

## SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE



LEADERSHIP • PARTNERSHIP • RESULTS

## Invasive Species and WRDA 2020

Adam Gelber, OERI Allyn Childress, OERI Carrie Beeler, OERI November 19, 2022

## Water Resources Development Act 2020



Photo Credit: Argentine Black and White Tegu by ECISMA

• The "SLITHER" Act was included in WRDA 2020 as "Invasive Species Risk Assessment Prioritization and Management"

 Amended WRDA 1996 and added specific duties to the Task Force related to invasive species

# WRDA 2020 Direction

#### Part 1: Develop a priority list of invasive species.



Part 2: Focus on cooperative and collaborative efforts to:

- Guide applied research
- Develop innovative strategies and tools
- Implement specific management, control, and eradication activities

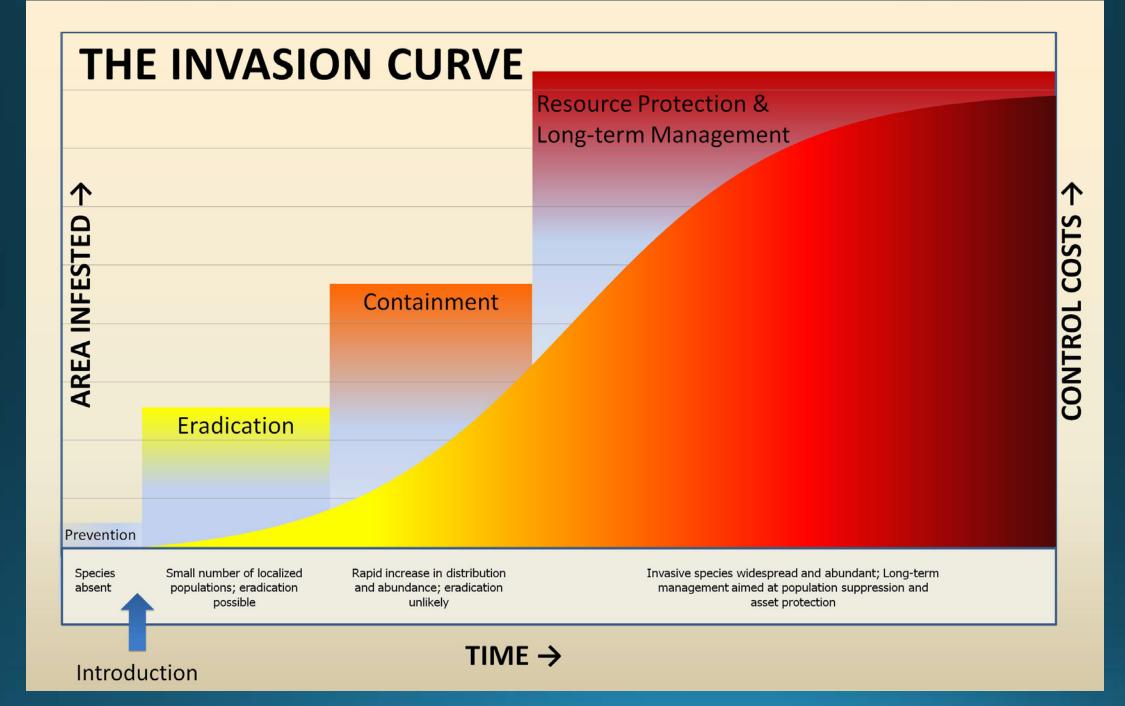
Photo Credits from left to right: Midas cychlid illustrated by Diane Peebles, African clawfoot frog provided by FWC, Northern African rock python by https://animalstime.com/african-rock-python-facts/, Lygodium by Jennifer Possley, and Conehead Termite http://www.pestworld.org/pest-guide/termites/conehead-termites/.

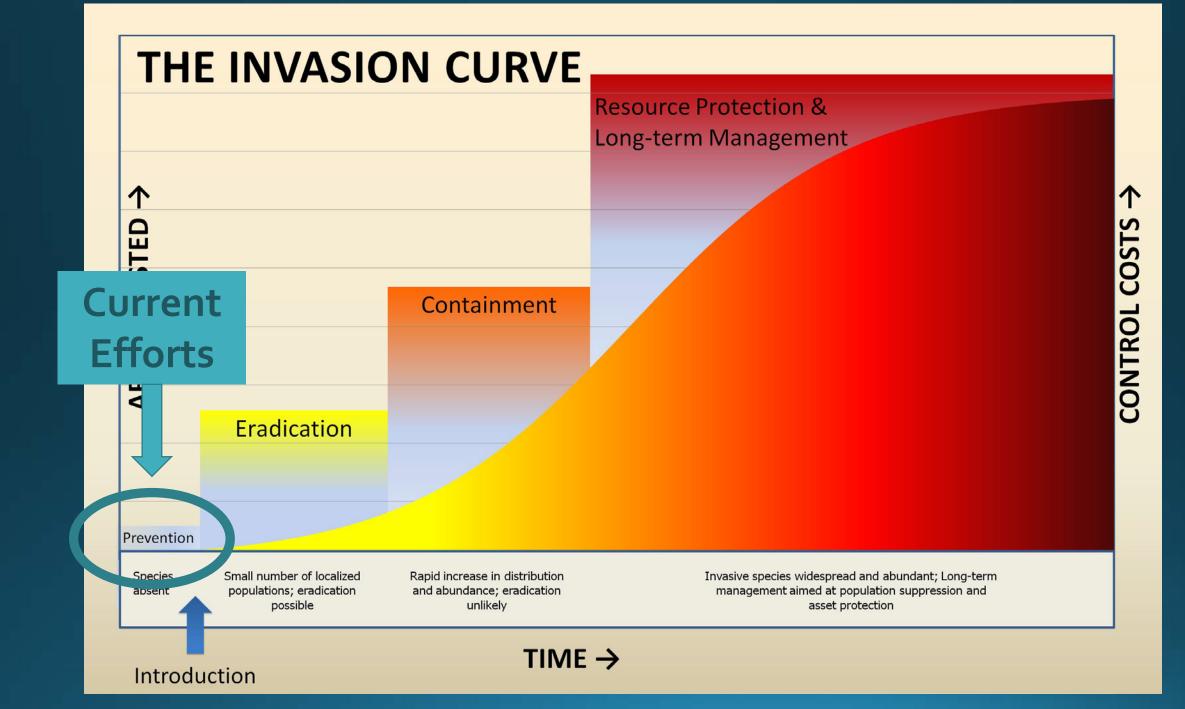
## Part 1: Progress Update

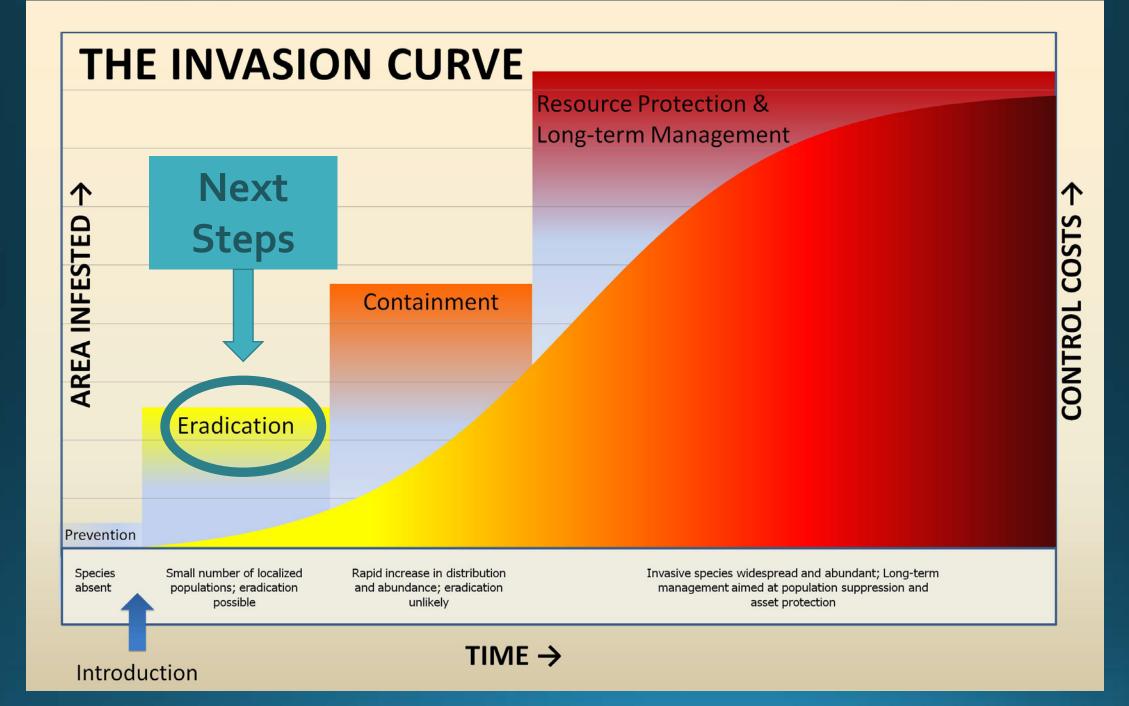
- Convene a group of experts
- Identify existing priority lists
- Identify path forward to create Task Force priority lists for:
  - Prevention
  - Eradication through EDRR (Early Detection & Rapid Response)
  - Established Species (Containment and Long-term Management)

# Part 1: Following the Curve

- As we work to fulfill the requirements of WRDA 2020, the team is using prior Task Force efforts to guide the process
- The Task Force's *Invasive Species Strategic Action Framework* has 4 Goals that are organized along the Invasion Curve
- Beginning with species that are found early on the Curve:
  - Prevention
  - Eradication through Early Detection and Rapid Response (EDRR)

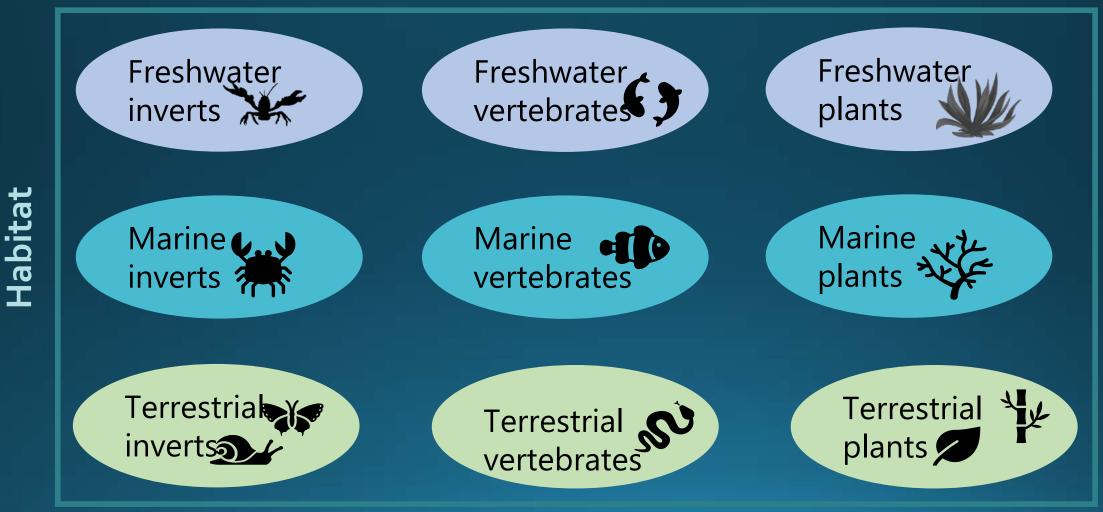






# Developing and Organizing the Lists

#### **Taxonomic Group**



Credit: Deah Lieurance UF, IFAS

# Prevention

- Working with experts to refine effort that has been already undertaken by University of Florida, USGS, and other partners
- Process identified 42 species of concern for the whole state of Florida





Procambarus clarkii (125) Dreissena polymorpha (125) Rhithropanopeus harrisii (100) Procombarus virginalis (var. fallax; Marmorkrebs) (100) Faxonius virilis (100) Potamopyrgus antipodarum (80) Limnoperna fortunei (80) Procambarus zonangulus (75) Faxonius palmeri (75) Faxonius immunis (64)



- Kappaphycus alvarezii, Kappaphycus striatum (100) Halophila stipulacea (80) Diplosoma listerianum (80) Tricellaria inopinata (64) Rapana venosa (64) Mycale (Mycale) grandis (64) Hemigrapsus sanguineus (64) Codium fragile subsp. tomentosoides (64) Ligustrum vulgare (100)
- Ligustrum vulgare (100)
   Phalaris arundinacea (80)
   Cytisus scoparius (80)
   Agrostis capillaris (80)
   Persicaria hydropiper (75)
   Avena fatua (75)





Macaca fascicularis (125) Alosa pseudoharengus (125) Xenopus laevis (100) Tilapia zillii (100) Rattus tanezumi (100) Gambusia affinis (100) Varanus indicus (80) Rana ridibunda (80) Micropterus dolomieu (80) Pseudorasbora parva (75) Poecilia reticulata (75) Cyprinella lutrensis (75) Pycnonotus cafer (64) Ploceus cucullatus (64)

Mamestra brassicae (100) Helicoverpa armigera (100)

Lymantria monacha (80)

Discus rotundatus (75)



- Very LowLowMedium
- High

#### Note: THESE DATA ARE unpublished

#### Credit: Deah Lieurance UF, IFAS

# Prevention

- Rated by likelihood of:
  - Arrival
  - Establishment
  - Impact
- Color saturation indicates certainty
- Next steps: Refine to the Everglades/South Florida Ecosystem (e.g., climate matching)





Procambarus clarkii (125) Dreissena polymorpha (125) Rhithropanopeus harrisii (100) Procombarus virginalis (var. fallax; Marmorkrebs) (100) Faxonius virilis (100) Potamopyrgus antipodarum (80) Limnoperna fortunei (80) Procambarus zonangulus (75) Faxonius palmeri (75) Faxonius immunis (64)



- Kappaphycus alvarezii, Kappaphycus striatum (100) Halophila stipulacea (80) Diplosoma listerianum (80) Tricellaria inopinata (64) Rapana venosa (64) Mycale (Mycale) grandis (64) Hemigrapsus sanguineus (64) Codium fragile subsp. tomentosoides (64)
- Ligustrum vulgare (100)
   Phalaris arundinacea (80)
   Cytisus scoparius (80)
   Agrostis capillaris (80)
   Persicaria hydropiper (75)
   Avena fatua (75)





Mamestra brassicae (100) Helicoverpa armigera (100) Lymantria monacha (80) Discus rotundatus (75)

Macaca fascicularis (125) Alosa pseudoharengus (125) Xenopus laevis (100) Tilapia zillii (100) Rattus tanezumi (100) Gambusia affinis (100) Varanus indicus (80) Rana ridibunda (80) Micropterus dolomieu (80) Pseudorasbora parva (75) Poecilia reticulata (75) Cyprinella lutrensis (75) Pycnonotus cafer (64) Ploceus cucullatus (64)



- Very LowLowMedium
- High

#### Note: THESE DATA ARE unpublished

#### Credit: Deah Lieurance UF, IFAS

# Early Detection & Rapid Response (Eradication)

- Developing a similar priority list process for EDRR species
- The focus would be on species already here that are most in need of rapid response
- Will conduct kickoff workshop in early 2023
- Invite experts and generate some "homework"
- Finalize the EDRR priority lists at a second workshop

# Early Detection & Rapid Response (Eradication)

## **Prevention**

### Rated by likelihood of:

- Arrival
- Establishment
- Impact

#### <u>EDRR</u>

### Rated by likelihood of: • Establishment • Spread • Impact

# Next Steps

Continue Implementing WRDA 2020 Part 1:
PREVENTION: Refine priority list of species for next Task Force meeting
EDRR: Early 2023 workshop with experts
CONTAINMENT/LONG-TERM MANAGEMENT: Established species refinement process Summer 2023