

Northern Snakehead (*Channa argus*)

Historical Presence	Abundance	Life History	Management
Exotic	Occasional	Freshwater	Invasive

General Information

An obligate air-breather, this primitive fish can survive out of water (overland migration possible for juveniles). Morphologically similar and often mistaken as Bowfin, Northern Snakehead can be distinguished by the position of pelvic fins (directly behind pectoral fins) and the size of the anal fin (elongate and similar in size to dorsal fin). Considered a potentially dangerous invasive species in NJ, the Northern Snakehead is an opportunistic predator tolerant of a wide range of environmental conditions.



Geographic Range

Native to China and Korea, it has become established in DE, VA, MD, PA, NY, NJ, AR, and MI; and has been documented in CA, FL, IL, MA, NC, and GA.

Habitat Description

Stagnant shallow (< 2 m) ponds or swamps with mud substrate or aquatic vegetation and slow muddy streams, it also occurs in canals, reservoirs, lakes, and rivers.

Optimum Habitat Requirements

Dissolved Oxygen	
Temperature	0 – 30 °C
pH	
Turbidity	
Current	Calm/slow

Diet

Fry	Zooplankton, small insects, small crustaceans
Juveniles	Small fish, crustaceans, insects
Adults	Fish, crayfish, frogs, insects, small birds, mammals
Notes: Adults are voracious. Feeds in schools.	

Reproduction

Time of Year	April – August	Age Males Mature	2 – 3
Temperature Range	18 – 26 °C	Age Females Mature	2 – 3
Water Depth	0.6 – 0.8 m	Nest	Circular floating (aquatic vegetation)
Substrate	Shallow aquatic vegetation	Egg Type	Buoyant (non-adhesive)
Time of Day	Dawn or early morning	Parental Care	Male and female guard
Critical pH		Days to Hatching	1 – 3
Velocity Range	Calm/slow	Oxygen Level	

Notes: Ability to spawn multiple (up to 5) times per year. Both parents guard the nest of eggs from predation and continue to guard the hatched fry for several additional weeks.

Size and Growth

Maximum length up to 850 mm, typically reaching 7-8 years of age.

References

(Courtenay Jr. and Williams 2004; Herborg et al. 2007; Landis and Lapointe 2010; Landis et al. 2011)

- Courtenay Jr., W. R., and J. D. Williams. 2004. Snakeheads (Pisces, Channidae): A biological synopsis and risk assessment. U.S. Geological Survey, USGS Numbered Series 1251, Reston, VA.
- Herborg, L.-M., N. E. Mandrak, B. C. Cudmore, and H. J. MacIsaac. 2007. Comparative distribution and invasion risk of snakehead (Channidae) and Asian carp (Cyprinidae) species in North America. *Canadian Journal of Fisheries and Aquatic Sciences* 64(12):1723–1735.
- Landis, A. M. G., and N. W. Lapointe. 2010. First record of a northern snakehead (*Channa argus* Cantor) nest in North America. *Northeastern Naturalist* 17(2):325–333.
- Landis, A. M. G., N. W. Lapointe, and P. L. Angermeier. 2011. Individual growth and reproductive behavior in a newly established population of northern snakehead (*Channa argus*), Potomac River, USA. *Hydrobiologia* 661(1):123–131.