

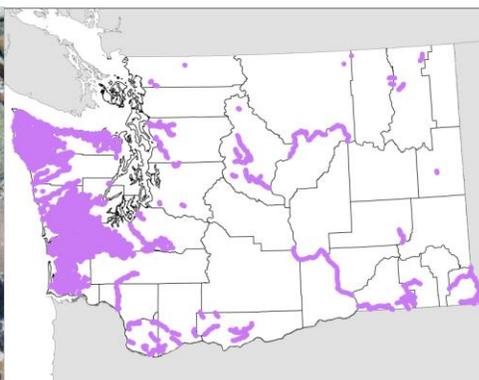
Species Fact Sheet

Western brook lamprey

Lampetra richardsonii



Photo by Gary Susac, ODFW



STATUS: SPECIES OF CONCERN

Western brook lamprey potentially occur in these Washington counties: Douglas, Okanogan, Chelan, Grant, Kittitas, Yakima, Benton, Franklin, Walla Walla, Columbia, Garfield, Asotin, Klickitat, Skamania, Cowlitz, Wahkiakum, Pacific

(Map may reflect historical as well as recent sightings)

On January 27, 2003, USFWS received a petition to federally list the western brook lamprey, *Lampetra richardsonii* in Oregon, Washington, Idaho, and California as threatened or endangered under the Endangered Species Act. In 2004, the USFWS found that the petition did not provide the required information to indicate that listing the species may be warranted and therefore a status review was not initiated.

Current and Historical Status

Western brook lampreys are found from coastal southeast Alaska to California, which includes inland distribution in the Columbia, Sacramento, and San Joaquin River basins. They have been documented in the Columbia River as far upstream as the Yakima River basin. None have been confirmed in the Snake River basin.

However, small lampreys that were either river or western brook lampreys were captured in Asotin Creek, Washington.

Available information on the abundance of western brook lamprey indicates some potential local declines and extirpations, but data are lacking to substantiate a significant decline in abundance or distribution of river lampreys.

Description and Life History

Lampreys are a primitive group of fishes that are eel-like in form but lack jaws and paired fins. These species have a round sucker-like mouth (oral disc), no scales, and breathing holes instead of gills. Pacific, river, and western brook lamprey ammocoetes (larvae) are nearly indistinguishable from each other. Ammocoetes are sometimes distinguished by a dark tail and pigmentation of the head above the gill openings. In the adult life stage, the oral disc is small and poorly developed and the two teeth (cusps) are rounded and nonfunctional. Adults are dark on the back and sides and yellow to white on the underside. Except for the last 6 months to 1 year of life, the western brook lamprey and the river lamprey are indistinguishable from each other.

Adult lampreys spawn in gravel bottomed streams, at the upstream end of riffle habitat. Both sexes construct the nests, often moving stones with their mouths. Spawning occurs from March to July where 1,100 to 5,500 eggs are laid per adult female. The adults typically die after the eggs are deposited and fertilized. The newly-hatched ammocoetes emerge about 10 days after spawning and drift into silty backwater areas. They remain burrowed in the stream bottom, living as filter feeders on algae and detritus for 2 to 7 years. Western brook lamprey ammocoetes have been observed at densities as high as 203 per square yard. Metamorphosis to adult stage occurs from February through July and at this time their gonads are not fully developed. They burrow into the stream substrate where they remain dormant through the winter months. In the spring, western brook lampreys emerge from their burrows sexually mature and remain in freshwater where they may migrate short distances to spawn. Western brook lampreys are nonparasitic and do not feed as adults.

Habitat

Riffle and side channel habitats are important for spawning and silty backwater habitats for ammocoete rearing. Because western brook

lampreys colonize areas and are relatively immobile in the stream substrates, good water quality is essential for rearing.

Reasons for Decline

Potential threats to western brook lampreys include poor water quality, harvest, predation by nonnative species, stream and floodplain degradation, dredging, and dewatering.

Conservation Efforts

Many Tribes, State, and Federal agencies are beginning to incorporate the needs of lampreys into management and monitoring plans. Currently there is little systematic monitoring of abundance and distribution.

The USFWS encourages interested parties to continue gathering information to increase our understanding of the status of this species on topics such as:

- (1) Western brook lamprey biology and ecology, their current and historical distribution and abundance, and habitat needs during all life stages;
- (2) The range, status, and trends of this species;
- (3) Specific threats to this species or its habitats;
- (4) Techniques for improving identification of lamprey ammocoetes to species;
- (5) Any other information that would aid in determining population status, trends, and structure;
- (6) The adequacy of existing regulatory mechanisms to protect or conserve lampreys and their habitat.

References and Links

[90 Day Finding 2004](#)
[Pacific Lamprey Conservation and Information](#)