



Lampreys (*Petromyzontidae*)

Lamprey species found in Indiana waters:

Parasitic lampreys

- Chestnut lamprey (*Ichthyomyzon castaneus*)
- Ohio lamprey (*Ichthyomyzon bdellium*)
- Sea lamprey (*Petromyzon marinus*)
- Silver lamprey (*Ichthyomyzon unicuspis*)

Non-parasitic lampreys

- American brook lamprey (*Lampetra appendix*)
- Least brook lamprey (*Lampetra aepyptera*)
- Northern brook lamprey (*Ichthyomyzon fossor*)

Do they have any other names?

Other names for lampreys are: lamprey eel, lamper, bloodsucker, hitchhiker, and seven-eyed cat.

Why are they called lampreys?

The name lamprey comes from the Latin word *lampetra* which means "stone licker." Also, the Greek word *ichthyomyzon* means "fish to suck."

What do they look like?

Lampreys resemble eels in that they have slender, snake-like bodies and smooth, slippery skin. Lampreys do not have jaws, however, but have a sucking disk for a mouth. They have seven pore-like gill openings on each side of the head and a single nostril is located in the middle of the head just below the eyes. Lampreys also have a skeleton made completely of cartilage. One way to tell a parasitic lamprey from a non-parasitic lamprey is the disk teeth on the mouth. Parasitic lampreys' teeth are all developed in the disk whereas the non-parasitic mouth does not have fully developed

teeth.

Non-Parasitic Lamprey: Least Brook Lamprey

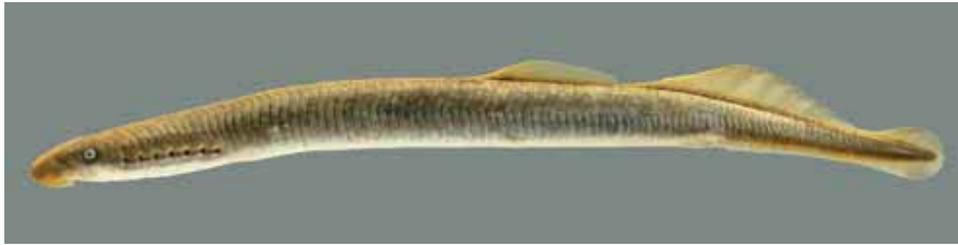


Photo Credit: Matthew Thomas, Kentucky Department of Fish and Wildlife Resources

Parasitic Lamprey: Ohio Lamprey

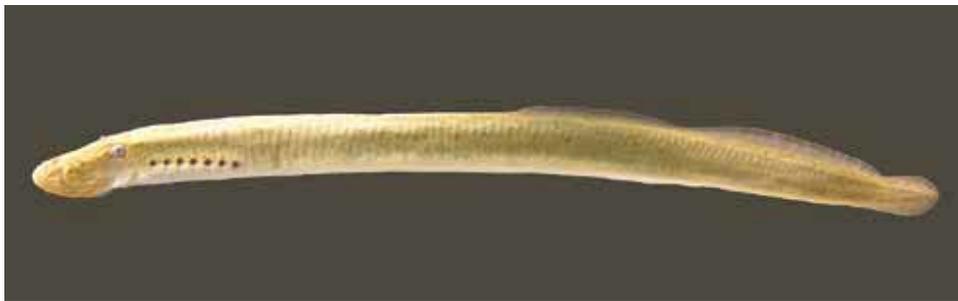


Photo Credit: Matthew Thomas, Kentucky Department of Fish and Wildlife Resources

Where do they live in Indiana?

Lampreys are common throughout Indiana and are found in rivers, streams, lakes, and reservoirs. The sea lamprey is an invasive species found in abundance in the Great Lakes and the northern brook lamprey is listed as endangered in the state.

What kind of habitat do they need?

Lampreys need small streams for spawning and for the larvae. The larvae burrow into the bottom of clear, permanently flowing streams and filter feed for 3 to 6 years before they transform into the adult stage and enter the river or reservoir.

How do they reproduce?

The adult lampreys migrate to small streams to spawn and make shallow pits near the upper ends of gravelly riffles or beneath rocks and other objects in the deeper, swifter sections of the stream. To create these pits they use their suction-disc mouth to carry stones away from the pit and they also fan out the silt by vibrating their bodies. This pit construction is a group activity with 20 or more lampreys present in a single pit. After the adults spawn they die and the larvae will then go downstream where they

will burrow into soft substrate on the bottom and filter feed for 3 to 6 years before transforming into the adult stage. After transformation some lampreys go into the parasitic stage and other species (the brook lampreys) skip the parasitic stage altogether. The parasitic stage lasts one or two years and then the adult migrates to a small stream to spawn. The non-parasitic lampreys remain in the small stream and spawn the following spring.

How old are they when they reproduce?

Lampreys reproduce anywhere from 4 to 8 years old depending on the length of time each lamprey remains in the larva and parasitic stages of life. A lamprey can transform into an adult at 3 years and then complete its parasitic stage one year later making it 4 years old when ready to reproduce. Alternatively it could take up to 8 years if the lamprey transforms after 6 years and remains parasitic for 2 years.

How long do they live?

A lamprey's life span is dependent on the amount of time spent in the larvae stage; some species can live up to around 8 years.

How fast do they grow in Indiana?

In the parasitic species the adults are usually around 4 to 6 inches long when newly transformed and can reach a length of about 10 to 12 inches. The brook lampreys (non-parasitic) are usually on average around 4 or 5 inches long when newly transformed and generally only grow about another inch before spawning.

What do they eat?

Lamprey larvae feed on microscopic life and organic particles that are filtered from the water by the gills. Adults in the parasitic stage attach themselves to other fish and suck blood through a hole rasped in the host fish by a hard, tongue-like structure in the middle of the mouth disc. Lampreys will feed on one fish for a few days before letting go of it and the host fish does not usually die directly from the attack. Host fishes can die from infections that develop in the wound or if more than one lamprey is attached to the same fish at the same time. Non-parasitic adults do not feed while they wait for the spring to spawn.

What eats them?

Larval lampreys are eaten by fish and the only predators for the adults are humans.

Are they safe to eat?

Lampreys are a nongame species in Indiana.

How do I fish for them?

Lampreys are often found attached to a fish that has been caught, they are not however listed as a game species in Indiana.

How is Indiana managing lampreys?

Lampreys are native to Indiana (except for the sea lamprey) and are not stocked by the state. The northern brook lamprey is listed as endangered in Indiana and is monitored by the state. The sea lamprey is an invasive in the Great Lakes and many efforts have been put forth to eradicate it from those waters.