

GUIDELINES FOR OWNERS OF AQUARIUMS AND EXOTIC PETS

Balancing responsible exotic pet ownership with environmental stewardship

What are invasive species, and why are they a problem?

Invasive species are non-native plants, animals, and pathogens that can harm the environment, the economy or human health. They are among the greatest threats to New York's biodiversity and can cause habitat loss and/or degradation; the loss of native fish, wildlife and tree species; reduced recreational opportunities; and economic damage such as crop loss, decreased property values, and negative impacts on the tourism industry.

How can exotic plants and animals be invasive?

Some invasive species can be purchased in stores that sell exotic pets and plants for aquariums and ornamental water gardens. Occasionally, owners can no longer keep their animals and plants and dispose of them in nearby streams, ponds or lakes, or simply flush them down the toilet. For example, red-eared slider turtles are often sold as juveniles, when they are only about four inches long. This popular species can live for more than 20 years and may triple in size during its lifespan. Pet owners are often unprepared to care for a pet for such a long time and may release the turtle into a local wetland. Releases may seem safe and even humane, but discarded plants and/or animals can degrade our natural ecosystems. If enjoyed and disposed of properly, however, exotic pets and plants do not pose a threat.



*Red-eared sliders compete with native turtles for food, nesting sites and basking places.
Photo: Rhondle via Wikimedia Commons*



*Goldfish introduced to natural waters disturb sediment and vegetation on lake and river bottoms, thereby releasing nutrients that can contribute to nuisance algae blooms.
Photo: USGS, Bugwood.org*

What are the impacts?

Aquarium fish such as lionfish and goldfish compete with native fish for resources and may even feed on the young of native fish species. Goldfish in particular can tolerate poor water quality and low oxygen levels, enabling them to outcompete native fish in degraded ecosystems. Invasive aquatic plants like hydrilla, fanwort, and Brazilian elodea can vigorously reproduce and overtake waterways, impairing recreational uses such as swimming, fishing and boating. Red-eared slider turtles are opportunistic omnivores and can outcompete native turtle species for food and habitat. They are also known carriers of *Salmonella* bacteria, which they can pass on to other turtles and to humans who handle them.

What guidelines should I use to prevent the spread of invasive species?

The following best management practices apply to various activities, including but not limited to maintaining a water garden and/or aquarium, purchasing study specimens for classrooms and owning exotic pets:

- Select species that comply with federal and state regulations, which prohibit or regulate the sale, possession, and transport of certain species.
- Confirm the scientific name of plants or animals with the retailer to ensure you have the correct species information and proper care instructions.
- Inspect the contents and packaging that arrive with any plants or animals purchased. Remove unwanted seeds, plants or animals, and put them in a sealed plastic bag for the trash.
- Donate unwanted plants and animals to a school, nature center, aquarium or zoo, or return them to the retailer if possible.
- Swap unwanted plants and animals with another aquarium owner or water garden hobbyist.
- Caution the new owner of donated or swapped plants and animals against releasing them into the natural environment, and suggest alternatives for disposal.
- Avoid composting aquatic plant material due to the risk of spreading seeds or plant fragments to natural areas.
- Contact a veterinarian or pet retailer for guidance on humane disposal if you can't rehome an animal.

More ways to help

- Learn to identify common invasive plants and animals in the exotic pet, aquarium and water garden trade, such as Brazilian elodea, hydrilla, fanwort, red-eared sliders, goldfish, koi and lionfish, and seek native alternatives.
- Take photos and report infestations to the iMapInvasives database: <http://www.nyimainvasives.org/>.

Where can I find additional information?

New York's Invasive Species Regulations:

<http://www.dec.ny.gov/animals/99141.html>

Northeast Aquatic Nuisance Species Panel:

<http://www.northeastans.org/>

Pet Industry Joint Advisory Council
Environmental Stewardship Programs:

<http://pijac.org/animal-welfare-and-programs/environment>

National Habitattitude Campaign:

<http://www.habitattitude.net/>



Fanwort (sometimes sold as "green cabomba") is often marketed as an oxygenator for freshwater aquaria. Native elodea species (canadensis, nuttallii) are environmentally conscious alternatives.

Photo: Graves Lovell, Alabama Dept. of Conservation and Natural Resources, Bugwood.org

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