

Ohio's Invasive Aquatic and Wetland Plants

A Brief Update



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Eugene Braig,
Program Director,
Aquatic Ecosystems

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

OSU Extension, School
of Environment and
Natural Resources

Aquatic and Wetland Invasive Plants

The outline:

- Ohio Dept. of Ag. invasive plants rule
- Recently on the move (2023–present)
- ID and other resources



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ODA Invasive Plants Rule

Ohio Department of Agriculture (ODA) Invasive Plants Rule

(authority under ORC 901.50).

- Implemented January 2018 and revised February 2023.
- Listing requires formal assessment.
- List revised by appointed 5-member advisory committee as necessary.
- The rule: <https://codes.ohio.gov/ohio-administrative-code/rule-901:5-30-01>



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ODA Invasive Plants Rule

The initial 15 aquatic/facultative invasive (or potentially invasive) spp. (2018):

- Flowering rush (*Butomus umbellatus*)
- Brazilian waterweed (*Egeria densa*)¹
- Giant hogweed (*Heracleum mantegazzianum*)¹
- Hydrilla (*Hydrilla verticillata*)¹
- European frog-bit (*Hydrocharis morsus-ranae*)¹
- Purple loosestrife (*Lythrum salicaria*)²
- European wand loosestrife (*L. virgatum*)³
- Parrotfeather (*Myriophyllum aquaticum*)¹
- Eurasian watermilfoil (*M. spicatum*)
- Yellow floating-heart (*Nymphoides peltata*)¹
- Common reed (*Phragmites australis*)
- Curly-leaf pondweed (*Potamogeton crispus*)
- Water chestnut (*Trapa natans*)³
- Narrow-leaf cattail (*Typha angustifolia*)
- Hybrid cattail (*Typha x glauca*)



Default: Common and widespread within Ohio.

1. Uncommon or of limited range within Ohio.
2. Also listed as a noxious weed
3. Not yet present in Ohio.



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ODA Invasive Plants Rule

The 19 newly listed aquatic/facultative plants (2023):

- Pinnate mosquitofern (*Azolla pinnata*)¹
- Anchored water hyacinth (*Eichhornia* azurea*)^{1*}
- Indian swampweed (*Hygrophila polysperma*)^{4**}
- Yellow flag iris (*Iris pseudacorus*)^{1, 2, 3}
- African oxygen weed (*Lagarosiphon major*)²
- Asian marshweed (*Limnophila sessiliflora*)
- European water-clover (*Marsilea quadrifolia*)⁴
- Arrowleaf false pickerelweed (*Monochoria hastata*)
- Heartshape false pickerelweed (*Monochoria vaginalis*)
- Brittle waternymph (*Najas minor*)^{1, 3}
- Duck lettuce (*Ottelia alismoides*)
- Water lettuce (*Pistia stratiotes*)^{2, 4}
- Reed canary grass (*Phalaris arundinacea*)^{3, 5}
- Arrowhead (*Sagittaria sagittifolia*)¹
- Crack willow (*Salix fragilis*)^{1, 4}
- Common salvinia (*Salvinia minima*)²
- Giant salvinia (*Salvinia molesta*)
- Simple bur-reed (*Sparganium erectum*)¹
- Water soldier (*Stratiotes aloides*)

* Proposed move to *Pontederia*

** News



Default: Not yet present in Ohio's wild.

1. Potential competitor with native congeners.
2. Sometimes sold as ornamental.
3. Common in Ohio.
4. Uncommon in Ohio.
5. Except when sold as animal feed.



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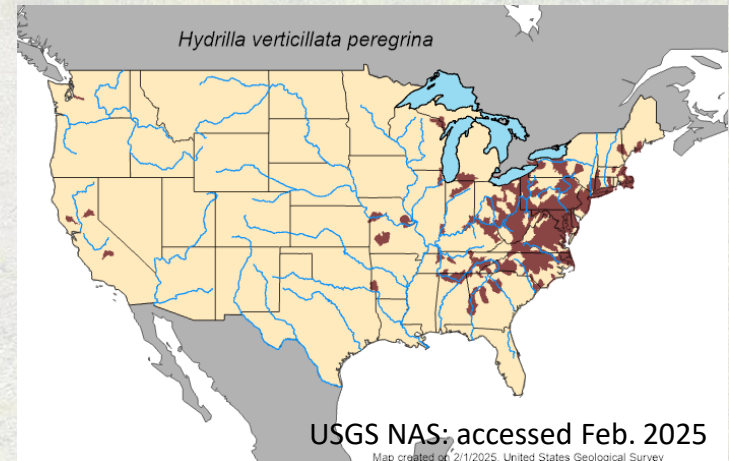


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Hydrilla (*Hydrilla verticillata*)

- Listing status: **invasive**.
- Monoecious biotype recently given subspecific status (*H. verticillata peregrina*).
- Submerged and similar to native waterweeds (but whorls of mostly 5 leaves with serrations on midribs).
- Continues spread into Ohio's interior (especially transported on boats/equipment from the Ohio R.).
 - Large stand discovered in 2022 now being managed on Alum Creek Lake, Delaware Co.
 - Stand discovered in north Seneca Lake in 2024 (Muskingum Watershed Cons. Dist.): contractor will experiment with mud-flat treatments.
 - Additional new observations in Mosquito Creek, Cuyahoga, and West Branch Rocky rivers (NE) and Cow, Flatfoot, Willow, and Spruce creeks (SE).



Kathryn Hamman, MWCD (2024)

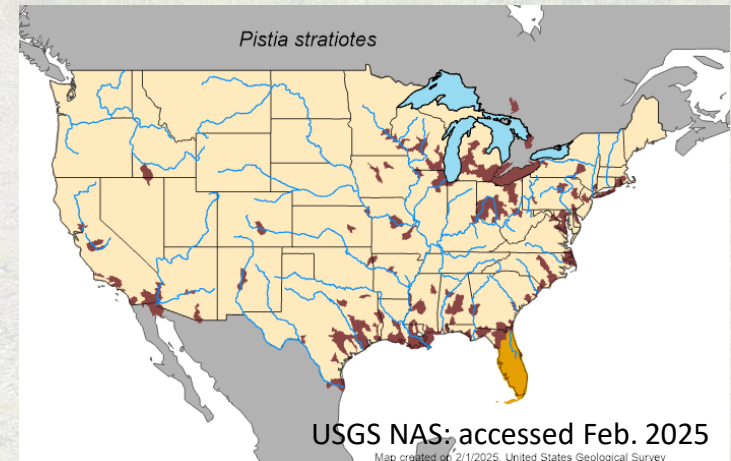


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Water Lettuce (*Pistia stratiotes*)

- Listing status: **invasive**.
- Free-floating with unattached roots, distinctly striated leaves.
- Considered fragile this far north (unknown if any current observations overwintered).
- Still relatively uncommon to Ohio.
- New observations:
 - Blacklick Creek (central); Baldwin, Euclid, and East Branch Nimishillen creeks (NE); and Greenville Creek (W).
 - Stands I reported in Delaware (2023) and Franklin cos. (2024) not yet represented.



Eugene Braig (2024)



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Eugene Braig (2024)

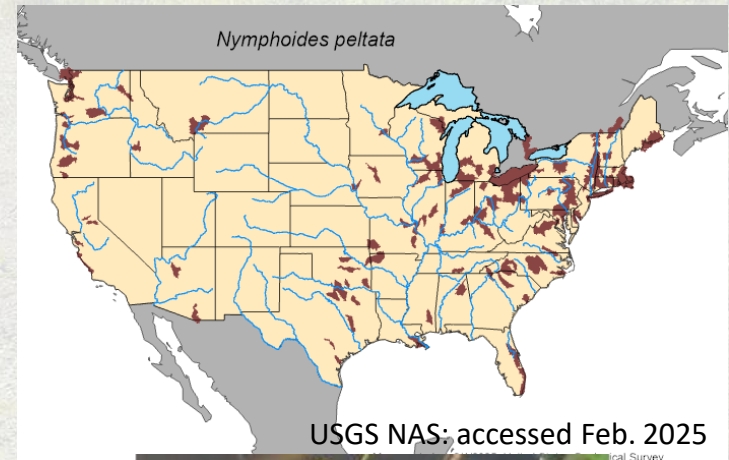


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Yellow Floating-heart (*Nymphoides peltata*)

- Listing status: **invasive**.
- Water-lily like, but small with distinctly frilled flowers.
- Still relatively uncommon to Ohio.
- Stalled for decades (no new reports 1940–2005), but recently on the move.
- New observations:
 - Aurora Branch, Marsh and Swine creeks (NE) and Pone Run (E).

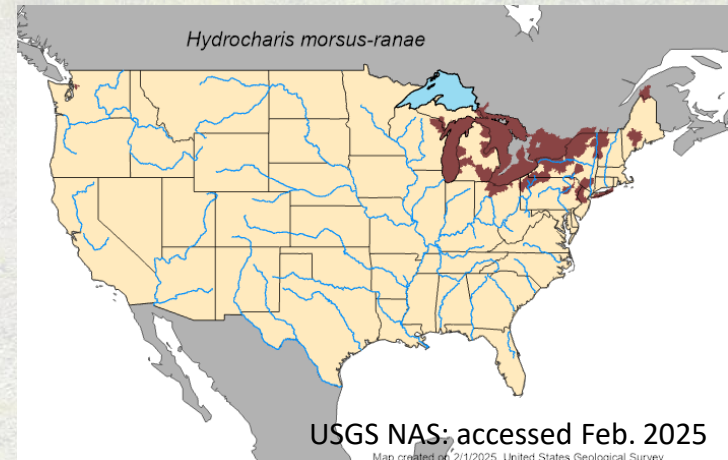


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European Frog-bit (*Hydrocharis morsus-ranae*)

- Listing status: **invasive**.
- Water-lily like, but tiny and free-floating with unattached roots.
- Northern species: first invaded Ohio in Lake Erie's western marshes.
- Observed in NE Ohio marshes by 2022.
- Now surprisingly widespread to Ohio's coastal marshes.



Dave Brenner, MI Sea Grant



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European Frog-bit (*Hydrocharis morsus-ranae*)



Eugene Braig (2018)

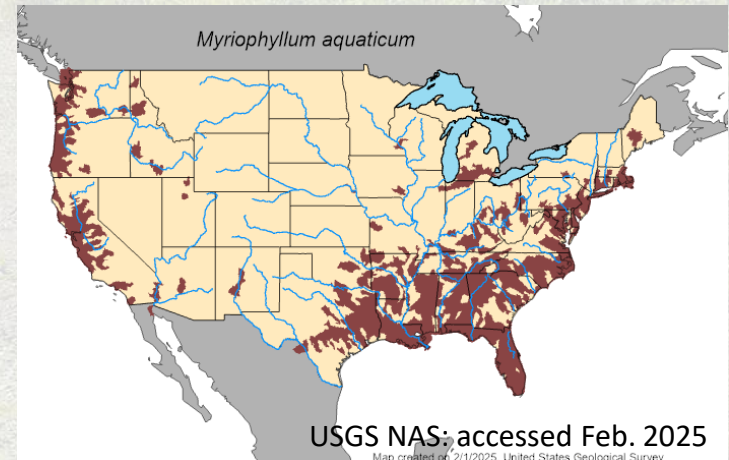


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Parrotfeather (*Myriophyllum aquaticum*)

- Listing status: **invasive**.
- Similar to other submerged watermilfoils but with some rather “rubbery” looking emergent stems–leaves.
- Still relatively uncommon to Ohio.
- New observations:
 - Patterson Creek (E), Coates Run (SE), and Shawnee Creek (SW).
 - Stand I reported in Delaware Co. (2023) not yet represented.



Ryan Wersal, MSU

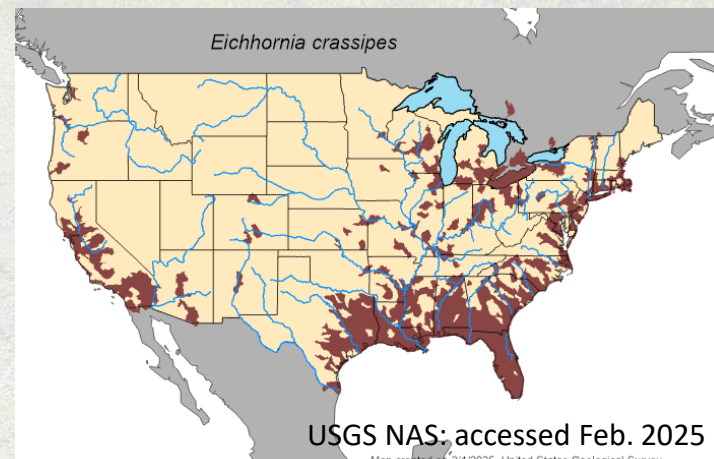


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Water-hyacinth (*Eichhornia crassipes*)

- Listing status: not listed (but perhaps it should be).
- Free-floating with unattached roots; thick, glossy leaves; inflated, bulbous petioles; and showy flower spikes.
- Still relatively uncommon to Ohio.
- New observations:
 - Crooked Creek (NW); Baldwin Creek, city of Medina, Griswold Creek, and Boston Run (NE); Greenville Creek (W); and Olentangy River and Grave Creek (central).
 - Stand I reported in Franklin Co. (2024) not yet represented.



Eugene Braig (2024)

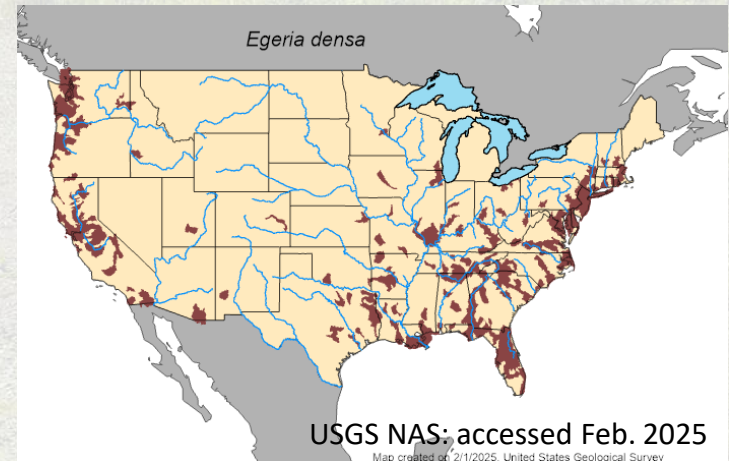


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Brazilian Waterweed (*Egeria densa*)

- Listing status: **invasive**.
- Submerged and similar to native waterweeds (but whorls of mostly 4 leaves along dense nodes and conspicuous-but-small white flowers in bloom).
- Still uncommon to Ohio.
- New observation:
 - Cahoon Creek on Lake Erie (NE).



Mark Warman, ex-Cleveland Metroparks (2023)

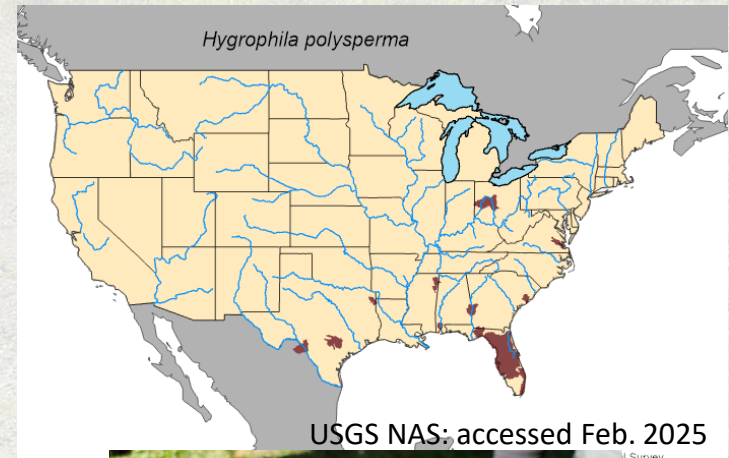


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Indian Swampweed (*Hygrophila polysperma*)

- Listing status: **invasive**.
- Similar to native *Ludwigia* spp. (but mostly submerged where *Ludwigia* spp. are mostly emergent).
- Brand new invasion (discovered 2024):
 - Rare to Ohio excepting 11 miles of the upper Mad River (W) spanning Logan and Champaign cos.
 - The interesting case of a tropical species in a coldwater stream...



Noah Ganson, Trout Unlimited (2024)



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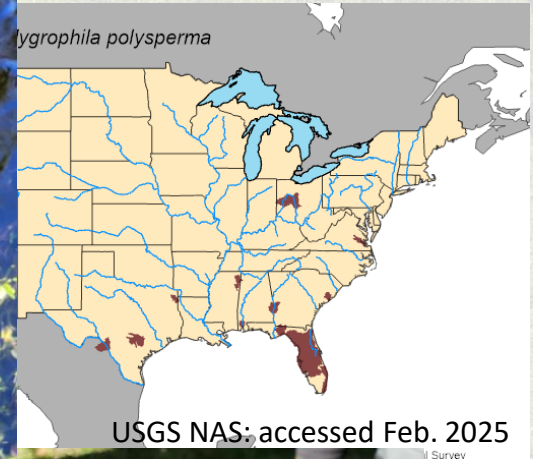
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Indian Swampweed (*Hygrophila polysperma*)

- Listing status
- Similar to native species (but mostly submerged, *Ludwigia* spp. emergent).
- Brand new in Ohio (2024):
 - Rare to Ohio, found in the upper reaches of the upper spanning Lake Erie basin.
 - The interest in this species in a



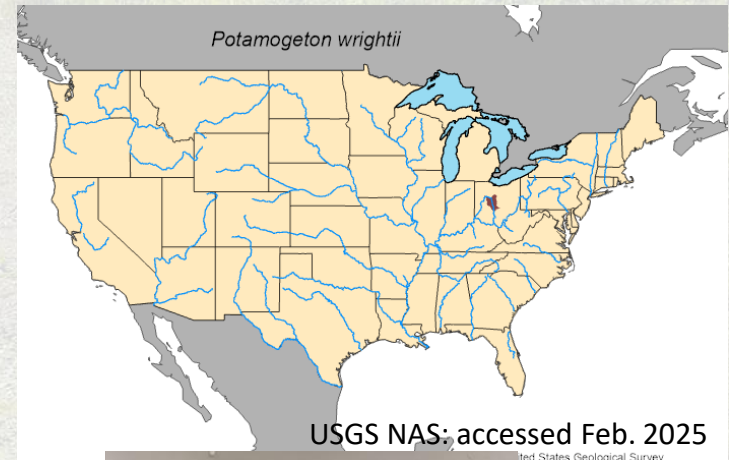
Noah Ganson, Trout Unlimited (2024)



Noah Ganson, Trout Unlimited (2024)

Pondweed (no common name: *Potamogeton wrightii*)

- Listing status: unexpected and unlisted.
- Similar to native pondweeds...but aren't they all?
- Didn't quite match pondweeds known to Ohio.
- Collected during *Hydrilla* surveys and identified using genetics in 2024. (A 2021-collected specimen was similarly later identified.)
- Brand new invasion:
 - Only known to Alum Creek Lake (upper Scioto watershed).



Mark Warman, ex-Cleveland Metroparks (2024)



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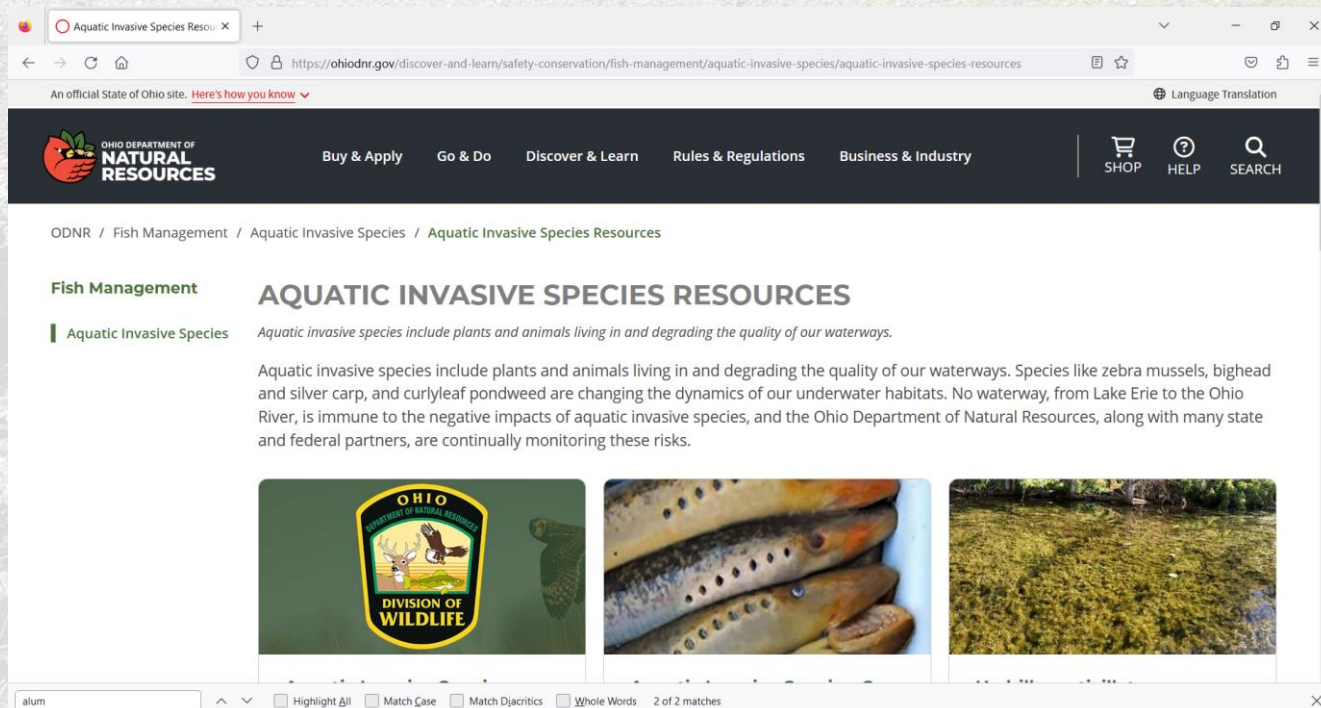
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Information resources

- ODW's clearinghouse for related issues:
<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/fish-management/aquatic-invasive-species/aquatic-invasive-species-resources>



The screenshot shows a web browser window displaying the Ohio Department of Natural Resources website. The browser's address bar shows the URL: <https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/fish-management/aquatic-invasive-species/aquatic-invasive-species-resources>. The website header includes the ODNR logo and navigation links: Buy & Apply, Go & Do, Discover & Learn, Rules & Regulations, and Business & Industry. There are also icons for SHOP, HELP, and SEARCH. The main content area features a breadcrumb trail: ODNR / Fish Management / Aquatic Invasive Species / Aquatic Invasive Species Resources. The page title is "AQUATIC INVASIVE SPECIES RESOURCES". A sub-section titled "Aquatic Invasive Species" includes a paragraph: "Aquatic invasive species include plants and animals living in and degrading the quality of our waterways. Species like zebra mussels, bighead and silver carp, and curlyleaf pondweed are changing the dynamics of our underwater habitats. No waterway, from Lake Erie to the Ohio River, is immune to the negative impacts of aquatic invasive species, and the Ohio Department of Natural Resources, along with many state and federal partners, are continually monitoring these risks." Below the text are three images: the Ohio Department of Natural Resources logo, a close-up of a fish with dark spots, and a field of green aquatic plants. At the bottom of the browser window, a search bar contains the text "alum" and shows 2 of 2 matches.

Information resources

U.S. Geological Survey's (USGS) Nonindigenous Aquatic Species (NAS) database:

- Links to **frequently updated range maps**, collection info, and **detailed fact sheets (with ID)** for catalogued species.
- Depends on user reports (so please submit your reports).
- Seems to find most frequent use among agency professionals.
- Staff botanist: Ian Pfungsten (ipfungsten@usgs.gov)

<http://nas.er.usgs.gov/>

USGS
science for a changing world

NAS - Nonindigenous Aquatic Species

USGS Home
Contact USGS
Search USGS

Home Alert System Database & Queries Taxa Information

Welcome to the Nonindigenous Aquatic Species (NAS) information resource for the United States Geological Survey. Located at Gainesville, Florida, this site has been established as a central repository for spatially referenced biogeographic accounts of introduced aquatic species. The program provides scientific reports, online/range maps, species, spatial data sets, regional contact lists, and general information. The data is made available for use by biologists, interagency groups, and the general public. The geographical coverage is the United States.

The NAS site will no longer serve data or track aquatic plants or marine invertebrates (except for Asian tiger shrimp - *Penaeus monodon*). Plants are being discontinued due to budgets cuts. Marine invertebrate data can now be obtained from our partners at the Smithsonian Environmental Research Center from their [National Exotic Marine and Estuarine Species Information System \(NEMESIS\)](#).

The NAS system will focus on freshwater introductions and fishes (freshwater and marine).

Invertebrates

Bryozoans Cnidarians Crustaceans Mollusks

Vertebrates

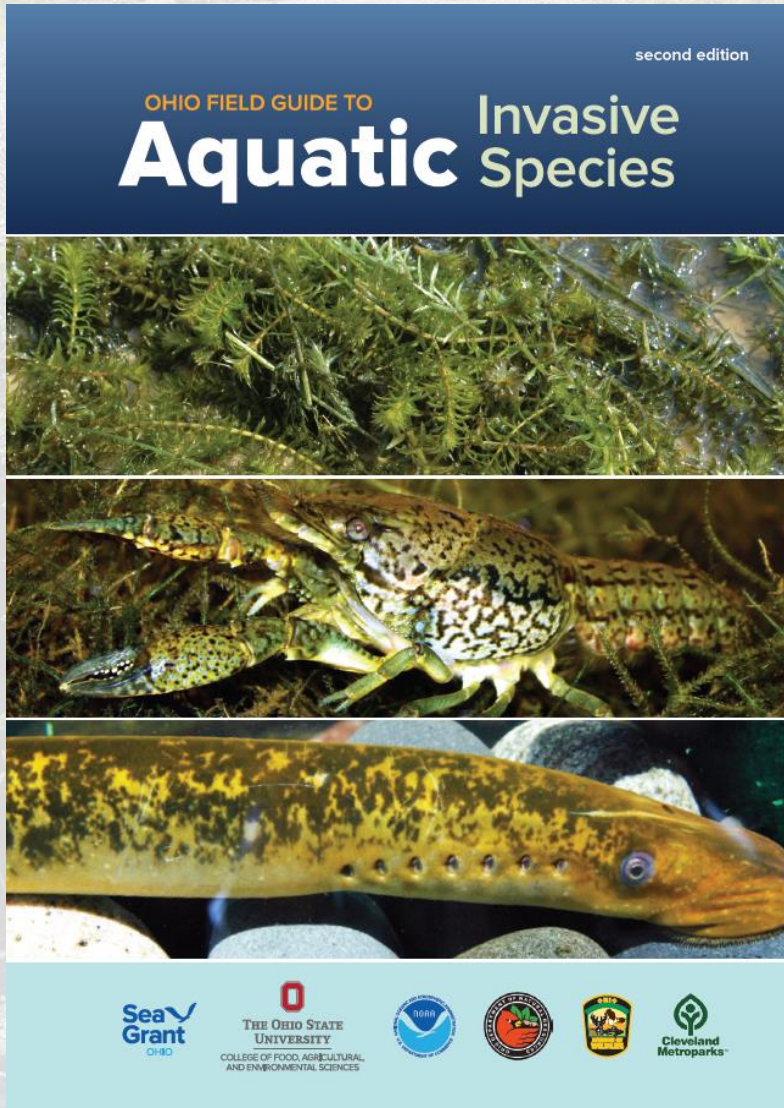
Amphibians Fishes Mammals Reptiles

Accessibility FOIA Privacy Policies and Notices
U.S. Department of the Interior | U.S. Geological Survey
URL: <http://nas.er.usgs.gov>
Page Contact Information: Pam Fuller - NAS Program
Page Last Modified: Monday, October 01, 2012

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Information resources

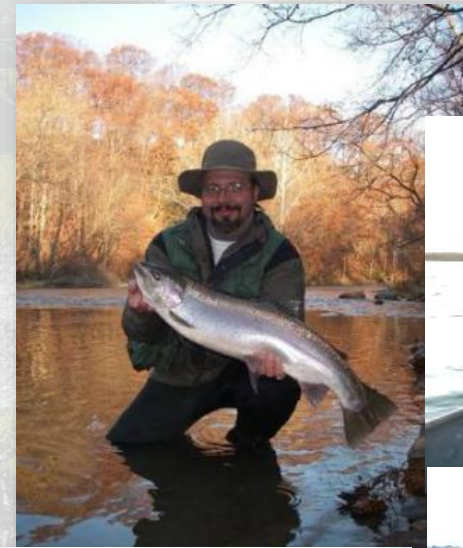


New edition!

- Gabriel, T., J. Navarro, E. Braig, and M. Warman (eds.). 2024. **Ohio field guide to aquatic invasive species**, second ed. Ohio Sea Grant College Program and Ohio Department of Natural Resources, Columbus.
- http://ohiodnr.gov/static/documents/wildlife/fish-management/OSU_AIS_Field_Guide_Web.pdf



Questions?



STAT
OOD, A
MENTA

Aquatic and Wetland Invasive Plant Update

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Invasive Species
Committee
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**OAISC semi-annual
meeting,** Glen Helen
Nature Preserve,
Yellow Springs, OH,
24 June 2025



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