

PA's Water Invaders

These species are banned in Pennsylvania. It is unlawful to sell, barter, possess or transport these species. If you catch any of these species, notify your local waterways conservation officer, noting the exact location of the catch.

Bighead carp (*Hypophthalmichthys nobilis*)

Origin: Warm rivers and lakes in China, distributed globally as a food source. May have been released accidentally during transport as live food fish or from bait buckets.

Description: Very large, can be over 40 pounds; record size close to 100 pounds. Scaleless. Closely related to silver carp (another AIS).

Concerns: Highly invasive. Some have escaped from aquaculture facilities into the Mississippi River Watershed. As filter-feeders they can remove excess plankton from waters, improving water quality but eliminating this food source for native fish and mussels.

Watersheds: Ohio River Basin and Lake Erie.

European rudd (*Scardinius erythrophthalmus*)

Origin: Western Europe to Caspian and Aral Sea watersheds; popular food and game species. Probably brought to U.S. as a game and food fish; spread through bait bucket introductions.

Description: Medium size, deep-bodied with forked tail. Fins are reddish orange or reddish brown.

Concerns: Competes with native fishes for invertebrate food sources. Mates with native golden shiners. Fairly hardy and fares better than native fish in polluted waters.

Watersheds: Lake Erie, Ohio River, Susquehanna River.



European rudd

Quagga mussel (*Dreissena bugensis*)

Origin: Dneiper River Watershed in Ukraine, probably transported to U.S. in ballast water.

Description: Closely related to zebra mussels (another AIS); both have black stripes and tan shells. Quaggas have a rounded outer shell edge and are lighter in color; they are about as big as an adult's thumbnail.

Concerns: Like the zebra mussel, quaggas reproduce rapidly and are filter-feeders, removing substantial amounts of plankton from the water and food web. This also results in clearer waters but alters the ecosystem makeup. Decomposing mussel feces use up dissolved oxygen, decreasing pH (more acidic). Both mussels accumulate on rocks, docks, buoys and boat hulls, causing structural damage.

Watersheds: Lake Erie and Delaware River (limited).

Northern snakehead

Origin: Parts of China, Russia and Korea; sold through aquarium stores and fish markets. Often used as part of a religious ceremony. Most likely released into U.S. waterways intentionally. First found in PA waters in 2004.

Description: Looks like native bowfin and burbot. Torpedo-shaped body, long dorsal and anal fins without spines and toothed jaws; flattened, pointed head with long lower jaw. Can survive in waters with very low oxygen levels; can breathe out of the water.

Concerns: Predatory; will likely compete with other fish species for food and habitat; may feed on sportfish.

If you catch one, after positive identification, DO NOT put it back in the water. Kill it, freeze it (double bag), and contact the PA Fish & Boat Commission at 610-847-2442. Make note of the exact location of capture.

Watersheds: Schuylkill and Delaware River.



Northern snakehead

Rusty crayfish (*Orconectes rusticus*)

Origin: Parts of the Ohio River Watershed in Ohio, Kentucky and Tennessee, but not native to Pennsylvania waters. Likely introduced through use as bait.

Description: 3 to 5 inches long with large black-tipped claws. Dark, rusty spots on each side of the midsection.

Concerns: Can reproduce in large numbers and reduce lake and stream vegetation, depriving native fish and their prey of cover and food. Their size and aggressive nature keeps many fish species from feeding on them. May also reduce native crayfish populations by out-competing with them for food and habitat. DO NOT transfer any crayfish from one waterway to another.

Watersheds: Ohio River, Juniata, Little Juniata, and lower Susquehanna River.



Rusty crayfish

Tubenose goby (*Proterothinus marmoratus*)

Origin: Rivers and estuaries of the Black Sea, Sea of Azov and Caspian Sea; also the rivers of the northern Aegean and Aral seas in eastern Europe (where it is considered endangered in some areas). Transported to Great Lakes via ballast water with round goby.

Description: Small, bottom-dwelling species. Mottled brown with two dorsal fins, rounded caudal fin and blunt head. Large eyes and scales on the head. Pectoral fins are fused to form a suction disc, distinguishing them from similar-looking fish, like native sculpins.

Concerns: Not spreading rapidly, unlike its cousin the round goby. Eat the same food as rainbow darters, and therefore may compete with these native fish for food.

Watershed: Lake Erie.

Silver carp (*Hypophthalmichthys molitrix*)

Origin: Southern and central Asia, brought to U.S. to control plankton in southern catfish ponds. Escaped because of flooding and through use as baitfish (juveniles). Not known to inhabit Pennsylvania waters at this time, but is thought to be moving north to lower Great Lakes.

Description: Very similar to bighead carp in size and appearance; lighter in color, over 50 pounds.

Concerns: Filter feeder, competing with native species for food (plankton and fish larvae) and space. May disrupt the ecosystem and food web of large river systems. Also known as the "jumping carp"—can injure humans because of their large size when they jump into boats.

Watershed: Not known to be in Pennsylvania at this time but are in the lower Ohio River.

Black Carp (*Mylopharyngodon piceus*)

Origin: Eastern China and Russia rivers draining into the Pacific Ocean. First brought to U.S. in early 1970s with grass carp; later as food fish. Escaped because of flooding and accidentally included in shipment of baitfish.

Description: Very similar to grass carp, with very large scales, dark in color and has "throat teeth" similar to human molars for chewing mollusks.

Concerns: May greatly reduce numbers of native mussels and snails, including threatened or endangered species. Black carp have been proposed as a control of zebra mussels, but this has not been tried as yet.

Watershed: Not known to be in Pennsylvania at this time.

Red-Eared Slider

The red-eared slider turtle (*Trachemys scripta elegans*) has been a favorite in pet stores and as a carnival souvenir for many years. But it has become an invasive species in Pennsylvania.

Buying the turtles when small, people don't realize how large they will grow and how difficult they are to keep. Sometimes, thinking they are doing good, people release the turtles into the wild, where they compete with our native turtles for food and space. If you see a red-eared slider in the wild, please contact the Commission's Natural Diversity Section at 814-359-5237 but **don't harm or try to catch the turtle.**