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# The Magazine of the Friends of Pukekura Park

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Armillaria novae-zelandiae in Kauri Grove, May 2010

Photo David Medway

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From the Archives

### **Carrington Blockhouse and Fort Herbert**

Ron Lambert Senior Researcher Puke Ariki

During the First Taranaki War – 150 years ago this year - central New Plymouth was ringed by ten or so blockhouses built to guard the approaches to the beleaguered and overcrowded town. Two of these blockhouses were situated in Pukekura Park.

Fort Herbert, named after Major Charles Herbert of the Taranaki Militia, was on the high ground now traversed by Claffey Walk behind the eastern terraces of the Sportsground. In July 1860, the Militia and Volunteers escorted several carts to Hurworth, Harry Atkinson's farm further up Carrington Road, to bring in "a wooden building for the guard at Fort Herbert" (*Taranaki Herald* 21 July 1860). In the latter part of the First War the fort was garrisoned by "Friendly Natives" (Prickett 1994). Although they were dressed in a uniform of blue shirt braided with scarlet (*Taranaki Herald* 9 March 1861), being a "Friendly Native" was apparently a hazardous occupation as they were, on several occasions, fired on by patrols who mistook them for Maori raiding parties.

The second stronghold, Carrington Blockhouse, was on the high ground of the original Carrington Road (re-named Victoria Road in the early 20th century) near the Curator's former house at 25 Victoria Road. It overlooked the Pukekura and Brooklands gullies. The road and fort was named for Frederic Carrington, the well-known surveyor of New Plymouth. A watercolour by Colonel E. A. Williams in Hocken Library shows Carrington Blockhouse to be an "L"-shaped wooden building with rifle loopholes and a gabled roof.

On 3 March 1861, a party of 13 Volunteers and a civilian gathering peaches at Brooklands were ambushed, and 17 year-old Edward Messenger was shot dead along with one of the Maori attackers. "A small party of friendly natives from Fort Herbert, and six men of the 65th [Regiment] from Carrington road Blockhouse, under Lieutenant Bailie, coming to their assistance, Messenger's body was brought out and the party returned to town" (*Taranaki Herald* 9 March 1861). Military detachments from Carrington Blockhouse and Fort Herbert also played a small part in the alarm associated with the burning of Brooklands homestead on 15 March 1861. "Several houses were fired by the rebels last night, and between 5 and 6 this morning dense masses of black smoke gave notice that Brooklands, Captain H. King's residence, with outbuildings, barns, stabling, &c. was given to the flames. Not a vestige remains except the masonry of the chimneys. Brooklands is overlooked from the Marsland hill garrison, and is not more than 600 yards from the military Fort in the Carrington road. The guard turned out, followed by the Fort Herbert natives, and some shots were fired ...." (*Taranaki Herald* 16 March 1861)

Only small detachments were deployed at the New Plymouth blockhouses, including Carrington and Herbert, during 1861-63, but full complements were again installed during the first few months of the Second Taranaki War in 1863 (Prickett 1994). Most were abandoned or used as troop accommodation when the possibility of Maori attack lessened during the mid-1860s, although Carrington Blockhouse seems to have survived as a Taranaki Militia base until at least 1869 (Prickett 1994).

Reference: Prickett, Nigel (1994). Pakeha and Maori Fortifications of the First Taranaki War, 1860-61. *Records of the Auckland Institute & Museum* 31: 1-87.

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From the Archives cont'd



Colonel Edward Arthur Williams. *Marsland Hill. N.P. 22 June. Taranaki* [with Carrington Blockhouse in the middle distance]. Watercolour, [1865]. Hocken Library Collection, Dunedin.

From the Archives

#### The Superintendent's new residence fuels a controversy

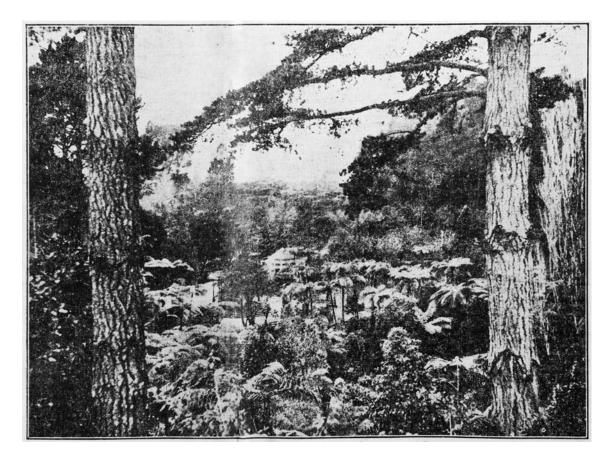
#### **David Medway**

The Chairman of the Pukekura Park Board, in his annual report presented in May 1927, noted that a house in the Park for the Superintendent, at that time Thomas Horton, was an absolute necessity as he felt sure that if the Superintendent was housed there it would stop a great deal of the vandalism that was going on, as well as making life a good deal more comfortable for him (*Taranaki Herald* 4/5/1927). There was no meaningful progress relating to the proposed residence until 1930. We learn from Horton's work diary for 4/2/1928-30/11/1932 (Puke Ariki ARC 2003-860, Box 1) that he moved into the new house at 25 Victoria Road on 6 October 1930.

The Superintendent and the Chairman of the Board had inspected the site of the proposed residence on 13 February 1930 (Horton's work diary). It may have been on this occasion that Horton was authorised to fell three pine (*Pinus radiata*) trees, apparently to make room for the new house. When Horton advised the Board at its meeting on 14 April 1930 that these pines had been taken down and sold, Board member and "Father of the Park", R. C. Hughes, "again made protest, as he has often done in the past, against the practice of taking down trees. "To cut down these glorious monarchs of the forest so ruthlessly is nothing short of a crime" he said" (*Taranaki* FoPP Magazine, Volume 5, N° 2. Page 3

# From the Archives cont'd

*Herald* 15/4/1930). The Board met on site on 10 July 1930 and decided to have six more pines removed (Horton's work diary). It was considered that these trees, which were on the hillside east of the proposed residence, were not beautiful and constituted a menace (*Taranaki Herald* 9/7/1930). They were felled on 14-18 July 1930 by men from Sash & Door who took the logs away. The Superintendent and his staff were busy during this time and the following few days "clearing up & burning rubbish after the felling of pines etc near new house". Horton recorded that one of the pines was 113 feet high (Horton's work diary). The slowly-decaying stumps of these pines are still present on the hillside. The accompanying photograph of the Park from the site of the Superintendent's new residence, taken before the pines were removed, is reproduced from the *Taranaki Daily News* of 22 August 1931.



A suggestion was made at the meeting of the Board on 8 July 1930 that some of the rarer native trees be secured for the Park. It was decided that the sum of £10 be spent in securing these trees (*Taranaki Herald* 9/7/1930). On 25 July 1930, Horton received native plants that he had ordered from Duncan & Davies the previous day. On 11 & 12 August 1930 he planted "native & other trees in front new house" (Horton's work diary). Horton reported to the Board on 9 September 1930 that "planting of native trees had been done on the western hill face, near the new house, and trees had been planted in various parts of the park where needed most. A total of 390 trees had been planted altogether this season, including 250 pohutukawa, and the balance were mostly varieties of native trees which were not formerly growing in the park" (*Taranaki Herald* 10/9/1930). All but 70 of the Pohutukawa (*Metrosideros excelsa*) trees had been grown in the Park nursery that Horton had established five years earlier. The "native trees which were not formerly growing in the park" were probably those he had recently purchased from Duncan & Davies. Horton told the Board on 9 December 1930 that the young trees planted during the past season were all doing well (*Taranaki Herald* 10/12/1930).

It was primarily the felling of the pine trees near the Superintendent's new house, and the effects thereof, coupled with the Board's decision in August 1931 to fell the row of pines on the skyline at the top of the eastern terraces at the sportsground (*Taranaki Herald* 21/8/1931, and this *Magazine* 5(1) (February 2010): 6-8), that prompted the formation of a deputation of 28 persons which waited on the Board at its meeting on 8 September 1931 to "voice strong disapproval at what was described as the "wholesale butchering" of the great pinus insignis trees in the reserve, to express the hope that no further of the trees would be felled, and that some of the damage done by this "wholesale butchering" might be in a small measure repaired by the planting of young pine trees" (*Taranaki Herald* Herald

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# From the Archives cont'd

9/9/1931). The chief cause of public bitterness was the "nakedness of the once sylvan view from the tea kiosk towards the west" (*Taranaki Daily News* 22/8/1931). Miss C. A. Douglas, a member of the deputation, stated that while its members "had no complaint to make regarding the architecture of the superintendent's residence, they did not want to see it from the park. Many fine pine trees which formerly grew on the western bank of the park in front of the residence had been cut down, leaving the hillside bare, so that people in the park could see not only the superintendent's residence but also traffic passing up and down the road behind the house. In a recent interview the



board's secretary had explained that the trees had been cut away in order that the superintendent might have a better view over the park and that the danger of destruction by vandalism was therefore considerably lessened. She did not find vandalism a satisfactory explanation for the felling of these fine trees, remarked Miss Douglas". The deputation requested the Board to, among other things, "replant with quickly-growing trees the slope below the superintendent's residence, so that it may no longer be seen from inside the park, and to replant the areas to the north and north-east of the residence with the definite object of restoring those lines of contour,

Stumps of pine trees felled in the 1930s

the loss of which is so markedly and unpleasantly noticeable from many points within the park" (*Taranaki Herald* 9/9/1931).

At a special meeting of the Board on 30 September 1931 it was resolved that "regarding the filling of the gaps created by felling trees below the superintendent's residence, the Board is satisfied that the replanting authorised, when deciding to fell the trees, with quick growing and dense native flora, is in the best interests of the park and that within a very short period the gaps apparent today will be densely filled". The Board



Vegetation on hillside below the Superintendent's residence today

requested that the press publish a list compiled by the Superintendent of the trees planted on the slope below his house (*Taranaki Herald* 1/10/1931). This list appeared in the *Taranaki Herald* of 2 October 1931 under the heading "List of native trees planted and growing on the eastern face of hill in Pukekura Park in front of superintendent's house". Horton's list is reproduced here as it appeared in the newspaper, except that I have corrected a few apparent printer's errors and italicized his scientific names. I have added an asterisk to six of them. One, *Correa alba*, is an

Australian not New Zealand plant, and the others are plants that bear scientific names which I have not been able to find in the New Zealand botanical literature.

"One Ackama rosaefolia (Makamaka), one Alectryon excelsum (Titoki), one Aristotelia racemosa (Makomako), three Brachyglottis rangiora (Rangiora), one Clianthus puniceus alba, three Coprosma baueri (Taupata), six Coprosma robusta (Karamu), two Cordyline australis (Cabbage tree), two Correa alba\*, one Corokia lineata, one Corokia buddleoides, four Corynocarpus laevigata (Karaka), one Dacrydium colensoi (Silver pine), two Dacrydium cupressinum (Rimu), one Dacrydium intermedium (Mountain Pine), one Dracophyllum strictum (Nei-nei), one Fuchsia excorticata purpurea, one Helichrysum glomeratum, three Hoheria populnea (Houhere), three Leptospermum nichollsii, one Libocedrus bidwillii (Pahautea), six Macropiper excelsum (Kawakawa), one Melicytus lanceolatus (Mahoewhau), one Melicytus simplex\*, one Melicytus micranthus, two Myrtus bullata (Ramarama), two Myrtus obcordata (Rohutu), two Myrtus obcordata 'Purpurea', six Nothopanax arborea (Five-finger), three Olearia greyii\*, two Olearia nitida, one Olearia haastii, one Olearia ilicifolia, two Olearia oleifolia, one Panax daviesii\*, one Phebalium nudum (Mairehau), one Phyllocladus alpinus (Toatoa), one Phyllocladus glaucus, two Phyllocladus trichomanoides (Tanekaha), one Pisonia brunoniana, one Pimelia decubata (Taranga)\*, one Pittosporum crassifolium (Karo), six Pittosporum eugenoides (Tarata), one Pittosporum dallii, one Pittosporum nigrescens\*, one Podocarpus totara, one Pomaderris apetala (Tainui), one Pomaderris rugosa, three Pseudopanax crassifolium (Lancewood), one Pseudopanax discolor, one Pseudopanax ferox, one Pseudopanax lessonii (Houpara), one Quintinia serrata (Tawheowheo), one Rhopalostylis sapida (Nikau), two Senecio greyii, two Senecio rotundifolia, one Senecio bidwillii, one Senecio remotifolius, one Sideroxylon costata, one Senecio buchananii, one Meryta sinclairii (Puka), ten Sophora tetraptera (Kowhai), twenty-two Cyathea medullaris (Mamaku), six Dicksonia fibrosa (Weki-ponga). Total, 146. The following exotic trees and plants are planted amongst the above: Three Fagus purpurea (Copper Beech), one Waratah, one Koelreuteria paniculata, one Banksia menziesii, two Thuja gigantea, one Chamaerops excelsa, one Musa ensete, one Retinospora obtusa, one Retinospora crippsii aurea. These make the total 158 trees on this open face, besides a few ornamental and flowering shrubs".

A letter from the deputation that had waited on the Board was received at the Board meeting on 10 November 1931 (Taranaki Herald 11/11/1931). The deputation thanked the Board for the time and care given by it in considering the deputation's requests. In reviewing the list of native and exotic trees and shrubs planted below the Superintendent's house, the deputation requested that the Board consider the following facts supplied by Mr. Victor Davies: "(1). Trees grown under open conditions on a hillside, such as those below the superintendent's house, do not grow so quickly or so high as those grown under natural forest conditions. (2). Of the 146 native trees in the list, there is but one (the rimu) which grown under open conditions at maturity would be 50 feet high. Ten others (one titoki, four karaka, one nikau, one totara, two tanekaha, and one pahautea) would range from 30 feet to 35 feet. The other 135 in the list would at maturity range from four feet to 25 feet. In fifteen years time the tallest, the rimu, would be approximately 30 feet. (3). Of the twelve exotic trees in the list there are five which, grown under open conditions, would reach the height of 50 feet at maturity (three copper beech and two Thuja gigantea). In fifteen years they would be approximately 25 feet". The deputation requested that the Board compare the possible heights and the positions of these trees with those that have been removed. It considered that the gap which allowed the Superintendent's house and outbuildings to be seen from within the Park was not likely to be filled "within a very short period". In early 1936 it was reported that "on the hillside east of the superintendent's residence, where originally six pinus insignis trees were removed, some of them dying and dangerous, 80 assorted trees now from three to 15 feet in height are making excellent and dense growth" (Taranaki Herald 26/2/1936).

There have been many plantings on the slope below the Superintendent's residence since the early 1930s. For this reason, it would be difficult to determine with any certainty which of Horton's original plantings still survive, but two Copper Beeches, one Tanekaha, one Totara, two Karaka, two Cabbage Trees, one Nikau Palm, and several Wheki-ponga and Mamaku warrant serious consideration in that regard.

From the Garden

### Autumn update

## Ian Hutchinson Technical Officer Pukekura Park

The autumn planting season has focused mainly on renovation works on various borders and gardens in Pukekura and Brooklands Parks.

The herbaceous border in Brooklands Park will undergo some renovation works which will involve lifting some groups of plants, composting the soil, and then resetting. Some of the groups that will be lifted will be put back as smaller groups in order to make space for a range of new perennials that will be added to increase the overall variety of plants and flowering duration of the border. New plants will include varieties of some old favorites like *Achillea, Artemisia, Brachyscome, Crocosmia, Geranium, Heliopsis, Kniphofia, Monarda, Penstemon, and Phlox.* One group of plants to be relocated is the collection of *Iris sibirica* opposite the *Fagus sylvatica* 'Riversii' which will be relocated to the margins of the lakes in the Bowl where they will associate well with the water. The space they occupy will be filled with some of the new plants, possibly some of the *Penstemon* varieties. The locations for the new plants will be determined by plant form and colour associations.

The Hebe border on Victoria Road has had a small revamp to freshen up some of the bare patches within the garden and to re-establish better lawn areas at the back of the border under the trees. This has involved removing a few very woody older plants to let more light in for both the border and the grassed area at the rear. We have planted a selection of New Zealand natives in the gaps in the garden to fit with the existing collection – *Corokia* 'Bronze King', *Corokia buddleioides, Hebe diosmifolia, Hebe corriganii, Hebe recurva (albicans), Hebe topiaria, Olearia albida, Olearia paniculata*, and *Coprosma virescens*. We have also provided for future management of the collection by taking cuttings from the existing *Hebe, Brachyglottis*, and *Olearia* collection so that there will be plants available to replace the older specimens. This will maintain the integrity of the collection by using the same species.

On Palm Lawn we have removed a few *Trachycarpus fortunei* palms to give more room for the *Parajubaea cocoides* palms which were being forced to develop a lean by being crowded. We have now grassed out between these palms to make the lawn look more spacious. A few new plants in keeping with the sub-tropical look of this area have been added - *Chamaedorea microspadix, Cordyline petiolaris, Schefflera setulosa*, and *Vaccinium acrobracteatum*. On Smith Walk near the waterwheel we have planted a specimen of *Dypsis baronii* and a specimen of *Podocarpus brassii*, both of which are new to the Park's plant collection.

In Primula Dell we have recently added some more *Primula vialii*, *Primula capitata* which has purple drumheadshaped flower heads, and some more candelabra types which are hybrids between *Primula bulleyana* and *Primula beesiana* which should have flowers in orange, yellow, and red shades to build on the collection and to continue blocking in the bare areas. In the upper part of the dell we have planted the woodland shrubby plants *Illicium simonsii*, *Stachyurus himalaicus*, and *Vaccinium staffeanum*.

Lastly, Goodwin Dell is having some adjustments made to open up a larger almost oval to circular lawn area in the centre. It is hoped this will mean the garden can be better viewed and appreciated rather than being purely a transition area that is walked through without stopping. In order to make space for the new central lawn, the top grass path is being closed off and turned into garden and will have some of the deciduous azaleas shifted into it from the area that will become lawn. It is also planned to propagate from the collection of deciduous azaleas to have replacement plants for the future, plus to add some new varieties as well. We have reduced the number of *Cercidiphyllum japonicum* within the garden so that it appears less congested with big trees, and the specimens of *Podocarpus henkelii* will be relocated to nearby Monument Hill with the conifer collection.



#### Autumn update

#### John O'Sullivan

As in all gardens, autumn is a time to review and renew. In this respect The Gables garden is no different.

At the front of The Gables the Camellia hedge has taken a little time to establish. The chilling winds and attendant root disturbance the plants received almost as soon as they were transplanted has meant that a number of them ended up on the compost heap. Replanting the gaps has resulted in a hedge that will be an established boundary by spring. The *Acanthus* near the Kunming Garden entrance has been extremely vigorous. It is being cleared for eventual planting with trees and shrubs which will fit in with the overall pastel theme.

White Hydrangeas have been added to the shrub display whilst there have been plantings of Gladioli, *Narcissus*, and Dwarf Iris throughout the beds. To the left of The Gables front gate, the tuberous Begonias have been lifted and replaced with Polyanthus. All this enthusiastic planting was then followed by hoeing, weeding, and much dead-heading.

The volunteers optimistically persisted with a large group of Hostas, and the slugs continued to enjoy *cordon bleu* meals. The Hostas are now replaced with Clivias grown by a volunteer. The seat, purchased in memory of Mary

Morris by The Friends, is now *in situ* under the Maple in the front garden. More work is needed before it can be officially dedicated, but Ian Hutchinson has already done an excellent job raising the crown of the tree so that the seat has a sympathetic canopy.

The herb garden has been a triumph. Six months ago it was created through the generosity of The Friends' membership. It consisted of many plants, but also a lot of bare earth in-between. Now it is a forest of foliage and aroma. The studio garden, at the back of The Gables, had been much neglected. Now is the time to prepare it for regeneration. A new border has been established, and we are preparing to take out the two central grapevines. They have grown very vigorously,





but despite pruning and tying-in have failed to produce much of a crop. Our spring dreams of bottling "Chateau Gables" were dashed when the vines produced little more than a teaspoonful of grape juice. We shall retain the two outer vines to preserve their historic origins as they were propagated from a vine discovered in Stainton Dell, and are a direct link to the vineyard set up there in 1870s. The space created will be filled with *Rosa* 'Veilchenblau'.

Already waiting for planting in the new beds are three Mandarins, two Pomegranates, and one Lemon tree, and Cranberries, raised by a volunteer, are ready to become a hedge by the garden entrance near the herb bed. We also have

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# From the Volunteers cont'd

a magnificent specimen of *Hydrangea* 'Merveille Sanguine'. If we translate the name from Latin to English then that is what the studio garden will be next year.

The volunteers have not confined their work to The Gables. If, come spring, you stand at the Bowl and look up towards the bank below Jellyman Walk it will have an even more splendid display of Daffodils than last year. At least an extra thousand bulbs have been added. Not all the volunteers participated in this challenge. Only those with a cavalier disregard for life and limb. The more sensible ones occupied themselves with dead-heading and leaf raking.



Volunteers preparing for the planting of the daffodils

The Zoo, as part of its new signage, has included a superb large model of a Monarch Butterfly which stands in the middle of the lawn. It has proved to be very popular with children as they can be photographed in front of it. As part of our remit to assist with Park projects, The Friends have financed the purchase of a substantial collection of Swan plants. Spring next year will see a working party of volunteers creating beds and planting a backdrop to the butterfly. We hope this will not only enhance its attraction, but will also become a practical and educational exhibit demonstrating the Monarch Butterfly life cycle.

Volunteering at the park is a pleasure we all look forward to. Not only do we have time to set the world to rights but we do it in one of the most beautiful places in New Zealand, if not the world. However, surprising things still happen. Recently, whilst digging the new border in the studio garden, a mild expletive from one of our team made us turn round. A fork had just pierced an underground water main. This led to a varied discussion. Firstly, on the stupidity of laying a water pipe so shallowly, secondly, on the superb maintenance of the fork which had been so sharp that it had created a perfect puncture point and, thirdly, on the possibility of now installing a water feature in the studio garden. Ultimately, after further observations, it was decided a plumber should be sent for. The plumber had not arrived by the time we gathered our tools at the end of the morning's gardening. We paused to look back at our newly-created border and the jet of water that rose from it. At its maximum height it swung into an elegant arc fluttering in the breeze and breaking into a myriad of tiny droplets which glistened in an iridescence of rainbow colours. You could certainly see where we had been.

From the Fernery

#### **Recent activities**

# Donna Christiansen Technical Officer Fernery and Display Houses

During a busy summer with the TSB Bank Festival of the Lights from December to March we had 27,831 visitors through the Fernery and Display Houses at night and 12,858 during the day. Now we are gearing up for our winter activities cleaning, re-potting, and keeping warm.

In April, Mia Hurst, the first year apprentice from Pukeiti Rhododendron Trust, worked in the Fernery and Display Houses learning about the trials, tribulations, and triumphs of working in a glass houses environment. The Parks Team has initiated an exchange of apprentices and our apprentices have each had a month at Pukeiti which is a great way to gain a broader range of horticultural skills.

There are two new water features in the glass houses. One is in House 1 nestled in amongst the ferns, and the other is in the annex by the entry into the Begonia House. These are on loan from local artist Garry Cole who has sculpted them from coloured and polished concrete. They are a unique and natural design, and have been admired by many of our visitors.

We have been working on a new project in the annex. We have taken down the "Pukekura Hilton" as it did not meet Council building consent requirements. It had a small retaining wall and shelves built by the Hard Landscapes team. The shelves are to display hanging plants, creating a cascading wall of foliage that can also be viewed from House 3. In this new display we are show-casing our large collection of Begonias. The Display Houses are often associated with the summer display of the flamboyant large-flowered tuberous types, of which we grow more than 300 plants, but they are only one section of our collection. The Begoniaceae family is one of the largest among the flowering plants, with around 1500 species plus all the cultivars and varieties that have been bred over the centuries. Our collection of about 50 different species and cultivars represents a number of the horticultural-classified groups of begonias - canestemmed, shrub-like, thick-stemmed, Rex-cultorum, rhizomatous, trailing-scandent, and tuberous. The diversity of foliage and growth habits makes an interesting display, and we are working on naming the specimens to make the display more informative.



Photos Derek Hughes



Some pleasing texture, a bit of native colour and a taste of the tropics! A pleasant place to be on a chilly Taranaki day.

From the Friends

#### Wanderings and purposeful ambles

#### **Elise Smith**

The Friends enjoyed the dry and warm conditions in late summer with several wanderings and guided walks. The guided walks with David Medway visited some most familiar areas, the Brooklands lawn and Smith Walk, as well as the "remote", the Nature Trail. This track loops from Brooklands Zoo into native bush, through a clearing at Ambush Gully, between the towering Lawsonianas (*Chamaecyparis lawsoniana*) below Kaimata Street, and back through Kohekohe forest to Brooklands Lawn.

On Smith Walk we discovered that "Lilly Pilly" is a most confusing name applied to two trees from Australia. The large and gracious Lilly Pilly trees along Smith Walk are Acmena smithii, sometimes regarded as a pest plant, which have whitish fruits. The other Lilly Pilly species is Syzygium *australe*, which has purple-red fruits. We considered the difficulties of labelling the plants, and discussed the amazing variety of cultivars found in the Park. David shared his historical appreciation of early curators and their work. Did you know that W. W. Smith was the first person to rear Kiwi chicks in captivity, in an aviary on Hatchery Lawn? On our tour of Brooklands lawn we admired many plants, particularly the imposing



Camellia japonica 'Emperor of Russia'. Our slow pace enabled a family of ducks to accompany us !



I joined the Wanderers on their May walk down the new Racecourse–Bowl access road, now an aesthetically pleasing entrance to the Bowl. Compared to the Guided Walkers, we set off at a comparatively cracking pace, at well over 3km per hour ! We proceeded around Lily Lake and across the wetland boardwalk. The wetland plants are now well established and look most inviting habitat for frogs. Some early Rhododendrons were flowering, contrasting pinks to the golden palette of autumn provided by the Dawn Redwoods (*Metasequoia glyptostroboides*) fringing Lily Lake.

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Park Ecology

**David Medwav** 

### Karaka fruits and Tui in Pukekura Park and Brooklands

Numerous mature Karaka (*Corynocarpus laevigatus*) trees, some of them very large, grow throughout Pukekura Park and Brooklands ("the Park"), and Karaka seedlings are abundant throughout its bushed areas. Karaka have varying-sized crops of elliptical-shaped fruits each year. Those fruits begin to ripen in the Park in mid-January, are at their peak throughout February, and nearly all have fallen by mid-March.

During the 2010 fruiting season, I measured 1280 ripe Karaka fruits of which at least 100 of typical size were collected from under each of 12 trees growing in the Park that I selected for the purpose. Included among them is the only tree I found in the Park that had noticeably smaller fruits. The average size of the 1280 fruits measured was 38.7mm long x 23.0mm wide, and their width ranged from 16.3mm to 31.3mm. The authors of a recently-published paper in the *New Zealand Journal of Ecology* 34(1)(2010): 66-85) consider that Tui (*Prosthemadera n. novaeseelandiae*), with an average gape size of 9.7mm, should be able to swallow Karaka fruits of up to about 15mm in width. Karaka fruits of that size are rare in the Park. I searched specifically for exceptionally small fruits under the 12 trees whose fruits I measured. Only 25 of the innumerable fruits examined were less than 16mm in width. Perhaps not surprisingly, a large proportion of them were under the Karaka with the smallest average-sized fruits. The seeds of very small Karaka fruits may not be viable.



I was fortunate to obtain the accompanying photograph of an immature Tui feeding at a Karaka fruit in the Park on 9 February 2004. It clearly shows the Tui pecking at its flesh. Tui may theoretically be able to swallow small Karaka fruits, but that does not mean they do so in real life. There are no unequivocal records in the published literature of Tui swallowing Karaka fruits of any size anywhere in New Zealand. I spent a total of about 26 hours throughout the 2010 Karaka fruiting season specifically observing birds feeding at Karaka fruits in the Park. I saw only two Tui do so. Previously, I had seen only three Tui feeding at Karaka fruits in the Park. Undoubtedly Tui, which are present year-round in the Park, feed at Karaka fruits more often than I have noticed, but my few records of them doing so suggest that Karaka fruits are not a prime source of food for Tui there. All five Tui I have seen feeding at Karaka fruits in the Park, two adults and three immatures, pecked at and ate the flesh of ripe fruits which were far too large for them to swallow whole.