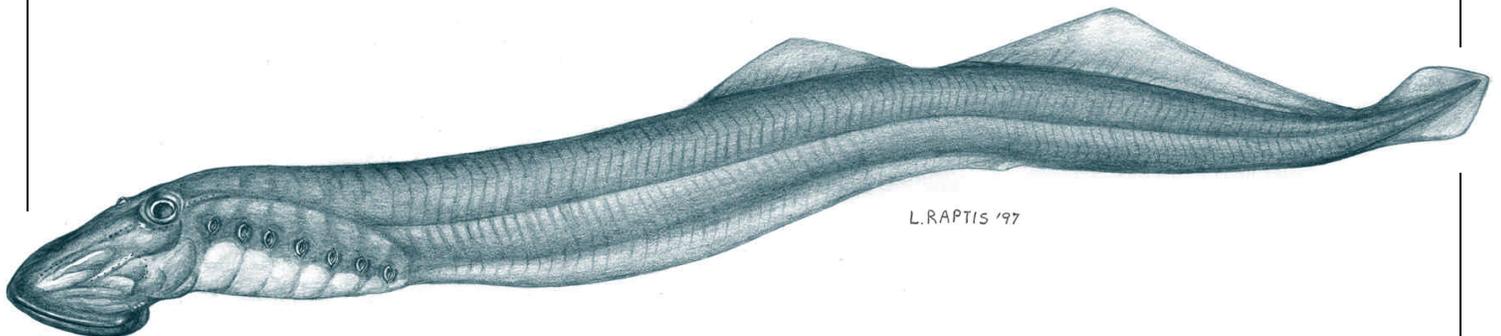


# B.C. Fish facts

## Lake Lamprey *Lampetra macrostoma*



### Other common names:

*Cowichan Lake lamprey, Pacific Lake lamprey.*

Typical range in length for adults: 18 - 23 cm

Maximum length: 26 cm

Typical range in weight for adults: 11 - 24 g

Maximum weight: 35 g

### What do they look like?

Lake lampreys are long and thin like eels. They have a smooth skin with no scales. The adult lake lamprey has large eyes and it has a larger mouth (circular sucking disk) than other members of the family *Lampetra*. It is dark, almost black in colour. Scientists often use the structure of the adult's mouth and teeth to separate one species from another because lampreys have few other features that can be used for identification. Young lampreys do not have eyes or teeth.

### Where do they live?

The lake lamprey is exclusively a freshwater lamprey, both spawning and living its adult life in freshwater streams and lakes. This is quite different from its nearest relative, the Pacific lamprey, which spawns in fresh water, but spends its adult life in the sea.

The lake lamprey is found in just two lakes, Cowichan Lake and Mesachie Lake, both on Vancouver Island, B.C. It is found nowhere else on Earth.

### What do they eat?

Young lampreys strain tiny plants and animals from the water they funnel into their mouths with an oral hood (a scoop-shaped membrane surrounding the mouth). As adults, these fish are parasitic on trout and salmon, preferring coho salmon and cutthroat trout. The adult attaches to its host with horny teeth and a sucking disk. It sucks out blood and other body fluids, but does not usually kill its host.

In one study in Mesachie Lake, as many as half the salmon and trout sampled had scars from lampreys. Less than 15% had wounds deep enough that could cause death.

## What is their life cycle like?

Lake lamprey have been seen spawning, from May to August, in the shallow, gravel fans created by the creeks that flow into Cowichan and Mesachie lakes. It has not been determined whether or not lake lamprey also spawn in the deeper areas of these lakes. Both male and female make a nest bowl among the stones by vibrating their bodies or carrying the stones away in their mouths. The female attaches to a rock and the male strokes her lightly with his disk. When the male reaches her head, he attaches and coils around her so that the eggs and sperm are released together and the fertilized eggs drop into the nest. The pair pushes stones with their heads or carries them to the nest to cover the eggs. It appears that all adults die after spawning. The larval form (called an ammocoete) burrows into the mud downstream of the area where it hatched – in the creeks or in the lake very close by. They remain in the larval stage for about 6 years and then change into adults from July through October. These young adults probably stay in the creek gravel

until the following spring before swimming up into the water. One year after leaving the gravel they spawn.

## How are they doing?

Although this species is locally abundant, it is found in only two adjoining lakes. It does not seem to be under obvious threat, but due to its extremely limited range it has been placed on the B.C. Ministry of Environment, Lands and Parks' Red List. The Red List contains species at risk of extinction. It has been designated as Vulnerable by COSEWIC (the Committee on the Status of Endangered Wildlife in Canada), the organization that lists the national status of wildlife in Canada.

The proportion of salmonids that have lamprey scars on them varies from year to year, indicating similar ups and downs in the size of the lamprey population. This pattern of change in population numbers is normal in natural systems.

## How you can help:

- Never transport live fish or other organisms from one body of water to another. This could transfer diseases and parasites from one ecosystem to another, or upset the natural balance in the ecosystem where they are released. This species could pose a threat to salmonids in other watersheds if it were moved into another lake or stream.
- Be aware that what you dump down the sink or into your septic tank, roadside storm drains or sewers may

find its way into streams. Help keep water quality high by using detergents and soaps minimally and by not dumping harsh chemicals, such as bleach, paint thinners or antifreeze, into drains.

- Learn to appreciate the variety of native fish found in our waters. They are part of healthy aquatic ecosystems.
- Form a group of water stewards and volunteers to monitor local water quality, the quality of riparian habitats, and to be environmental watchdogs in important spawning areas.

## No kidding!

- Lampreys are the most ancient group of fish, at least 300 million years old.
- Lampreys have cartilage instead of bones and are considered an early form in the evolution of fishes.
- They have only one nostril, located on top of their head.
- They have no jaws but take their food in through suction.
- Three-quarters of their life is spent in the larval stage.
- One trout caught in Cowichan Lake had three lampreys attached to it.
- The lake lamprey has only been recognized as a distinct species since the early 1980s.

