Big Island Invasive Species Committee (BIISC) Highlights

During the FY2010 reporting period, BIISC focused a substantial portion of its efforts on response and control of established pests; focusing on red mangrove (*Rhizophora mangle*), Poison Devil's Pepper (*Rauvolfia vomitoria*), Miconia (*Miconia calvescens*) and Rubber vine (*Cryptostegia madagascariensis*). During this reporting period BIISC received $90,000 from HISC and leveraged approximately $250,000 in additional funds. An additional $157,000 was received from the American Recovery and Reinvestment Act (ARRA), however a funding deficit resulted in a significant loss of staff during this period. Despite this setback BIISC made significant progress towards completion of an island wide early detection survey, control and containment of several established pests and eradication of a number of rapid response targets.

HISC Response and Control: Measures of Effectiveness

Number of species detected and evaluated for feasibility of eradication

The BIISC early detection team surveyed an estimated 650 miles of road in the districts of South Kona, South Kohala, North Kohala, Hamakua and North Hilo. During this reporting period BIISC collected and identified 2 new state records, 3 new records of naturalization, and 7 new island records as determined by the Bishop Museum Herbarium, with 12 new records pending determination. In addition the early detection team surveyed approximately 30 miles of road and trails within the Bond Historic District in coordination with the New Moon Society in North Kohala, resulting in 5 new records.

Implementation of the priority response and control actions of the Aquatic Invasive Species, West Nile virus, coqui frog and red imported fire ant plans.

BIISC is currently hosting the county wide DOFAW funded coqui coordinator, and our field crew have been assigned to him periodically over the summer (warm) months in 2010. During this funding period BIISC crew supported the coqui coordinator for a total of 9 nights. In addition BIISC has partnered with DOFAW to assess the impact of invasive species on the Endangered Hawaiian Coot population on Lokoaka Fish Pond, and made the determination that a suite of control targets would be necessary to address the population decline: including cats, mongoose, rats, algae, grass carp, tilapia and numerous invasive plants. Further actions beyond this scoping phase are dependent on external funding sources.

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

BIISC surveyed for and controlled 14 different plant species, controlling 23,717 individuals over a total survey area of 2,739 acres (* signifies rapid response targets below):

Scientific name	Common name	Number controlled	Area Treated (acres)
Rhizophora mangle	Red Mangrove	10,922	7
Rauvolfia vomitoria	Poison Devils Pepper	8931	1246
Psidium cattleianum	Strawberry Guava	1520	3
Miconia calvescens	Miconia	1099	1227
Morella cerifera	Wax Myrtle	550	64
Clidemia hirta	Costers Curse	414	3
*Cryptostegia madagascariensis**	Rubber Vine	181	85
*Rosa laevigata**	Cherokee Rose	40	8
*Jasminum polyanthum**	Pink Jasmine	32	1
*Paulownia tomentosa**	Empress Tree	10	2
Bocconia frutescens	Plume Poppy	8	69
*Buddleja madagascariensis**	Butterfly Bush	8	2
*Parkinsonia aculeata**	Jerusalem Thorn	2	4
Cortaderia jubata	Pampas Grass	0	18

In addition BIISC, in partnership with Kohala Watershed Partnership – have conducted helicopter delimitation surveys and high resolution fixed wing remote sensing surveys to map the extent of occurrence of *Rauvolfia vomitoria* from the air. This information is critical for developing an action plan to contain this species over the next few years.

Prioritization processes identified and in place.
Due to the size of the island and number of roadways, BIISC has still not been able to complete even a single island-wide early detection survey. However our goal is to finish by 2011 so that we can make progress towards a comprehensive rapid response strategy. BIISC hosted a day-long meeting to discuss priority setting for targets, but partners could not agree on a methodology for an incomplete survey. In the meantime, using an ad-hoc method we have 10 possible targets for eradication, with a formalized process pending the development of a State-wide rapid response target protocol.

Number and names of species, habitats, ecosystems, agriculture and managed areas protected because of control efforts.
During this funding period significant progress was made to eradicate Miconia from the Wao Kele O Puna Forest Reserve, a new protected area which currently is in the planning stages. In addition, although eradication of red mangroves are currently on hold pending a lawsuit – work to date has greatly improved native coastal habitats and fishponds in South Hilo and Puna districts. Ongoing containment of Poison Devil's Pepper not only is restoring a private forest refuge but is also making invaded agricultural lands available for cultivation in North Kohala. The ongoing containment of this invasive tree will ensure that several regional endemic plants do not become extinct; including *Gardenia remyi, Clermontia drepanomorpha* and *Pritchardia lanigera.* Finally our hope is that the scoping exercise for Hawaiian Coot will result in progress towards recovery goals for the species in 2011, and prevent local extinctions which seem imminent due to juvenile survivorship problems associated with a suite of invasives.