



# Regional Assessment of Priority Animal Management

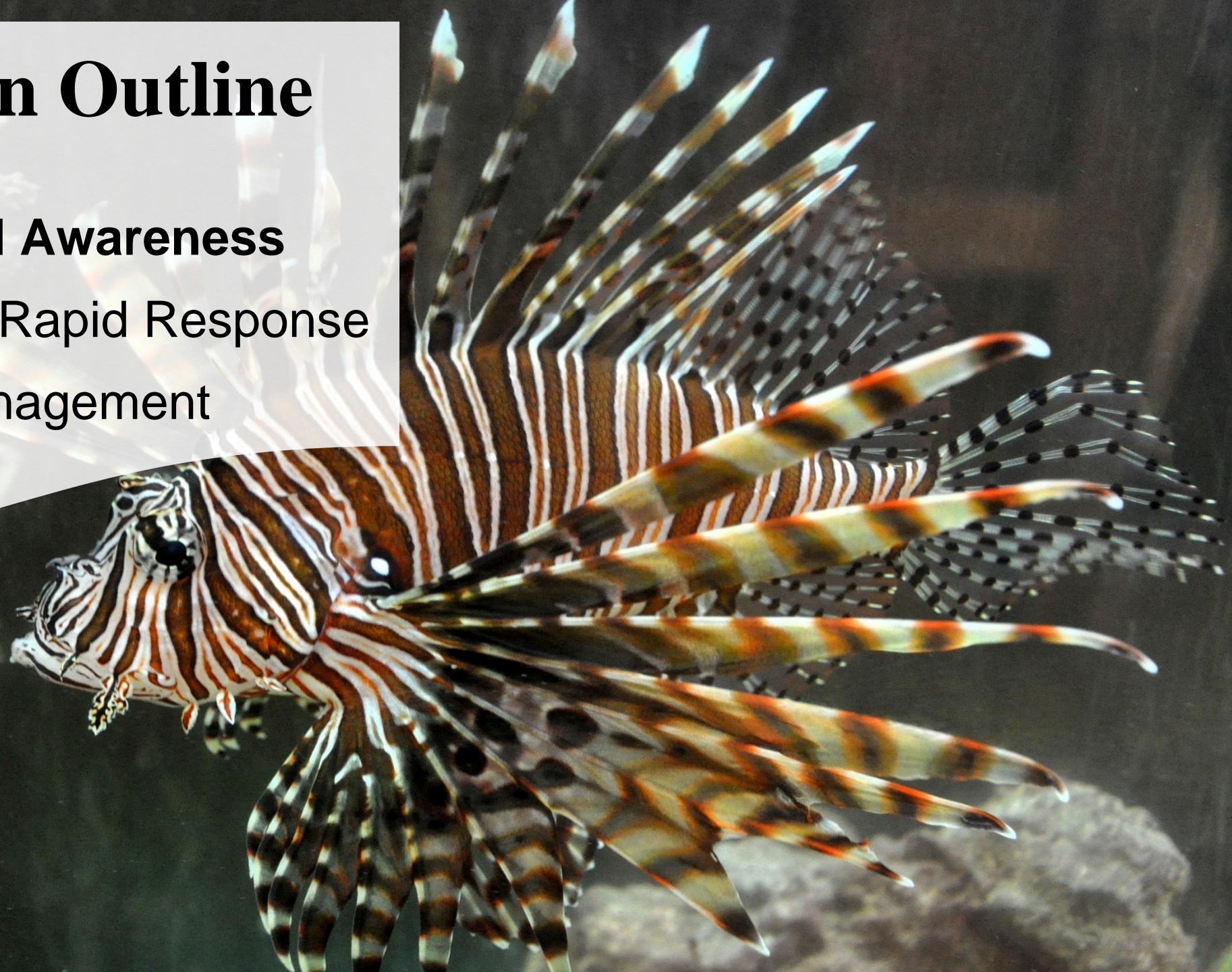


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# Presentation Outline

- **Prevention and Awareness**
- **Early Detection/Rapid Response**
- **Control and Management**





# Nonnative Fish and Wildlife Technical Assistance Group (TAG)

- TAG charged with examining regulatory structure for nonnative fish and wildlife in Florida
  - Provide feedback to FWC
  - No decision-making authority
- Members represent 12 interest groups
- 11 meetings completed (one virtual in 2023)



The intent of the Florida Python Challenge® is to raise public awareness about invasive species in Florida, like Burmese pythons, that are a threat to the Everglades ecosystem. The Florida Python Challenge® is an effort to promote protection of native wildlife through removal of Burmese pythons.



**1,050**

Participants  
-35 states  
-1 from  
Belgium

**209**

Pythons  
removed

**\$10  
K**

Grand Prize  
by Inversa  
Leathers



- August 9 – 18, 2024
- registration opened May 30, 2024
- \$25,000 total cash prizes available
- 258 participants registered as of Jun. 17
- Prizes offered in Novice, Professional and Military categories





To reduce the number of nonnative species released into the wild, the Exotic Pet Amnesty Program offers a free and legal opportunity for Florida residents to rehome nonnative pets they are no longer able to keep.

Over  
7,300

Total requests  
to rehome  
nonnative pets

Over  
1,500

Nonnative  
pets regulated  
as Conditional  
or Prohibited

Over  
1,400

Pre-  
approved,  
active  
adopters

## 2023 – 2024 Highlights



- Database overhaul to reduce admin. time
- Focus on out-of-state adopter recruitment
- iHeart Media campaign May to June 2024
- **280** adopter applications, so far

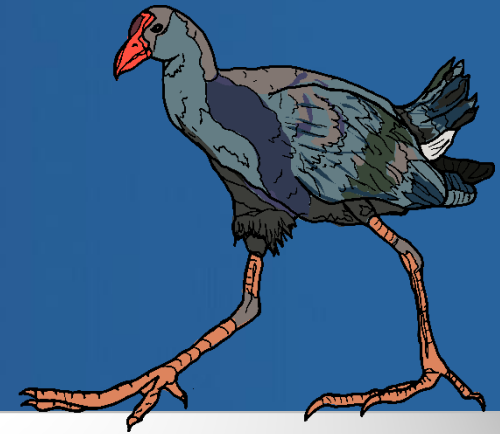
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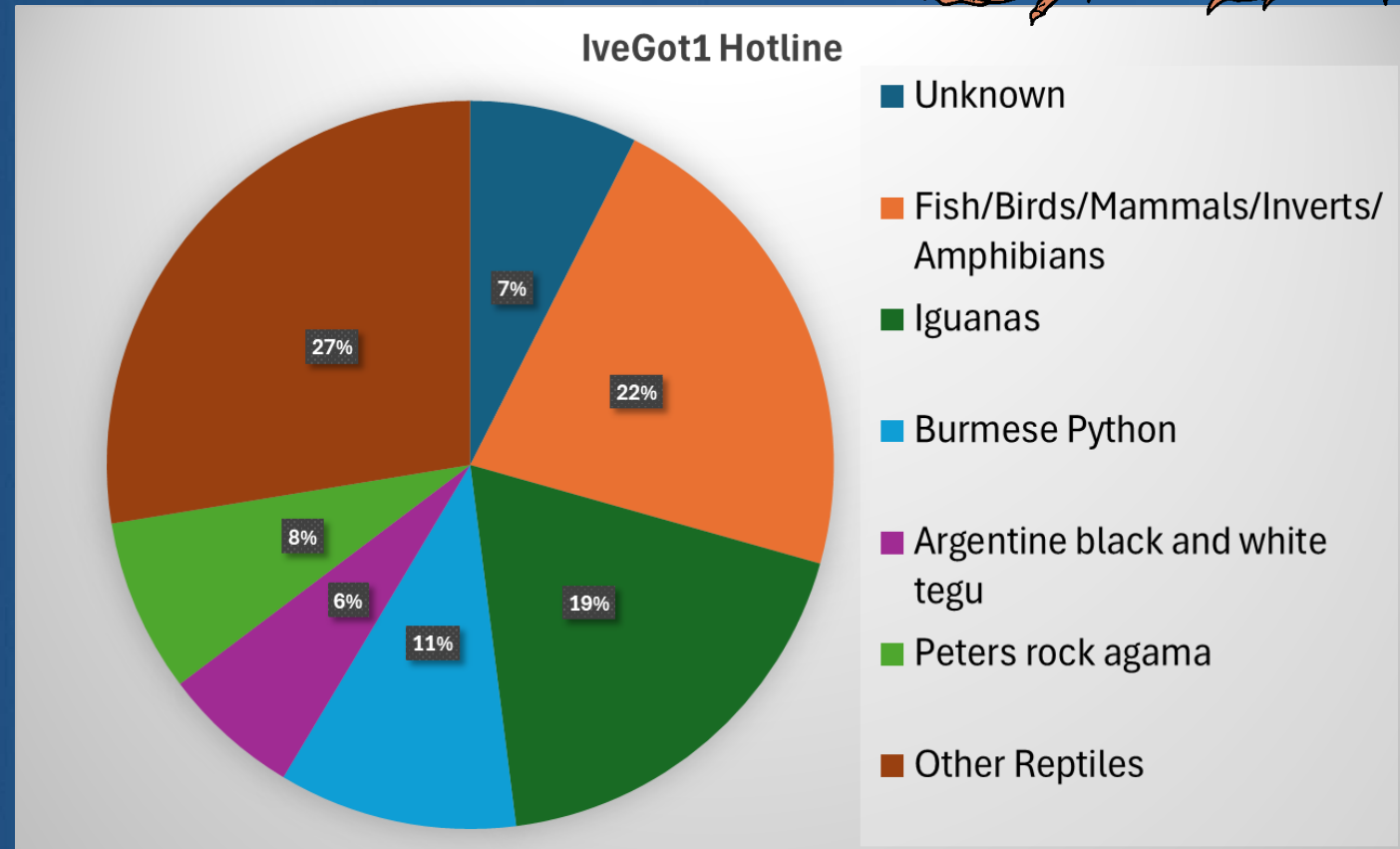
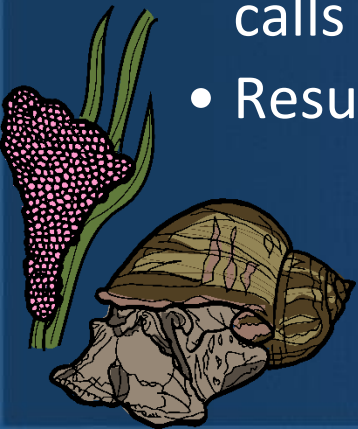




# IVEGOT1 and Public Reporting



- 2,676 hotline calls within past year
  - 50% about observations
  - Reptiles make up over 3 quarters of hotline reports
  - 11% Burmese pythons related calls
  - Resulted in 260 animal removals

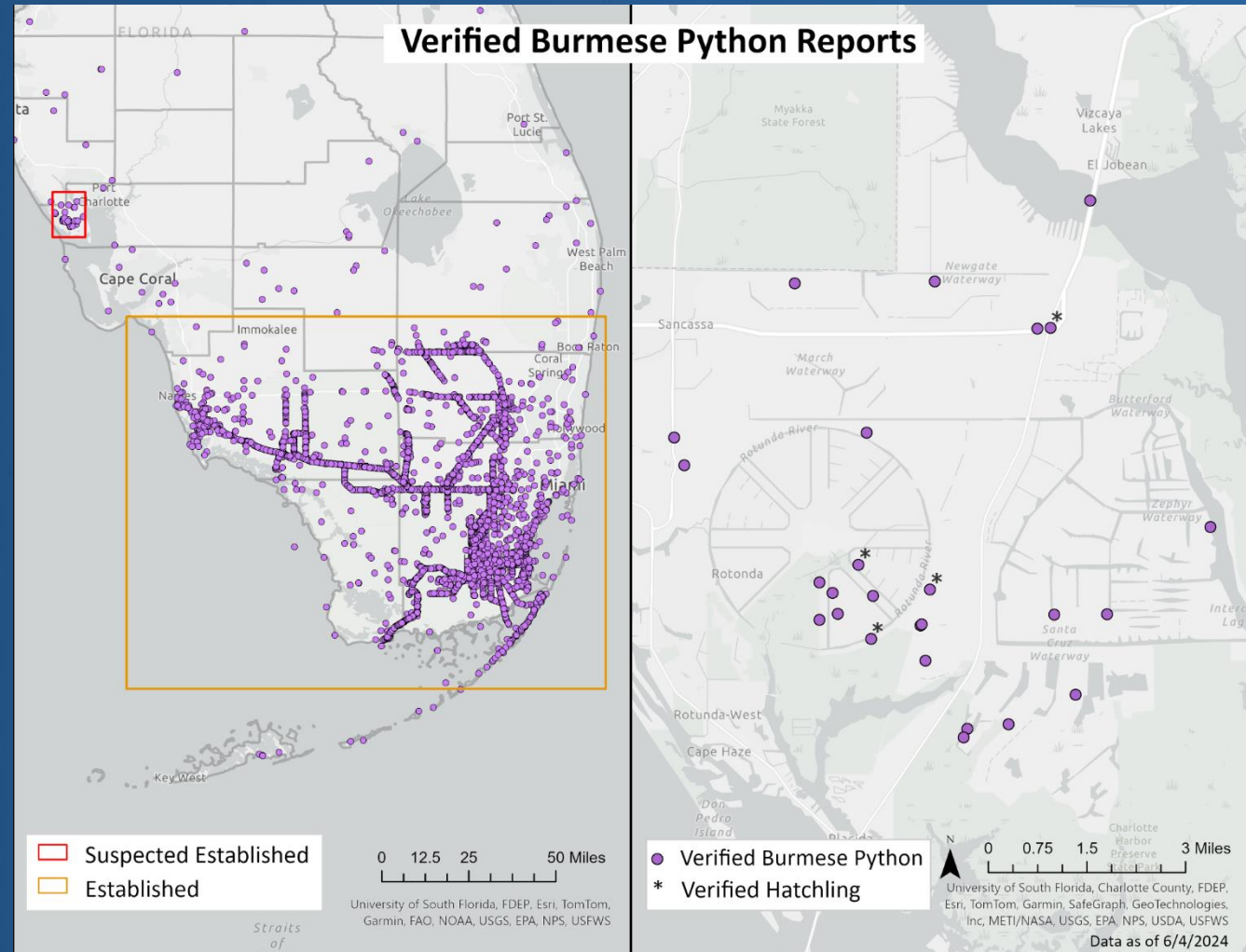




# Charlotte County Burmese Pythons

*Python molurus bivittatus*

- Majority of sightings occurring in far western Charlotte County.
- Up till May 2024 there have been 27 verified reports from Charlotte Co.
  - 4 of those reports were hatchlings/juveniles.
- FWC has 2 dedicated part time employees surveying Rotonda area
- FWC had an organized media announcement day in March 2024 to increase public reporting

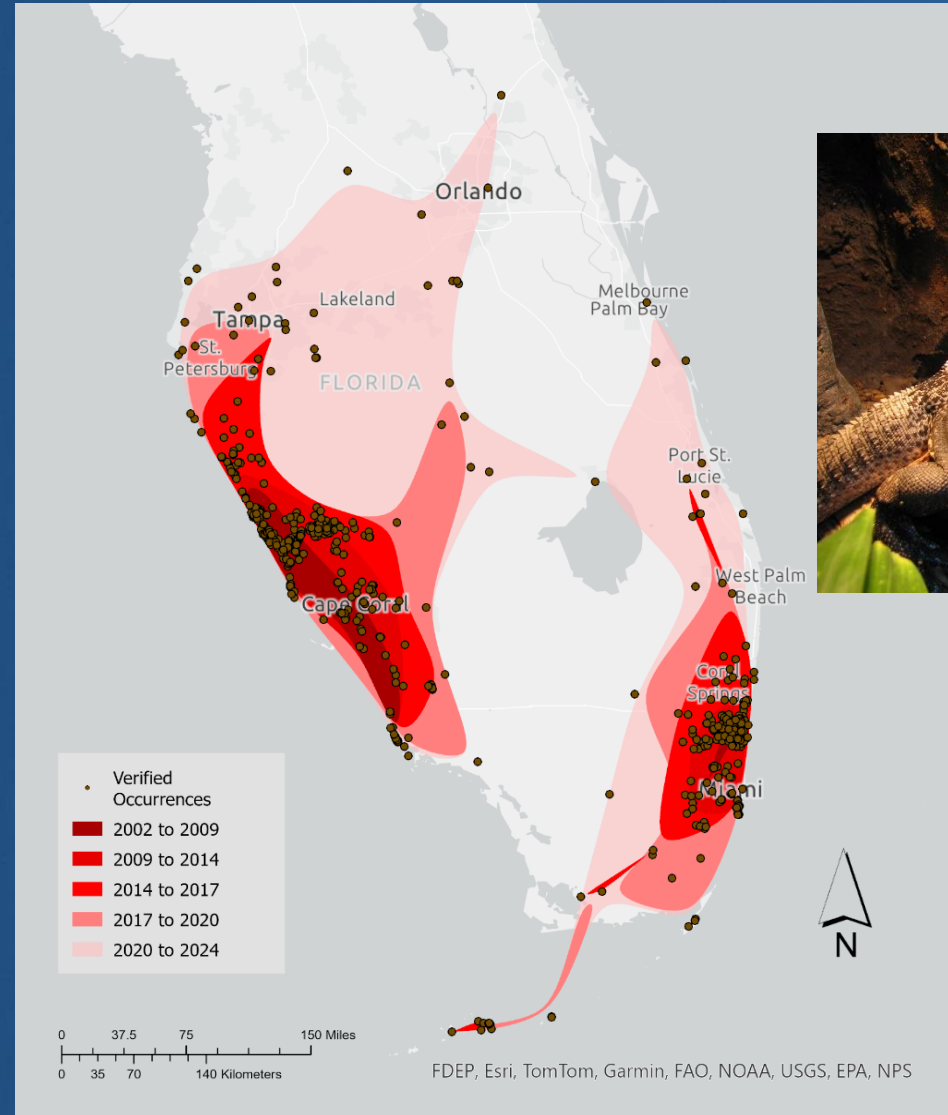




# Black Spiny-tailed Iguana Update

*Ctenosaura similis*

- Two possible populations
  - SW Counties: Pinellas through Collier through Collier
  - S Counties: Palm Beach through Miami-Dade
- Steady increase in reports
- Not an established range map





# Black Spiny-tailed Iguana & Burrowing Owl EDRR

*Ctenosaura similis* & *Athene cunicularia*

- Goal: Prevent Green and Spiny-tail iguanas from impacting Florida burrowing owls
- Partner: Broward County Courthouse
- Traps: Havaharts, Tomahawks, and double doors
- Trapped: 16 Spiny-tails, 0 Greens in 3 trap weeks (March and April)
- Lures: Blackberries appeared to be most effective

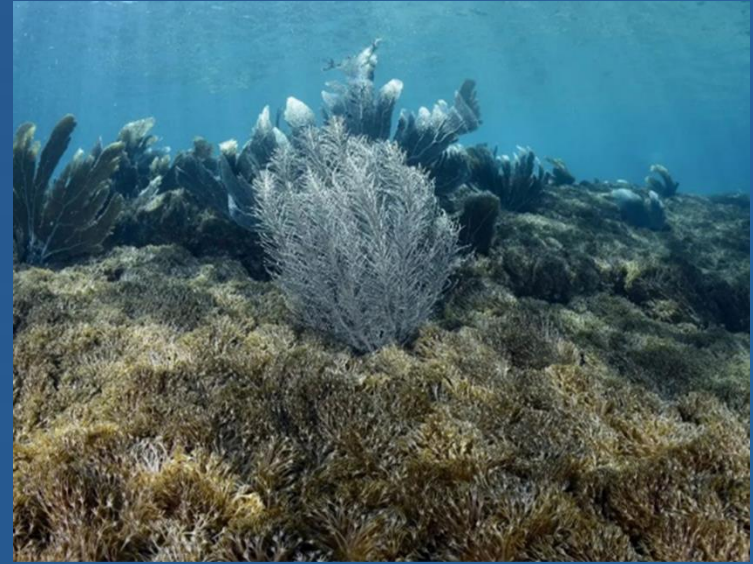




# Invasive Pulse Corals

Family Xeniidae, including *Unomia stolonifera*

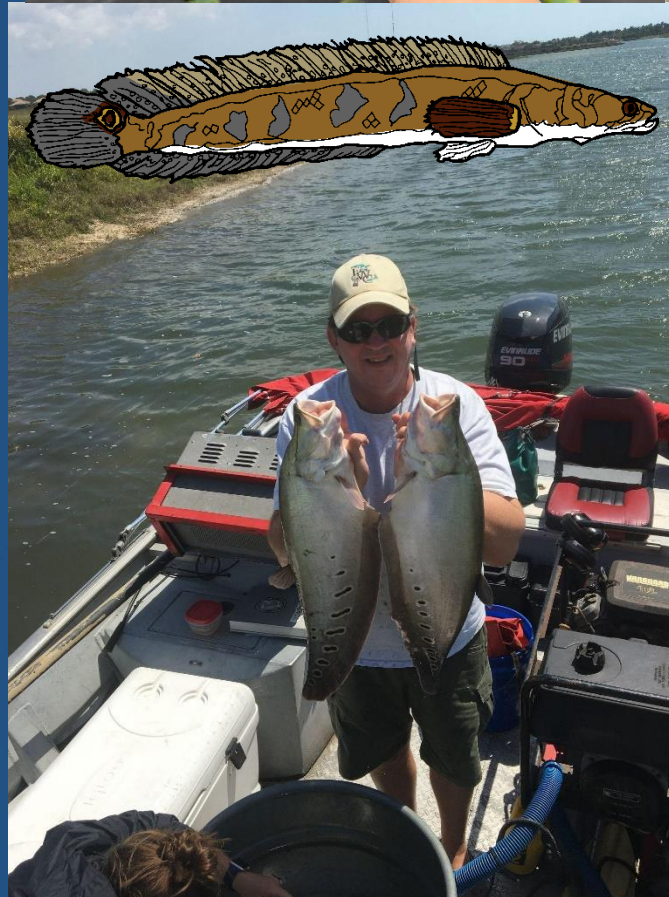
- Issue: Invasive pulse corals (family Xeniidae) found in locations such as Hawaii, Colombia, and were recently reported in Puerto Rico and Cuba
- Puerto Rico implemented Executive Order banning Xeniidae family corals in May 2024
- Partners in SE USA meeting to discuss EDRR efforts in Florida
- If you see Xeniidae, **Do Not Touch It, Report It:** <https://www.agrra.org/the-unomia-learning-exchange/>





# Fish Slam Update

- Goal: Since 2013, sample nonnative freshwater fish in Florida
- Partners: State, Federal, Tribal, museums, and universities
- 16th Fish Slam held in December 2023 in Cape Coral area
- 54 biologists from 9 organizations
- Sampled 31 sites, collected 16 species



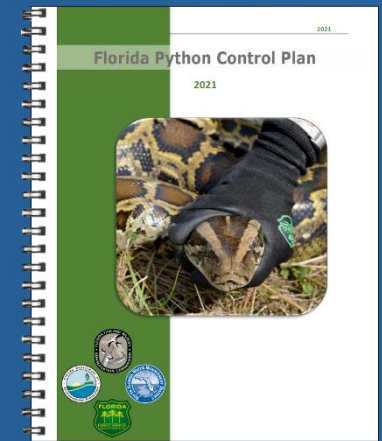
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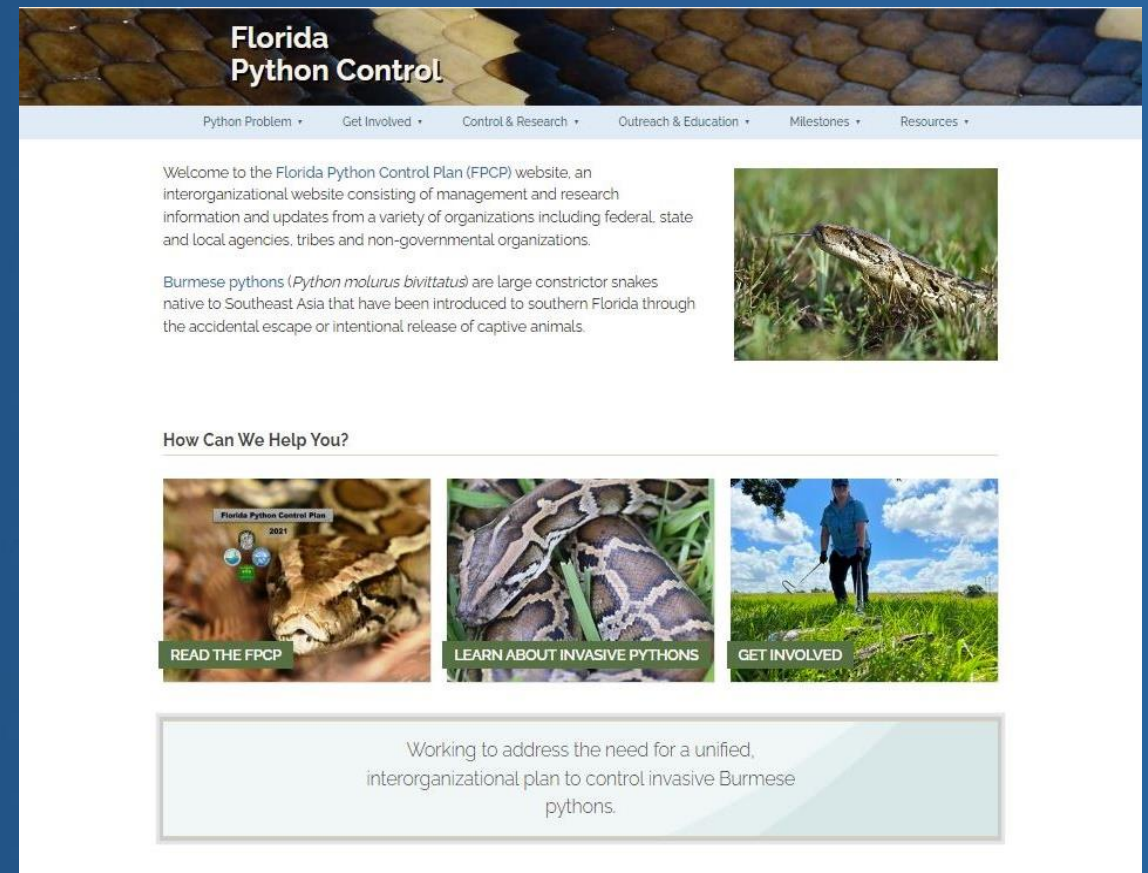




# Florida Python Control Plan



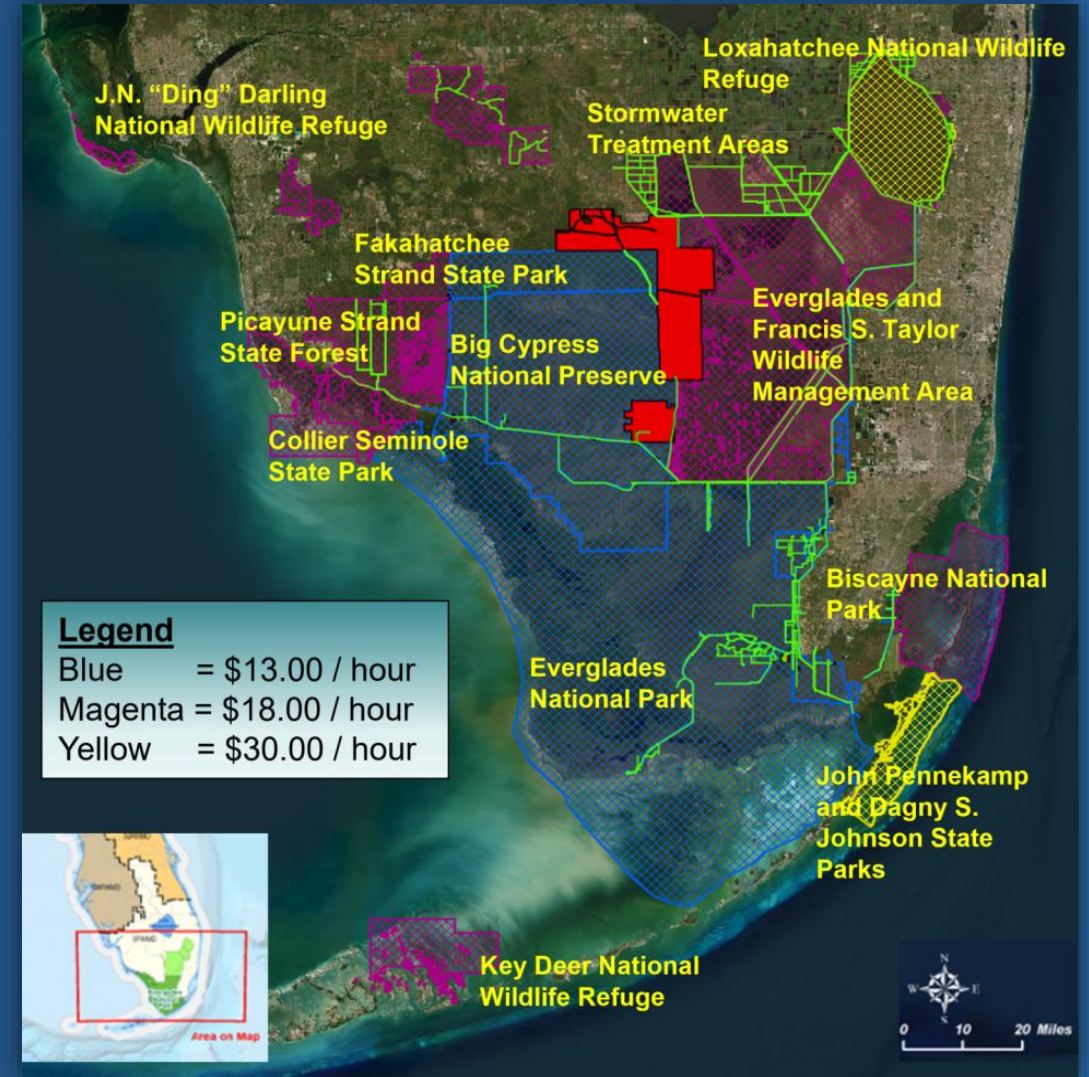
- Resource guide to cooperatively manage pythons in Florida
- Multi-organizational effort
- Finalized in August 2021
- FPCP Workgroup currently implementing the plan
- FPCP Website active as of 2023:  
[flpythoninvasion.org](http://flpythoninvasion.org)



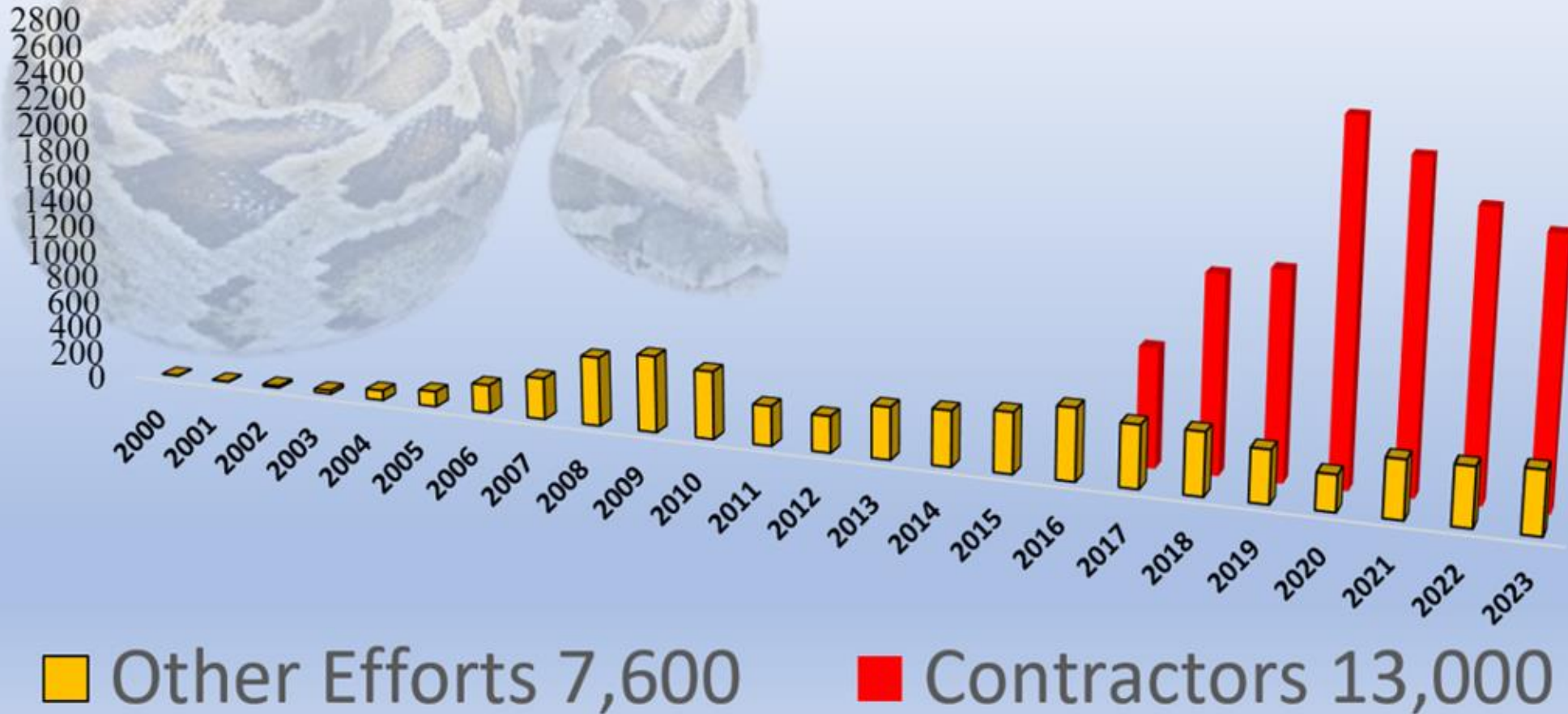


# Python Removal Contractors

- FWC and SFWMD sister programs
- Compensate local experts to survey for and remove pythons
- ~100 paid contractors
- Over 13,000 pythons removed
- Project area spans 11 counties



# Burmese Pythons Removed



# 2023 Python Telemetry Scout Programs

## Conservancy of Southwest Florida

- Established 2013
- 32 scout pythons (31M:1F)
- 44 associate pythons



## Everglades FST WMA (UF, USGS, FWC, SFWMD)

- Established 2022
- 13 scout pythons (6M:7F)
- 8 associate pythons



## BICY (USGS, NPS)

- Established 2017
- 34 scout snakes (15M:19F)
- 4 juveniles
- 31 associate pythons





# Loxahatchee Python Update

- Informal ECISMA python workday on Jan. 30, 2024 in response to a sighting of large 10+ foot python along the L-40 levee on Jan. 16, 2024
- Multi-agency response: USFWS (4), FWC (5+contractor), UF (3)
- An estimated 4-6 miles were surveyed on both sides of the levees by foot and by vehicle
- Python was not located

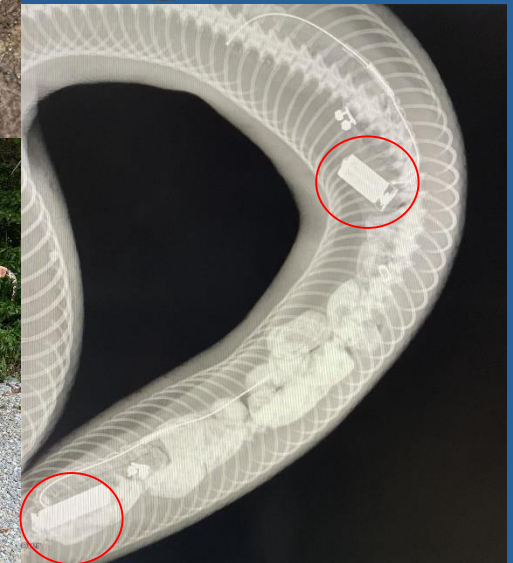




# Innovative Upcoming Tools for Control

## Telemetered Prey (meso-mammal) Project

- 8 collared opossums predated by pythons
- 4 python captures (one python ate two collared opossums) and three trackers passed before capture
- Colored zip ties have been added to collars to potentially increase retention time in pythons and assist in identification of collared opossums with remote cameras
- Python predation events occurred Jul.-Oct.

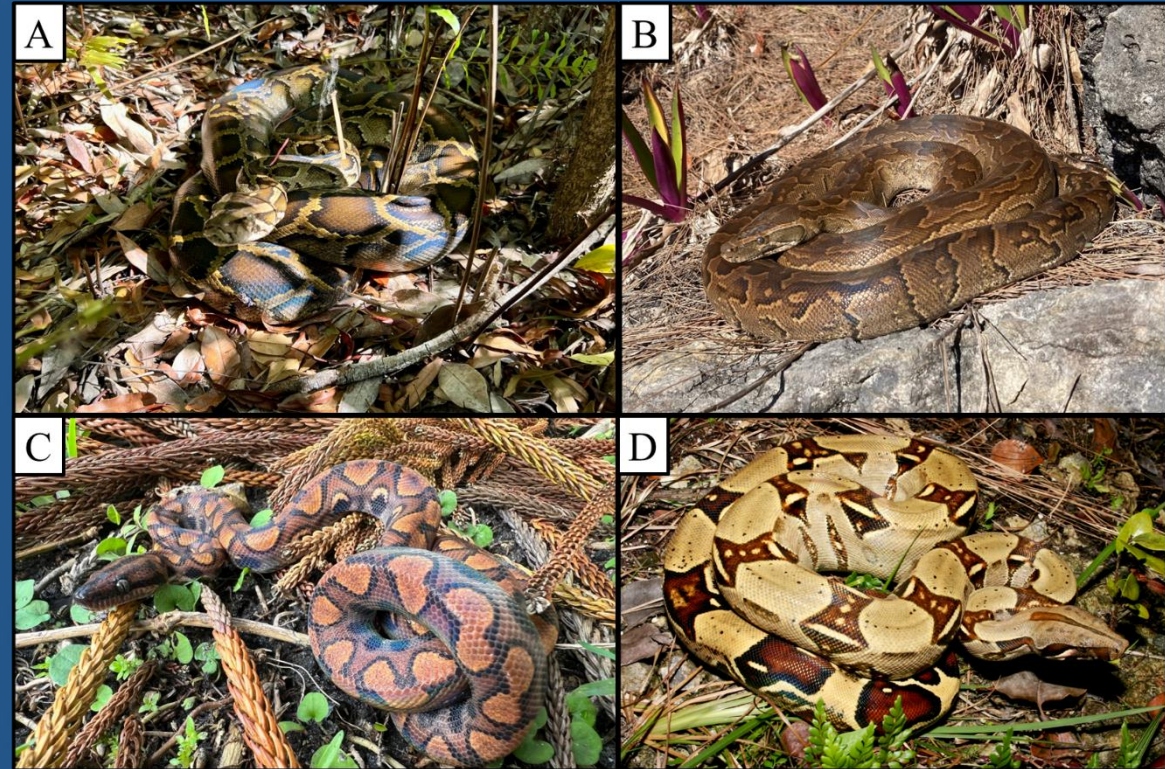




# Innovative Upcoming Tools for Control

## Multi-plex Digital PCR Assays

- Developed by UF
- Detects DNA of 4 target species from one sample
- Assays developed for eDNA detection of invasive wildlife and fish in multi-invaded systems
- First assay designed to detect Burmese python, NAP, Boa constrictor, and rainbow boa





# Northern African Python

*Python sebae*

- Large nonnative constrictor
- Localized population established in Miami-Dade County since 2001
- 49 NAPs removed since discovery
  - 8 removed since December 2021
  - Ongoing surveys and canvassing
- Necropsies found raccoons, rats, birds, and unidentified canid in gut

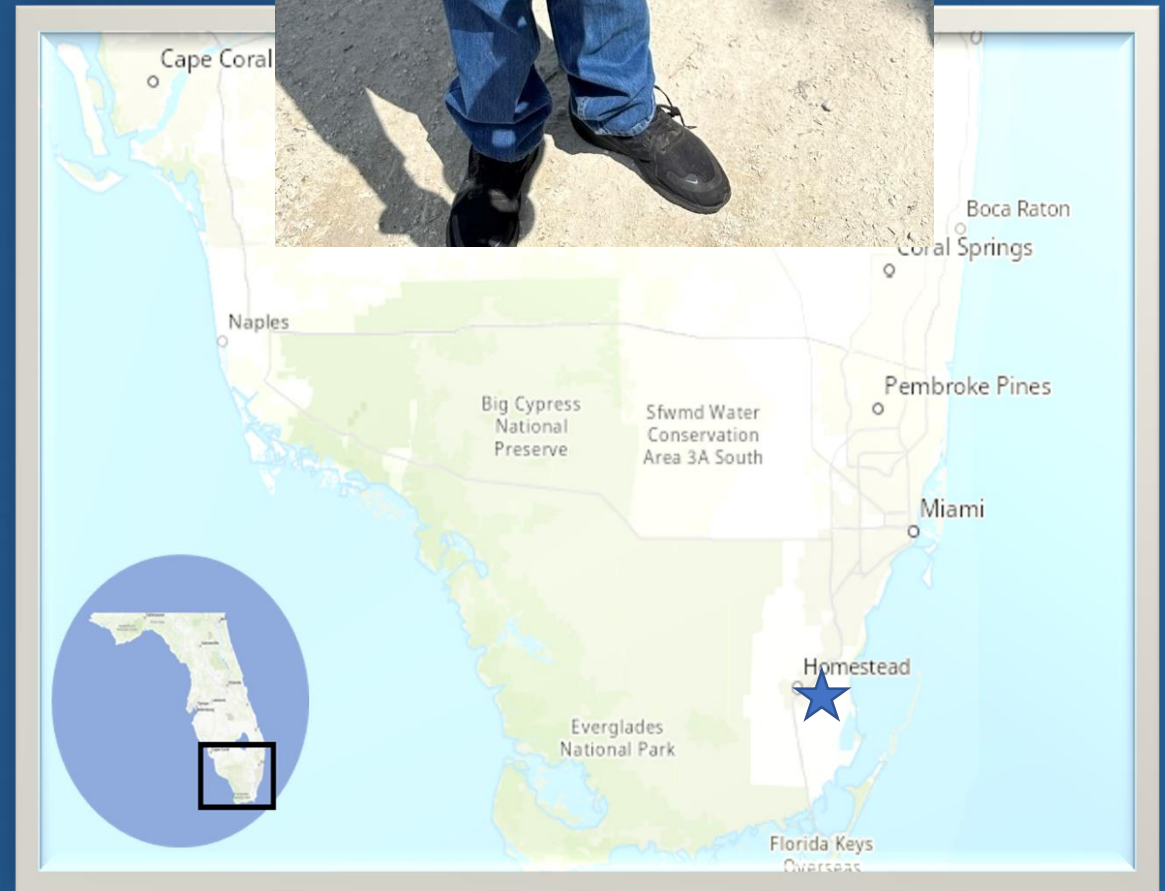




# Rainbow Boa

*Epicrates cenchria/maurus*

- Native to Brazil
- Not currently established
- 8 removed since 2009
- Negative impacts through consumption of native species
- First documented clutch from wild-caught rainbow boa
  - Female gave birth to 12 neonates June 2 – 4, 2023





# Boa Constrictors outside Deering Estate and in Everglades National Park (ENP)

*Boa constrictor*

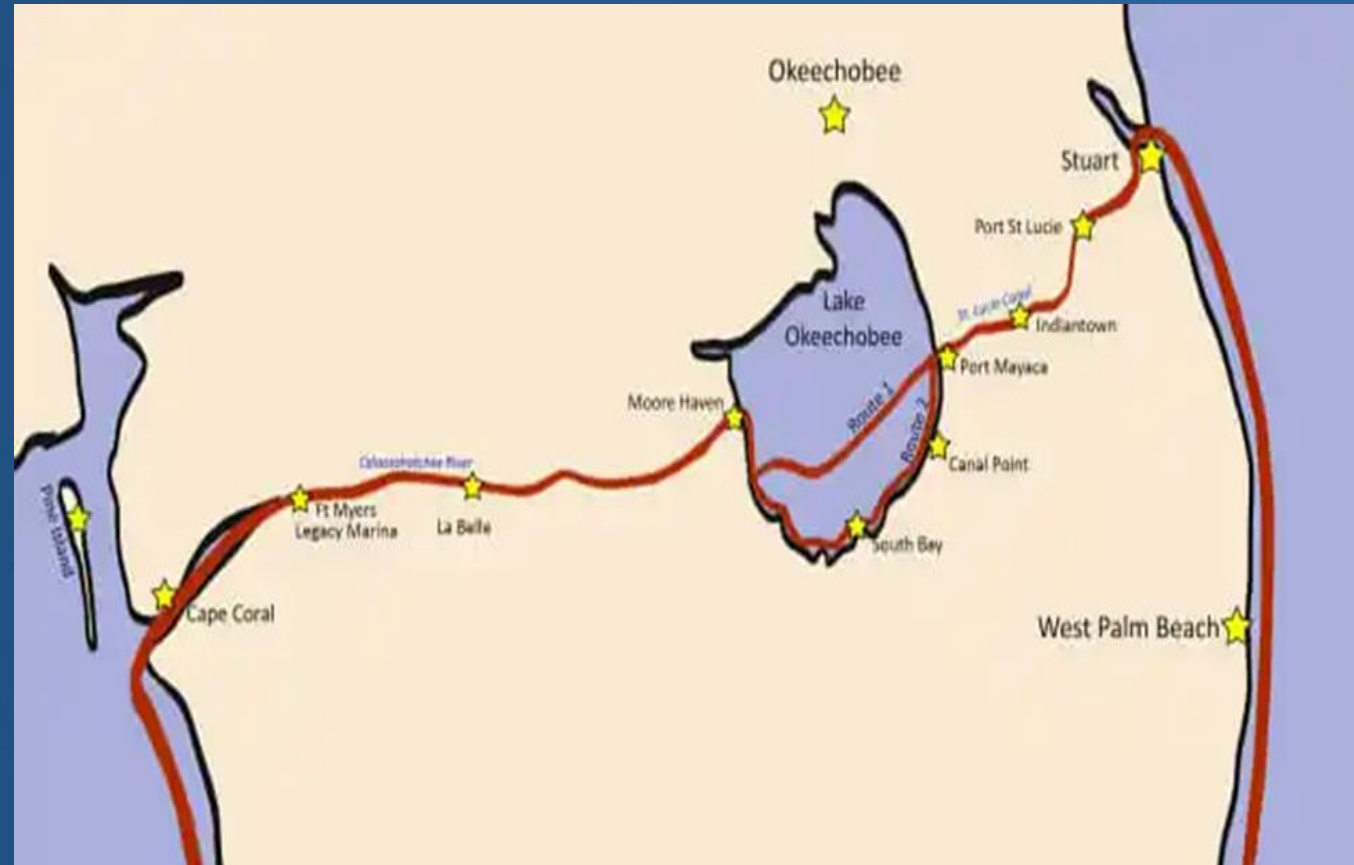


- Collaboration between Miami-Dade County, FWC, Zoo Miami, and UF
- Deering: 41 surveys conducted by FWC and park staff, effort is ongoing
  - 129 hours of survey time as of June 2024
  - Removed 5 Boas and 1 B. python
- ENP: UF captured 1 Boa on Main Park Rd.
  - Hispid cotton rat hair found in GI tract



# Herbert Hoover Dike (HHD) Invasive Control

- USACE utilizes Economy Act agreement with USDA Wildlife Services to remove burrowing lizards
  - Red-headed Agama- 450
  - G. Iguana-259
  - B. Basilisk- 95
  - N. Curlytail-29
  - B. Spinytail-1
- See Matt's Poster

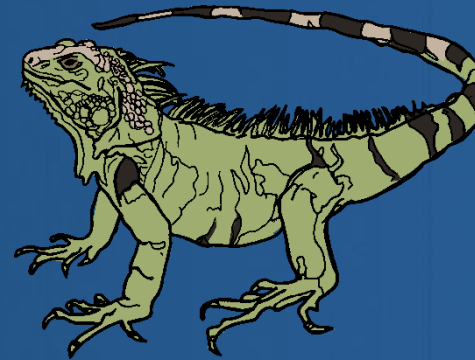




# Iguana Removal in Keys

*Iguana sp. and Ctenosaura spp.*

- Goal: To minimize the impact of Iguanas on critical public conservation lands
- Contractors charged remove iguanas from 5 Wildlife Environmental Areas (WEAs) and 8 State Parks in the Florida Keys
- July 2023-April 2024, 580 iguanas removed; 1,313 total
- Success varied by site and was greatly dependent on allotted removal method

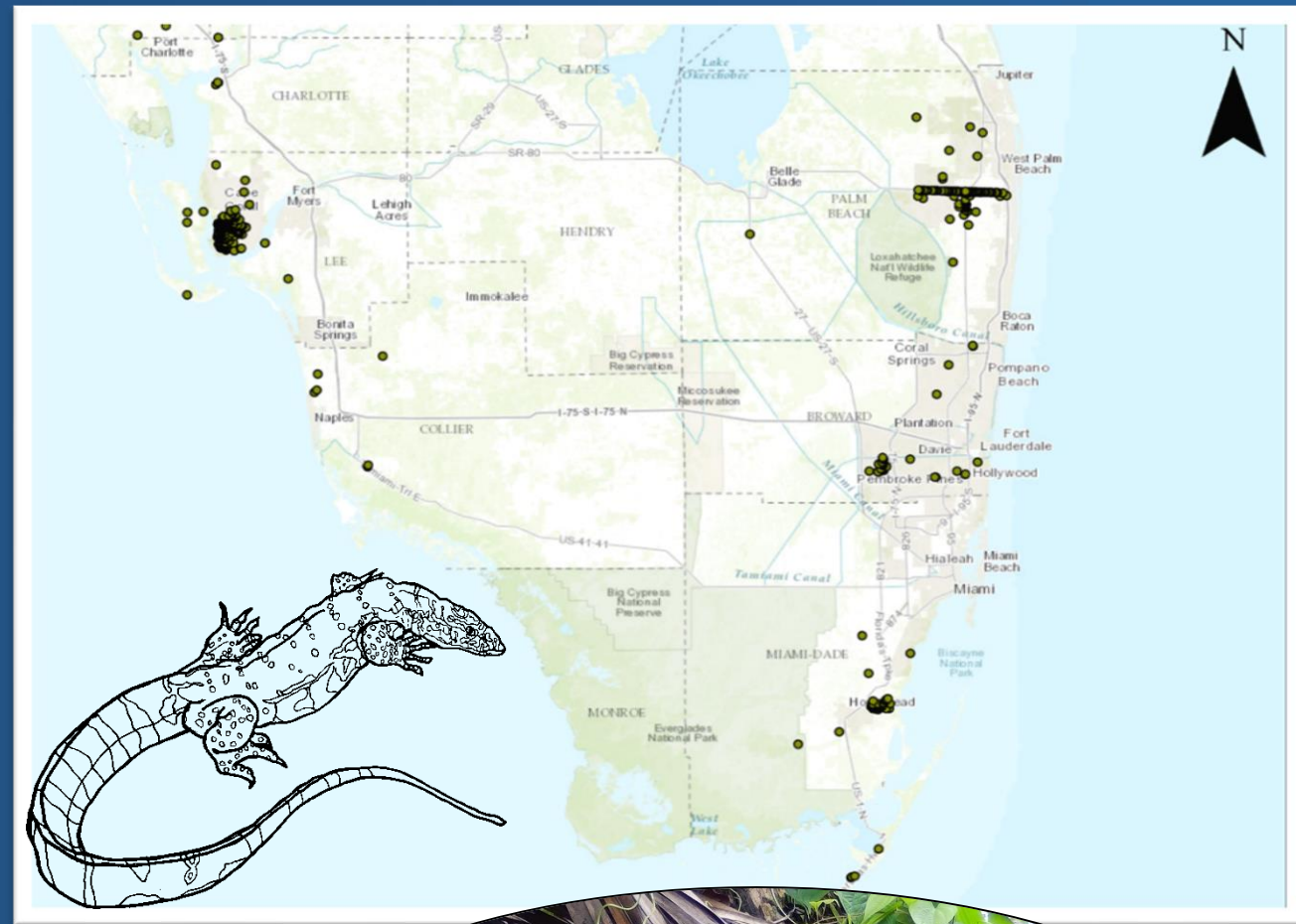




# Nile Monitor

*Varanus niloticus*

- Large lizard native to sub-Saharan Africa
- Two breeding populations in Florida
  - Cape Coral
  - West Palm Beach
- Apex predator
- 0 removed last year in WPB
- Observed 2 in field and 3 on cameras, all on E-2 Canal





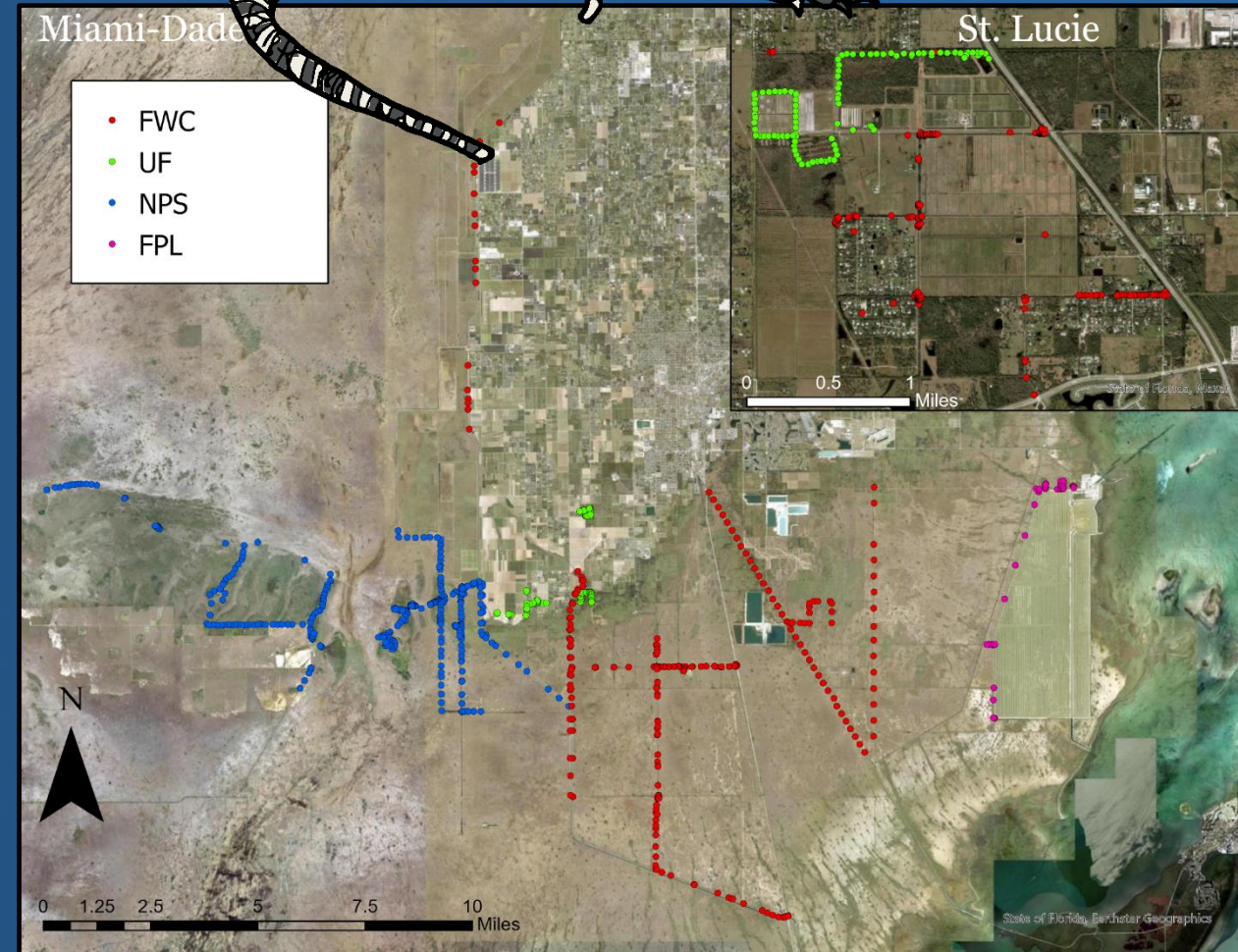
# Black and White Tegu Trapping

*Salvator merianae*



## Agency Capture Summaries - 2024

- Miami-Dade County
  - FWC: 756; CPUE=0.019
  - UF: 124; CPUE=0.027
  - NPS (Canals): 79; CPUE=0.012
  - NPS (EVER): 10; CPUE=0.001
  - FPL: 75; CPUE=0.042
- St. Lucie County
  - FWC: 165; CPUE=0.047
  - UF: 51; CPUE=0.008
- Charlotte County
  - FWC: 52; CPUE=????



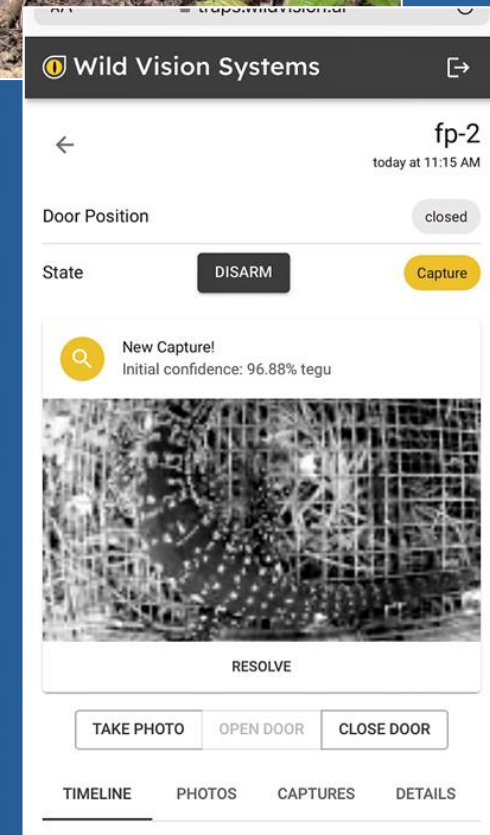


# Black and White Tegu

*Salvator merianae*

## Innovative Tools - AI Smart Traps (UF and Wild Vision Systems)

- Wild Vision Systems (WVS) designed a smart trap to selectively capture target species while eliminating bycatch
- Traps are solar powered and can be checked and operated remotely via web
- Last year, UF and WVS successfully field-tested 1st Gen smart traps for capture of tegus in St. Lucie County
- Next step, make minor refinements to smart traps identified during first field deployment to develop Gen 2 smart trap ready for large scale tegu trapping efforts



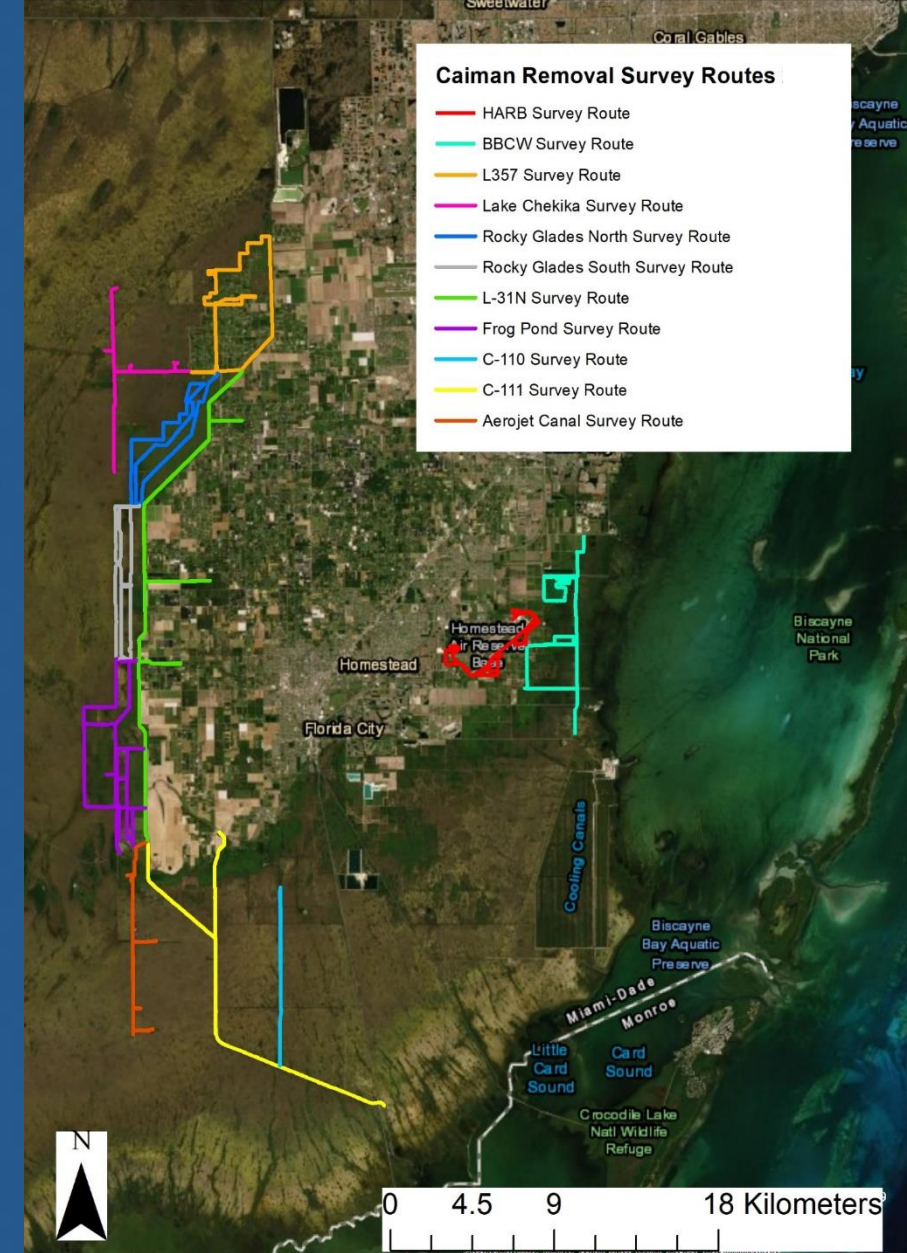
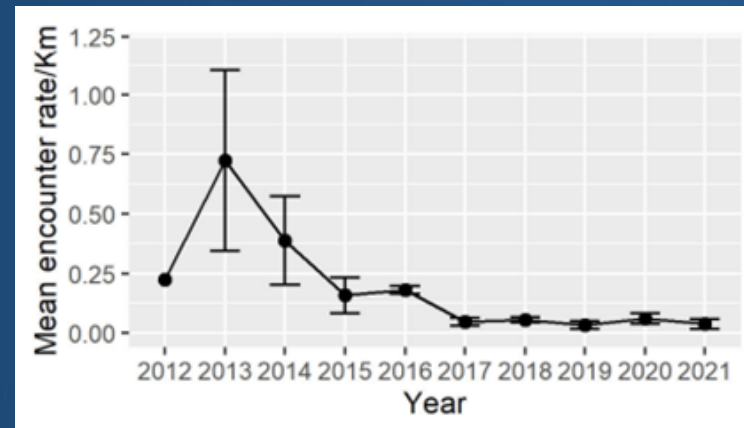


# Spectacled Caiman

*Caiman crocodilus*



- Collaboration among UF and USACE
- Total caiman removed: 304
- Total surveys conducted: 444
- Continue to see decrease in number of caiman removed despite an increase in survey effort
- May indicate maximum containment of population





# Feral Hogs/Wild Boar

*Sus scrofa*

- USACE continues to implement hog removal via volunteer trapper program
- Trappers allowed to take hogs along Herbert Hoover Dike
- USDA also provided aerial removal services on adjacent SFWMD lands
- Reduced damage on dike

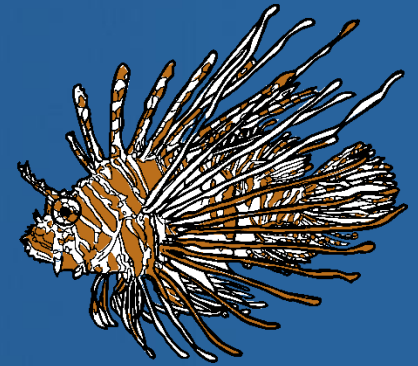




# FWC Lionfish Removal

*Pterois volitans*

- 9 Lionfish (LF) tournaments in 2023
  - 9 scheduled for 2024 (may increase)
- Lionfish Removal and Awareness Day
  - May 18, 2024
  - Over 2,000 people attended
  - Removed over 7,411 LF
- 2024 Lionfish Challenge, May 24-Sep 2, 2024
  - 363 people registered as of May 30, 2024
  - 52 trips have been taken
  - 2,206 LF removed in 7 days (as of May 30, 2024)





# Summary



- Interorganizational collaboration and public engagement are key to success
- Continue to see increase in unique species and populations
- Don't Let It Loose!
- If you see it, report it!





# Additional Updates 2024