



# NORTHERN SNAKEHEAD

## *Channa argus*



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

*It's been nicknamed frankenfish 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; however, since then additional snakeheads were discovered in Maryland and Pennsylvania.*

### SPECIES DESCRIPTION

The northern snakehead is a cylindrical fish that can grow over 84 cm (33 in) long. As the name implies, the scaled head of the fish looks like a snake. It has a large mouth with sharp teeth, a truncated, not rounded tail, and is easily identified by dark irregular blotches along the 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.

### NATIVE & INTRODUCED RANGES

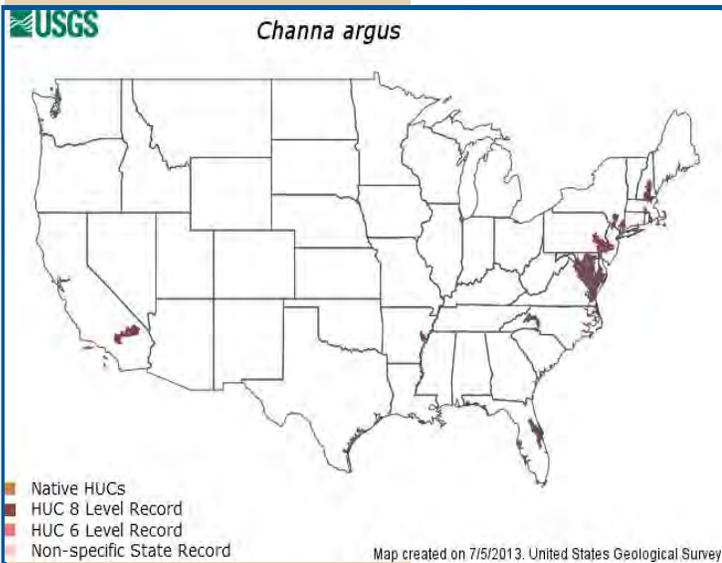
Native to China, Russia, and Korea, the first reported breeding population of northern snakeheads in U.S. waters was discovered in a Crofton, Maryland pond in May 2002. Since then, northern snakeheads have been found in FDR Park in Philadelphia, Pennsylvania, and about a year later, an angler caught 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.

### BIOLOGY & SPREAD

The air bladder of the northern snakehead works like a primitive lung, allowing it to survive out of the water in moist locations for up to four days. This adaptation, along with its 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. In addition, 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.

### HABITAT

The northern snakehead survives in a wide range of habitats including wetlands, vegetated ponds, swamps, and slow-moving streams with water temperatures ranging from 32-86°F (0-30°C), including water that is covered in ice.



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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.



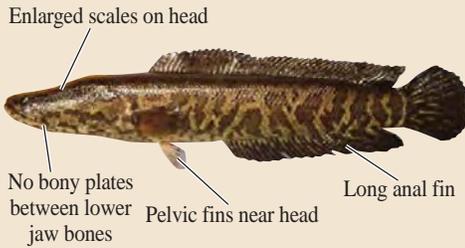
## IMPACTS

### 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.

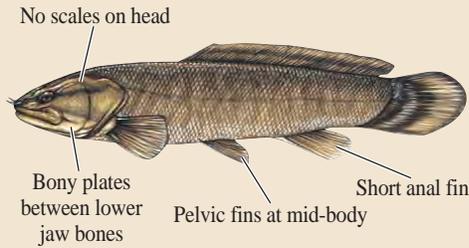
The Northern Snakehead can be confused with the native North American Bowfin and native Burbot

### Northern Snakehead (*Channa argus*)



Photos courtesy of Pennsylvania Fish and Boat Commission.

### North American Bowfin (*Amia calva*)



### Burbot (*Lota lota*)

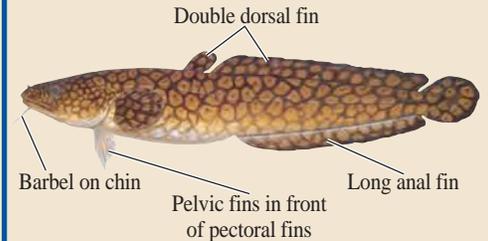


Photo courtesy of Wisconsin DNR.

## 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.

### References:

Courtenay, W. and Williams, J.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](http://fisc.er.usgs.gov/Snakehead_circ_1251/circ_1251_courtenay.pdf)>.

U.S. Fish and Wildlife Service. 2002. Invasive Species Program: The Newest Aquatic Invader. <<http://www.dnr.state.md.us/fisheries/snakeheadfactsheetedited.pdf>>.

Orell, T. M. and Weigt, L. 2005. 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. <[http://www.fws.gov/northeast/marylandfisheries/pbsw\\_b118\\_02.407-415.pdf](http://www.fws.gov/northeast/marylandfisheries/pbsw_b118_02.407-415.pdf)>.



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