

Smart water gardening to prevent the spread of aquatic invasive species

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Does your landscape contain a water garden or ornamental pond? Many water garden plants and animals have the potential to become invasive – outcompeting and destroying the rich diversity of native aquatic species.

When non-native plants or animals are introduced into waterways they can become invasive due to an absence of natural controls (predators, disease, etc.) that would normally keep them in check. Exotic, non-native plants and animals have proven over and over again their ability to adapt to colder environments and water temperatures. These non-native invaders of our waterways are called aquatic invasive species. They not only negatively impact the aquatic environment, but they create negative recreational and economic impacts for individuals, businesses and communities. The cost of trying to control these aquatic invasive species in the United States is more than \$100 billion per year, approximately \$1,100 per household according to the national Habitattitude campaign (www.pijac.org/habitattitude).

Habitattitude encourages enjoyment of your water features **and** protection of natural waterways by

offering responsible solutions to the disposal of dead, dying or unwanted aquatic plants and animals. If you are a successful water gardener, you know that plants can grow so successfully that they take over your pond. When autumn arrives, freezing temperatures may turn plants unsightly and threaten fish and other animals in your water garden. **Do not release** these plants and animals into the environment where they may become aquatic invasive species.

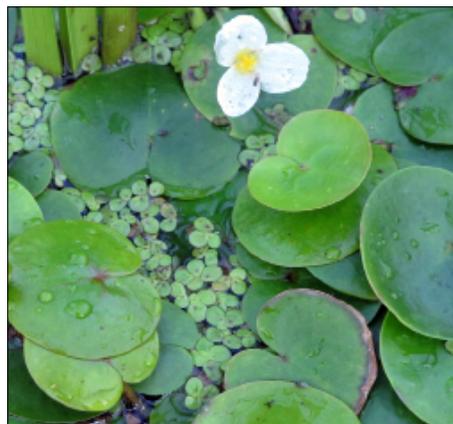
Safe and proper disposal of plants and animals that you've purchased at a garden center early in the summer and nurtured all summer can be emotionally difficult. Caution and careful thought are needed in deciding what to do with unwanted plant and animal specimens. Releasing any aquatic organism into the environment is **not** an accepted practice and may even be punishable by law.

What can water gardeners do to help prevent the spread of aquatic invasive species? For starters, find out if a plant or animal is native to Michigan when deciding which to purchase. Never assume a plant or animal is harmless or benign. Understand that retail names and descriptions of plants and animals can be misleading.



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European frogbit is a popular water gardening plant that appears on Michigan's prohibited species list.



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European frogbit crowds out native wetland plants.



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Floating mat on invasive European frogbit crowds out native wetland plants.

Disposal options include:

- Contacting retailer for proper handling advice or for possible returns.
- Giving or trading with another responsible water gardener.
- Donating to a local aquarium society, school or aquatic business.
- Sealing aquatic plants in plastic bags and disposing in trash to be landfilled.
- Contacting veterinarian or pet retailer for guidance about humane disposal of animals.
- Do not release water garden animals and plants into the outdoor environment, **even if they appear to be dead.**



Jane Herbert, MSU

Overwintering buds (turions) of European frogbit break loose and float to new locations within a waterway.

Habitattitude also offers tips for thoughtful planning of your water feature to avoid stress, heartache and the spread of aquatic invasive species. Before purchasing non-native plants and animals, know which aquatic species are prohibited and restricted according to Part 413 of Michigan's Natural Resources and Environmental Protection Act 451 of 1994 (<http://1.usa.gov/13061uQ>). It is **illegal** to be in possession of, sell, offer to sell or introduce into the environment prohibited plants and animals and hefty fines may be incurred. Michigan's

prohibited aquatic plant list includes popular water garden and aquaria plants such as European frogbit, fanwort, parrot's feather, yellow floating heart, water chestnut and others along with many fish and snails.

Although not on the Michigan prohibited aquatic plant list, there are two plants that are popular with water gardeners that are on the federal list of prohibited aquatic species: water hyacinth and water lettuce. As a result, care should be exercised when growing these water plants also.

A note about European frogbit in Michigan:

This popular water gardening plant has escaped to invade our natural waterways. To date, documented sightings of European frogbit have occurred in the following Michigan counties: Alpena, Chippewa, Monroe and St. Clair. For more information on these sightings or to report an invasive species sighting, please visit the Midwest Invasive Species Information Network at <http://www.misin.msu.edu>.

For more information on a wide variety of **smart gardening** articles, or to find out about smart gardening classes and events, visit www.migarden.msu.edu.

