

# Northern Brook Lamprey (*Ichthyomyzon fossor*)

*Pennsylvania Endangered Fish Species*

**State Rank: S1 (critically imperiled) Global Rank: G4 (apparently secure)**

## Identification:

The northern brook lamprey is a non-parasitic fish. It reaches six inches in length. Like other lampreys, it has a single, round sucker-like mouth disc, but its disc is narrower than the body width where the gill openings are found. A single large tooth with two blunt cusps small mouth opening, and six to 11 blunt teeth are arranged in a line below the opening. Rows of smaller single teeth are situated around these larger teeth. The body is scaleless, with the first and second dorsal fins joined and connected to the tail fin. Except for an anal fin, sometimes connected to the tail fin, there are no other fins.



Photo Credit: William L. Pflieger

## Biology-Natural History:

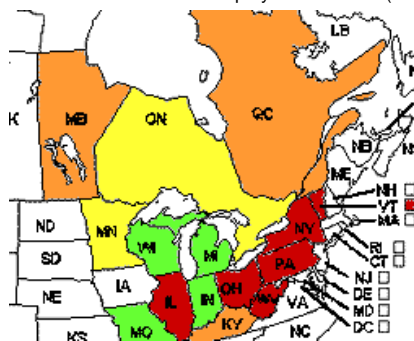
Spawning adults gather in the shallow water of creeks and small rivers during May and June. The sucking mouth is used to remove stones up to six inches in diameter, to create a spawning depression among coarse gravel rocks and beneath larger rocks. The bodies of spawning individuals are generally vertically oriented. Several days after spawning, the adults die. The sticky mass of eggs hatches in 15 to 30 days, releasing small larvae (ammocoetes) which make "U"-shaped burrows in the silt and sand bottom of quieter areas of the stream. Ammocoetes develop a hooded mouth structure and feed on small, one-celled plants and animals. After three to four years, teeth develop within the hooded mouth and the digestive tract degenerates. Newly transformed adults are about five to six inches long. Sexual maturity is attained just before the spawning period.

## Habitat:

The northern brook lamprey inhabits clean headwater areas of creeks and small rivers with coarse gravel to rock bottoms located in once glaciated terrain.

## North American State/Province Conservation Status

Map by NatureServe (August 2007)



### State/Province Status Ranks

SX	– presumed extirpated
SH	– possibly extirpated
S1	– critically imperiled
S2	– imperiled
S3	– vulnerable
S4	– apparently secure
S5	– secure
Not ranked/under review	

## Reasons for being Endangered:

This species is rare throughout its limited Great Lakes and disjunct midwestern range. It is known in Pennsylvania only from a limited portion of Conneaut Creek in Crawford County.

## Management Practices:

Watershed management is necessary to maintain the undisturbed habitat and water quality required by this species. Larvicides used to control parasitic sea lamprey populations must not be applied in northern brook lamprey habitat.

## References:

- NatureServe. 2007. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.2. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: August 20, 2007).



Fact Sheet adapted from: Felbaum, Mitchell, et al. Endangered and Threatened Species of Pennsylvania. Harrisburg, PA: Wild Resource Conservation Fund, 1995.

