

A B r i e f T r i p t o t h e O l y m p i c P e n i n s u l a

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b y  
J a y D e L o n g

It was the first time I had seen an Olympic mudminnow and sea otter.

My job takes me in the field throughout western Washington State for 2-3 months each spring, fall and winter. I am a fisheries biologist for the Northwest Indian Fisheries Commission, in Olympia, Washington. I visit tribal salmon hatcheries and supervise them in the coded-wire tagging of their juvenile coho and chinook salmon and steelhead trout. Coded-wire tags are tiny (one-half to one millimeter long) stainless steel wires which are injected into the snout of fish. The tags remain in the snout for the life of the fish, which is generally three years for coho, 3-7 years for chinook, and 3-6 years for steelhead. Other salmon species (sockeye, pink and chum) are also tagged, primarily in Alaska and British Columbia.

Young salmon don't survive well, so we tag many fish at a time with the same unique code (which is never used again) to insure that an adequate number of fish are recovered as adults. Fish are recovered by commercial and sport fishermen, and when they return to their native river or hatchery. We normally tag 50-75,000 coho or steelhead and 200,000 chinook. Tagging is performed in a specialized mobile tagging trailer, which permits the tagging of up to 40,000 fish per day.

The tags are later removed from fish at the place of capture, and then decoded. We gain information, such as how well the fish survived, who caught them and in what numbers, and how strong a given year's returns are expected to be. This latter information permits state and tribal managers to set catch limits.

Rivers in Washington do not have diverse fish populations. Generally, our rivers have high flow in the spring, when the Cascade and Olympic mountain glaciers melt, low flow in the summer, then torrential flow in the fall when the rains come. These flows are tied to salmon behavior; juvenile salmon migrate out in the spring, and adults generally return in the fall.

I almost always find the same few species when I sample these streams in Puget Sound. Sculpin are the most common, so I've learned to identify them. The most common is the torrent sculpin (*Cottus rhotheus*). There are also the coastrange sculpin (*C. aleuticus*), prickly sculpin (*C. asper*), and a few others. The torrent sculpin is generally associated with swift riffles, but I've found it in slow sandy areas as well. The longnose dace (*Rhinichthys cataractae*) is very common, too, and I've found it associated with the torrent sculpin many times.

Between May 19-23, 1997, I was working on the Olympic Peninsula far from Puget Sound, near the Makah Tribe town of Neah Bay, located on the most northwest portion of the state. When the work day was over at five p.m., I still had four hours of daylight to explore and enjoy. One night I sampled a stream called Beaver Creek with a dip net. The stream looked like typical torrent sculpin/longnose dace habitat, with many long swift riffles and shallow pools. I didn't find either fish; instead the only sculpin was the coastrange sculpin. This was in line with what I had read about sculpin distribution.

Much of the riffle habitat was not usable, which was a sad sight. At first glance, the cobble-covered riffles looked like ideal sculpin/dace habitat, but closer observation

showed that much of the cobble substrate was cemented in place by finer silt and sand particles, certainly from logging erosion in the watershed.

In one riffle, I placed my net in front of some likely fish-holding gravel and cobble, kicked around, and pulled out a 20 inch-long Pacific lamprey (*Lampetra tridentata*) that filled the net. These fish return to freshwater to spawn in riffles and die, and this was the first time I caught one with a dip net. I also saw schools of small salmonids in the pools. I think they were coho salmon and rainbow or cut-throat trout.

Mostly I wanted to see the Olympic mudminnow (*Novumbra hubbsi*), so I traveled to a site where the fish had been collected before: a tributary to the Quinault River called Cook Creek. I knew only that the fish prefers slow water with mud bottoms and vegetation, and is often found in water that is spring-fed. I

found a likely location, hopped in with my shorts and sneakers, and nearly lost my breath in the ice-cold water. Then, after putting on my waders, I began dragging my dip net through vegetation, finally finding a single mudminnow after a few minutes. Success!

I also took advantage of the mountain and coastal trails in the area, and did some hiking and sight-seeing. One night I hiked to Cape Flattery, the lower 48's most northwest point. High above the water at that violent and rocky place, I looked down and saw a sea otter doing what you think of sea otters as doing: floating on its back (and sleeping, I think). I watched a purple-orange-gray sunset and felt a sense of complete peace. As I walked (stumbled) back down the trail in the near darkness, I felt sad that, at a 5-1/2-hour drive, the Cape was so far from my home that I couldn't easily revive that peaceful experience.

I was wrong. The memory is still vivid as I write this.

### A Note on Longnose Dace Coloration

In Western Washington, many rivers are glacier-fed and become quite milky in appearance when spring warmth melts snow and ice in the Olympic and Cascade Mountains. These rivers will stay turbid from glacial runoff all summer long until the fall rains begin.

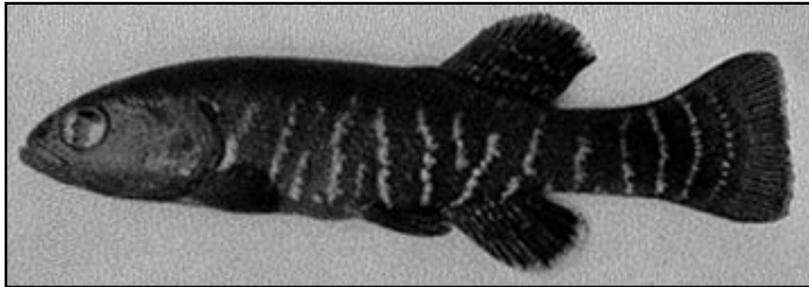
The longnose dace is common in these rivers. One day in the summer of 1996, I was collecting in two rivers in Eastern Puget Sound: the Puyallup River, which enters Puget Sound in Tacoma, and the Green River, which enters at Seattle. The Puyallup River is fed by two glaciers on Mt. Rainier. The Green River is not glacier-fed, so it stays clear year-round.

I noticed the dace may have changeable protective coloration. I collected the fish in both rivers and they looked quite different. While seining the Puyallup, I collected a single

creamy-white longnose dace. In the Green, I collected several dace of the typical brown-gold variety.

I released all the fish and later told fellow NANFA member Dan Logan what I saw. He thought it would be interesting to see what would happen to the fish in an aquarium. Would the white fish darken? What would be the effects of dark vs. light gravel? Although interesting, these observations would not take into consideration the many other factors that could cause color changes. For example, I've seen coho salmon fry go from brown to pale white in a matter of minutes just from handling stress. Duplicating Puyallup River water quality and flow would be next to impossible, so I think it's an experiment that, while fun to think about, would not be practical with home aquaria.

See Jay DeLong's report from the 1997 NANFA Annual Convention in Portland on page 24.



Top: *Novumbra hubbsi* (male, 2.5 inches, Conner Creek, Washington).  
Bottom: *Novumbra hubbsi* (female, 2.3 inches, Conner Creek, Washington).  
From Wydoski and Whitney, *Inland Fishes of Washington*.

