

Invasive Species in the Great Lakes (and inland waters of Ottawa County)



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OVERVIEW

- *Stop Aquatic Hitchhikers!* campaign
- GLANSIS website
- Range expansions in Ottawa County
- Asian carp response options

STOP AQUATIC HITCHHIKERS!

- 2010-2012 GLRI project involving 7 states
 - \$1.5 M project generating 30+ products
 - Target 4.8 million exposures to SAH! Message
 - Evaluation will determine behavior change
- Looking for partner groups
 - Register at: protectyourwaters.net
 - Companies, clubs, and organizations needed

STOP AQUATIC HITCHHIKERS!

- Concurrent AIS HACCP project
 - Determine critical control points at tournaments
 - Develop best practices to avoid AIS spread
 - Partnered with Master's Walleye Circuit



STOP AQUATIC HITCHHIKERS!™

Prevent the transport of nuisance species.
Clean all recreational equipment.
www.ProtectYourWaters.net

When you leave a body of water:

- Remove any visible mud, plants, fish or animals before transporting equipment.
- Eliminate water from equipment before transporting.
- Clean and dry anything that comes into contact with water (boats, trailers, equipment, clothing, dogs, etc.).
- Never release plants, fish or animals into a body of water unless they came out of that body of water.

GLANSIS Website (NOAA GLERL)

- Great Lakes ANS Information System
- Includes all known exotics in Great Lakes
- New watchlist of 53 species
- Fact sheets for established species
- Maps and distribution records
- Link to reporting form (or contact me...)

Watchlist species – water hyacinth

Eichhornia crassipes, water hyacinth –

South American aquatic plant identified as having probability of invasion if introduction to the Great Lakes is coupled with predicted increase in winter water temperature (Adebayo et al. 2011)

Listed as having extensive invasion history and described as one of the “worst aquatic weeds in the world” (Global Invasive Species Database). Potential pathway of introduction: aquarium trade.



UGA2132008

WATER LINE →



INFLATED PETIOLE

GLANSIS ONLINE REPORTING

Neogobius melanostomus (Pallas 1814)

Common Name: round goby

Synonyms and Other Names: *Apollonia melanostoma* (Pallas, 1814), *Apollonia melanostomus* (Pallas, 1814) See Stepien and Tumeo (2006) for name change.



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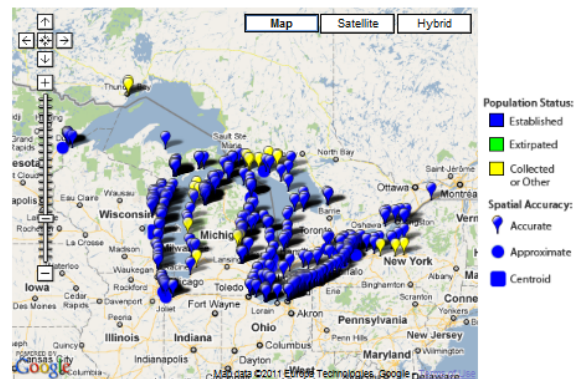
Identification:

Distinguishing characteristics have been given by Berg (1949), Miller (1986), Crossman et al. (1992), Jude (1993), and Marsden and Jude (1995). Young round gobies are solid slate gray. Older fish are blotched with black and brown and have a greenish dorsal fin with a black spot. The raised eyes on these fish are also very distinctive (Jude 1993). This goby is very similar to native sculpins but can be distinguished by the fused pelvic fins (sculpins have two separate fins) (Marsden and Jude 1995).

Size: 30.5 cm; 17.8 cm maximum seen in United States (Jude 1993).

Native Range:

Fresh water, prefers brackish (Stepien and Tumeo 2006). Eurasia including Black Sea, Caspian Sea, and Sea of Azov and tributaries (Miller 1986).



Round Goby



- Macatawa River to Adams Rd.
- Pigeon River nearly to 120th
- Grand River to Kent Trails Bridge
- White River to Pines Point
- Kalamazoo River to Allegan Dam

White Perch

- Lake Macatawa
- Spring Lake
- Grand River to Riverside Park



Exotic white perch – no stripes



Native white bass – 5 to 7 stripes

Chinese Mysterysnail

- 1965 record from upper Grand R.
- 2011 collected in Ottawa County
- Larger than natives (>3 cm)
- Popular as food



Shell found in Eastmanville Bayou

Rusty Crayfish

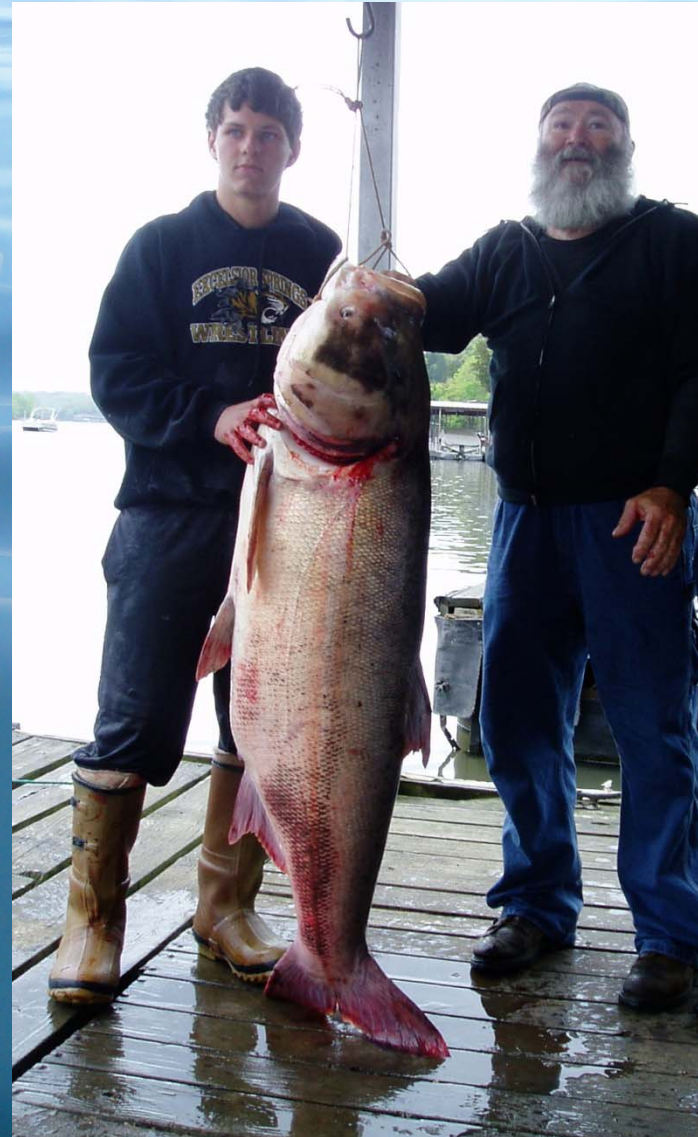
- Native to Ohio R.
- No official records from L.P.
- Displaces native crayfish
- Spread by anglers when used as bait



Note black bands behind orange tips of claws and rusty splotches on carapace.

Prohibited ANS

- Michigan lists 10 fish and 5 plants
- Lacey Act lists 8 fish as “injurious”
- Latest addition was bighead carp March 22, 2011



Current List of Injurious Wildlife

Mammals

- Flying fox or fruit bat (genus *Pteropus*, 60 species)
- Mongoose (7 genera - *Atilax*, *Cynictis*, *Helogale*, *Herpestes*, *Ichneumia*, *Mungos*, and *Suricata*)
- European rabbit (genus *Oryctolagus* – 1 species)
- Indian wild dog, red dog, or dhole (genus *Cuon* – 1 species)
- Multimammal rat or mouse (genus *Mastomys* – 8 species)
- Raccoon dog (*Nyctereutes procyonoides*)
- Brushtail possum (*Trichosurus vulpecula*)

Birds

- Pink starling or rosy pastor (*Sturnus roseus*)
- Species of dioch (including the subspecies black-fronted, red-billed, or Sudan dioch) (*Quelea quelea*)
- Java sparrow (*Padda oryzivora*)
- Red whiskered bul-bul (*Pycnonotus jocosus*)

Fish, Mollusks, Crustaceans

- Walking catfish, family Clariidae (13 genera, ~100 species)
- Mitten crabs (genus *Eriocheir* - 3 species)
- Zebra mussel (*Dreissena polymorpha*)
- Snakehead (family Channidae; 2 genera (*Channa* and *Parachanna*) totaling 28 known species)
- Silver carp ((*Hypophthalmichthys molitrix*)
- Largescale silver carp (*Hypophthalmichthys harmandi*)
- Black carp (*Mylopharyngodon piceus*)
- Salmonids: live or dead whole fish, live fertilized eggs, or gametes, unless with health certificate

Reptiles

- Brown tree snake (*Boiga irregularis*)

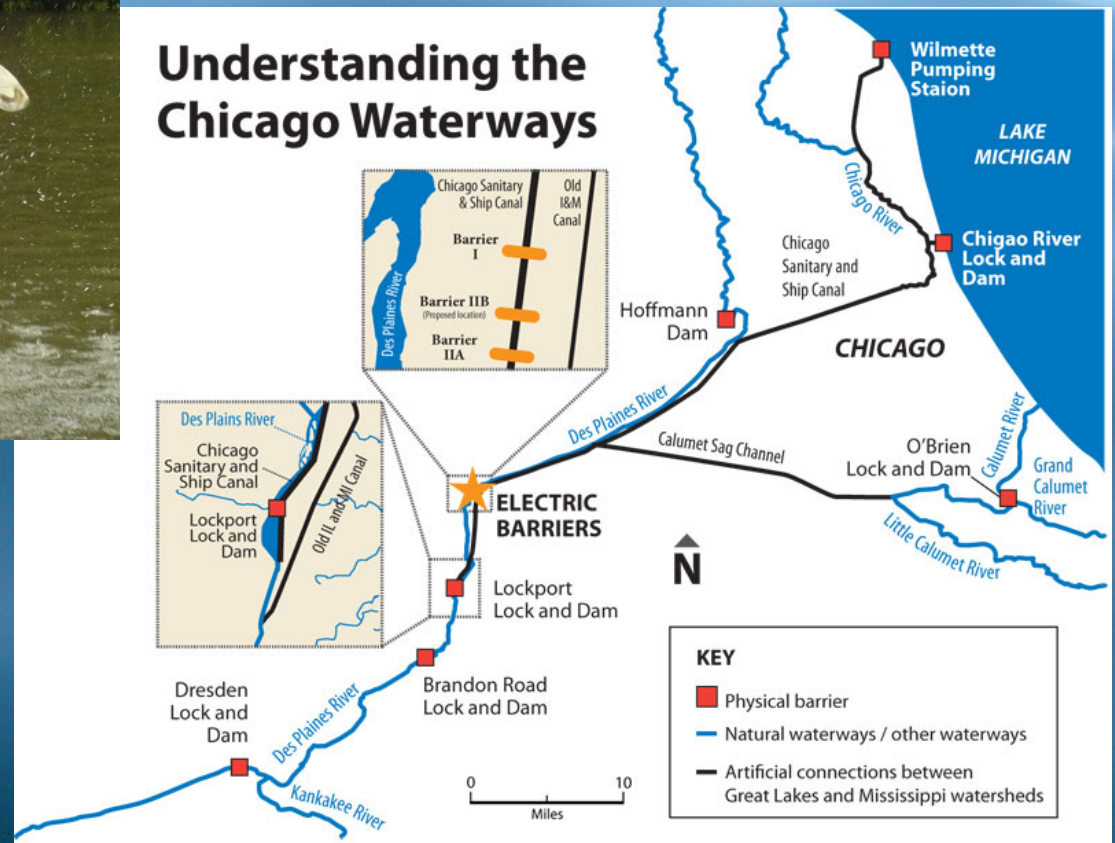
Amphibians

- None are listed.
-

ASIAN CARP INVASION



Understanding the Chicago Waterways



Walleye Bait?



Illinois Natural History Survey Photo



**Keel
without
scales**

**MICHIGAN DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENT**

**PROPOSED PLAN FOR THE PREVENTION, DETECTION, ASSESSMENT, AND
MANAGEMENT OF ASIAN CARPS IN MICHIGAN WATERS**



(Bighead carp)



(Black carp)



(Grass carp)



(Silver carp)

DAVID CLAPP, JESSICA MISTAK, KREGG SMITH, and MARK TONELLO

FISHERIES DIVISION

OCTOBER 2010

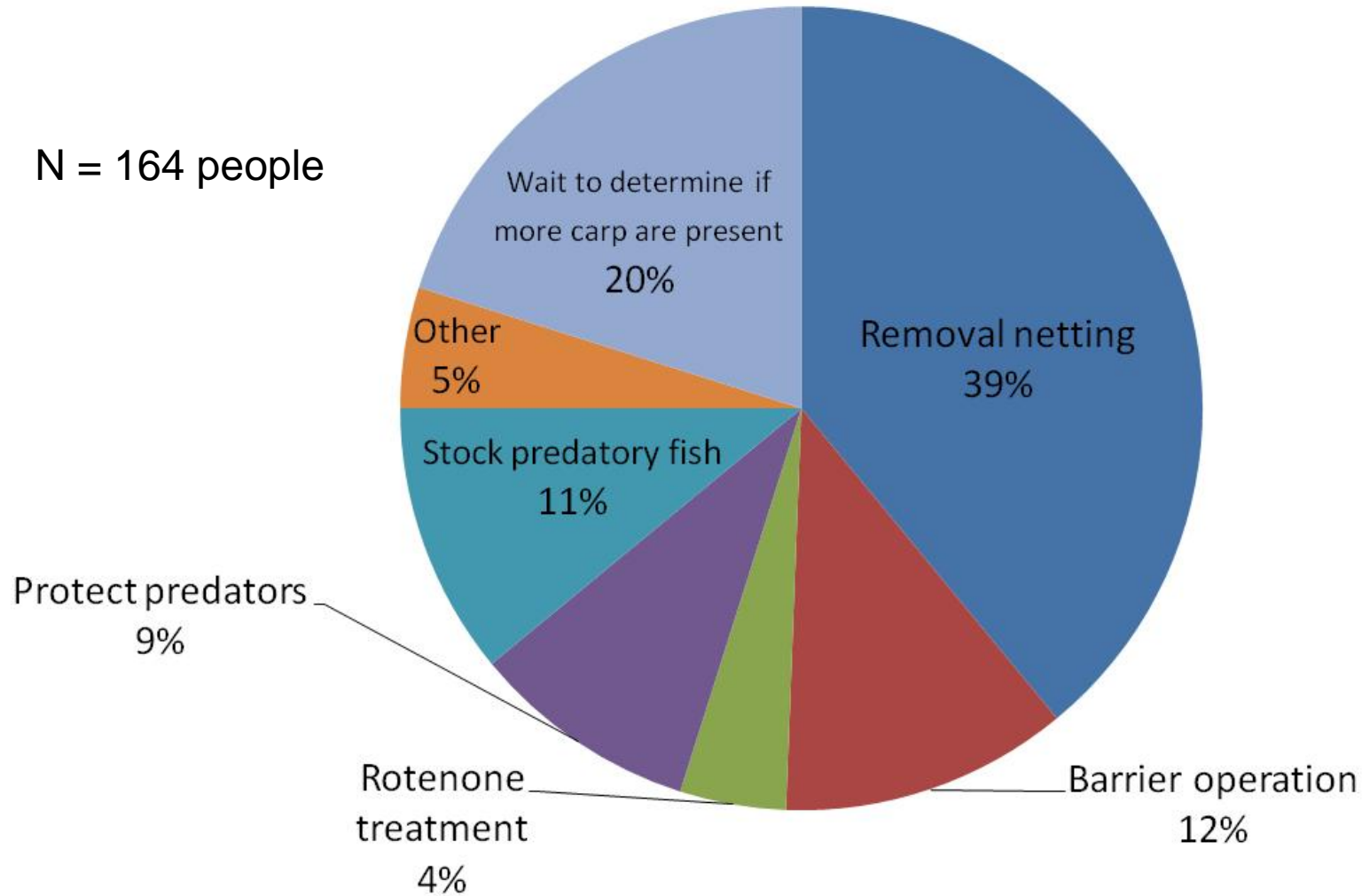


What could we do if an Asian carp was found in the Grand River?

- Removal netting
- Barrier renovation or altered operation
- Stock predatory fish
- Protect predatory fish
- Rotenone treatment
- Wait to determine if more carp are present

Preferred Options for Response to Silver Carp Invasion

N = 164 people





QUESTIONS???