

Invasive Species: A Global Issue

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Pet Industry Joint Advisory Council (PIJAC)

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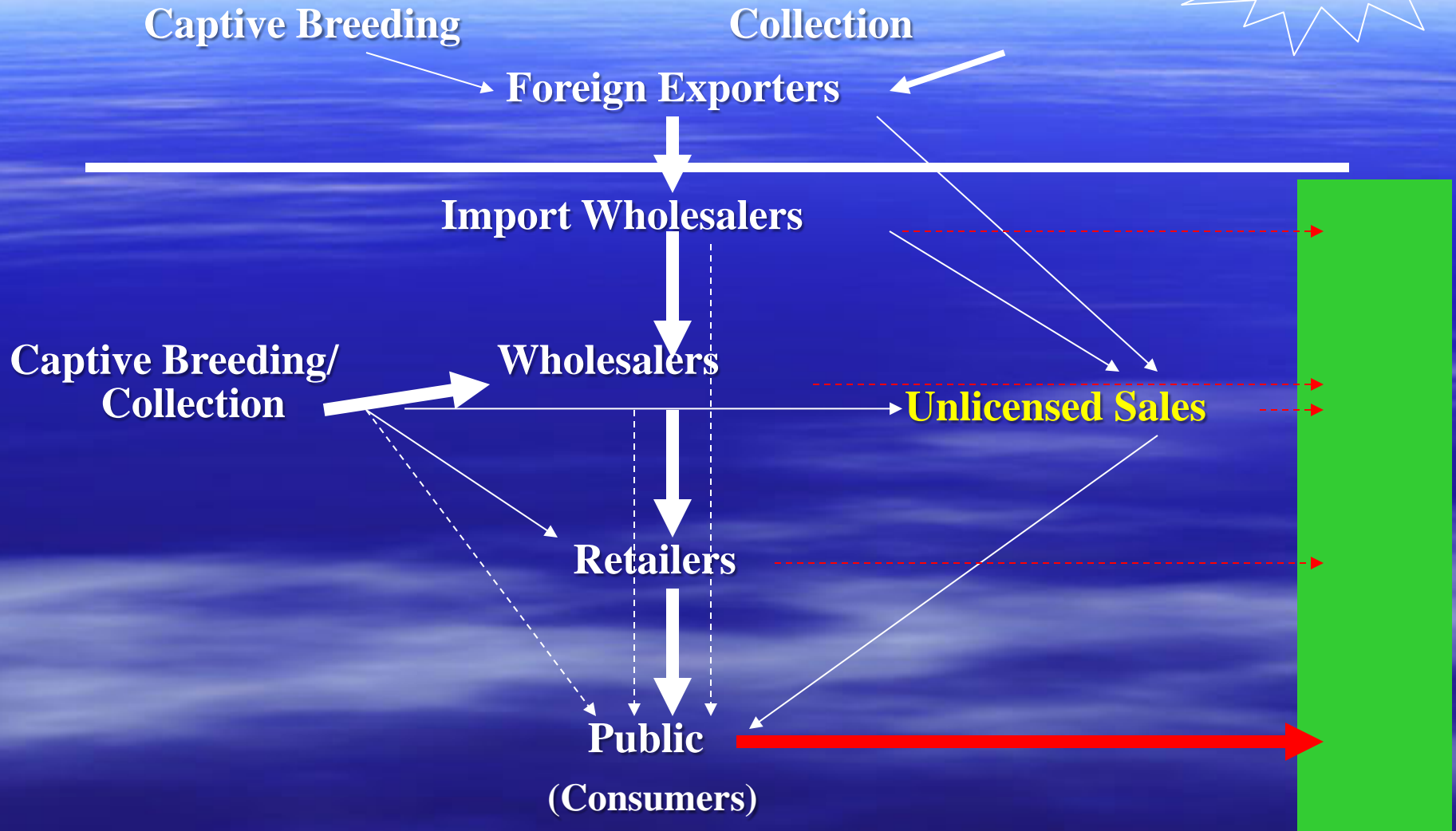
Invasive Species

- **Major and increasing driver to biodiversity loss**
- **Acknowledged as global issue**
- **Impacts native species, weakens ecosystems, destroys habitat, affects human health**
- **Which industry handles more specimens of more non-native species than the pet industry?**

Global Movement

- Argentina
- Australia
- Barbados
- Bahrain
- Bahamas
- Bangladesh
- Belgium
- Brazil
- Canada
- Chile
- China
- Columbia
- Congo
- Cook Islands
- Costa Rica
- Denmark
- Dominican Republic
- El Salvador
- Egypt
- Entrea
- Fiji
- France
- Guatemala
- Germany
- Hong Kong
- India
- Indonesia
- Italy
- Japan
- Kenya
- Maldives
- Mauritius
- Netherlands
- Nicaragua
- Paraguay
- Peru
- Puerto Rico
- Russia
- Saudi Arabia
- Senegal
- Singapore
- Solomon's
- South Africa
- Spain
- Sri Lanka
- Surinam
- Philippines
- Tanzania
- Thailand
- Tonga
- Tunisia
- UAE
- Ubekistan
- UK
- USA
- Vanuatu
- Venezuela
- Yemen

Pet Release Pathway (Generic)



Notes: Dashed lines indicate infrequent sales/movement. Thick lines indicate primary sales/movement. Likelihood of release in red. Green box represents the natural environment.

Lacey Act

- **1973 USFWS Proposed all non-natives “injurious” under 16 USC § 42**
- **1975 PIJAC called for**
 - **FACA committee**
 - **Science based listing criteria/Process**
 - **Publish criteria/Transparency**
 - **Licensure system for commercial importers**
 - **Screening/Risk assessment**
 - **Emergency Response Network**
 - **Education/Outreach**

Lacey Act

- **1994 PIJAC recommended risk-based screening process for “first time introductions”**
- **2001 National Invasive Species Management Plan calls for Rapid Screen Process**
- **2014 Ecological Risk Screen a “reality”**

Lacey Act Shortcomings

- Out of touch with a global economy
- One size fits all
- Requires modernization
- Lacks regulatory flexibility
- Insufficient funding and staffing
- Listing process time consuming
- Effective prevention
 - Regulatory/Non-Regulatory

Industry Involvement

- **Opposes poorly crafted laws/regulations**
- **Promotes science-based decision-making**
- **Regulatory/non-regulatory initiatives**
- **Industry education/outreach initiatives**
- **Requests to share trade data**
- **Dealing with unwanted animals/plants**

Non-Regulatory Initiatives

Two MOUs

– Education/outreach



– Ecological Risk Screen



Current poster child



**Could this be our next poster
child?**



Or this?



Industry, government and academia working together to promote environmentally-responsible consumer behaviors."



HabitatTitude™
PROTECT OUR ENVIRONMENT
DO NOT RELEASE FISH AND AQUATIC PLANTS



- Alternatives to Release**
- Contact a retailer for proper handling advice or for possible returns
 - Give/trade with another aquarist, pond owner, or water gardener
 - Donate to a local aquarium society, school, or aquatic business
 - Seal aquatic plants in plastic bags and dispose in the trash
 - Contact a veterinarian or pet retailer for humane disposal guidance
 - Know your state regulations regarding these alternatives

It's a Conservation Thing!

www.habitattitude.net



It's Not About Fish and Plants. It's About Responsible Consumer Behavior.

Industry, government, academia, and consumers working together.

The escape or release of animals and plants from aquariums, terrariums or ponds and water gardens can harm our environment. Survival of these species in the wild has potential to cause the loss or decline of native plants and animals.

Protecting our environment is part of our responsibility to maintain healthy habitats for our native animals and plants. DO NOT release aquarium pets or aquatic plants into our oceans, rivers, streams, lakes, or wetlands. It is not good for your pets, and it can harm native habitats.



HabitatTitude™
PROTECT OUR ENVIRONMENT
DO NOT RELEASE FISH AND AQUATIC PLANTS
THANK YOU FOR A RESPONSIBLE CHOICE. NOVELTY IS GOOD.
TOUR ORGANIZATION

www.habitattitude.net



DOI/PIJAC MOU Revisited

- Brand name
- Revitalize/Redirect
- Rebrand/Target messaging/Brand compliance
- Expand beyond aquatics
- Redesign website/Relevant content
- Utilize social marketing
- Produce useable outreach/education materials
- Collaborate on education/public awareness
- Engage more partners
- Inadequate funding and staffing



Habitattitudetm



Proactive campaign to ensure

- Wise pet choices (**Habits**)
- Protect environment (**Habitats**) from impacts of unwanted pets
- Help pet owners find alternatives to release of their pets (**Attitudes**)

“Select the right pet!

Do right by your pet. Do right by our environment.”



Codes of Conduct Best Management Practices





Pet Industry Joint Advisory Council

Public Outreach Programs



Habitattitude

Habitattitude

Habitattitude™ is a proactive campaign designed to:

- Ensure that pets are thoughtfully chosen and well-cared for (**Habits**)
- Protect the natural environment (**Habitats**) from the impacts of unwanted pets
- Help pet owners find alternatives to the release of their pets (**Attitudes**)

Do right by your pet. Do right by our environment.

Bd-Free 'Phibs Campaign

The Bd-Free 'Phibs campaign is an education-outreach program designed to educate those that maintain captive amphibians about the problems posed by Bd and husbandry practices that can be employed to reduce the spread and impact of Bd. This campaign is for the pet industry, pet owners, and other industry professionals such as zoos, aquaria, and hobbyists.

Care Sheets

Available for a variety of pets, Care Sheets provide basic care information, including proper housing requirements and maintenance, diet, and additional items needed to care for your new pet. Under final development, Care Sheets will be available for retailers to download and give to customers.

Pet Pathways Toolkit

Pet Pathway Toolkit

The introduction and/or spread of invasive species threaten biological diversity and, by some definitions, human health, animal health, or the economy. This toolkit is designed to assist governments, the pet industry, and their partners in establishing programs and policies that prevent the release/escape of pets into the natural environment, where they can become invasive species. Website and materials are in the final stages of development.

The National Reptile Improvement Plan

This program improves practices of those involved in the importation, sale, or captive breeding of reptilian and amphibian species. The Plan is aimed at minimizing the risk of international or interstate movement of reptiles causing harm to the reptiles, livestock or the environment.

Animal Care Guidelines

This single-source booklet assists retailers in implementing best practices for animal care. Retailers can easily incorporate these guidelines into their own operating manuals or educational materials. In addition, these guidelines can be used to supplement relevant Federal, state, or local laws and regulations that apply to their stores.

Doing It Right

A pet store employee is responsible for meeting the needs of the store, the team they work with, the animals in their care, and customers. Doing It Right is an essential read for all new employees, covering fundamental topics every employee needs to know to be successful.



Non-Regulatory Initiatives

Two MOUs

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– Ecological Risk Screen

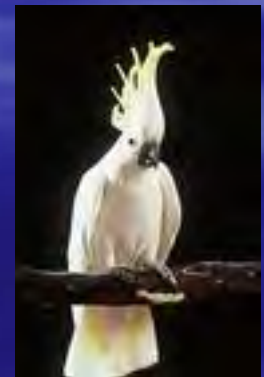


RISK SCREENING



Risk-based comprehensive screening system

- Intentional Introductions Review Report to Congress (1994)
- National Invasive Species Management Plan (2001)
- USGS, ANSTF, ISAC, NISC experimented
- FWS Ecological Risk Screen under final review



FWS Ecological Risk Screening Tool

- **Rapid risk assessment designed to evaluate potential invasiveness (establishment and impact) of non-native species not yet in trade – “first time introduction”**
- **Relies on**
 - **Current scientific information**
 - **Numerous invasive species databases**
 - **Climate matching technology**
 - **Risk management options**
 - **Detailed administrative record**
 - **Peer review**

Tools Available

(Databases)

- Fishbase
- IABIN
- GISD
- NAISN
- APASD
- SERC
- NISIC
- DIAS
- NANSC
- NIS
- NAS
- IABIN
- AIRD
- NISS
- RBIC
- InfoNatura
- USGS NAS
- OISD
- DAISIE
- FAO
- GISIN
- GRIS
- CABI ISC
- NOBANIS
- GBIF
- NISbase
- BioNet
- CIESM
- AIRIES
- CORPI
- APFISN
- ENV.GOV
- FISNA
- NIMPIS
- Europe-aliens
- Inter-American Biodiversity Network
- iz.carnegiemnh.org
- Google scholar
- Google Earth
- KGS Mapper
- AFS

6 Test Species

- Risk Assessment Elements
 - Overall Risk Assessment Category: **High**
 - History of Invasiveness: **High**
 - Climate Match: **High**
 - Certainty of Assessment: **High**

Stone Moroko



Prussian carp



Roach



Crucian carp



Nile Perch



Wels Catfish





Industry/Government Collaboration



Stone Moroko (*Pseudorasbora parva*)

Ecological Risk Screening Summary

Updated June 2011



Photo: Photo Credit

1 Distribution

P. parva is not documented as either introduced or established anywhere in the United States (including territories).

From: <http://www.europe-alien.org/species/factsheet.do?speciesId=503079>

Native Range

East Asian region including the basins of the rivers Amur, Yang-tze, Huang-ho, Japanese islands, western and southern parts of the Korean Peninsula and Taiwan.

Nonindigenous Occurrences

In Europe, it was first recorded in 1961 from southern Romania and Albania. In 1972 the species was recorded from the European part of the former USSR – the Danube delta and Dniester. In slightly over 40 years it has almost entirely colonized Europe, proceeding rapidly from east to west, including Hungary, Czechoslovakia, France, Austria, Germany, Belgium, the Netherlands, Bulgaria, northern Greece, Turkey and the western part of the Balkans, Poland, Italy, England and Denmark.

Wels Catfish (*Silurus glanis*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, February 2011

Updated October, 2011



Photo: <http://animal.discovery.com/fish/river-monsters/killer-fish-photos/images/wels-catfish-photo-01.jpg>

1 Native Range, and Status in the United States

From Freyhof and Kotelat (2008):

Native Range

Afghanistan; Albania; Armenia; Austria; Azerbaijan; Belarus; Belgium; Bosnia and Herzegovina; Bulgaria; China; Croatia; Czech Republic; Denmark; Estonia; Finland; France; Georgia; Germany; Greece; Hungary; Iran, Islamic Republic of; Italy; Kazakhstan; Kyrgyzstan; Latvia; Liechtenstein; Lithuania; Luxembourg; Macedonia, the former Yugoslav Republic of; Moldova; Montenegro; Netherlands; Pakistan; Poland; Romania; Russian Federation; Serbia; Slovakia; Slovenia; Sweden; Switzerland; Tajikistan; Turkey; Turkmenistan; Ukraine; Uzbekistan

Nonindigenous Occurrences in the United States

Not native to, or known to be established in, the United States.

2 Biology and Ecology

Ecological Risk Screen

Outcomes

- Governments and industries determine whether science-based risk of a nonnative species impact on native species and ecosystems, is:
 - Uncertain
 - Low, or
 - High
- Governments can use results to regulate
- Industries can use results to keep “green”
- Both groups can work together to design biosecurity protocols

What is the benefit?

Voluntary non-regulatory approach to preventing potential invasive species from being imported.

- **FWS provides recommendations on the risk level of species and makes the information publically available.**
- **Individuals use ERS Summary reports to determine whether or not to import the species and, if so, adopt biosecurity safeguards.**
- **States can decide for themselves whether to regulate a species or work with industry on alternatives.**
- **Open door policy – bring more tools to the toolkit**

Potential Partners

- Pet Industry Joint Advisory Council (PIJAC) ✓
- Association of Fish and Wildlife Agencies (AFWA) (representing the 50 States) ✓
- Association of Zoos and Aquariums (AZA) ✓
- National Aquaculture Association (NAA)
- American Sportsfishing Association (ASA)
- Alliance of Marine Mammal Parks & Aquariums
- Other Federal Agencies and Bureaus?
- Individual states
- Other Industry partners?

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