

A tree for dinner

- A virtual meal

Philip C. Tomlinson - Version: 19 September 2008

Friends of Wellington Botanic Garden Guides

We are often serious when we tour the garden. This tour is designed to be a bit of fun and perhaps show that some of the trees and plants are not just good for firewood or timber and shelter, but can provide many other services as well.

The gardeners were not happy when I suggested that we would like to eat some of their trees, so this tour will have to be a **virtual meal** only.

We will be in the Main Garden only, on the flat, with only easy walking. We may refer to other plants in the Garden, but time will preclude us from visiting them. We should, however, have a full and nourishing meal from this area!

NOTE: Not all items may be covered in the tour, as some alternative sources of items exist, but can be mentioned if not inspected.

Samples: Figs, dates, pine nuts, bananas, coconut candy?

Show: Paperbark, Silver birch bark – written on?

Meet at DUCK POND; finish FOUNDERS GATE

(##### = Move to next tree)

1 To keep us going we need a **DRINK** to feed our inspiration. The sap from the *Linden Lime* can be drunk as a pleasant beverage, or fermented into a ‘very agreeable’ **wine**.

2 We can go to the Cork Oak for corks to **stopper the bottle**, but it is away from our walk.

We will, however, require **SOMETHING TO DRINK FROM** - at Silver Birch we will discuss further.

3 Before we commence making our dinner, we need to plan it. This is easier if we have some **PAPER** to write on. We have several choices. The first requires us to make the paper. We can use the *Tilia europaea* the **Linden Lime**. Stems are harvested in the spring or summer, the leaves removed and the stems steamed until the fibres can be stripped. The outer bark is removed from the inner bark by peeling or scraping. The fibres are cooked for 2 hours with lye (water made alkaline by the addition of vegetable ashes), and then beaten in a ball mill. The paper is beige in colour.

The Greeks called it ‘**liber**’ so becoming extended to books, and giving us the word ‘**library**’. This is of interest of us today, in that we may wish to visit a library to obtain **recipe books**.

We will look at another paper source later, also source of ink

4 **Flax**, found along the stream, can be woven into **PLATES** etc

- 5 ##### *Betula pendula* the Silver Birch. The thin outer bark can be used as a PAPER SUBSTITUTE. It is carefully peeled off the tree and used as it is. A fibre is obtained from the inner bark and another from the heartwood; these are used in making paper. The branches of the tree can be harvested in spring or summer, the leaves and outer bark are removed, the branches are steamed and the fibres stripped off.

The bark is used to make DRINKING VESSELS. It is waterproof, durable, tough and resinous. Only outer bark is removed, and this does not kill the tree. It is most easily removed in late spring to early summer. It has been extensively used for this purpose

Bark of *Manuka* (on slope above Main Garden), with its resinous waterproof bark, can also be used for making water containers, as can Miro

Sap of the Silver Birch - eaten raw or cooked with a sweet flavour. It is harvested in early spring, before the leaves unfurl, by tapping the trunk. It makes a PLEASANT DRINK. It is often concentrated into syrup by boiling off the water. Between 4 and 7 litres can be drawn off a mature tree in a day and this will not kill the tree so long as the tap hole is filled up afterwards. However, prolonged or heavy tapping will kill the tree. The flow is best on sunny days following a frost.

- 6 ##### *Quercus palustris* The Pin Oak BLACK INK can be made from twig galls.

For our list we will use the quills for the PEN from ducks? We have no swans!!

- 7 *Magnolia grandiflora*. The Southern Magnolia, often called the Evergreen Magnolia. We need a TABLE DECORATION, so lets collect something on the way past. The flowers are very large (up to 25 cm across) and have a delicious and very powerful scent. This is perhaps the most strongly scented flower in the world. What a superb table centre piece.

- 8 ##### *Melaleuca viridiflora*. We need to plan our main course. We will have duck for the main course, with fish to start - eel from the Duck Pond. We need to decide how we are going to cook the dishes. Let us bake it in the oven, in an umu or hangi.

Melaleucas are commonly known as "Paperbarks" which refers to the flaky bark of many species. The bark provides good insulation against fire. Paperbark smoulders rather than burns. Indigenous peoples sometimes used it for cooking, as we use steamers today, and for storing food. The early settlers used the bark for trays. Paperbark can be used in place of FOIL FOR BARBECUING FISH.

We can also use it for SERVIETTES, also for PLATES, BOWLS etc

- 9 All the required HERBS are available from the Herb Garden.

We can also go to the olive trees there for OLIVES, and press these into OIL if required, but there are other sources of oil that is just as good – later

- 10 ##### *Ilex the Holly*. In ancient times, the bark of the holly was used in the preparation of a viscid substance called 'birdlime' that was pasted on twigs and held the feet of small birds, enabling them to be captured. "Four and twenty blackbirds baked in a pie" was probably the result.

- 11 ##### (Go to *Liriodendron tulipifera* Tulip Tree)

For starters we may like some BREAD ROLLS with eel from the pond. The inner bark of a number of trees can be dried and ground up to a flour, mixed with cereal grains for bread making. *Picea orientalis* Oriental spruce or **Caucasian Spruce** with

Sitka spruce are both good sources of FLOUR also *Ulmus the elms* can be used for the same purpose.

12 (West Way) The seed of the Beech *Fagus sylvatica* can also be ground up for FLOUR and used for the making of the bread.. All tree flour is mixed with cereal grains, and tasty bread can be obtained.

13 While we are at the spruces (Oriental Spruce) , we can have some BEER, made from the sap.

14 We can also obtain some roots from the Tulip Tree *Liriodendron tulipifera*, which will give a pleasant LEMON FLAVOURING TO THE SPRUCE BEER and also contains a chemical that corrects the bitterness of the spruce beer.

15 From Beech *Fagus sylvatica* well-ripened **mast (seeds)** yield from 17 to 20 per cent. of a non-drying OIL - similar to hazel and Cotton-seed oils - used in some areas as a substitute for BUTTER. This stores well without going rancid and is said to be equal in delicacy to the highest quality olive oil.

The oil can be used in the DRESSING for the salads

16 With the main course of duck, we will have two SALADS.

The first is a LEAF SALAD, using **young leaves of the beech** that can be eaten raw. A very nice mild flavour, they go well in a mixed salad. However, the leaves quickly become tough so only the youngest should be used. New growth is usually produced for 2 periods of 3 weeks each year, one in spring and one in mid-summer. **Also leaves of the elm**. We looked at the **silver birch** earlier and that provides **leaves, catkins and young shoots** for the salad. Colourful.

17 ##### (Duck Pond Linden Lime) The second salad is a 'CABBAGE SALAD'. This is obtained from *Rhopalostylis sapida*, the Nikau Palm. The central, unexpanded, leaf bud (called rito) at the top of the tree is used; unfortunately it does kill the tree (which is why early settlers called it 'millionaire's salad'). Young flower buds can also be eaten.

18 The heart of the cabbage tree can also be eaten as a salad, similar to the nikau.

19 We can add PINE NUTS. Pine nuts are a pleasant addition to the salad. About 30 of the 120 total species produce edible nuts. *Pinus pinea* was the first pine used and cultivated by man, its edible seeds having been harvested for perhaps half a million years or more. Early man has used its seeds for food, shells being found at many prehistoric sites.

Above us is *Pinus torreyana*, the Torrey Pine which has very large, edible, though very hard, seeds that are used as an indigenous food source by local Indians

20 *Pinus sylvestris*. The Scots Pine has very resinous roots that burn well. They can be used as a CANDLE substitute

21 We now need a DESERT. The palm here is related to the date palm and the coconut palm. . We also have in the garden figs, banana, pawpaw, cherries, native passion fruit, rose hips, and sometimes pineapples – a basis for a great fruit salad. Mint and ginger from the herb garden will give that additional flavour

22 From many **pin**es, *vanillin*, a VANILLA FLAVOURING used in the manufacture of 'artificial' vanilla, is obtained as a by-product of other resins that are released from pulpwood

- 23 We can add **sweetness** by soaking banksia flowers in water, releasing the sweet nectar into the liquid.
- 24 (Linden Lime) Now we need to finish our meal. We can have **TEA** (camellia garden) or **COFFEE** (Begonia House) but locally we can get tea from the Linden Lime, spruce, Holly (tea and coffee substitute). A **tea** made from the fresh or dried Lime flowers has been harvested commercially and often sold in health shops etc. Lime flowers are said to develop narcotic properties as they age and so they should only be harvested when freshly opened.

25 A very acceptable **CHOCOLATE substitute** can be made from a paste of the **ground-up flowers and immature fruit** of the Linden Lime.

26 ##### We need **SUGAR**. The *Acer saccharum* the **Sugar Maple** is the principal source of **MAPLE SUGAR**. The trees are tapped early in the spring for the first flow of sap, which usually has the highest sugar content. The sap is collected and boiled or evaporated to syrup. The flow is best on a warm sunny day after a frost. Further concentration by evaporation produces the maple sugar. The sap can be tapped within 10 - 15 years from seed but it does not flow so well in areas with mild winters

Sugar maple sap averages about **2.5 percent sugar**; about 129 litres (34 gal) of sap are required to make 3.8 litres (1 gal) of syrup or 3.6 kg (8 lb) of sugar. **35 litres sap = 1 litre syrup OR 1 kg of sugar**. **Yields** of 40 - 100 litres sap per tree can be obtained.

27 ##### The leaf buds of beech, *Fagus sylvatica* harvested in the winter and dried on the twigs are used as **TOOTHPICKS**.

During the War an attempt was made in Germany to use Beech *leaves* as a substitute for **TOBACCO**, and a mixture was served to the army, but proved a failure.

28 ##### While we are at the *Sitka spruce*, lets collect some **CHEWING GUM**. A gum obtained from the bark is hardened in cold water and then used for chewing. It should be aged for 3 days or more before using it. The best gum is obtained from the sunny side of the tree. In 1848, in Bangor, Maine, John Curtis produced the first commercial spruce gum - a chewing gum made of resin from spruce trees. By 1852 the Curtises had built a large chewing gum factory in Portland. As supplies of spruce gum diminished, manufacturers tried other chewables, such as paraffin, eventually turning to the latex from the chicle tree (*Manilkara zapota*.) Chicle became the basis of the American Chicle Company, and for their product, Chicklets

29 ##### (Main path) *Phoenix canariensis*, **Canary Island Palm** is related to the **Coconut Palm**. A clump of unopened flowers may be bound tightly together, bent over and its tip bruised. Soon it begins to 'weep' a steady dripping of **sweet juice**, up to a gallon (4.5 litres) per day. The cloudy brown liquid is easily boiled down to syrup, called **coconut molasses**, then crystallised into a rich dark **SUGAR**, almost exactly like maple sugar. Sometimes it is mixed with grated coconut for **CANDY**.

Left standing, it ferments quickly into a **BEER** with alcohol content up to 8%, called 'toddy' in India and Sri Lanka; 'tuba' in Philippines and Mexico; and 'tuwak' in Indonesia. After a few weeks, it becomes **VINEGAR** used for the salad dressings.

'Arrack' is the product after distilling fermented 'toddy' and is a common **SPIRITUOUS LIQUOR** consumed in the East

30 ##### (Founders Gate by elm) *Eucalyptus viminalis* **Manna Gum, Ribbon Gum**. Where holes have been made by insects in the young branches, sap flows out and dries easily into hard sugary drops which fall to the ground, hence the name 'manna' = **MANNA CANDY**.

Aborigines and early settlers were very fond of it. The sugary secretion from sap-sucking insects on the tree was also eaten.

31 If you want to finish with a **MOUTH WASH**. *Ulmus the elms* Immature fruits, used just after they are formed, eaten raw. An aromatic, unusual flavour, leaving the mouth feeling fresh and the breath smelling pleasant.

32 SUMMARY

Trees are more than just timber, shelter and firewood.
Many have provided significant and unusual resources for humans over the eons
I trust you have enjoyed the 'meal' and an appreciation of some of our special trees.

33 WRAP UP



Modern birch bark tankard from Russia

Description: Birch basket, Native American. Old and beautifully made.

Condition: good

Year: Unknown

Height: 7.5 in. (19.05 cm)

Depth: 6.5 in. (16.51 cm)

Width: 11.5 in. (29.21 cm)

Materials: Birch bark

