPAS GRASS

During our 2006 aerial reconnaissance operations, a new target area on Kaua'ula was discovered as well as one lone individual along a Waihe'e area gulch. Both of these areas required new access permits which have been successfully secured. MISC field staff did Haleakalā Ranch survey work this winter and completed control on several plants that had been missed during previous sweeps . We've had positive residential landowner cooperation with our control efforts this quarter.

This spring we plan to construct a temporary camping platform that will be in close proximity to the core of the pampas population on East Maui. This will give crew members a dry staging area for camping.



IVY GOURD

Maui ivy gourd data clean-up continues for residential areas. In South Kihei, an infestation on a vacant lot off Lipoa Road was bulldozed for development resulting in the existing seed bank being spread to the four corners of the lot. We plan to set up a test plot focusing on seed viability and time duration to germination/flowering for a sample of ivy gourd fruit to assist in revisit scheduling.

On Lāna'i, field crew will do a first time suppression on ivy gourd sites adjacent to the golf course at Mānele Bay utilizing foliar spray and thin-line basal techniques. Golf course personnel have offered assistance and thus far have permitted crew use of golf carts. We are hopeful that the golf course staff will take a more active role in control work in the future.

FOUNTAIN GRASS

Control efforts at the Kahakuloa site continue to be a challenge. Scheduling of revisits is hampered by the fact that seed germination at the site follows no set pattern and when seedlings do occur they are hidden by other grasses. No plants were found at the Maui Lani and Waiehu sites this quarter. At Mākena Golf Course, field crew applied a pre-emergent control and have been closely monitoring the site.



On Lāna'i, we are finding significantly fewer flowering plants throughout all known locations. Control work was ramped up this quarter with the presence of the entire (almost) MISC staff on Lāna'i for a week. The Kō'ele Golf Course locations were visited as well as locations within the Kānepu'u management area.

RUBBER VINE

There has been no change with hold-out landowners on our four Maui sites. On Lānaʻi, the only known rubber vine location was controlled by the property owner.

PERIPHERAL MICONIA SWEEPS

Peripheral ground surveys for miconia continued this quarter as often as the weather would permit. No new stands of miconia were found and surveys of the makai portion of the Hāna Highway are nearing completion. Dedicated miconia gear was issued to the vertebrate crew this quarter to allow for more rapid response when plants are found in peripheral areas.

Gaining property access in the Huelo/Kailua area continues to be a challenge. We were fortunate to receive truck access on an EMI road through Mark Vaught of EMI. Quite a few of the area parcels are State of Hawaii/EMI controlled but have right-of-way issues dealing with other tenants.

HĀNA MICONIA

Crews completed the Kawela management unit that was begun in December and swept the entirety of the East Honomāʻele management unit - including cutting more clearly defined access trails and reevaluating unit boundaries. There was also work done in the vicinity of ʻUlaʻino and Upper and Lower Nāhiku.



Reports of miconia populations from landowners and partners were investigated. One of these reports eventually led to the treatment of a population above the Keʻanae Arboretum in a hau grove. The terrain in the area is difficult and is being evaluated for the most efficient and effective treatment method. The crew entered “Tom Backhoe’s” property in the vicinity of Helani Gardens in Hāna to obtain footage of the miconia team in action for a public service announcement under development by CGAPS.

Extensive aerial operations were completed during this quarter resulting in the current NPS aviation contract being nearly complete at the end of March. A total of 18 days were flown during the reporting period with two helicopters flying each day.

PLANT DATA JANUARY 1 TO MARCH 31, 2007

Lanai

	<i>Plants Controlled</i>			<i>Acres</i>		<i>Total</i>
	<i>Mature</i>	<i>Immature</i>	<i>Total</i>	<i>Inventoried</i>	<i>Treated</i>	<i>Person Hours</i>
Priority Target Species						
<i>Pennisetum setaceum</i>	208	1,015	1,223	245.54	48.35	343.6
Grand Totals:	208	1,015	1,223	245.54	48.35	343.6

PLANT DATA JANUARY 1 TO MARCH 31, 2007

Maui

	<i>Plants Controlled</i>			<i>Acres</i>		<i>Total</i>
	<i>Mature</i>	<i>Immature</i>	<i>Total</i>	<i>Inventoried</i>	<i>Treated</i>	<i>Person Hours</i>
Priority Target Species						
<i>Miconia calvescens</i>	122	12,663	12,785	18,067.42	0.00	2468.0
<i>Cortaderia</i>	24	68	92	346.61	0.01	137.3
<i>Pennisetum setaceum</i>	0	4	4	54.38	0.07	44.3
<i>Coccinia grandis</i>	392	920	1,312	381.89	0.01	218.0
<i>Cryptostegia grandiflora*</i>	0	0	0	5.30	0.00	0.1
Eradicable Species Project						
<i>Macaranga tanarius</i>	0	0	0	0.56	0.00	0.2
Grand Totals::	538	13,655	14,193	18,856.19	0.09	2,867.9

**Cryptostegia grandiflora*: Single plant controlled by owner. Zero MISC treatments, acreage is owner's property

BANANA BUNCHY TOP VIRUS

This quarter MISC expanded our BBTv survey and suppression efforts by searching more area in Kihei, bringing the total known BBTv locations in Kihei to 36. All MISC crewmembers were trained to identify the signs and symptoms of BBTv and annual comprehensive surveys of Pukalani and Makawao where completed. BBTv was also found and controlled in Kahului this quarter.



One banana replacement coupon was given to a Kihei resident this quarter and several residents received native plants from William Midgley's Pi'iholo nursery in exchange for their willingness to remove invasive species and/or infested plant material. A presentation for the MISC Committee by Joseph Manaute of New Caledonia highlighted efforts to suppress bunchy top in other island systems.

- This quarter MISC crews surveyed 1,103 properties on Maui for BBTv, encompassing 734 acres. This is an increase from last quarter partly due to the substantial amount of BBTv found in Kihei.
- A total of 8 sites in Pukalani, 11 in Makawao, 27 in Kihei and 1 in Kahului had infected banana plants; of which 7 remain to be treated. Forty-seven sites were found to have bunchy top this quarter.

Vertebrate Status

The vertebrate crew suffered a major loss this quarter as Chris Candito transferred to the plant crew. Chris was a valuable member of the team and we have no doubt that he will greatly benefit the plant crew as he diversifies his experience.

COQUI FROGS



The crew continues to observe reductions in coqui population densities and infested acreage. In the areas where we have been controlling coqui frogs, we have reduced infested acreage by 2/3 in two years! This includes a noticeable reduction in the residential area of Māliko Gulch, where our newly installed water meter is being put to good use and reducing the cost of control for area residents. We hope to begin work on the non-residential area of Māliko Gulch this summer – our last known, largest and most difficult infested area.

MISC crews continue to keep coqui-friendly habitat at bay at a Ha'ikū nursery, a junkyard, Māliko Gulch and Honopou Valley by working cooperatively with area residents. Burning of debris at the Honopou site was successfully concluded this quarter with responsibility for continuation of the burning permit now falling on the property owner. The burning of debris in the area greatly reduced coqui-friendly habitat and made the area much safer for night work. The frog crew treated plant material from the Big Island on two occasions in cooperation with a nursery owner to prevent the reestablishment of coqui frogs on his property.

- This quarter MISC received 32 frog related reports and all have had appropriate follow-up. This includes a report from Lāna'i that turned out to be *Bufo* toads.
- MISC crews made 139 separate visits to 71 frog-infested areas and/or suspect locations for a total of 373 hours of coqui fieldwork.
- 5,044 lbs. of citric acid were used this quarter.
- Twenty-eight hours of contributed time and nine hours of volunteer time were logged this quarter. Contributors typically assist with coqui frog control and include members of partner agencies while volunteers are typically members of the public.

VEILED CHAMELEONS

We continue to revise our approach to control of veiled chameleons as a result of our ongoing research project. This quarter we expanded our search area for four nights and focused on our “core” area for two nights. This seemed to be an effective search model and one we may continue to follow in the future as we better define our strategy and benchmarks.

- During January, 20 properties were searched over three nights. Twenty-eight properties were searched over three nights in February.
- Two juvenile males and one juvenile female were recovered during the January surveys. All three were found on “core” properties.

MITRED CONURES AND OTHER PARROT LIKE BIRDS

No control work occurred this quarter. Field observations continue to support previous counts of roughly 40 to 50 remaining birds. A separate flock of roughly 25 birds, to the west of the original flock, is being monitored. Control activities are planned for later this spring when the conures are more likely to remain near the cliffs as they begin their breeding season.

OTHER VERTEBRATES AND INVERTEBRATES

In January, MISC responded to a report of a flying lizard in Kihei. Crews visited the site on three different occasions at different times of day and surveyed from different vantage points to no avail. No further evidence of a flying lizard in the area has been presented. A red-eared slider was recovered from a Kula home in March. Two possible little fire ant (LFA) samples were submitted to HDOA for analysis this quarter. Fortunately, neither sample was LFA.

MoMISC Activities

During this quarter, MoMISC continued to control and/or monitor the following species: arundo, cat's claw, rubber vine, Australian tree fern, ginger, woodrose, gooseberry, New Zealand flax, false awa, long-thorn kiawe, tumbleweed, palm grass, and gold-dust day gecko. MoMISC found additional populations of gooseberry and false awa in Hālawā Valley. Permission to work on false awa is pending. Another population of arundo was found after a new landowner in Kaunakakai bulldozed a beachfront property that had been covered with kiawe for the past 20 years. MoMISC has obtained permission to remove the arundo and is currently formalizing a plan for control.

MoMISC staff attended several planning meetings during this quarter including a CGAPS meeting, Hunters Working Group meeting, Maui County budget hearing on Moloka'i, Earth Day Planning Committee meeting, and a Nature Conservancy weed strategy meeting. Lori and Kama joined the rest of the MISC staff for a week of fountain grass control on Lāna'i in February. The trip was a great experience for Kama who had never worked on fountain grass before and Auntie Lori always enjoys cooking with the boys!



Mapuana Hanapi joined the MoMISC staff working part-time in the office to help with outreach and “stuff” that no one else wants to do!” Upcoming MoMISC events include micronia aerial surveys and hosting the Youth Conservation Corps. MoMISC’s next meeting is scheduled for May 21, 2007 at 9:30am at the TNC office on Moloka'i.