



Northern Snakehead

Channa argus



Photo courtesy of
U.S. Geological Survey,
Florida Integrated Science Center.

It's been nicknamed "frankfish" and has starred in two science fiction movies. But what is fact and what is Hollywood fiction? The northern snakehead is a freshwater fish that created a media frenzy when a population was discovered in a Maryland pond. Fishery managers eventually used chemicals to eliminate that population. Since that time, however, additional snakeheads were discovered in Maryland and Pennsylvania.

Native & Introduced Ranges

The northern snakehead is native to China, Russia, and Korea. The first reported breeding population in U.S. waters was discovered in a pond in Crofton, Maryland in May 2002. In July 2004, northern snakeheads were found in a lake in FDR Park in Philadelphia, Pennsylvania. About a year later, an angler caught a northern snakehead in the nearby Delaware River. This fish probably traveled from the lake through a maze of waterways that link to the Delaware and Schuylkill rivers.

Spread

Before their threat was fully appreciated, live snakeheads were openly sold in the United States in pet shops and live fish markets. Uninformed pet owners may have released snakeheads into the wild when they grew too big for aquarium tanks, or as part of religious or cultural practices. In 2002, the import and interstate transport of the northern snakehead was banned without a permit from the U.S. Fish and Wildlife Service.

Impacts

Threat to Biodiversity

These invaders can devastate populations of native fish and wildlife. At all stages of their lives, northern snakeheads will compete with native fish for food. As juveniles, they eat

zooplankton, insect larvae, small crustaceans, and young fish. As adults, they become voracious predators, feeding on other fish, crustaceans, frogs, small reptiles, and even birds and mammals. Northern snakeheads are also capable of surviving in water with very low oxygen content, giving them a competitive advantage over species such as pike and bass that require more oxygen.

Prevention & Control

Anglers, commercial fishermen, and fisheries professionals should know how to identify the northern snakehead. If you think you've caught a snakehead DO NOT put it back into the water. Instead, kill it, freeze it, and notify the Pennsylvania Fish and Boat Commission. Make note of where you capture it, because the information is useful for determining distribution and possible control methods. It is unlawful in Pennsylvania to possess, sell, or purchase live snakeheads. It is also unlawful to introduce, import or stock live snakehead species into Pennsylvania waters. Never release plants, fish, or animals into a body of water unless they originated from that body of water.



NORTHERN
SNAKEHEAD

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Photo of a juvenile northern snakehead courtesy of Algeria Perna of the Baltimore Sun.

Photo courtesy of Pennsylvania Fish and Boat Commission.

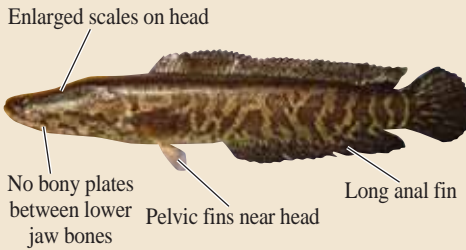


Species Description

Northern snakeheads are cylindrical fish that can grow over 33 inches long. As the name implies, the scaled head of the fish looks like a snake. They have a large mouth with sharp teeth, a truncated, not rounded tail, and are easily identified by dark irregular blotches along their sides. Northern snakeheads look similar to the native burbot and bowfin. The burbot can be distinguished from the northern snakehead by a split dorsal fin, and a single barbel on the lower jaw. The bowfin can be distinguished by a rounded tail, no scales on its head, and an eyespot near the tail in males.

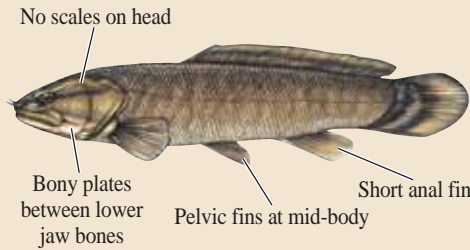
The Northern Snakehead can be confused with the native North American Bowfin and native Burbot

Northern Snakehead (*Channa argus*)



Photos courtesy of Pennsylvania Fish and Boat Commission.

North American Bowfin (*Amia calva*)



Burbot (*Lota lota*)

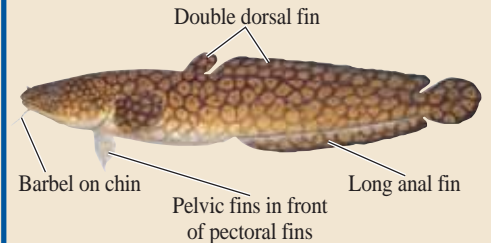


Photo courtesy of Wisconsin DNR.



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Habitat & Biology

The northern snakehead survives in a wide range of habitats including wetlands, vegetated ponds, swamps, and slow-moving streams with water temperatures ranging from 32°F to 86°F, including waters that are covered in ice. Its air bladder works like a primitive lung, allowing snakeheads to survive out of the water in moist locations for up to four days. This adaptation, along with their ability to wriggle over land to new bodies of water, gives the snakehead a competitive edge over other fish in securing habitat and expanding its range. Females can spawn several times a year beginning in June, and can lay as many as 100,000 eggs annually.

References:

- Courtenay, Walter Jr., and Williams, James D. *Snakeheads (Pisces, Channidae) — A Biological Synopsis and Risk Assessment*. US Geological Survey Circular 1251. <http://fisc.er.usgs.gov/Snakehead_circ_1251/circ_1251_courtenay.pdf> (Accessed January 9, 2007).
- Invasive Species Program — The Newest Aquatic Invader*. US Fish and Wildlife Service. July 2002. <<http://www.dnr.state.md.us/fisheries/snakeheadfactsheetedited.pdf>> (Accessed January 9, 2007).
- Orell, Thomas M., and Weigt, Lee. *The Northern Snakehead Channa argus (Anabantomorpha: Channidae), a non-indigenous fish species in the Potomac River, USA*. Proceedings of the Biological Society of Washington. 118(2):407. 2005 <http://www.fws.gov/northeast/marylandfisheries/pbsw_b118_02.407-415.pdf> (Accessed January 10, 2007).