

Big Island Invasive Species Committee (BIISC) Highlights

BIISC surveyed 4,006 acres for key target species, including incidental and early detection species. A total of 9,218 individual plants were treated, and a total of 8,156 worker hours were used. An additional 291 miles of road were surveyed by the early detection crew looking for and mapping 198 potentially incipient invasive species.

Miconia calvescens

BIISC continues to focus containment strategy along a 40-mile containment buffer between Malama Ki in lower Puna to Ninole in the Hamakua districts. Surveys focused in the Hilo, Hamakua and Puna districts.

- Completed survey and control efforts between the 1,600' to 1,800' elevation at various sites in Hamakua, including Lapahoe, Akaka Falls, and the area above the core population in Onomea.
- Completed Phase 1 *Miconia* control work in the Wao Kele O Puna Forest Reserve in partnership with the Office of Hawaiian Affairs and DLNR. Crews surveyed a total of 1,454 acres controlling a total of 609 *Miconia* plants. Most of BIISC efforts for *Miconia* in FY09 was spent on this specially funded project.
- Expanded and completed additional control blocks in the Maku'u Forest Reserve to expand the control buffer. DHHL assisted BIISC in permitting us to utilize their lands as a landing zone to load and off load the crew. Crew controlled a total of 1,572 plants in this area of which 140 were considered mature plants, ground surveying a total of 397 acres.
- Completed aerial surveys of Maku'u Forest Reserve surveying a total of 646 acres.
- Completed control efforts of an outlier populations in South Hilo and Lapahoe, controlling a total of 960 plants of which 139 were considered mature plants, surveying a total area of 206 acres.



Plume Poppy (*Macleaya cordata* formally *Bocconia frutescens*)

Survey and control activities focused in the Wood Valley area of Kau, and Honomalino area in S. Kona.

- Completed surveys in Wood Valley, surveying a total of 769 acres, and controlling a total of 134 individual plants which were all adults.
- Honomalino has proven to be extremely difficult to get a handle on, particularly with pulling information from the community on potential outlier populations in order to create a containment buffer zone. BIISC ceased ground operations in late FY08 when it was determined that the control effort had considerably exceeded our allowable budget when more and more plants were found. It became obvious once crews were on the ground, that the population was much larger than original estimated, particularly from aerial surveys completed in early FY08. The strategy has since re-focused on developing a containment plan with assistance from the community hoping to define a clear buffer area for containment. Unfortunately, after multiple attempts to enlist community assistance this never came to fruition. After advertising in local media, and attempting to hold a community meeting, which no one attended, the decision was made to pull back and reassess our efforts. BIISC will now control areas closest to the Honomalino Forest Reserve to protect this high value resource.

Fountain Grass (*Pennisetum setaceum*)

BIISC scaled back fountain grass considerably during this reporting period, with higher priority projects taking precedence. However, this remains a joint effort with key partners including Hawaii Volcanoes National Park and the Natural Area Reserve staff of the Division of Forestry and Wildlife.

- The crew pulled two (2) plants, both mature surveying less than an acre. This was an incidental find of a previously treated area.

Pampas Grass (*Cortaderia jubata*)

BIISC focus for Pampas grass is full eradication island wide.

- Completed control of the core population in Waimea, controlling a total of 35 adult plants.
- Completed road surveys within the buffer region of Waimea covering a total of 114 acres. No additional plants were found.
- Recommendation for FY10 is to monitor any potential new plants within the Waimea core.
- Surveys in the Volcano area yielded three (3) adult plants on private parcels, which the crew successfully controlled with owner assistance.



Wax Myrtle (*Morella cerifera*)

BIISC began an aggressive control effort of wax myrtle, a close relative to the faya tree which has invaded forests in Hawaii's Volcano National Park and surrounding areas. BIISC continues to expand on this project with additional funding assistance from the U.S. Fish and Wildlife Service. These funds were used to control plants found on private parcels adjacent to the core population located on State lands (unencumbered). BIISC strategy remains full eradication for the entire island.

- Crews controlled a total of 4,023 plants of which 1316 were considered mature, and 2702 considered immature plants. Ground surveys covered a total of 368 acres on both State and private parcels. The primary work took place in and around the Mohouli and Komohana area above downtown Hilo. Two smaller populations were located just off Steinback Hwy above the Hilo Zoo and below N. Kulani Road.
- BIISC anticipates expanding survey and control efforts onto additional private parcels with an expected addition of funds from the U.S. Fish and Wildlife Service in FY10.

Other plant species

Mexican Sunflower (*Tithonia diversifolia*)

- BIISC controlled a total of 133 plants in three different districts (Ka'u, Hamakua and Puna) of the Big Island, covering a total of 2 acres.

Devils Backbone (*Bryophyllum daigremontianum*)

- Continued roadside survey and control efforts of this species in the district of Ka'u. Crews controlled a total of 134 plants covering a combined total of 1 acre.

Cuban Oregano (*Plectranthus ambonicus*)

- Continued roadside survey and control efforts of this species in the district of Ka'u. Crews controlled a total of 723 plants covering a combined total of 1 acre.

Early Detection

- The BIISC early detection (ED) team completed roadside surveys of major, secondary and tertiary roads within the Kau, S. Kona and Upper Puna districts, surveying a total of 291 miles of roadside. Current roadside surveys are taking place in N. Kona and should be completed by December 2009.
- The ED team has made 92 collections, to date, of invasive plant specimens in Ka'u, South Kona, North Kona, and Upper Puna, submitting a report to Bishop Museum's Occasional Papers of 7 new island records and 1 new naturalized record for the state of Hawai'i
 - Next year's report is anticipated to discuss more than 30 new island records.

- BIISC met with partners to assess and update the early detection species list. The early detection invasive species list for the Big Island has increased to a total of 192 species, up from 52 species 2-yrs ago (1997) when the BIISC early detection program first began. The ED team continues to work with the Weed Risk Assessment (WRA) staff in Honolulu to assess a small number of unranked species on the current species list.
- Identified 7 rapid-response species for immediate control efforts.
- Conducted Little Fire Ant (LFA) surveys and outreach at 12 Kona nurseries.
- Assisted USDA Entomologists with mapping population extent of new thrips species affecting the native groundcover, Nai‘o (*Myoporum sandwicense*).
 - Surveyed resorts, subdivisions, condominium communities, and nurseries in North Kona, South Kohala, and North Kohala.

Coqui

BIISC assist the State Coqui Coordinator by providing office space, equipment (including computers) and administrative assistance to its project and personnel. In addition BIISC assists with all hotline calls and provides citric acid to community members through its citric acid matching program (CAMP). BIISC efforts also include:

- Providing two (2) cell phones to communities in the Volcano and upper Puna areas to respond to hotline calls directly. The community hotline calls total 96 to which community teams responded and treated 75 areas.
- Received a total of 1,275 hotline calls between BIISC and USFWS, all of which were implemented into the coqui database.
- Provided a total of 448 50-lb. bags of citric acid to community members as part of the citric acid matching program (CAMP).
- BIISC provided technical assistance to 9 community groups wanting training on application and spraying techniques. These were in addition to training programs given by Hawaii County.
- BIISC assisted the Volcano community with putting in coqui street signs the group purchased with a grant from the Hawaii Island Economic Development Board.
- BIISC crews assisted DOFAW/Natural Area Reserves System(NARS) with aerial control activities at the Manuka Natural Area Reserve in Kau.

The State Coqui Coordinator is responsible for:

- Maintaining the interagency databases and develops maps for the coqui hotline calls, road surveys and control efforts.
- Maps and reports are used to track progress and strategize State efforts.
- The control operations are contracted to the USDA-Wildlife Services branch.
- Targets high-value natural areas and state land near residential areas.

Coqui Community Outreach

- Coordinated the establishment of a coqui barrier fence around the Kulani Prison parking lot to prevent the spread of frogs into the prison area.
- Conducted nursery support in Waimea.
- Supplied community support for organizations in Honokaa and Volcanoes area.
- Sprayed buffer zones around state park parking lots to prevent spreading the frogs on vehicles

Patrick Chee at Patrick.C.Chee@hawaii.gov