
The Pacific Northwest: Wild Versus Farm Raised Salmon

Chapter 17

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Historical Geography

Native Americans

Humans migrated to the region about ten thousand years ago, about 3 thousand years after the glacial retreat. The people lived in fishing villages and depended on the abundant natural resources the land provided like coniferous timber (needle shaped or scale-like leaves), shellfish and salmon.

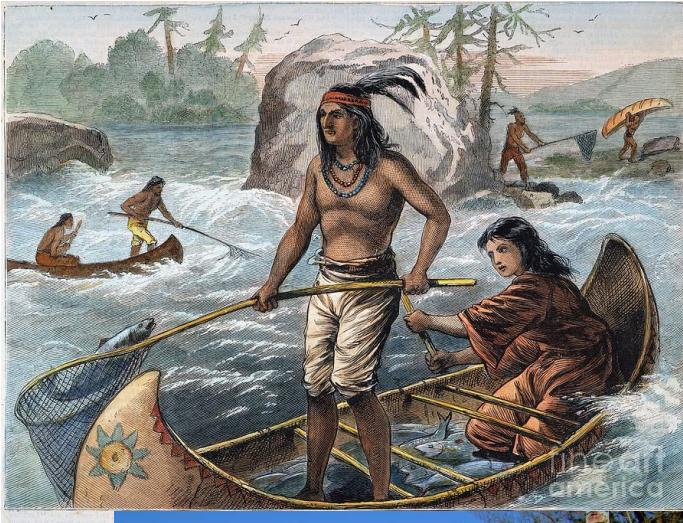
Native Americans tribes like the Algonquian in northern California; Chinook in Oregon and Washington; and Haida, Tlingit, Tsimshian in British Columbia.

European discovery in the Mid-eighteenth century devastated indigenous population because of smallpox and other European diseases. But despite the outbreak in diseases the remaining natives still practice cultural traditions like salmon based lifestyle, potlatch, and totem poles.



Native Americans Cont..

- The long-term existence of these local groups depend on communal land and sustainable fishery.
- A couple of things have affected the fishery including, overfishing and for-profit fishing from natives, warming waters, El Nino, dams and sea lions.



Hudson's bay and fort Vancouver

- Lewis and Clark were the first white men to search out for a transcontinental water route.
- John Jacob Astor was influenced by Lewis and Clark's published works to extend fur trapping into the territory
- Astor's trading company established western trading post for Fort Astor



- Once the Oregon trail was established the trading post began to increase in productivity
- The Oregon trail symbolized the credo of Manifest destiny and the expanding power over the British
- The British Hudson's bay created the competition of the Vancouver and Washington forts. They competed for land at the mouth of the Columbian River
- In 1846 the Oregon treaty extended the 49th parallel to the pacific coast and established a border between United States and the British.



Settlement

- After the Gold rush when California outgrew its own resources businesses moved toward Oregon and Washington for its resources mainly its timber.
- Small company towns like Port Townsend, Port Gamble and Seattle competed against each other to provide timber for the California market



Settlement in Oregon

- Portland succeeded during the California gold rush by providing crops from along the Willamette and Columbia River
- Steamboat transportation along those rivers established a market-based lumber and agricultural company

Portland went from a handful of houses in 1850 to a population 2,874 in 1860

- Rail access in 1883 settled Portland's position as the regional trade center



Settlement in Washington

- Seattle was found in 1851
- Tacoma was chosen as the most profitable region in Washington because of the Pacific Railroad in 1883
- In 1897 Seattle build its own railroad that went into the interior and it became the gateway to the Klondike Gold Rush



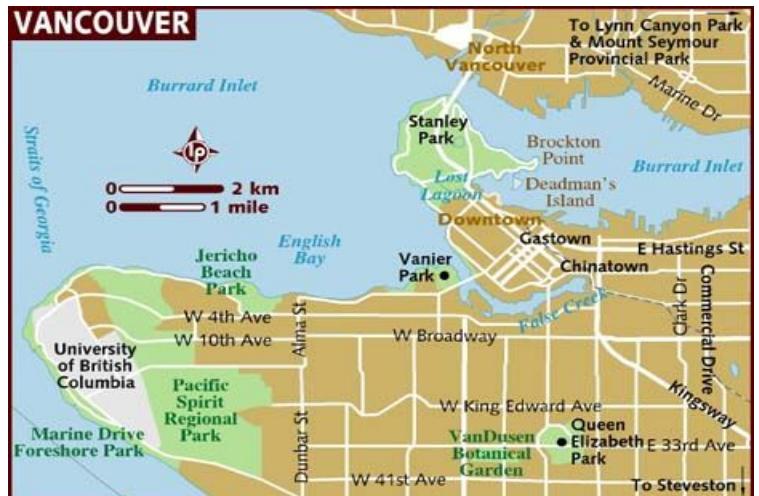
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Settlement in Vancouver

- Vancouver was founded as a sawmill settlement in 1886.
- Because of the Klondike gold strike, Vancouver was Canada's gateway to the Klondike gold rush



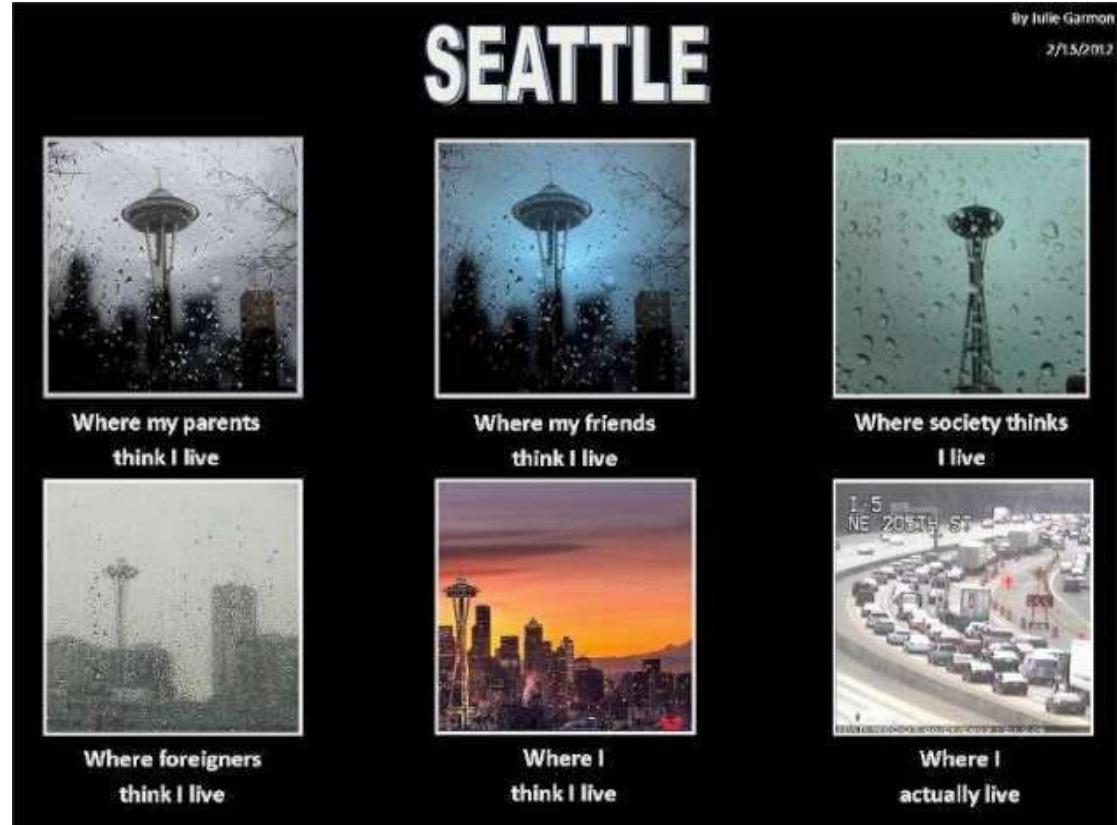
Climate

Reputation: moist & gray climate
(but this is not always pervelant)



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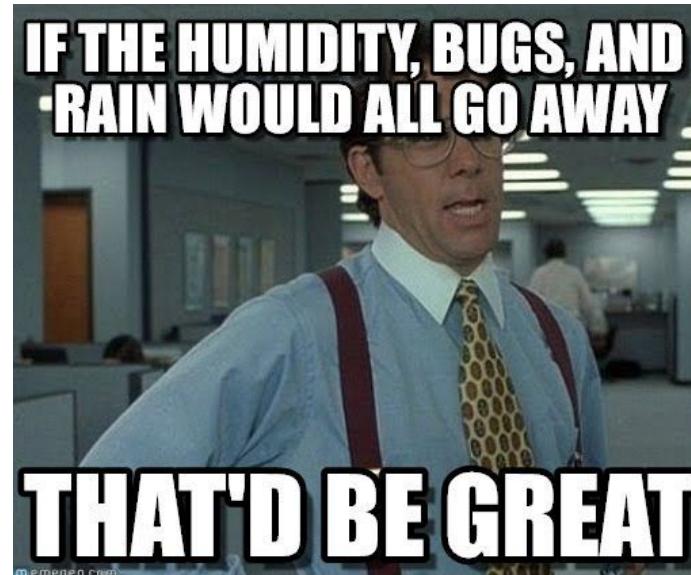
Climate: Marine Climate

“A climate strongly influenced by an oceanic environment, found on islands and the windward shores of continents...”

Small daily & yearly temperature ranges

Relatively high humidity

Lots of rain



Marine Climate - Three Seasons Out of Four

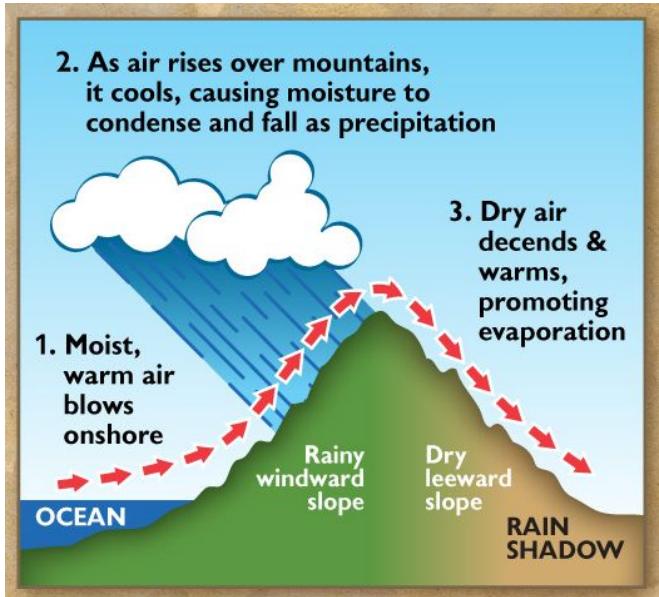
Vancouver Island receives about
250 inches of rain annually



Marine Climate - Three Seasons Out of Four

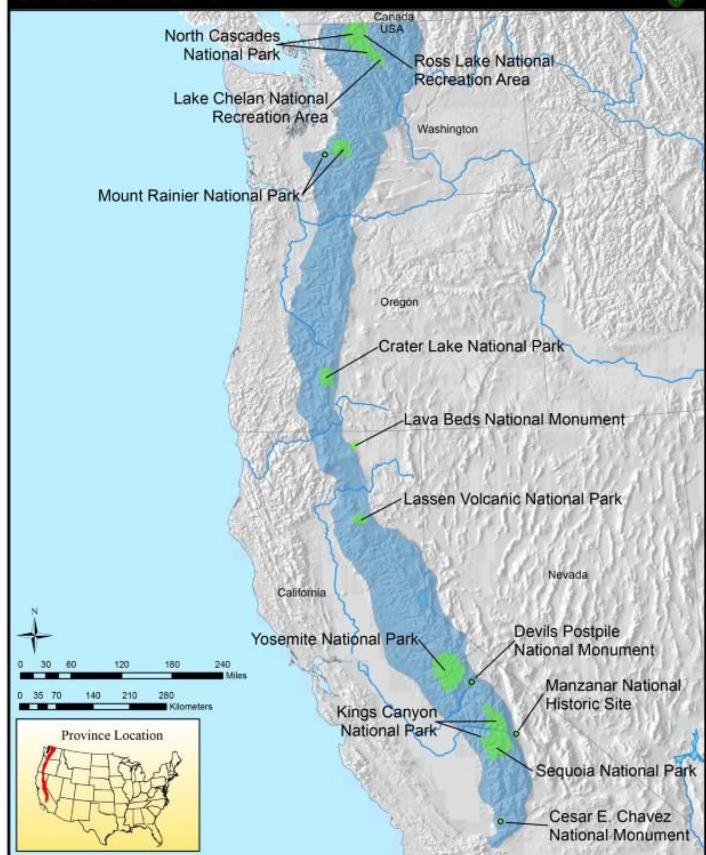
The Cascades

Orographic Rainfall



Cascade-Sierra Province
U.S. Physiographic Province Map

Geologic Resources Division
National Park Service
U.S. Department of the Interior



Marine Climate - The Cascades



Marine Climate - Three Seasons Out of Four

Cold Ocean air decreases air pressure

Results in storms moving up the mountains

Rain or Snow depends on elevation



Marine Climate - Seattle

Area receives around 40 inches of rain annually

$\frac{3}{4}$ during October - March

Less than 100 days/year have clear skies

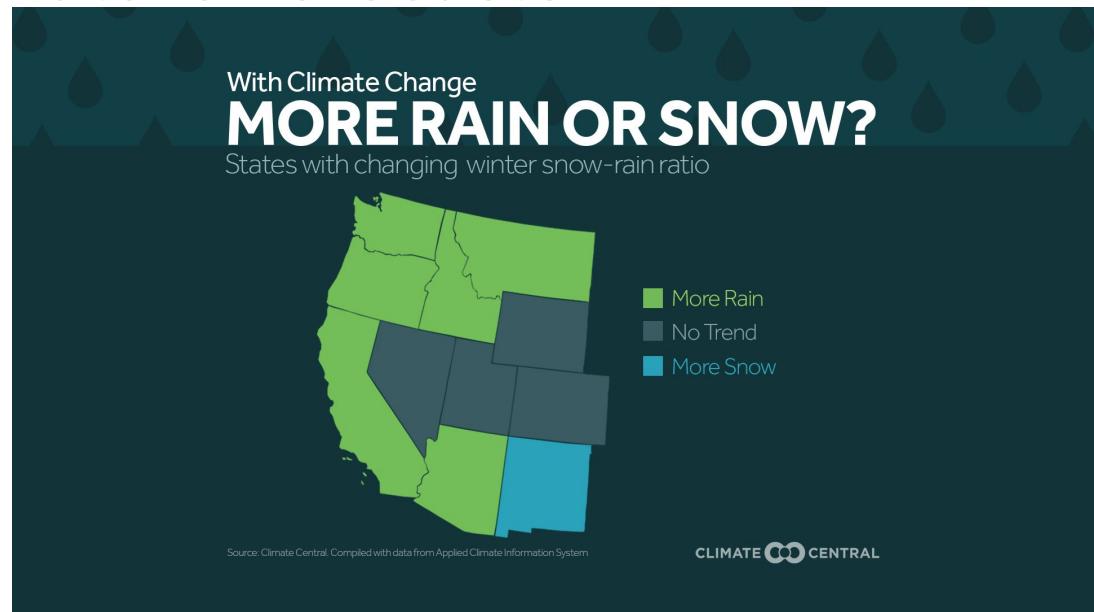


The Pacific Northwest - Climate Change



Climate Change - Future Forecasts

- Higher Temperatures
 - 1 Degree Celsius ↑ every 25 years
- More precipitation
 - More rain than snow
 - Pressure for water conservation efforts



Geography

Physical:

- **Mountains** dominating the Pacific-Northwest form a barrier separating the region from the rest of the country.
- **Water** is abundant in the Pacific Northwest:
- Three important rivers are the **Columbia**, **Willamette** in Oregon, and the **Fraser** river in British Columbia.





Salmon in Rivers

Columbia River

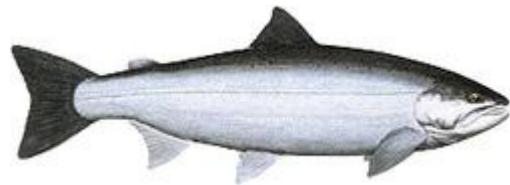
- 30 Dams generate hydropower in the Columbia river stimulating industrial growth and irrigating land; however,
- it disturbs the salmon runs.
- The harbors are dredged (cleaned out) regularly to let large ships through which has contributed to the loss of the salmon fishery.

Fraser River

- Largest and longest river in the province.
- Runs from Mount Robson to Vancouver
- Major salmon producer
- Contains 5 types of salmon
- There are Environmental pressures that threaten the salmon such as urbanization and agricultural development.
- **Salmon needs cold water to survive.**
 - The cold oxygenated water of the Pacific Northwest has been an ideal habitat.



American Shad



Sockeye Salmon

The Economics of Wild-Caught Salmon

A Traditional Occupation for the Region

- Highly regarded for taste, wild-caught salmon, particularly in Alaska, only makes up about 14% of supply.
- Salmon industries face fierce competition from farm-raised aquaculture that can produce Salmon year-round.
- Increased human activity and development of the coastline largely contributes to salmon depletion.
- Rivers and streams have mostly been dammed, disrupting natural salmon spawning patterns.



The Economics of Farm-Raised Salmon

The Aquaculture of Salmon

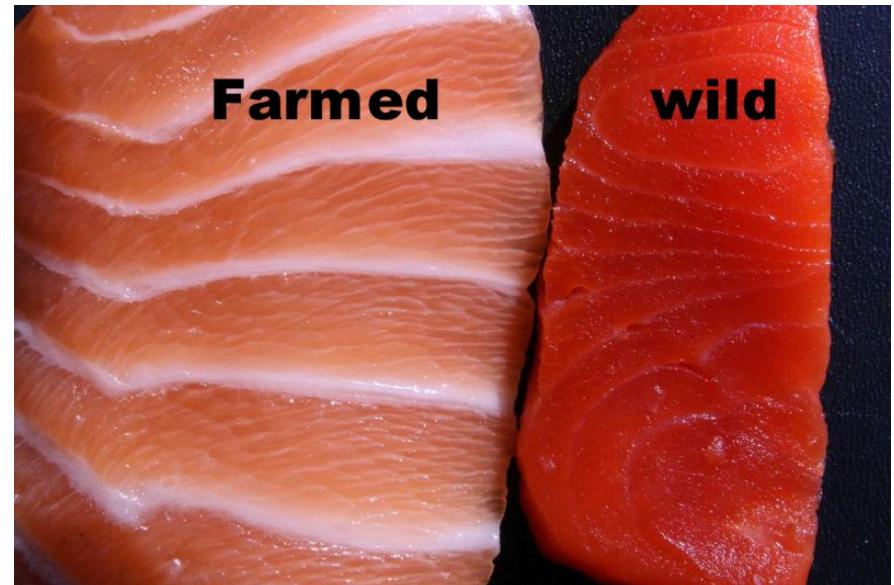
- Defined as the farming and harvesting of salmonids for both commercial and recreation purposes.
- Salmon are generally raised in large, protected nets off the coast in shallow water.
- Although they are mostly protected from larger ocean predators, they are significantly impacted by microscopic organisms like sea lice.
- Domestic salmonid aquaculture only accounts for 5% of consumption.
- Salmon industry produces around \$1 billion annually.



The Economics of Farm-Raised Salmon continued...

The Impact of Salmon Aquaculture

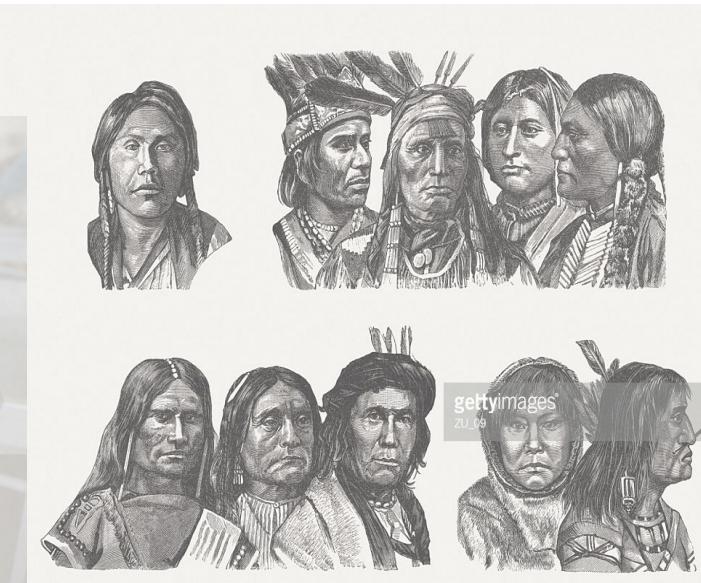
- Unfortunately for fishermen, salmon aquaculture has largely replaced the fishing industry.
- Major demand from consumers has put a greater demand for salmon fillets to be sold in stores.
- This has resulted in a vastly different product that shows significant distinctions between wild-caught and farm-raised.
- There are many possible environmental consequences to farm-raised salmon, like increased pollution.



Cultural Perspectives

Two dominant issues:

- Historical tension between Native Americans and European settlers
- Control of salmon fishing and consumption



Native Americans v. European Settlers

- Tension from the beginning with Lewis and Clark expedition
- Early settlers set on converting Native Americans to Christianity; Native Ams. not having it
- Euro settlers arrived in increasing numbers via the Oregon Trail
 - Native Ams. lost control of territory
 - Indigenous cultural values have been systematically diminished, treaties ignored



Control of Salmon

- Historically Native Ams. fished sustainably
- 1866: Euro settlers open the first cannery; commercial salmon fishing begins
 - Native Americans begin to work in these canneries
- 1930s: Canneries die out with advent of refrigeration
- 1950s: Tribal fishing grounds eliminated and Native Am. fishing rights ignored
 - Salmon migration routes get disrupted by overfishing, habitat degradation and dams
- 1974: Court decision restores Northwestern tribes' fishing rights
- Currently:
 - Tribal groups fish for food but also for profit
 - Unsustainable commercial salmon "farming" dominates
 - Environmentalists claim Native Ams. are now overfishing



Regional Life





Environmental Topic & Essay Question

Wild Versus Farm Raised Salmon

What are some pros and cons about both farm raised salmon and wild salmon fishing?

Articles Food Related:

<https://www.healthline.com/nutrition/wild-vs-farmed-salmon#contaminants>

<https://www.bonappetit.com/story/difference-between-wild-caught-and-farm-raised-salmon>



Bibliography

Mayda, Chris. *A Regional Geography of the United States and Canada: toward a Sustainable Future*. Rowman & Littlefield Publishers, 2013

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