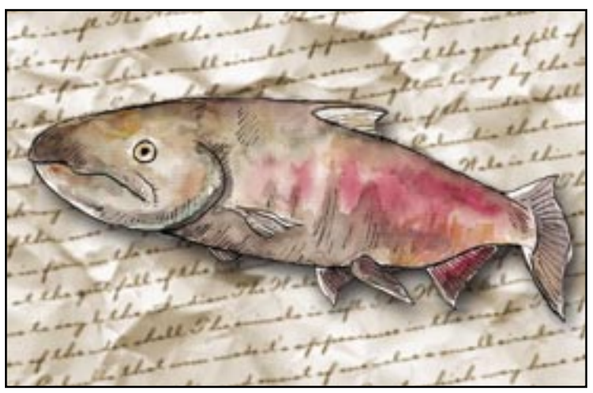
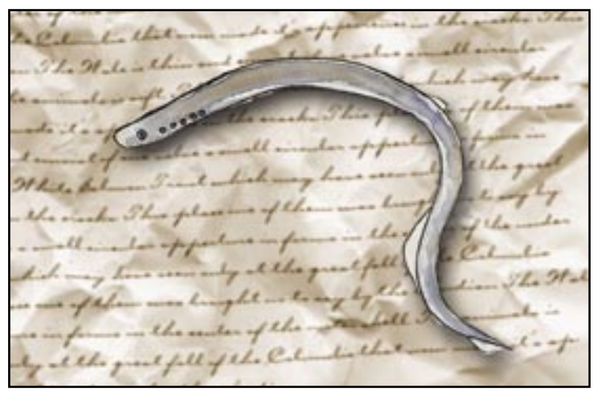




‘Fish We Have Met With’

Pacific Coast Fishes of the Lewis and Clark Expedition

Captains Meriwether Lewis and William Clark and other members of their expedition collected nearly 400 species of plants and animals during the Voyage of Discovery in 1804-1806. Of this total, 31 species of fish were reportedly mentioned in the explorers’ diaries, including up to 12 species considered unknown to science at that time.

The two explorers crossed the Continental Divide in August 1805 in search of the Columbia River and its route to the Pacific Ocean, leaving the breaks of the Missouri River behind them. Once past these landmarks, they were on the threshold of a whole new assemblage of freshwater fishes.

Species Collected in the Pacific Northwest (1805-1806)

Trout and salmon, from the family Salmonidae, are one of the most visible fish groups in the Pacific Northwest. Two centuries ago when Lewis and Clark explored the region, up to 20 million Pacific salmon returned to spawn in the Columbia River. Based on their journal entries, the explorers encountered five different species of fish from the family Salmonidae. They described at least two species of resident trout and four of the six species of Pacific salmon and steelhead during their travels up and down the Columbia and Snake river systems. Fish species encountered and described include the common salmon (chinook), red charr (sockeye), white salmon trout (coho or silver), salmon trout (steelhead), and spotted trout (cutthroat).

Journal entries documented that resident fish regularly found their way to the meal table when salmon were not available. According to Lewis, sturgeon, which had “been cut into large flatches,” were laid on top of fire-heated stones then layered with small boughs or leafy branches. Once all the meat was laid down, the stack was covered with mats and water poured over it and among the hot stones. This caused steam, which cooked the fish in an hour or so. We can be fairly certain that these accounts refer to white sturgeon, the most common of the two species in the Columbia River.

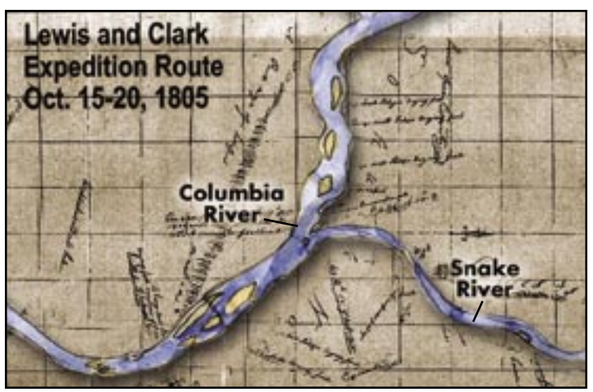
Based on the journals of Lewis and Clark, we know that fall chinook salmon spawned in the Columbia River just upstream of its confluence with the Snake. Lewis noted on October 17, 1805, “The number of dead salmon on the shores and floating in the river is incredible to Say.” The size of the run was sufficiently large that Indians could harvest them with ease, “at this season they float in such quantities down the stream, and are drifted ashore, that the Indians only have to collect, split, and dry them on the scaffolds.” Imagine the expedition’s thoughts as they watched local tribes harvest and prepare salmon carcasses. Little wonder dried fish gave them a belly ache!

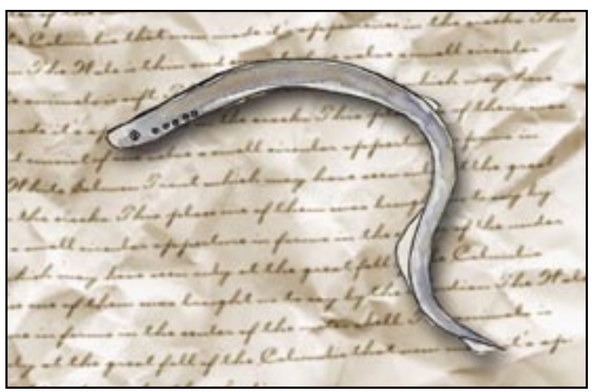
The explorers described in detail only a few common freshwater fish species native to this region. These included the euchalon or candlefish (*Thaleichthys pacificus*), sturgeon (white sturgeon, *Acipenser transmontanus*), chubb (most likely peamouth chub, *Mylocheilus caurinus*), and mullet (most likely largescale sucker, *Catostomus macrocheilus*). Their accounts of these species, although not always conclusive, provide enough detail or corroborative data on life history and timing to provide reasonable certainty as to species identification. Other accounts of fish were fleeting at best.

Species Present in the Mid-Columbia Region (1805-1806)

In addition to fish species noted in the Lewis and Clark journals, several other species were known to inhabit the Columbia and Snake river systems during the early

Clark provided a detailed sketch of only one species of salmon, the “white salmon trout.” The likeness was drawn from a freshly gigged specimen that “made its appearance in the creeks near this place” (i.e., their winter camp at Fort Clatsop, March 14, 1806). Descriptions of other species of salmon and trout they encountered were limited to counts of characteristics such as number of fin rays, scale size, mouth shape, general body size, and coloration.





1800s. This evidence can be gleaned from an examination of fish known to Sahaptin-speaking people in the Mid-Columbia region. Their classification scheme included 20 kinds of fish, which corresponded to about 30 based on present-day taxonomy. Lewis himself noted on March 2, 1806 ... "I have no doubt there are many other species of fish, which also exist in this quarter of different seasons of the year, which we have not had the opportunity of seeing."

Fish, particularly salmon, were an important part of the diet of the expedition. The type of gear used to collect or harvest fish, in addition to the time of year and habitats sampled, influenced which species were actually collected.

The mullet (thought to be a sucker) were seasonally abundant and readily collected by local tribes such as the Wallah Wallahs. They were served roasted to the party on at least one occasion. According to historian Eugene Hunn, the arrival of sucker in streams adjacent to winter camps was a celebrated event for local tribes in the Mid-Columbia region because this species arrives prior to the spring salmon migration.

For example, the explorers sometimes used "sein [made] of willow brush" or a "drag of bushes" to herd fish and capture them in streams. They also attempted to snag salmon with limited success. One unique fish collection method was alluded to by Clark when the party was near the Tapteal (Yakima) River. "I shot a large Prairie Cock, several Grouse, Ducks and fish." The most popular way of getting fish was to trade fish hooks and other objects with local Indian tribes.

That Lewis and Clark passed down and up the Columbia River during a relatively brief time period (October to November 1805 and again in April to May 1806) meant they missed key migration and spawning periods of many resident fishes. Their fish-catching methods would not have been effective for collecting many of the smaller fish species likely present. In addition, the principal waterways they traveled were too large to allow efficient sampling of the entire fish community. This would have required a much more focused effort to gain additional knowledge of the relative abundance, habitats, and life history of all the area fishes.

Based on knowledge of fishes native to the Columbia River system, ethnobiological notes, and observations of later explorers to this region, additional freshwater species of fish present in 1805-06 would have to include:

- redside shiner (*Richardsonius balteatus*)
- various dace (*Rhinicthys* spp.)
- northern pikeminnow (*Ptychocheilus oregonensis*)
- chiselmouth (*Acrocheilus alutaceus*)
- various sculpin (*Cottus* spp.)
- sandroller (*Percopsis transmontana*)
- Pacific lamprey (*Lampetra tridentata*)
- bridgelip sucker (*Catostomus columbianus*)
- mountain whitefish (*Prosopium williamsoni*)
- three-spine stickleback (*Gasteroseus aculeatus*).

Species Currently Found in the Mid-Columbia (2003)

The freshwater fish community in the Mid-Columbia region comprises 44 species of fish if we include those brought in by Eurasian settlers. Common fish species introduced to the Mid-Columbia region since the early 19th century include popular sport fishes such as smallmouth and largemouth bass (*Micropterus* spp.), bluegill and pumpkinseed sunfish (*Lepomis* spp.), crappie (*Pomoxis* spp.), walleye (*Stizostedium vitreum*), and yellow perch (*Perca flavescens*). Several members of the catfish family not native to this region, but now present, include the channel catfish (*Ictalurus punctatus*) and several species of bullhead (*Amyerius* spp). Other shifts in species composition and relative abundance of area fishes can be expected in the future because of changes in water use practices, climate change, fish and wildlife management practices, and human intervention.

The contributions of Lewis and Clark to our knowledge of natural history were significant enough that we can forgive them for not providing more information on fishes. One of Lewis and Clark's greatest accomplishments was that they opened up passage to the West, sparking the imagination of the greater American public. The era of specializing within the broader field of biology had also begun.

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Produced and printed using Battelle funds.
June 2003