UPDATE ON NEW INTRODUCTIONS FROM THE NAS DATABASE

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U.S. Geological Survey

USGS science for a changing world

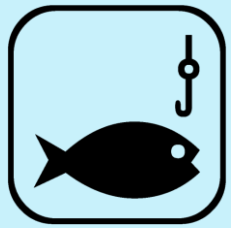
NAS

- Amphibians
- Fishes
- Marine Fishes
- Mammals
- Reptiles
- Plants
- Bryozoans
- Coelenterates
- Crustaceans
- Mollusks

Data from:

museum collections
state and federal agencies
scientific literature
researchers
other databases
public sighting reports





>1,300 species/ subspecies tracked

>700,000 data points

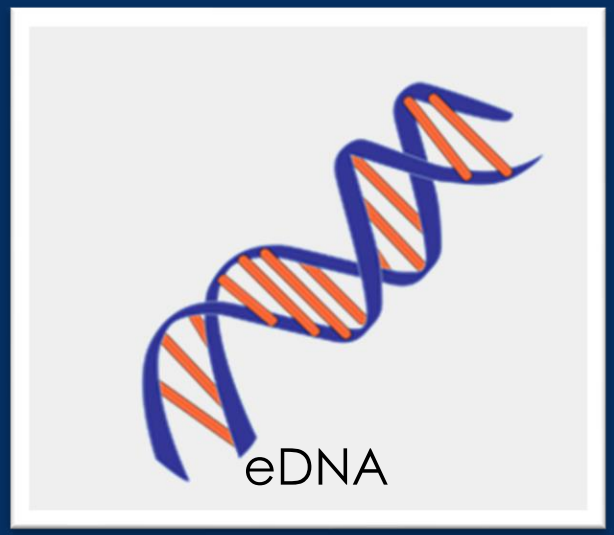
Across conterminous US, Alaska, Hawaii, and US territories

Data ranges from 1800's - present

Data windows:

Great Lakes Aquatic Nonindigenous Species Information System (**GLANSIS**)

Lake Champlain (coming soon)



Zebra mussels on moss balls

Since Oct 1st

25 NAS Alerts

National	2
Bonus	1
County	3
Drainage	16
State	3

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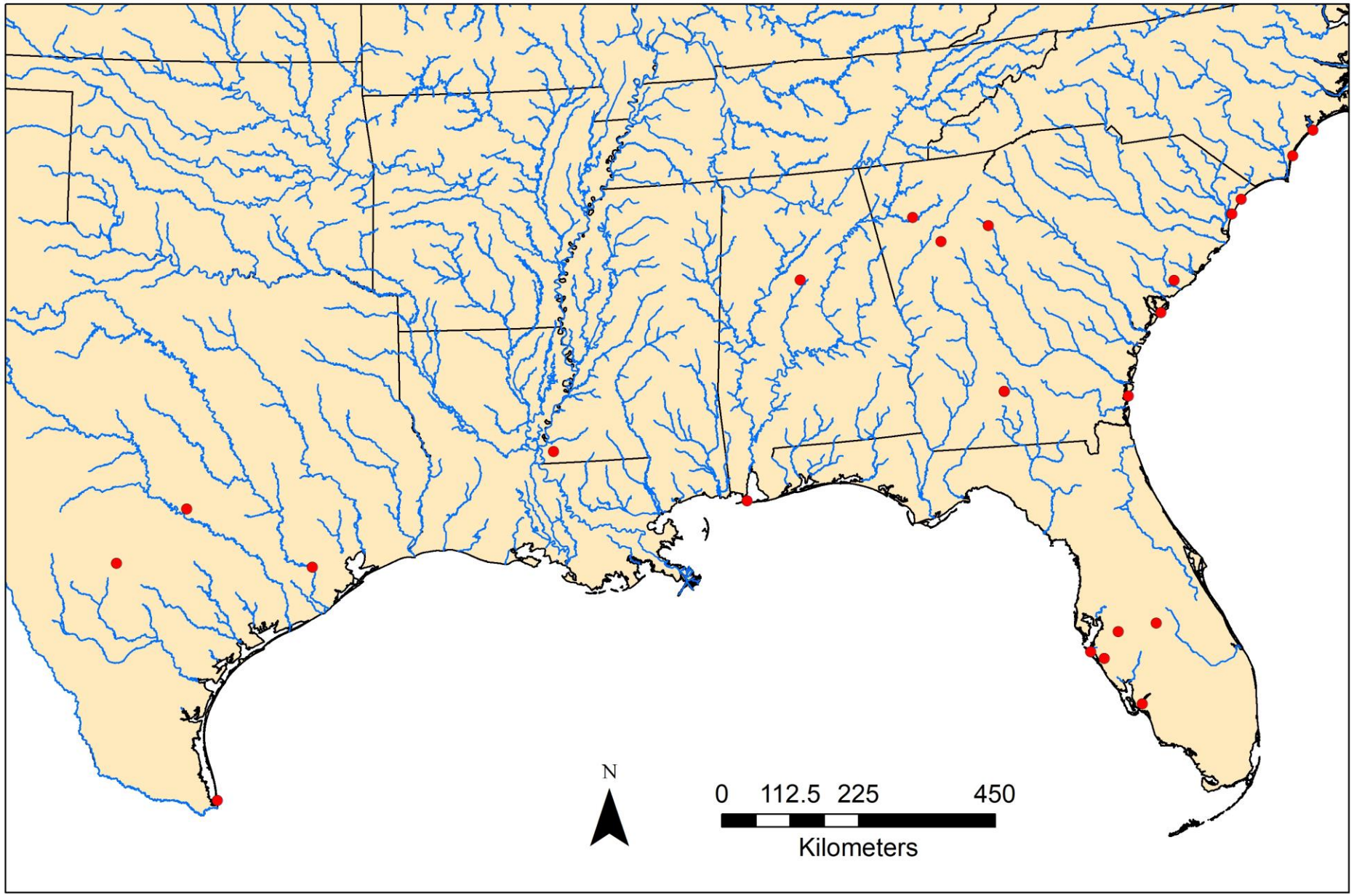
NAS Alerts
from 10/01/2010 - 4/19/2021



NAS alerts

1061 register users

Data sources:

Literature	**6**
NAS sighting report	**9**
Personal communication	**10**

Top States:

6 Georgia

5 Florida

4 South Carolina

4 Texas

7 7 5

Terapon jarbua (tigerfish)

Macrobrachium nipponense
(East Asian river prawn)

NEW TO THE U.S.

Terapon jarbua (tigerfish)

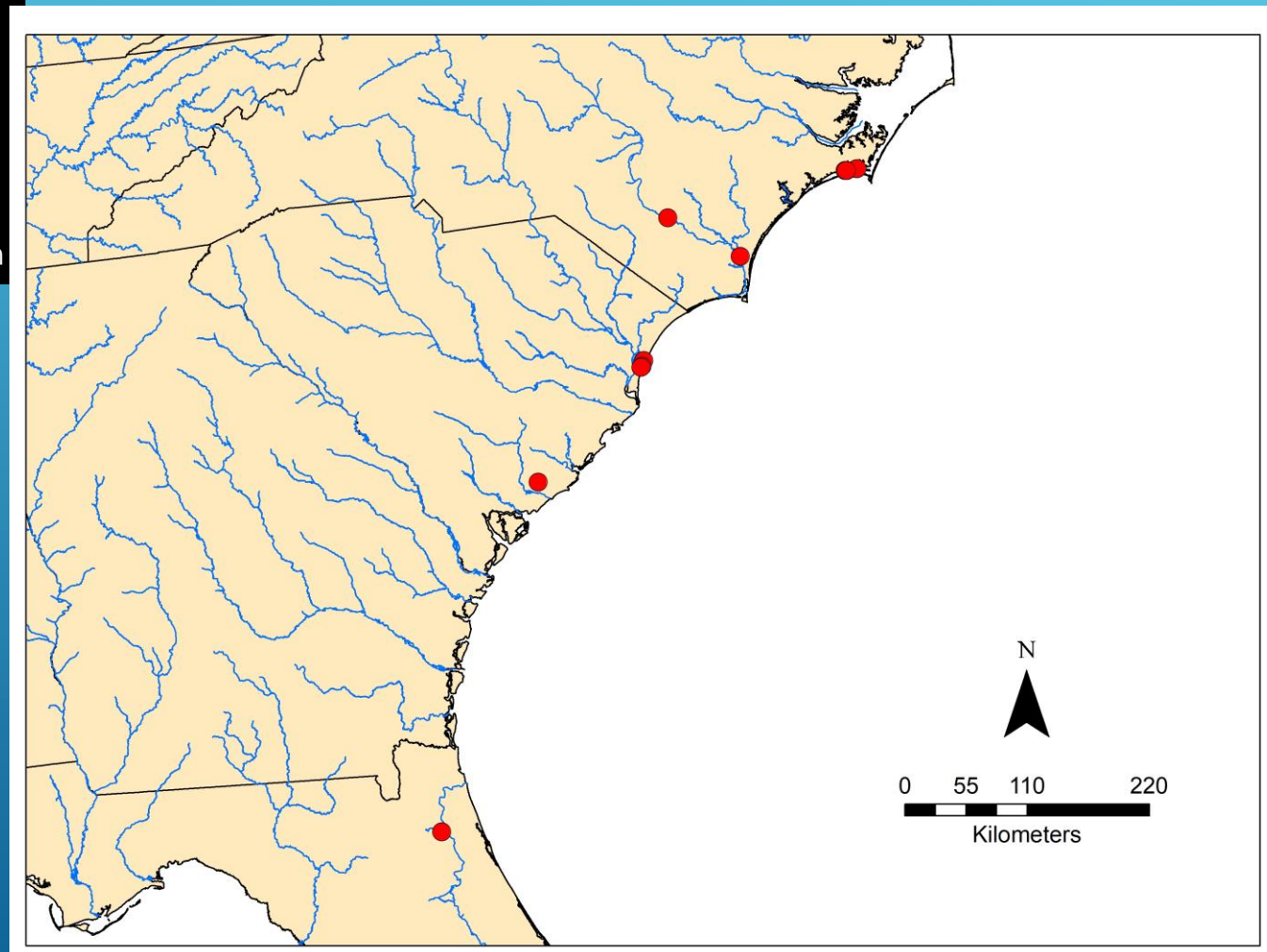
Collected at Dauphin Island, AL on 2-28-201

Means of Introduction: Aquarium releases

Macrobrachium nipponense (East Asian river prawn)

Means of Introduction: Possible ballast water discharge

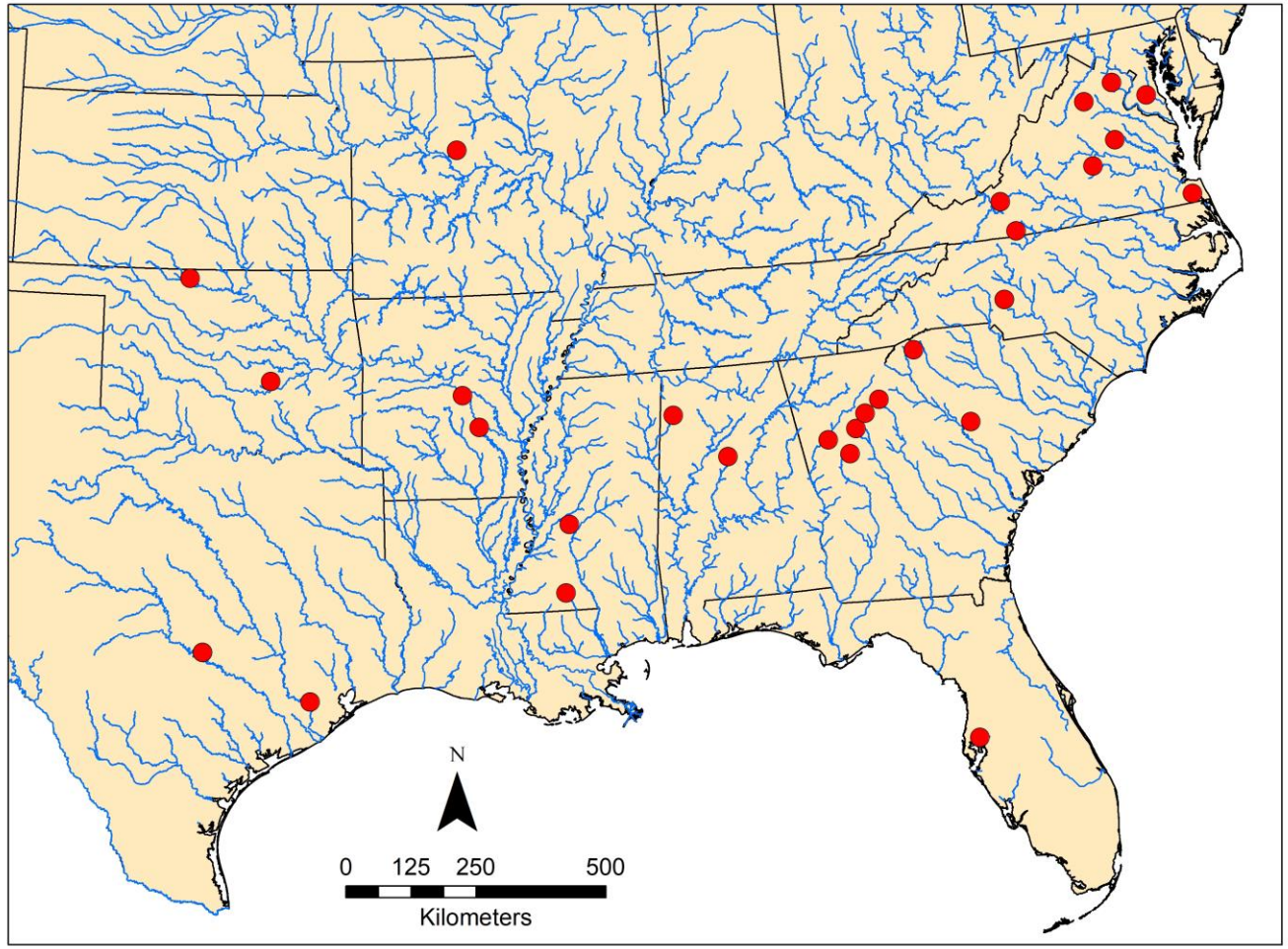
Status: Florida and South Carolina is unknown. North Carolina: perhaps established in the White Oak River Basin.



Marsilea mutica (Australian water-clover)

Means of Introduction: Aquarium releases

Status: Established in Alabama, Georgia, North Carolina, Texas, and Washington.

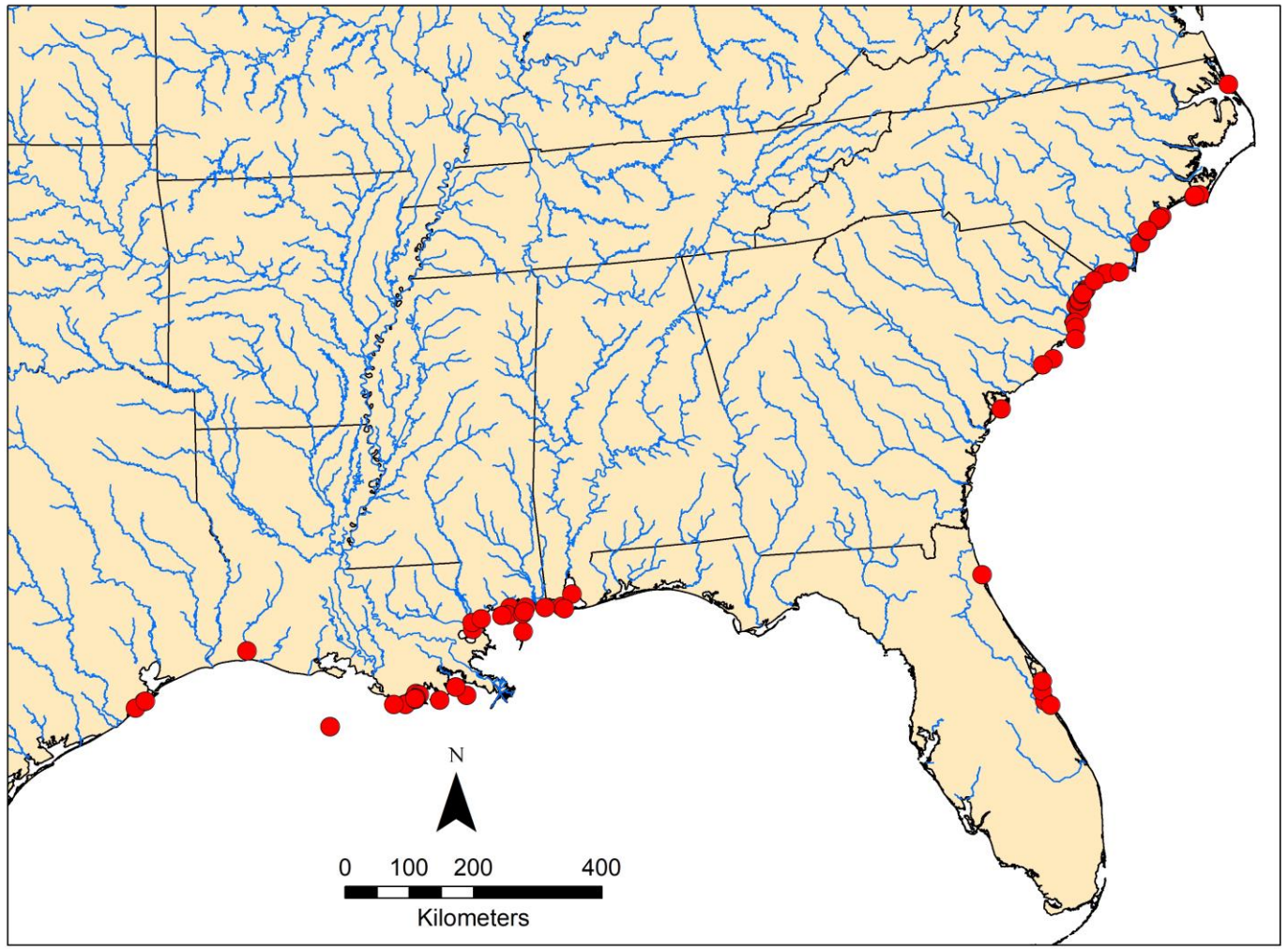


Phyllorhiza punctata

(Australian spotted jellyfish)

Means of introduction: The polyp stage hitchhiking with ships or other seagoing infrastructure.

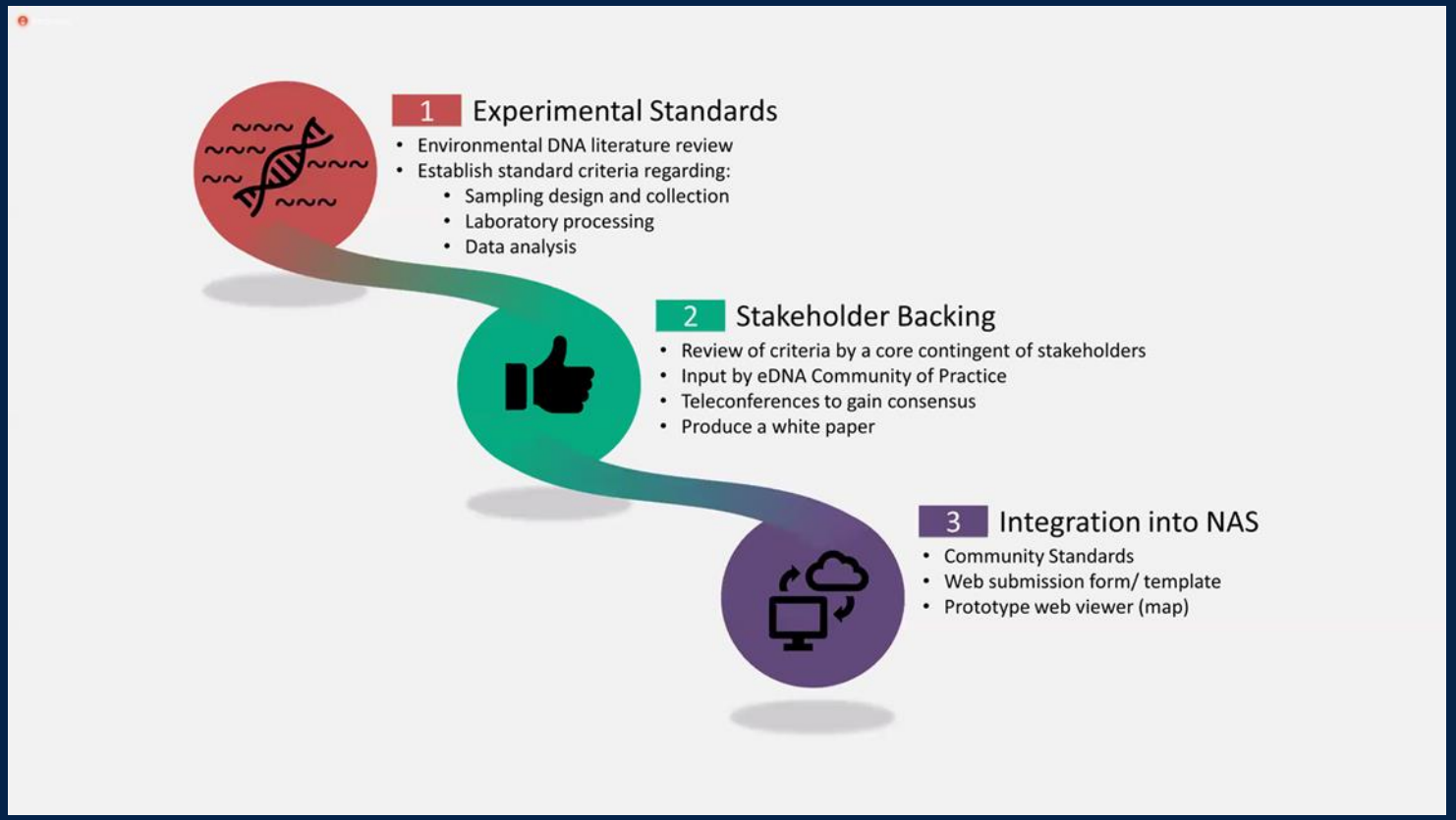
Status: Established in the northern Gulf of Mexico and off the coast of the Carolinas



eDNA in the NAS Database

7 webinars in the spring

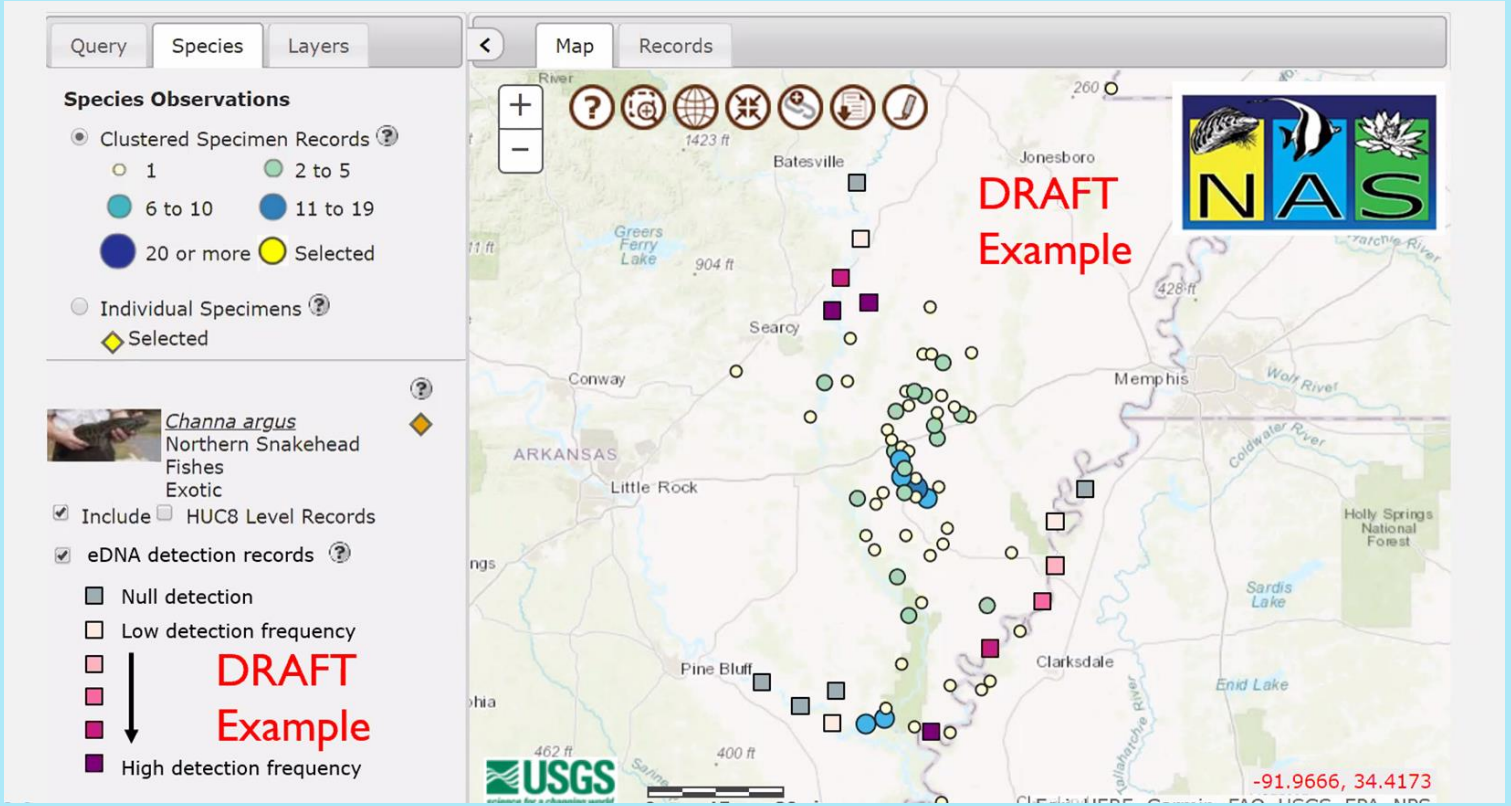
164 participants

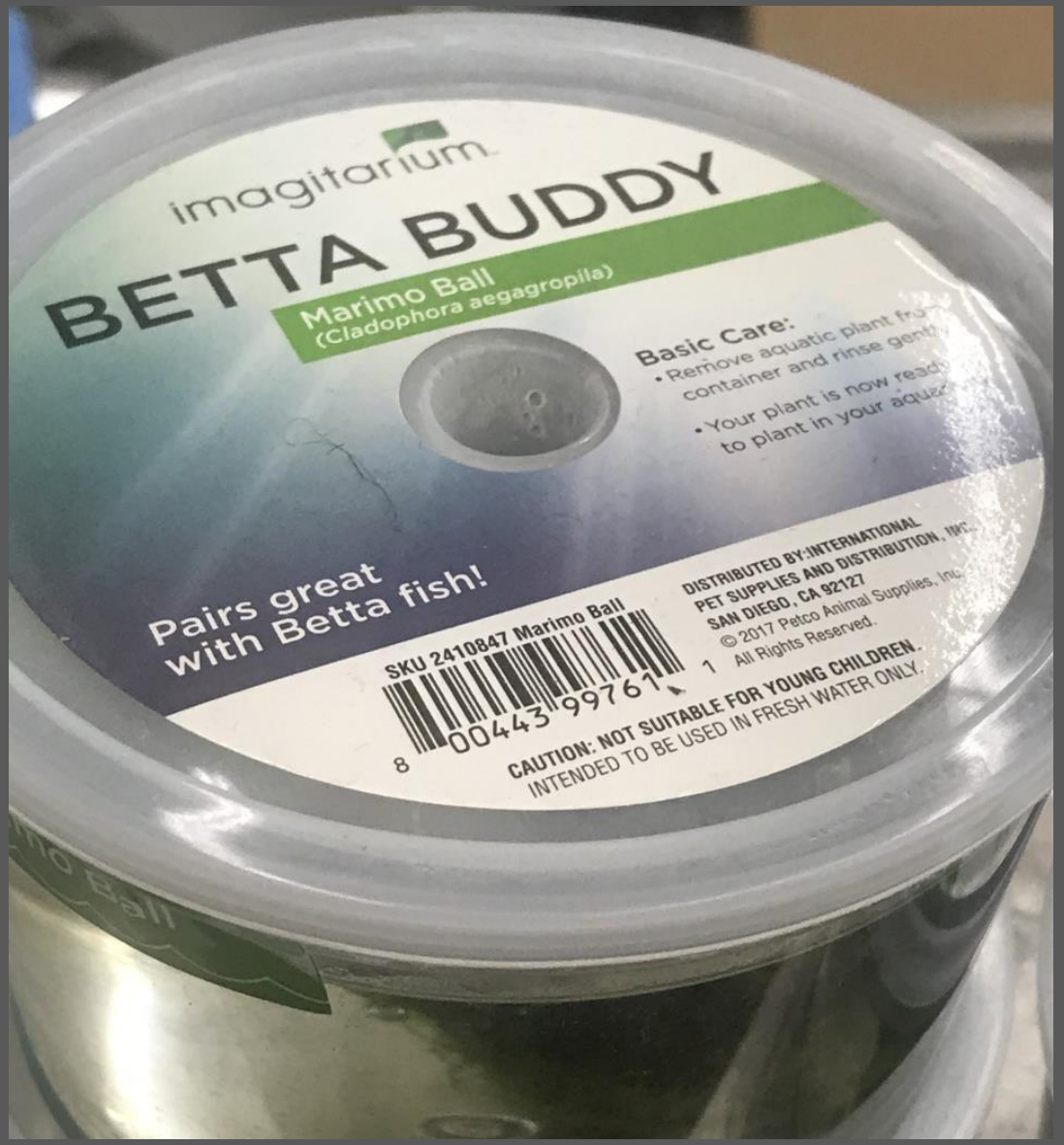


eDNA in the NAS Database

Three products being developed:

- Community standards
- Communication plan
- Displaying eDNA on the NAS database




imagitarium
BETTA BUDDY
Marimo Ball
(Cladophora aegagropila)
Basic Care:
• Remove aquatic plant fr
container and rinse gent
• Your plant is now read
to plant in your aqua
Pairs great
with Betta fish!
SKU 2410847 Marimo Ball
8 00443 99761 1
DISTRIBUTED BY:INTERNATIONAL
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SAN DIEGO, CA 92127
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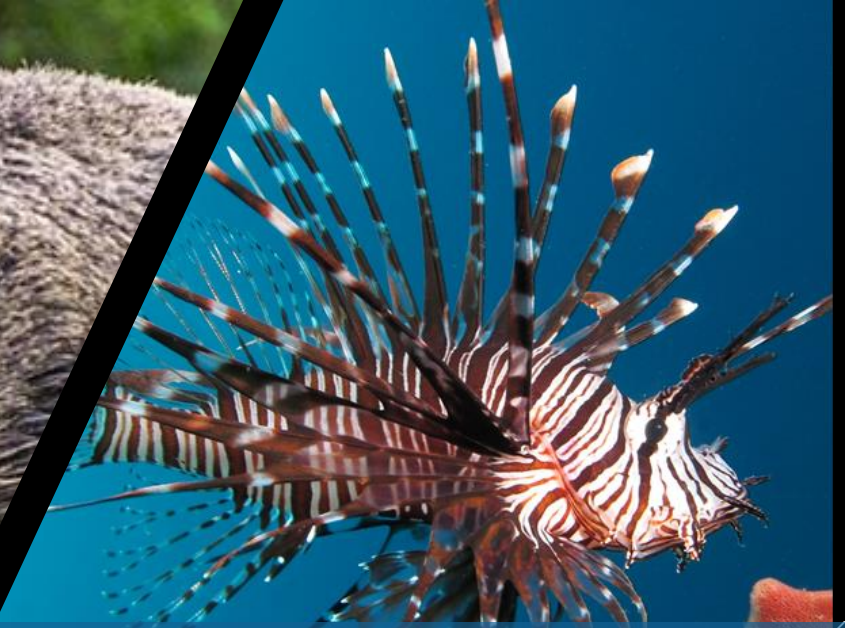
CAUTION: NOT SUITABLE FOR YOUNG CHILDREN.
INTENDED TO BE USED IN FRESH WATER ONLY.

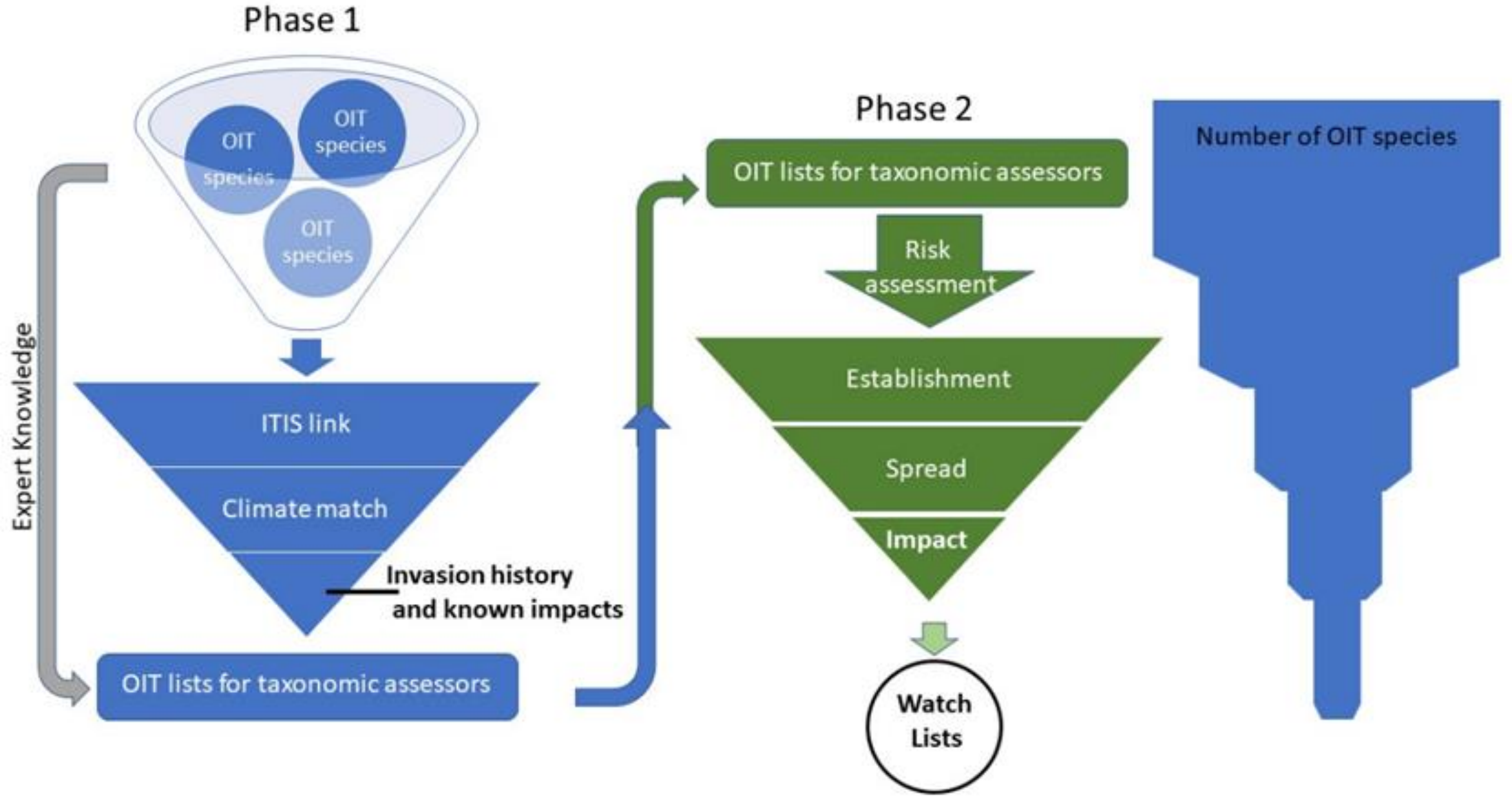
Cuban tree
(*Osteopili*



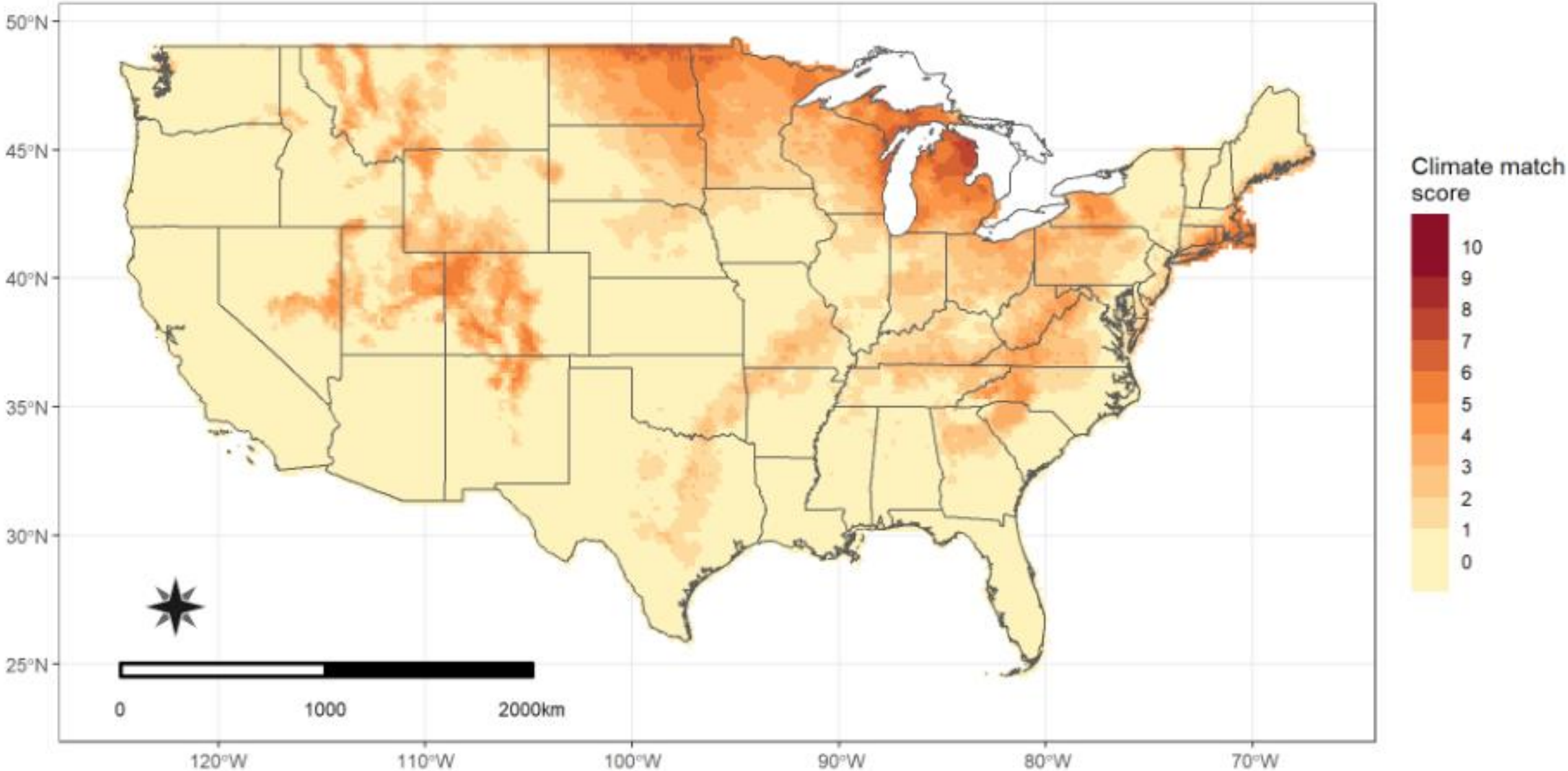
National Horizon Scan of Organisms in Trade

(*Iguana iguana*)

Rock Pigeon
(*Columba livia*)


Phase 1
OIT species
OIT species
OIT species
ITIS link
Climate match
Invasion history and known impacts
Expert Knowledge
OIT lists for taxonomic assessors
Phase 2
OIT lists for taxonomic assessors
Risk assessment
Establishment
Spread
Impact
Watch Lists
Number of OIT species

Climate match within the U.S.



A global list of highest-risk traded species that have the potential to become invasive in the U.S.

Regional watchlists of OIT species of high risk

A public interface on the NAS webpage providing easy access to the watch lists and species profiles highlighting the high-risk species

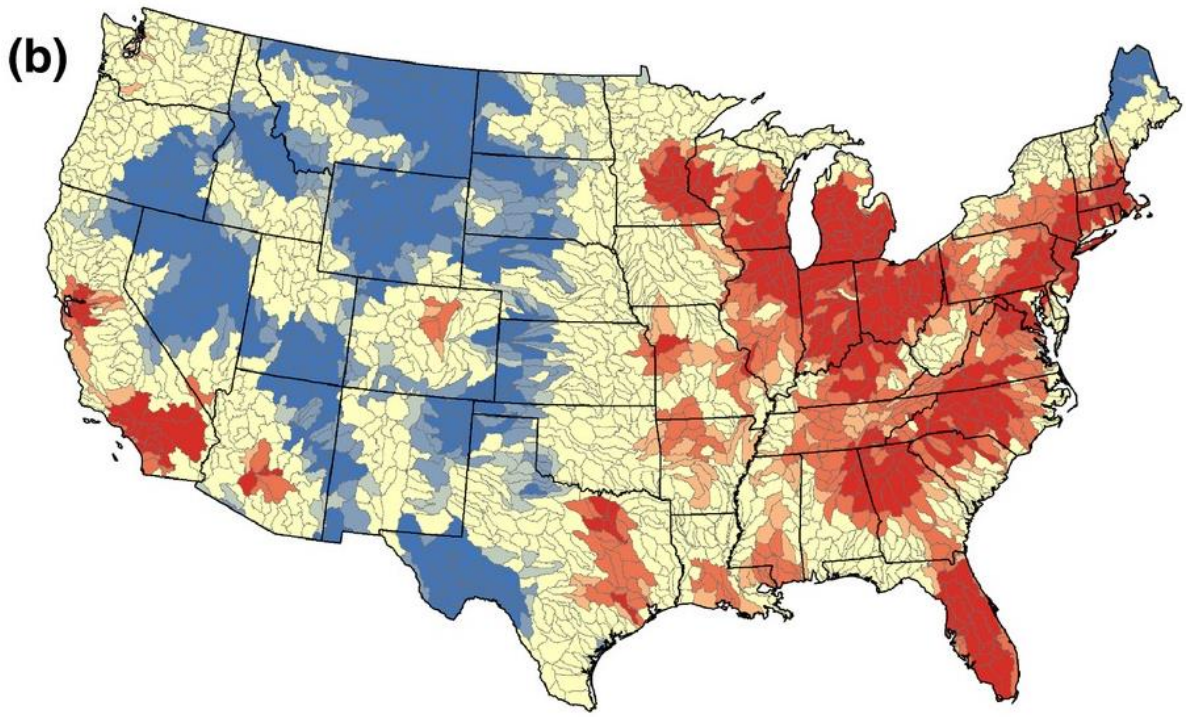
Creation of ArcGIS Server web service layers of any maps for use by stakeholders

Publish any automation tools developed on code.usgs.gov

A publication of the results of this project

Proposed products

Completed in October 2021



Freshwater recreational fishing demand
Davis and Darling 2017

- The goal of this project is to identify regional hotspots at the highest risk of invasion from watch list freshwater species.
- This information will be provided to stakeholders through online interactive maps housed on the **NAS Database.**

Hotspot analysis of invasion threats

Help prioritize species for NAS Tools including the Flood and Storm Tracker (FaST)

Provide information to congressional members when opportunities arise

STATE INVASIVE SPECIES LISTS

Thank you

- Wesley Daniel – Coordinator, Inverts, Mollusks, Mammals

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