

# Early Detection and Rapid Response in Florida: A Review

Dexter Sowell

Chad Anderson

2019 FLEPPC Conference

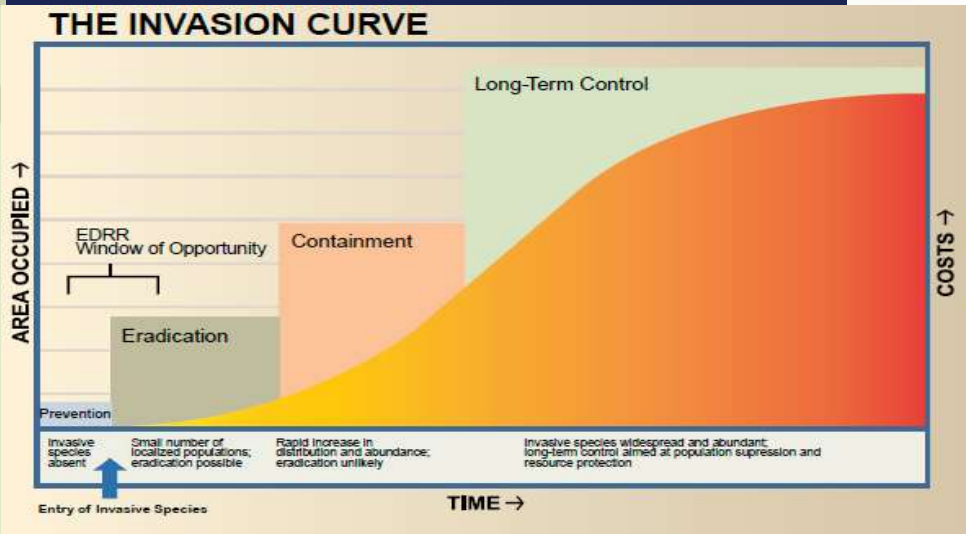


# Early Detection and Rapid Response (EDRR):

*A call to arms!*



- The **early detection** of a species that is not yet established in an area
- but which has been determined to be a threat to native species in similar areas (**rapid assessment**)
- and which should be eradicated as soon as possible to avoid potential ecological disturbance, aka **rapid response**
- Seems simple and straightforward...





# Part 1. Summarize various definitions or interpretations of EDRR and their origins

- Searched for documents or websites with EDRR plans
- Typically, EDRR is a component of a larger **Invasive Species Management Plan**, usually not a stand alone document
- Compared what the objectives of EDRR are among the plans by organization type and organizational level
  - National>Regional>State>sub-state
  - Government, NGO

# Part 1. Summarize various definitions or interpretations of EDRR and their origins

Source Document	Organization Level	Organization Type	Agency or Group	Purpose of EDRR		
				Eradication	Containment	Management
<p><b>Safeguarding America's Lands and Waters from Invasive Species: A National Framework for Early Detection and Rapid Response.</b>  <a href="https://www.doi.gov/sites/doi.gov/files/National%20EDRR%20Framework.pdf">https://www.doi.gov/sites/doi.gov/files/National%20EDRR%20Framework.pdf</a>, last accessed 17 Jan 2019. US Department of the Interior (DOI).</p>	National-US	Government, National	DOI	•		
<p><b>National Invasive Species Council Management Plan: 2016–2018.</b>  <a href="https://www.doi.gov/sites/doi.gov/files/uploads/2016-2018-nisc-management-plan.pdf">https://www.doi.gov/sites/doi.gov/files/uploads/2016-2018-nisc-management-plan.pdf</a>, last accessed 17 Jan 2019. US Department of the Interior (DOI).</p>	National-US	Government, National	DOI	•		
<p><b>USGS Website.</b> (<a href="https://www.usgs.gov/ecosystems/invasive-species-program/science/early-detection-and-rapid-response">https://www.usgs.gov/ecosystems/invasive-species-program/science/early-detection-and-rapid-response</a>), last accessed 17 Jan 2019. US Department of the Interior-US Geologic Survey (DOI-USGS).</p>	National-US	Government, National	DOI-USGS	•		
<p><b>National Strategic Framework for Invasive Species Management.</b>  <a href="https://www.fs.fed.us/foresthealth/publications/Framework_for_Invasive_Species_FS-1017.pdf">https://www.fs.fed.us/foresthealth/publications/Framework_for_Invasive_Species_FS-1017.pdf</a>, last accessed 17 Jan 2019. US Department of Agriculture-US Forest Service (USDA-USFS).</p>	National-US	Government, National	USDA-USFS	•	•	•
<p><b>South Florida Ecosystem Restoration Task Force, Invasive Exotic Species Strategic Action Framework Website.</b>  <a href="https://www.evergladesrestoration.gov/content/ies/">https://www.evergladesrestoration.gov/content/ies/</a>, last accessed 17 Jan 2019. US Department of the Interior (DOI).</p>	National-US	Government, National	DOI	•		

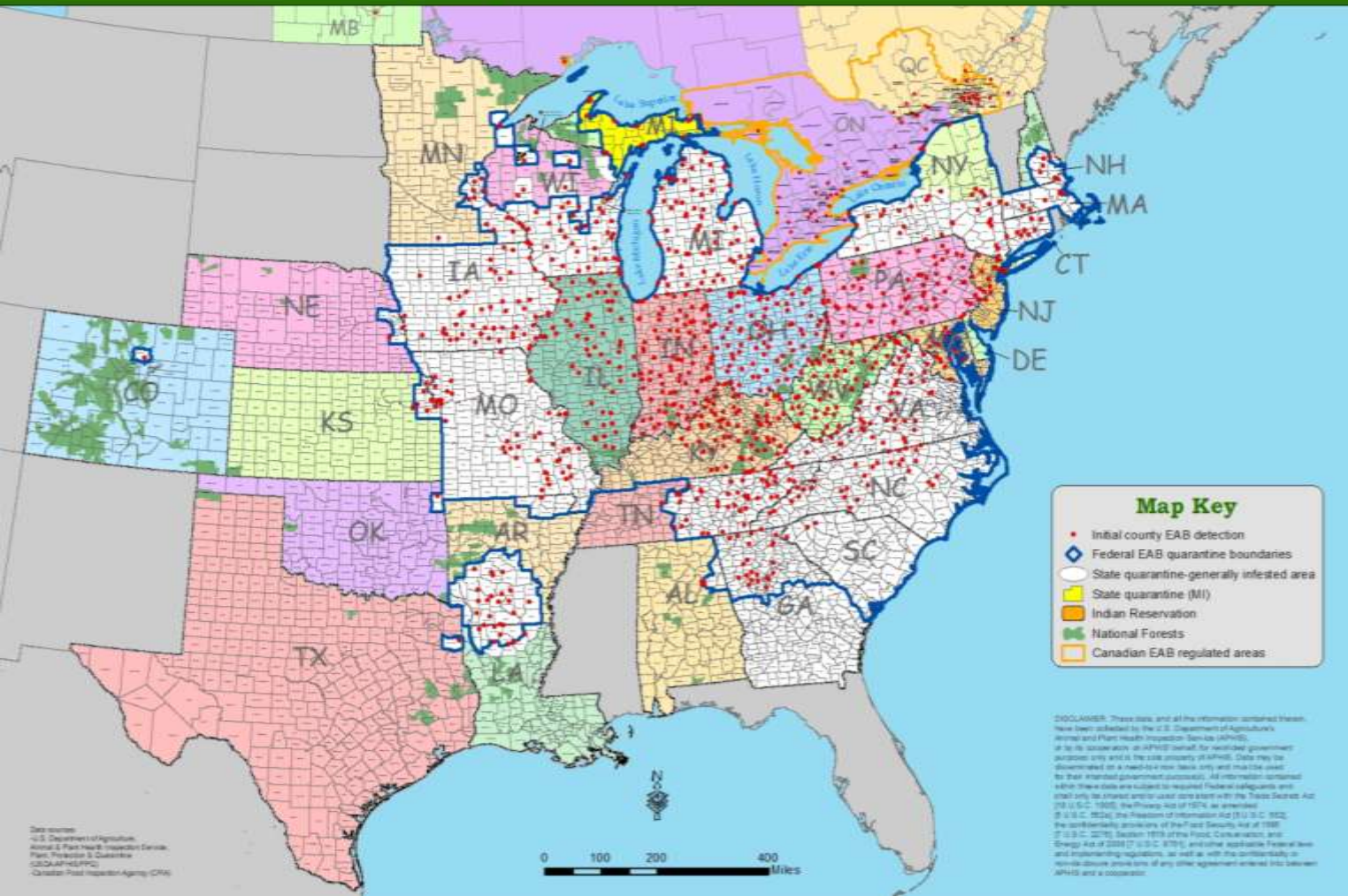
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<b>University of Florida Institute of Food and Agricultural Sciences (UF-IFAS), Department of Wildlife Ecology and Conservation Website.</b> ( <a href="http://ufwildlife.ifas.ufl.edu/reddy.shtml">http://ufwildlife.ifas.ufl.edu/reddy.shtml</a> ), last accessed 17 Jan 2019.	State-FL	University	UF-IFAS	•	•	
<b>California Invasive Plant Council (Cal-IPC) Website.</b> ( <a href="https://www.cal-ipc.org/solutions/management/">https://www.cal-ipc.org/solutions/management/</a> ), last accessed 17 Jan 2019.	State-CA	NGO, State	Cal-IPC	•		
<b>Everglades Cooperative Invasive Species Management Area (ECISMA) Website.</b> ( <a href="https://www.evergladescisma.org/what-we-do/">https://www.evergladescisma.org/what-we-do/</a> ), last accessed 17 Jan 2019.	sub-State-FL	NGO, sub-State	ECISMA	•		
<b>The Invasive Non-Native Species Framework Strategy for Great Britain.</b> ( <a href="http://www.nonnativespecies.org/downloadDocument.cfm?id=99">www.nonnativespecies.org/downloadDocument.cfm?id=99</a> ), last accessed 17 Jan 2019.	National-UK	Government, National	DEFRA	•		
<b>Australian Weeds Strategy 2017–2027</b> , Invasive Plants and Animals Committee, Department of Agriculture and Water Resources, Commonwealth of Australia. ( <a href="http://www.agriculture.gov.au/SiteCollectionDocuments/pests-diseases-weeds/consultation/aws-final.pdf">http://www.agriculture.gov.au/SiteCollectionDocuments/pests-diseases-weeds/consultation/aws-final.pdf</a> ), last accessed 17 Jan 2019.	National-AU	Government, National	DAWR	•	•	
<b>Arctic Invasive Alien Species: Strategy and Action Plan.</b> Akureyri, Iceland. ( <a href="https://oaarchive.arctic-council.org/bitstream/handle/11374/1929/CAFF-PAME_Arctic_Invasive_Alien_Species_Strategy_and_Action_Plan_%28ARIAS%29.pdf?sequence=1&amp;isAllowed=y">https://oaarchive.arctic-council.org/bitstream/handle/11374/1929/CAFF-PAME_Arctic_Invasive_Alien_Species_Strategy_and_Action_Plan_%28ARIAS%29.pdf?sequence=1&amp;isAllowed=y</a> ), last ac	Continental/Oceanic	NGO, Multi-continental	CAFF & PAME	•		

# Early Detection and Rapid Response (EDRR): Problems?

Cooperative Emerald Ash Borer Project  
Initial county EAB detections in North America

January 2, 2018



- Potential lack of uniformity in agency approach to an invasive species arrival
- Eradication may not be possible if Containment or Management is goal of other agency participants
- Agencies may have different thresholds to determine whether Eradication is to be pursued

# Part 2: EDRR Efforts in Florida: What's working-animals

- ▶ North African python
- ▶ Spectacled (common) caiman
- ▶ Sacred ibis
- ▶ Chameleons (panther, veiled)
- ▶ Conehead termite
- ▶ *Giant African land snail???*



## Make Giant African Land Snails legal as pets in The USA



1,514 have signed. Let's get to 2,500!

Remon Egusquiza signed 7 minutes ago

Bailey Dieckman signed 43 minutes ago

First name

Last name

Email

Tallahassee, 32306 United States

Display my name and comment

[Sign this petition](#)

By signing, you accept Change.org's [Terms of Service](#) and [Privacy Policy](#), and occasional emails about campaigns. You can unsubscribe at any time.

Jack D started this petition to United States Department of Agriculture (USDA)

Giant African Land Snails are illegal in the United States because they are an invasive species. The reason why they are illegal as pets compared to other snails is because they are huge. The largest of them can become 14-15 inches long. This is very unfair because animals like cats and dogs, not native to the US, are legal and widespread (I love, and have, cats and a dog. I have nothing against them). Even animals like the alligator and crocodile monitor are legal in some states (both are capable of killing people easily) but a non toxic, non venomous, friendly, leaf eating snail is illegal. In Britain, they are legal but if they are released, the former owner would be fined. That is how it should be in the US because many people are allergic to mammals (cats, dogs, hamsters, mice, rats, guinea pigs etc.) and these are a good replacement because they are friendly and social. They eat things like lettuce and cabbage, and almost every vegetable and fruit that is not citrus. If this petition get enough signatures, I will send a petition, first to Mr. Douglas H. Fisher, head of department of agriculture in New Jersey. If it passes through him, I will start another (much larger) petition to send to the head of the department for the country.

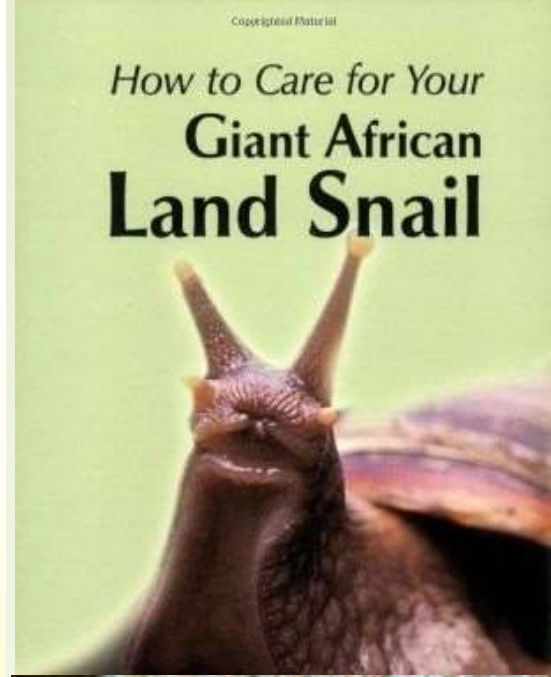
**Start a petition of your own**  
This petition starter stood up and took action. Will you do the same?

[Start a petition](#)

# Giant African Land Snail

## Giant African Land Snails As Pets

Giant African Land Snail complete care book.



9. Marketing ..... 73

10. Harvesting snails ..... 74

**Chapter 13: The Health Dangers of snails ..... 75**

    1. The Importance of Clean Hands ..... 77

    2. Signs of a Sick Snail ..... 79

**Conclusion ..... 81**

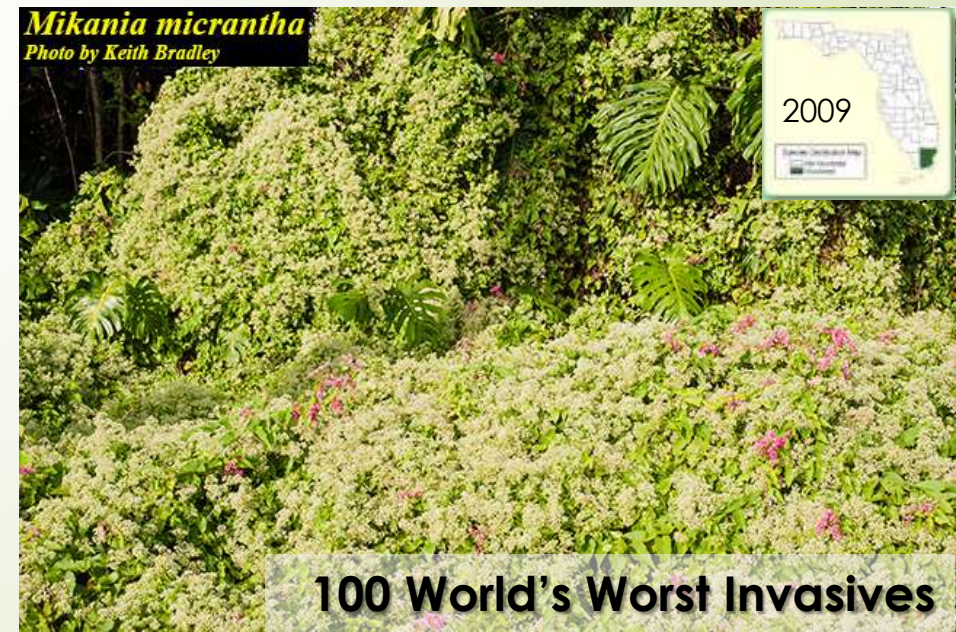
### The little snails journey





# Part 2: EDRR Efforts in Florida: What's working-plants

- Nut-rushes (*Scleria eggersiana* and *Scleria microcarpa*)
- Spurgecreeper (*Dalechampia scandens*)
- Mile-a-minute (*Mikania micrantha*)



*Chrysopogon aciculatus*  
Photo by Keith Bradley



# Part 2: EDRR Efforts in Florida: What's working-plants

- Golden false beardgrass (*Chrysopogon aciculatus*)
- Sewervine (*Paederia cruddasiana*)
- Kripa (*Lumnitzera racemosa*)\*
- Redwing (*Heteropterys brachiata*)
- Three-leaf cayratia (*Causonis trifolia*)

\*Presentation later in FLEPPC 2019

*Paederia cruddasiana*  
Photo by Alan Franck



*Lumnitzera racemosa*  
Photo by Jennifer Possley



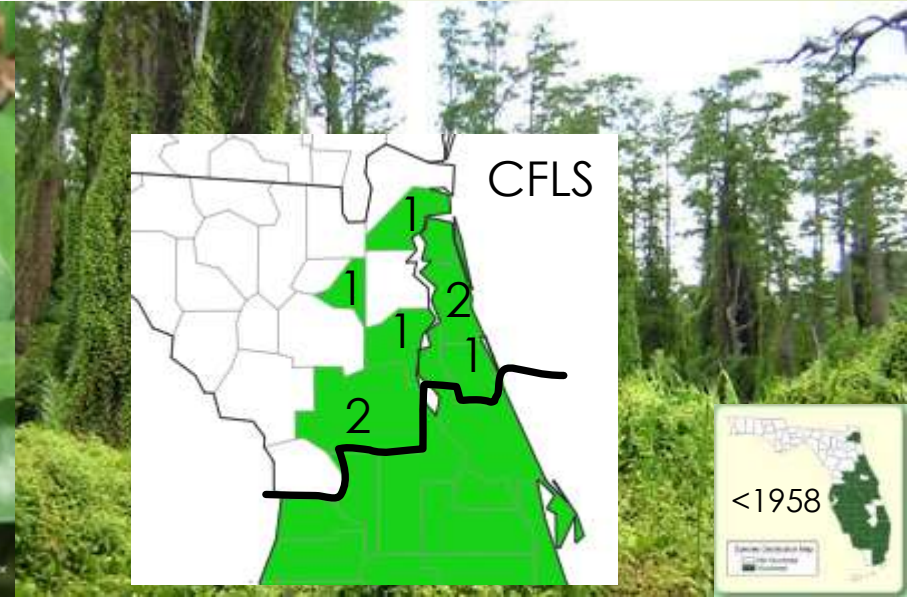
*Heteropterys brachiata*  
Photo by Jennifer Possley



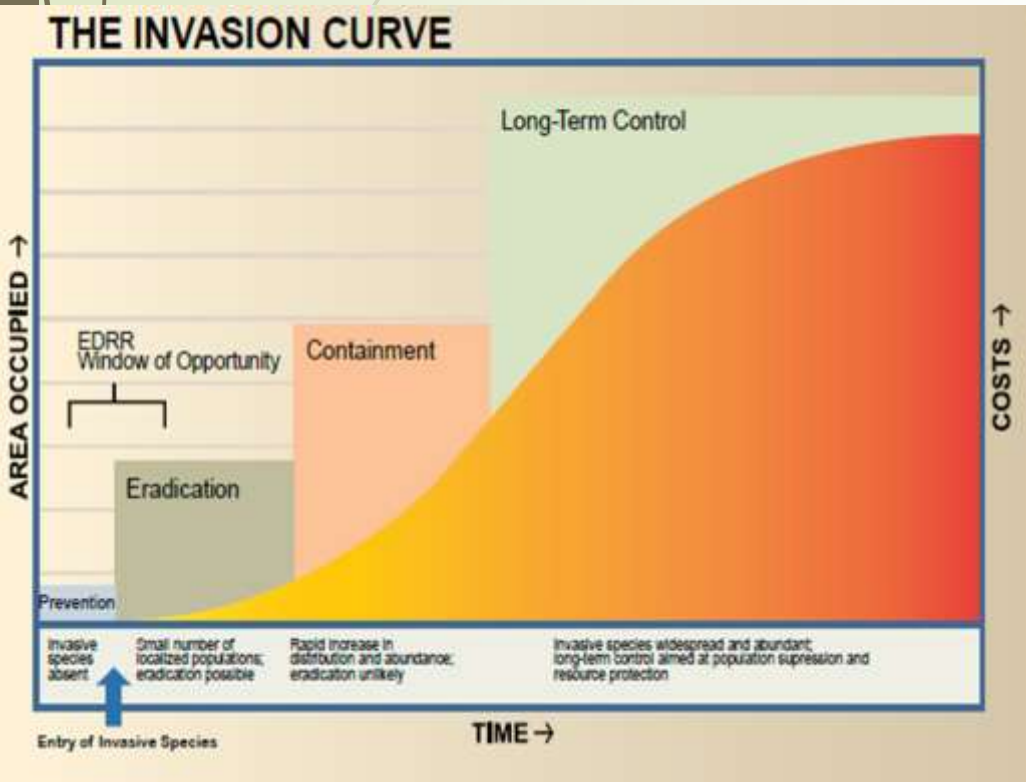
# Part 2: EDRR Efforts in Florida: What's not working?

- Giant salvinia (*Salvinia molesta*)
- Beach vitex (*Vitex rotundifolia*)\*
- Old world climbing fern (*Lygodium microphyllum*)

\*Presentation later in FLEPPC 2019



# Part 3. Evaluate effectiveness of EDRR

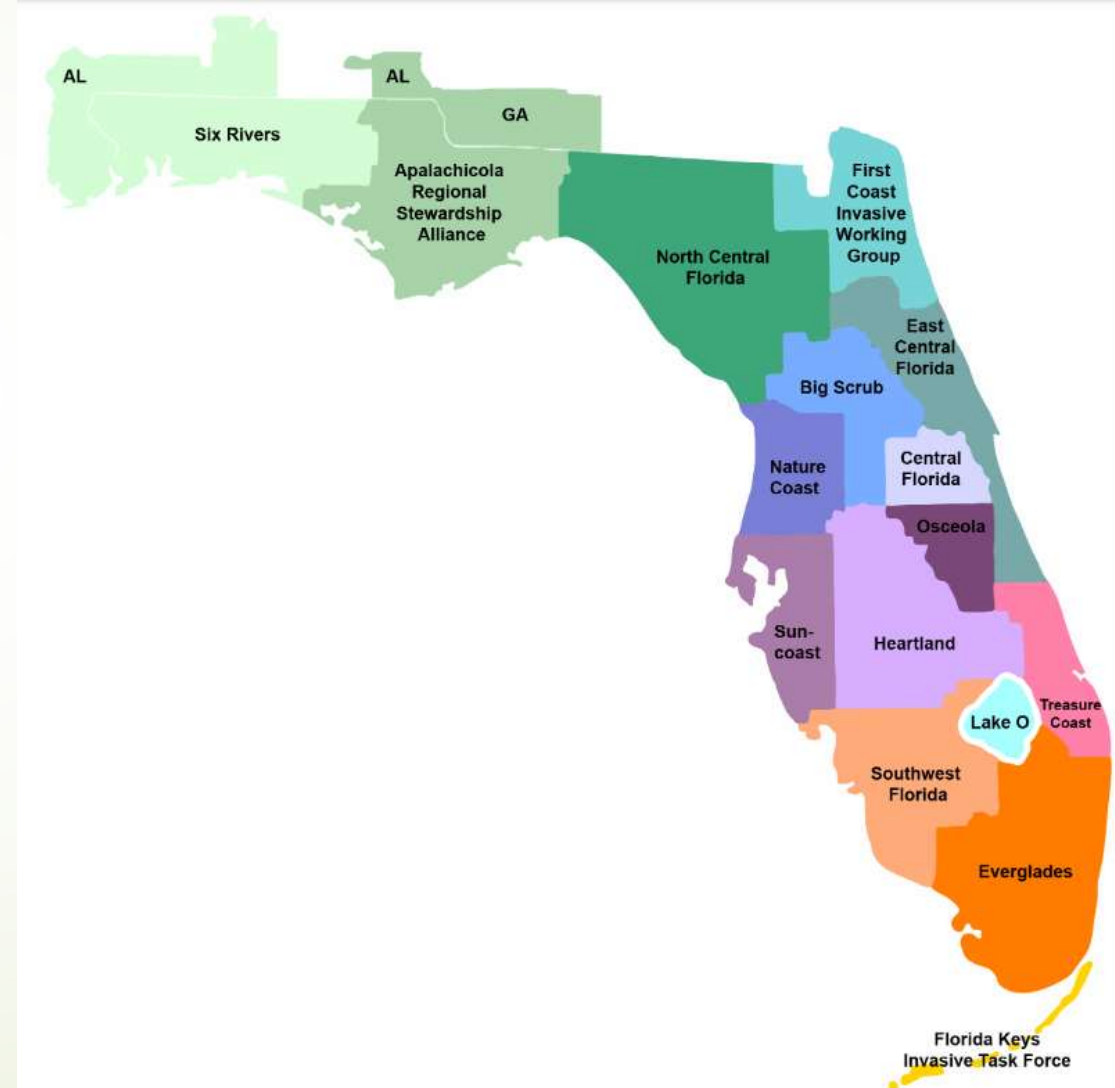


- Potential Eradications of Animals
  - Invasive reptiles and amphibians good (EIRAMP)
    - Burmese pythons, tegus, cane toads, Nile monitors, missed the chance already
  - Fish, marine invertebrates, insects: probably poor
- Potential Eradications of Plants
  - Good, possibly excluding ferns, grasses, sedges
- Potential Eradications of Fungi, Pathogens, Disease Organisms
  - Not likely to be caught by folks who are land/resource managers
  - Will depend on FDACS-DPI, USDA-APHIS folks for their expertise

# Part 4. Constraints of EDRR in Florida

## Early Detection

- Typically done locally (CISMA)
- Some CISMAs will always have better EDRR capability
- Need a reporting network that everyone uses, so all are aware of occurrences of new species in their CISMA/Florida



Overview

Reports

Download

Alerts

My Species List

My County List

Projects

Edit Profile

View Profile

My Uploads

My Surveys

Rangeland

Bat Reports

Review Records

### Create Alerts

Florida

County

Insects

Select a Category

Select a subject

New Only (?)

Create Alert Clear

Sign up for Alerts!

### Manage Alerts

Search:

Alert ID	New Records Only	Division	category	Location	Species	
26964	Yes	Plants		Florida		Delete

# Part 4. Constraints of EDRR in Florida

## Early Detection

- Typically done locally (CISMA)
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## Rapid Assessment

- Exists at either the national, regional, state, local level
- Have assessments conducted beforehand, no need to 'assess' threat levels when action could be taken
- Plants: assessments for many plants in Florida by IFAS Assessments
- Animals: no one state-wide comprehensive assessment exists

# Dianella ensifolia

SHARE



COMMON NAMES:

Cerulean flaxlily, Dianella lily, flax-lily

SYNONYMS:

No known synonyms

CONCLUSIONS BY ZONE:

CENTRAL, NORTH, SOUTH

**Invasive (No Uses)**

For Status Assessments:

Invasive and not recommended by IFAS. Will be reassessed every 10 years.

Assessment Status: Complete

GROWTH HABIT:

Forb/Herb





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## Rapid Response

- Typically done locally (CISMA)
- Personnel throughout state involved when health or agriculture are potentially impacted
  - Screwfly, GALS





# To help FNAI assess how land and resource managers are constrained in conducting EDRR Surveys...

- ▶ Use the form handed out to you
- ▶ Answer anonymously
- ▶ A quick 3 question survey please
- ▶ Indicate your type Employer, Region of Responsibility, CISMAs involved with or work in



# Importance of EDRR in Invasive Species Management

- ▶ **Question 1:** How important do you think EDRR is for invasive species management in Florida?
  - ▶ 5 - Very important
  - ▶ 4 - Important
  - ▶ 3 – Potentially useful, not necessary where I work/live
  - ▶ 2 - Not important
  - ▶ 1 - Waste of time, go treat cogon/climbing fern/Chinese tallow/Brazilian pepper/etc.

# Importance of EDRR in Invasive Species Management

- **Question 2:** How often do you/can you perform surveys for EDRR/new invasive species (new to your CISMA/state) as part of your job?
  - 5 – twice a month / 24 times a year or more
  - 4 – once a month / 12 times a year
  - 3 – twice a quarter / 8 times a year
  - 2 – once a quarter / 4 times a year
  - 1 – biannually / 2 times a year or less

# Importance of EDRR in Invasive Species Management

- ▶ **Question 3:** If you could dedicate time to conduct EDRR surveys as part of your job description, what interval would you choose to survey for EDRR/new invasive species in your CISMA, so as to detect new invasive species/EDRR arrivals?
  - ▶ 5 – twice a month / 24 times a year or more
  - ▶ 4 – once a month / 12 times a year
  - ▶ 3 – twice a quarter / 8 times a year
  - ▶ 2 – once a quarter / 4 times a year
  - ▶ 1 – biannually / 2 times a year or less

# Thank You!

## Contact:

**Chad Anderson**

[canderson@fnai.fsu.edu](mailto:canderson@fnai.fsu.edu)

**Dexter Sowell**

[dsowell@fnai.fsu.edu](mailto:dsowell@fnai.fsu.edu)



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*Natural Areas*  
INVENTORY

