

## December 2012/January 2013 Self Guided Tour PLANTS IN HISTORY

Contributed by Sunday volunteer Guides

## Please follow the directional arrows and numbers for this tour

Plants are essential to human survival and to all life on earth. Plants have played key roles in human history and culture. Often the scientific names of plants commemorate significant people, events or places. To sample a few plants that have stories to tell of our human history follow the numbers and arrows for this winter tour.

As you leave the Visitor Centre notice the beautiful wooden door handles made of **yew**. We will see living **yew** later on this tour. Go left to exit the plaza and proceed over the bridge to the Ornamental Grasses. **1 - Magellan wild rye** (*Elymus magellanicus*) is native to Chile and Argentina. Its name reflects both a geographic area and the era of seagoing exploration that was the beginning of "globalization". Ferdinand Magellan's expedition from 1519-1522 for Portugal was the first to circumnavigate the globe, though he died before the end of the voyage.

Retrace your steps to re-cross the entry plaza and go down the ramp to **2 – southern magnolia** (*Magnolia grandiflora*), named for 17<sup>th</sup> century French botanist Pierre Magnol of Montpellier who developed the concept of plant families. Continue along the main path and at the second mulched path go left into the woods.

Have you ever tossed a stick into a running stream to watch it float? Since ancient times, humans have utilized plants for flotation—from barges and boats to floating homes. The birch bark canoes of First Nations people of North America were the model for *voyageur* canoes that plied the fur trade along the inland waterways of our continent from the 17<sup>th</sup> to the 19<sup>th</sup> century. One company of the fur trade, the Hudson's Bay Company, has survived to the present.

On the mulched path in the woods stop at **3** - **yellow birch** (*Betula alleghaniensis*) and **4** - **paper birch** (*Betula papyrifera*). Notice the bands of horizontal lenticels typical of birch. The bark would be peeled off a large, mature tree in a long strip to form the lightweight shell of a canoe, with the outermost skin turned to the inside.

How was the stripped bark held together? Veer left on the mulched path to the edge of the woods and go left to **5** - **American larch** (*Larix laricina*). Long thin roots of larch, spruce or pine lashed the bark around a light wood frame. Sap (pitch) of spruce or pine sealed the seams.

Look right at **6 - eastern white pine** (*Pinus strobus*). The straight trunk of this 5-needled pine made it valuable in the 18<sup>th</sup> and 19<sup>th</sup> century for masts. The blazing of 24" diameter pines marked them as property of the British king, a source of friction in some of the colonies. During the European blockades of the Napoleonic wars *Pinus strobus* from New Brunswick and Nova Scotia helped hoist the sails of the British fleet and became a link in the Atlantic shipping trade that moved timber, slaves, cotton and sugar.

Cross the lawn to the gravel path, turn right, cross the floating bridge and take the gravel path to **7 - coast redwood** (*Sequoia sempervirens*) on your left. Valued for its sheer mass and resistance to fire and decay, it was rapidly exploited in the early settlement of California. One 1300-year-old giant felled in 1853 by five men laboring for 22 days had a stump so broad it was used as a dance floor. The fire-resistant redwood siding of many buildings of old San Francisco was credited with reducing the spread of the great fire of 1906 that followed the earthquake.

Continue and turn left onto the paved path and at the junction look far right to **9 - cedar of Lebanon (***Cedrus libani***)** native to the mountains of Lebanon and Turkey. Many ancient civilizations used its wood for building ships, temples and houses. It is the symbol on the flag of Lebanon.



Continue to **10** – **cider gum (***Eucalyptus gunnii***)** on your right. Several species of *Eucalyptus*, native to Australia, have been altering landscapes all over the world for more than a century. *Eucalyptus* has yielded timber, pulp, fibre and fuel as well as oils used in medicine. They have drained swamps to reduce malaria and colonized barren places. They regrow well after cutting or

coppicing. The downside in Spain, Portugal and California has been that *Eucalyptus* has displaced some native oak forests. *Eucalyptus* has also fueled destructive and costly fires.

On the opposite side of the path is the evergreen 11 - coigüe (*Nothofagus dombeyi*), native to the Andean forests of Patagonia, and named for Joseph Dombey, a French botanist trained in Montpellier. In 1778 a joint plant-hunting expedition by France and Spain to South America turned into "The Dombey Affair", an international squabble over newly discovered plants. Britain seized Dombey's first collection from Peru in 1780 and Spain seized half of his second collection from Chile. To this day Dombey's herbaria of 1500 plants are divided among London, Paris, and Madrid.

Go straight ahead up the stairs and right to **12 – Darwin's barberry** (*Berberis darwinii*). Native to Chile and Argentina, for thousands of years native peoples have eaten this barberry's fruit. Its European discovery was in 1835 by Charles Darwin aboard the *HMS Beagle*. Darwin's research on that voyage laid the foundation for *On the Origin of Species* and our modern understanding of evolution. Return down the stairs and go left to cross the zigzag bridge, curve left up the paved path and turn right through the rocks of the Grotto. Keep left through the Heather Garden to **13** - **Scots pine** (*Pinus sylvestris*), a long-time source of ships masts in Europe.

Continue over the stone bridge and left to the Perennial Garden with its evergreen hedge of 14 - Irish yew (*Taxus baccata 'Fastigiata'*). Valued for hedges because it regenerates after cutting, the history of yew in Europe is far from gentle. From prehistoric times spears and bows were made from yew. Its strong, flexible wood was ideal for the longbows that defended England in the Hundred Years' War with France (1337 to 1453). Medieval arms trade in yew staves eventually depleted European yew stands beyond recovery.



Continue through the Perennial Garden and just past the Lathhouse look left for **15-English oak** (*Quercus robur*), a white oak native to Europe and Asia Minor. Its robust watertight wood was valued in shipbuilding until the mid-19<sup>th</sup> century. For wine barrels it is called French oak, perhaps as important as the grape for creating certain fine wines.

Stay on the paved road and turn right onto the Rhododendron Walk. Continue to **16** - **sweet box** (*Sarcococca hookeriana*), first collected in Sikkim, India in the mid-19<sup>th</sup> century by Sir Joseph Dalton Hooker, a foremost British botanist and explorer, colleague of Charles Darwin and a long-time director of Kew. In late winter its tiny white flowers fill the air with their sweet fragrance.

Stroll all the way up the Rhododendron Walk. You may notice the scent of witch hazels in bloom. Near the top go across the lawn to 17- tea plant (*Camellia sinensis*), native from Assam, India to China. Tea drinking in China dates back 3000 years. China strictly controlled trade of tea with the West for centuries and only accepted silver bullion in trade. In 1848 Robert Fortune, a Scottish plant hunter working for British East India Company, managed to transport tea plants and tea workers from China to India. As he learned, black and green teas come from the same plant.

Go up the mulched path. At the Korean Pavilion, go straight to the paved path toward the Fern Dell, then right up the stone stairs to **18** - **Chinese fir (***Cunninghamia lanceolata***)**. Its European discovery was by Dr. James Cunningham on the island of Chusan (Zhoushan) in 1701. Long valued as timber in China, archeological studies of ancient shipwrecks and Ming dynasty shipyards confirm the use of *Cunninghamia*. Accounts of huge Ming Dynasty treasure ships and voyages to Africa by navigator Zheng He in the early 15<sup>th</sup> century continue to foster scholarly debate.



Across the gravel path is **19** - **white mulberry** (*Morus alba* 'Unryu'). Mulberry is widely cultivated in China. It is coppiced in plantations to produce abundant leaves to feed the silkworm larvae (caterpillars). Sericulture and silk-making go

back over 4000 years in China. The techniques were kept secret for millennia to maintain China's monopoly. The Silk Road from 2<sup>nd</sup> century AD enabled the trade of silk and other goods from China to the West. Silkworms, mulberries and knowledge also moved along the trade routes to create new centres of silk production. Beginning in Roman times, trade from Asia to the Mediterranean and Europe stimulated contact and cultural exchange between East and West.

You may return to the Visitors Centre by heading back down the Rhododendron Walk. We hope you have enjoyed this winter tour of the garden and will visit VanDusen again soon.