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WEEKEND BREAK

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Enormous Columbia plays hide and seek

By NANCY LLOYD
 For The Daily Astorian

The Columbia River rises in Canada's Rocky Mountains, flows north, then south, west, south again, east, south, east again, south again, west, north and finally west into the earth's largest ocean. It gathers water from approximately the totality of the Pacific Northwest and travels about 1,200 miles before colliding with the surf of the Pacific Ocean.



On its trip downhill from the mountain ranges surrounding its drainage basin, the Columbia picks up desert sand, volcanic ash, rich topsoil and forest debris, which all jostle along in the flow, some piling up behind the many dams punctuating the stream. At the mouth of the river between Oregon and Washington, the remaining debris drops out of suspension, creating an ellipse of muck that the surging and retreating tide and the outflowing river incessantly shove around. That ellipse is called the Columbia River bar.

Most great rivers have a delta near their mouth where water slows and meanders over a wide flat tideland until it eases into the ocean. Not so with the Columbia: It flows full force abruptly into the ocean.

The height difference in tidal elevation between the river and the ocean is about 10 feet, meaning one body of water is almost always trying to shove the other out of the way.

Ice Age floods

Perhaps 15,000 years ago, when the world was frozen, a series of ice dams stopped the downhill outflow of water from glacial Lake Missoula. Repeatedly, that water floated the ice dams and forced its way free to tear through the lands west of northern Idaho's Rocky Mountains, breaking through several stony blockages — at Washington's Wallulah Gap and the Cascade Mountains in the Columbia River Gorge — before flooding into the primordial Pacific Ocean.

The Ice Age coastline was farther west in those days; all that ice meant that sea level was a lower proposition than it is today. When those fantastic floods of water and debris perhaps 600 feet high roaring toward the sea at 40 miles an hour reached the ocean, they scoured a great and deep gorge, the Astoria Canyon.

Today, within perhaps 35 miles of the shore, the sea bottom at the Astoria Canyon drops abruptly from sea level to over 3,000 feet. No room is left for a flattened delta to calm the meeting of the waters.

As you stand near the mouth of the Columbia River and look to the southeast you see Saddle Mountain. Its height is slightly more than the depth of the Astoria Canyon and its distance away from you is about the distance between the river's mouth and the commencement of that canyon.

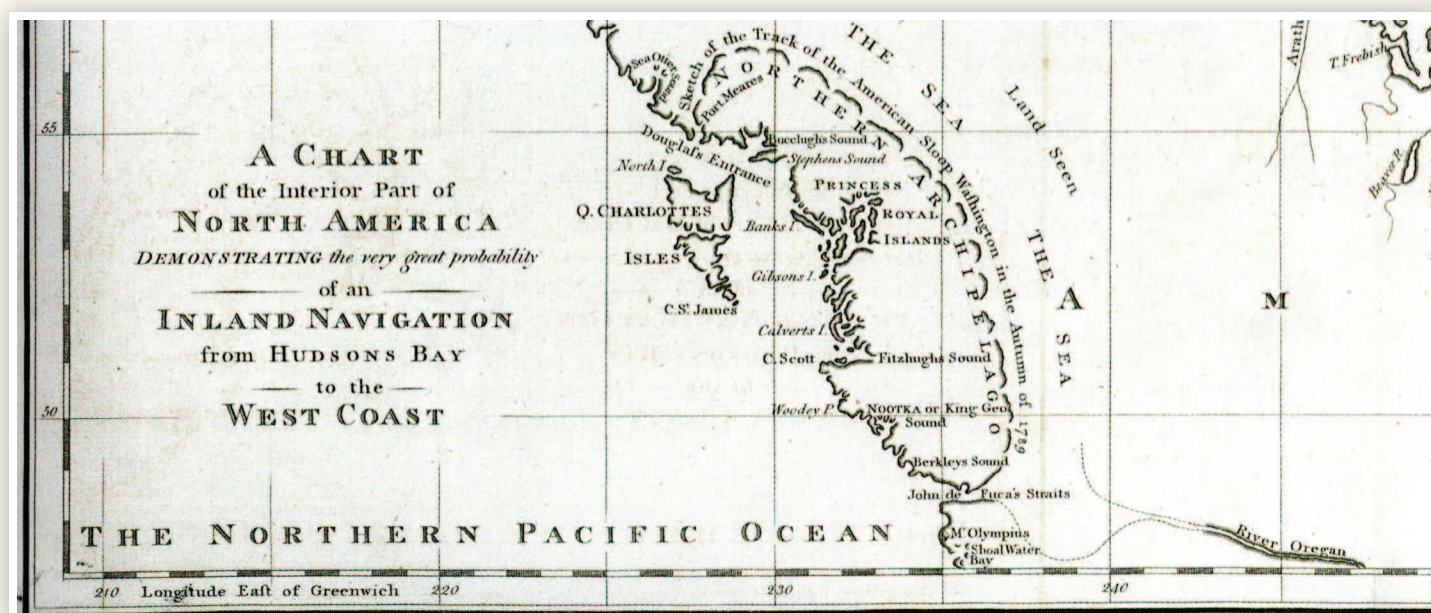
Big change in a short distance!

The Astoria Canyon is one element creating the horrific Columbia River bar; another is the weather of the North Pacific Ocean blowing toward our coast, particularly in winter; a third is the distance swells may travel — from Japan, Hawaii, Alaska or Chile — before fetching up uninterrupted on this lee shore.

With nothing offshore to break up those big onshore swells, and with an abrupt rise in sea floor between the Astoria Canyon and the river's mouth, and with storms from the west, the place where the Columbia meets the Pacific Ocean is often a watery riot.

Seven-fanged horror

Then there is the amount of water coming downstream. As it nears its oceanic destiny, the river widens into an estuary nearly 10 miles across, is nowadays narrowed by rock jetties



AUTHOR'S COLLECTION

English explorer John Meares failed to find the mouth of the Columbia River, supposing instead that "River Oregon" discharged far to the north. It was Meares who named Cape Disappointment, in the mistaken belief that it did not mark the river's entrance.

into an entrance six miles wide, and blasts hundreds of thousands of square feet of water per second into the Pacific Ocean.

Picture a fire hydrant open at full blast, aimed at a stout stone wall.

Here, where river and ocean scrimmage fiercely back and forth over the same few muddy leagues of center field, sand and downstream debris piles up. Water may riot in waves of 20 feet, or 40, shoving that stuff around. Breakers may show white the entire width of the bar.

Not for nothing did old-timers call it "the seven-fanged horror."

Today, author Michael Haglund sums it up bluntly: "... (T)he Columbia River bar is the most dangerous entrance to a commercial waterway in the world."

This elusive coast, this elusive river

As we Pacific Northwesters look at old maps, we note an appalling lack of information about our coastline. Oftentimes our region is blank.

Much before 1775, English, Spanish, French and Dutch shipmasters drew coastlines of Mexico and Baja California that we recognize today; the farther north their pens moved the sketchier the outline got. "New Albion" was decidedly unclear. Russians and Scotsmen etched wonderfully detailed coastlines southward from the Aleutians to Vancouver Island, where the edge of the paper conveniently intervened.

The coast between Cape Flattery near Neah Bay, Washington, and Cape Blanco near Brookings, Oregon, was sometimes missing completely. A few maps show a line labeled "great river of the west" wandering due eastward from this vague coastline.

Those of us who've drawn maps know about fudging what we don't understand.

Why so mysterious?

Just why was it that it took the world's best sailors until almost 1800 to accurately draw the coastline of Oregon and Washington? And why was the Columbia apparently the last major river in the temperate world to be found by non-Natives?

Today, as we look at the mouth of the Columbia River, fixed in place by jetties made of boulders the size of Volkswagens and which weigh almost as much as a Mack truck, we can't imagine how the world's finest mariners repeatedly missed it.

One fact was that it didn't look like any major river they'd ever seen. The coast betrayed only a "slight and gradual inner curve," silt-colored water, and often the unbroken row of frothing breakers looked like a coastline with no opening. Sailing closer and climbing to the top of their tallest mast, most sailors still saw only what looked like an elbow of the sea.

In 1775 Spaniard Bruno de Hezeta observed "a great bay" which he thought might be the entrance of "some great river or pass to some other sea," but his crew was too debilitated by scurvy to attempt an entrance. The captain named several points of land and sailed on.

Thirteen years later England's John Meares saw the telltale discolored water but couldn't get beyond the breakers. He named the headland and what he took to be a harbor, "Cape Disappointment" and "Deception Bay." He, too, sailed on.

In 1792 England's George Vancouver, determined to find "Hezeta's River," noted off-shore of Deception Bay that "the sea had now changed from river-coloured water, the probable consequence of some streams falling into the bay. Not considering this opening worthy of more attention, I continued our pursuit to the northwest." How this fine mariner must have come to regret making a record of that opinion. Vancouver's failure to enter that "opening" eventually contributed to England's losing claim to the Oregon Country.

A month later on May 11, 1792 Robert Gray of Boston had what sounds like a breeze of a bar crossing into the Great River of the West. "At eight, A. M., being a little to windward of the entrance of the Harbor, bore away, and ran in east-north-east between the breakers, having from five to seven fathoms of water. When we were over the bar, we found this to be a large river of fresh water, up which we steered..."

USA on the Pacific Northwest Coast

How did it come to be that the U.S., barely out of rompers in terms of its nationhood, succeeded in the competition to find that so-called "Great River of the West?" How did its maritime explorers beat out those more experienced sailors from nations that were far older?

After determined Americans, with the help of France and Spain, had defeated Great Britain in the revolutionary War of Independence, it found itself in the quandary of having to support its own currency and finance its own government. Fortuitously, they heard rumors of a wealth of furs to be trapped on the north coast of the Pacific Ocean and sold in China.

Those tales were being spread by sailors from Capt. James Cook's third voyage, and some Boston businessmen listened. Among them were Joseph Barrel, merchant; Charles Bullfinch, recent Harvard graduate; Samuel Brown, another merchant; John Derby, shipmaster; and others.

One vessel the group bought for their first expedition west was the *Columbia Rediviva*. The word "rediviva," Oregon historian Horace Lyman tells us, "indicat[ed] the patriotic feeling of the promoters that Columbia — America — was alive again." This venture was planned to resuscitate the fortunes of the young nation.

The fur trade

In February 1846 the *Connecticut Courant* reprinted an article from the *Boston Journal* about the business of the fur trade. Boston merchant William Sturgis who had sailed to the Pacific Northwest and traded for furs before 1800 — he was aboard the vessel *Caroline* at the Columbia River in 1804 — spoke 42 years later to a group in Boston about early American presence in the region.

(These were the days when "The Oregon Question" rankled between Great Britain and the United States: who would control that land drained by what would come to be known as the Columbia River?)

"In 1787," the *Courant* repeated, "the first American expedition to engage in the fur trade, started from Boston; it consisted of two vessels [*Columbia Rediviva* and *Lady Washington*] ... Mr. Sturgis spoke of the boldness and daring of the undertaking and said that the whole field of commercial enterprise, at the present day, could afford no parallel to it. It was not easy now to estimate the dangers and difficulties attendant upon it. The country had but just passed through the Revolution ... and the vessels which carried out the undertaking were not such as would pass an insurance office of this day.

"Medals were struck, on that occasion; of the inscription upon them, Mr. Sturgis was enabled to procure a facsimile, from a medal preserved in the Department of State, at Washington. The inscription was as follows — In the circle round the medal, 'North America, for the Pacific Ocean, fitted at Boston, (in the centre) By J. Barrel, S. Brown, C. Bullfinch, J. Derby, C. Hatch, J. M. Pintard, 1787.'

"On the reverse was 'Columbia and Washington, commanded by J. Kendrick.' [Robert Gray was the second in command.] In the centre, were drawn two ships under full sail. ... The voyage of the *Columbia* was not profitable in a pecuniary point of view, but it opened the way to others.

"In 1791, seven vessels from the United States were in the North Pacific in pursuit of furs. American traders gained the ascendancy, and the whole North-West fur trade, except

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An engraving from the May 30, 1868 edition of Harper's Weekly depicts Astoria and the mouth of the Columbia River. The Columbia estuary is so easily confused for a large bay, and the line of breakers over the old river bar was so violent, that the river's mouth long eluded efforts to discover it.

AUTHOR'S COLLECTION

