

Welcome to the Traveling Trunk of Invasive Species Program

A resource available to you thru
the Invasive Species Leadership Team

March 1st 2017

Mark Cornish, Dr. Linda Nelson,
Jeremy Crossland, Deanie Kennedy,
John Pribilla
Education and Outreach Sub Group



E-3531

E-3531



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Mika Green

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Pete Egan

Al Cofrancesco

Prevention thru Education is our Goal



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WHAT IS AN INVASIVE SPECIES?

Alien Invaders... Nature's Hitchhikers

An invasive species is an organism that is non-native to an ecosystem and whose introduction causes or is likely to cause economic or environmental harm or harm to human, animal, or plant health.



Introduced Air Potato Vine

James H. Miller, USDA Forest Service, Bugwood.org

An invasive species can be a plant, animal, or other organism such as a microbe.

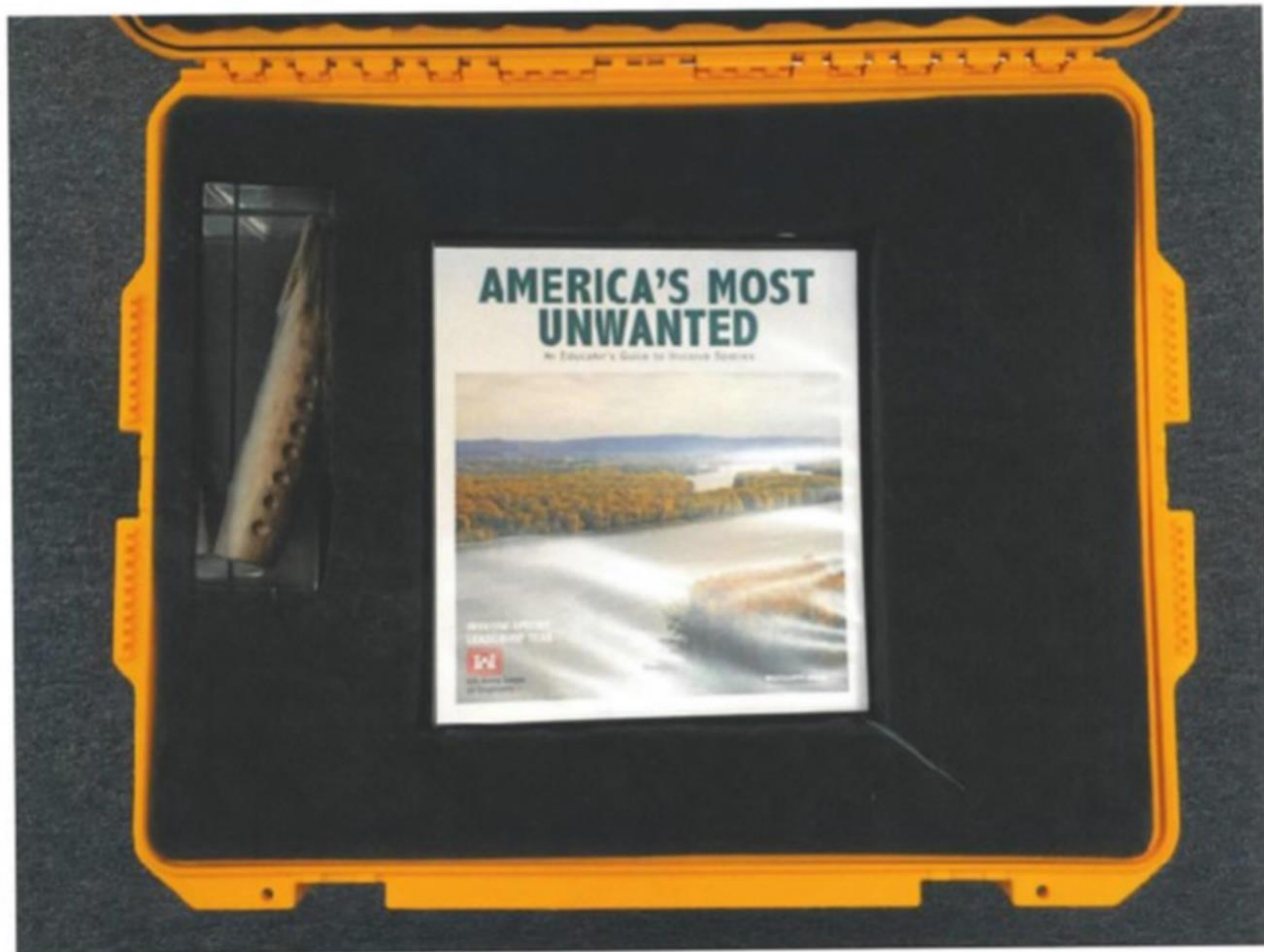
Florida Everglades

William Silver/Shutterstock.com

Released Pet: Burmese Python

Kevin Enge, Florida Fish and Wildlife

Layer 1



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Educator's Guide

- Ideas for Organizing Your Presentation
- Talking Points
 - ▶ Key Characteristics of Invasive Species
 - ▶ Invasives and Threats to Biodiversity
 - ▶ Sources of Invasive Species
 - ▶ Preventing Invasive Species
 - ▶ Controlling Invasive Species



Hands-On Specimens





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Display Items

Accompanying profile cards detail the threats posed by these species.

Emerald Ash Borer

Emerald ash borers are beetles whose larvae feed under the bark of ash trees. They burrow back and forth between the bark and outer sapwood when they feed, creating S-shaped patterns in the wood. They survive for several years in living trees and can survive in firewood and other products.

Native region: Asia and Eastern Russia

Introduction: 1990s; accidentally introduced in Michigan in a shipment of wood packing material

Spread: Spreads with the movement of forestry products such as firewood, wood chips, and lumber

Range: Prevalent in the Midwest



Nutria

Nutria are large, semi-aquatic rodents that damage wetland habitats by burrowing and feeding on aquatic vegetation. They contribute to erosion and disturb agricultural areas, causing damage to rice and sugarcane crops.

Native region: South America

Introduction: 1930s; introduced for fur production and likely escaped or were intentionally released when the fur industry declined

Spread: Mating season lasts all year; gestation is about 4 months and 1 – 11 pups may be born; can adapt to a wide range of environmental conditions

Range: Coastal Gulf states, Atlantic coast and the Pacific Northwest



Japanese Honeysuckle

Japanese honeysuckle is a climbing, woody vine that crowds out native plant species. Reaching lengths of up to 80 feet, it can twist around trunks and stems of native plants, effectively killing them by cutting off their water supply.

Native region: East Asia

Introduction: Early 1800s; introduced as an ornamental plant, and as deer browse and erosion control

Spread: Spreads widely through long root runners and long distances by birds

Range: Widespread throughout the South, New England, and the Great Lakes regions



Sea Lamprey

Sea lamprey are parasites that prey on other fish species by sucking their blood and body fluids. They resemble eels, but are fish that lack jaws and bony structures.

Native region: Atlantic Ocean

Introduction: 1835; first discovered in Lake Ontario, and later in Lake Erie in 1921

Spread: Spread originally through the Welland Canal, and quickly through the Great Lakes

Range: Widespread throughout the Great Lakes



Eurasian Watermilfoil

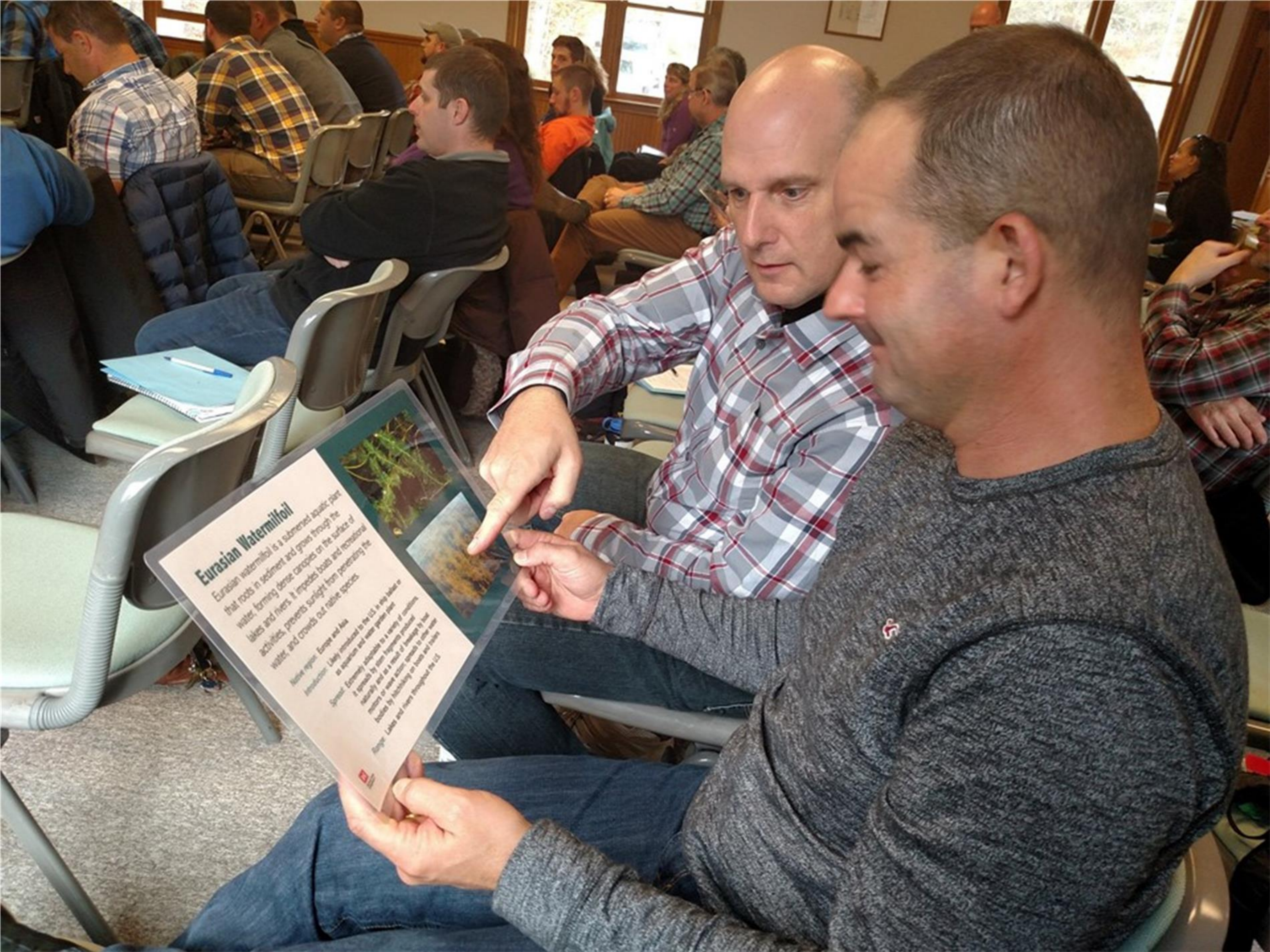
Eurasian watermilfoil is a submerged aquatic plant that roots in sediment and grows through the water, forming dense canopies on the surface of lakes and rivers. It impedes boats and recreational activities, prevents sunlight from penetrating the water, and crowds out native species.

Native region: Europe and Asia

Introduction: Likely introduced to the U.S. in ship ballast or aquaculture and water sports gear.

Spread: Extremely adaptable to a variety of conditions, it spreads by stem fragments produced naturally or as a result of boating. It has become an invasive species in many water bodies by hitchhiking on boats and trailers.

Range: Lakes and rivers throughout the U.S.





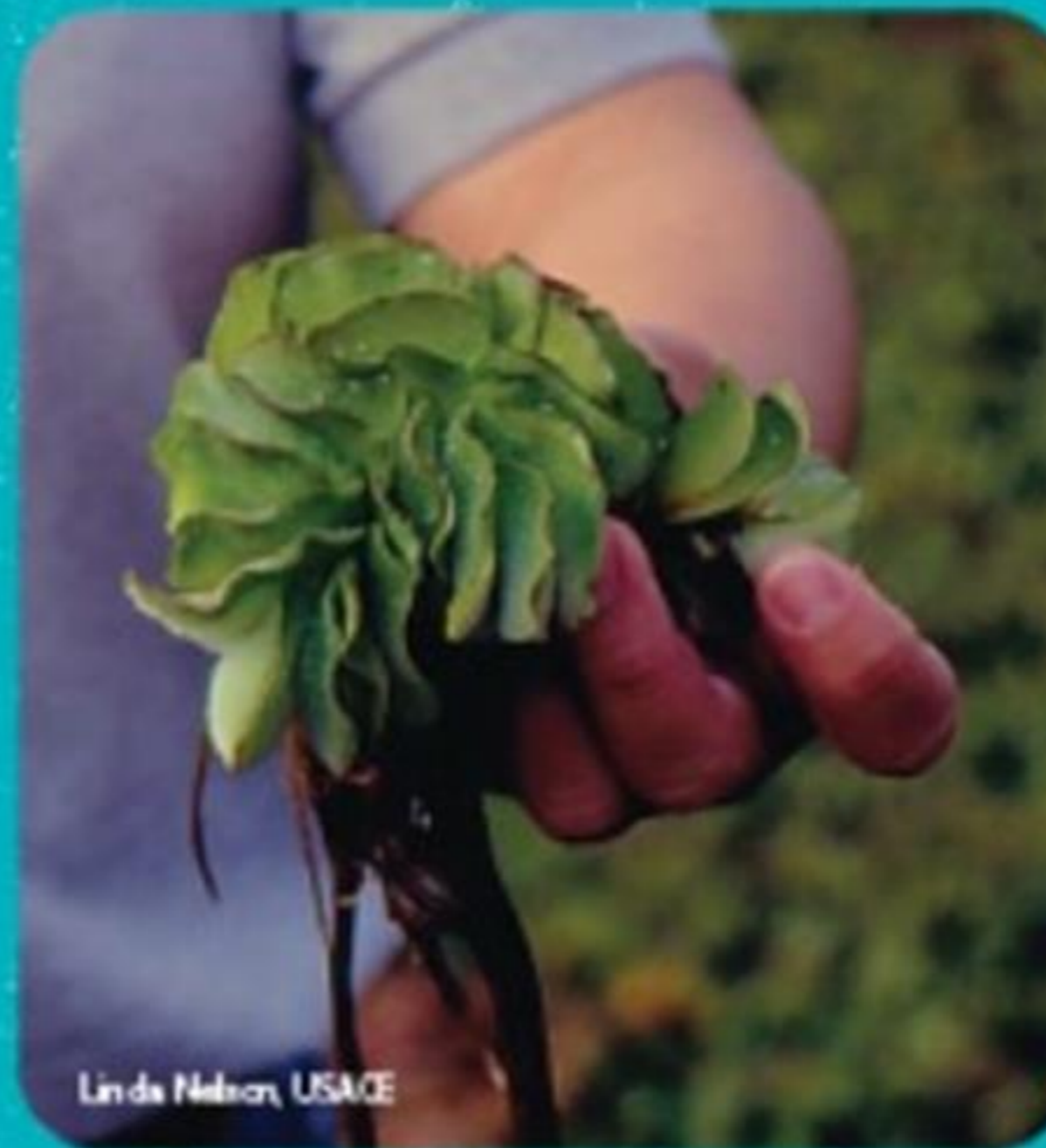
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Games – *Meet the Invaders*

Geared to the youngest of visitors, the memory game helps children get acquainted with invasive species.



Front of all cards



GIANT SALVINIA

- Escaped aquarium and water garden plant
- Invades lakes and ponds
- Populations can double in size in 14 days!



FERAL PIG

- Intentionally released or escaped fugitive from farms
- Roam in aggressive packs
- Destroys crops & lawns through digging

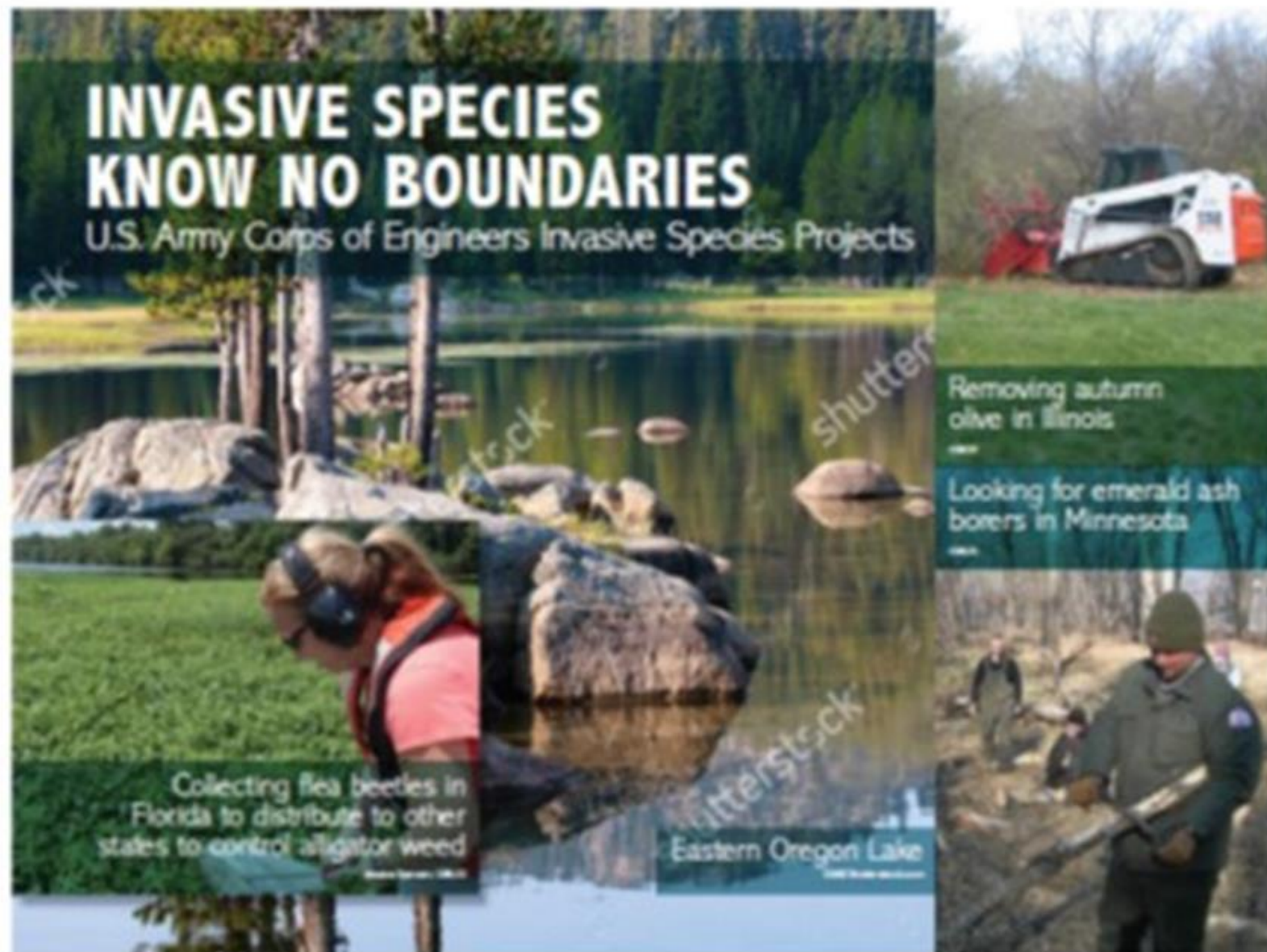
Games - *Hitchhikers From Another Ecosystem*

| HITCHHIKERS FROM ANOTHER ECOSYSTEM | |
|------------------------------------|--|
| Group Name/Number: | |
| Object 1 | |
| Object 2 | |
| Object 3 | |
| Object 4 | |
| Object 5 | |
| Object 6 | |
| Object 7 | |
| Object 8 | |
| Object 9 | |

Geared to older children, the game helps visitors recognize how we can have an impact in stopping the threat and spread of invasive species. Props for game play are included.



Electronic Materials



Slide 11

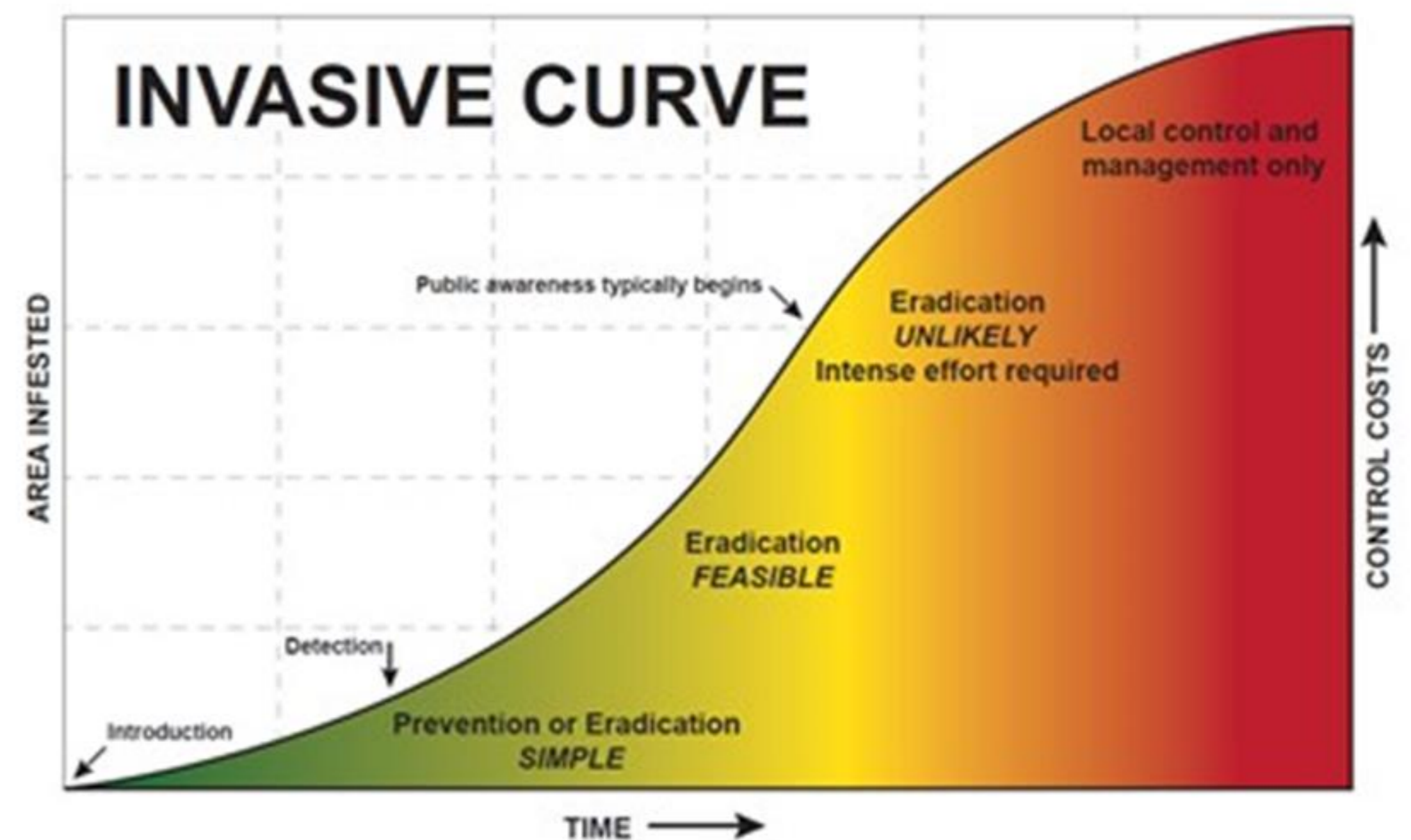


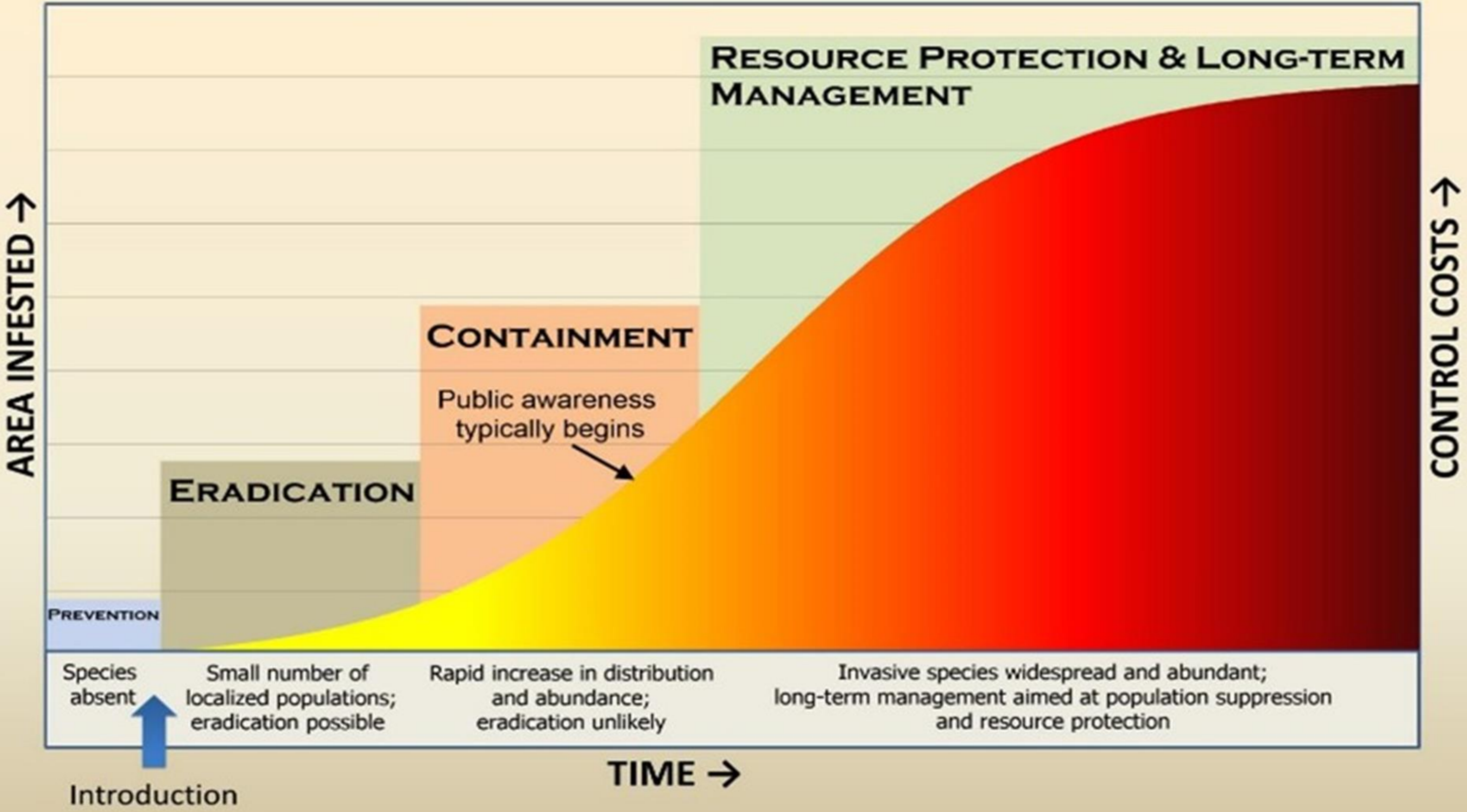
Slide 7



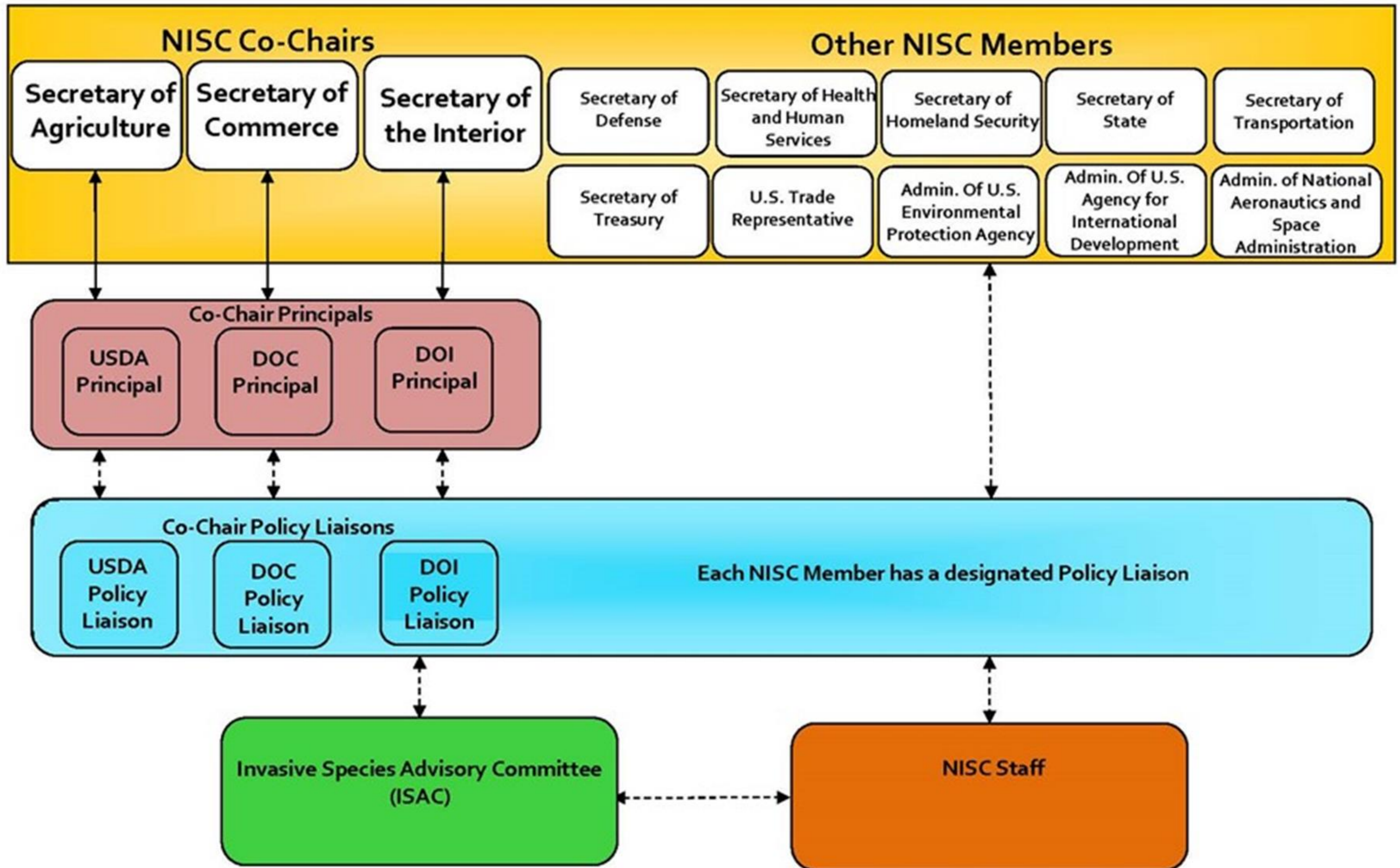
Slide 10

- PowerPoint presentation
- Printable informational handouts
- Corps Video
- Printable invasive species photographs and posters





The National Invasive Species Council



Solid lines indicate authority and supervision. Dotted lines indicate information flow.

Solid lines represent direct supervisory relationships between the Secretaries and their Principals and among NISC staff members.

NISC's Principles for Combating Invasive Species

- Prevention (education)
- Early Detection, Inventory, & Monitoring
- Rapid Response (Incident Command System)
- Control & Management (long term)
- Restoration/Mitigation of Natives



Your Region's Point of Contact to Reserve the Trunk



- Western Region:**
- **NWD: Seattle, Portland & Walla Walla Districts**
 - **SPD**
 - **POD**

Contact:
NWP, Bonneville
Megan L. Iness
megan.l.iness@usace.army.mil
541-374-4547
Or
Mason A. Scharfe
mason.a.scharfe@usace.army.mil
541-374-2544

- Central Region:**
- **MVD**
 - **ERDC**
 - **SWD**
 - **NWD: Kansas City & Omaha Districts**

Contact: MVD, Mississippi River Project Office
Lauren McNeal, Lauren.j.Mcneal@usace.army.mil 309-794-4332
or
Kyle Slifka,
kyle.f.Slifka@usace.army.mil 309-794-4523

- Eastern Region:**
- **LRD**
 - **NAD**
 - **HQ**
 - **SAD**

Contact:
NAE, Cape Cod Canal
John Pribilla
John.Pribilla@usace.army.mil
978-318-8622
-or-
Samantha Gray
Samantha.a.Gray@usace.army.mil
978-318-8622



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We are your support team!



Learn more about the Invasive Species Leadership Team Traveling Trunk on our Gateway site at:

<https://corpslakes.erdcdren.mil/employees/islt/islt.cfm>

Join the Invasive Species Management Community of Practice at:

<https://eko.usace.army.mil/usacecop/environmental/subcops/invasive/>

Learn more about Corps of Engineers invasive species management at:


<http://www.usace.army.mil/Missions/Environmental/InvasiveSpeciesManagement.aspx>



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How to Borrow the Trunk

Fill out a request form & send it to your region's point of contact

| | |
|---|---|
|  <p>Meet the Invaders Invasive Species Interpretive Trunk</p> | <p>Order Information</p> <p>The Interpretive Trunk is available to borrow for up to 10 days. If you are requesting the trunk for more than 10 days you must fill out the comments section</p> <p>Arrival Date: <input type="text"/> (We will ship out trunk three business days before the date of your request)</p> <p>Return Date: <input type="text"/> (We will anticipate receiving the trunk by three business days after the date of your request):</p> <p>Intended Audience(s): <input type="text"/></p> <p>Comments: <input type="text"/></p> |
| <p>REQUEST FORM</p> <p>Date <input type="text"/></p> <p>Requester Information</p> <p>Name <input type="text"/></p> <p>Organization Symbol <input type="text"/></p> <p>Street Address Line 1 <input type="text"/></p> <p>Street Address Line 2 <input type="text"/></p> <p>City <input type="text"/></p> <p>State <input type="text"/> Zip Code <input type="text"/></p> <p>Desk Number <input type="text"/></p> <p>Cell Number <input type="text"/></p> <p>Email Address <input type="text"/></p> <p>Shipping Address (if different from above)</p> <p>Contact Name <input type="text"/></p> <p>Project Name <input type="text"/></p> <p>Street Address Line 1 <input type="text"/></p> <p>Street Address Line 2 <input type="text"/></p> <p>City <input type="text"/></p> <p>State <input type="text"/> Zip Code <input type="text"/></p> | <p>By checking the box below and submitting this request form you are acknowledging that the "Trunk" and it's contents are the property of the United States Federal Government, and you will return the "Trunk" and all of its contents by the date listed above. Your Point of Contact can provide you vendor information should you need to purchase replacement items. You also acknowledge that it is your project's responsibility to pay for shipping costs to return the "Trunk" to your P.O.C. Your P.O.C. will cover shipping costs to send it to you.</p> <p><input type="checkbox"/></p> <p>Email the request to your Point of Contact listed on the next page. Requests are accommodated on a first come first serve basis.</p> |



Link to the form:

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US Army Corps
of Engineers

Invasive Species Leadership Team

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<http://www.usace.army.mil/Missions/Environmental/InvasiveSpeciesManagement.aspx>



Meet the Invaders

Invasive Species Interpretive Trunk

INVENTORY FORM

Instructions:

- If you are the receiver: complete, sign and date applicable portion of this form when you receive and unpack the trunk.
- If you are packing/shipping the trunk: complete, sign and date applicable portion of this form when you pack and prepare the trunk to ship.
- Keep all forms with the trunk. Make a copy for your records.

| Layer | Item | Packed/Shipped | Received |
|-------|--|--------------------------|--------------------------|
| 1 | Booklet: Photos of trunk contents by layer | <input type="checkbox"/> | <input type="checkbox"/> |
| 1 | Tape Measure: 25' | <input type="checkbox"/> | <input type="checkbox"/> |
| 1 | Educator's Guide | <input type="checkbox"/> | <input type="checkbox"/> |
| 1 | In Educator's Guide: DVD of supporting electronic materials (video, PowerPoint, printable files of posters, etc) | <input type="checkbox"/> | <input type="checkbox"/> |
| <hr/> | | | |
| 2 | Sea lamprey model; acrylic encased | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Burmese python skin | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Hitchhikers from Another Ecosystem laminated group card | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Laminated Cards: Hitchhikers from Another Ecosystem, 19 Cards | <input type="checkbox"/> | <input type="checkbox"/> |



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-
- 6 Game Piece: Fishing Bobber
 - 6 Game Piece: Hiking boot keychain
 - 6 Game Piece: Section of bike tire
 - 6 Game Piece: Tent stake
 - 6 Game Piece: Japanese honeysuckle seed packet
 - 6 Game Piece: Stuffed dog
 - 6 Game Piece: Toy boat
 - 6 Game Piece: Toy construction vehicle
 - 6 Game Piece: Piece of ash wood
 - 6 Dry erase markers
 - 6 Dry eraser (2)
-

| | | |
|--|---|---|
| | Initial <input style="width: 80px;" type="text"/> | Initial <input style="width: 80px;" type="text"/> |
| | Date <input style="width: 80px;" type="text"/> | Date <input style="width: 80px;" type="text"/> |

All items above have been accounted for and are in good condition.
Any exceptions are listed here:

Sender Name (Print)

Sender Signature

Sender Phone Number

All items above have been accounted for and are in good condition.
Any exceptions are listed here:

Receiver Name (Print)

Receiver Signature

Receiver Phone Number





US Army Corps
of Engineers



Invasive Species Leadership Team

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<http://www.usace.army.mil/Missions/Environmental/InvasiveSpeciesManagement.aspx>



Meet the Invaders

Invasive Species Interpretive Trunk

Evaluation Form

Please take the time to fill out and return this evaluation form and return it with the trunk (or email it directly to your Point of Contact). It will help us make future improvements.

| | Very Unsatisfied | Unsatisfied | Neutral | Satisfied | Very Satisfied |
|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Overall satisfaction | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Trunk request process | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Shipping process | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Trunk size (mobility) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Specimens - quality | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Specimens - type/quantity | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Educator's Guide - ease of use | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Educator's Guide - content | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Games | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Connection with your audience | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Most Useful Items in the Interpretive Trunk



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Item or area that generated the most enthusiasm with your audience(s)

Most relevant items or parts of presentation

Least liked item or section

Suggestions for improvement

Additional comments



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Meet the Invaders: Invasive Species Interpretive Trunk -- Please record how the trunk was used

| Date mm/dd/yyyy | Event | event / program length | Location | Group/organization | # of Contacts |
|--------------------|-------|------------------------------|----------|--------------------|------------------|
| | | | | | |
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ISLT Information Cards

- **November 2014**
 - 100,000,000 information cards printed
- **January, 2015**
 - Corps Environment article on ISLT Education & Outreach activities
http://www.usace.army.mil/Portals/2/docs/Environmental/Corps_Environment/The_Corps_Environment_January_2015.pdf
 - Cards shipped to 50 Districts/Divisions offices (1600 cards each)
 - E-mail sent to recipients prior shipping
 - Letter included with shipments describing purpose, how/where to distribute cards
 - 20,000 cards sent to HQ warehouse for future distribution

US Army Corps of Engineers
Invasive Species Leadership Team
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<http://www.usace.army.mil/Missions/Environmental/InvasiveSpeciesManagement.aspx>

Invasive Species Leadership Team

The purpose of the Invasive Species Leadership Team is to ensure that the Corps of Engineers meets the goals established by the President through the National Invasive Species Council, and to improve invasive species management in all agency business lines and missions. These goals include:

- Leadership and Coordination
- Prevention
- Early Detection and Rapid Response
- Control and Management
- Restoration
- Research

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INVASIVE SPECIES EDUCATION

Stopping species before they invade

By Mark Corneish, John Pribille, Linda Nelson and David Nichl
 U.S. Army Corps of Engineers
 Invasive Species Leadership Team
 Education and Outreach Committee

Should we post signs at our Midwest boat ramps saying, "Enter at your own risk?" Recreational boaters in the lower Illinois River are all too familiar with silver carp -- the leaping invasive fish, getting their boat, wiring passengers and generally creating havoc. The locals call it "catching fish the easy way" when the fish jump into the boat. It's entertaining, that is until someone gets hurt.

While the anecdote may be amusing, invasive species are a serious threat to America's ecosystems, decreasing biodiversity, impacting human health and imposing significant financial costs to the economy. Aquatic nuisance species are impacting U.S. Army Corps of Engineers missions involving the maintenance of harbors, waterways, locks and dams, flood control and ecosystem restoration. Stopping the introduction and spread of an invasive species before it damages the environment is the next major challenge on the horizon.

The National Invasive Species Council identified an answer: education. An enlightened mind, once expanded, cannot contract. People who understand the risk of transporting and releasing non-native plants and animals are less likely to do so in the future. The USACE Invasive Species Leadership Team's (ISLT) Education and Outreach Committee is developing tools to help educate the public to combat invasive species.

This month the ISLT Education and Outreach Committee will distribute the Invasive Species Leadership Team business cards to each district. The card features pictures of seven costly invasive species:

- Zebra mussel,
- Silver carp,
- Japanese knotweed,
- Feral hog,
- Burmese python,
- Emerald ash borer, and
- Kudzu.

These cards were created as a national educational aid for the USACE Natural Resource Management staff and the visiting public. The goal is to promote the prevention, introduction and spread of invasive species on project lands and waters. Most importantly, the card displays the USACE Invasive Species Management website with information about invasives, such as current news, issues, reports and best practices in dealing with invasive species. The card displays the motto "Prepare, Prevent, Protect," which contains the goals of the USACE and the National Invasive Species Council.

The ISLT is requesting that park rangers hand out cards when engaging the visiting public at boat ramps, boat inspection stations, visitor centers and water safety events and to discuss the significance of protecting our land and water from invasive species. This public engagement will make the greatest impact in preventing and protecting our land and water from invasive species.

The ISLT Education and Outreach Committee also is developing an interactive Traveling Trunk interpretive program to educate the visiting public about invasive species and the effects they have upon our natural environment and their management by the Army Corps of Engineers. The program will be presented to the general public at visitor centers, meeting rooms, classrooms and outdoors events. The Traveling Trunk Program is designed to be a hands-on environmental educational experience where park visitors and students will be exposed to an array of activities, specimens and handout materials.

The ISLT Education and Outreach Committee is using the Gulf and South Atlantic's Regional Panel on Aquatic Invasive Species Traveling Trunk as a model for expanding a regional program into a national invasive species traveling trunk for USACE. All developed materials (activity guide, specimens, posters, pamphlets and handouts) will align with agency goals, objectives and themes. Later this year the traveling trunk will be available for loan to USACE offices for a period up to three weeks.

Future information on the traveling trunk will be posted on the Invasive Species Management Community of Practice website at <https://www.usace.army.mil/usaceceop/environmental/subjects/invasive/>.

You can also find current news information on the Invasive Species Management Web page (<http://go.usa.gov/F0V6>). This website proves a valuable resource for students, educators, policy makers and management teams on USACE projects and programs.

The Invasive Species Leadership Team was established by a CE/CW/CO Memorandum dated July 13, 2005. The team comprises USACE biologists, planners and research scientists from across the nation. Their purpose is to minimize the introduction and spread of invasive species on USACE projects through the development of comprehensive policy, methodologies, techniques and educational materials.

Invasive Species Leadership Team
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Prior to your Presentation:

- Laptop with DVD player and presentation software
- Large display screen or projection surface
- Table: for specimen display
- Handouts: regionally customized
- ISLT Business Card



General Information





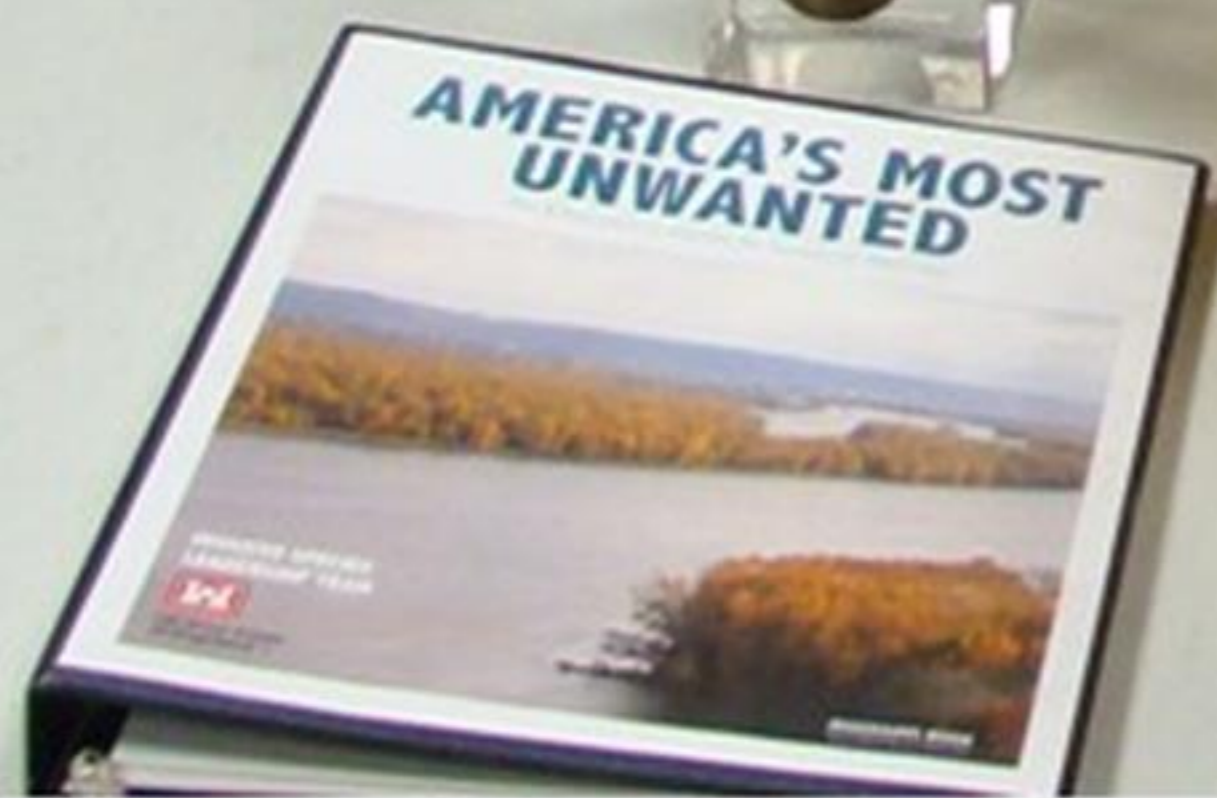
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◀ CAUTION ▶
Remove all items before
removing foam layer



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Photos of
Trunk Contents by Layer

**AMERICA'S
UNWANTED**

An Educator's Guide to Invasive



1



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Photos of Trunk Contents by Layer



Layer 6



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contents by L



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Mark Cornish

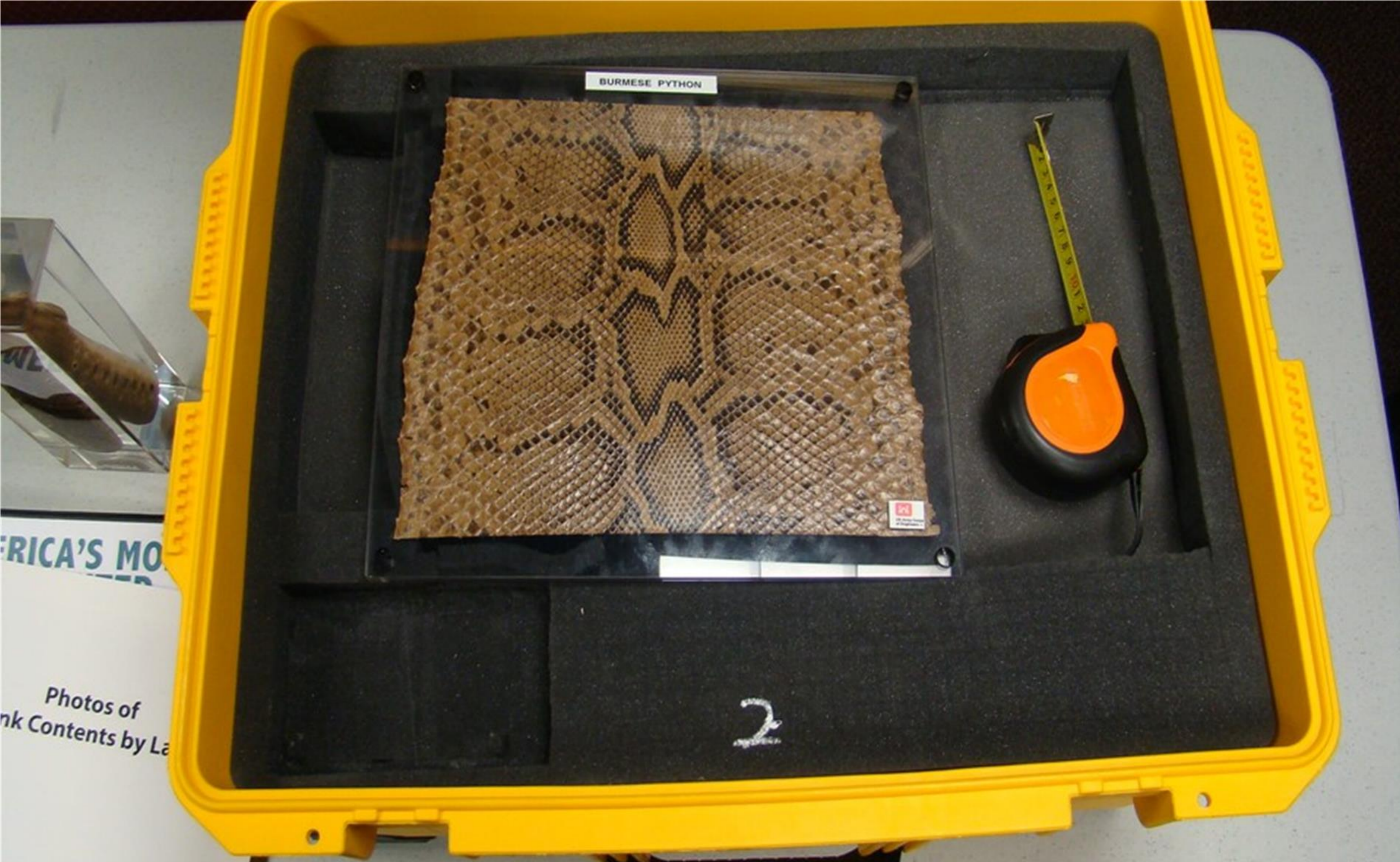
Mika Green

Benjamin Mobley

Wel

Pete Egan

Al Cofrancesco



ERICA'S MO

Photos of
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Or
Mason A. Scharfe
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541-374-2544

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 - **SWD**
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kyle.f.Slifka@usace.army.mil 309-794-4523

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