

**PA Trout In the Classroom:**

**Aquatic Invasive Species**

## AQUATIC INVASIVE SPECIES (AIS)

AIS are species capable of propagating in an area other than their origination. They are anticipated to be the leading cause of biodiversity loss and extinctions in North American freshwater ecosystems. AIS prey on and compete with native species, potentially spread disease, degrade and alter ecosystems and natural aesthetic, and result in economic and recreational loss and damage.

Once established in a body of water, AIS are very difficult to eradicate and spread easily to non-infested waterways through recreational boating, bait introductions, and aquaculture. Some species are native only to their watershed and should not be introduced to an adjacent watershed even if those waterways are a few miles apart or less.

Sea Grant and Penn State University Erie. *Aquatic Invasive Species of Pennsylvania*. Ed. Sara Grise. Sea Grant and Penn State University, June. Web. 19 June 2010. <<http://www.pseric.psu.edu/seagrant/ais/index.htm>>.

As interesting as new additions to the classroom aquarium may be, avoid adding aquatic wildlife such as mussels and snails, and aquarium plants to the trout aquarium as the introduction may have immediate impact on the aquarium ecosystem and devastating impact from release on the watershed. If freshwater mussels, snails, plants, etc. are included in classroom study, please do not include them in the TIC aquarium and never release them into a watershed.

### **Reasons for concern**

The plants, snails or mussels introduced into a classroom learning station, without any research, could be AIS. Even if they are not released with the trout into the designated waterway, the release stream could suffer impact. Some AIS uniquely reproduce and/or disperse seeds, and the release could unknowingly spread throughout the watershed and into new regions.

For example, freshwater mussels (bivalves) reproduce by utilizing fish as a host for their young. The female mussel releases embryos called glochidia into the gills of host fish. Mussels in a classroom aquarium utilize trout as “hosts” for their young during reproduction. Releasing host trout may impact the release waterway.

Storer, T.I. 1951. *General Zoology*, 2nd edition. McGraw-Hill Book Company, Inc., New York

Some plants reproduce by the smallest amount parent plant matter.

For example, the aquatic plant, Hydrilla, was imported to the United States as an aquarium plant. It can propagate from the dispersal of even the smallest living plant fragment to form a new plant in a new watershed location.

Watercress is native to Pennsylvania and is safe to use in the classroom aquarium.

Before placing plants or other animals into your aquarium you should conduct research by reaching out to the [ra-troutclass@pa.gov](mailto:ra-troutclass@pa.gov) or by visiting the following websites:

✍ **RESOURCE:** For more information on invasive plant facts visit:  
<http://www.invasivespeciesinfo.gov/aquatics/main.shtml>

✍ **RESOURCE:** For more information on Pennsylvania Aquatic Invasive Species visit:  
<http://seagrant.psu.edu/publications/ais.htm>

During the release and aquatic studies, the risk of exposure to AIS is possible. There are easy ways to reduce the spread of AIS.

- Select release and assessment sites that have less traffic.
- Always visit low risk sites first and higher risk sites following
- Learn to identify AIS in your area and avoid them
- Utilize waders with lug soles rather than felt soles
- Decontaminate gear and clothing between sites and at the close of the activity



**INSTRUCTIONAL VIDEO:** [How to clean your gear](#)