



Pacific Lamprey Virtual Geocaching and Lamprey Travel Bugs

What Is Geocaching?

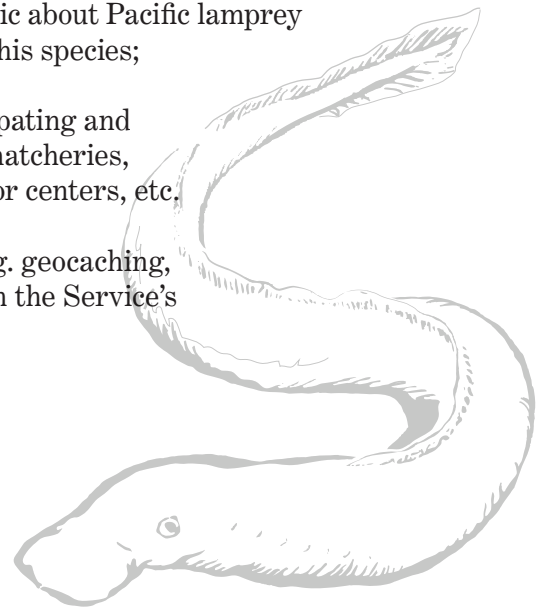
Geocaching is an outdoor recreational activity in which participants use a Global Positioning System (GPS) device to locate hidden containers or locations called “geocaches,” or “caches,” or fixed objects (called ‘waypoints’). Caches and waypoints can be found anywhere in the world. Geocaching is similar to traditional orienteering.

What Is the Pacific Lamprey Geocaching Project?

FWS Region 1 Fishery Resources is deploying—using a phased approach—12 unique Pacific lamprey geocaching travel bugs in select river basins up and down the West Coast within the region of Pacific lamprey. A travel bug is a geocaching item that ‘travels’ to different geocaches or waypoints via human transport based on pre-determined (and updatable missions). People who find a travel bug in a cache and choose to take it to another geocaching site ‘check out’ the travel bug via a special travel bug website operated by Geocaching.com; they access the site via a special code printed on the travel bug’s ‘dogtag,’ a metal fob that allows a travel bug finder to learn more about the item. Each travel bug will have a special mission to visit sites relevant to lamprey along its migratory route in its designated river basin and via ‘migration’ to and from the Pacific Ocean.

Project Goals

- Educate and inform the public about Pacific lamprey and our efforts to conserve this species;
- Increase visitation at participating and partner facilities, including hatcheries, refuges, parks, forests, visitor centers, etc.
- Promote outdoor activity (e.g. geocaching, hiking) and engagement with the Service’s web and social media sites.



j.mp/PacificLamprey



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Pacific Lamprey Life History

Shortly after hatching in freshwater streams, lamprey larvae, or ammocoetes, drift downstream into areas of low velocity and fine substrates where they burrow, and live as filter feeders for up to 7 years. Metamorphosis to the macrophthalmia (juvenile) phase occurs gradually over several months from July to November before migration to the ocean in winter and early spring. During this transformation, macrophthalmia develop eyes and teeth. As adults in the ocean, Pacific lamprey are parasitic and feed on the body fluids and blood of marine fishes. After 1-3 years in the marine environment, the fish stop feeding and migrate back to freshwater between February and June. They overwinter in fresh water until spawning the following year (between March and July). After spawning, lamprey die within days.

Why Are Pacific Lamprey Important?

While the Pacific Lamprey is culturally important to Native American peoples, they also provide numerous ecosystem services. As larvae, they facilitate sediment transport and improve water quality via filter feeding. Relatively weak swimmers, they provide an abundant and rich food source for predatory animals both as larvae and outmigrating juveniles. Upon their return to freshwater they act as a predation buffer for other anadromous fish like salmon and steelhead. Spawned-out lamprey are also a source of marine derived nutrients to stream ecosystems.

Please note: As with National Parks and Monuments, it is illegal to place permanent caches on National Wildlife Refuges and Hatcheries. However, virtual geocaches are finding their niche on public lands and activities such as the Lamprey travel bug are welcome to visit. We encourage participants to log their visit, take a picture of the lamprey travel bug, and upload it to Geocaching.com's website. The travel bug lamprey should then be left in another cache close by. Good Luck!

