

Title: Detection and Control of Invasive Species on the Island of Hawai'i
Organization: Big Island Invasive Species Committee
Award: \$205,000



In FY 2012, BIISC continued working on goals outlined by the HISC Established Pest Working Group Strategic Plan. Priority was given to island-wide early detection, rapid response, and control of various plants and vertebrate targets.

BIISC's HISC award leveraged funding from the US Forest Service, US Fish and Wildlife Service, Malama O Puna, and Wao Kele O Puna totaling an additional \$410,920. Priority work included ongoing miconia control in Wao Kele O Puna, targeted coqui frog control, early detection surveys, and monitoring and control of priority species.

Achievements in FY12

Number of species detected and evaluated for feasibility of eradication:

Early detection of incipient invasive species included surveys of: roadsides, private property, nurseries, resorts and botanical gardens.

- 28 plant pest species found on roadside surveys were evaluated for feasibility of control.
- 5 species chosen to further evaluate with delimiting surveys
- 450 miles of roads surveyed for incipient weeds



Clearing Miconia calvenscens in Honoka'a

Number and area of priority invasive species eradicated and/or controlled:

Control and eradication efforts centered on 6 priority plant species (*Buddleja madagascariensis*, *Cortadera jubata*, *Cryptostegia madagascariensis*, *Miconia calvenscens*, *Morella cifera*, *Pereskia aculeate*), and three vertebrate species (*Chincilla lanigera*, *Oryctolagus cuniculus* and *Eleutherdoactylus coqui*).

- Ongoing survey and control of Miconia focused in the forest of Wao Kele Puna and Waipio Valley. BIISC hopes to "contain" the spread of miconia to the North districts of the Big Island. During this reporting period over 1,746 acres were surveyed by air and ground. 19 mature and 40 immature plants were controlled.
- Survey, control and monitoring of other plant priority species covered over 2,135 acres and resulted in the control of 2,284 plants.
- Vertebrate crew surveyed over 4, 071 acres for chinchilla and feral rabbit and treated over 45 acres for coqui frog.

Prioritization processes identified and in place:

Each year, BIISC conducts annual prioritization meetings with the committee as a whole. Target activities are reviewed and new species are evaluated for feasibility of control. There are many factors that help in the prioritization of BIISC priority targets including: proximity to high value native forests, acres of infestation, feasibility and cost of control, the [Hawai'i-Pacific Weed Risk Assessment](#) (HP-WRA) ranking, and number of property owners.

Overall effort expended:

Table 1 reflects overall effort expended on all target species.

Number and names of species, habitats, ecosystems, agricultural, and managed areas protected because of control efforts:

- The Island of Hawaii has extraordinary natural resources, from mauka to makai, with over 70 threatened or endangered plants, 28 threatened and endangered animal species, and thriving agricultural and floricultural industries. Invasive species pose one of the greatest threats to the long-term viability of native ecosystems and agriculture. During this reporting period BIISC's island wide early detection surveys covered over 450 miles of road through all habitats, ecosystems, agricultural and managed protected areas for incipient pest species.
- BIISC also works closely with and supports partner agencies to fill gaps of invasive species control work in their managed areas such as the ongoing miconia control efforts in Wao Kele O Puna Forest.

Other Activities in FY12:

Capacity development: Three intermittent workers were hired with support from the USFWS to assist with education, outreach, and water quality testing. Overall staff capacity was enhanced by participating in the following training events: CPR & First Aid classes and certification, Basic Aviation Safety Training, IACUC Training and Certification, and All-Terrain Vehicle training.

Partner collaboration: BIISC continued to work closely during FY2012 with the UH-CTAHR, DLNR-DOFAW, The Nature Conservancy, Hawai'i Department of Agriculture, US Department of Agriculture, and US Fish and Wildlife Service.

Contact Information

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Table 1 – BIISC Target Species Activity FY2012

Species Name	Acres Surveyed	Mature Controlled	Immature Controlled	BIISC Work Hours
<i>Buddleja madagascariensis</i>	12	485	356	480
<i>Chinchilla lanigera</i>	2,403	0	0	107
<i>Cortaderia jubata</i>	.03	7	0	32
<i>Cryptostegia madagascariensis</i>	53	161	358	367
<i>Eleutherodactylus coqui</i>	46	2	0	75
<i>Falcateria moluccana</i>	2,702	15	0	41
<i>Fulica alai</i> *	13	0	0	75
<i>Herpestes auropunctatus</i>	6	0	0	18
<i>Miconia calvescens</i>	1,746	19	40	190
<i>Morella cerifera</i>	297	39	106	244
<i>Oryctolagus cuniculus</i>	1,668	0	0	173
<i>Pennisetum setaceum</i>	.03	58	1	17
<i>Pereskia aculeata</i>	1	30	25	64
<i>Rauvolfia vomitoria</i>	214	585	132	180
<i>Rhizophora mangle</i>	11	1	525	27
<i>Rosa laevigata</i>	.2	11	23	39
<i>Rubus ellipticus</i>	7	0	230	20
<i>Ulex europaeus</i>	325	5,884	18,610	559
<i>Verbascum Thapsus</i>	1	0	36	18
Total	9,505	7,297	20,442	2,726