

# Strategies for Dealing with Invasive Exotic Species in South Florida





# The Problem

- Invasive exotic plants and animals infest millions of acres of natural lands in the US and Florida.
- Invasive exotic plants and animals have been documented to alter the ecological structure and environmental processes & functions of ecosystems.

# The Scale

- **WORLD WIDE**

- Estimates of upwards of 3 million species introduced (total species on earth estimated between 7- 30 million; that's 10 - 40% of all the species on earth)

- **UNITED STATES**

- Over 90,000 species introduced (total native species estimates in US ~200,000: that's ~ 45% of all native species in the continental US)

- **FLORIDA**

- Over 32,000 species (25,000 plants 7,000 animals) introduced (total native species estimates ~3,800 plants, ~14,000 animals; that's ~ 180% of all native species in Florida)
- Over 1,800 exotic plant species are documented to be invading natural areas in Florida ( that's 47% of all plants in Florida)
- Introduced animal species that are invasive in natural areas; 4 amphibians, 46 reptiles, 12 birds, 19 mammals, 43 fishes, 76 invertebrates

Sources: IUCN ISSG Global Invasive Species Database and Precious Heritage: The Status of Biodiversity in the United States, The Nature Conservancy, FFWCC, Florida Ornithological Society, UFL, USGS, Florida Entomological Society, SF Environmental Report



# Task Force Strategy

Strategies, objectives and coordination are important parts of the solution

- Goal 2 – Restore, Preserve, and Protect Natural Habitats & Species
  - Subgoal 2B - Control Invasive Exotic Plants *and Animals*
    - *Objectives:*
      - Achieve maintenance control of Brazilian pepper, melaleuca, Australian pine and Lygodium by 2020
      - *Release two biological control insects per year to control invasive exotic plants*
      - *Achieve eradication of Gambian pouch rat by 2012*



# **Invasive Exotic Strategies**

- To assist the Task Force in developing more specific strategies the Working Group has established Issue based Task Teams
- Two of the these teams deal with invasive exotic species:
  - One for Plants - Noxious Exotic Weed Task Team (NEWTT)
  - One for Animals - Florida Invasive Animal Task Team (FIATT)



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# **“Weeds Won’t Wait”**

## ***The Invasive Exotic Plant Strategy***

### **Assess, Manage, Control and Restore (Management)**

- **To reduce the impact and contain the distribution of existing priority invasive exotic species**

### **Assess, Detect and Prevent (Rapid Response)**

- **Prevent new invasive exotic species being introduced that could become problems in natural areas and prevent incipient populations in natural areas from spreading**

### **Inform, Advise and Educate (Communication)**

- **Generate awareness of the invasive exotic species problem and broad support for efforts to control invasive exotic species**

### **Organize, Coordinate and Plan (Cooperation)**

- **Marshall federal, state, region and local actions and resources on invasive exotic species to provide integrated, consistent, cost efficient and effective management**



[www.sfrestore.org](http://www.sfrestore.org)

# FIATT's Invasive Animal List

- Mammals - 19 species
  - 1 Rapid Response Candidate (Gambian Rat)*
- Birds - 12 species
  - 2 Rapid Response Candidates (Purple Swamp Hen & Sacred Ibis)*
- Herps - 50 species
  - 1 Rapid Response Group (Large vertebrate snakes)*
- Fishes - 43 species
- Invertebrates - 76 species





**GAMBIAN POUCH RAT  
ERADICATION PROGRAM**

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# Purple swamp hen eradication

August 2006 to March 2008 - ~ 2,500 removed



# Pythons - A New Top Predator

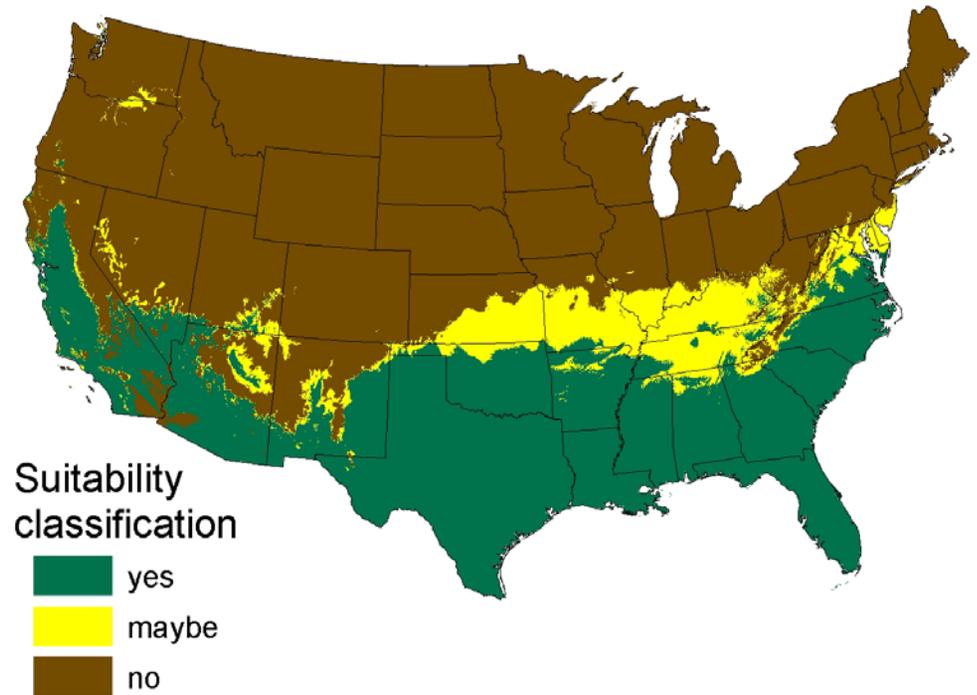
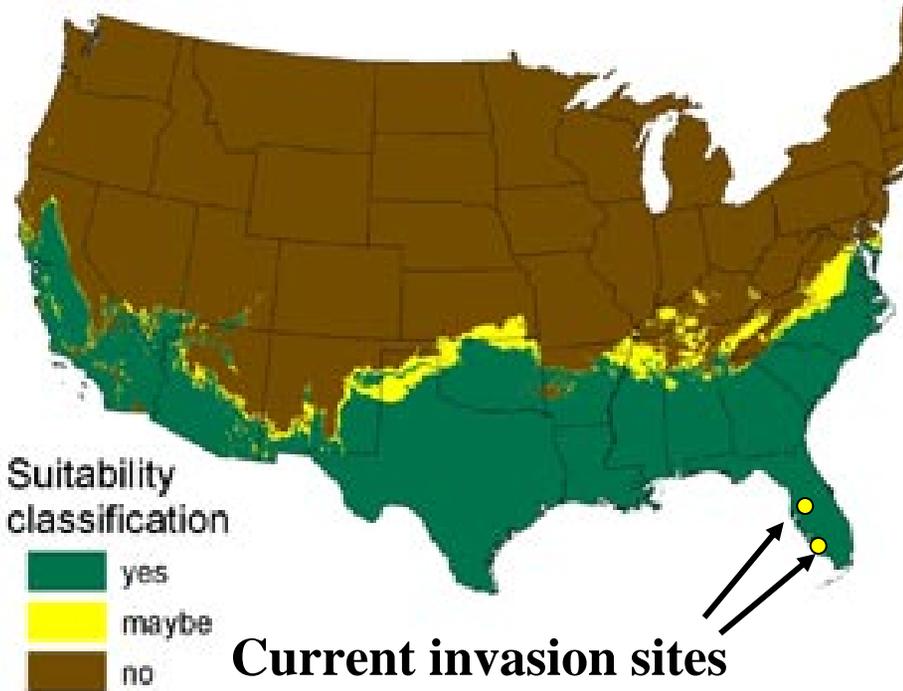
- Everglades species have not evolved to deal with these predators – up to 25 ft & 300 pounds
- Diet documented to include native mammals, birds, reptiles, including Threatened & Endangered species.
- Can reproduce clutches of several dozen eggs 2-3 times per year
- Clutches of 40+ eggs have been found
- Population estimates for South Florida between 60,000 - 150,000 animals



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# More pythons and other predatory exotics all the time





**Current Potential Range of Python invasions in US based on climate (Source USGS)**

**Predicted Range Expansion of Pythons due to Climate Change by 2100 (Source USGS)**



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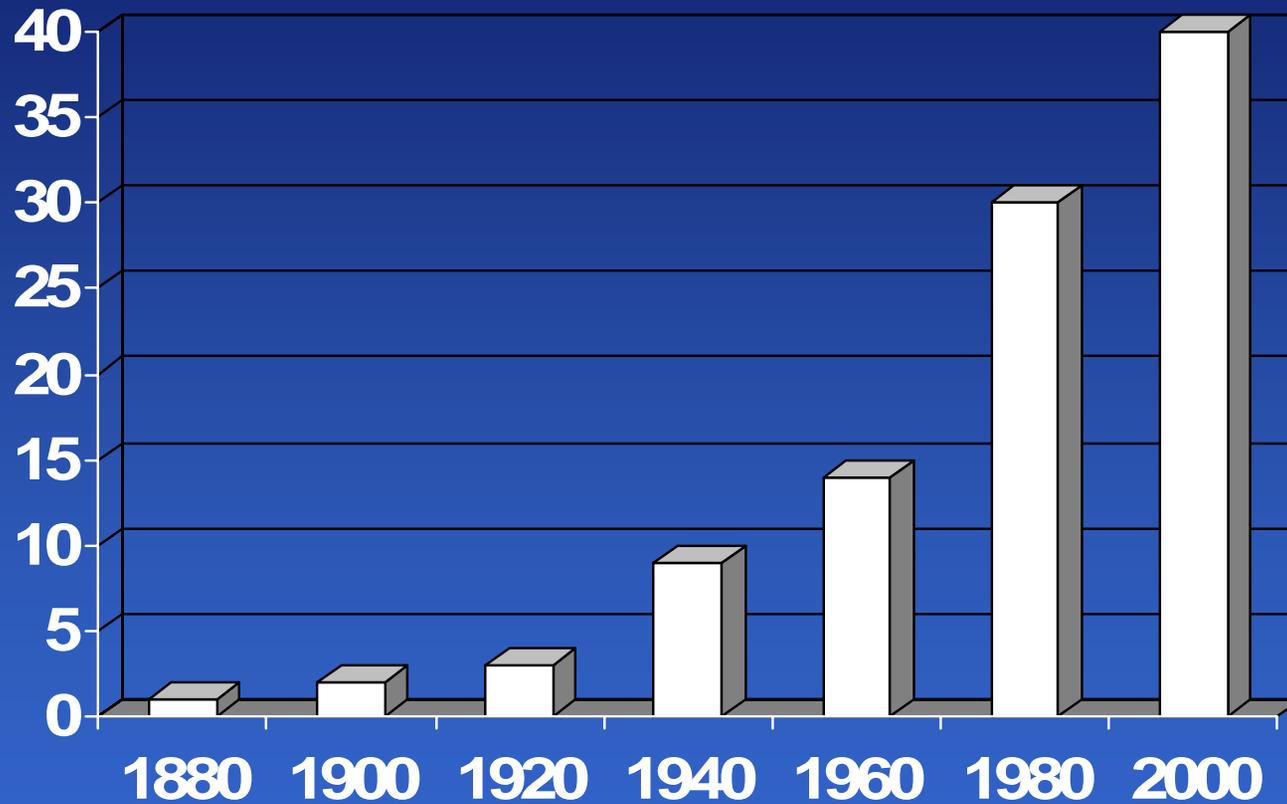
# Nile Monitor lizards

- Top Predator – eats sea turtle & bird eggs, dogs, cats, rodents, nesting birds, wading birds, other herps, “anything they can catch” Greg Klowden UF biologist.
- Semi-aquatic, excellent swimmers
- Can reach 7 feet and 65 pounds
- Clocked at over 15 mph
- Dangerous, infectious bite
- Estimated numbers in low thousands centered in Cape Coral, Florida



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■ Total No. Exotic Herp Species



# **Working and Science Coordination Group Guidance to FIATT**

- **Develop a strategy for invasive exotic animals**
- **Use “Weeds Won’t Wait” as the template**
- **Building off of the invasive exotic animal list**



# **Additional Information:**

**Contact: Bob Doren**

**Phone: (305) 348 - 6721**

**Email: [dorenr@fiu.edu](mailto:dorenr@fiu.edu)**

**[www.sfrestore.org](http://www.sfrestore.org)**

**Office of the Executive Director  
(305) 348-1665**

