

The Forest of Carkeek Park, *its past, present, and future.*



Tundra vegetation on permafrost, after the ice retreated. Photo Loren McElvain

About 12,000 years ago the area where we now (2015) find Carkeek Park was tree-less. The latest ice age was coming to its end and this region had a tundra climate. Slowly, with the rising temperature, tundra vegetation changed with new species coming in from the south. It took thousands of years to establish what we now call "Old growth forest" of mostly conifers. Spread out through the Carkeek forest some huge boulders (glacial erratics) testify to that ice-age history.



***Very large boulder just
north of the second shelter.
Photo Lex Voorhoeve***

About 150 years ago, new settlers found a fairly natural forest, though not totally pristine, because human influences were undoubtedly there. The abundance of Red Cedar trees invited the use of natural resources. Red Cedar trees provided many materials used daily by the Native Americans: the bark (fiber materials), the wood (shingles), and whole trees (seaworthy canoes).

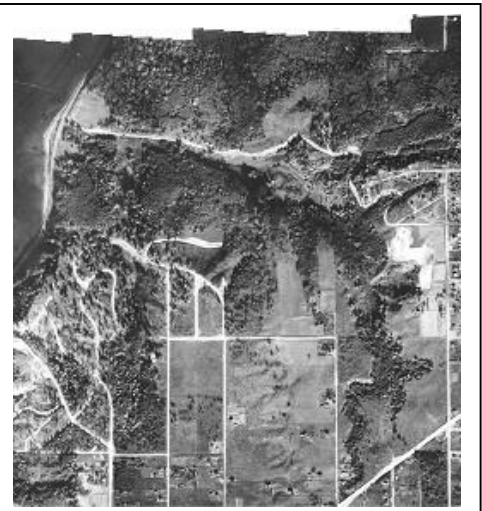
This forest was harvested and clear cut about 100 years ago, making place for settlements and agriculture: orchards, grasslands and dairy farms. The Piper's orchard is a remnant and reminder of that period; huge 100 year old stumps of Red Cedar trees still bear witness to the former forest cover.

In the late 1920's, against fierce opposition, the Piper's Creek ravine was turned into a City Park – probably because the steep slopes did not allow development for housing. Today we appreciate the efforts of the wise people who pushed this through. Gradually, agricultural use on the moist slopes of Piper's Creek was terminated and the land was invaded by fast growing, light demanding species with winged seeds, most notably Red Alder and Big leaf Maple. The Alder/Maple forest we now find along these slopes is therefore about 80 years old. Interestingly the forest on the much drier north slopes of the park, north of the playground for example, is totally different: Douglas fir, Hemlock, Red Cedar and Grand fir reflect an atmosphere of the original forest.

Regular visitors of Carkeek Park notice that each year a number of Alder and Maple trees fall down. Sometimes they hear a crash "somewhere up there", or are confronted with a fallen tree across a trail. This might seem disconcerting – what is going on here? It is, actually, a quite natural event; the Alder/Maple forests are at the end of their 80-year life span and under natural conditions a new forest of predominantly coniferous trees would develop over time.

However, in Carkeek Park, this natural succession pattern is not seen, for several reasons. First of all Carkeek Park is an "Urban Forest", with miles of boundaries with private gardens. This has a huge influence on vegetation development inside the forest. The temperature inside the forest is different from a natural forest, water supply is affected, and all kinds of foreign "invasive" garden species find their way into the park. But there are other causes for the failure of the forest to regenerate naturally as well. Most evident is the abundance of Mountain Beavers, an ancient type of rodent that loves to nibble on seedlings and young trees, especially young conifers. Then there is the very low soil fertility; after decades of agricultural use, the soils are seriously depleted. And finally Carkeek Park is blessed with a very dense undergrowth, mostly Salmonberry, which suppresses any new seedlings that might arise. The Salmonberry jungle is an important nesting facility for birds and a valuable asset of the Park – but it also slows down or prevents the natural regeneration of the forest.

What we can expect is that Carkeek's trees will continue to topple at an increasing rate as remaining trees become more exposed to wind. We expect that in about 20 years little will be left of what now still



Carkeek Park 1929, forested steep slopes and creek floodplains, with agricultural land in between. Seattle Engineering Department (via Ron Edge)



Carkeek Park 1951, the south slopes of Piper's Creek ravine are forested. Note the sand banks developing along the beach. Compare with 1929. Seattle Engineering Department (via Ron Edge)

seems to be a lush and vibrant forest. Because natural regeneration does not occur, the resulting open space may turn into a wilderness of Blackberries and other aggressive invasives. The value of the Carkeek forest as a recreational area and a habitat for forest plants and wildlife will be greatly diminished or lost.

The Green Seattle Partnership (GSP)¹ is well aware of this sword of Damocles hanging over the park. Plans being developed include pro-active measures to prevent forest loss, guaranteeing a gradual transition from over-mature Alder/Maple forest into a mixed conifer dominated forest. You may see a lot of action in the park in the coming years, including felling of trees that overhang the Piper's Creek trail, making sure that this very popular trail is safe to walk. The open spaces or "gaps" thus created will be planted with appropriate species to form the new forest.

This whole process will take many years and require a steady input of volunteer work. If you feel inclined to become part of this forest restoration effort, don't hesitate to contact the GSP Carkeek Park Forest Steward, Loren McElvain (206.782.7617)² or the president of the Carkeek Park Advisory Council, David Koon (dkoon14@gmail.com).



***Carkeek 2007, a lush, green urban forest. But for how long?
Note the much wider (white) beach as compared with 1929, with the creek forming a spit.
Are Mountain Beavers causing erosion? King County GIS map.***

¹ Green Seattle Partnership or GSP is the organization working on upgrading the Seattle park forests, organizing a unique volunteer input. Check out its website: <http://greenseattle.org/>.

² Loren McElvain is leader of a group of forest volunteers calling itself the WEWOS because they work on a week day: every Friday from 9:00 – noon.