

The tour starts at the Plaza and ends at the top of the Garden, near the Maze. It takes about an hour, plus the time to return to the Visitor Centre. Please follow the black and white number and arrow signs. A map of the Garden is available at the Information Desk. Parts of this tour are not wheelchair accessible.

Within VanDusen Botanical Garden's 55 acres there are over 6,700 trees with nearly 1,000 different species and varieties. This tour includes trees whose natural lifespan ranges from less than 50 years to over 5000 years. Rapidly growing trees generally have a shorter life expectancy than slower growing trees, and trees in the wild tend to live longer than cultivated and urban trees.

From the right side of the Plaza, walk down the ramp and turn left beside Livingstone Lake. Bordering both sides of the path are **1 – ginkgo or maidenhair trees (*Ginkgo biloba*)**, the national tree of China. Their natural life span is up to 1000 years, though there is one in China thought to be 3,500 years old. The oldest surviving tree species on earth, it is considered a living fossil because it has remained essentially the same for 270 million years. Ginkgo trees are often planted beside highways and as street trees because they are disease-resistant, insect-resistant and tolerate pollution well. So, when you pass by ginkgos on a busy city street, imagine dinosaurs roaming through ginkgo forests, including in the Antarctic when the climate there was subtropical.

Retrace your steps, turn left, then left again at the "Eastern North America" sign and follow the curved gravel path past several **2 - red maples (*Acer rubrum*)**, with their fallen leaves creating a colourful fall scene. The path curves around to the floating bridge over the R. Roy Forster Cypress Pond. This area is a representation of the swamps of the southeastern United States. At the water's edge on your right are several **3 - bald or swamp cypress (*Taxodium distichum* var. *distichum*)** with their distinctive rows of knobby "knees" or pneumatophores jutting up through the water and along the shore. The latest research reveals that these extensions of the roots help to both support the tree in wet, unstable soils and to oxygenate submerged roots. Though conifers are typically evergreen, a few are deciduous like the bald cypress. Its feathery soft green needles are turning orange and will soon be shed, which is why it is known as the 'bald' cypress. The oldest bald cypress on record grew in Florida; named The Senator, it stood 38 m (125 feet) tall and was estimated to be 3,500 years old.

A gravel path leads from the bridge through the bamboo grove with several **4 - coast redwoods (*Sequoia sempervirens*)** on either side. Coast redwoods can live for 2,500 years and are the tallest tree species in the world. The record is held by a tree named Hyperion in Redwood National and State Park in California, towering at 115.9 m (380 feet) tall – about the height of a 38 storey building. Because these trees are so tall, very little water from the roots reaches the top of the tree, fighting gravity all the way. In the wild, coast redwoods only grow within 30 miles of the coast of northern California. Up to 40% of their annual water intake is from coastal fog, the moisture in the air absorbed directly by the leaves at the top of the tree. The fog also condenses on the leaves and drips to the ground and roots below, ensuring water during the dry but foggy summer months.

At the end of the path, cross over to the grove of **5 - giant sequoias (*Sequoiadendron giganteum*)**, the largest tree in the world by mass. These juvenile (40 year old) trees are just 21 m (70 feet) tall but the current record holder is nearly four times that height. At 83.8 m (275 feet) tall, the world's largest living giant sequoia, named General Sherman, was discovered growing in California's Sequoia National Park and is estimated to be over 2,500 years old. The oldest giant sequoia on record lived to 3,266 years.

Stay on the path to the left of the sequoias until you come to a large tree on the right. The **6 - western redcedar (*Thuja plicata*)** is not a true cedar (*Cedrus* species) but a conifer belonging to the Cypress Family. Western redcedar is the official tree of British Columbia and has played a central role in the culture of coastal First Nations for thousands of years. Canoes, totem poles, ceremonial masks, baskets, implements, textiles and much more are made from its wood, bark, roots and branches. First Nations harvest the bark without killing the tree and the trees they select for bark are called "culturally modified trees", now protected by several laws.

Next, on the right, is the **7 - Australia & New Zealand** collection. Over three quarters of all trees in Australia are gum trees (*Eucalyptus* species) and most of the over 700 eucalyptus species are evergreen. They can grow up to 3.6 m (12 feet) in a single year and the tallest is Tasmania's **swamp gum (*Eucalyptus regnans*)**. A swamp gum named Centurian is estimated at 400 years old and 99.7 m (327 feet) tall, the second tallest tree in the world. A *Eucalyptus regnans* recently grew here but, like other marginally hardy species, did not survive the severe cold spells we experienced over the past few winters.

In the Chilean Garden on your left, sheltering under the branches of a large Dombey's southern beech, is a small specimen of the evergreen **8 - alerce (*Fitzroya cupressoides*)**. It was named by Charles Darwin to honor Robert FitzRoy, the captain of the Beagle, after they visited Chile between 1832 and 1835 on a survey expedition. At risk of being logged to extinction, the species was declared a national monument in 1976. A living tree called Gran Abuelo (meaning "great grandfather") is 3,647 years old, the second oldest tree in the world.

Turn right down the slope to a **9 - monkey puzzle tree (*Araucaria araucana*)** on the right. Native to Chile and Argentina, it is the national tree of Chile and can live for over 2,000 years. The stiff, evergreen leaves that spiral around its branches are sharp! Brought to England by explorer Archibald Menzies in 1795, it became a popular ornamental tree, but in the wild, monkey puzzle forests have been destroyed by intensive logging and fire. In 1990 logging was banned and this threatened species tree is now protected.

Cross the zig-zag bridge and look for a small pine tree high on the left bank. The **10 - ancient pine (*Pinus longaeva*)**, also known as the **Great Basin bristlecone pine**, is the oldest individual, non-clonal organism in the world. In the high desert White Mountain range of California, an ancient pine was discovered in 2013 that was estimated to be 5,067 years old. This tree was just a seedling when construction began on the Pyramids of Egypt and England's Stonehenge. Ancient pines live in such harsh conditions they may reach a height of only 50 feet after several thousand years. Their tree ring patterns have helped dendrochronologists track climate change over the millennia.

Turn right and enter the Grotto of black basalt rock. Above your head are the branches of **11 - spreading English yew (*Taxus baccata* 'Repandens')**, a low-growing variety which can live 150 years. However, the species *Taxus baccata* is upright and extremely long-lived with trees in Europe estimated at over 2,000 years old and the Llangernyw yew in Wales estimated to be 4,000-5,000 years old.

Keep to the path on the left through the Heather Garden, which represents a typical Scottish moorland with heather, heath, Scots pine and birch trees. Cross the small stone bridge by Heather Pond, turn left, and where four paths meet, turn right and follow the path up the Great Lawn. On the right are several **12 - coastal Douglas-firs (*Pseudotsuga menziesii*)**, the largest member of the pine family, which dominates the coastal forests from BC to California. The largest living coastal Douglas-fir in the world grows near Port Renfrew on Vancouver Island. Named the Red Creek Tree, it is estimated to be up to 1,400 years old and stands 73 m (242 feet) tall. Records from over a century ago, before much of BC's old growth forest was logged, describe Douglas-firs that stood over 121 m (400 feet) tall.

The path now leads through a grove of **13 - ornamental cherry trees** which usually have a short life span of up to 20 years. However, some of the famous Washington, D.C. cherry trees, planted in 1912, are still flowering and reportedly the world's oldest ornamental cherry tree, in Yamataka, Japan, is estimated at 1800-2000 years old. Fruit trees typically live longer than their ornamental counterparts, and apple trees live the longest, up to 100 years. One amazing exception is the Endicott Pear, planted about 1630 in Danvers, Massachusetts, which is the oldest known fruit tree in North America and still bears fruit.

At the top of the Great Lawn, turn left past a row of palm trees on the left. Palm trees are typically associated with tropical and subtropical regions but the **14 - windmill palm (*Trachycarpus fortunei*)** is an evergreen that prefers our cool West Coast weather. It's hardy enough to survive freezing temperatures and snow, particularly if sheltered from the wind which can shred its leaves. Living up to 50 years, it grows to about 12.2 m (40 feet).

Continue along the path and turn right at the Korean Pavilion to the **15 – princess tree (*Paulownia tomentosa*)** on the corner. One of the most rapidly growing trees in the world, this species can reach 5.8 m (19 feet) in its first year and 24 m (80 feet) in its short life of about 70 years. In spring, large, mauve, foxglove-like flowers cover the tree before the leaves emerge. Princess trees give off more oxygen than most trees and they efficiently absorb pollutants from both the air and soil. Unfortunately, it has become an invasive species in North America since being introduced in 1844 from its native China.

Continue walking up the wide paved path, past the Meditation Garden and the Fern Dell on your right, and look for a narrow flagstone path on the left that leads to a stand of white-barked **16 - trembling aspens (*Populus tremuloides*)**, their leaves fluttering in the slightest breeze. These were planted as individual trees but trembling aspen is typically a clonal species. Its roots send suckers up to 40 m (130) feet away from the parent tree, producing new genetically identical trees. Most aspens grow in clonal colonies, which can renew themselves for thousands of years. In Utah, a colony named Pando contains about 47,000 genetically identical trees spanning 106 acres. Pando is estimated to have been growing for 80,000, possibly even a million years, which would make it the oldest living clonal organism on Earth.

We hope you enjoyed this tour. Choose from several routes on your map to make your way back to the Visitor Centre, or continue to explore the garden on your own.