

Everglades Complex of Wildlife Management Areas, Pennsuco, & East Coast Buffer Strip

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South Florida Water Management District

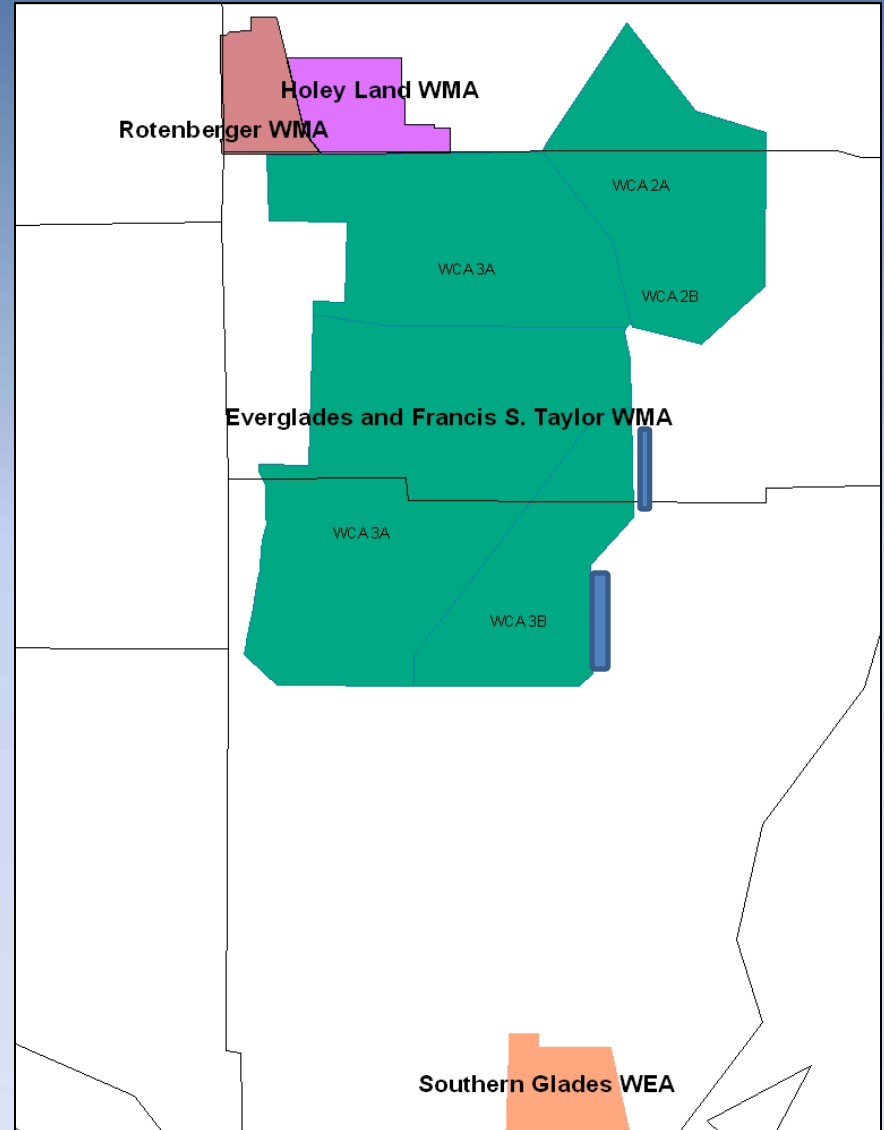
Marsha Ward

Florida Fish and Wildlife Conservation Commission



2011 Everglades Invasive Species Summit

- Everglades & Francis S. Taylor WMA
 - 671,831 acres
- Rotenberger WMA
 - 29,700 acres
- Holey Land WMA
 - 35,350 acres
- Southern Glades Wildlife and Environmental Area
 - 30,080 acres
- East Coast Buffer including Pennsuco Mitigation Bank



Invasive Species Programs

- SFWMD's objective is to manage invasive species of the WCAs and the ECB. Primary objectives include melaleuca, schinus and lygodium. The SFWMD program started with melaleuca.
- FWC shares these, with an emphasis on tree islands. Every year we perform and contract exotic treatment, native tree and shrub planting, and maintenance of planted trees on hundreds of acres of tree islands.

Priority Plant Species

- **Priority Plants**

- Melaleuca
- Schinus
- Lygodium
- Torpedo grass
- Cattail and Carolina willow expansion

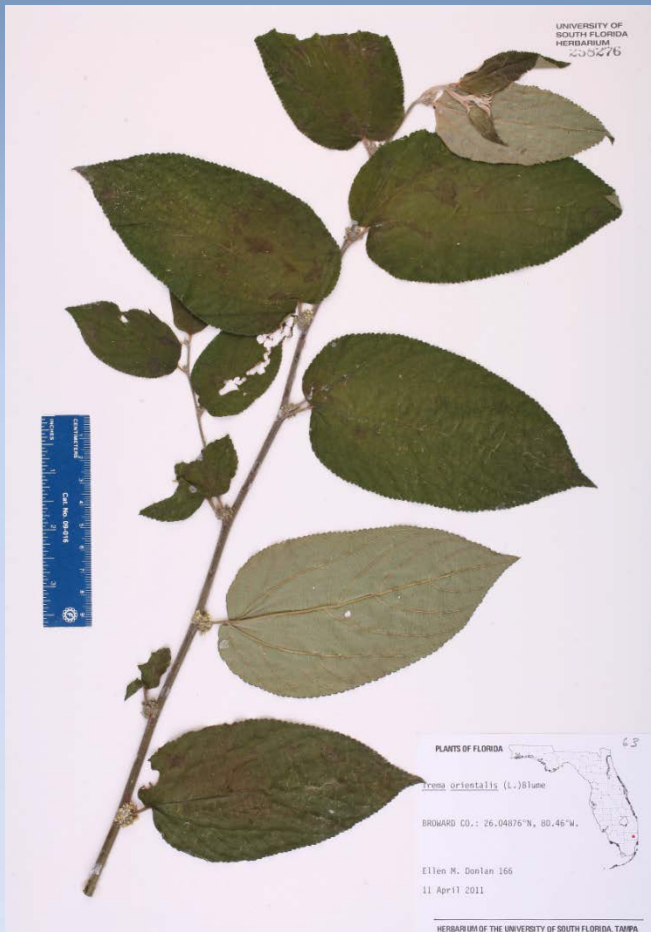
- **Newly Detected Plant Species**

- Trema
- Laurel wilt

Is it *Trema orientalis*?

- Now on the look out
- Finding large variety in specimens
- No good way to ID without fruit
 - *T. orientalis* is black when ripe (after it is orange)
 - *T. orientalis* has larger leaves
 - Leaf margin variability
 - Genus is weedy species

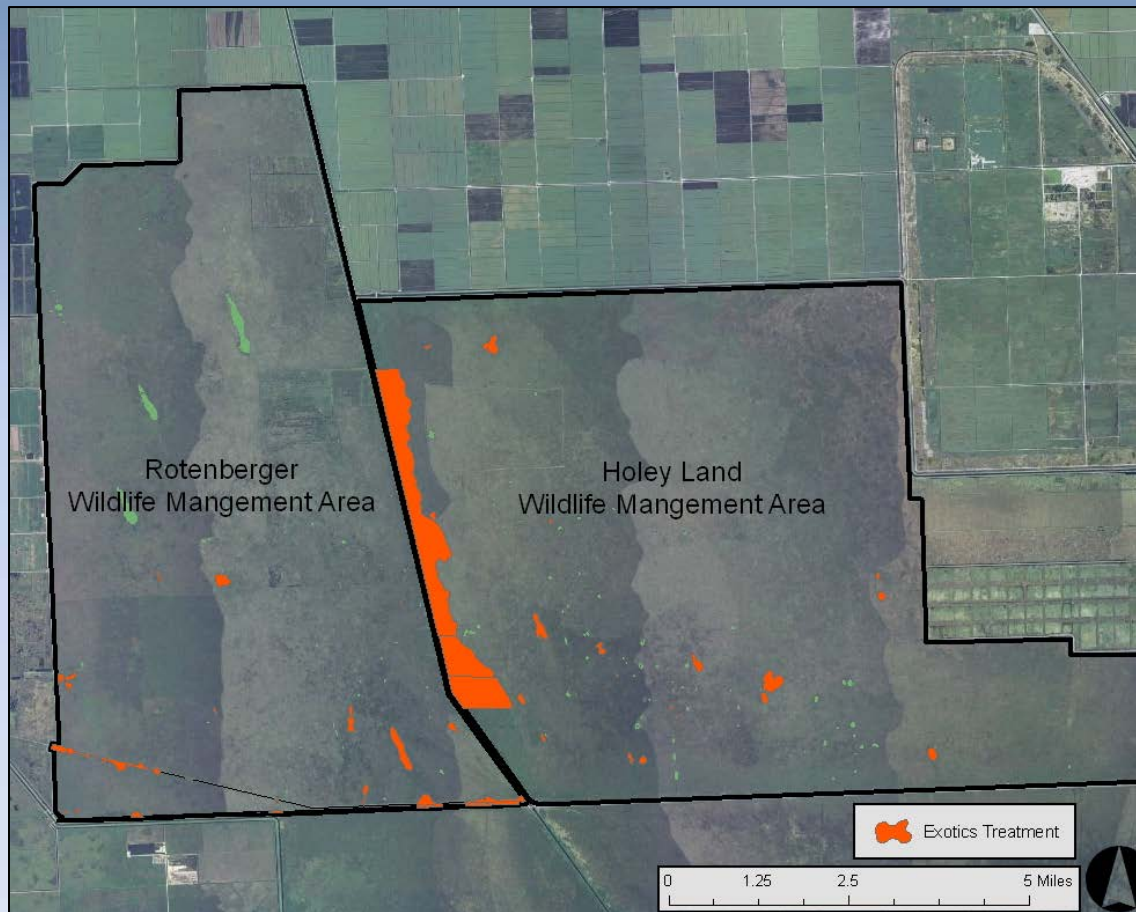
Trema orientalis



Priority Animal Species

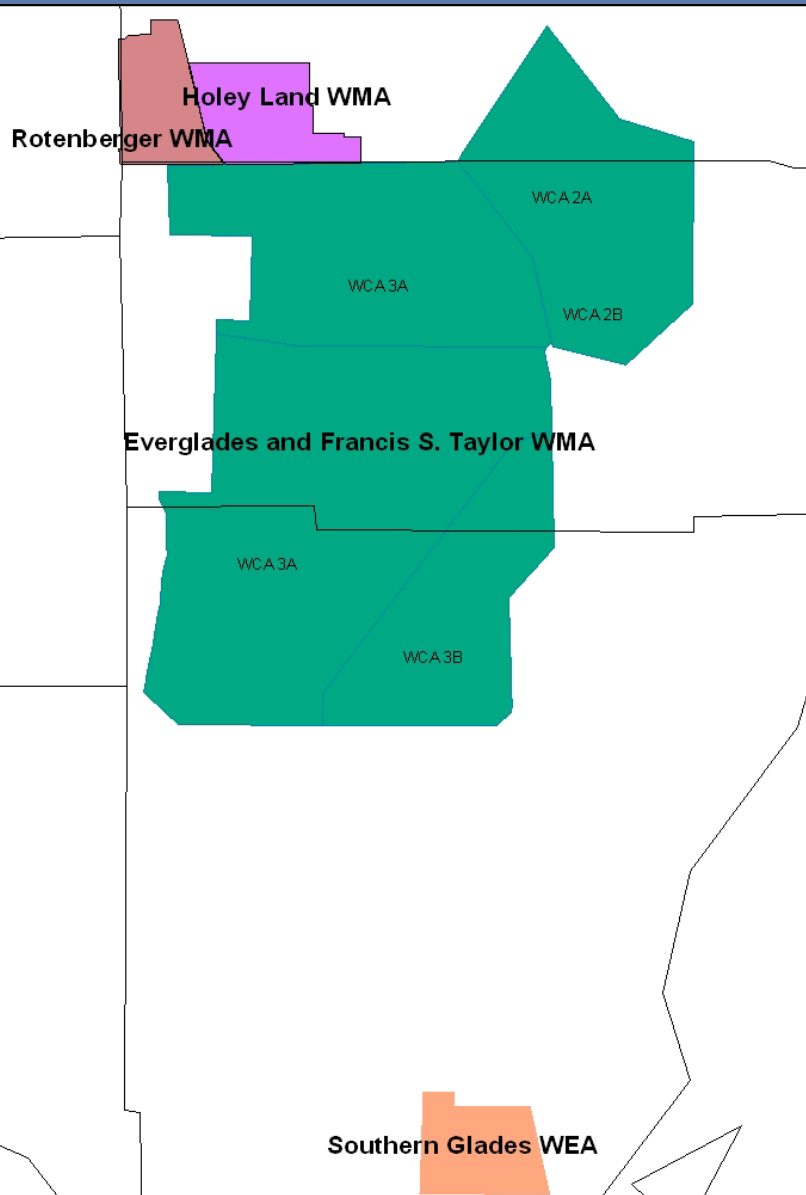
- **Priority Animals**
 - Burmese and Northern African pythons
- **Newly Detected Animal Species**
 - Exotic apple snail expansion in WCA 3A
 - Banded caracol snail on WCA 3B tree island

Fiscal Year Treatments FWC July 2010- June 2011



- Rotenberger WMA
 - 252.5 acres = \$60,827.25
 - 3,511 cages maintained = \$18,344.97
 - 659 trees planted = \$19,999.50
- Holey Land WMA
 - 1,199 acres treated = \$179,850.00

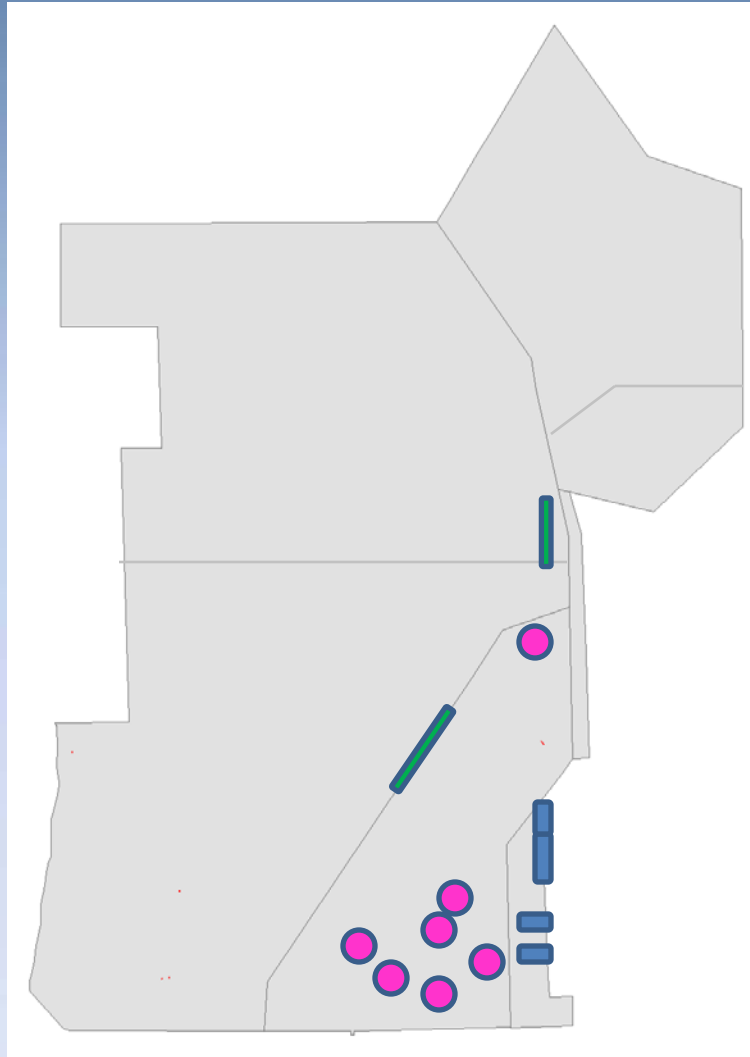
Planned Treatments: FWC 2011/2012



- **Everglades WMA**
 - Exotic treatment islands & levees
 - Cage maintenance
 - Native tree/shrub planting
 - Lygodium survey & treatment
- **Rotenberger WMA**
 - Exotic treatment islands & levees
 - Cage maintenance
 - Native tree/shrub planting
- **Holey Land WMA**
 - Exotic treatment islands & levees
- **Southern Glades WEA**
 - Exotic treatment
- **Prescribed Burning – All areas**

Fiscal Year Treatments: SFWMD FY 2012 planned

Melaleuca, **Lygodium** & **schinus & woody**

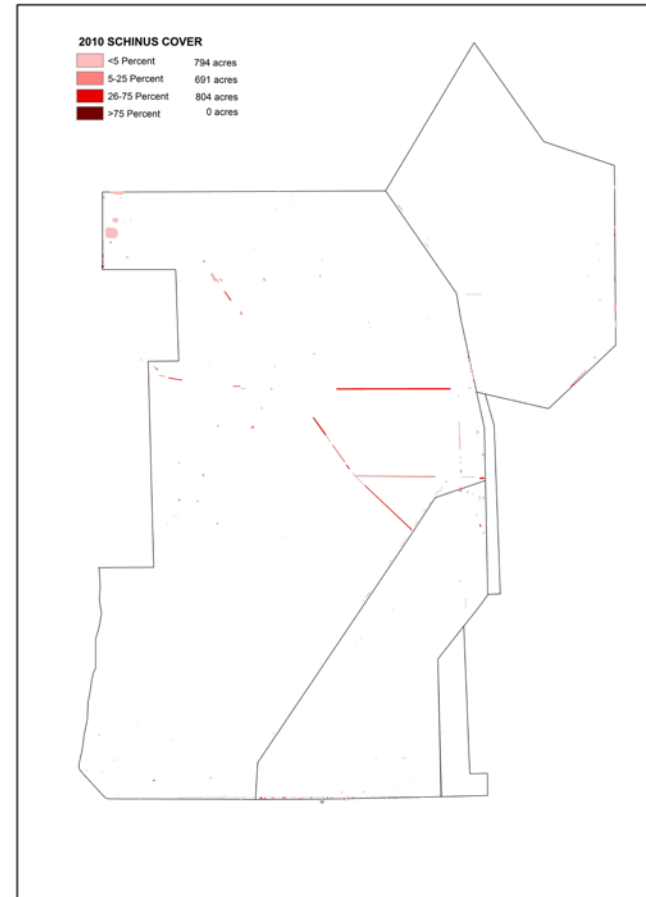
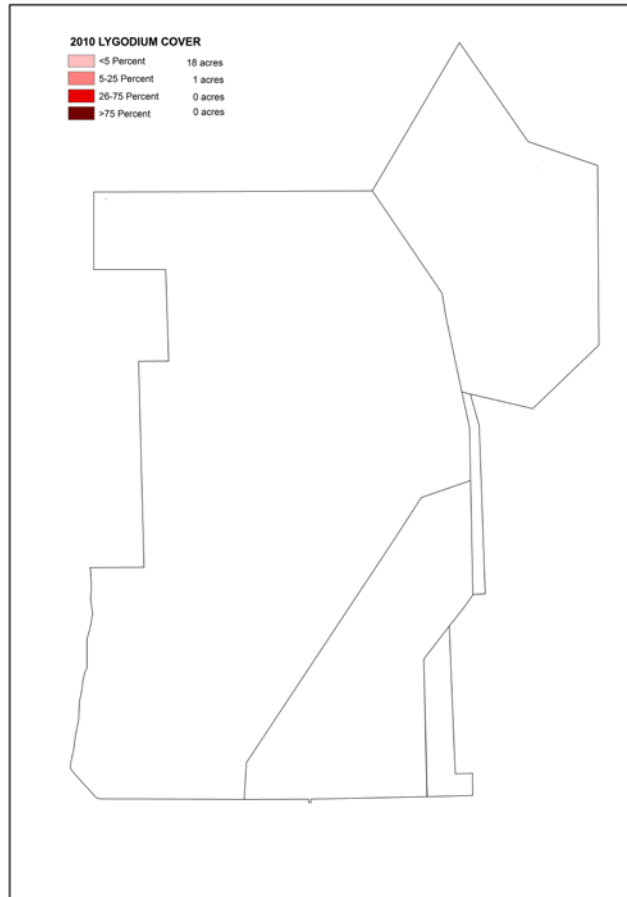


- Ground melaleuca treatment follow up to previous aerial and ground. Treating any schinus or lygodium also seen in marsh.

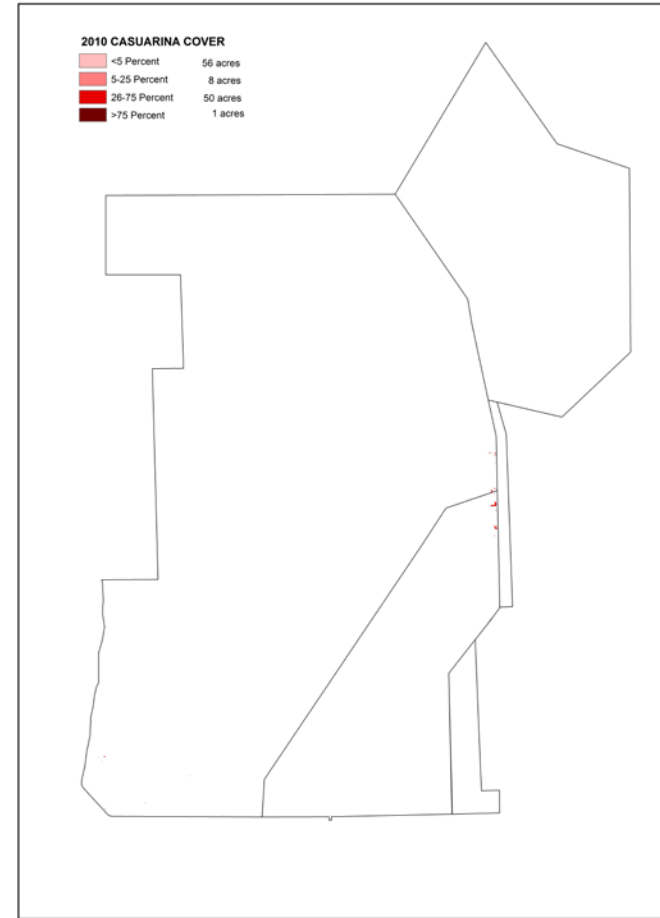
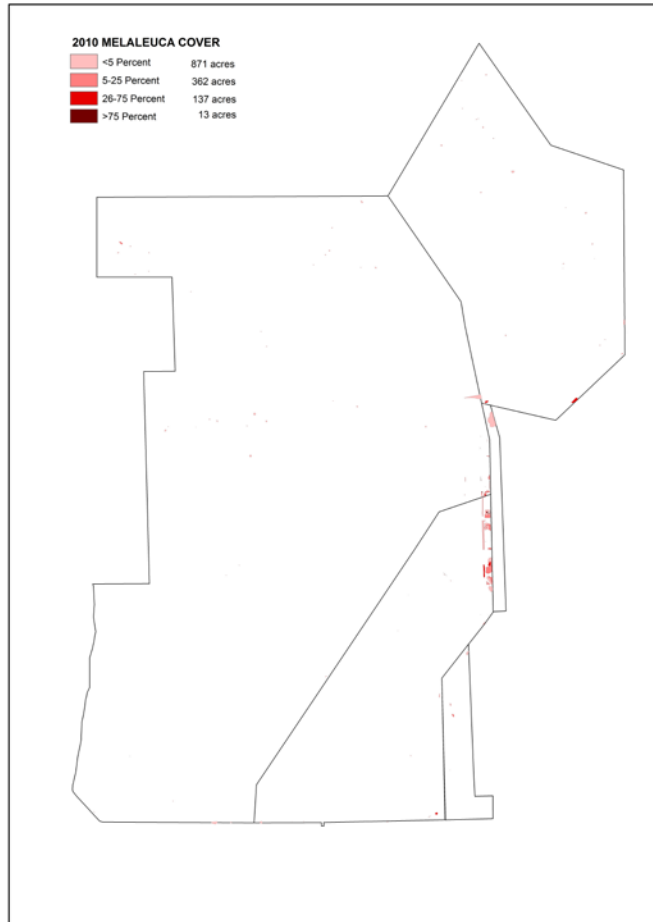
Monitoring

- ECISMA-wide Digital Aerial Sketch-mapping (DASM)
- Contract for tree island surveys (lygodium detection and treatment)
- Cattail surveys in Holey Land & Rotenberger WMAs
- Tracking exotic treatment and other restoration activities in ArcView and spreadsheets
- Camera trapping to monitor wildlife utilization
- Photopoints to monitor changes in vegetation over time

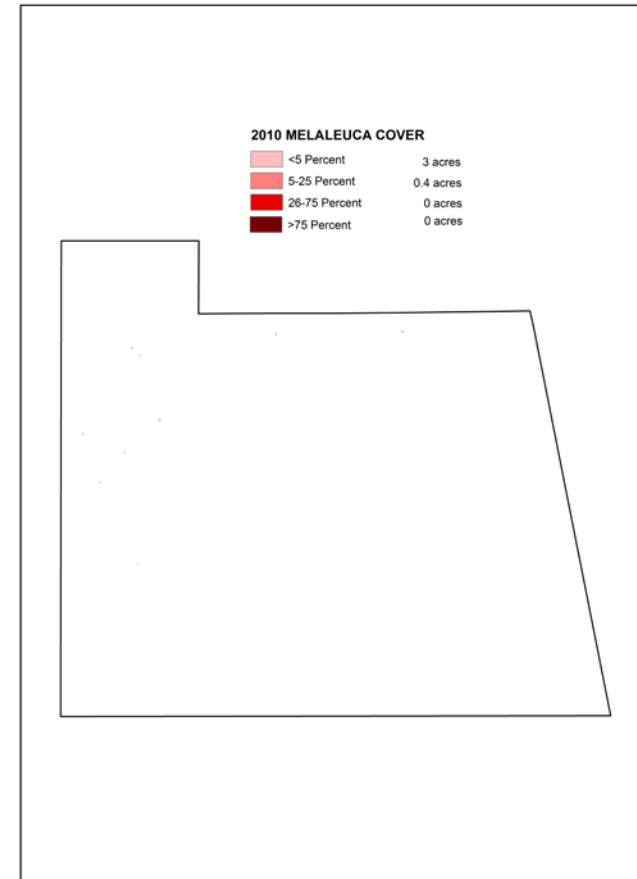
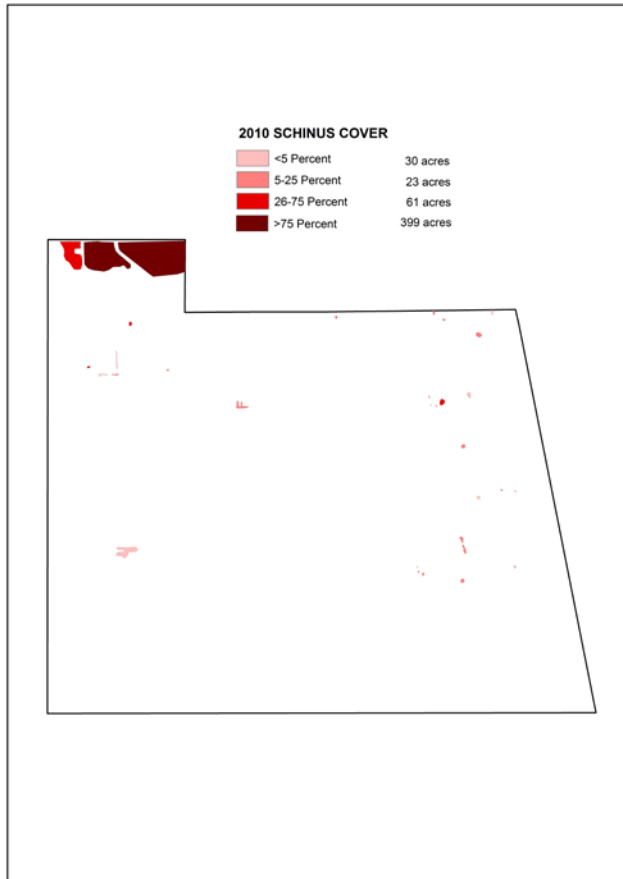
Digital Aerial Sketch Mapping



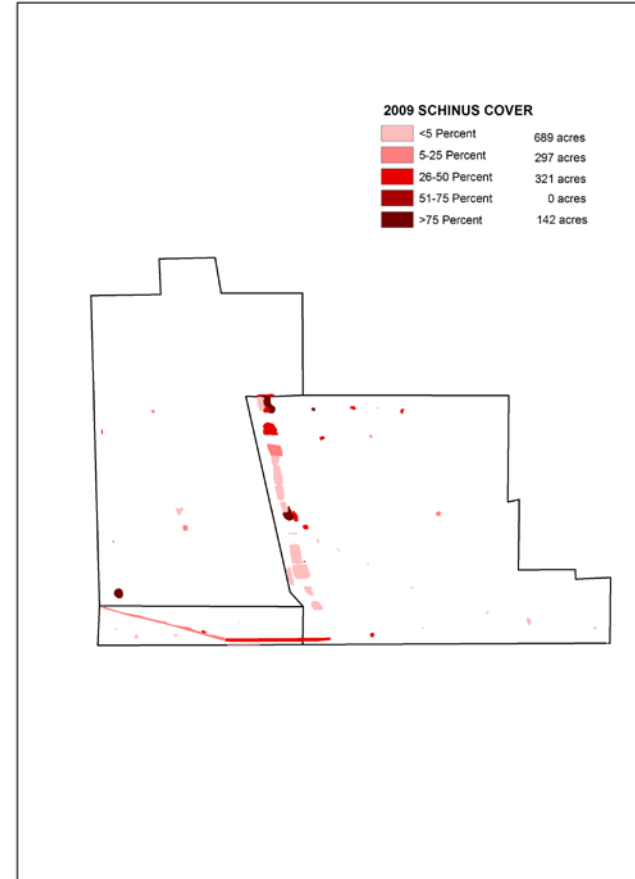
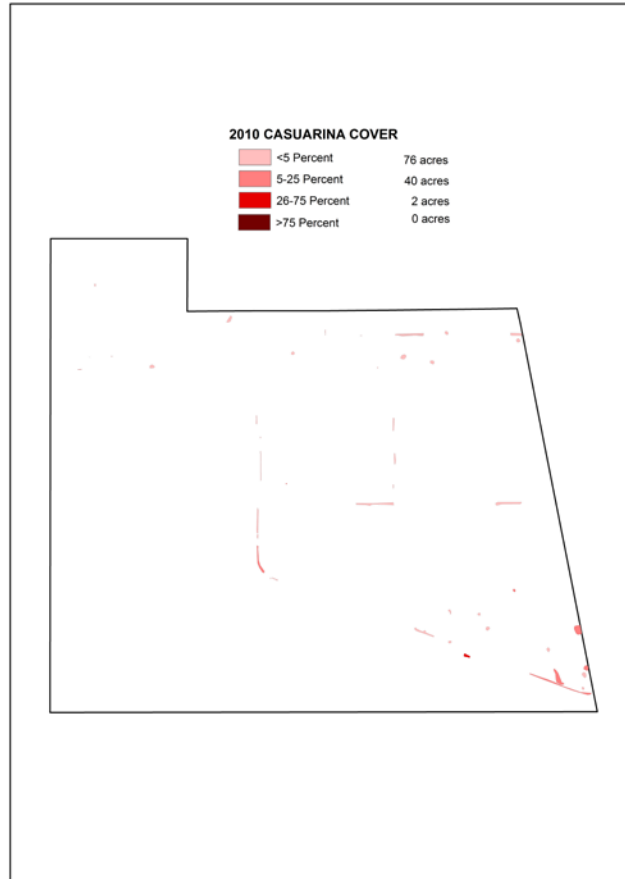
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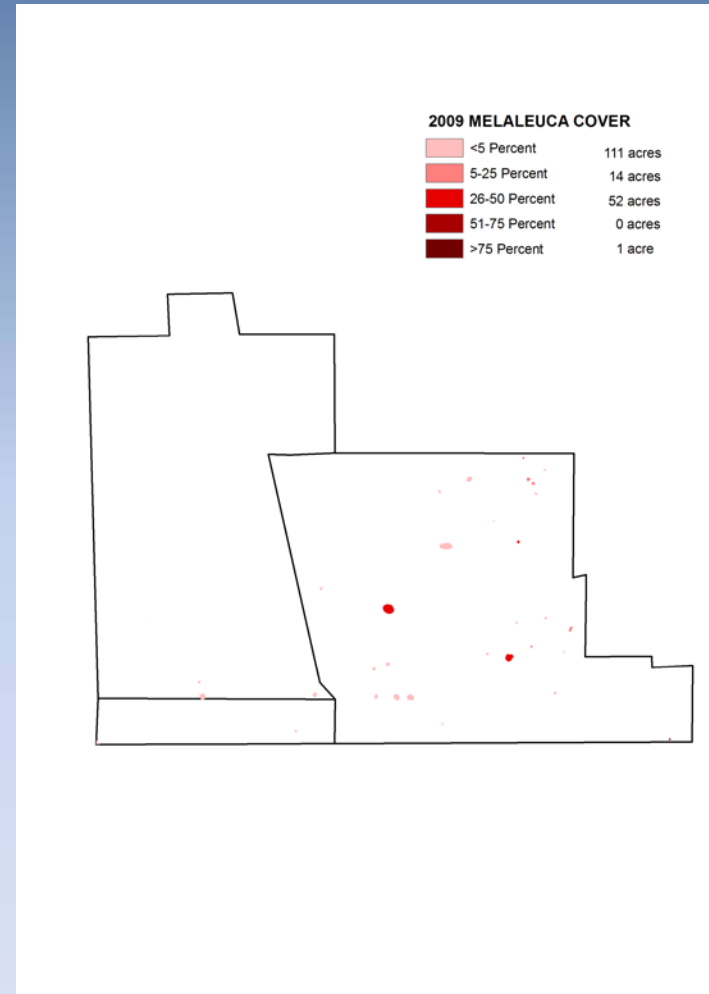
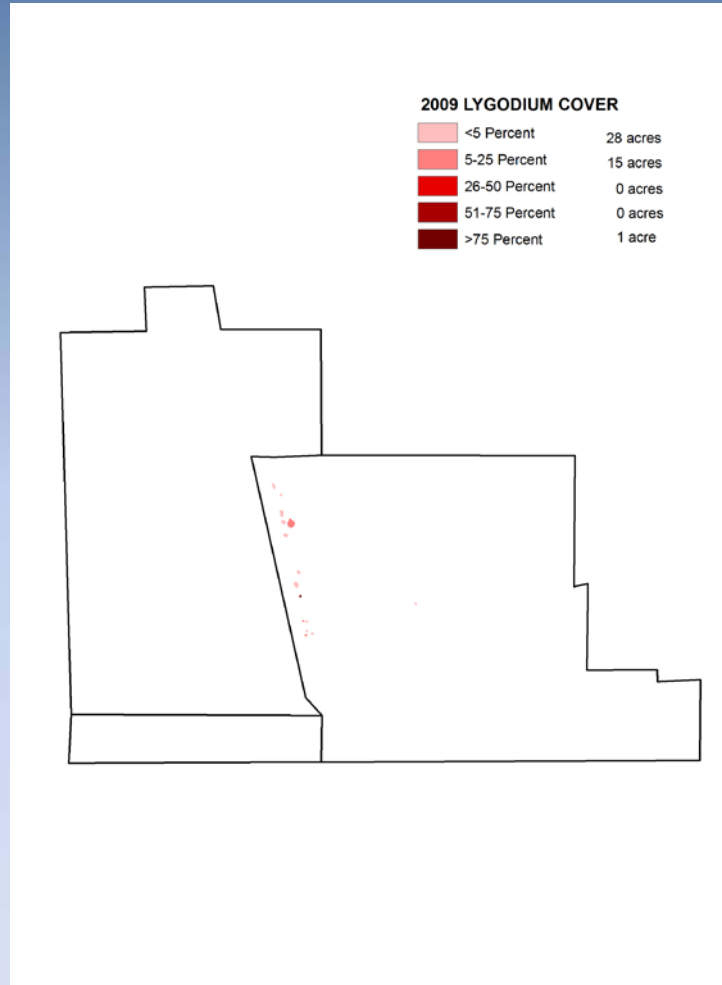
Digital Aerial Sketch Mapping



Digital Aerial Sketch Mapping



Digital Aerial Sketch Mapping



2011 Everglades Invasive Species Summit

Photo Point Monitoring

Rotenberger Island 3018



4/17/09



6/24/09



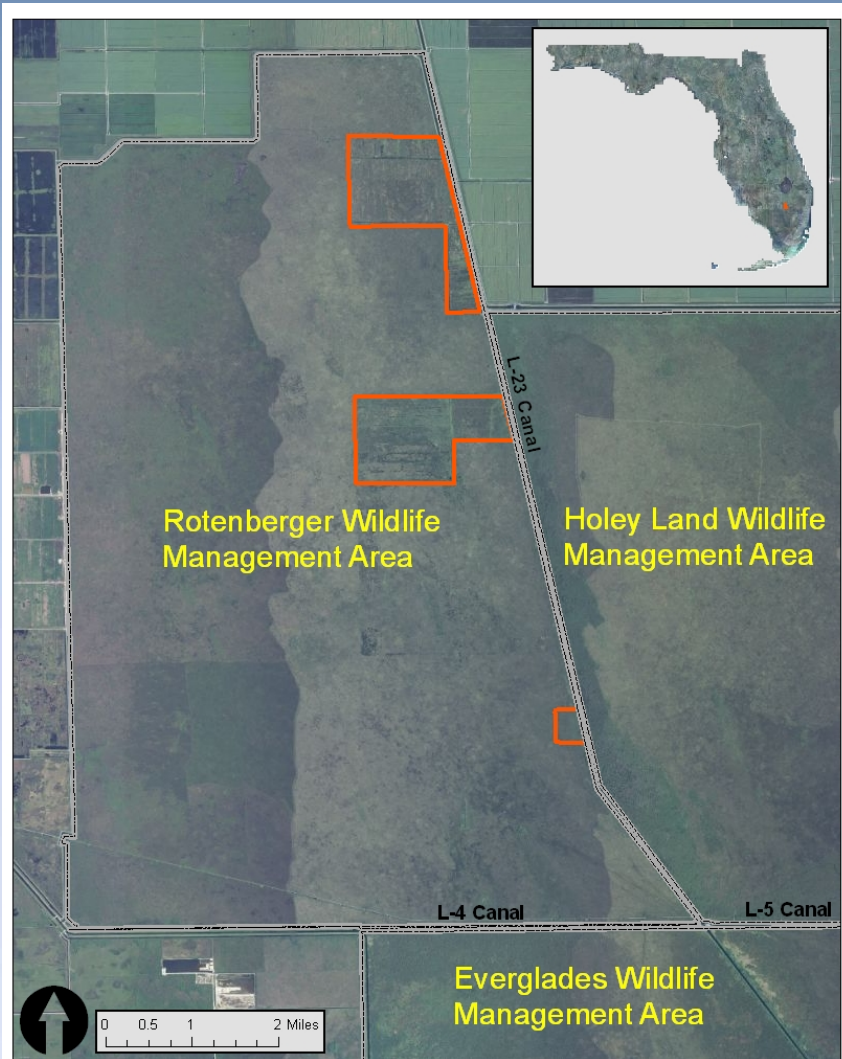
9/2/09

Monitoring Cattail Coverage in Holey Land WMA

<u>Year</u>	<u>Estimated % coverage</u>
2004	27.0
2005	22.2
2006	22.8
2007	19.4
2008	15.6
2009	17.3
2010	10.5
2011	17.8

Innovations and Successes

Rotenberger WMA Hydrologic Restoration



- Mechanically degrade 10.7 miles of former farm berms and canals
- Multi-year/-phase project
 - Exotic treatment
 - Hydrologic survey
 - Berm/canal removal
- Funded by Aquatic Habitat Restoration and Enhancement (AHRE)

Photo Point Monitoring

Before and After



4/19/09



5/11/11

Ditch North S

Innovations and Successes

WCA 2B Aerial Prescribed Burn



- 2,710 acres burned

Innovations and Successes

- FWC exotic wildlife biologist for south Florida (Jenny Ketterlin)
- Python permit program continues
- Incidental hunter take of conditional species on WMAs continues

Needs & Gaps

- Identify critical needs and gaps
 - Additional survey of islands for lygodium
 - Trema identification guide & survey



Questions?