

Pennsylvania's 10 LEAST-WANTED

Aquatic Nuisance Species



Zebra mussel (*Dreissena polymorpha*)
Origin: Introduced from Europe into the Great Lakes in the 1980s from the ballast water of an ocean-going ship.
Description: Small fingernail-sized freshwater mollusk.
Concerns: Zebra mussels colonize on surfaces, such as docks, water intake pipes and native mollusks. Their only known predators, some diving ducks, freshwater drum, carp and sturgeon, are not plentiful enough to have a significant effect on their numbers. Zebra mussels have greatly affected the Great Lakes ecosystem and economy.



European ruffe (*Gymnocephalus cernuus*)
Origin: Introduced from Europe into the Great Lakes in 1985 from the ballast water of an ocean-going ship.
Description: Small fish, close relative of the yellow perch.
Concerns: Because of its aggressive nature, the ruffe has the potential to devastate both perch and walleye fisheries by competing for food and habitat.



Hydrilla (*Hydrilla verticillata*)
Origin: Introduced from Southeast Asia in the 1960s, probably through the aquarium trade. This plant was first reported in Pennsylvania in the mid-1990s in Adams and Bradford counties.
Description: Submerged aquatic plant with finely toothed leaves. Resembles common elodea.
Concerns: Hydrilla spreads quickly and creates mats of vegetation that are extremely dense. These mats may crowd out native vegetation.

Round goby (*Neogobius melanostomus*)
Origin: Introduced from Europe into the Great Lakes in 1990 from the ballast water of an ocean-going ship.
Description: Small bottom-dwelling fish.
Concerns: Round gobies are aggressive feeders and can find food in total darkness. The round goby takes over prime spawning sites traditionally used by native species, competing with native fish for habitat.



Sea lamprey (*Petromyzon marinus*)
Origin: Native to the North Atlantic region and introduced into the Great Lakes early in the 20th century.
Description: Primitive eel-like parasitic fish.
Concerns: Even though this species is native to the Susquehanna and Delaware River basins, the sea lamprey has had a devastating effect on Great Lakes fisheries, where it is non-native. It is a direct parasite on large game fish.



Spiny water flea (*Bythotrephes cederstroemi*)
Origin: Introduced from Europe into the Great Lakes in 1984 from the ballast water of an ocean-going ship.
Description: Small plankton-eating crustacean, slightly larger than one centimeter (0.4 inches) long. More than two-thirds of this length is a long, barbed tail spine.
Concerns: The rapid reproduction of this species, lack of predators, and competition with young fish for food may greatly change the food webs of the Great Lakes.



Eurasian watermilfoil (*Myriophyllum spicatum*)
Origin: Introduced from Europe in the 1800s.
Description: Submerged aquatic plant. Featherlike leaves have reddish-brown tips.
Concerns: This plant grows so densely that it becomes poor fish habitat, clogs propellers, and restricts swimming. Eurasian watermilfoil is common throughout the state, but less common in the Northeast where native watermilfoils still thrive.

Aquatic Nuisance Species (ANS): Aquatic animals and plants that have been introduced into new ecosystems. ANS have harmful effects on the natural resources in these ecosystems and the human use of these resources.

These are the most aggressive nuisance species that have invaded Pennsylvania's aquatic habitats. All have negative effects on Pennsylvania's native plants and wildlife. Every effort should be made to halt their spread.

Purple loosestrife (*Lythrum salicaria*)
Origin: Introduced from Europe in the early 1800s as an ornamental garden plant.
Description: Tall-stemmed plant with lance-shaped leaves. A spike with pinkish-purple flowers tops each stem.
Concerns: Purple loosestrife has been found in all major river drainages in the state. It can invade a wetland and quickly crowd out native vegetation. It has little or no value for wildlife.



Asian clam (*Corbicula fluminea*)
Origin: First introduced from Asia to the West Coast of North America around 1924. By the 1970s, the clam occupied most of the Mississippi Basin, the Gulf Coast and eastern United States.
Description: Small freshwater mollusk.
Concerns: The Asian clam causes serious water supply problems, affecting power and water suppliers and other industries. Asian clams are drawn into intake pipes and block water flow.

Red-eared slider (*Trachemys scripta elegans*)
Origin: Native to the southeast United States. Established populations are the result of the release of unwanted pets.
Description: Medium-sized freshwater turtle with a bright-red stripe immediately behind the eye on each side of its head.
Concerns: The red-eared slider competes for food and habitat with Pennsylvania's native turtles. This competition could affect sensitive populations of native turtle species.



Photo credits: Round goby, Dave Jude; Asian clams, U.S. Geological Survey; zebra mussels, J. Ellen Marsden; Eurasian watermilfoil, spiny waterflea, Minnesota Department of Natural Resources; purple loosestrife (left), Ted Walke; purple loosestrife, M. Walter, Michigan Sea Grant; European ruffe, Gary Cholwek; red-eared slider, photo courtesy of U.S. Geological Survey; hydrilla, California Department of Food and Agriculture; sea lamprey, Great Lakes Sea Grant.