



SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE



LEADERSHIP • PARTNERSHIP • RESULTS

Implementing WRDA 2020: *Invasive Species Prevention*

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June 1, 2023

WRDA 2020 Direction

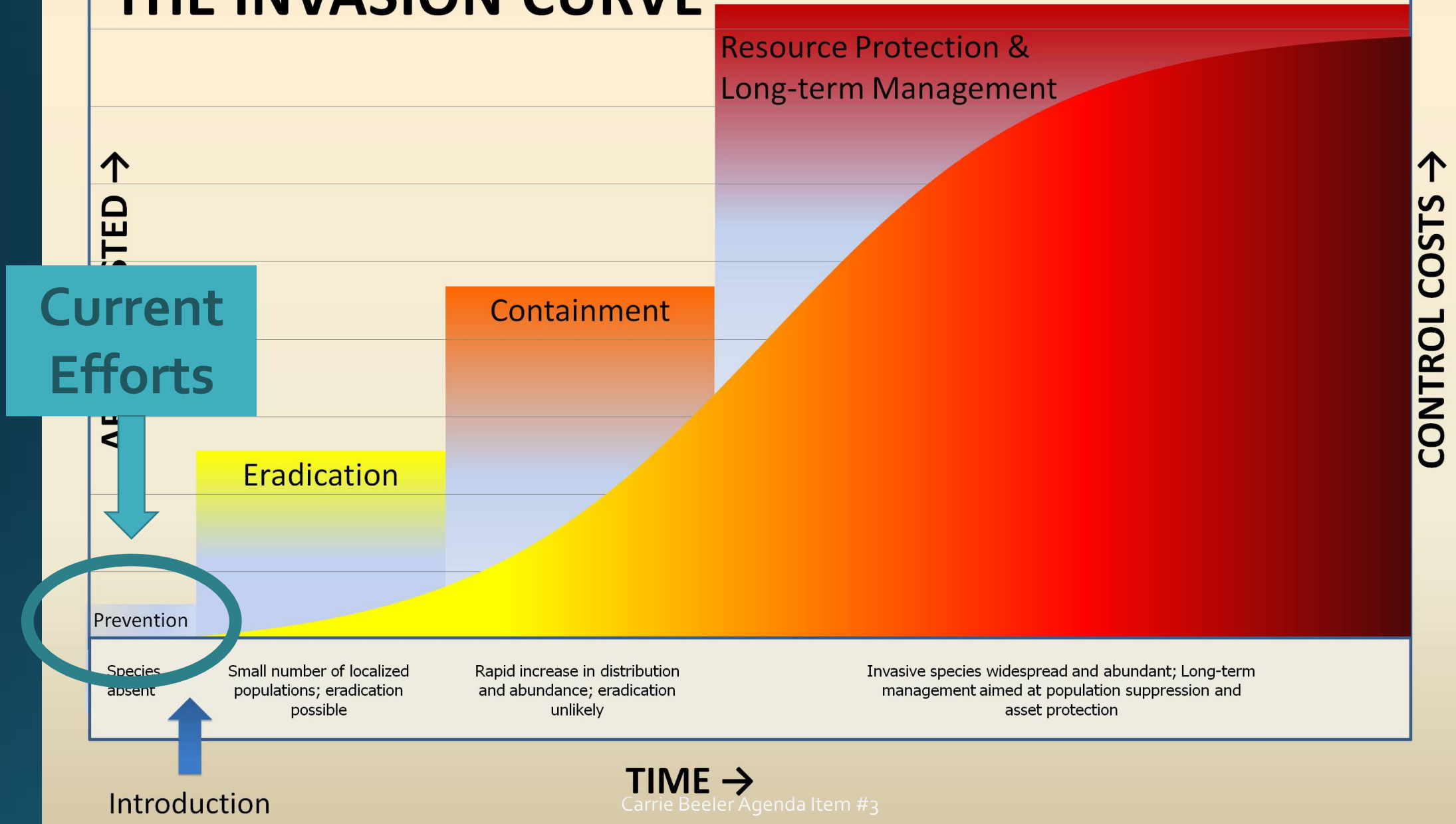
Part 1: Develop a priority list of invasive species.



Part 2: Focus on cooperative and collaborative efforts to:

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

THE INVASION CURVE



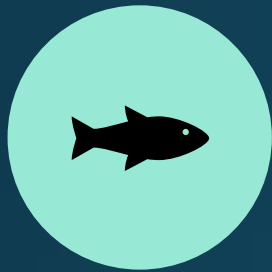
Implementing WRDA 2020: Prevention – Part 1

State-wide Prevention

- Horizon scan to identify invasive species threats to Florida
- Rated by likelihood of:
 - Arrival
 - Establishment
 - Impact
- Color saturation indicates certainty
- 40 Priority species for all of Florida



Developing the South Florida Ecosystem Restoration *Preliminary Prevention* Priority Species



40 SPECIES FROM
FL ALL TAXA
HORIZON SCAN
PROCESS
REFINED TO 16



MANGROVES
EVALUATED BY
EXPERT OPINION
AND/OR HORIZON
SCAN PROCESS



3 MANGROVES
ADDED TO THE
LIST



TOTAL OF 19
SPECIES SPLIT
BETWEEN 5 TAXA

*Note Florida All Taxa Horizon Scan Manuscript is in review (Deah Lieurance et al)

Fresh Water Invertebrates

- *Limnoperna fortunei* (Golden Mussel)
- • *Procambarus clarkii* (Red Swamp Crayfish)



GUSTAVO A. DARRIGRAN



Elise Thompson, LA Beat

Fresh Water Vertebrates

- *Tilapia zillii* (Redbelly Tilapia)
- *Xenopus laevis* (African Clawed Frog)
- *Rana ridibunda* (Marsh Frog)
- *Pseudorasbora parva* (Stone Moroko)



Marine Species

- *Kappaphycus alvarezii*, *Kappaphycus striatum* (Agar-agar)
- • *Halophila stipulacea* (Halophila Seagrass)
- *Mycale (Mycale) grandis* (Orange Keyhole Sponge)



Plants

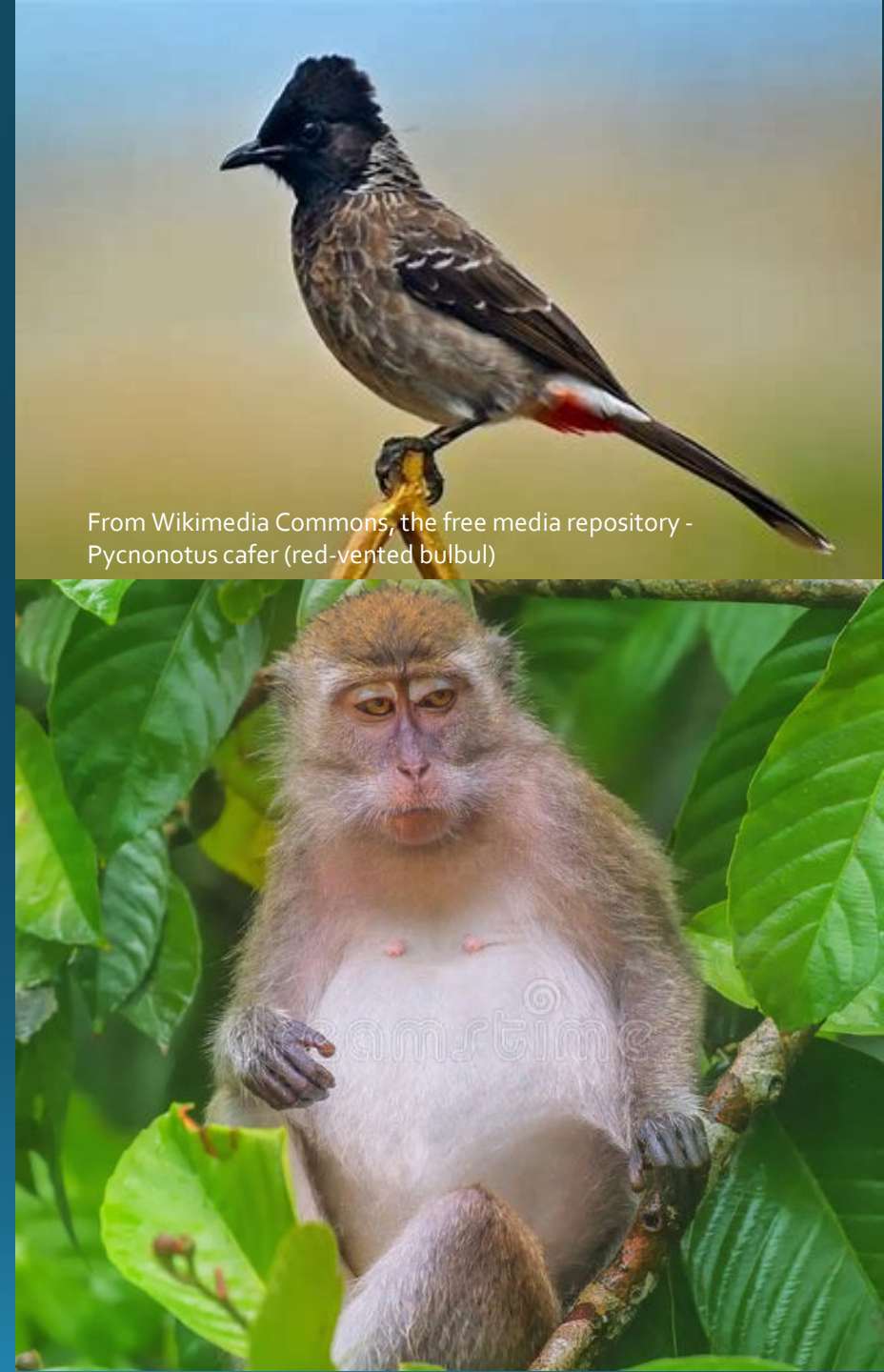
- *Phalaris arundinacea* (Reed Canary Grass)
- *Persicaria hydropiper*, *Polygonum hydropiper* (Marsh Pepper Knotweed)
- *Nypa fruticans* (Nipa Palm, Mangrove Palm)
- *Bruguiera* spp.* (Asian Mangrove in the family Rhizophoraceae)
- • *Lumnitzera* spp.* (Indo-West Pacific Mangrove)

* includes all species of genus



Terrestrial Vertebrates

- *Macaca fascicularis* (Crab-eating Macaque, Long-tailed Macaque)
- *Rattus tanezumi* (Tanezumi Rat, Asian House Rat, Asian Rat)
- • *Varanus indicus* (Mangrove Monitor, Western Pacific Monitor Lizard)
- *Ploceus cucullatus* (Village Weaver Bird)
- *Pycnonotus cafer* (Red-vented Bulbul)



From Wikimedia Commons, the free media repository -
Pycnonotus cafer (red-vented bulbul)

Implementing WRDA 2020: Prevention - Part 2

Recommended Actions for SFERTF:

Interrupting Pathways

Prevent them from getting here:

- Regulations
- Outreach and Education

Response Planning

Prepare for swift response:

- Research
- Monitoring
- Strategic planned responses

Interrupting Pathways: Regulation Recommendations

Restrict importation and possession of species through regulation using appropriate authorities

Add authorities to the USFWS Law Enforcement Wildlife Inspection Program to allow inspection of domestic containers that carry wildlife

Review and revise equipment decontamination protocols & procedures as appropriate

Interrupting Pathways: Outreach & Education

Recommendation: Task Force, Working Group,
Science Coordination Group, and OERI:

Distribute the list and recommended actions

Encourage member organizations and invasive
species groups such as CISMAs to adopt the list and

Create outreach initiatives and provide them to
target audiences

Response Planning

Recommendation: Task Force, WG, & SCG agencies prepare in case of species arrival

Research: Promote, fund, and support research including synthesis for priority species to identify preferred habitat, likely points of entry, and possible control methods

Monitoring: Include species in existing monitoring programs and develop new as needed

Response Planning: Encourage development of response action plans and teams



Prevention Resources Needed Examples

REGULATIONS: USFWS Law Enforcement Wildlife Inspection Program: Additional inspection resources such as inspectors and dogs/handlers

OUTREACH AND EDUCATION: Cleaning stations at boat ramps, marinas, fishing tournaments, at the State line, and other freshwater public access points

OUTREACH AND EDUCATION: Additional resources, including support to South Florida ecosystem CISMAs

RESPONSE PLANNING: Resources and resource requests to support research, monitoring, and planned response actions for the prevention priority species as needed



Next Steps

WRDA 2020 Part 1: Priority Lists

- **Early Detection Rapid Response:** Develop, calibrate, and validate methods for prioritization including a workshop
- **Established Species:** Evaluate current species lists and prioritize using newly developed processes

WRDA 2020 Part 2: Cooperative and Collaborative Efforts

- **Prevention:** TF/WG/SCG and OERI begin work on recommended actions

WRDA 2020 Updates

- **Prevention:** Continue updating priority species list and processes as needed

Discussion