**Lampreys** are [jawless fish](https://en.wikipedia.org/wiki/Agnatha%22%20%5Co%20%22Agnatha) of the [order](https://en.wikipedia.org/wiki/Order_%28biology%29) Petromyzontiformes, placed in the superclass [Cyclostomata](https://en.wikipedia.org/wiki/Cyclostomata). The adult lamprey may be characterized by a toothed, funnel-like sucking mouth. The common name "lamprey" is probably derived from [Latin](https://en.wikipedia.org/wiki/Latin) ***lampetra*,** which may mean "**stone licker**".

There are about 38 known extant species of lampreys. Parasitic species are the best known, and feed by boring into the flesh of other fish to [suck their blood](https://en.wikipedia.org/wiki/Hematophagy);but only 18 species of lampreys are parasitic.

lack jaws, retain to a notochord throughout their life, have vertebral column composed of cartilage that surrounds notochord.

Bilateral symmetry, has eye, gill, and a tail.

In their larva phase, they eat algae and small organisms. In their parasitic phase, they feed off a host (fish). In their spawning phase, they don't eat.



Bilaterally symmetrical body, anterior dorsal fin, external gill slits, posterior dorsal fin, and the caudal fin.

They can also be recognised by their gills which open directly to each side of the head in the form of a line of seven gill holes behind the eye.

Dentition: supraoral lamina, 1 bicuspid tooth; infraoral lamina, 6-10 unicuspid teeth, the lateralmost sometimes bicuspid; 4 endolaterals on each side; endolateral formula, typically 2-2-2-2; 3 rows of anterials; first row of anterials, 1 unicuspid tooth; 5-7 rows of exolaterals on each side; 3 rows of posterials; first row of posterials, 10 unicuspid teeth; transverse lingual lamina strongly w-shaped.

Sea lampreys are anadromous, and migration is triggered by changes in water temperature.

Demersal; freshwater; brackish; marine; depth range 1-650m.

Newly hatched larval sea lampreys are freshwater filter-feeders that consume detritus, algae, and other organic material found at river bottoms. Once in a saline environment (or in the Great Lakes), sea lampreys develop parasitic abilities, attach themselves to a fish and ingest their blood and skin. Sea lampreys ultimately breaks down the fish while the fish is still alive.

Life cycle:

 There are four stages in the life cycle of sea lampreys, which usually spans 18 months but can last as long as 5 years. The first of these stages is the spawning phase, which occurs during spring and early summer. From April to June, sea lampreys search freshwater rivers and streams, seeking an ideal location in which to construct a nest and lay their eggs. Once the area is selected, male sea lampreys construct a nest, often moving rocks to create a large indenture or depression in the river or lake bed. A female then lays 30,000 to 100,000 eggs, which the male externally fertilizes. Both male and female adult sea lampreys float away and die soon after spawning. Unique to this phase is the disintegration of the digestive system; adult sea lampreys cannot feed while spawning. During the second phase, fertilized eggs settle into the sand or gravel and begin to grow. Within a few weeks, the eggs hatch and the larvae burrow further into the sand or gravel. Larvae filter-feed on algae and other aquatic organic matter. This larval phase can last for more than three years. In the third phase, known as transformation, larvae metamorphose into adult sea lampreys. During this phase sea lampreys develop a mouth, teeth and eyes. They also migrate to larger bodies of water, such as oceans or freshwater systems like the Great Lakes. Sea lampreys remain in this habitat for 12 to 18 months as a mature adult and begin to feed, attaching themselves to fish. This is known as the parasitic phase, during which sexual reproductive organs develop.

"During the reproductive season male lampreys. which build nests in streams, exude a substance that draws females from long distances downstream. A team of biologists headed by Weiming Li, of Michigan State University, has identified this substance- a bile acid produced by the liver and probably released through the gills by special glands found only in breeding males."



 

