

**Please note that there are no number or directional signs in use at this time. Look for plant names on black stakes located by many of these plants in the Garden to help you identify them.**

VanDusen Botanical Garden's beauty and significance lies not only in its bounty of plants, but how those plants enhance the Garden's design, created by Mr. Bill Livingston, Deputy Superintendent of the Vancouver Park Board in the early 1970s. He saw the garden as an extension of nature and wanted it to provide knowledge as well as pleasure. This tour will take you to some of the stands of trees that anchor this Garden and define the botanical focus and aesthetic effect of these 55 acres.

Begin by exiting the Visitor Centre and walking towards Livingstone Lake. Walk down the ramp on your right and head to the first path leading away from the lake and branching off from the main one you are on. As you turn left onto this path, you will see several evergreen and deciduous **magnolias**. The genus *Magnolia* is named to commemorate Pierre Magnol, a famous professor of botany and medicine in C17, France. It contains about 80 species of large shrubs and trees which were once widespread throughout the world but are now limited to Southeast Asia and southeastern North America and adjacent Central America. Fossils of magnolias have even been found in Greenland. They have the largest flowers of our cultivated trees and are among the most primitive of flowering plants, whose ancestors evolved 60 million years ago. Some were "dinosaur-fodder". Their petals do not have indicators for insects like bees who did not exist at the time magnolias appeared. Beetles pollinated them instead by being caught up in flowers that closed at night. To protect themselves, the petals became tough and resistant to insect damage.

Most deciduous magnolias are of eastern Asian origin. These bloom pink or white before leafing out, whereas North American magnolias are mostly evergreen. Only one species, the **largeleaf cucumber tree (*Magnolia macrophylla*)**, extends from eastern USA into Canada. It is deciduous and has enormous, elongated oval leaves and stunning, plate-sized white flowers in early summer and cucumber-shaped fruits. You can find a specimen just beyond the left-branching path on the left side of the main path.

Now follow the left-branching path, keep to the right at the fork in the path and walk to the floating bridge. On either side of you are **bald cypress (*Taxodium distichum*)**, the state tree of Louisiana where it is found in swamps. They appeared during the Jurassic period over 150 million years ago. These trees are deciduous conifers, and their needles are soft, feathery and nearly neon yellow-green when they appear in the spring. They turn an equally noticeable coppery brown in the fall. But the most striking feature of these trees is their raised roots or pneumatophores that push up into "knees" above the ground or water. It is believed that these knees take up oxygen into the roots to assist with normal metabolic functions, and may provide extra stability, though this is still unproven. Usable prehistoric mineralized wood is still found and mined from some swamps and is prized by wood carvers.

From here you can either walk around the pond edge or cross the floating bridge. On the far side of the pond you will be entering an area with some very large **coast redwoods**. These trees have evolved thick bark to protect their sensitive cambium, especially from fires. But the soft, spongy texture also allows it to absorb moisture from rain and fog. Look up to appreciate the majestic shape and size of these trees. Many redwoods interlock their roots underground for extra stability.

On your left, a short way past the bamboo, is a **dawn redwood (*Metasequoia glyptostroboides*)**, another example of a deciduous conifer. Its leaves are bigger, broader and open about two months earlier than those of the bald cypress. The dawn redwood is native to China and was only known from fossils and thought to be evergreen. But thanks to the discovery of a living specimen at a shrine in the village of Moudao in Hubei, China in the 1940s, seeds were sent to the USA after World War II and were propagated.

Continue on the path and look for a fine specimen of a **coast redwood (*Sequoia sempervirens*)** on your right. These redwoods are the world's tallest trees and can live hundreds of years, with the maximum age counted in annual rings at about 2200 years. They covered most of the northern hemisphere before the glacial age but are now only found in California about 30 miles inland. Over 90% of all redwood forests in California have been clear-cut. During the Gold Rush, these were lost to build houses, barns and saloons. The Spanish in California also depleted the natural stands to build missions. When they were plentiful, the indigenous peoples of California used these trees as an important source of medicine. Coast redwoods have two types of evergreen needles and their red-brown cones are about half the size of those of giant sequoias. To view a grove of these sequoias, walk to the end of the path and cross over to the grass straight ahead.

These **giant sequoias (*Sequoiadendron giganteum*)** are still youngsters, but this species ranks among the world's longest-lived trees, with the oldest recorded at 3,200 years of age. They are also among the world's largest trees and are found on the western slope of Sierra Nevada in central California. This genus name commemorates Sequoyah, the inventor of the Cherokee alphabet who died in 1843. Walk into the grove and enjoy the magical quiet as you stand among these ornamental trees. Almost all giant sequoias are a protected species in California state parks and forests.

Now retrace your steps to the pathway and turn right following it into the Southern Hemisphere and Mediterranean Gardens. You will pass a stone wall and a bench on your left. At the cross-roads turn left and see a cluster of evergreen trees with short tufts of narrow pointed needles. These trees belong to the Pine Family (Pinaceae), but are **true cedars**. They appeared in the Tertiary period around 60 million years ago. The Hebrew word for cedar means "a strongly rooted tree". Our native red-cedar (*Thuja plicata*) is not a true cedar and was given this common name because of its durable, fragrant, disease resistant hard wood. Three of the four species of true cedars are represented in this area. The **cedar of Lebanon (*Cedrus libani*)** stands a little way in on the gravel path at the edge of the stream bed on your right. Native to Lebanon, it was the wood from which King Solomon built his temple and the Persians, their warships. Crusaders may have brought specimens back to Europe but it is not recorded as growing in England until the late C17. It has *level* branches. The **blue Atlas cedar (*Cedrus atlantica* syn. *C. libani* subsp. *atlantica*)** is native to Algeria and Morocco and the one nearest the path has grey-blue tinged needles which provide for more UV protection. It has *ascending* branches. The *Cedrus deodara* has graceful, *descending* branches and is native to the Himalayas. There is one growing at the side of Heron Lake to your left.

Return to the crossroads and turn left, continuing on the path you were on which leads straight to another stone wall and some steps. Go up the steps and look for a grouping of **monkey-puzzle trees (*Araucaria araucana*)** with their distinctive spiky branches. These are native to central Chile (where it is considered the national tree) and west central Argentina. They are evergreen and another ancient plant like the magnolia. They evolved during the Jurassic Period about 160 million years ago. Their Latin name commemorates the Araucana People in Chile, who harvested the tree's seeds. These trees look very straight and evenly branched because they are in a temperate garden. In the south-central Andes above 1000m where the snowfall can be heavy in winter, older branches break under the weight of snow and the trees typically have a columnar trunk with a short crown of vegetation.

Monkey-puzzle trees are dioecious, or separated into female and male trees. If you look up near the tops of the specimens before you, you may see basket-ball like spheres hanging from the branches. This is an indication the tree is female. And why call it monkey-puzzle tree, especially since there are no monkeys in the tree's native range? That stems from about the 1850s when a friend of a proud owner of a young specimen at Pencarrow Gardens in Cornwall remarked upon seeing it, that "it would puzzle a monkey to climb that". Thereafter, the name "monkey-puzzler" eventually became "monkey puzzle". For more interesting information about how the seeds came to England, check out information about Archibald Menzies, who was Captain Vancouver's surgeon and resident botanist on his exploratory journey along our Pacific Coast.

Retrace your steps, turn left at the bottom of the stairs and follow the curving path down to and across the bridge. As you go up the rise of the path on the other side you will see a lot of **mugo pines (*Pinus mugo* subsp. *pumila*)**, once popular as landscape plants. The Pine Family, which has the greatest species diversity of any conifer family, is also the second largest in geographical range, reaching from the subarctic to the tropics, with the majority of its members growing in the northern hemisphere in

temperate climates. Cedars, firs, hemlocks, larches, spruces and pines are part of this economically and ecologically important plant family.

Head to the grotto at the top of the rise, turn right and walk through the tunnel constructed of black basalt conglomerate boulders originating from False Creek. As you enter the Heather Garden look for signs of spring among the heathers. You will find banks of scaly-leafed **heath (*Erica*)** and spiky-leafed **Scotch Heather (*Calluna*)** as well as **Irish Heath (*Daboecia*)**. Keep to the path on your left and turn right on the path leading along Heather Pond. Across the pond is a stand of **Douglas-firs (*Pseudotsuga menziesii*)**. These were likely planted about 100 years ago, reminders of when the Shaughnessy Golf Club leased this land (1910-1960) from the Canadian Pacific Railroad. They are examples of coast Douglas-firs. Their common name is misleading, since they are not true firs. Ridged bark helps them to survive moderate surface forest fires. Their wood is used commercially in construction because of its weight-bearing capability. In fertile sites this tree can grow to a tremendous size, with BC records listing the tallest at 125 meters. This tree's common and botanical names honour both David Douglas, the Scottish plant collector who introduced it into cultivation in Britain, and Archibald Menzies, who sailed with Captain Vancouver and first documented the species.

Follow the path to the Scottish Shelter and cross the stone bridge, then turn right and head up the paved path. Note the unusually shaped **snake-branch spruce (*Picea abies 'Virgata'*)** on your right. This is a cultivar of the Norway spruce. Firs and spruces are closely related. *Picea abies* actually translates as 'spruce fir'. A helpful hint to distinguish between the two is to note that the needles of spruces are usually squarish while those of firs are flat. Also, the cones of spruces are pendulous, whereas those of firs grow upright.

A little further up the path you will see beautiful specimens of **Chihuahuan spruce (*Picea chihuahuana*)** on your right and **white spruce (*Picea glauca 'Coerulea'*)** on your left. **White spruce** is native to forests throughout Canada, except for the west coast. It is used for lumber and pulp but its most interesting use was in the preparation of spruce beer to protect crews embarking on long sea voyages from scurvy.

Now, turn around and walk back down the paved path until you reach a four-way crossroad and a view of the Perennial Garden.

There are many more groupings of trees to visit, but they will have to wait for another tour. Turn left here and follow the path for one final stop. The first path that soon forks off to your right is VanDusen's famous and beloved **Laburnum Walk**, which blooms in May. This walkway was designed by VanDusen's first Garden Curator and Director Roy Forster and planted before VanDusen opened in August 1975. The original plantings were ***Laburnum* × *watereri* 'Vossi'**, a hybrid cultivar of two European *Laburnum* species, and underplanted with thyme and lavender. The latter did not overwinter well enough and were replaced with purple ornamental onions (alliums), in the early 1990s. This is a recreation of English garden designer and writer Rosemary Verey's own Laburnum Walk and is stunning in the combination of yellow-chain flowers dangling over the large purple allium globes. This beauty hides the fact, however, that most parts of the laburnum tree are poisonous! Photographing them is safe and highly recommended, but please do not touch.

To return to the Garden entrance, keep left and follow the paths heading in that direction. You will see Livingstone Lake on your left, from where you began this tour. If you wish to look for more tree stands on your own, then you are welcome to wander the many other pathways and explore the geographically grouped botanical wonders in the Garden. And do come often so that you can see the Garden change through the seasons. See the magnolias in bloom, the bald cypress in leaf and the laburnums in glorious flower.