

# Offbeat Oregon History: When old Portland flooded



**Bv Finn JD John** For The Sentinel

or most modern Oregonians, the most intriguing part of the old stories of the 1894 Portland and Willamette Valley flood is

how undaunted people were by it.

Today, most Willamette Valley residents expect to have schools canceled when five inches of snow falls. Yet 125 years ago, when the streets of downtown Portland lay under five feet of swirling, dirty floodwaters following a late-spring arrival of one of the state's famous snow-melting "Pineapple Express" weather systems, their great-great-grandparents took the calamity completely in stride.

No one seems to have considered closing for business until the floodwaters receded. A downtown Portland hotel built a temporary false floor in its lobby, so guests could carry on as normal. The cook at the Bureau Saloon brought a rowboat into the kitchen and stood in it while he worked. The Meier & Frank department store built raised walkways for shoppers — and shoppers came, many by boat.

Erickson's Saloon, on Burnside — known at the time for having the world's longest bar — moved onto a houseboat anchored in the middle of the canal formerly known as Burnside Street; here, owner August Erickson continued hosting his "dainty lunch" buffet and pouring drinks as patrons arrived and left by rowboats and canoes.

Hundreds, perhaps thousands, of small craft crowded through the town's streets, and some folks in Chinatown (then ranged along Second Street parallel to the waterfront) staged an eight-block boat race downtown. And one fellow, presumably early in the flood before the water quality had gotten too awful, caught a 15-pound steelhead in the lobby of the railroad station.

These intrepid show-must-go-on citizens were not outliers. All around the city, residents were building temporary scaffolding in front of businesses and residences to serve as elevated sidewalks.

This was for convenience at first, but as time went by, with Nature calling to each Portland resident roughly once a day and no place to dump out the resulting chamber-potfuls except directly into the floodwaters, things got very unsanitary very quickly.

Still, it was all in a day's work for those early Portlanders. They knew their river, and they knew it flooded up into the streets of the city once a decade or so. The 1894 flood was a whopper, but it differed from earlier floods only in scale — residents already had a well-drilled routine for dealing with a foot or two of water in the street, so all they had to do was scale those plans up a bit.

Even up the valley, where the suffering was greater — wooden farmhouses built close to the streambed were floated off their foundations and away down the river, and thousands of head of livestock drowned in their pastures — the flood was greeted mostly with a sort of wry "here-we-go-again" resignation.

That "no big deal" attitude was in sharp contrast to an earlier flood — the flood that first put the valley's residents on notice as to what the river was capable of, and which still today remains the biggest flood in the history of the state.

That flood came in the dead of winter in late 1861.

In that year, the winter started out very cold and wet, very early. The Dalles got a whole year's worth of precipitation in two months. The Willamette Valley didn't get hit that hard, but it did get roughly double the usual amount. The residents hunkered down in their cabins and new-built houses — built close to the river, most of them, since it and the riverboats that plied it were the main transportation route — and waited for spring to come.

It, or rather something like it, came very, very early. At the beginning of December, the "Pineapple Express" wind started, blowing up from the tropical south, and temperatures shot up into the 60s, accompanied by lots of rain ... and the snowpack started to melt.

From there, everything moved very quickly. Starting at 5 a.m. on Dec. 2, the river started rising at a stunning rate of a foot per hour, and kept going for 12 hours.

It was somewhat miraculous that this terrifying show of natural force happened during daylight hours. In those pre-electricity days, people were almost as helpless as roosting chickens after night fell. Thousands hurried to higher ground, and so when the houses started to float away, not many people were still inside them. (How many isn't clear. At least four people are known to have died in the flood, but records from 1861 are very incomplete.)

Water rose in Oregon City until it flowed through the main streets of town, high on its bluff over the lower river. Residents of Corvallis, who went to bed that night thinking their homes were high enough to be safe, learned otherwise when they were awakened from slumber by the sound of driftwood slamming into the side of their houses.

South of Oregon City at Canemah, a riverboat captain named Pease escorted his family safely to high ground. Then he returned to the steamboat dock and fired up the boiler in his sternwheeler, the Onward, and set out up the valley to rescue people. By nightfall Captain Pease had saved some 40 people from certain soaking and possible drowning. His method was simple: He simply drove from farmhouse to farmhouse making sure everyone was out. When he found people still inside a house, he would simply drive his shallow-draft boat up to the house, throw a rope around a tree or chimney, and drop a board onto the porch or roof. The occupants would then scramble up the board and onto the boat, and Pease would move on to the next farm.

Many other people, stranded after having taken refuge in the second floor or on the roof of a house or barn, were rescued by neighbors in skiffs and canoes as the majority of ground in the valley was turned into a vast, half-million-acre lake.

Over following week or two, the water level stayed high and occasionally rose. Watchers at Oregon City saw houses floating down the river and over the falls, many with candles and lanterns still burning in their windows.

When the floodwaters finally receded, the damage was stunning. The entire town of Champoeg had been washed away; the general store was spotted a mile downriver in a clump of brush, but the rest of the houses were long gone. One building remained.

The same fate befell the town of Orleans, across the river from Corvallis. Once considered a rival of Corvallis for local primacy, Orleans was wiped from the face of the Earth by the flood, with the sole exception of the Orleans Church and adjacent cemetery, which was built on a nearby knoll and escaped the flood.

All of this was still fairly fresh in many residents' minds 32 years later, in 1894. And although the high water was an inconvenience, it was a familiar one. Bad as it was, they knew very well that it could get a whole lot worse. It was all just part of what one had to do to live in the Willamette Valley.

Since that time, of course, the river has been mostly tamed. Dams and reservoirs like Cottage Grove Lake and Detroit Lake are lovely places to go fish and water-ski, of course, but that's not why they were built; they're there to provide a brake on the speed with which snowmelt hits the main-stem Willamette. And since 1948 — the most recent flood to fill the streets of Portland, and the same flood that carried away the town of Vanport — those dams have done a yeoman's job of keeping the river from pulling another 1861.

But there have been some very close calls. The floods of 1996 brought the water level up to within inches of spilling over Portland's floodwall and pouring into downtown Portland once again. That flood reached 35 feet in Salem; the Army Corps of Engineers estimated that it would have reached 42.5 feet without flood-control

But the 1861 flood reached 47 feet. Which strongly suggests that the next time that much rain and snowmelt come along, Portlanders and other Willamette Valley residents are going to need to re-learn some of their old 1894-style coping skills.

# Telomeres are central to the aging process



By Joel Fuhrman, MD

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chromosomes that protect our genetic material and make it possible for our cells to divide. Telomeres are where the DNA replication ma-

chinery attaches during the cell division process, so that the entire DNA strand can be copied. Each time the cell divides, the telomeres get shorter. For the next cell division to happen, there must be the ends of our enough room left on the telomere for the replication enzymes. If the telomere becomes too short, the DNA can't be copied properly, and the cell cannot divide. To prevent excessive shortening, the enzyme telomerase rebuilds telomeres. Telomere length and telomerase activity are factors associated with aging, not only within individual cells, but of organisms as a whole. As scientists continue to examine the complex role of telomeres in the aging process and the role they play in our health, we have come to understand that shorter telomere length is associated with biological aging and lifestyle-related diseases such as heart disease, diabetes, osteoporosis and cancer,

> The good news is that telomere length, although influenced by genetics, can also be affected by environmental factors, including diet and lifestyle choices. A superior diet and a healthy lifestyle are associated with greater telomere length. Conversely, since oxidative stress and chronic inflammation are linked to telomere shortening, studies have reported factors that promote inflammation and oxidative stress may also accelerate telomere erosion, namely a high body mass index, obesity, a sedentary lifestyle, smoking, chronic stress and a low socioeconomic status.

> What does this mean for you and me? It means that the positive choices we make when it comes to what we eat or how much we exercise—among other lifestyle factors—can maintain our telomeres, one of the many mechanisms by which healthy behaviors promote longevity. Higher levels of vegetable and fruit consumption, fiber intake, vitamin and mineral adequacy, and exercise are the factors associated with longer telomeres and/or greater telomerase enzyme

activity.

When the telomeres get too short, the cell can no longer divide, becoming what scientists call senescent. Senescent cells are still alive, but not able to carry out normal cellular processes, and as more cells in a tissue become senescent, it impairs the tissue's ability to repair damage. Plus, senescent cells secrete factors that negatively affect the function of neighboring cells, including promoting the development of cancer.

Telomere length and telomerase enzyme activity can be measured in human white blood cells. A shorter length or lower telomerase activity has been associated with not only the shortening of the human lifespan, but also a number of chronic, preventable diseases, including hypertension, cardiovascular disease, insulin resistance, type 2 diabetes, depression, osteoporosis and obesity.

In a study assessing the relationship of food groups to telomere length, vegetables were found to have the most significant association to greater telomere length. In particular, peppers, carrots, spinach, tomatoes and root vegetables had the highest correlation. Further analysis showed specific micronutrients from whole plant foods were associated with telomere length. Also, in a study involving an elderly population, vegetable and fruit consumption were both significantly associated with longer length telomeres. Another study in women found dietary fiber consumption to be associated with longer telomeres, further supporting the idea that whole plant foods can improve telomere length.

In addition to a healthful diet, supplementing with a carefully designed multivitamin can help to optimize the body's supply of micronutrients, which may benefit telomere length by tempering oxidative stress and chronic inflammation.

A comprehensive lifestyle change study assessed the impact on telomeres and found improvements in diet, exercise, stress management and social support significantly increased telomere length by approximately 10 percent. Notably, the more individuals changed their behaviors, the more dramatic their improvements became.

The aging process is complex, and much has yet to be determined, but these findings indicate that lifestyle factors can influence telomere length and cellular aging. A high-nutrient diet and a healthy lifestyle supports healthy aging and may even help decelerate the aging process.

Dr. Fuhrman is a #1 New York Times best-selling author and a board certified family physician specializing in lifestyle and nutritional medicine. Visit his informative website at DrFuhrman.com. Submit your questions and comments about this column directly to newsquestions@drfuhrman.com.

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