CISMA
Everglades Cooperative Invasive Species Management Area

Newsletter

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ECISMA—Targets Invasive Plant Species at Fairchild

Coral Gables, Florida – Resource managers from the Everglades Cooperative Invasive Species Management Area (ECISMA) converged on Fairchild Tropical Botanic Garden last year in an effort to control the spread of three non-native species on their property.

Though each species has long been a part of garden's permanent collection, their spread has now made removal necessary. ECISMA partnered with Fairchild staff and helped eliminate these species from roughly 37 acres of lowland property in the garden.

These non-native plant species could possibly become widespread and diminish and degrade South Florida's ecosystems.

Armed with chain saws, hand tools and herbicides, crews targeted to remove all specimens that have infiltrated coastal areas in the garden. Cooperating crews from Miami-Dade County also removed *L. racemosa* from nearby county-owned lands.

Targeted species included:

Lumnitzera racemosa – an invasive tree native to Asia and Australia that invades mangroves.

Jacquinia aurantiaca – an invasive evergreen shrub native to Latin America.

Phoenix reclinata – an invasive palm native to Africa.

ECISMA aims to better coordinate the activities of partner agencies and help facilitate a rapid response against new non-native introductions, which can pose a serious threat to the health and integrity of south Florida's natural environments through direct competition with native plants and wildlife. ECISMA partners actively work to help stem the proliferation of numerous invasive plant and animal species.

Lumnitzera racemosa

ECISMA workday at Fairchild Tropical Botanic Garden

Mile-a-Minute weed detected in Miami

Miami-Dade County, Florida - *Mikania micrantha* (known by the common names of mile-a-minute, Chinese creeper and bittervine) has been observed to grow almost a half a meter per week and is listed on both the Federal and Florida state noxious weed lists. Native to Central and South America, this rapidly growing climbing vine can smother and overwhelm other small plants and even large trees. It was recently detected in the Redlands area of Miami-Dade County.

This plant had not previously been reported to be established in the continental United States. Survey and eradication efforts are underway. If you think you have seen this plant, call 888-397-1517

Mikonia micrantha

Screening of Brazilian Peppertree Tortricid Moth Completed

Photo of the caterpillar stage of the tortricid moth.

Photo credit - Hawaii Dept. of Agriculture

By James P. Cuda, University of Florida , Gainesville

University of Florida researchers have completed laboratory host range testing and impact studies on the defoliating tortricid moth *Episimus unguiculus*. One of the most widespread insects attacking Brazilian peppertree in South America, this insect was released in Hawaii in the 1950s under its previous name *E. utilis* after host range testing with local economic and ornamental plants. Although it established in Hawaii where is widely distributed on Brazilian peppertree, there is evidence that its impact was minimized by generalist parasitoids and predators released in the 1970s to control various agricultural pests.

The caterpillar (or larval stage) of *E. unguiculus* attacks the foliage of Brazilian peppertree. Early instars are tan to light green in color but as they reach maturity, the larvae turn bright red before pupating. The average life span for the adult moths is 8 to 9 days, and development from egg to adult stage occurs in about 42 days.

Field observations in Hawaii and results of host range testing showed that when given a choice of alternative plants, it will attack only Brazilian peppertree. Laboratory studies also showed that high levels of defoliation by *E. unguiculus* will reduce the growth and biomass of potted Brazilian peppertree plants, and that plants were not able to recover from the effects of the herbivory after 2 months. This insect appears to be well adapted to all Brazilian peppertree genotypes found in Florida.

ECISMA Summit held at the Loxhatchee NWR

By Tony Pernas , National Park Service, Palmetto Bay

About ECISMA

ECISMA was created to formalize cooperation among land management agencies to improve the effectiveness of exotic species control by sharing information, innovation and technology across borders through a memorandum of understanding with the ultimate goal of helping to ensure the success of the Comprehensive Everglades Restoration Plan.

The sixth annual Everglades Invasive Species Summit was hosted by Everglades CISMA and held at A.R.M. Loxahatchee National Wildlife Refuge on July 7-8, 2009. The bulk of the two-day Summit was composed of exotic species control updates given by representatives from all ECISMA organizations and four-break out sessions were held to address some of the priority issues confronting ECISMA lands. Other presentations included aerial spot spraying, exotic marine organisms, monitoring exotic treatment crews by satellite and the effects of sea level rise on native and exotic species.

To download the Agenda and view the interesting data and slide shows that were presented at the 2009 Summit, go to **everglades cisma.org.** Some of the highlights of the meeting follows.

In the Melaleuca Management Plan of 1990, it was estimated it would cost $4.5 million to get melaleuca under maintenance control. To date government agencies have spent $60 million.

Everglades National Park reported they had their first success with catching a python at large using a drift net and that python necropsies have revealed very high mercury levels.

Florida Fish & Wildlife Conservation Commission (FWC) reported that purple swamp hens will be captured and radio collared to help determine distribution and hunting efforts.

There are 29 species of exotic marine organisms documented in Florida's coastal waters and the lionfish is the first known case of a non-native marine fish becoming established in the Western Atlantic.

Biocontrol insects that are, or could be, used operationally by ECISMA collaborators include those for hydrilla, melaleuca, Brazilian pepper, tropical soda apple, lygodium, hygrophila and Mexican bromeliad weevils.

Climate change associated sea level rise is expected to change the terrestrial habitats of South Florida over the course of the next 100 years. There is a great need to protect native plant communities so that they are more resilient and able to migrate/move inland over time.

Action tasks identified from the Summit: include developing goals and objectives for subcommittees, establish timelines for action items, plan for python management efforts, develop an EDRR list for plant species, develop a control animal list, and develop SOP's for herbicide use by land managers to use along with contractors.

New moth, *Neomusotima conspurcatalis*, colonizes and impacts *Lygodium microphyllum*

By Robert Pemberton and Anthony Boughton
USDA-ARS - Ft. Lauderdale

Biological control research to discover and introduce natural enemies of *Lygodium micro-*

phyllum has been underway for more than a decade with the essential support of the Florida Fish & Wildlife Commission and the South Florida Water Management District. Now a small brown moth with leaf feeding caterpillars, native to Australia and Southeast Asia, has been successfully colonized in Florida for the control of *Lygodium microphyllum*.

First released in Jonathan Dickinson State Park I (JDSP) in Martin County in southeastern Florida during January, 2008, this moth established populations and caused considerable defoliation of the weed, during its first year. A total of 31,091 insects were released.

Ten months later populations estimated at 1.6 to 8.2 million larvae per site had defoliated over 14,000 square meters of *L. microphyllum.* Cold weather in January 2009, reduced both the moth and the weed. The moth populations rebounded at some sites and were reduced or absent at other sites during the summer 09.

Editors note: It appears the moths also survived the January 2010 cold weather at JDSP.

Photo showing moth damage to Lygodium at JDSP (brown areas)

Miami-Dade County's South Dade Wetlands (SDW) Project

By Jane Griffin Dozier
Miami-Dade County Park & Recreation

Miami-Dade County's South Dade Wetlands Project (SDW) consists of approximately 55,000 acres of Everglades wetlands, strategically located in the watersheds of Florida Bay and Biscayne Bay, Card Sound and Barnes Sound. The project area lies adjacent to the state-owned and managed Southern Glades Wildlife and Environmental Area. Combined, SDW and Southern Glades connect Everglades National Park to Biscayne National Park. These lands are still being acquired from willing sellers by Miami-Dade's Environmentally Endangered Lands Program (EEL) and the South Florida Water Management District (SFWMD). To date, some 18,204 acres have been acquired.

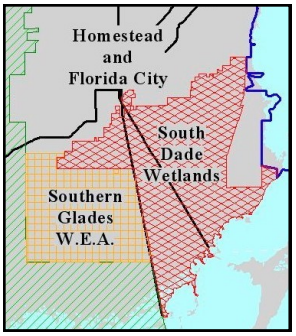
EEL and SFWMD have been coordinating management activities since acquisition of these lands began in the 1990's and management priorities that emphasize exotic species control were set soon afterward.

The SDW project supports a diverse wildlife population. Here, one may witness a spectacular array of wading birds and raptors. Listed species using the area include American crocodile, Eastern indigo snake, white-crowned pigeon, wood stork, roseate spoonbill, and reddish egret. Vegetation in the SDW is composed of both freshwater and coastal wetlands, ranging from prairie with tree islands to mangrove marsh.

Initial exotic plant control efforts in SDW and Southern Glades focused on melaleuca. Compared to elsewhere in South Florida, melaleuca was a relatively small problem in the SDW. EEL targeted this species to keep it that way, using crews from Miami-Dade Park & Recreation Department's Natural Areas Management (NAM). Meanwhile, the SFWMD targeted Australian pine, especially in the coastal mangrove system. Initial efforts were successful so attention from both agencies turned to the insidious shoebutton ardisia. Control crews continue to labor on this species, which crept in from higher ground to transitional wetlands and tree islands. It often invades disturbed wet areas, such as old farm fields, where it mingles with Brazilian pepper.

Old World climbing fern arrived recently, and treatment of known populations has begun. Treatment has proved expensive and internal trust funds for both agencies have been supplemented with grants.

Exotic animals, such as Burmese pythons, are also invading. Recently, biologists from EEL and NAM have been assisting ECISMA partners from the National Park Service and Florida Fish & Wildlife Conservation Commission on rapid response trapping efforts, targeting Nile monitor and tegu lizards. These lizards have been seen on the northern fringe of the SDW, in predominantly agricultural areas. From the beginning, the South Dade Wetlands Project has involved, and relied upon, teamwork and interagency cooperation. So, while acquisition of these important lands continues for years to come, management efforts are well underway.



Map showing the South Dade Wetlands Area

2010 African Python Hunt

In mid-January 2010, the Exotic Animal Strike Team of the Everglades Cooperative Invasive Species Management Area (ECISMA) conducted an Early Detection Rapid Response effort by making organized surveys in the Bird Drive Basin Recharge Area (Miami-Dade County) in order to find and capture Northern African Pythons, ***Python sebae***. These surveys assisted the Florida Fish & Wildlife Conservation Commission to assess the status of the introduced population in an area where Northern African Pythons have been sighted and collected on several occasions, including both large adults and juveniles.

Upper left photo - head of a African python, lower left photo - Bobby Hill, Tony Pernas, and Larry Perez with a 14' 138 lbs African python

2010 African Python Hunt Results

5 African pythons collected:

- **3 females, 2 males**
- **Largest female, 12'10"**
- **Largest male, 14'**
- **1 male collected north of US 41, outside of Bird Drive Basin, first record**
- **2 African pythons seen, unable to collect**

1 female Burmese python, gravid with developing eggs collected inside Bird Drive Basin, first record

1 Red-tailed 4' Boa collected

>70 participated in the hunt

Nile Monitor Lizards in Homestead

By Dennis J. Giardina
FWC –Everglades Region Biologist, Naples

In the late spring of 2008, just before the Everglades Invasive Species Summit, Toby Hairston, a USDA Wildlife Services Biologist, shot and killed a large Nile Monitor Lizard on the Homestead Air Reserve Base. Several other Nile monitor lizards had been reported and photographed on the base and a couple of other reports were made about large lizards in the agricultural areas surrounding it.

Tony Pernas and I decided that there was enough evidence to warrant a response and so we decided to go out and talk to the mostly Hispanic people who worked in the agricultural fields and tree nurseries in the area, figuring if there were big lizards around, they would know about them. Tony developed a Nile monitor flier in Spanish and on the morning of August 14th, Dallas Hazelton, Tony and I went out to talk to people and survey for large lizards. We made our way around the base, talking to people and handing out fliers. As we suspected, people were seeing them.

When we decided to shift from outreach to surveying, our expectations were very low. However, within a half an hour, we actually came across several monitor lizards and were able to collect one of the largest Nile monitor lizards ever recorded in Florida (6'7" and over 30 lbs). We realized we had a problem and went into rapid response mode. Within a couple of months we racked up a number of sightings and reports. Toby shot and killed several additional Nile monitor lizards and we were able to trap a couple more, both inside and outside of the air base. We determined that Nile monitor lizards were not only present but reproducing in the area and they had apparently spread far beyond the boundary of Homestead Air Reserve Base.

One day as I was surveying, I struck up a conversation with a young Hispanic man and he told me that his uncle in Florida City recently told him about the big lizards around his farm. He gave me directions and the next day I went to Florida City and began to survey around the agricultural fields just north of the Federal Penitentiary. It was late in the afternoon when I rounded a corner and a large lizard (three to four feet) ran into the road in front of me. It ran ahead of me and then darted into a bottle brush plantation. I jumped out of my truck and spent an hour trying to find it, but no luck. I didn't see it well enough to know for sure if it was a Nile monitor lizard but I knew it wasn't an iguana (the only other exotic lizard that grows that large).

The next day, Tony drove over to the area and he saw a two to three foot long lizard run across the road way ahead of him. He said that it kind of looked like a tegu lizard. We set a couple of our monitor lizard traps in the area, but after a month or so with no results, we pulled them. We then got busy with other projects and didn't get a chance to return to Florida City to resume our early detection surveys until right after the 2009 Everglades Invasive Species Summit. *To be continued.*

Photo of Dennis Giardina and Tony Pernas with a large Nile Monitor lizard in Homestead, Florida

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ECISMA Website:

Evergladescisma.org

New Burmese Python Reporting Web Page from FWC

The Florida Fish & Wildlife Commission (FWC) has established a new webpage so sited Burmese pythons can be rapidly reported. Burmese pythons have become established in South Florida and are being targeted for control and/or eradication. Although there are other large constrictor snakes that have been found in Florida's natural areas, Burmese pythons are the most likely ones that will be sited in natural areas.

If you think you may have sighted a Burmese python, please go to the following FWC website:

http://myfwc.com/WILDLIFEHABITATS/Nonnative_BurmesePython_Reporting.asp

Early Detection/Rapid Response - The Key to Prevention of New Invasive Species

ECISMA is nearing the completion of an Early Detection/Rapid Response Plan to provide a conceptual design, framework, and set of strategies to minimize the establishment and spread of new invasive exotic species within the management area through a coordinated framework of partners and processes. The plan provides many pre-determined management responses, and establishes a decision-making infrastructure that will facilitate rapid resolution of remaining issues. The plan contains a number of objectives and related tasks, along with a rapid response action planning protocol. The rapid response action protocol is being finalized after consideration of several rapid response scenarios for different invasive species (e.g., northern African python, Tegu lizard, or Lumnitzera rapid response efforts). Comments received on the draft plan will be incorporated into the final plan and submitted to the ECISMA Steering Committee for final approval.

Don't Let it Loose!

The most effective and least costly defense against invasive species is prevention and early detection. Local Florida residents are the single most important players in this effort. A highway interagency bill board campaign has begun with space donated by the Florida Outdoor Advertisers Association in South Florida advising residents not to release their unwanted pets into the wild.

Please visit **DontLetItLoose.org** for more information.

7th Annual Everglades Invasive Species Summit, 2010

The ECISMA Everglades Invasive Species Summit (EISS) will be held in conjunction with, the 2010 Greater Everglades Ecosystem Restoration Conference (GEER). The event will take place July 12th – 16th, 2010 in Naples, Florida at the Naples Grande Beach Resort. The EISS will start on Monday July 12th at 9:00am. The first day will be open to all registered participants and will include our operations updates. The second day will be a closed session, primarily for ECISMA members where we will discuss the Annual Report and work on the 2010 Work Plan. Technical and research presentations and posters on invasive species issues will be included in the general sessions of the GEER conference. We are encouraging ECISMA members to submit abstracts for posters and presentations. This is our opportunity to expose a new and different audience to the problems invasive species pose to the environment.

There is no fee to participate in the EISS. However, ADVANCE REGISTRATION IS REQUIRED to participate. Register for the Summit through the GEER 2010 online registration. If you want to attend the remainder of the GEER Meeting, you must pay the applicable GEER registration fee. GEER/EISS website - **http://www.conference.ifas.ufl.edu/GEER2010/index.htm**