

Please follow the black and white number and arrow signs for this tour.

In the winter, trees dominate the VanDusen Botanical Garden landscape. Once they have been stripped of their Festival of Lights decor, they stand as Nature's testament to survival and renewal. In his book, *The Secret Wisdom of Nature*, Peter Wohlleben reveals that trees are social beings, creating ecosystems that moderate temperatures, store a lot of water and generate humidity. Many can communicate by olfactory and visual signals, register pain, suffer more from thirst than hunger and are capable of distinguishing their own roots from the roots of other species. This tour will look at some of the things that make trees such useful and interesting contributors to our environment.

Begin by crossing the Plaza to your left to **1 - Garry oak (*Quercus garryana*)**. This is the only native oak tree in BC. It is named for Nicholas Garry, Deputy Governor of the Hudson's Bay Company in the early 1800s. It was first described by the Scottish botanist, David Douglas, whom Nicholas Garry met and assisted. This particular tree has a claim to fame locally, in that it was planted in 2009 by Camilla, the Duchess of Cornwall. It can take 30 years for Garry oaks to produce acorns that provide food for grazing animals. Mosses and lichens that grow on these trees provide a rich environment for insects. And when they drop limbs, the resulting cavities provide shelter for cavity-nesting songbirds and woodpeckers.

Continue walking over the bridge and turn left at the Jade Fountain and look for **2 - Mountain hemlock (*Tsuga mertensiana*)**. It is named for Karl Mertens, a German naturalist, who collected specimens in what is now Sitka, Alaska. If you look at its shape, you can see that it is well-adapted to snow with its flexible branches. Its trunk and branches bend in winter wind storms and under heavy ice-build up on the crown. This is advantageous as it grows in mountainous areas with a dense snow pack, ranging from Alaska to California.

Continue on the path leading past the grasses on your right and follow the arrows to **3 - Serbian spruce (*Picea omorika*)**. Its shape also allows it to shed snow, which is plentiful in the mid-alpine areas of the Drina River Valley. It is considered an endangered species, at risk from clearing, logging and fires. Luckily, this tree is surviving as a fairly popular garden conifer here and in Europe. Spruce seeds are an important food for squirrels, mice and many birds. The young cones can also be eaten raw or cooked by humans. Its inner bark can even be made into a powder to be used in bread or to thicken soups!

Walk straight ahead on the path until you see an arrow directing you slightly off the path to your right to find **4 - Western redcedar (*Thuja plicata*)** or the "Tree of Life" to First Peoples. This tree has both spiritual significance as well as practical value to local First Nations. They use the disease-resistant wood to create storage boxes, implements, paddles, houses, canoes, coffins, story poles and ceremonial regalia including masks. They made baskets and clothing from the bark, bedding from the boughs and medicines from various parts of the tree. Because of climate change, these important giants are struggling with our more frequent summer droughts. Their root systems are not deep, which makes them especially vulnerable. Hopefully they will adapt and continue to be symbols of strength and versatility.

Return to the paved path and walk to the crossroads by the stone wall. Follow the arrows to your left and walk to the first set of stairs into the Formal Rose Garden. Go up the steps under the stone archway on your right and follow the curving path to **5 - Himalayan pine (*Pinus wallichiana*)**. Like other white pines, it has five needles clustered in a bundle (note that the word white has five letters!). Its native habitats include mountain screes, glacier forelands and mixed forests found in the Himalaya and parts of Afghanistan, Pakistan, India and southwestern China. In the drier forests at higher elevations, it can become host to a leafless parasitic plant, the Himalayan dwarf mistletoe, which infects the crown of the pine causing a loss of needles. But generally here, it has become popular in the nursery trade because of its attractive foliage and large, decorative cones. This is thanks to a Danish botanist, Nathaniel Wallich, who introduced seeds to England in 1825. Another positive is the tree's resistance to pollution, more so than some other conifers. It also has a commercial use as a source of turpentine. The only problem is that it prefers dry winters and wet summers, which is the opposite of what we have here. Whether this will become more of an issue remains to be seen.

Now continue along the path to the next four-way crossroads and turn left. Walk through the Perennial Garden towards the two weeping beeches draped over benches and stone walls. This is a lovely cool spot to escape to on a hot summer day. Just beyond the walls on your right is the **6 - beech grove (*Fagus*)** leading to the Great Lawn, a reminder of the Golf Course that existed here before this land became VanDusen Botanical Garden in 1975. An old German country saying suggests that if trees produce a lot of beechnuts, then that winter will prove harsh. Beech trees apparently agree on a time to bloom together, so in some years, they produce an overabundance of seeds. In Europe this is tied into the plant-eating population of animals that browse on the beechnuts. Beech trees can't predict the weather a year in advance any more than we can (even though we try) but they can develop survival strategies. For one thing, beech nuts always fall under the mother tree so the seedlings grow in a predictable microclimate. The Latin word "fagus" comes from the Greek "phagein" meaning "to eat". In ancient times beechnuts were consumed by humans too. Flour made from the nuts was used during times when food was scarce.

To your left is a path that is bordered by lavender. Take this path to another one lined with **7 - hybrid golden chain trees (*Laburnum x watereri 'Vossii'*)**. This Laburnum Walk, which comes into its glory for about three weeks in mid to late May, was designed by VanDusen Botanical Garden's first Garden Director, Roy Forster, who was inspired to create it after a visit to Bodnant Garden in Wales. It was planted in 1975 before the Garden opened. The idea of under-planting the Walk with purple alliums was the idea of head-gardener and foreman, Steve McNamara who was inspired by Rosemary Verey, an English garden writer and designer. Ms. Verey planted this combination of yellow blooming trees and purple alliums in her own garden at Barnsley House. Laburnums are poisonous, but when they bloom, they make up for their "dark" side by being so beautiful and photogenic. The Laburnum Walk also demonstrates the role that design can play in a garden.

Continue right and to the end of the Walk. When you come to another crossroad, turn left to **8 - golden catalpa (*Catalpa bignonioides 'Aurea'*)**. This tree's claim to fame in VanDusen is that it was planted by dignitaries on the day the Garden opened August 30, 1975. The species is native to the natural levees, banks and large river flood plains of the southeastern United States. Fossil records show that this tree existed in Europe sometime between 65 to 1.8 million years ago. Catalpas have long, thin seed pods. You should be able to look up and see these black pods hanging from the branches. Their seeds do not have any edible use. Moreover, the roots are highly poisonous to dogs and humans and the leaves have some toxicity, but the voluptuous, fragrant flowers which appear in the summer are worth waiting for and a favourite with bees. Even the leaves are able to secrete nectar. Caterpillars of the catalpa sphinx moth feed on the leaves of catalpas and also make excellent fishing bait, hence another common name for this tree, the "fish bait tree". In some years there are so many caterpillars that trees will be completely stripped of their leaves, but healthy trees will respond by regrowing their leaves and hopefully recover the next year. Natural predators help to keep the damage under control. These include parasitic wasps which use the caterpillars as incubators for their eggs.

Continue walking on the path leading past the Herb Garden and Fragrance Garden on your right. You will come to two rows of **9 - pink dogwood (*Cornus kousa 'Satomi'*)**. These line what used to be the entrance to the Garden before the present Visitor Centre was built. In mid-June this small tree becomes spectacular with long-lasting tiny green flowers surrounded by four stunningly pink bracts, which are modified leaves. In the fall, these produce round, edible, red fruits that birds enjoy and which can even be made into wine. These trees are cultivars of *Cornus kousa*, a dogwood species native to China, Japan and Korea. It is less susceptible to the diseases our native Pacific dogwood (*Cornus nuttallii*) is plagued with. It is a good garden tree selection, particularly for a small garden.