

Biocontrol of Weeds in the Greater Everglades

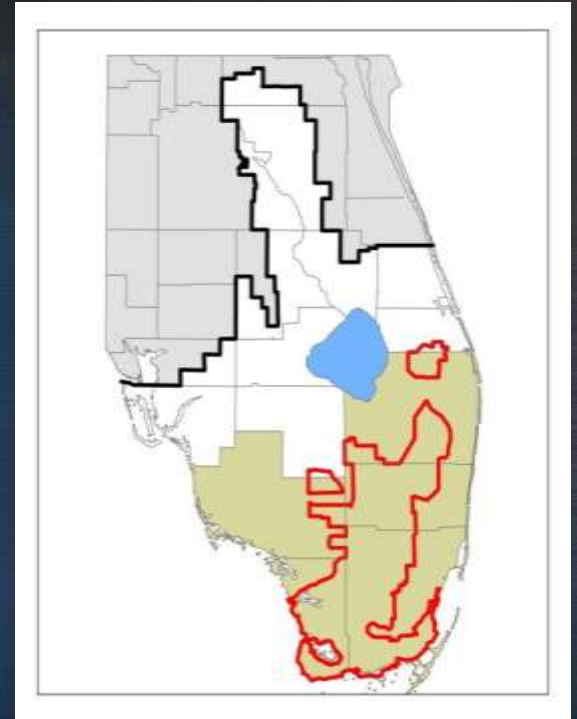
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South Florida's Exotic Plants

- **787** exotic plant taxa in the five counties encompassing the *Greater Everglades*
 - Of these...
 - **71** FLEPPC Category I Invasive
 - Of these...
 - **9** are widely established or locally abundant in Everglades natural areas



Sources:

- *Atlas of Florida Vascular Plants*
- *Florida Exotic Pest Plant Council, 2011 Invasive Plant List*
- *2013 South Florida Environmental Report, Status of Non-indigenous Species.*

Melaleuca Management

- Melaleuca now under maintenance control in WCA's 2 & 3 and Lake Okeechobee marsh.

Moore Haven Marsh, Lake Okeechobee

1995



2012



Integrated Pest Management

Herbicidal Control
Mechanical Control
Cultural Control
+ Biological control

Integrated Pest Management



Biological Control

■ Melaleuca

- Three agents well established
- Damage to plants lengthening return interval for chemical control

Biocontrol

No



77% less biomass, 95% fewer seeds, 47% less dense, 50% slower growth rate, 36.5% more susceptible to fire, 30-40% more susceptible to herbicides

Biological Control

- Old World Climbing Fern
- Air Potato
- Waterhyacinth
- Alligator Weed



Megamelus scutellaris



Lilioceris cheni



Neomusotima conspurcatalis

CERP Melaleuca Eradication and Other Exotic Plants – Implement Biological Controls

Conceptual Framework



Quarantine & Laboratory

Research and Development



Annex

Production and Distribution

(CERP Funded)

Many Other Invaders to Address!

- **Brazilian pepper** (*Schinus terebinthifolius*)
- **Australian pine** (*Casuarina spp.*)
- **Earleaf Acacia** (*Acacia auriculiformis*)
- **Downy Rosemyrtle** (*Rhodomyrtus tomentosa*)
- **Shoebuttan Ardisia** (*Ardisia elliptica*)
- **Peruvian water primrose** (*Ludwigia peruviana*)
- **West Indian marsh grass** (*Hymenachne amplexicaulis*)
- **Wright's nut-rush** (*Scleria lacustris*)
- **Mile-a-minute weed** (*Mikania micrantha*)
- **Roundleaf toothcup** (*Rotala rotundifolia*)

Brown Lygodium Moth Damage

