

Pacific Lamprey Fish Are Cool | Provided by the Bureau of Reclamation

Did you know the lamprey fish first appeared in the fossil record 450 million years ago? This is way before the dinosaurs were even around. Pacific lamprey, the prehistoric elder of the Columbia River fish world, are not only cool looking, but they are very important to the environment.

Pacific lamprey are anadromous, which means they are born in freshwater. They live in rivers, like the Columbia River, for about seven years, then the fish migrate out to the ocean to grow some more. A few years later, they swim back upriver into tributaries to spawn, which means have babies! After lamprey spawn, the fish live the last part of their lives in the rivers.

Juvenile lamprey are very tiny, like small earthworms and when they become adults, some say they look like eels because their bodies are so long. They have round eyes on each side of their head. Their mouths look like suction cups with lots of tiny teeth. Juvenile lamprey tend to "go with the flow" because they are so tiny that traditional fish screens are ineffective at keeping them out of canals. The Bureau of Reclamation is testing how to reduce this risk through several techniques. We are looking into using pumps or hydraulic structures to change how water flows and encourage baby lamprey to flow past the fish screens instead of going through them.

Lamprey are very different from salmon, and it takes creativity to meet their passage needs. About two hours away from Wenatchee, there are Reclamation projects to help lamprey in the Umatilla and Yakima basins. At the Umatilla River, lamprey ramps have been installed to provide a way for adult lamprey to pass over a diversion dam.

Not only are these fish good swimmers, but they are also very good climbers. They cling to rocks with their suction cup lips and push upwards with their strong bodies and tails; they've been climbing up waterfalls to get where they're going for centuries! At Prosser Dam on the Yakima River, they do just that! They wiggle right on up a wet, stainless-steel structure that mimics a waterfall.

Reclamation is working with many partners to help this fascinating fish. Beside the fact that they are just cool, lamprey is very important to the Native American culture as ceremonial and subsistence food. This special fish is great for the environment, too! They bring important nutrients into the freshwater rivers from the ocean when they migrate up to spawn. Lamprey act like little engineers in the streams when they move rocks and wood around with their strong mouths to make a nest for their eggs. This helps freshen up the stream, and the babies feed by filtering the water through their mouths, which helps clean the water. They are also tasty little morsels that provide prey for many other fish and birds, which reduces predation on salmon as they migrate out to the ocean. Lamprey are cool.



Adult Pacific lamprey climb a lab prototype of the vertical wet wall used at Prosser Diversion Dam on the Yakima River, Wash.



Reclamation biologist Sue Camp holds an adult Pacific lamprey collected from a trap box at the vertical wet wall passage structure at Prosser Diversion Dam, Yakima River, Wash.



Pacific lamprey have suction cup looking mouths and tiny teeth to attach to their host fish in the ocean and feed.



Larval Pacific lamprey resemble a small earthworm and live in fine sediment in tributaries, filter-feeding for up to seven years.