OHIO SEA GRANT AND STONE LABORATORY

Ohio Field Guide to AIS, and App?

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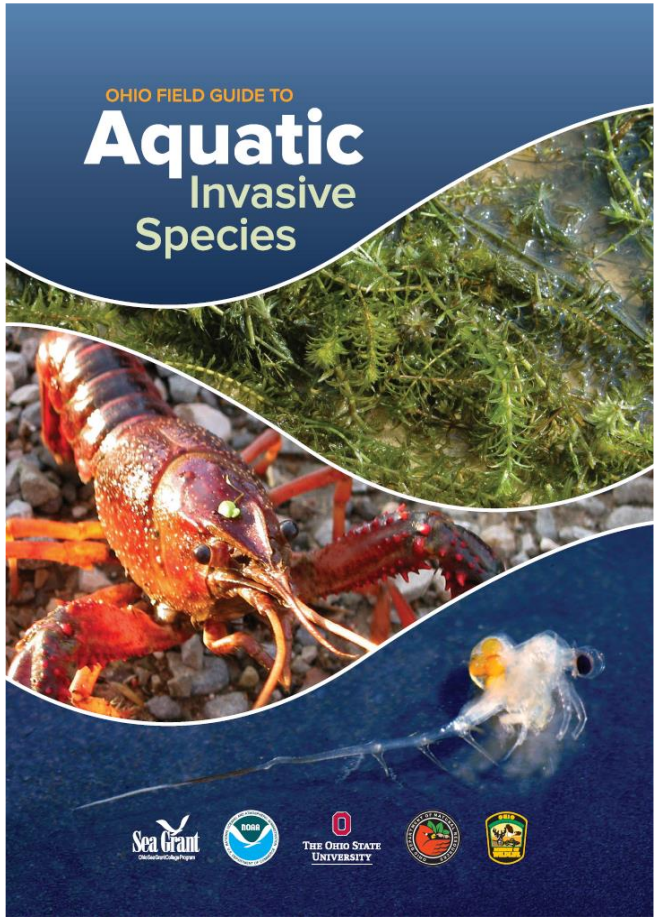
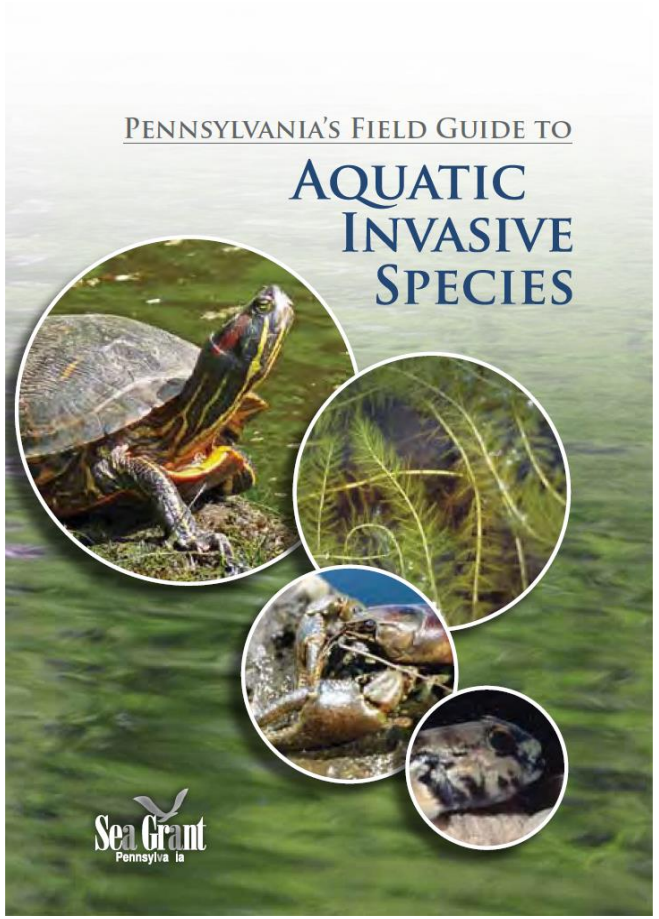
Ohio Sea Grant College Program

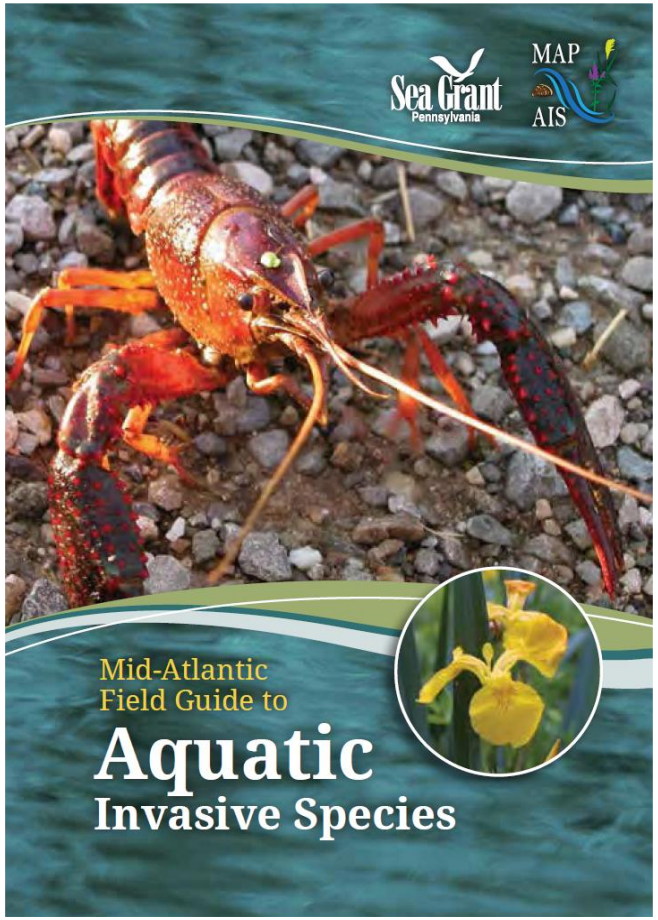
Ohio AIS Committee Meeting 23 May 2019

The Ohio Field Guide to Aquatic Invasive Species



Adapted from work from Pennsylvania Sea Grant…





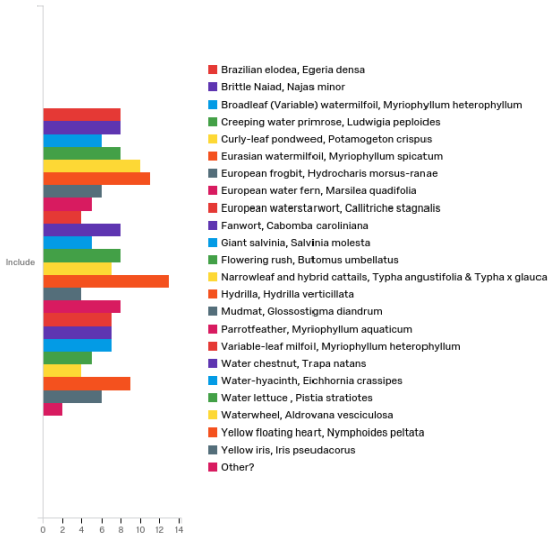
…with input from Ohio's AIS Committee (thanks!)

Default Report

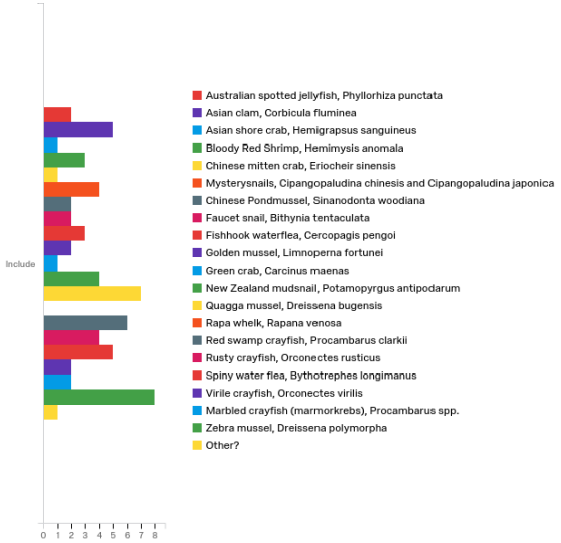
Ohio AIS guide species list

January 3rd 2017, 2:05 pm EST

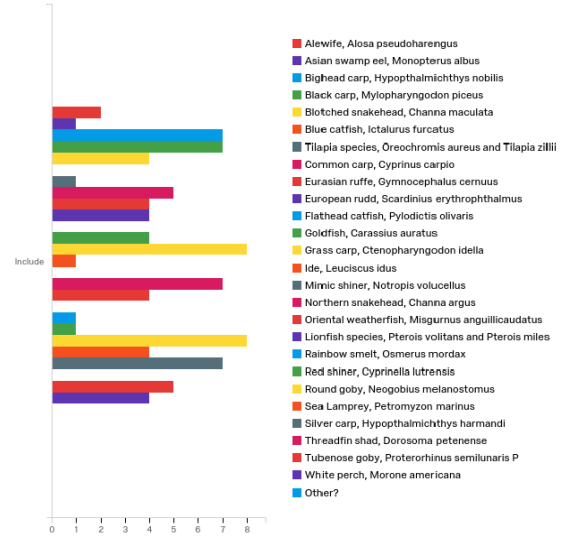
Q1 - Which of the following aquatic plants should be included in an Ohio Aquatic Invasive Species field guide?



Q16 - Which of the following invertebrate species should be included in an Ohio Aquatic Invasive Species field guide?



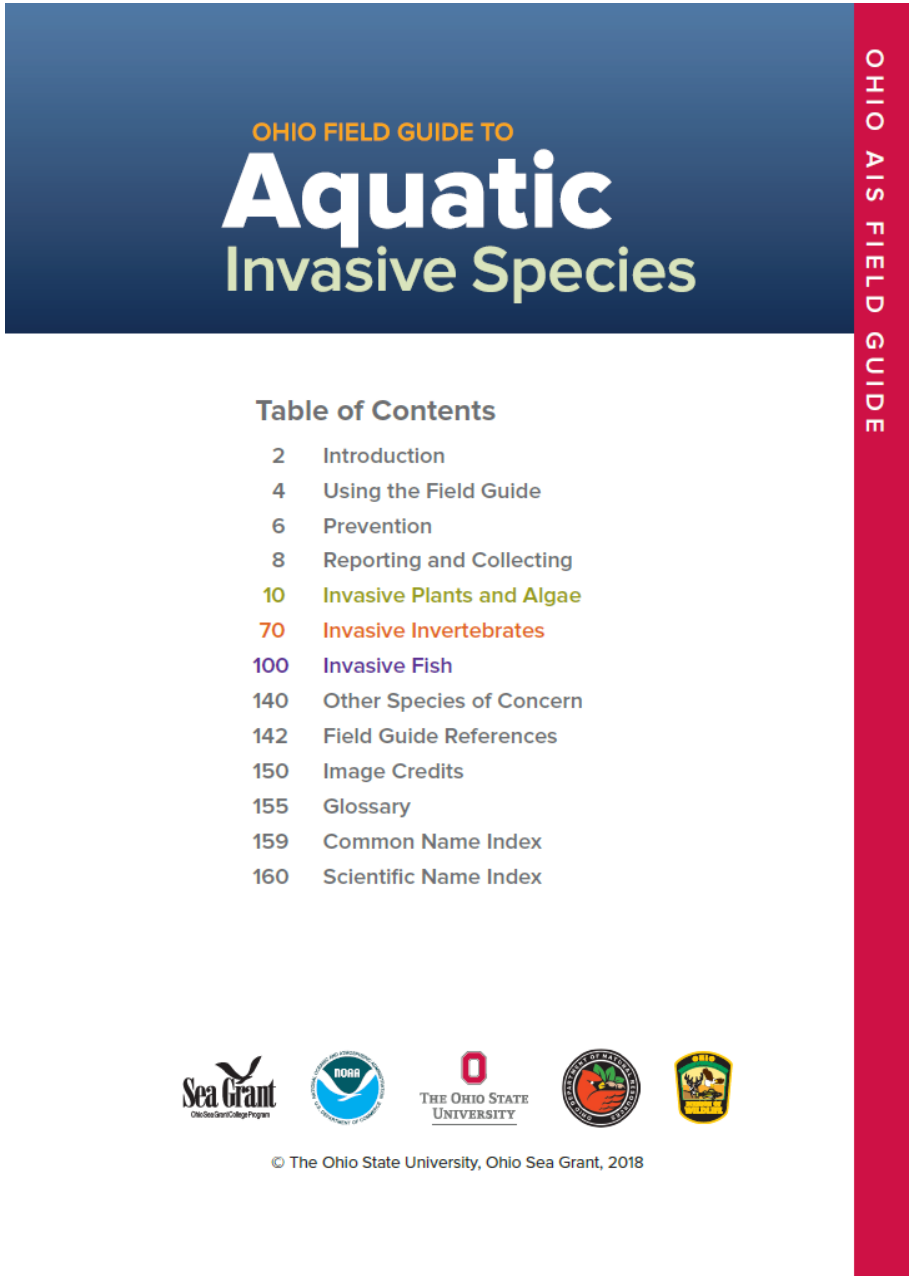
Q6 - Which of the following fish should be included in an Ohio Aquatic Invasive Species field guide?



Sea Grant

The Ohio State University

Content



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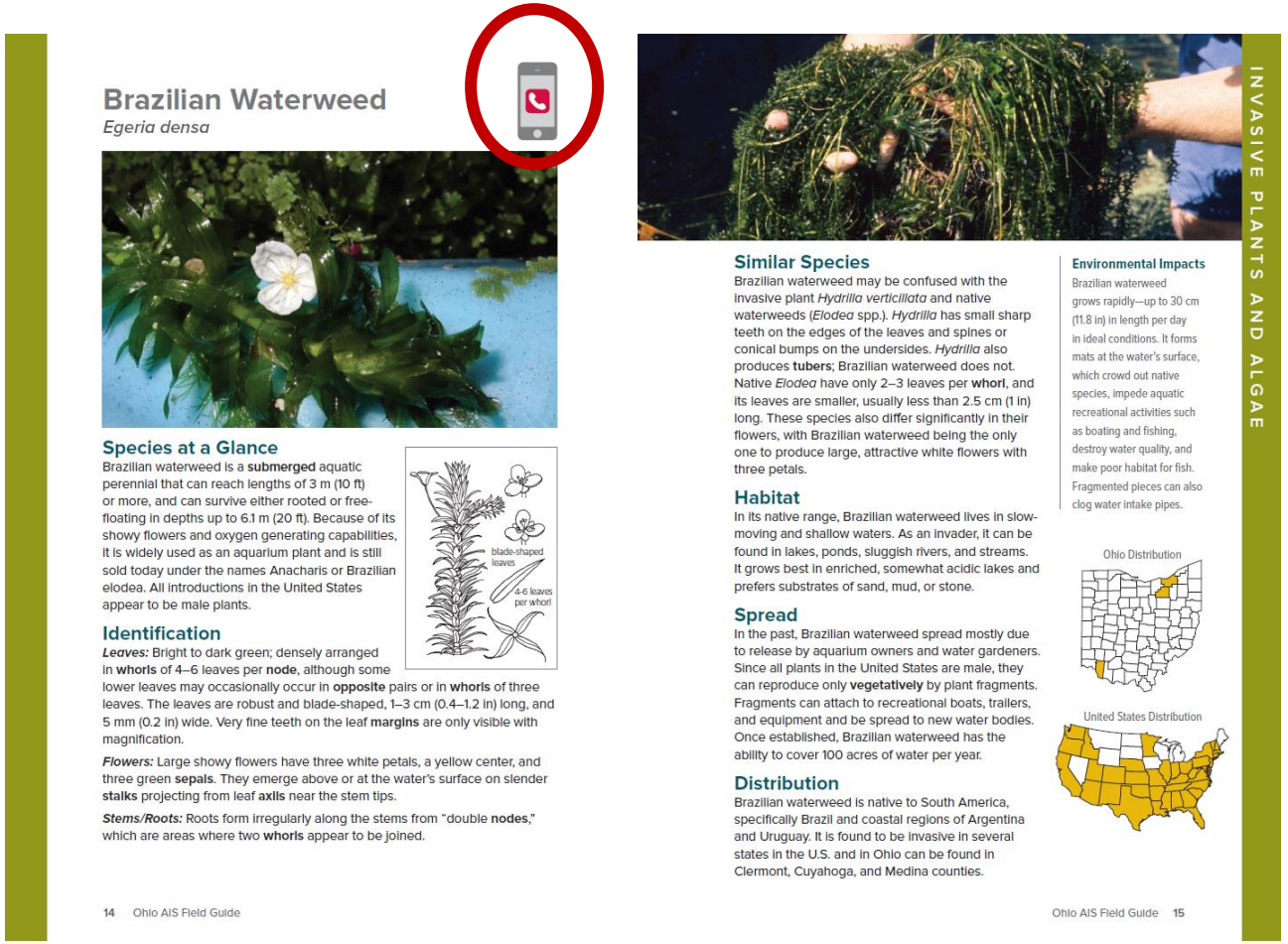
Species Accounts

- Species at a Glance
- Identification
- Similar Species
- Habitat
- Spread
- Distribution
- Environmental Impacts



Brazilian Waterweed

Egeria densa

Species at a Glance

Brazilian waterweed is a **submerged** aquatic perennial that can reach lengths of 3 m (10 ft) or more, and can survive either rooted or free-floating in depths up to 6.1 m (20 ft). Because of its showy flowers and oxygen generating capabilities, it is widely used as an aquarium plant and is still sold today under the names Anacharis or Brazilian elodea. All introductions in the United States appear to be male plants.

Identification

Leaves: Bright to dark green; densely arranged in **whorls** of 4–6 leaves per **node**, although some lower leaves may occasionally occur in **opposite** pairs or in **whorls** of three leaves. The leaves are robust and blade-shaped, 1–3 cm (0.4–1.2 in) long, and 5 mm (0.2 in) wide. Very fine teeth on the leaf **margins** are only visible with magnification.

Flowers: Large showy flowers have three white petals, a yellow center, and three green **sepals**. They emerge above or at the water's surface on slender **stalks** projecting from leaf **axils** near the stem tips.

Stems/Roots: Roots form irregularly along the stems from "double **nodes**," which are areas where two **whorls** appear to be joined.

Similar Species

Brazilian waterweed may be confused with the invasive plant *Hydrilla verticillata* and native waterweeds (*Elodea* spp.). *Hydrilla* has small sharp teeth on the edges of the leaves and spines or conical bumps on the undersides. *Hydrilla* also produces **tubers**; Brazilian waterweed does not. Native *Elodea* have only 2–3 leaves per **whorl**, and its leaves are smaller, usually less than 2.5 cm (1 in) long. These species also differ significantly in their flowers, with Brazilian waterweed being the only one to produce large, attractive white flowers with three petals.

Habitat

In its native range, Brazilian waterweed lives in slow-moving and shallow waters. As an invader, it can be found in lakes, ponds, sluggish rivers, and streams. It grows best in enriched, somewhat acidic lakes and prefers substrates of sand, mud, or stone.

Spread

In the past, Brazilian waterweed spread mostly due to release by aquarium owners and water gardeners. Since all plants in the United States are male, they can reproduce only **vegetatively** by plant fragments. Fragments can attach to recreational boats, trailers, and equipment and be spread to new water bodies. Once established, Brazilian waterweed has the ability to cover 100 acres of water per year.

Distribution

Brazilian waterweed is native to South America, specifically Brazil and coastal regions of Argentina and Uruguay. It is found to be invasive in several states in the U.S. and in Ohio can be found in Clermont, Cuyahoga, and Medina counties.

Environmental Impacts

Brazilian waterweed grows rapidly—up to 30 cm (11.8 in) in length per day in ideal conditions. It forms mats at the water's surface, which crowd out native species, impede aquatic recreational activities such as boating and fishing, destroy water quality, and make poor habitat for fish. Fragmented pieces can also clog water intake pipes.

Ohio Distribution

United States Distribution

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Pennsylvania Field Guide to Aquatic Invasive Species Smart Phone app

Sara Stahlman, Pennsylvania Sea Grant

Sea Grant Ohio Sea Grant College Program

The Ohio State University

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OHIO SEA GRANT AND STONE LABORATORY

OHIO? ~~Pennsylvania~~ Field Guide to Aquatic Invasive Species Smart Phone app

Sara Stahlman, Pennsylvania Sea Grant

Sea Grant Pennsylvania

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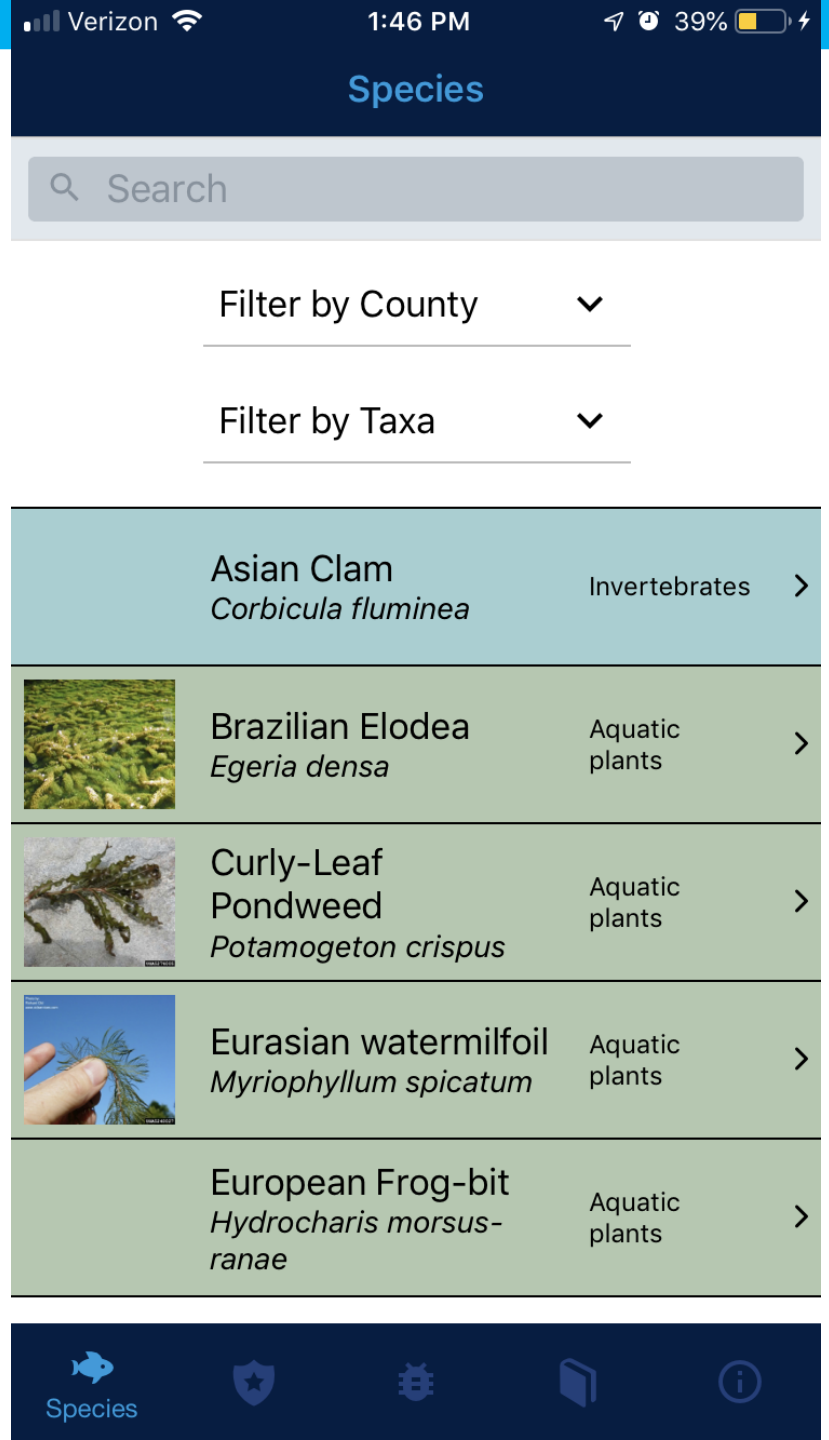
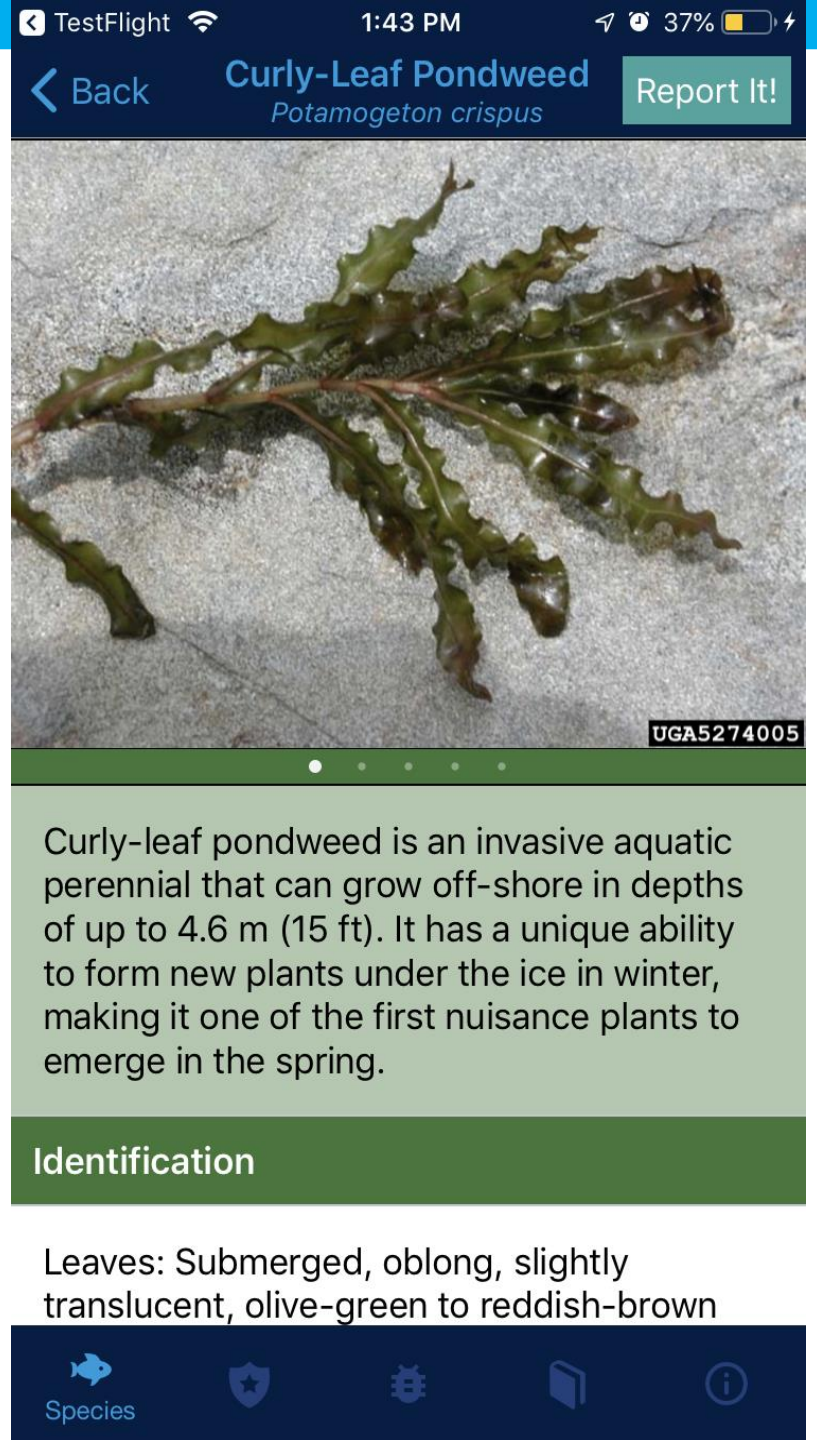


PA Version:

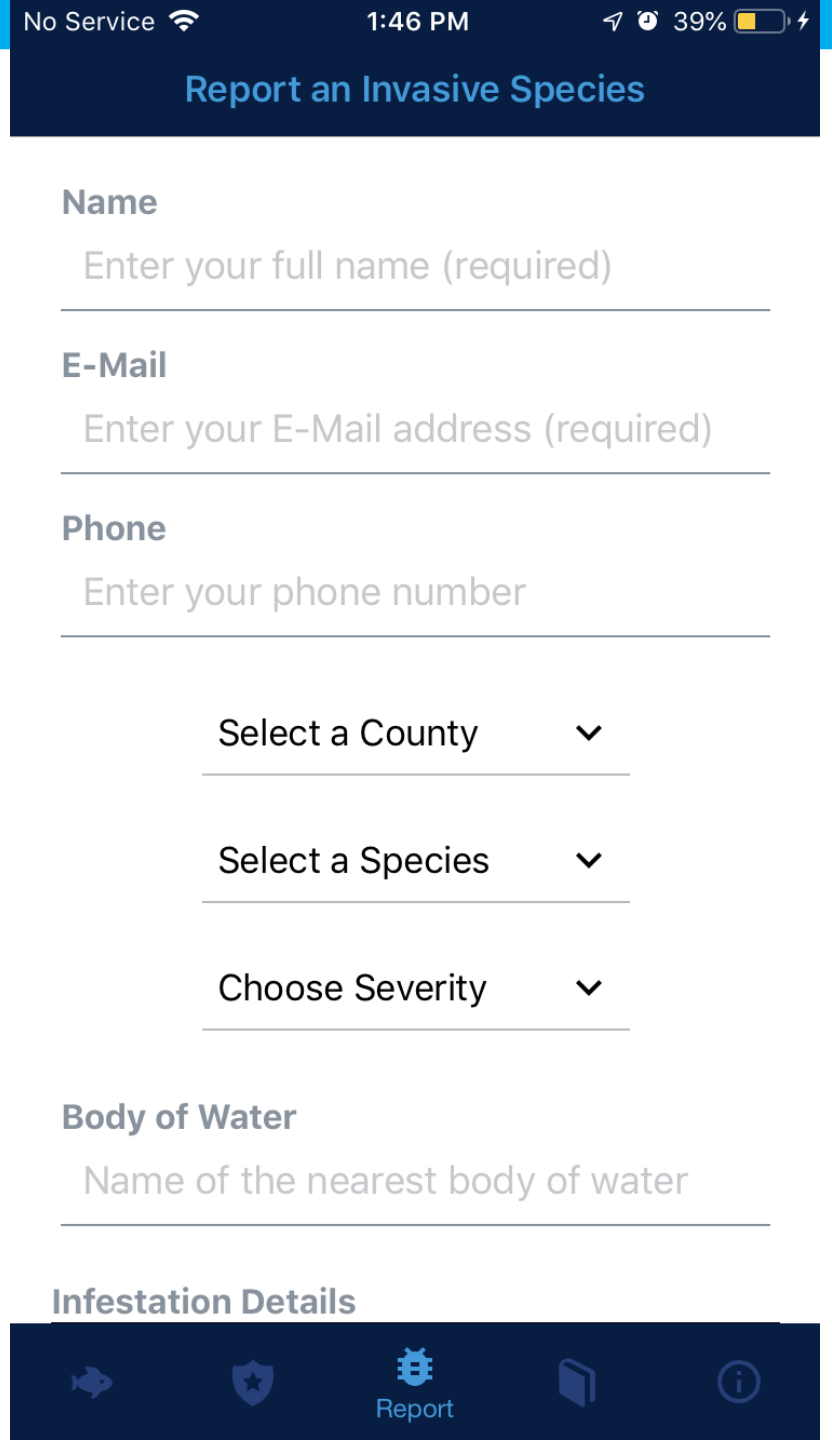
- Obligate plants
- Facultative plants
- Invertebrates
- Fish
- Reptiles
- Pathogens
- Algae

Ohio's would mirror guide:

- Plants and Algae
- Invertebrates
- Fish



- Species profiles:
  - Identification
  - Similar Species
  - Habitat
  - Spread
  - Distribution
  - Environmental Impact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Report an Invasive Species
Name
Enter your full name (required)
E-Mail
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Phone
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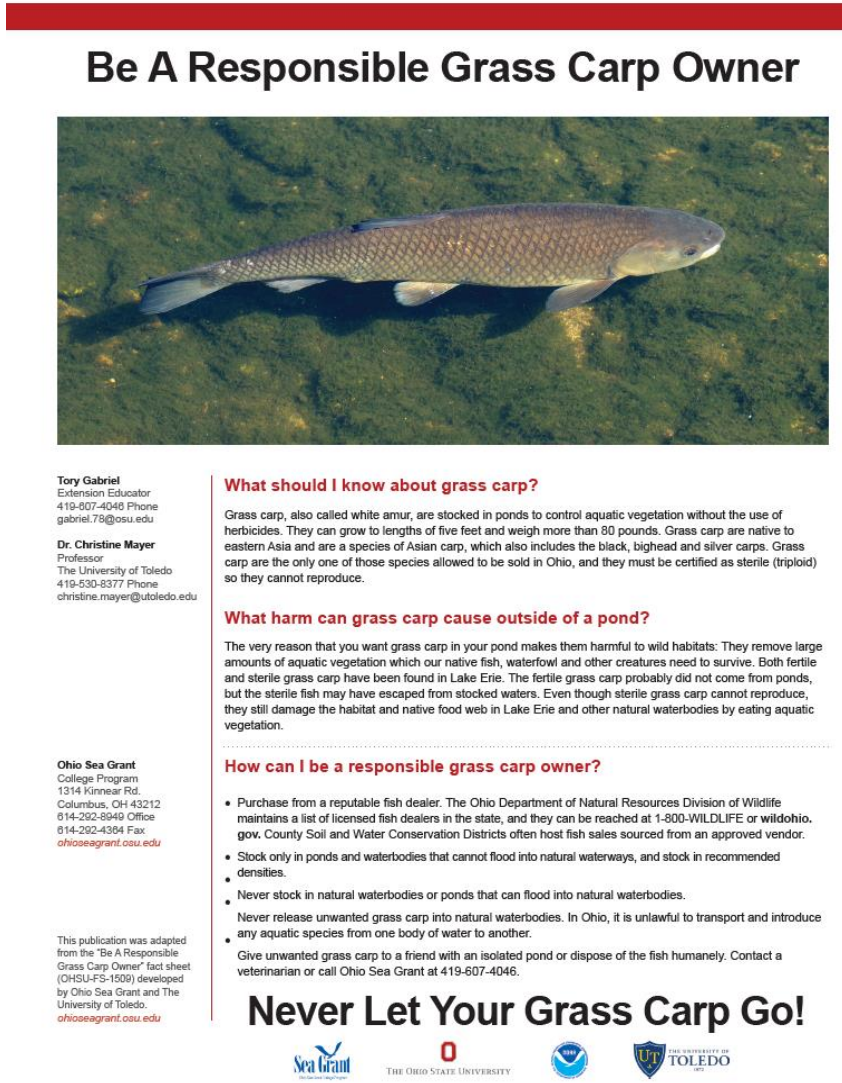
Select a County
Select a Species
Choose Severity
Body of Water
Name of the nearest body of water
Infestation Details
Report

- Report

Skyward App Company

- Edition manager
  - Mid-Atlantic Field Guide
  - Ohio Field Guide?
  - Others?
- $20,000 add-on

Another OHSG AIS Product



Be A Responsible Grass Carp Owner

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This publication was adapted from the "Be A Responsible Grass Carp Owner" fact sheet (OHSU-FS-1509) developed by Ohio Sea Grant and The University of Toledo.
ohioseagrant.osu.edu

What should I know about grass carp?

Grass carp, also called white amur, are stocked in ponds to control aquatic vegetation without the use of herbicides. They can grow to lengths of five feet and weigh more than 80 pounds. Grass carp are native to eastern Asia and are a species of Asian carp, which also includes the black, bighead and silver carps. Grass carp are the only one of those species allowed to be sold in Ohio, and they must be certified as sterile (triploid) so they cannot reproduce.

What harm can grass carp cause outside of a pond?

The very reason that you want grass carp in your pond makes them harmful to wild habitats: They remove large amounts of aquatic vegetation which our native fish, waterfowl and other creatures need to survive. Both fertile and sterile grass carp have been found in Lake Erie. The fertile grass carp probably did not come from ponds, but the sterile fish may have escaped from stocked waters. Even though sterile grass carp cannot reproduce, they still damage the habitat and native food web in Lake Erie and other natural waterbodies by eating aquatic vegetation.

How can I be a responsible grass carp owner?

- Purchase from a reputable fish dealer. The Ohio Department of Natural Resources Division of Wildlife maintains a list of licensed fish dealers in the state, and they can be reached at 1-800-WILDLIFE or **wildohio.gov.** County Soil and Water Conservation Districts often host fish sales sourced from an approved vendor.
- Stock only in ponds and waterbodies that cannot flood into natural waterways, and stock in recommended densities.
- Never stock in natural waterbodies or ponds that can flood into natural waterbodies.
- Never release unwanted grass carp into natural waterbodies. In Ohio, it is unlawful to transport and introduce any aquatic species from one body of water to another.
- Give unwanted grass carp to a friend with an isolated pond or dispose of the fish humanely. Contact a veterinarian or call Ohio Sea Grant at 419-607-4046.

Never Let Your Grass Carp Go!

- Idea from Dr. Chris Mayer, University of Toledo
- Based on discussions with Lucas County Soil and Water Conservation District
- Emphasis on not releasing grass carp
- Sent to all county SWCDs
- Well received at Great Lakes Panel meeting
  - Creating editable version for other states to customize

Take a Kid Fishing!

QUESTIONS?

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