Everglades National Park

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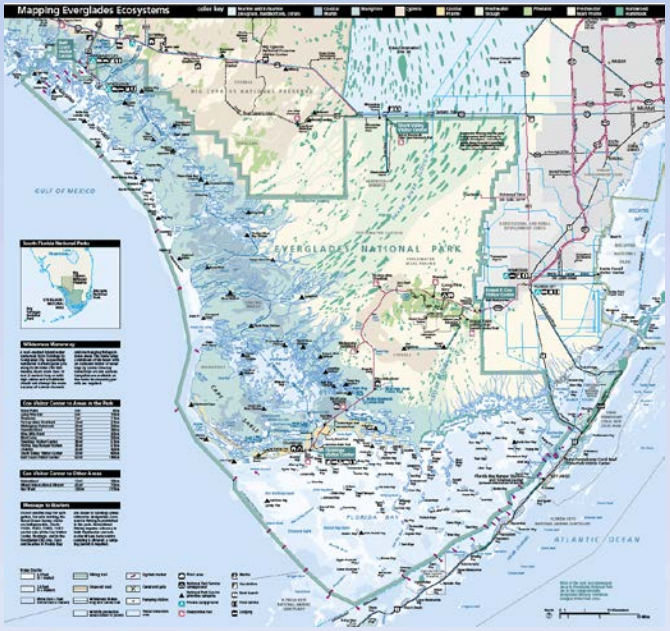
Everglades National Park




Invasive Species Programs

Everglades National Park
Exotic Vegetation Management Program

- Description
  - Manage and control invasive exotic plants within Everglades N.P.
- Objective
  - Reduce the presence and spread of exotic vegetation and protect park resources.
- Partners
  - FLFWC, SFWMD, ACOE, SAMP/DERM,
  - EPMT, NPS-SFNRC/Fire, ECISMA,
  - and others
- Start/End Dates
  - Park established 1947/on-going
  - Exotic vegetation started ~1970's
- Status
  - On-going



Invasive Species Programs

- Over 1,000 plants reported within ENP, approximately 220 are non-native.
  - -Park established 1947
  - -Melaleuca- 1st reported 1967 (eastern boundary)
  - -East Everglades Expansion Area added in 1989
  - -Lygodium- 1st reported 1999

Work in progress

Priority Plant Species

- **Priority Plants**
  - All FLEPPC 2009 category I and II (Top *Melaleuca quinquenervia, Casuarina equisetifolis, Lygodium microphyllum, Schinus terebinthifolius, Thespesia populnea, Colubrina asiatica, Syngonium podophyllum, Epipremnum pinnatum*)

- **Newly Detected Plant Species in Everglades National Park**

- *Rotala rotundifolia* (dwarf rotala)-culverts along Tamiami Trail

-Laurel Wilt ?- North-east portion of Everglades N.P.

Close to the Park

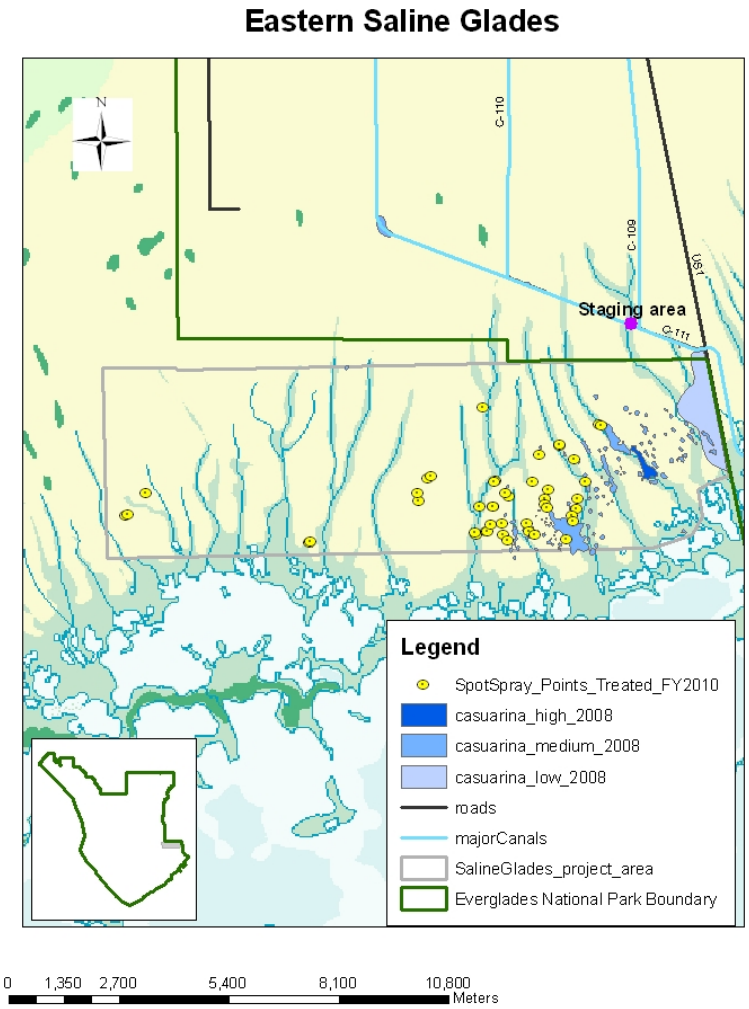
- *Mikanai micrantha* (bittervine, Chinese creeper)- Redlands

-*Luziola subiterga* (tropical American water grass)- 8.5 SQM

-*Polygonum pensylvanicum* (Pennsylvania smartweed)-Frog pond

-Laurel wilt- Krome Ave.

Fiscal Year Treatments: 2010-2011



Completed

1. EPMT-FY2010-Retreatment (5,278 acres)
2. BAR-Mitchells Hammock (245 acres)
3. Hazard fuel (333 acres)
4. In-house_Fire & Aviation (3,697 acres)
5. Tamiami Trail-exotic vegetation treatment (158 acres FY09=54,FY10=103))
6. L-67-Shark Valley Tram Road (30,000 acres)
7. SE Saline glades-Australian pine (~7,000 gross acres~ 300 canopy acres)
8. East Cape-In-house crew

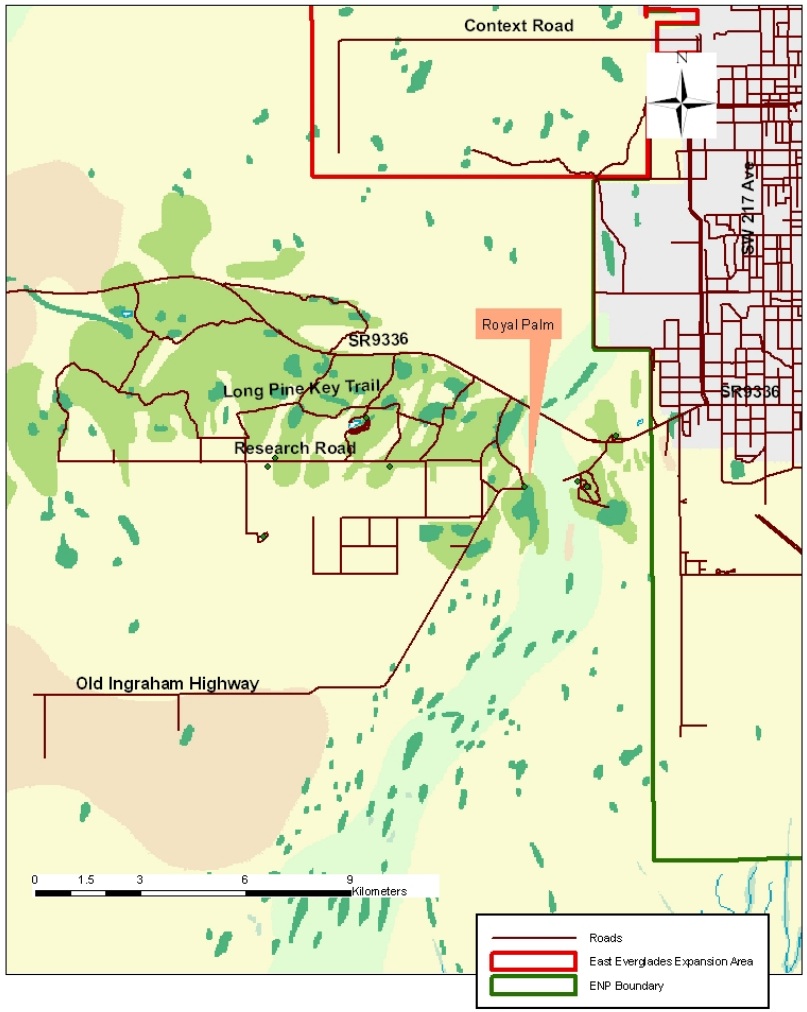
On going

9. West of Shark Valley Tram Road (~30,000acres)
10. Hazard fuel-In-house-Retreatment (118 acres).
11. General In-house projects

Planned

12. EMPT-FY2011-Retreatment

Planned Treatments: FY2011&2012

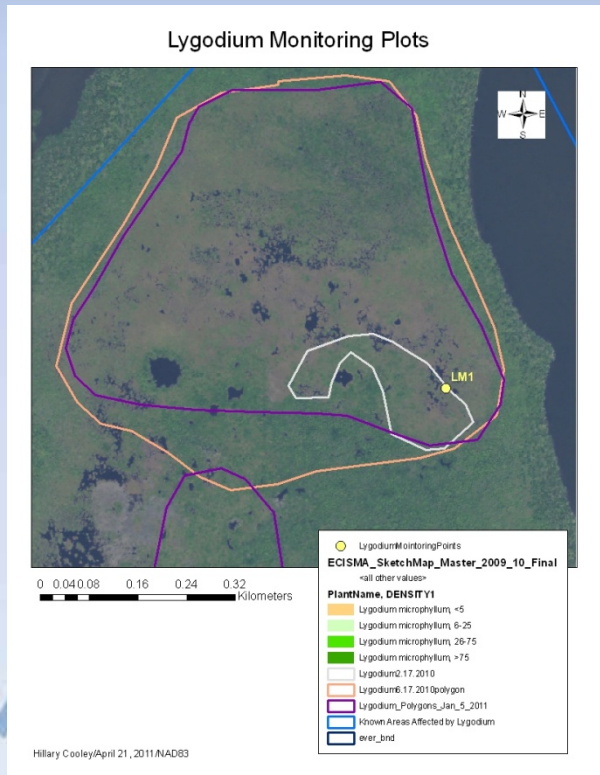


1. EPMT- Re-treatment in EEEA (~2,700 acres)
2. SAMP - Initial treatment (~1,000 acres)
3. DERM/Miami-Dade-Initial treatment-Dade (~1,000 acres)
4. East Cape Sable-NPSEPMT crew
5. Royal Palm-NPSEPMT crew
6. Other in-house projects-Road-side, Flamingo, Chekika

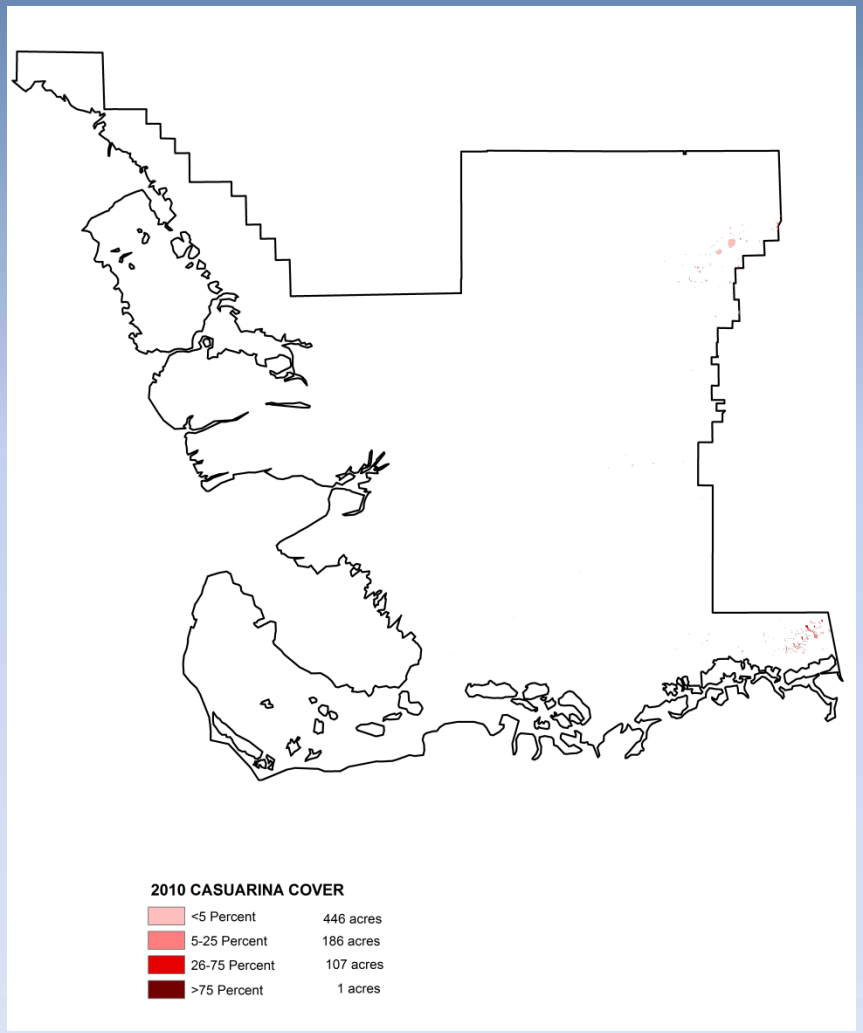
Monitoring

- EPMT plots and Fire Effects plots
- Helicopter mapping (Lygodium at Landscape Level).
- New plots in Cape Sable area (Burned vs. Unburned)
- ECISMA-wide Digital Aerial Sketch-mapping (DASM)

-We are working to improve Lygodium/Fire monitoring



Digital Aerial Sketch Mapping



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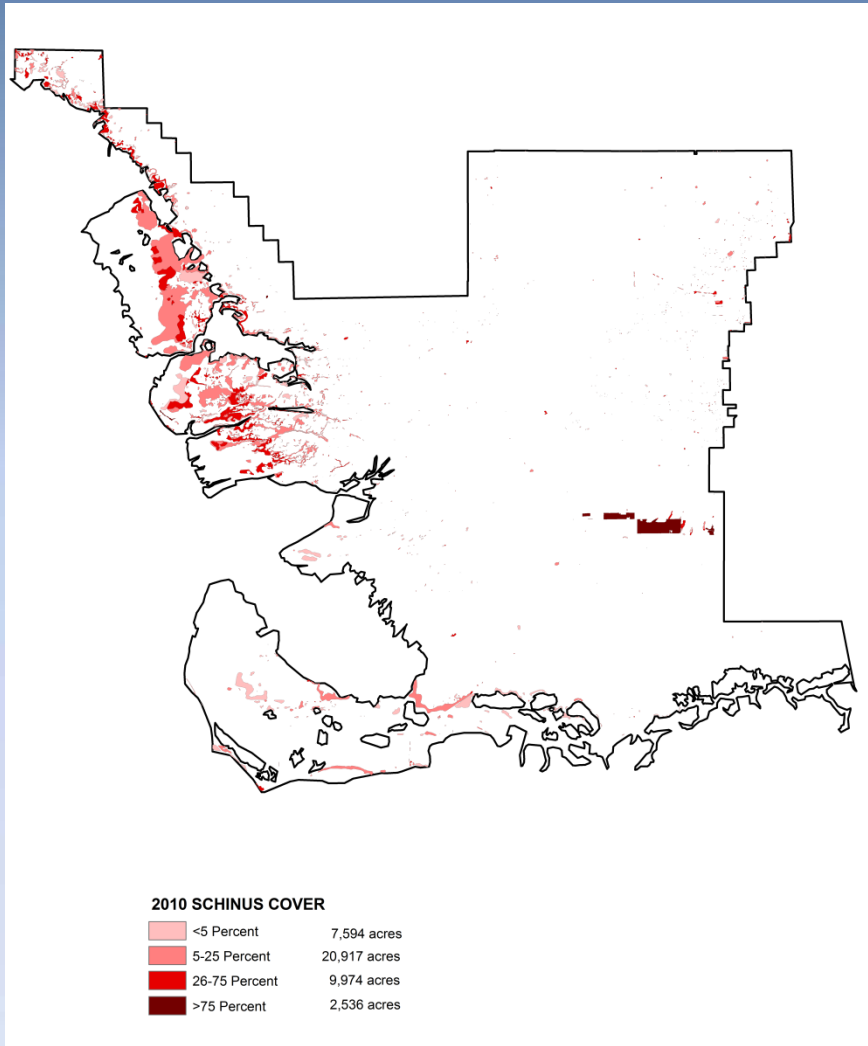
Casuarina

Coverage Class	Acres
<5 %	446
5-25%	186
26-75%	107
>75%	1
Total	739

Digital Aerial Sketch Mapping



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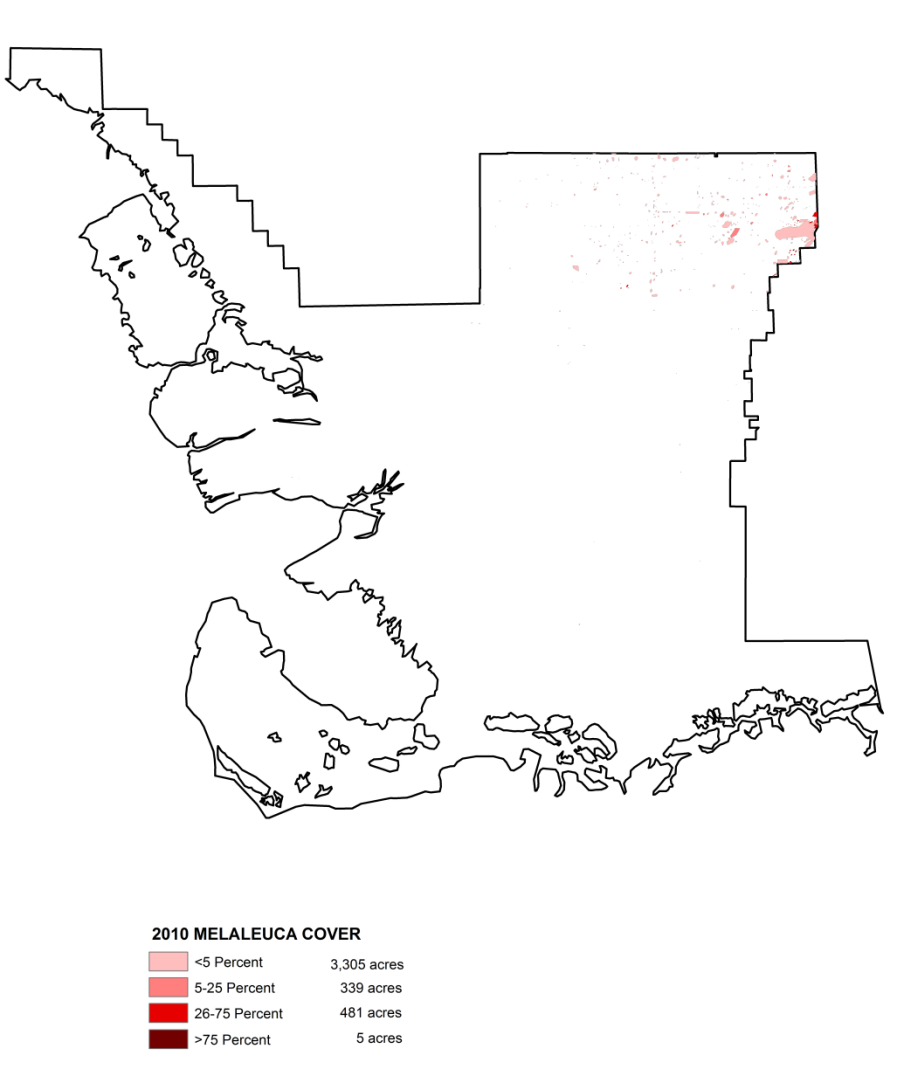
Brazilian Pepper

Coverage Class	Acres
<5 %	7,594
5-25%	20,917
26-75%	9,974
>75%	2,536
Total	41,021

Digital Aerial Sketch Mapping



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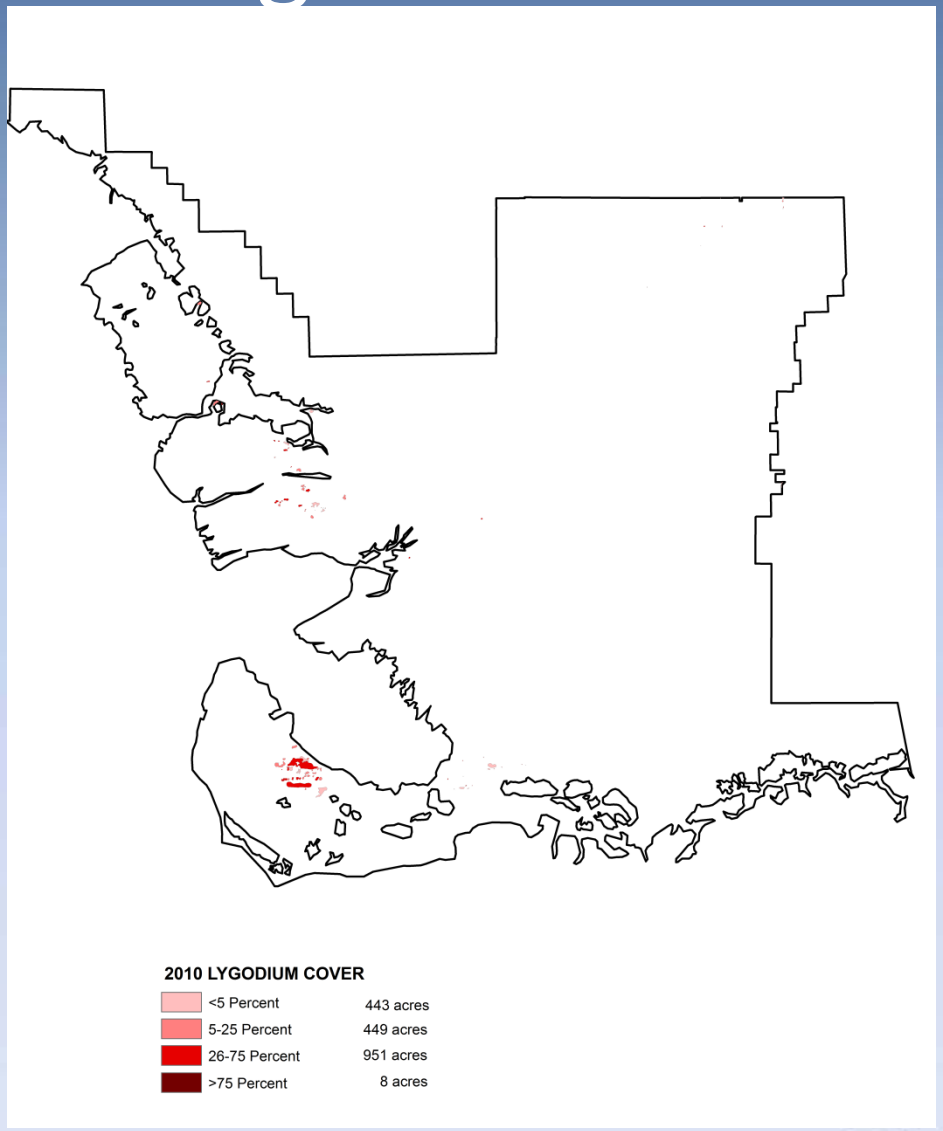
Melaleuca

Coverage Class	Acres
<5 %	3,305
5-25%	339
26-75%	481
>75%	5
Total	4,130

Digital Aerial Sketch Mapping



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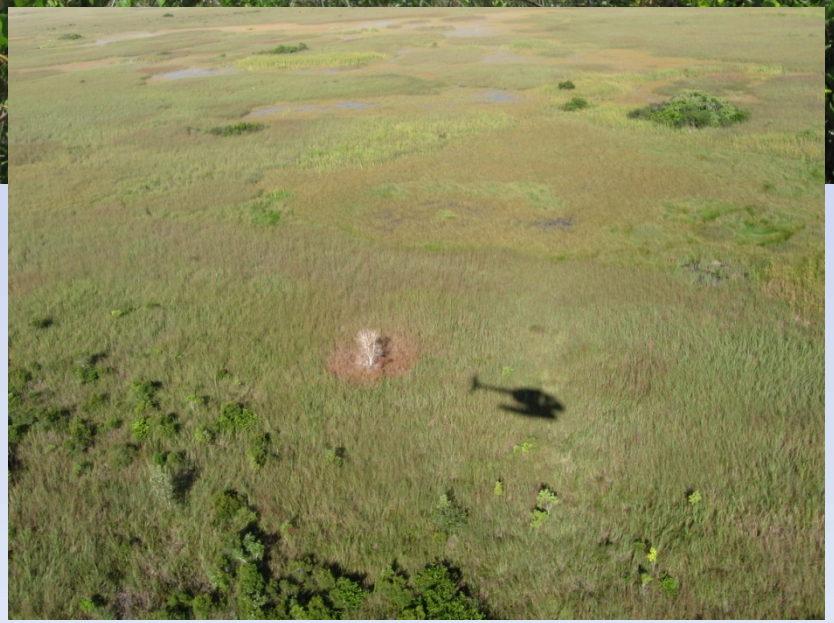
Old World Climbing Fern

Coverage Class	Acres
<5 %	443
5-25%	449
26-75%	951
>75%	8
Total	1,851

Innovations and Successes



Needs & Gaps

Lygodium/Fire monitoring in coastal Marsh

How does fire effect Lygodium in the marsh and costal marsh habitats

a.)How does fire affects *Lygodium microphyllum* (Old World climbing fern) i.e. fecundity, spore rain, biomass response, etc.

b.) How does fire affect the spore rain of *Lygodium microphyllum*?

c.) studies that look at herbicide vs. fire as treatment for invasive exotic vegetation in marsh and costal marsh.

d.) Studies that look at herbicide followed by fire as treatments for invasive exotic vegetation in the marsh and costal marsh habitats

e.) studies that look at fire followed by herbicide as treatments for invasive exotic vegetation in the marsh and costal marsh habitats.

f.) does the timing of fire affect the colonization of *Lygodium microphyllum*.

g.) Pre-fire fuel load and effect on *Lygodium microphyllum.*


Thank you