



Trillium ovatum

Sitka spruce (*Picea sitchensis*)

# Welcome to the Chehalis River Surge Plain

**A**long this trail, catch a glimpse of the past as well as the future.

You'll travel back 15,000 years to the time when ice covered the land, learn how a missed chicken dinner 150 years ago earned a slough its name, and discover the connection between today's forests and tomorrow's salmon.

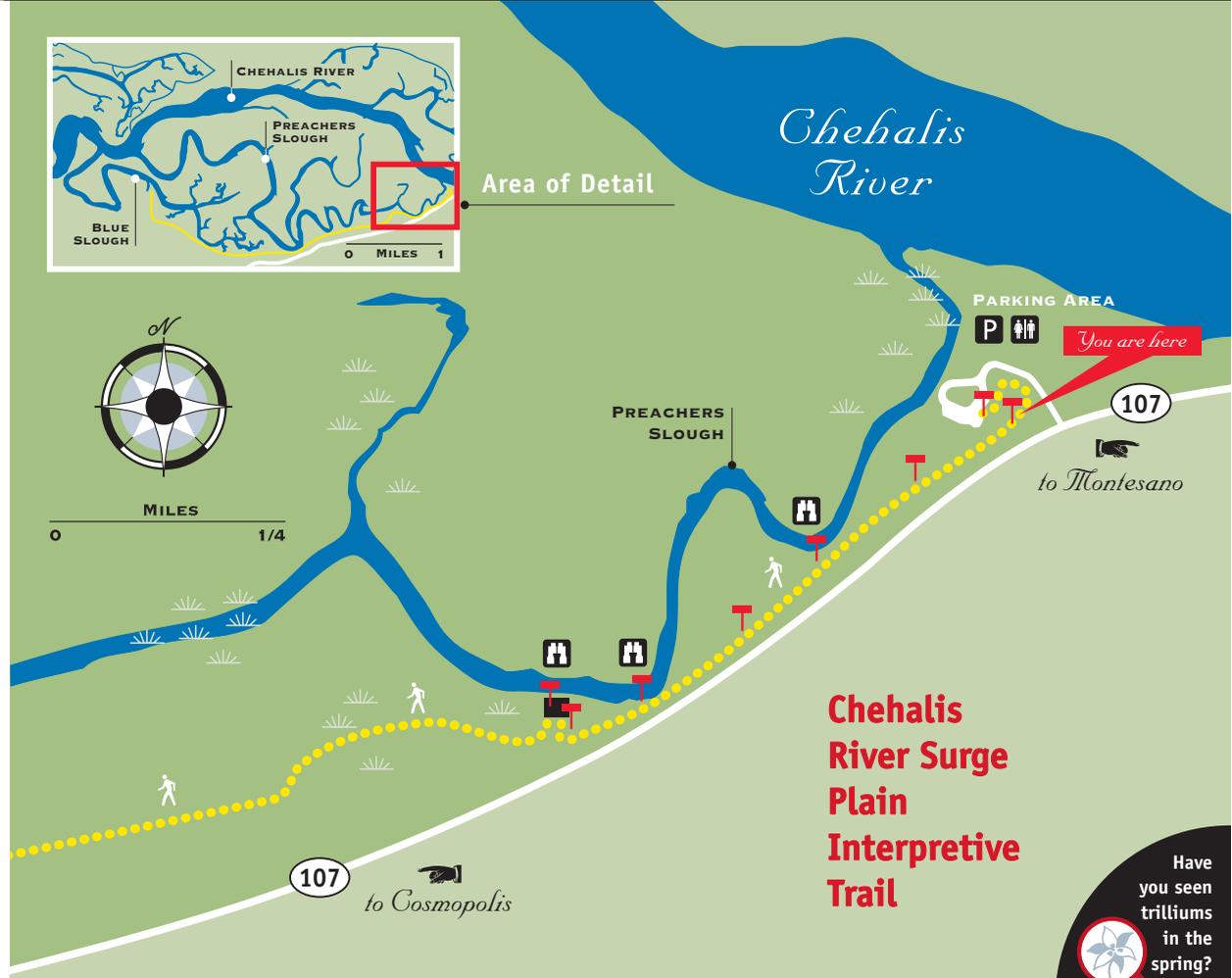
This project was funded in part by the Aquatic Lands Enhancement Account (ALEA) program of the Department of Natural Resources.

Trail construction by the Cedar Creek Correctional Facility Camp and Washington Conservation Corps crews.



WASHINGTON STATE DEPARTMENT OF **Natural Resources**

-  Interpretive Sign
-  Viewpoint
-  Parking Area
-  Toilet
-  Trail



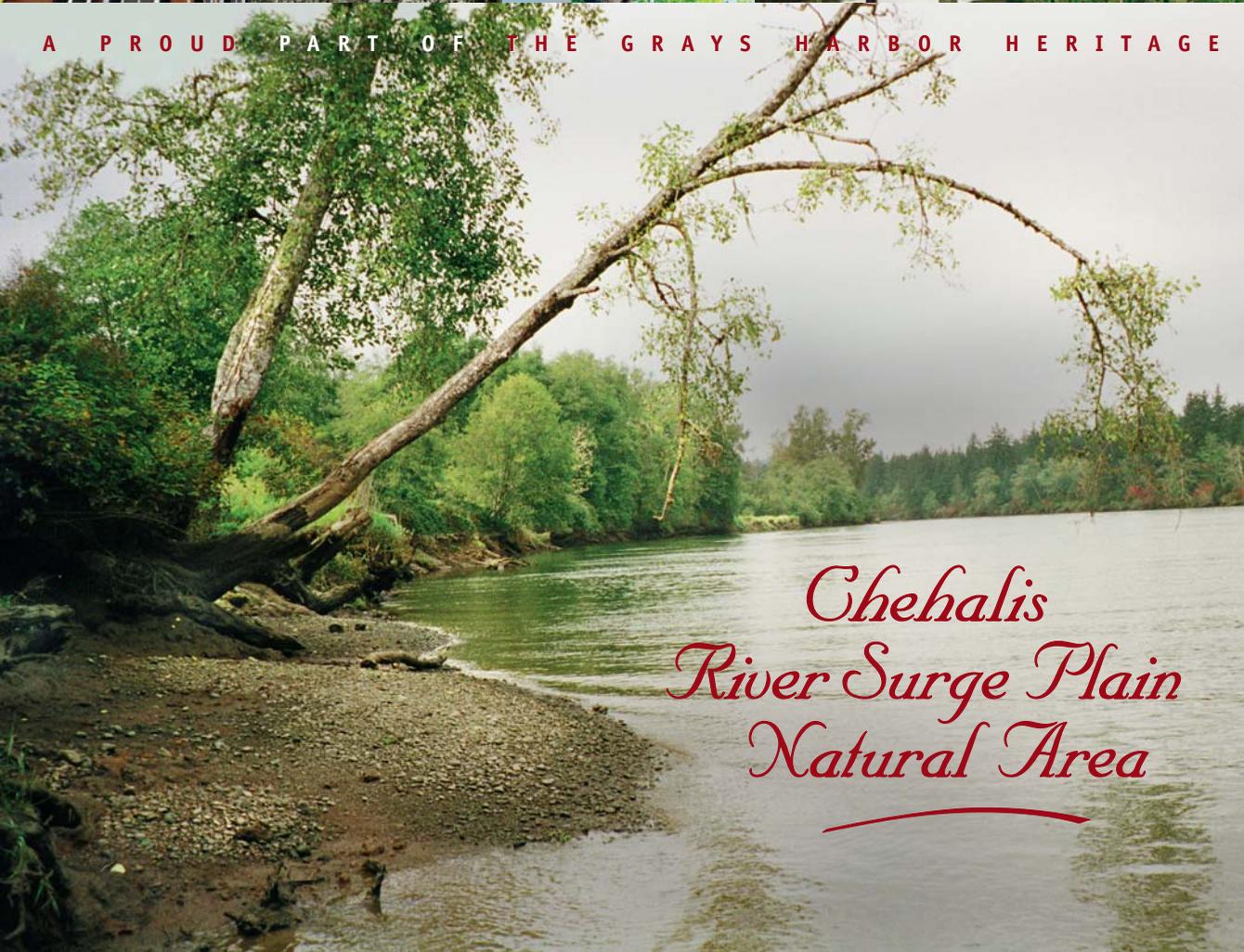
## Chehalis River Surge Plain Interpretive Trail





# Exceptional Places

A P R O U D P A R T O F T H E G R A Y S H A R B O R H E R I T A G E



## *Chehalis River Surge Plain Natural Area*

The Department of Natural Resources accepts with pride the charge to safeguard and share with you this special component of the Grays Harbor Heritage.

Outstanding ecosystems including salt marshes, mounded prairies, oak woodlands and ponderosa pine forests, are being protected statewide in natural areas as the “last of the best.”

“We are spared to see the wilderness bud and blossom as the rose.”

—Mrs. David (Mary) Byles, Grays Harbor pioneer, *the Montesano Vidette*, 1898

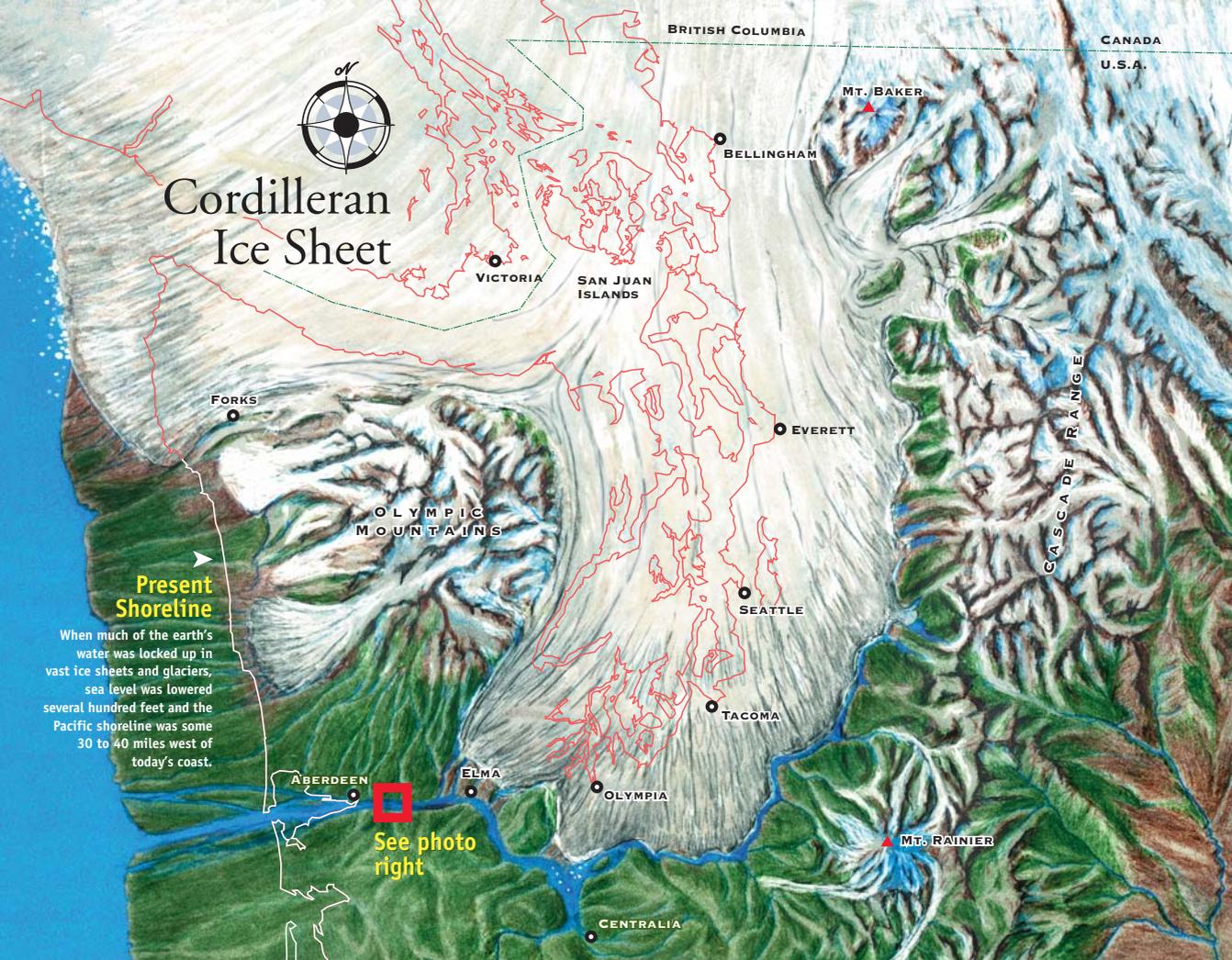
For more information on the Chehalis River Surge Plain, contact the Department of Natural Resources Central Region office in Chehalis at (360) 748-2383 TTY (360) 740-6841 or 1-800-527-2387



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**Natural Resources**



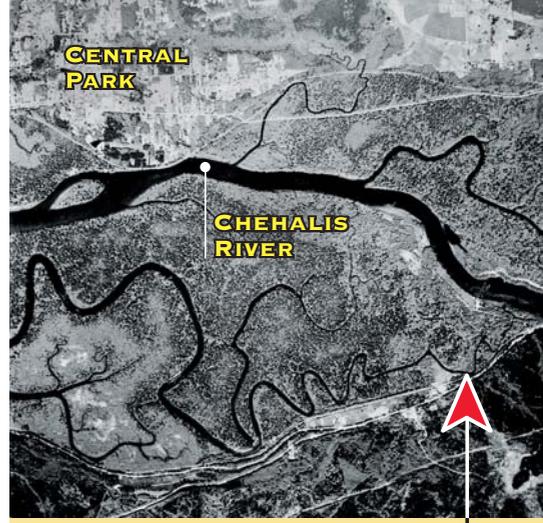
# The channel is wide, the river is narrow



## Present Shoreline

When much of the earth's water was locked up in vast ice sheets and glaciers, sea level was lowered several hundred feet and the Pacific shoreline was some 30 to 40 miles west of today's coast.

See photo right



**G**eologists refer to rivers like the Chehalis as "underfit," because the river is much narrower than its flood plain. They would know that the river had once been much wider just by looking at the above photograph.

You are here

About 15,000 years ago, ice flowed south from Canada, between the Olympic Mountains and Cascade Range. Rivers that normally flowed into Puget Sound were blocked. Lakes formed and drained southwest into the Chehalis River. In time, glacial meltwater also flowed into the Chehalis, temporarily producing a river 20 times larger than you see it today.

What will the river look like in another 15,000 years?



# With a shake and a rattle

▲ Union Pacific, Northern Pacific, and Milwaukee Road engines at their shared facility in Hoquiam, 1945.



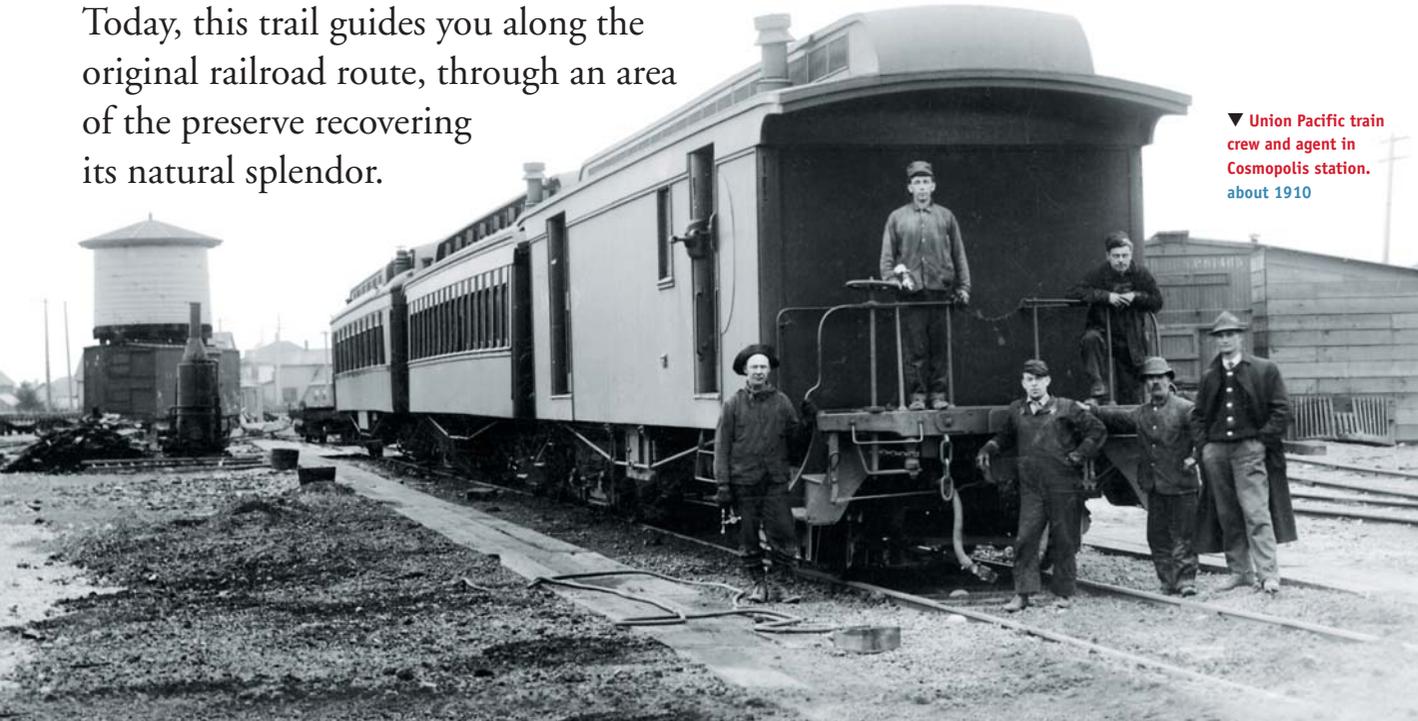
The Union Pacific and Milwaukee Road locomotives first thundered along this route on August 15, 1910. Seventy-five years later, the trains were gone.

The Milwaukee Road had gone bankrupt and after

numerous slides and washouts, the Union Pacific rerouted its trains to the more stable tracks on the north side of the river.

Today, this trail guides you along the original railroad route, through an area of the preserve recovering its natural splendor.

PHOTO COURTESY OF ALBERT FARROW, J. A. PHILLIPS III COLLECTION



▼ Union Pacific train crew and agent in Cosmopolis station, about 1910

PHOTO COURTESY OF REEF ASBY



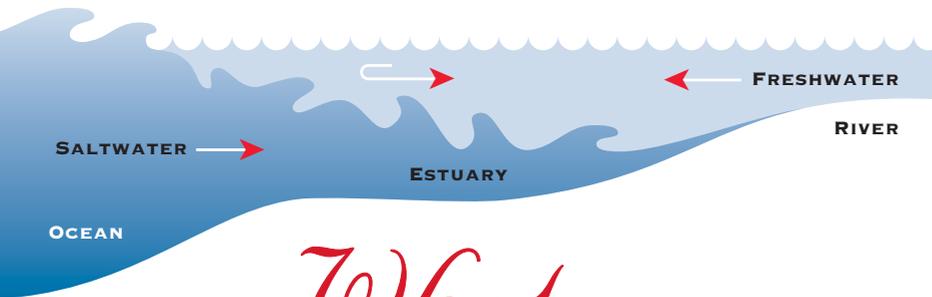
▲ South Aberdeen station, 1910–1919

SEATTLE, TACOMA, PORTLAND AND COLUMBIA RIVER ROUTE									
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# The Chehalis River Surge Plain

*What* do we mean by a surge plain?

When tidewater comes up the river, the salt-heavy ocean water sinks, pushing and lifting the freshwater to the top. The higher freshwater floods the land and spreads out, running backward into sloughs where it remains until the tide changes course.

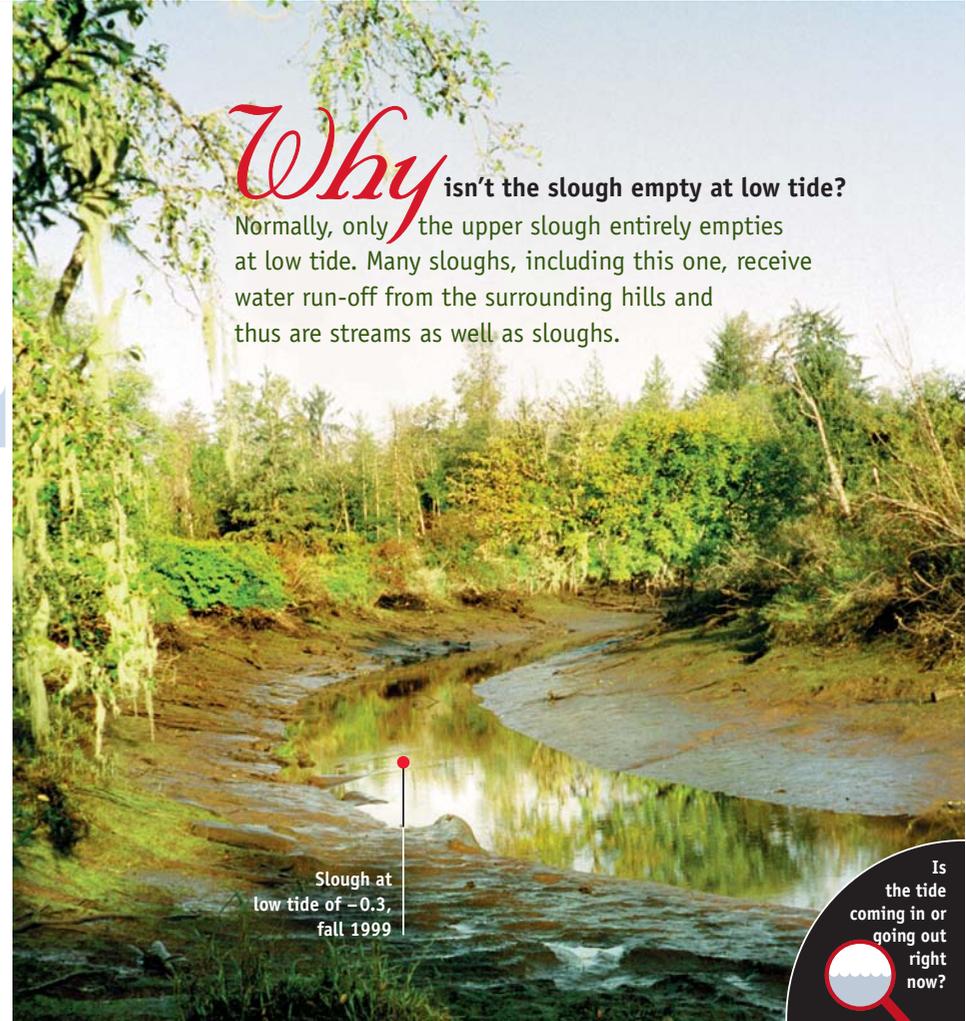


*What* makes this surge plain special?

This is one of the few places left where the mixing of saltwater and freshwater occurs naturally. The coming together of saltwater and freshwater in a natural way creates a flood control zone for man, a unique plant community and habitat for fish and other wildlife.

*Why* isn't the slough empty at low tide?

Normally, only the upper slough entirely empties at low tide. Many sloughs, including this one, receive water run-off from the surrounding hills and thus are streams as well as sloughs.



Slough at  
low tide of -0.3,  
fall 1999

Is  
the tide  
coming in or  
going out  
right  
now?

# Long shadows, cool waters, young salmon



SALMON FRY

Letting trees grow tall and thick, drop their leaves, age gracefully, and finally fall into the slough helps

young salmon (fry) survive.

The long shadows cool the water, and the fallen trees create quiet pools where fish can rest and feed.

#### SALMON WEIR

This sketch of Indians fishing in the Chehalis River with a weir was made by a member of the Charles Wilkes expedition in 1842. A weir is a fence usually made of wood that is placed in a river that directs the fish into a gap fitted with a basket that serves as a pen for easy capture.



SALMON FISHERY ON CHEHALIS RIVER.



If you were a salmon fry, where would you hide?



# What has a crown but is not a king?

- What is not married, but has a ring?
  - What has a trunk but never gets around?
- What makes music but has no sound?

The answer is the Sitka spruce, *Picea sitchensis*. You knew that “tree” was the answer to most of the questions, but did you

know that parts of violins, guitars, and pianos are made from spruce? It has “perfect pitch.”

Spruce is the most abundant evergreen tree in the surge plain and is often found sprouting on old logs.

Its wide, flaring base allows it to thrive in such wet places. Trees with broken tops provide good roost and nest sites for eagles, ospreys, heron, and other birds.



Sitka spruce, *Picea sitchensis*, has 1”– 4” woody cones and sharp, prickly needles.



Finely split Sitka spruce roots were used by Lower Chehalis Indians for making woven, water-tight baskets and rain hats. Designs were added by weaving in bleached or dyed grasses.

Sitka is the world's largest spruce. It can grow up to 210 feet and live to be 800 years old.



Would a hat made of spruce roots keep you dry?



# Rowboat, shoes, saddle, and canoe

In 1859, the young Methodist-Episcopal minister, J.S. Douglas got around the newly formed Grays Harbor circuit by rowboat, shoes, saddle, and canoe. One fall afternoon, Reverend Douglas set out to row from the Byles home (Cosmopolis) to the Scammon family claim (South Montesano). Thoughts of a fine chicken dinner filled his mind until he found himself at the “end of the river.” He had missed the main channel and entered a slough. He was late for his dinner and his bed, but the story so amused the people of Grays Harbor that they named the waterway before you “Preachers Slough.”



▲ Lower Chehalis Indians used shovel-nose canoes for traveling and fishing on the river. The shovel-nose canoe has curved ends that push swiftly flowing water away from the prow. Shovel-nose canoes were rarely taken beyond Cosmopolis because they were considered unsafe for ocean travel.

Sea-going canoes need sharp ends to cut through rough seas.

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Could  
a canoe get  
through today  
at low  
tide?

