

Aquatic Invasive Species

- Are non-native plants, animals, and pathogens
 - Do not occur naturally in our lakes and rivers
- Live primarily in water
- Thrive in their new environment
- Cause economic loss, environmental damage, and harm to human health
 - Displace native plants and animals
 - Damage water resources
 - Interfere with water-based recreation

How did they get in Iowa?

- Most introductions are caused by humans.
 - Some are intentional and cause unexpected damage.
 - Others are accidental (hitch a ride with anglers, boaters, and other water recreationists on boats and equipment, on aquatic plants, and in water).

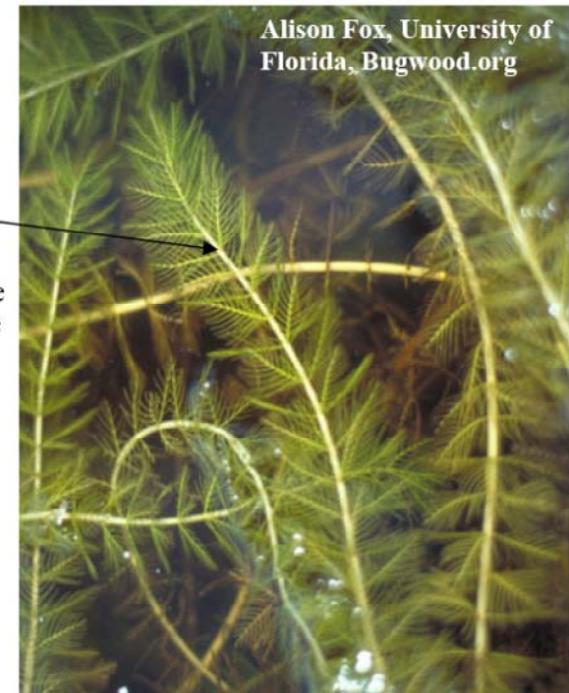
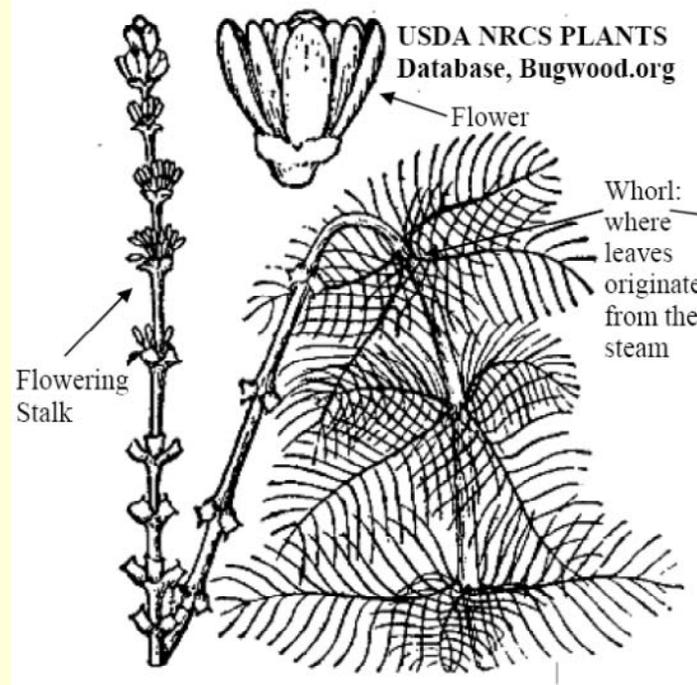


How can I prevent spreading them?

- Learn to IDENTIFY them and REPORT sightings
- Before leaving a waterbody:
 - INSPECT your boat, trailer, and equipment and REMOVE any visible plants, animals, or mud.
 - DRAIN water from you boat, motor, live well, and bilge.
 - DISPOSE of unwanted bait in the trash.
- Never release plants or animals into the wild unless they came from that waterbody.
- RINSE or DRY your boat, trailer, and equipment.
 - Rinse with high pressure and/or hot water
 - Dry for at least 5 days

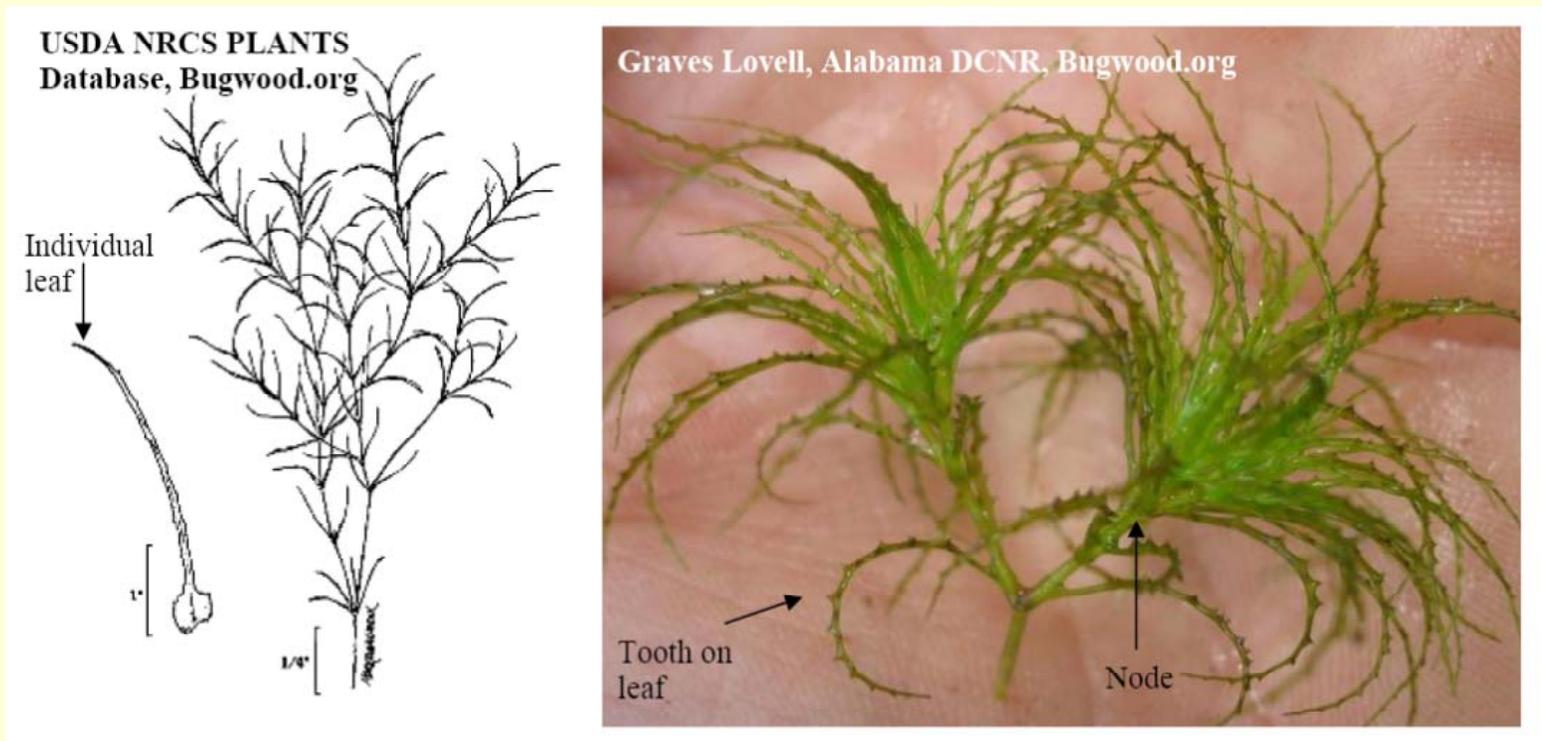
Eurasian Water Milfoil

- Submerged aquatic plant native to Europe, Asia, and northern Africa.
- Spreads easily because it has the ability to reproduce by stem fragmentation and underground runners.
- Key Characteristics:
 - Delicate Leaves
 - Leaves limp when out of water
 - Leaves arranged in whorls
 - 12-21 leaflet pairs
 - Long spaghetti like stems



Brittle Naiad

- Submerged aquatic plant that is native to Europe.
- It reproduces by fragmentation
- Key Characteristics:
 - Highly toothed leaves
 - Leaves are up to 1 ¼ inch long and 3/16 inch wide
 - Several leaves at each node

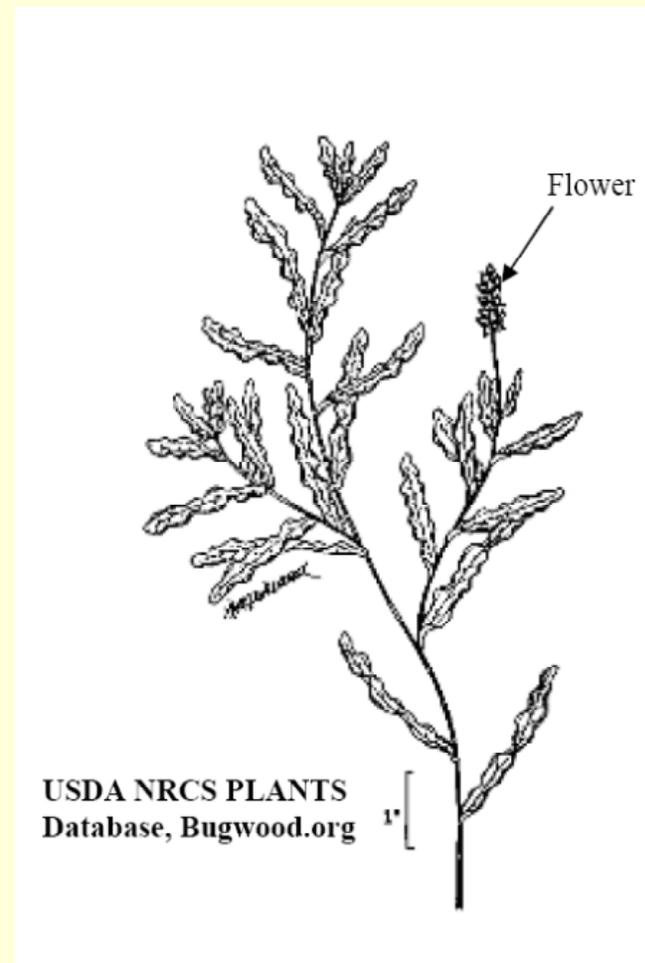


Iowa Lakes with Brittle Naiad

- Nelson Park Lake
- Yellow Smoke Park Lake
- Crawford Creek Impoundment
- Moorhead Park Pond
- Brushy Creek Lake
- Great Western Park Lake
- Pleasant Creek Lake

Curly-Leaf Pondweed

- Submerged aquatic plant native to Eurasia, Africa, and Australia.
- Tolerant to low light and low water temperatures.
- Key Characteristics:
 - Leaves have a wavy appearance, are finely toothed, and reddish green
 - Stems are reddish brown



Purple Loosestrife

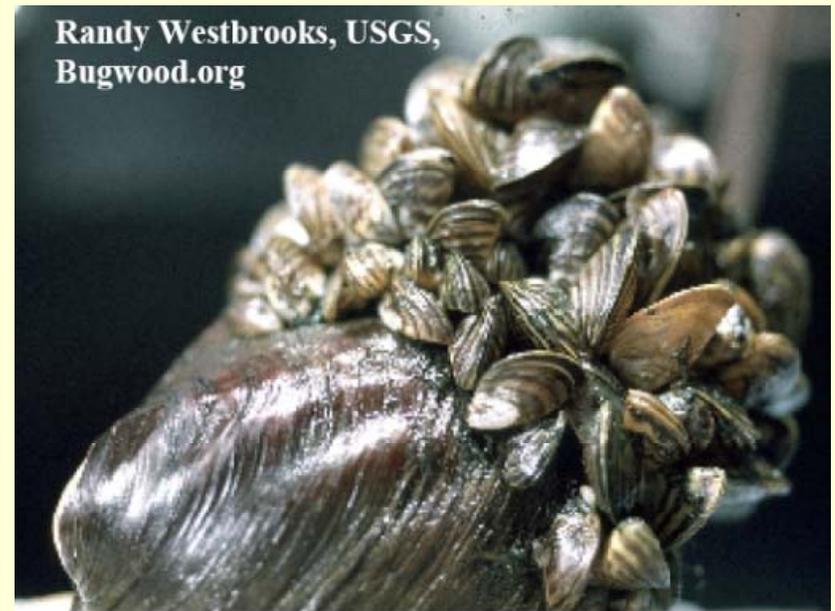
- Wetland plant native to Europe and Asia.
- Forms dense, impenetrable stands of vegetation and produces an enormous number of seeds.
- Key Characteristics
 - Long, showy spikes of magenta flowers
 - Individual flowers have 5-7 petals
 - Flowers bloom from June to September
 - Leaves are soft with smooth edges
 - Leaves are arranged opposite and alternate



John D. Byrd, Mississippi State University, Bugwood.org

Zebra Mussel

- Small shellfish native to the Black, Caspian and Azov Seas.
- Introduced to NA in mid-1980's via transoceanic ships discharging ballast water.
- A single female can produce >30,000 eggs!
- Cause a number of problems:
 - Remove plankton that are food for larval fish & native mussels
 - Can colonize and suffocate native mussel beds
 - Dense colonies can form on breakwalls, locks and dams, control structures, docks, boats and pipes.
 - Reduce fish spawning and commercial fish catches.
 - Dead shells on beaches.

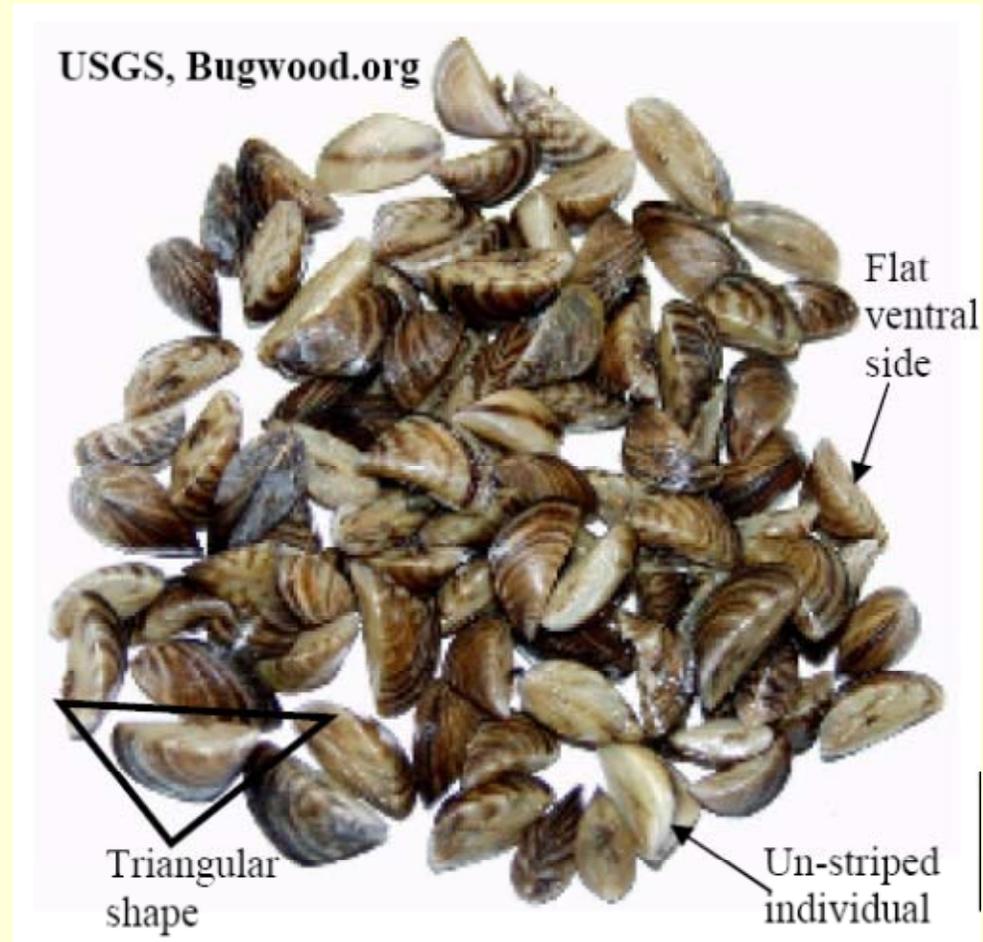


Randy Westbrooks, USGS,
Bugwood.org

This is a native Freshwater Mussel (Three-ridge)
covered by Zebra mussels

Zebra Mussel

- Key Characteristics:
 - Most have a striped pattern on their shells
 - Triangular in shape
 - Sits flat on its ventral side
 - Typically found attached to objects, surfaces or each other.



Mystery Snail

- Giant snails native to southeast Asia, eastern Russia and Japan.
- Key Characteristics:
 - Very big compared to native snails
 - 2 inches
 - Olive green, greenish brown or reddish brown shell as an adult.



Rusty Crayfish

- Native to Ohio River basin.
- Can:
 - Displace native crayfish
 - Reduce the amount & kinds of aquatic plants
 - Decrease the density and diversity of invertebrates
 - Reduce some fish populations
- Key Characteristics (NOTE: Difficult to identify and should be done by an expert):
 - Larger claws than native crayfish.
 - Dark, rusty spots on either side of their carapace (not always present).
- What do you do if you think you have found one?
 - Collect an individual (put it in a plastic bottle with rubbing alcohol)
 - OR take the highest quality photo of it that you can
 - THEN contact IOWATER at iowater@iowater.net for assistance.



Asian Carp

- Bighead & Silver Carp are native to Asia
- Eat microscopic food and may compete with larval fish and native mussels for food.
- Silver carp can jump up to 10 ft out of the water when disturbed by sounds.
- Key Characteristics:
 - Low set eyes, below mouth
 - Large downturned (frowning) mouths without barbels
 - Small scales

