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**Great Lakes Fishery Commission**

**Sea Lamprey Control**

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## Sea Lampreys: A Great Lakes Invader

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### What are Sea lampreys?

Sea lampreys are aquatic vertebrates native to the Atlantic Ocean. Sea lampreys resemble eels, but unlike eels, they feed on large fish. They can live in both salt and fresh water. Sea lampreys were accidentally introduced into the Great Lakes in the early 20th century through shipping canals. Today, sea lampreys are found in all the Great Lakes.



### What is the sea lamprey's life cycle?

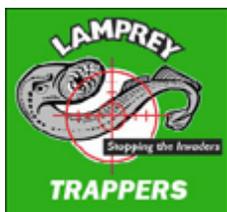
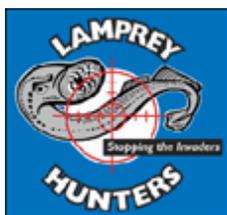
Adult sea lampreys swim upstream to spawn and then die. Fertilized eggs hatch into small, wormlike larvae which burrow into stream bottoms. The larvae feed on debris and small plant life (algae) for an average of 3 to 6 years before they transform into the parasitic adult. The adults migrate into the Great Lakes where they spend 12-20 months feeding on fish. The complete life cycle, from egg to adult, can take an average of 5 to 8 years to complete.

### What Damage do Sea lampreys Inflict on the Fishery?

Lampreys have been enormously destructive since they invaded the Great Lakes. Sea lampreys attach to fish with a sucking disk and sharp teeth. Sea lampreys feed on body fluids, often scarring and killing host fish. During its life as a parasite, each sea lamprey can kill 40 or more pounds of fish. Sea lampreys are so destructive that under some conditions, only one of seven fish attacked by a sea lamprey will survive. Sea lampreys prey on all species of large Great Lakes fish such as lake trout, salmon, rainbow trout (steelhead), whitefish, chubs, burbot, walleye, catfish, and even sturgeon. Sea lampreys have had a serious negative impact on the Great Lakes fishery. Because sea lampreys did not evolve with naturally occurring Great Lakes fish species, their aggressive, predaceous behavior gave them a strong advantage over their native fish prey. Their aggressive feeding behavior contributed significantly to the collapse of fish species that were the economic mainstay of a vibrant Great Lakes fishery. For example, before sea lampreys entered the Great Lakes, Canada and the United States harvested about 7 million kgs. (15 million lbs.) of lake trout in lakes Huron and Superior annually. By the early 1960s, the catch was only about 136,000 kgs. (300,000 lbs.). The fishery was devastated.

### What Can We do About Sea lampreys?

The Great Lakes Fishery Commission was formed in 1955 in part to control sea lampreys. The commission, in cooperation with Fisheries



and Oceans Canada, the U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers participate in sea lamprey control on the Great Lakes. The U.S. Geological Survey and universities throughout the Great Lakes basin conduct critical sea lamprey research. Overall, the sea lamprey control program has been tremendously successful. Ongoing control efforts have resulted in a 90% reduction of sea lamprey populations in most areas, creating a healthy environment for fish survival and spawning. Although it is impossible to completely rid the Great Lakes of sea lampreys, through continued cooperation and support, we can keep their populations at levels that lessen the impact to our fishery.