

The Magazine of the Friends of Pukekura Park

Volume 8, Number 2
June 2013



Photo Derek Hughes

This Magazine is made possible through the generous sponsorship of Graphix Explosion

www.pukekura.org.nz

<http://kete.pukekura.org.nz>

Gems on a Guided Walk

Val Smith

Autumn enveloped us on the May guided walk in the vicinity of the Victoria Road terrace. Not the full-in-the-face brazenness of Central Otago, or even our own Brooklands in a good year, but a more subdued merging of evergreen hues with occasional splashes of colour from deciduous trees bordering the main lake. The autumn feel was enhanced by a crisp nip in the air, fleeting fungi, flocking Silvereyes (*Zosterops lateralis*), and foraging Tui (*Prosthemadera novaeseelandiae*) amidst the abundance of ripe fruits on the Himalayan Strawberry (*Cornus capitata*) trees, long since naturalised in the Park.



Callistemon salignus bark

Trees noted included Holm Oak, also known as Holly Oak (*Quercus ilex*), a large evergreen species native to the Mediterranean area. Its common name “Holm” was an ancient one for Holly. In pride of place near the street verge an attractive Japanese Umbrella Pine, Koyamaki (*Sciadopitys verticillata*), is one of two growing in the Park. Its species name means “with whorls” and refers to the arrangement of shiny dark green foliage/needles encircling the branches like the ribs of an umbrella. The nearby Australian Willow Bottlebrush or White Bottlebrush (*Callistemon salignus*) from New South Wales and Queensland is the tallest growing of the species reaching up to 10 metres in height. Its striking papery bark was admired and photographed. In the family Myrtaceae, it was named *Metrosideros salignus* in 1797 by James Edward Smith, a co-founder of the Linnean Society of London, but was later transferred to *Callistemon*. Like *Metrosideros*, it is a useful nectar source for honey-eaters.

However, the plant of the day (for me, at least) was the Carob (*Ceratonia siliqua*) near the Shortland Street entrance. I knew carob as a so-called “healthy” substitute for chocolate, but had no idea what it was or where it came from. Hence, I took more than a little interest in this rather nondescript, sprawling, dark-green foliated shrub. Reddish-yellow catkin-like spikes sprouted directly from a few branches, but aging eyes were

unable to discern whether they sported flowers or developing fruit. Close-up photos were taken in the hope they would reveal more detail. Subsequent research uncovered an interesting plant botanically, and a long history of its use by humans.

Ceratonia siliqua, commonly known as Locust Tree, Carob Tree and St John’s Bread, belongs to the legume family Fabaceae, and is believed to be an archaic remnant of part of this family now considered extinct. Native

Contributions should be sent to
Friends of Pukekura Park, P.O. Box 484, New Plymouth 4340.
Magazine content editor: David Medway. Photographic editor & designer: Derek Hughes
email: info@pukekura.org.nz web: www.pukekura.org.nz

to the Mediterranean region, it has been cultivated for its edible pods for about 4,000 years. The Spaniards took it to Mexico and South America, and the British to South Africa, India, and Australia. The dried pod is used as a mildly sweet ingredient in cooking and as an alternative to chocolate. The seeds are the source of locust bean gum (a food-thickening agent) and are also used for animal fodder. The word “carat”, the unit by which gem weight is measured, has the same Greek derivation as “carob”, and is believed to go back to the ancient Middle Eastern practice of weighing gemstones and gold against the remarkably consistent Carob seeds. Tannin is obtained from the bark, the hard wood is prized for furniture, and the growing tree is valued for its shade, shelter, and drought tolerance.

Ceratonia siliqua is a slow growing, medium-sized, evergreen tree up to 15 metres tall, with a broad crown supported by a thick trunk, sometimes multi-stemmed. Descriptions vary, but it seems that it is mainly trioecious, with male, female and hermaphrodite inflorescences, each on separate plants. The flowers, which appear in autumn, are small and numerous, spirally arranged in racemes on spurs from old wood, and are pollinated by both wind and insects. They have no corolla (petals). The pods can be elongated, compressed, straight or curved, often growing up to 35 cm long, and take a full year to develop and ripen. However, don't count on sampling locally grown Carob next year – the flowers on our plant appear to be male!



Ceratonia siliqua flowers

Photos Val Smith



Sciadopitys verticillata foliage

Park autumn update

**Sheryl Clyma
Assistant Curator Pukekura Park**

Autumn has been a very busy time maintaining the Park and relocating our offices and staff facilities to the new Fernery and Display Houses development. Staff are very appreciative of the new facilities which have already been well utilised. The larger space has been valuable for holding meetings and training, and hosting conferences. Further attention will be given to the Fernery tunnel entrance area and the nearby Fred Parker Lawn gardens to finish and enhance the new development.



There has been much activity in the Park itself. At the time of writing, the new Kaimata Street entrance is nearing completion with the next stage being the instalation of improved signage and gates. The new frame for the notable *Wisteria* on Brooklands lawn is complete. The replacement of the bridge on Fuller Walk in upper Maranui Gully is currently underway and should be completed by mid-June. The Band Rotunda at the main lake has been wrapped in a white curtain for the last four weeks and will continue to be kept under wraps for at least another six weeks while it undergoes extensive restoration. Winter will be a busy time in the Park with both the lakes desilting project and the main Childrens' Playground redevelopment due to start in June.

Daffodil and Iris bulbs have been planted along the bush margin at the southern end of the Brooklands lawn and along the strip under the *Prunus* trees between the Zoo driveway and The Gables gardens. Poppies have been planted in the Brooklands flower beds and are growing nicely with flower buds forming. *Primula acaulis* 'Victorian Mix' has been planted at The Gables around the base of the building and in pockets in the garden. This Primrose is a perennial which flowers on multiple stems creating what we hope will be a sensational display. We have planted *Dianthus* in the raised beds in front of the Tea House. These produced an instant display but now need the rain to stop so that their flowers can stand back up and display. Camellia and Camellia-related plants of interest that we have recently noticed flowering in the Park are the notable *Camellia sinensis* (Tea Camellia) on Brooklands lawn, the *Camellia granthamiana* on upper Racecourse Walk (rare and protected in its native habitat of Hong Kong), the *Gordonia yunnanensis* (Poached Egg Plant) in Kunming Garden, and the *Gordonia chrysantra* on the southern hillside above Fred Parker Lawn.



Above - on the upper Racecourse Walk.

A few of the camellias out in the Park.

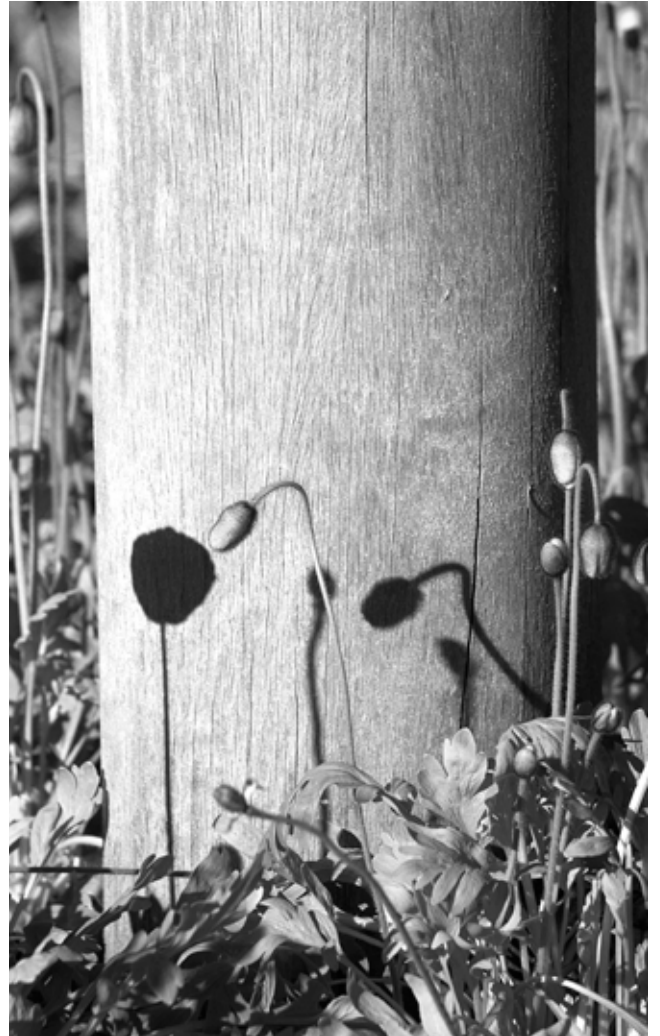
Right - the hedge at The Gables.



Gordonia yunnanensis (Poached Egg Plant)
in Kunming Garden



Primula acaulis 'Victorian Mix' at The Gables



The poppies at Brooklands



Photos Derek Hughes

From the Botanical Records Officer

Ian Hutchinson

At the time of writing, 100 new accessions have been recorded in the Pukekura Accession Book so far for 2013, and those accessions have been entered into BG Base.

I have recently spent some time working on the creation of accession labels. This is quite a process. It involves downloading report information from the database to an Excel spreadsheet where the data is edited to remove items such as asterisks. It is then copied to a Word document where tabs can be altered. Finally, it is copied and pasted onto a Notepad document which is the only format the label making machine can read the data from. The labels are created for each location code that exists on the database and the labels show the accession number and the name of the plant. They will be put with the plants in the gardens or Fernery to help keep track of the various accessions. They will be useful when it comes to doing plant census work which will be carried out periodically. The census results will be used to determine which plant accessions still exist, and the number of plants in each accession that are still alive, and the condition of the plants. The census information will be put into the database against the relevant accession record to keep a running tally of the plants in the Park.

The retrospective accessions list created for 2005 has now been entered into BG Base. These retrospective lists are a collation of information from plant supply inwards goods books and the outwards planting books, and in the case of the Fernery from diaries and monthly reports. Completed accession lists for the years 2006-2009 will be entered as census checks are completed for the respective lists because, as I have discovered, a list created in the office can sometimes be different from the reality in the field. I have also made a start on an accession list for 2010 and will complete this in due course along with 2011.

Visitors to the Park since the week before Womad will have noticed some of the new tree labels that have been made for us in Auckland. These labels are designed to help visitors identify the different trees and hopefully will make their experience even more enjoyable. A second label list has been created which largely covers the Brooklands area. The labels from that order arrived in the last few weeks. Installing them will be a good job for nice fine days when I feel like a break from the computer.

In early February, Glyn Church helped me identify the *Hydrangea* varieties at Brooklands. Several of them were shifted when the fireplace bed was removed, making it impossible to match the varieties to a planting plan. With Glyn's help the varieties were identified and their new locations sketch-mapped. Cataloguing them into BG Base in the future will now be much easier and more accurate. I have assessed the collections in the southern-most part of the Park, including the Chinese Collection and the Alder Collection which are located near the Pukekura Park tennis courts. I have also completed a survey of List's Garden. This is a surprising area where many exotic plant gems are hidden away amongst surrounding native vegetation.



Photo Derek Hughes



Araucaria araucana
Monkey Puzzle Tree (sprinkled
with *Pinus radiata* needles)



Agathis macrophylla
Pacific Kauri



Araucaria hunsteinii
(Syn. *klinkii*)
Klinki Pine



Araucaria bidwillii
Bunya Pine



The McGregor Kauri, *Agathis australis*, showing the whorls of branches and scars on the trunk

Photos Elise Smith

Close up of the
McGregor Kauri
branch stubs



More Beautiful Bark

Elise Smith

Some of the most prominent trees in the Park are members of the ancient Family Araucariaceae. They are sometimes known as “living fossils”. They grew in vast forests over Gondwanaland during the Mesozoic Era. No wonder they are so prickly, and so tall, as they are the species that survived browsing dinosaurs. These evergreen conifers are amongst the largest plants in the world. They typically have their branches and leaves arranged in whorls. Specimens in the Park have trunks showing the characteristic patterns of stubs and scars where limbs have been shed.

Araucaria araucana (Monkey Puzzle Tree) is the type species for the Family. Despite it being a horticultural favourite, it is on the IUCN Red List as an endangered species and “Vulnerable” in the wild. The name *araucana* is derived from the native Araucanians of Chile. The sacred pine nuts called “pehuén” were an important food source. There is a young grove of these trees near the Racecourse, planted in 2001, on the path between the Scanlan Lookout and the Bowl Stage, bristling with viciously sharp leaves. A similarly young tree, but more approachable, is the *Agathis macrophylla* (Pacific Kauri) at the Pinetum end of Brooklands lawn.

Araucaria hunsteinii (synonym *klinkii*) (Klinki Pine) is from the mountains of New Guinea. It is the tallest tree in the Araucariaceae reaching heights of 80m or more. This tree is noticeable with its branch stubs protruding like spouts and can be seen next to the path close to the top of the Bowl of Brooklands. Twenty metres further along is *Araucaria bidwillii* (Bunya Pine) which is a relict species, the last of its kind, its abundance in Queensland rapidly reduced after European occupation. It is sacred to the Aborigines who have a traditional Dreaming Festival associated with the fruiting season. Since a cone may weigh up to 10kg, be careful when they mature and fall. The bark shows rows of knobbly scars, and a crown of close-set branches. *Araucaria cunninghamii* (Hoop Pine, Moreton Bay Pine) is also from the Queensland rainforests, growing up to 60m tall. It is a timber tree valued for veneer. The edible nuts and resin were used by Aborigines. There are two of these trees in the Park, one on top of Cannon Hill, the other not far away in the Sunken Dell.

There are about 263 *Agathis australis* (New Zealand Kauri) in the Park. The one whose bark is illustrated here shows an interesting branch pattern. It was originally planted at Brooklands Zoo in the early 1960's in commemoration of Professor William Roy McGregor who initiated the saving of Waipoua Kauri Forest in Northland. It may be seen near the top of the road from the Racecourse to the Bowl of Brooklands. It was transplanted in the 1970's after being endangered by hungry deer (G. Fuller).

Araucaria heterophylla (Norfolk Island Pine) is literally a stand-out tree in the Park. Their crowns can be seen from around the city, spiking the skyline, distinctive and imposing. The bark of the trees is also distinctive, sometimes quite scaly, flaking to reveal a golden undercoat.

Araucaria heterophylla
Norfolk Island Pine





Tui feeding at *Aloe cryptopoda* flowers



Tui feeding at *Aloe maculata* flowers



Tui feeding at *Aloe capitata* flowers



Tui feeding at *Aloe striata* flowers

Four spring-flowering Aloes of value to Tui in Pukekura Park

David Medway

The *Aloe* genus (Family Asparagaceae) comprises about 500 species of flowering succulent plants that are native to tropical and southern Africa, Madagascar, and the Arabian Peninsula. Madagascar alone has at least 121 endemic species. Several *Aloe* species are growing in the *Aloe* beds at the northern end of the Brooklands lawn and in the nearby Traffic Islands Garden. Included among them, in the Traffic Islands Garden, are four species of *Aloe* which were planted recently. My observations show that these Aloes - *A. striata*, *A. capitata*, *A. cryptopoda* and *A. maculata* - provide an important source of floral nectar for Tui (*Prosthemadera novaeseelandiae*) when they are flowering in spring.

***Aloe striata*.** Thirty-five specimens of the Coral Aloe from South Africa were planted in the Traffic Islands Garden on 23/9/2009 (*Planting Book 9/2007-9/2010*: 80). Their flowers are present in August-November. I saw Tui feed a total of 66 times at numerous flowers of these Aloes during my observations of them on 32 occasions when they were flowering in 2012.

***Aloe capitata*.** This *Aloe*, which does not appear to have a common name, is endemic to Madagascar. Thirty-five specimens were planted in the Traffic Islands Garden on 23/9/2009 (*Planting Book 9/2007-9/2010*: 80). Their flowers are present in September-November. I saw Tui feed a total of 52 times at numerous flowers of these Aloes during my observations of them on 18 occasions when they were flowering in 2012.

***Aloe cryptopoda*.** There are about twelve specimens of the Crown Aloe from southern Africa in the Traffic Islands Garden. Five of them were transferred to there from the Brooklands lawn *Aloe* beds on 28/9/2009 (*Planting Book 9/2007-9/2010*: 80). Their flowers are present in September-December. I saw Tui feed a total of 39 times at numerous flowers of these Aloes during my observations of them on 25 occasions when they were flowering in 2012.

***Aloe maculata*.** Ten specimens of the Soap Aloe from Southern Africa were transferred as *Aloe saponaria* (which is a synonym of *Aloe maculata*) from the Brooklands lawn *Aloe* beds to the Traffic Islands Garden on 23/9/2009 (*Planting Book 9/2007-9/2010*: 80). Their flowers are present in October-December. I saw Tui feed a total of 21 times at numerous flowers of these Aloes during my observations of them on 16 occasions when they were flowering in 2011 and 2012.

The large group of *Aloe arborescens* and the large specimen of *Aloe plicatilis* in the Traffic Islands Garden were a frequent source of floral nectar for Tui when those plants were flowering during winter and winter to mid-spring respectively. The planting of the four spring-flowering *Aloe* species discussed in this article meant that *Aloe* floral nectar became available to Tui in the Park throughout the whole of the winter and spring periods in 2010-2012. All four species produced copious seed pods at the end of their flowering. Sunbirds, most of which feed largely on nectar, are pollinators of Aloes in their native habitats. It is probable that Tui are also effective pollinators of these spring-flowering Aloes in the Traffic Islands Garden.

Animal Reactions

Jolene West
Keeper Brooklands Zoo

I'm sure people wonder how the animals at Brooklands Zoo react towards different situations that occur. The animals get to know the Keepers by their uniforms and voice. The Capuchin monkeys are very intelligent animals and it does not take them long to recognise something different about a Keeper. I remember going into the monkey enclosure with new gumboots on. Crumpy (the dominant male) started reacting very strangely towards me and was running up to my gumboots and touching them. After I left the enclosure I realised my gumboots were very shiny and he could see his own reflection in the gumboots and thought it was another monkey.



Crumpy eating a hard-boiled egg.

We recently had a mufti day at work. The animals looked very confused when they saw me out of uniform. Crumpy and Boo (another male Capuchin monkey) started vocalising at me through the mesh to start with, then they recognised my voice and calmed down. When I first got my prescription glasses I had to take them off for the first two weeks when I went in with the Capuchins because they showed aggression towards me. They could see their own reflection in my glasses and I looked very different to them!

The Capuchin monkeys also recognise our local vet and whenever they see the vet's car pull up outside their enclosure they start vocalising as they remember that bad things happen when the vet is on site! If only we could talk monkey language and explain to them the vet is here to make all better again. It would make our job a lot easier!