

# COWICHAN LAKE (VANCOUVER) LAMPREY

## A Threatened Species at Risk in our Watershed

### WHAT ARE LAMPREY?

Lamprey are an ancient group of fishes which evolved millions of years before dinosaurs roamed the earth. They are long, slender, and eel-shaped, with no scales or spine.

### WHY ARE THEY AMAZING?

Cowichan Lake lamprey (*Entosphenus macrostomus*) is found only in Mesachie, Bear and Cowichan lakes, nowhere else in the world!

This small (up to 27cm) freshwater species is the only lake spawning, parasitic lamprey species in Canada.

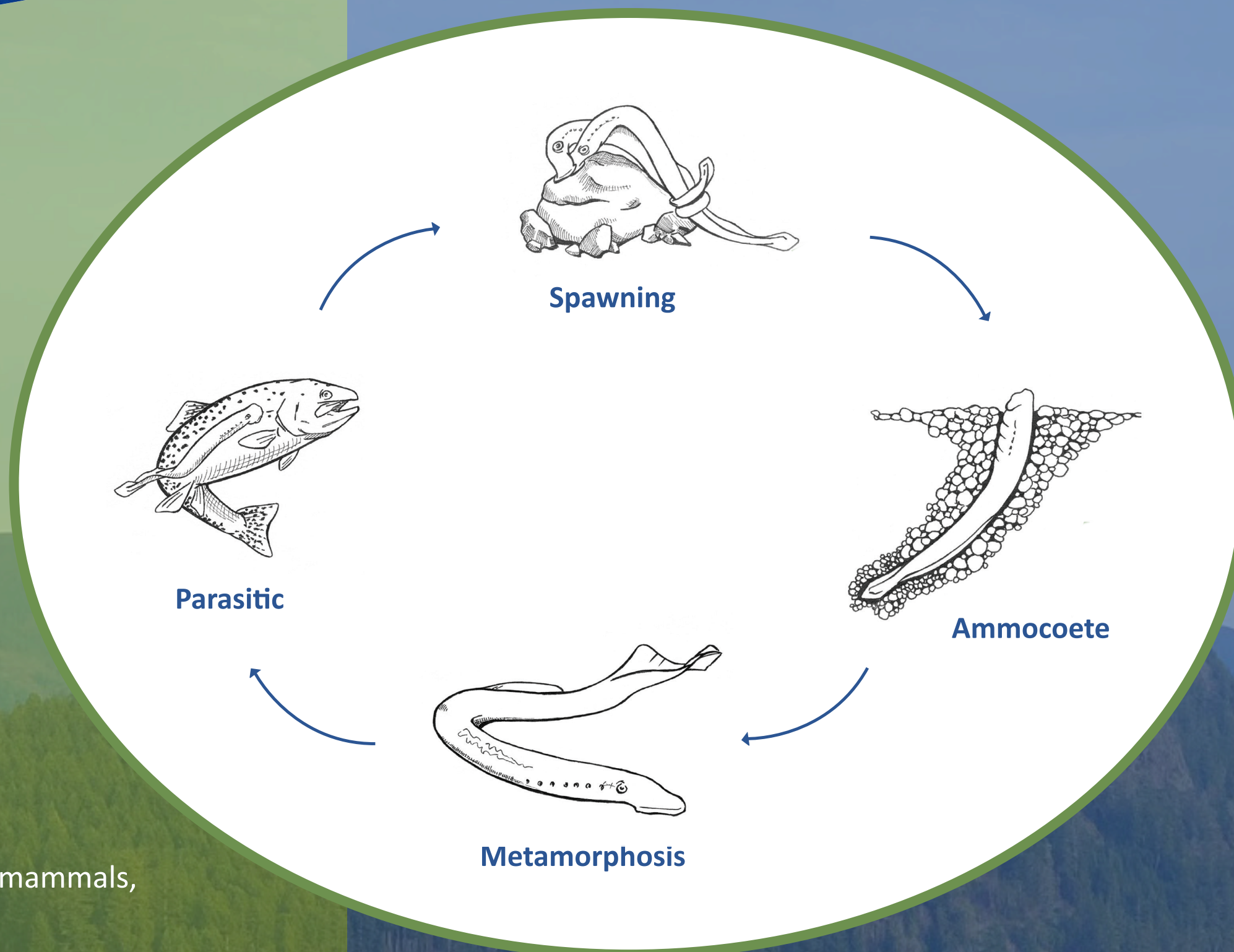
Lamprey play a key ecological role in our watershed through nutrient storage and cycling. They are also a great food source for birds, small mammals, and other fish species.

### LIFE CYCLE

**Ammocoetes**, the larval form of a lamprey, can be found in loose sediment, mud, and silt around all three lakes and in tributaries emptying into the lakes. They are blind, worm-like filter-feeders which eat bits of plant and animal material, plankton, and detritus. This life stage is the longest, lasting many years before they undergo **metamorphosis** where they develop eyes, fully formed fins, gill pores and a complete digestive system suitable for parasitic feeding.

The **parasitic** phase is very short, believed to last up to 2 years. During this time, they can be found attached to prey such as cutthroat trout or free swimming in the lakes.

From May to September this species is in **spawning** condition. They use their oral disc to move small rocks to make nests in the sandbars at the mouths of rivers. Lamprey will gather in pairs or groups to spawn. Males will use their oral disc to attach to a female's head and wrap his body around hers, squeezing out the eggs and fertilizing them. Lamprey tend to only spawn for one season before dying.



### SPECIES AND HABITAT PROTECTION

In order to help ensure the long term survival of this amazing species, both the species and its critical habitat are protected under the *Species at Risk Act*.

This means that it is illegal to harm, harass or kill Cowichan Lake lamprey and, it is illegal to alter or destroy critical habitat. Critical habitat for the species includes:

- Mesachie, Cowichan and Bear lakes
- Mesachie Creek
- The lower 100m of 8 tributaries flowing into Cowichan Lake
- Key riparian areas (15-30m) in the lakes and major tributaries

It is illegal to harmfully alter, disrupt or destroy critical habitat without a *Fisheries Act* Authorization. Applications for activities in critical habitat should be submitted to DFO for review.

### WHAT CAN I DO TO HELP?

This species faces many threats to its survival including:

- Drought during spawning and early ammocoete rearing
- Climate change
- Being killed through recreational fishing
- Habitat alteration and destruction

Help conserve water during summer droughts to increase the availability of water in spawning and ammocoete rearing areas.

Return lamprey, unharmed, if you catch one.

Protect nearshore lake and river habitats. Check with DFO to make sure you are not destroying lamprey habitat by creating beaches, removing gravel, building docks or other activities.



Get involved with a local stewardship group to help protect and rehabilitate habitat.

Importantly, report harm to lamprey or its habitat to DFO through the Observe, Record, Report line (1-800-465-4336) or email [DFO.ORR-ONS.MPO@dfo-mpo.gc.ca](mailto:DFO.ORR-ONS.MPO@dfo-mpo.gc.ca)

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