

# Improving mangrove management through a comprehensive extension education program

Southwest Florida and beyond

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# Overview

- Situation
- Goal
- What we did
- Why it worked/did it work?
- Looking Forward

# Situation

- Mangroves within this region are managed by public agencies and individual property owners.
  - Approximately 160,000 acres of mangroves are publicly owned\*
  - Approximately 42,000 acres of mangroves are privately owned\*
- Lack of understanding of mangrove best management practices and regulations has resulted in impaired mangrove fringes, extensive trimming, and violations.
- Lack of understanding of the ecological services that mangroves provide has resulted in a reduction of ecosystem services.

\*Data for South Florida, from U.S. Forest Service 2015







# Goal

To create a comprehensive extension education program for our different stakeholders that:

- Teaches them to identify protected species
- Increases their knowledge regarding ecosystem services
- Helps them understand local and statewide regulations
- Teaches them trimming best practices - plant and site-specific



# Methods: What we did

Interactive mangrove walks:

- Ecology/Importance of mangroves
- Identification of species
- Regulations





# Methods: What we did



Individual visits to private homeowners and homeowners associations (HOAs):

- Ecology/Importance of mangroves
- Identification of species
- Identification and removal of invasive species
- Regulations



# Methods: What we did



Individual mangrove related field trips for youth groups:

- Ecology/Importance of mangroves
- Identification of species



# Methods: What we did



- Interactive in-person training, on site
  - Ecology/Importance of mangroves
  - Identification of species
  - Regulations/Permit Criteria
  - Arboricultural practices
- Real Life Application, Personal Anecdotes
- Handouts for ID and Regs



# Results



## Who attended

120 Individuals Representing 13 Public Agencies and 12 Professional Arboricultural Services  
3 SW FL Counties: Manatee, Sarasota and Lee

## What they learned

Knowledge gained, Ecosystem services, Regulatory Concerns etc.  
Direct Observation of ID skills, 95% were able to correctly ID  
Direct Observation of Pruning skills, 50% were observed correctly pruning

## Application of knowledge

Follow up conversations with attendees on modified trimming practices  
Site visits for in depth shoreline management



# Why it worked

“They made it fun and informative”

“Great mix of knowledge and expertise!”

- Relationships with public agencies and professional arborists
  - Location
  - Resources
  - Practical Arboricultural Knowledge
- CEUs
- Hands-on demonstrations
  - Participants practice proper pruning methods
  - Learn where you work



Future  
Applications/Looking  
forward

“Excellent instructors  
from multiple agencies-  
very knowledgeable!”

“I would like to see this class provided in more locations”

- **Building relationships**
- Future climate migration considerations
- Different audiences:
  - Gov, public, prof
    - Can tailor the curriculum to meet the needs of different audiences
  - Other languages than English
    - Rookery Bay program et. al.

“I am still relatively new to this job, so I learned a ton. Thank you!”



# Questions

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# References

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