



Water gardening is becoming an increasingly popular hobby and is one of the fastest growing branches of the aquarium trade. While water gardens are beautiful and promote feelings of serenity and calm, they can also represent troubled waters as invasive species can often appear and be accidentally spread by water gardening activities. It is important that water gardeners understand the impacts that AIS can have and take actions to ensure these species don't spread while still enjoying their hobby.

Aquatic invasive species (AIS) are non-native plants, animals, or pathogens that cause harm to the environment, the economy, and human or animal health. Preventing the spread of AIS is important because once introduced, these species disrupt ecosystems, reduce biodiversity, and cost communities huge amounts of time, money, resources, and lost revenue.

Invasive plants, snails, and fish often make attractive additions to water gardens; however, if released, they can become a huge problem. These species are often readily available for purchase at local retail outlets, by delivery from online sources, or hitchhike in the packing material, soil, or water accompanying your purchase. Unintentional introductions become more likely if a water garden is built near a natural body of water. Extreme weather events, such as heavy storms and flooding, can spread species as high waters and winds can carry plant fragments, debris, seeds, and even the species themselves to neighboring waterways. Invasive species are typically hardier, grow faster, reproduce often, and can outcompete native species



and cause harm to ecosystems and the food web, and therefore should never be disposed of or released into a natural water system.

Water gardeners can unintentionally spread AIS when they 1) unknowingly purchase an invasive species from retail stores; 2) build water gardens too close to a natural waterway, or 3) dispose of aquatic plants by releasing them into a natural waterway. By following a few simple steps, water gardeners can play an active role in preventing the spread of AIS (see other side).

When Constructing a New Water Garden:

Choose a location away from natural waterways and flood-prone areas. *This will help ensure that the plants and animals in the water garden will not be carried into local streams, ponds, or lakes as a result of heavy rainfall.*

When Adding Plants:

Purchase from licensed nurseries. Many jurisdictions require that the license be posted. If the license isn't clearly visible, ask an employee about their licensing.

Choose regionally-native or non-invasive plants. *This will reduce the amount of plant-removal (i.e., weeding) needed to maintain the garden while also reducing the risk to nearby waterways should any plants be moved by wind, animals, flooding, etc.*

Check with your state natural resource agency to confirm which plants to avoid for your region. *Many states maintain regulated invasive species lists.*

Rinse plants in a bucket before planting. Remove all dirt and any attached debris including other vegetation, animals, or eggs before planting; dump bucket water on dry land. Strain debris from water before dumping and dispose of debris in a plastic bag. *This will help keep unwanted plants and animals from being accidentally introduced into the water garden, and keep these same organisms out of storm drains that might lead to natural waterways.*

When Doing Maintenance:

Check that the water garden remains isolated from natural waterways and areas that flood. *If this is not the case, the above recommendations regarding plant choice and rinsing are even more critical; installation of standard landscape water diverting structures (i.e., water bars, swales) or relocation of the water garden should be considered.*

Remove uninvited plants that colonize your pond. *A plant that moves into your pond and becomes established is likely an invasive species. It should be removed and disposed of properly (see below).*

Freeze unwanted plants in a sealed plastic bag and dispose in the trash. *Unwanted plants should not be composted because their seeds and other reproductive plant parts may remain viable.*

Find a new home for unwanted fish such as a pet retailer, animal shelter, or other water gardener. *If your animal finds a home with another water gardener, make sure that it won't be released into the environment in the future. If euthanasia is an option, consult with a veterinarian.*



Photo courtesy of iStock by Getty Images.

References:

Prevention steps for water gardeners

Where to report new invasive species infestations:
Sea Grant online reporting form

Aquatic invasive species in Pennsylvania

Aquatic invasive species mapping in Pennsylvania:
iMap Invasives

Additional AIS information:
Pennsylvania Fish and Boat Commission
Wildlife Forever

Support provided by



PennState

Education · Extension · Research · <https://seagrant.psu.edu>

Pennsylvania Sea Grant is a partnership of the National Oceanic and Atmospheric Administration (NOAA) and Pennsylvania State University, 2023.