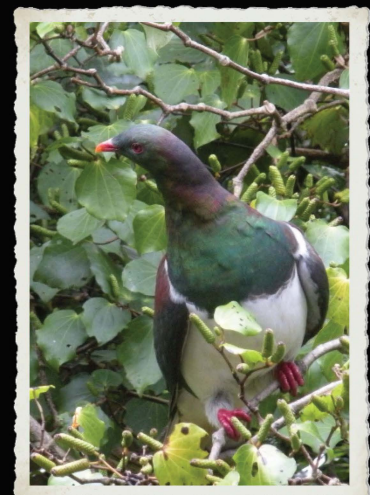
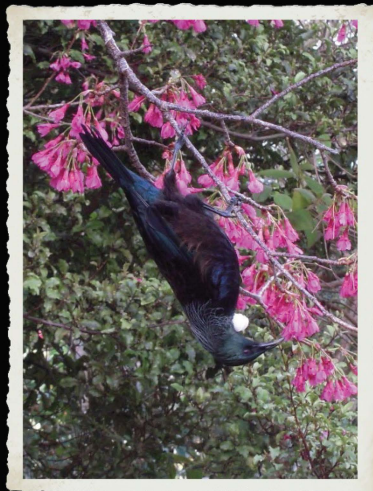




The Significant Plants of Pukekura Park

David Medway



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Foreword

The late David Medway was a lawyer and a noted ornithologist with a lifelong interest in birds and their sources of food. He realised that he lacked knowledge of plants and trees which birds frequented so he set about studying them and soon became obsessed with their true identification.

During 2007, when the Friends of Pukekura Park were commissioned by the New Plymouth District Council to undertake research to identify three hundred significant plants within Pukekura Park, David keenly took up the challenge with his knowledge and ability to research the subject. The number of plants grew to a great many more over the intervening years. Early records had often not been referred to in managing the park. Plants had been removed or relocated without reference to their historical values. The Friends had had a long-running objective to record the history and botanical significance of plants in the park and had been accumulating information through several other projects, such as the Kete and GIS projects.



David was on a treasure hunt, he spent innumerable hours collating information and tracing early sources for extra knowledge of a subject which had not normally been easy to research. He undertook a monumental task, incorporating the rich history with correct nomenclature and classifications, in this labour of love which took eight years to complete and which became an obsession as he discovered more details.

This publication represents the completion of his work. It has been collated and finished with the help of Elise Smith, Jasmine Lister and others since his sudden death in 2013. It has been adapted for use by modern technology, but it is fitting that it has been printed in hard copy form as he would have desired.

The George Mason Charitable Trust has kindly funded the work of Jasmine Lister, and the Friends of Pukekura Park have funded the publication of the work as a memorial to David, a stalwart of Pukekura Park for many years.

Adrienne Tatham

President, Friends of Pukekura Park Inc.

Introduction by David Medway

There are innumerable significant plants in Pukekura Park and Brooklands. Our mission was not to document all of them. It was to document significant plants of 500 species and varieties.

All of the park's notable trees as recorded by Smith and Fuller (2007), with the exception of several of their kauri, are included in this catalogue.

Twenty-two trees in Pukekura Park were included in the New Zealand Notable Trees Trust *New Zealand Tree Register* (www.notabletrees.org.nz) as at 1/1/2013. They are specimens recorded as: *Rhopalostylis baueri*, *Platanus occidentalis*, *Camellia japonica* 'Pukekura', *Camellia japonica* cultivar, *Phoenix reclinata*, *Castanea sativa* 'Paragon', *Camellia sinensis*, *Vitex lucens* (2), *Fagus sylvatica* var. *purpurea*, *Fagus sylvatica* 'Riversii', *Corynocarpus laevigatus*, *Dysoxylum spectabile*, *Aesculus x carnea* 'Briottii', *Pinus radiata* (3), *Cupressus macrocarpa*, *Pinus torreyana*, *Araucaria heterophylla* (2), and *Ficus macrophylla*. Two of these specimens, a *Pinus radiata* and a *Cupressus macrocarpa*, are considered to be notable specimens of international interest. Four of them are no longer extant. The others are also included in this catalogue.

Only five trees in the park are included, under DP 26–30, among the notable trees in Appendix 13 to the New Plymouth District Council 2005 Operative District Plan. They are recorded as one *Ginkgo biloba*, two *Araucaria heterophylla*, a *Quercus ilex* and a *Fagus sylvatica* var. *purpurea*. The last is no longer extant.

The earliest known botanical survey of Pukekura Park

The anonymous contributor of a lengthy article in the *Taranaki Herald* of 19 September 1925 considered that: to the botanist, Pukekura Park opened up "a field more prolific and fascinating than any in the Dominion". Included with the article was an account of a botanical survey of Pukekura Park, which must have been written by a person who was knowledgeable about native plants and the history of plantings in the park. This account was of the earliest known botanical survey of Pukekura Park. It provided an important record, indeed the only record, of the identity of many of the native plants to be found in the park half a century after the first trees were planted there on 29 May 1876 when the whole area was covered with "fern, furze and tutu". The account was reproduced by Medway (2008a) as it appeared in the *Taranaki Herald*, except that one or two minor printer's errors were corrected, and the currently accepted scientific names of the plants specifically referred to were added. It is repeated here.

A botanical survey

The park offers a very extensive field for the naturalist, and many fine and rare native trees are growing therein. Kauris (*Agathis australis*) grow rapidly. One fine specimen is 30 feet in height with a trunk five inches in diameter at a distance of four feet from the ground. The tree is seventeen years old. Several good specimens of tanekaha (*Phyllocladus trichomanoides*) are showing vigorous growth. This is the "celery-topped pine" of Hooker. The three species of totara (*Podocarpus* spp.) are growing rapidly, and there are groups of fine specimens ranging from five

to thirty-five years old. Ages of the rimu trees, of which there are several varieties (*Dacrydium* spp.), range from thirteen to thirty years. Miro (*Prumnopitys ferruginea*), planted from ten to twenty-one years ago, are growing robustly and are graceful young forest trees. A charm of the park is the puriri (*Vitex lucens*) trees, of rapid growth. The most magnificent specimens growing south of Kawhia are in Mr. Newton King's garden, adjoining the park.

The *Pinus insignis* (*Pinus radiata*) trees show the best and straightest growth in New Zealand. There are some splendid specimens of *Pinus torreyana*, which yields good timber for furniture and general work. The tree is a native of Puget Sound. American redwood pines (*Sequoia sempervirens*), which produce valuable timber, are showing good growth.

The six species of tree ferns are most admired by visitors from overseas. Taranaki is the home of the magnificent mamaku (*Cyathea medullaris*), the king of tree ferns. There are seven species of native orchids, which are of great interest in the flowering season. The large island at the head of the upper lake was planted with twenty-seven species of native plants twenty-three years ago. With two exceptions they succeeded well, and are a good illustration of the comparative growth of native trees under favourable conditions. There are forty-four species of native ferns and twenty-eight native mosses in the park. Some of both orders are beautiful and rare forms.

The park also contains a fine series of specimens of kaikomako (*Pennantia corymbosa*), kaikawaka (*Libocedrus plumosa*), kaiwhiria (*Hedycarya arborea*), karamu (*Coprosma robusta*), kakaha (probably *Collospermum hastatum*), karaka (*Corynocarpus laevigatus*), karo (*Pittosporum crassifolium*), kumarahou (*Pomaderris kumeraho*), kowhai (*Sophora* spp.) and kohekohe (*Dysoxylum spectabile*). Akerautangi (*Dodonaea viscosa*), horoeka (*Pseudopanax crassifolius*), horopito (probably *Alseuosmia macrophylla*), maire (*Nestegis* spp.), mairehau (*Phebalium nudum*), monoao (probably *Dracophyllum* spp.) and mauku (probably *Asplenium bulbiferum*) grow luxuriantly. Paratawhiti (horseshoe fern) (*Marattia salicina*), patate (*Schefflera digitata*), puahou (*Pseudopanax arboreus*), putaputaweta (*Carpodetus serratus*), and puwhaureroa (the bird-catching tree) (*Heimerliodendron brunonianum*) are well represented. Five species of rata (*Metrosideros* spp.) – two timber trees and three climbers – flourish. The rangiora (*Brachyglottis repanda*), rewarewa (*Knightia excelsa*) and wharangi (*Melicope ternata*) are very floriferous this season, and are very fine at present.

Thomas Horton's report on exotic trees in the park

(*Taranaki Herald* 1/10/1931, p. 5)

"It may be of interest to know what exotic trees are growing in the park, and the following is a fairly accurate list: 318 *Pinus insignis*, 38 *Cupressus macrocarpa*, 60 English oaks, 60 sycamore, 18 European silver birch, 12 poplars, 60 Japanese cherries, 150 *Benthamia fragifera*, 5 *Wellingtonia gigantea*, 5 *Cryptomeria japonica*, 30 *Sequoia sempervirens*, 6 *Cupressus lawsoniana*, 10 English ash, cypress of sorts, including *Goveniana*, *Knightiana*, *Mcnabiana*, and *Horizontalis*, *Thuja gigantea*, alder, plane, copper beech, Oregon pine, evergreen oak, *Salisburia adiantifolia*, scarlet oak, maples, *Paulownia imperialis*, acacias of sorts, English laurel, Canadian *Catalpa*, and several others. These come from many parts of the world and include the leading

varieties which are usually collected and planted in public parks. The total number of exotic trees is 997. Disease has killed a number of oak trees and these have been cut down. Sycamores in some portions of the park have become a nuisance, as they seed freely and young trees come up in thousands. These grow so rapidly that it becomes a fight to eradicate them. Prior to my taking charge thousands of these had taken root and grew in height from 4 feet to 12 feet, necessitating a great deal of labour and expense to grub them out. It has taken years to get rid of them, and thousands more are now coming on.”

An introduction to the plants in Pukekura Park

Land plants range from the mosses, to ferns, to flowering plants. The significant plants detailed in this book are in the categories of ferns, gymnosperms (with naked seeds often in cones) and angiosperms (flowering plants).

Ferns

These are an ancient group of plants, with fossil remains 360 million years old. There are approximately 12,000 species which reproduce using spores, having neither flowers nor cones. They do have a vascular system for conducting water and can have substantial trunks. They are generally found in damp conditions, so Pukekura Park provides an excellent environment naturally, as well as in the Fernery. The reproductive structures of ferns may sometimes be seen as a whole fertile frond, or seen in distinctive clusters, called sori, on the undersides of the fronds. The David Medway plant list identifies 11 significant types of fern in Pukekura Park.

Gymnosperms

There are three groups of significant gymnosperms in Pukekura Park: the conifers, cycads and ginkgo. Their ‘naked’ seeds develop on the surface of scales or leaves. Hence they are often seen held in cones or on the end of fleshy stalks.

Ginkgo

There is a sole living species of ginkgo, and it is often termed a ‘living fossil’. The plants have separate male and female plants. The David Medway plant list identifies the significant ginkgo specimens in the park.

Cycads

These plants have a long fossil history, have separate sexes and bear cones. They grow very slowly and live a very long time. The David Medway plant list identifies three different significant cycads in the park.

Conifers

These trees generally bear cones or have scales fused, which look like berries. The David Medway plant list identifies 88 different significant types of conifer in Pukekura Park with representatives of the major family groups. Of special interest are the Araucariaceae and Podocarpaceae which are descendants of the ancient forests of Gondwanaland. The park specimens range from common New Zealand native forest trees, to species from other southern hemisphere countries.

Flowering Plants

These plants are also known as the 'angiosperms' with flowers as their reproductive structures. It is a diverse group, with trees, herbs, submerged plants, underground plants and epiphytes. It is estimated that 352,000 species are flowering plants. Angiosperms are divided into two groups, the monocotyledons and the dicotyledons. Monocotyledons have a single embryonic leaf (in the seed); mature leaves generally have parallel veins and flower parts in threes, such as grasses and orchids. Dicotyledons have two embryonic leaves, and generally have leaves with a network of veins, and flower parts in multiples of four or five. The David Medway plant list identifies 335 different significant dicotyledons and 49 significant monocotyledons in Pukekura Park.

Pukekura Park has the reputation of being a haven for birdlife, which led David to document his observations in the Friends' magazine. The flowering plants provide a year-round supply of bird food, providing nectar and fruit as well as insects.

List of significant plants, by major groupings and families

Ferns

Family Cyatheaceae

Cyathea dealbata (silver fern, ponga). New Zealand native.

There are numerous fine examples of *C. dealbata* in the park. Among them are four very visible specimens on the edge of Sunken Dell. Two of them are beside the car park at the curator's former office and two (one of which has a new nameplate) are beside the vehicle access way from there to the tea house. Their planting dates are not known.

Cyathea medullaris (mamaku). New Zealand native.

This is the most common and conspicuous tree fern in the park where there are numerous fine examples, including many around the main lake. An excellent group is in a prominent position on the steep bank to the left of the waterfall.

Cyathea smithii (soft tree fern). New Zealand native.

This tree fern is not common in the park, but the following specimens can be noted here. Most of the planting dates are not known.

- (1). Three mature specimens, which are growing together beside the boatshed near the Boatshed Bridge.
- (2). One mature specimen on the north-east side of Fred Parker Lawn.
- (3). A large old specimen leaning over the lower pond in Stainton Dell, notable for the *Metrosideros perforata* vines that envelop the whole of its trunk.
- (4). Four specimens in waterwheel dell, of which one is a fine mature plant that is conspicuous from the bridge over the waterwheel. The three small specimens growing beside it were planted on 18/8/2006 (planting book 7/2004–9/2007: 34).

Family Dicksoniaceae

Dicksonia fibrosa (wheki-ponga). New Zealand native.

Stainton Dell. About 47 large specimens, which are growing around the two lakelets in the dell with a few others nearby. They were noted by Medbury (1986: 164). No doubt most or all of the specimens around the lakelets were included in the "load of tree ferns of the *Dicksonia fibrosa* variety" that was received from Tarata and planted out in mid-1927 (*Taranaki Herald*).

Dicksonia squarrosa (wheki). New Zealand native.

There are many specimens of this common tree fern throughout the park, including the following which are among the best examples.

- (1). A group in upper Primula Dell beside the lawn.
- (2). A group near the Fred Parker Lawn entrance to the Fernery.

Presumably these specimens were planted as groups, but their planting dates are not known.

Family Dryopteridaceae

Lastreopsis microsora (creeping shield fern). New Zealand native.

A native New Zealand fern, which is growing abundantly beside the former nature trail opposite the historic puriri at Brooklands.

Family Gleicheniaceae

Sticherus cunninghamii = *Gleichenia cunninghamii* (umbrella fern). New Zealand native.

There are three healthy groups of this fern growing close together beside Horton Walk near the Fernery entrance.

Family Marattiaceae

Ptisana salicina = *Marattia salicina* (king fern). New Zealand native.

This spectacular fern, now rare in the wild in New Zealand, is abundant throughout the park where it is regenerating naturally. Pure stands of it may be seen in King Fern Gully between the southern and eastern terraces at the sports ground, and in a gully beside the former nature walk near Kaimata Street at the southern end of Brooklands.

Family Osmundaceae

Todea barbara. New Zealand native.

A nationally endangered New Zealand fern. There are large specimens in the garden near the Poet's Bridge. This attractive fern appears to be regenerating naturally in the park. For example, there are young plants on the clay cutting on lower Racecourse Walk near the tea house.

Family Psilotaceae

Tmesipteris elongata (fork fern). New Zealand native.

Manhattan Island, near Goodwin Dell. This native New Zealand fork fern, which is uncommon in the park, grows as an epiphyte on the trunks of wheki (*Dicksonia squarrosa*) at the northern end of the island.

Clubmosses

Family Lycopodiaceae

Huperzia varia = *Lycopodium varium*. New Zealand native.

Brooklands lawn. The largest and best of the few known specimens of this native New Zealand clubmoss in the park hang down from the bases of clumps of *Collospermum hastatum* that are epiphytic on the large walnut (*Juglans regia*) at the southern end of the lawn.

Gymnosperms

Family Ginkgoaceae

Ginkgo biloba (ginkgo, maidenhair tree). China.

The following park specimens are worthy of record.

(1). Smith Walk, near the waterwheel. An impressive specimen with a gnarled trunk. Its planting date is not known. It does not appear in a comprehensive list compiled by Thomas Horton in the late 1920s of plants “Commencing at right-hand side of entrance from sports ground near lower lake and thence to Gilbert St gates” (Puke Ariki ARC2003–860, Box 3, Folder 28). Medbury (1986: 3) thought it was planted about 1940. This tree was also noted by Burstall (1973: 30) and by Smith and Fuller (2007: 142), who described it as “an extremely healthy tree in a well protected site”.

(2). Fountain Lake, at the foot of Cannon Hill. This tree is of historic significance. It was planted by Mr Fred Parker on 1/5/1976 as part of Pukekura Park’s centennial celebrations (planting book 1974–1976: 75; *Taranaki Herald* 1/5/1976: 1; Medbury 1986: 27; Smith and Fuller (2007: 141).

(3). List’s Garden, Maranui Gully. A very impressive female specimen, bearing many epiphytes, that was apparently planted by Clement Govett in about 1880. Burstall (1973: 20) considered this tree to be one of the largest *G. biloba* in New Zealand. It was noted by Medbury (1986: 396) and Smith and Fuller (2007: 140–141, Fig. 126). It is included as notable tree DP 26 in Appendix 13 to the New Plymouth District Council Operative District Plan. There is a photograph of it in the *Magazine of the Friends of Pukekura Park* 4 (1) (2009): 10.

Recent plantings of *G. biloba*:

(1). Kunming Garden. Eight specimens bordering the pathway from the Moon Gate to the pagoda, of which six were planted in 10 and 11/2004 (planting book 7/2004–9/2007: 19).

(2). Chinese collection, Coronation Avenue entrance. Seven specimens near the street that were planted on 20/6/2000 (planting book 6/2000–7/2004: 1).

Cycads: Family Cycadaceae

Cycas revoluta (sago palm). Japan.

Fred Parker Lawn, near Fernery entrance. The original specimen, planted on 28/1/1978, was donated by local nurseryman Fred Parker to commemorate the 50th anniversary of the opening of the Fernery and Display Houses. There is a photograph in the *Taranaki Herald* (14/2/1963: 7) of one of these cycads in bloom in Fred Parker’s garden. His specimen had been growing for about 40 years and that was the first time it had produced cones. The Pukekura plant probably originated from it. The present plant is a substitute, the original having been stolen. (See reference to original planting and photographs in the *Magazine of the Friends of Pukekura Park* 4 (3) (October 2009): 2–3).

Cycads: Family Zamiaceae

Lepidozamia peroffskyana = *Macrozamia peroffskyana* (pineapple zamia). Eastern Australia native.

Brooklands lawn. There are eight large plants of this cycad in one of the aloe beds at the north of the lawn. They were planted on various dates from 1984 to 1993, including one which was planted on 24/3/1993 as *Macrozamia peroffskyana* (planting book 9/1992–5/1993: 38). Three

specimens were planted on the former Vireya hillside at Pukekura on or about 18/6/1996 (planting book 9/1994–1997: 38).

Macrozamia miquelii (Burrawang). Eastern Australia native.

There are at least two plantings of *M. miquelii* in the park.

(1). Fred Parker Lawn. At least five specimens of this cycad are growing here, but the planting date has not been ascertained.

(2). Brooklands lawn, aloe bed. There are two plants growing here, but again the planting date is not known.

Cycad Collection: Hillside plantings above drive from the racecourse

Vireya rhododendrons, planted mostly in the 1990s, and the cycads growing there at that time, all of which were from the Fernery, were planted out on various dates between 1990 and 1996. They were:

Family Zamiaceae

Ceratozamia latifolia; *Encephalartos altensteinii*; *Encephalartos natalensis* x *woodii*; *Encephalartos transvenosus*; *Encephalartos umbeluziensis*; *Encephalartos villosus*; *Lepidozamia peroffskyana*; *Macrozamia communis*.

The following further 102 cycads, including more from the Fernery, were planted in this area on 14/9/2011 (planting book 9/2010–12/2011: 108876–108877).

Family Cycadaceae

Cycas revoluta (1); *Cycas thouarsii* (7).

Family Zamiaceae

Dioon edule (10); *Dioon spinulosum* (7); *Encephalartos cycadifolius* (7); *Encephalartos friderici-guilielmi* (5); *Lepidozamia hopei* (1); *Lepidozamia peroffskyana* (2); *Macrozamia miquelii* (1); *Macrozamia pauli-guilielmi* (1); *Macrozamia riedlei* (1); *Macrozamia spiralis* (1); *Zamia fischeri* (24); *Zamia furfuracea* (4); *Zamia loddigesii* (2); *Zamia pumila* (28).

The ***Macrozamia communis*** that was already growing there was relocated to Fred Parker Lawn, among others, in late 8/2011.

Conifers

Family Araucariaceae

Agathis australis (New Zealand kauri). New Zealand native.

There are about 263 New Zealand kauri trees in the park, many of which were planted in plantations at Fillis Street Gully and kauri grove by Thomas Horton in the 1930s (Medway 2010a, 2010c). Several of them were noted by Burstall (1973: 10, 14) and Medbury (1986: 56, 86, 95, 113, 132, 162, 243, 269, 353), and Smith and Fuller (2007: 15–31, Figs. 3–17) discussed many of them in detail. Only a selection of the many significant kauri in the park is included here.

(1). Monument Hill, northern end beside the pathway near Boatshed Bridge lawn. The “W. W. Smith Kauri” was the first kauri planted in Pukekura Park. Burstall (1973: 10), followed by Smith and Fuller (2007: 15), quoted the following passage from a letter by W. W. Smith, curator of Pukekura Park from 1908 to 1920, to the New Plymouth Parks and Reserves Department, dated 4/5/1936: “The young tree, when seven years old, was presented to the park by the late Captain Waller in 1909. It grew for two years in the lawn where the larger of two puriris are now growing. In March 1911 it was planted where it now grows. I attribute its rapid and vigorous growth to its being planted in the rich, black soil with which the walk was made. This soil was thrown out from the bottom of the extension of the lake above the upper bridge, by a gang of Maori who completed the work. The tree is growing in a warm and sheltered valley, which also greatly favours its growth.” This specimen was noted by Medbury (1986: 243). Smith and Fuller (2007: 15, Fig. 3) described it as a “healthy, superb specimen”. Burstall and Sale (1984: 255–256) included this specimen in their list of notable trees.

(2). Fred Parker Lawn. A large specimen planted on 17/10/1929 by Mayor H. V. S. Griffiths, to commemorate the formal handing over of Pukekura Park to the (then) New Plymouth Borough Council (*Taranaki Herald* 17/10/1929: 4–5). Burstall (1973: 10) noted it as an historical tree of local interest. Medbury (1986: 162) believed it to be the second oldest kauri in the park, but kauri on Horton Walk were planted five years earlier (see Medway 2011). Smith and Fuller (1986: 16, Fig. 4) noted that this tree “has a distinct lean to the north, probably due to its planting on a reclaimed swamp and shading from large pines on its southern side up to 1965”.

(3). Children’s playground, Pukekura. The “Bicycle Kauri”, included by Medbury (1986: 56). Smith and Fuller (2007: 31) recorded that in 1949 J. W. Goodwin, recently appointed curator of the park, was offered a young kauri by a resident of New Plymouth. “The transplanting procedure was unorthodox by any standards because of the height of the tree and absence of a vehicle to convey it. J. W. Goodwin’s solution was to detail a member of staff named Lou Schonbachler to accompany him on bicycle to the site and lift the tree. Not surprisingly for a young kauri, all the soil fell from the roots, whereupon they were appropriately covered and the tree was lashed between the two cycles. The slow procession of two men, two cycles, two spades and one young kauri wending through the town with Pukekura Park as the destination must have indeed been a strange spectacle. Under J. W. Goodwin’s expert skill the tree survived the ordeal and over 50 years later is a perfect specimen in an ideal site.”

(4). Horton Walk. There are 15 kauri beside the walk that were planted by Thomas Horton in 1924 (Medway 2011a). One or all of these trees were noted by Burstall (1973: 14), Medbury (1986: 113) and Smith and Fuller (2007: 26–27). Beginning at upper Horton Walk is a walking track that leads down the eastern side of the Fernery to Primula Dell and Fred Parker Lawn. Beside the upper end of this track are three fine kauri trees that presumably were planted at or about the same time as those beside Horton Walk. They were also noted by Smith and Fuller (2007: 27).

(5). Brooklands lawn, northern end. A large, multi-leadered specimen noted by Medbury (1986: 353). The planting date is uncertain, but probably it was the early 1900s. Smith and Fuller (2007: 30, Fig. 16) observed that such a multitude of leaders was atypical for a kauri.

(6). Cannon Hill, west face. This specimen was noted by Medbury (1986: 95), and by Smith and Fuller (2007: 30) who said: “This is a struggling tree on a very hungry site due to poor soil and intense root competition.” It is included here only because of its historic significance. It was planted by D. F. C. Saxton and A. Brodie on 1/5/1976 as part of Pukekura Park’s centennial celebrations (planting book 1974–1976: 7; *Taranaki Herald* 1/5/1976: 1).

Kauri Plantations

(1). Kauri grove, Brooklands

From 1936 to 1938, 500 kauri and many other native trees were closely planted by Thomas Horton in that part of Brooklands now known as kauri grove. Those kauri trees were most recently thinned in 2002–03. About 86 kauri remain in the grove (see Medway 2010c, 2011c).

(2). Fillis Street Gully

About 53 kauri still survive of those (and other native trees) that were planted by Thomas Horton in the gully from 1935 to 1939 (see Medway 2010a). This collection was mentioned by Burstall (1973: 14), Medbury (1986: 132) and Smith and Fuller (2007: 26, Fig. 13).

On 5/4/1934, a kauri donated by V. C. Davies was planted by R. C. Hughes in the presence of his wife, members of the park board and the park superintendent, at the southern end of the lily pond (now Hatchery Lawn) in recognition of the long association of Mr Hughes with the park. The chairman of the park board at the time, J. McLeod, expressed the hope that the tree would develop and reach a ripe old age. An account and photographs of this ceremony appeared in the *Taranaki Herald* (6/4/1934: 8, 11/4/1934: 3). The kauri was still present on that site in 1953 when it was suggested that it be signposted (*Taranaki Herald* 4/7/1953: 8), but it is no longer there. It is not known what became of it.

Agathis macrophylla (Pacific kauri). Islands of the south-western Pacific.

Brooklands lawn. There is a specimen in the northern aloe bed which was planted in 2010 (see *Magazine of the Friends of Pukekura Park* 6(1) (February 2011): 7).

Agathis robusta = *Agathis palmerstonii* (Queensland kauri). Queensland, Australia.

Above lower Racecourse Walk. There are three healthy and rapidly growing specimens that were planted on the former vireya bank on 28/10/2005 as *A. palmerstonii* (planting book 7/2004–9/2007: 22).

Araucaria araucana (monkey puzzle tree). Chile and Argentina.

Below the Scanlan Lookout. Fifty *A. araucana* were planted on the slope below Scanlan Lookout in 2001. This planting is probably unique in New Zealand because of its size (see *Magazine of the Friends of Pukekura Park* 3 (3) (October 2008): 4–6).

Araucaria bidwillii (bunya-bunya pine). Queensland, Australia.

Two specimens are included here.

(1). Jellyman Walk, near the main entrance to Brooklands. A large specimen which was planted on 10/9/1978 (planting book 1978–1979: 53). It was recorded by Medbury (1986: 306) whose number plate is still on the tree.

(2). Eastern hillside. A specimen which is of historic significance. It was planted on 20/11/2007 by Pukekura Park Curator Chris Connolly to commemorate the 1907 change of name from Recreation Grounds to Pukekura Park (see *Newsletter of the Friends of Pukekura Park* 3 (1) (February 2008): 8; planting book 9/2007–9/2010: 54). This specimen has a name plaque on a stand on the ground beside it.

Araucaria cunninghamii (hoop pine, Moreton Bay pine). Northern New South Wales and Queensland.

(1). Sunken Dell. There is a large specimen with a nameplate beside the western pathway from the Bellringer Pavilion car park to the tea house. According to Medbury (1986: 104), this tree was planted in 8/1959 and may have been quite large when planted out. It is the specimen referred to in planting book 1956–1959: 67.

(2). Cannon Hill. There is another smaller specimen of *A. cunninghamii* on the summit of the hill. It was probably planted along with other conifers in 8/1959 (planting book 1956–1959: 67).

Araucaria cunninghamii* var. *glauca (hoop pine, Moreton Bay pine). Northern New South Wales and Queensland.

Cannon Hill. Nearby, on the northern slope of the hill, is a specimen of *A. cunninghamii* var. *glauca* that was planted on 13/10/2005 (planting book 7/2004–9/2007: 21).

Araucaria heterophylla (Norfolk Island pine). Norfolk Island.

There are many fine specimens of *A. heterophylla* in the park, of which the following are noted here.

(1). Brooklands lawn. Two very large trees that dominate the skyline at the northern end of the lawn are believed to have been planted in about 1851 by Captain Henry King, the original owner of Brooklands. They were noted by Burstall (1973: 19), Medbury (1986: 365) and Smith and Fuller (2007: 90, Fig. 73), and are included as notable trees DP 27 and DP 28 in Appendix 13 to the New Plymouth District Council operative district plan. Burstall and Sale (1984: 256) included these specimens in their list of notable trees.

(2). Monument Hill, lower north face. A large and healthy specimen whose planting date has not been ascertained.

(3). Near Poet's Bridge, eastern side. This very tall specimen, which may have been planted about 1890, was noted by Burstall (1973: 27), Medbury (1986: 219) and Smith and Fuller (2007: 88, Fig. 72). A nearby pine, which fell during a storm on 3/5/1990, removed many of its lower lateral branches on the right-hand side. It is registered as a notable tree of national interest under TR/0766 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz).

(4). Near the curator's former office. This tall specimen, of uncertain planting date, is registered as a notable tree of local interest under TR/0951 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz). It was noted by Burstall (1973: 27), Medbury (1986: 111) and Smith and Fuller (2007: 89).

(5). Above the eastern terraces, beside Claffey Walk. A tall specimen noted by Medbury (1986: 131) that was probably planted in the mid-1930s.

(6). Cannon Hill, north face. This specimen is of historic significance. It was planted by Mr D. V. Sutherland, then mayor of New Plymouth, on 1/5/1976 as part of Pukekura Park's centennial celebrations (planting book 1974–1976: 75; *Taranaki Herald* 1/5/1976: 1; Medbury (1986: 88); Smith and Fuller (2007: 89).

(7). Upper Brooklands Park Drive. A row of fast growing specimens that were planted in a prominent position on the eastern side of the drive in mid-2000 (see the *Magazine of the Friends of Pukekura Park* 3 (3) (October 2008): 4–6).

Araucaria hunsteinii = *Araucaria klinkii* (klinki pine). Papua New Guinea.

Jellyman Walk. One large specimen near the main entrance to Brooklands that was planted on 10/9/1978 (planting book 1978–1979: 53). Medbury (1986: 305) identified it as *Araucaria klinkii*. Medbury's number plate is still on the tree.

Family Cupressaceae

Callitris rhomboidea (Oyster Bay pine). Eastern Australia.

Beside the Victoria Road car park. The only *C. rhomboidea* in the park, its planting date has not been ascertained.

Calocedrus decurrens = *Libocedrus decurrens* (incense cedar). Western North America.

There are three large specimens identified as this species.

(1). Flagpole hill, beside Mason Drive. Probably planted in the 1930s. Botanical Records Officer Ian Hutchinson (August 2013) considered it an example of *Cupressus macrocarpa* 'Aurea'.

(2). Totara hill. This specimen is growing at the northern end of the top track behind the racecourse caretaker's former house. The planting date is not known. It was noted by Burstall (1973: 27), Medbury (1986: 205), whose number plate is still on the tree, and Smith and Fuller (2007: 96).

(3). Monument Hill. One large specimen that was planted on 28/8/1961 as *Libocedrus decurrens* (planting book 1960–1962: 63). See conifer collection.

Chamaecyparis formosensis (Formosan cypress). Taiwan.

Eastern hillside plateau above Racecourse Walk. This tree was planted on 7/9/1965 (planting book 1965–1966: 40). It was noted by Medbury (1986: 202).

Chamaecyparis lawsoniana (lawsoniana). Western North America.

There are numerous lawsonianas in the park, of which the following selection of significant specimens is noted here.

(1). Beside the Hatchery Lawn. A very large and unique specimen features on the bank between the Hatchery Lawn and Hughes Walk. It was noted by Medbury (1986: 81) and by Smith and Fuller (2007: 222, Fig. 214), who described it as "a healthy tree with a very unusual form, branching into two co-dominant leaders at ground level".

(2). Beside lower Racecourse Walk, near the tea house. This very large specimen on the upper side of the path was noted by Medbury (1986: 155) and by Smith and Fuller (2007: 222, Fig. 213).

(3). Near the racecourse caretaker's former house. There is a very large specimen beside the track behind the house. Its planting date is not known, but it is the remaining one of two that were probably planted at the same time as other adjacent trees, including kauri and Norfolk Island pine, which appear to be of similar age.

(4). Near Rhododendron Dell. There is a group of four large and healthy specimens on the former boundary between Pukekura and Brooklands. They were noted by Medbury (1986: 232), whose number plate is still on one of the trees. Medbury thought they were almost certainly planted by Newton King before 1934 when the Rhododendron Dell was first planted out.

(5). Kaimata Street shelter belt. *C. lawsoniana* was used extensively in some shelter belts in the park, including that on the Kaimata Street frontage, which was planted on 22 and 23/7/1942. The former nature trail passes through the rows of tall lawsonianas which were planted on the southern boundary of the park at that time (Medway 2007a).

***Chamaecyparis obtusa* ‘Crippsii’** (hinoki cypress). Japan.

(1). Near the waterfall, Pukekura Park. Two specimens identified as this cultivar were planted at the commencement of Scanlan Walk near the waterfall on 22/7/1964 (planting book 1963–1964: 75). One of them, a large three-leadered specimen, is still present.

(2). Maranui Gully entrance. There are two good specimens of this cultivar in front of the toilet block near the Brooklands Bowl entrance to Maranui Gully. They are two of six specimens donated by Duncan and Davies on 7/9/1966. Presumably they were planted soon afterwards. They are referred to on planting plan WRH00024 by George Fuller dated 6/11/1968.

***Chamaecyparis obtusa* ‘Nana Aurea’** (hinoki cypress). Japan.

This tree at the Fernery entrance was identified by Medbury (1986: 161) and Smith and Fuller (2007: 109–110, Fig. 92) as *C. obtusa* ‘Nana Aurea’. Medbury said it was planted circa 1924–26 coinciding with the development of the Fernery lawn. Smith and Fuller described it as “a healthy colourful specimen that provides a very appropriate focal point to the entry of the fernery”.

***Chamaecyparis obtusa* ‘Tetragona Aurea’** (hinoki cypress). Japan.

The specimen by the lily pond bridge at Brooklands Bowl was identified as *C. obtusa* ‘Tetragona Aurea’ by Medbury (1986: 314), who said it was planted between 1955 and 1958.

Cryptomeria japonica (Japanese cedar). Japan and China.

This is the national tree of Japan. There are numerous specimens in the park, including the following:

(1). Western hillside above Hatchery Lawn. Perhaps the largest and best specimen in the park, which bears an old nameplate, is prominent beside the lower portion of the pathway leading up from the Moreton Bay fig (*Ficus macrophylla*) to the curator’s former house at 25 Victoria Road. Its planting date is not known. The native New Zealand epiphyte *Collospermum hastatum* is growing on its uppermost branches.

(2). Beside Fountain Lake. This specimen, near the control station for the fountain, was noted by Medbury (1986: 24) who thought it may have been planted in 1951. It has a nameplate. Medbury (1986: 121, 246) also noted specimens of *C. japonica* beside Claffey Walk and on Monument Hill.

(3). Japanese hillside, Pukekura Park. Sixty-two specimens of *C. japonica* were planted on this hillside on 28/6/1993 (planting book 5/1993–13/10/1993: 15) and more were planted subsequently. They were later thinned out, but a large number still remain.

***Cunninghamia lanceolata* ‘Glauca’** (blue Chinese fir).

In the past, the genus was usually treated in the family Taxodiaceae, but this family is now included within the Cupressaceae. There is one specimen on the eastern hillside plateau that was planted on 15/6/1993 (planting book 5/1993–10/1993: 11).

***Cunninghamia lanceolata* 'Konishii'** (Chinese fir). China, Taiwan and northern Vietnam.

Nine specimens of this monoecious evergreen tree have been located in the park, all of which are included here. Medbury identified trees of this species as *Cunninghamia konishii* which is now widely known as *Cunninghamia lanceolata* var. *konishii*, for this nomenclature see www.conifers.org.

(1). Jellyman Walk. There is a specimen near the main entrance to Brooklands. It was planted on 10/9/1978 (planting book 1978–1979: 53). Medbury (1986: 304) recorded it.

(2). Upper Hughes Walk, near Goodwin Dell. These two specimens were planted in 9/1976 (planting book 1976–1978: 11). Medbury (1986: 261) noted one of these trees.

(3). Near List Street entrance. Two specimens that were planted there in 1970 (planting book 1970–1971: 52).

(4). Ridge north of the curator's former house at 25 Victoria Road. The four specimens on the ridge were planted on 31/8/1977 (planting book 1976–1978: 64), one of which was noted by Medbury 1986: 87.

***Cupressus arizonica* 'Glauca'** (smooth Arizona cypress). South-west North America.

Victoria Road terrace. There are two specimens of this cypress growing on the terrace, one near the mid-point and the other towards the southern end. One of them was noted by Medbury (1986: 284), who said it was planted in 8/1953.

Cupressus cashmeriana (Kashmir cypress). Eastern Himalayas.

Brooklands lawn, four seasons border. The planting date of this good specimen is not known. It was noted by Medbury (1986: 371).

Cupressus macnabiana (Mcnab cypress). Northern California.

Beside the steps to the eastern lookout. This very large, but damaged specimen, is the only survivor of the *C. macnabiana* that Burstall (1973: 23) mentioned were in the park at the time of his survey. It was noted by Medbury (1986: 154) and by Smith and Fuller (2007: 123–124, Fig. 108). Medbury thought it was planted in about 1910.

Cupressus macrocarpa (macrocarpa or Monterey cypress). California.

(1). Brooklands. Burstall (1973: 28) considered this very large specimen, the remaining one of two that grew close together on the western side of Brooklands lawn, to be "one of the best of many large trees of this species in New Zealand". Medbury (1986: 368) observed: "This tree may represent the earliest planting of this species in N.Z. Some debate continues over the age of this planting. It is thought to be circa 1851 with the Norfolk Pines, although *Macrocarpa* is not recorded as present in N.Z. this early." According to Salmon and Salmon (2000: 40), *C. macrocarpa* was introduced into New Zealand about 1864 or 1865. Burstall and Sale (1984: 256) included this specimen in their list of notable trees. It is registered as a notable tree of international interest under TR/0763 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz). Smith and Fuller (2007: 124–125, Figs. 109, 110) observed: "Strong dieback in the canopy and decay at the base of the tree indicate some kind of root fungus. A combination of old age and this pathogen is expected to be the tree's demise in the near future."

(2). Beside Claffey Walk. Burstall (1973: 28) noted: "Between the band room and the SE corner of the sportsground, Pukekura Park, is a very striking group of six trees, remarkable for the fact that despite their size and good proportions, they are no more than 10 to 12 ft apart, and are arranged roughly in the form of a pentagon, with one in the centre." Their planting date is not known. Smith and Fuller (2007: 125) recorded that the most westerly tree in the group was blown down in 1982, and that the remaining five trees were showing signs of storm damage in an exposed site. Burstall and Sale (1984: 256) included the five surviving specimens in their list of notable trees.

***Cupressus macrocarpa* 'Aurea'** (golden Monterey cypress).

Victoria Road terrace. Four large specimens, probably all of this cultivar, are growing on the terrace. There is one at the northern end and a group of three at the southern end. According to Medbury (1986: 280), the group was planted about 1953 to 1955. The central tree of the group still has Medbury's number plate on it. It was host to a seedling of *Ficus macrophylla* (Moreton Bay fig) that was removed in 6/2011.

Cupressus sempervirens (Mediterranean cypress). Mountains of south-west Asia, Middle East and Mediterranean region.

Near the curator's former office. Burstall (1973: 28) recorded the measurements of one of four trees of *C. sempervirens* in this vicinity. This specimen was also noted by Medbury (1986: 109) and Smith and Fuller (2007: 126, Fig. 111).

Cupressus torulosa (Bhutan cypress). West Himalayas.

There are three large specimens of *C. torulosa* in the south-western corner of Brooklands beside Kaimata Street. Their planting date has not been ascertained, but they must have been planted by 8/1968 because they are noted on planting plan K101 which bears that date. The large specimen on the western slope of nearby Ambush Gully, *C. torulosa* 'Aurea' (golden Bhutan cypress) was planted on Arbor Day, 9/8/1969 (planting book 1968–1970: 59; *Taranaki Herald* 9/8/1969: 1; Medbury 1986: 413).

Glyptostrobus pensilis (Chinese swamp cypress). China and Vietnam.

G. pensilis is nearly extinct in the wild. (IUCN Red List Status: Critically Endangered). Two specimens in the park are worthy of note.

(1). By the lily pond bridge. A small specimen whose planting date has not been ascertained.

(2). Kunming Garden. A larger specimen that was planted on 12/8/2005 (planting book 7/2004–9/2007: 18).

Libocedrus plumosa = *Libocedrus doniana* (kaikawaka). New Zealand native.

(1). Fillis Street Gully. There are four large specimens in Thomas Horton's Fillis Street native botanical reserve that was originally planted between 1935 and 1939 (see Medway 2010a). One is in the bottom of the gully, and three are beside the pathway from Fillis Street to Claffey Walk. Two of them were noted by Medbury (1986: 133, 140) who thought they were planted about 1936, but the planting dates of these four specimens are uncertain because a specimen or specimens recorded as *L. plumosa* were planted in the gully in 7/1956 (planting book 1955–9/1956: 90). One beside the pathway still bears Medbury's number plate.

(2). Claffey Walk, near junction with Horton Walk. Medbury (1986: 124) recorded that this specimen was shifted there from Hatchery Lawn along with adjacent young rimus around the late 1950s.

(3). Monument Hill. Two specimens that were planted on 2/10/1959 as *Libocedrus doniana* (planting book 1956–1959: 77). See conifer collection.

Metasequoia glyptostroboides (dawn redwood). China.

(1). Palm Lawn. This specimen, which is prominent on the western side of the lawn, was recorded by Burstall (1973: 32), Medbury (1986: 50) and Smith and Fuller (2007: 159, Fig. 148) who said it was “a healthy tree growing in favourable conditions being sited next to a stream”. Medbury said it was originally planted at Brooklands in 8/1955 and transplanted to Palm Lawn in about 1956.

(2). Near the tea house. This specimen is beside the pathway between the curator’s former office and the tea house. Medbury (1986: 115) recorded, on the authority of Jack Goodwin, that it was planted in about 1950 and was the first *Metasequoia* planted in the park. Smith and Fuller (2007: 160) observed that it was a healthy specimen in a favourable locality close to a stream.

(3). Near Boatshed Bridge. A tall specimen is prominent on the large island near Boatshed Bridge. Its planting date is not known.

(4). Lily lake, Brooklands Bowl. According to Medbury (1986: 310), the healthy specimens on the southern bank of the lake, which colour well in autumn, were planted on 5/9/1966. We have not found a reference to them in the relevant planting book.

***Metasequoia glyptostroboides* ‘Sheridan Spire’** (dawn redwood).

Two specimens of the cultivar *M. glyptostroboides* ‘Sheridan Spire’ were planted beside the Brooklands Bowl stage around 26/8/1994 (planting book 10/1993–9/1994: 97).

Sequoia sempervirens (coastal redwood). California and southern Oregon.

(1). Behind Bellringer Pavilion. This large tree was noted by Medbury (1986: 100) and Smith and Fuller (2007: 200, Fig. 195) who described it as a fine specimen in excellent health. Its planting date is not known. Nearby, at the foot of Cannon Hill, are six more specimens of *S. sempervirens* of which two are now of quite impressive size. Their planting date is not known.

(2). Near Victoria Road, north of the curator’s former residence. Smith and Fuller (2007: 201) noted that the top of this large tree was subject to the severity of prevailing winds, which had retarded the growth and had given the canopy a flat top. Its planting date is not known.

(3). East-facing slope near the curator’s former residence. This large tree, sited on a slope where it is protected from westerly winds, has the largest diameter at breast height of all the *S. sempervirens* in the park (Smith and Fuller 2007: 201). It was apparently planted about 1890 (Medbury 1986: 85).

(4). Park boundary near List Street entrance. Smith and Fuller (2007: 201–202) considered that this row of about 16 *S. sempervirens* would become an extremely notable group in the future. Tree rings of one cut down around 2002 indicated that they may have been planted about 1940.

Sequoiadendron giganteum (giant sequoia or Californian big tree). California.

Until 1988, there were three large specimens of *Sequoiadendron* in lower Pukekura Park. Burstall (1973: 35) included one by the Bellringer Pavilion as an exotic notable tree of local interest. Smith and Fuller (2007: 205) recorded that this tree contained a minor co-dominant leader close to the top of the canopy, the vulnerability of which became apparent during Cyclone Bola in March 1988 when it failed and landed on an unoccupied utility vehicle in the nearby car park. The tree was considered to be a hazard and was felled in June 1988 (*Taranaki Herald* 25/6/1988: 9). Of the two remaining specimens, one is the large tree by the curator's former office, Medbury (1986: 108), and the other is beside the walk between there and the tea house. Medbury considered the former to be the best specimen of the three related plantings that existed in 1986. He thought it was a W. W. Smith planting (circa 1908 to 1922), but it and the other specimens may have been planted years earlier. At its meeting in September 1877, the Botanical Gardens Board (as it then was) thanked Mr J. T. Davis, a member of the board, for his "munificent donation to the Grounds of some Californian pines (*Wellingtonia Gigantea*)" (*Taranaki Herald* 11/9/1877, p.2). According to Smith and Fuller (2007: 205–206, Fig. 201), the two remaining *Sequoiadendron* were fine, healthy specimen trees. Both are included in this database as significant botanical specimens. They may also be of considerable historic interest if, indeed, they are survivors of some of the earliest trees planted in Pukekura Park after its opening in 1876. A photograph of the botanical records officer beside the specimen by the curator's former office in 5/2012 appeared in the *Magazine of the Friends of Pukekura Park* 7 (2) (2012): 7.

Taiwania cryptomerioides (Taiwan cedar). Taiwan.

Ambush Gully. This specimen was planted on Arbor Day, 9/8/1969 (planting book 1968–1970: 59). It was noted by Medbury (1986: 408).

Taxodium distichum (swamp cypress). South-eastern USA and Mexico.

Eastern end of Brooklands Bowl lake. There are several specimens of *Taxodium* here that Medbury (1986: 320, 321) noted under the name *Taxodium distichum*. These specimens are the remainder of 25 *T. distichum* that were donated by Duncan and Davies on 7/9/1966. Presumably they were planted soon afterwards. They are referred to by George Fuller on planting plan WRH00024, dated 6/11/1968.

Taxodium distichum* var. *imbricatum = *Taxodium ascendens* (pond cypress). South-eastern USA and Mexico.

Eastern end of Brooklands Bowl lake. There are several specimens of *Taxodium* here that Medbury (1986: 320, 321) noted under the name *Taxodium ascendens*. Medbury recorded that the two specimens of *T. ascendens* he mentioned were grafted on to *T. distichum* rootstock by George Fuller in about 1970.

Taxodium huegelii = *Taxodium mucronatum* 'McLaren's Falls' (Montezuma cypress). Mexico.

Stainton Dell, island in lower pond. This specimen, identified as the cultivar *T. mucronatum* 'McLaren's Falls', was planted on 16/6/1999 (planting book 5/1997–6/2000: 38). See (www.theplantlist.org).

Thuja occidentalis 'Elegantissima' (American arbor vitae or white cedar). Eastern North America native.

There are numerous ornamental cultivars. Hughes Walk, near the children's playground. The remaining two of three specimens that were planted in about 1964 are growing behind the toilets. Medbury (1986: 76) identified them as this cultivar.

Thuja plicata (western red cedar). Western North America.

(1). Victoria Road terrace. A large specimen is growing towards the southern end of the terrace. According to Medbury (1986: 286), it was planted in 8/1955.

(2). Hughes Walk, near the children's playground. Another smaller specimen of unknown planting date was near the toilets at the commencement of this survey. This tree, which did not appear to be very healthy, was cut down in 7/2013.

Thujopsis dolabrata (hiba cypress). Japan.

Monument Hill. One large specimen that was planted on 28/8/1961 (planting book 1960–1962: 63). It was noted by Medbury (1986: 252). See conifer collection.

Family Pinaceae

Abies balsamea (balsam fir). North America.

Near Bellringer Pavilion. This specimen beside the car park bears an older type of nameplate. It was noted by Burstall (1973: 26), Medbury (1986: 98) and Smith and Fuller (2007: 79, Fig. 65). According to Medbury (1986: 98), its planting date was not known but he thought it was before 1936. Unfortunately, this tree appeared to have died by 1/8/2013.

Abies fargesii (Farges fir). China.

Above Jellyman Walk. There is an unusual-shaped specimen of *A. fargesii* beside the picnic table above Jellyman Walk (planting plan NP66H). It was planted on 10/9/1978 (planting book 1978–1979: 53).

Abies grandis (grand fir). Western North America.

Four specimens are noted here.

(1). Eastern lookout plateau. A large specimen bearing a nameplate that was planted on 7/9/1965 (planting book 1965–1966: 37). It was noted by Medbury (1986: 216) whose number plate is still on the tree.

(2). Monument Hill. A smaller specimen that was planted on 2/10/1959 (planting book 1956–1959: 77). See conifer collection.

(3). Behind the south-eastern corner of Brooklands Zoo. Another large specimen that was planted on Arbor Day, 9/8/1969 (planting book 1968–1970: 64).

(4). Children's playground, Pukekura. Another specimen, noted by Medbury (1986: 66), is growing under the *Pinus torreyana* in the north-western corner of the playground. It was planted on 14/9/1965 (planting book 1965–1966: 42).

Abies holophylla (Manchurian fir). Northern China and Korea.

Eastern hillside plateau. This specimen was of historic significance. It was planted on 20/11/2007 by Peter Tennent, then mayor of New Plymouth, to commemorate the 1907 change of name from Recreation Grounds to Pukekura Park (see *Newsletter of the Friends of Pukekura Park* 3 (1) (February 2008): 8; planting book 9/2007–9/2010: 54). Unfortunately, this plant has since died.

Abies nordmanniana (Caucasian fir). Greece, Turkey and Caucasus.

(1). Cannon Hill. Two specimens of *A. nordmanniana* were planted on Cannon Hill in 8/1959 (planting book 1956–1959: 67). Two good specimens of *Abies*, probably both this species, are still growing on the hill, one on the summit. Another features at the foot of the north-western slope. It was noted by Medbury (1986: 89).

(2). Monument Hill. One specimen that was planted on 2/10/1959 (planting book 1956–1959: 77). See conifer collection.

Abies religiosa (religious fir). Mexico and Guatemala.

Mid-section of Racecourse Walk. This very large specimen, which bears a nameplate, was planted on 7/9/1965 (planting book 1965: 40). It was noted by Medbury (1986: 200) and Smith and Fuller (2007: 220, Fig. 212).

***Cedrus atlantica* 'Glauca'** (blue Atlas cedar). Algeria and Morocco native.

Victoria Road terrace. Two specimens of *C. atlantica* 'Glauca' were shifted from Vogeltown Walk (now Scanlan Walk) to nearby Victoria Road terrace on 30/8/1962 (planting book 1960–1962: 89). One of them, near the Shortland Street entrance, was noted by Medbury (1986: 278) whose number plate is still on the tree.

Cedrus deodara (deodar cedar). Western Himalayas.

Children's playground, Pukekura. According to Medbury (1986: 69), this specimen at the northern end of the playground was planted on 31/8/1949.

***Cedrus deodara* 'Aurea'** (golden deodar cedar).

(1). Lower Scanlan Walk. One specimen. Medbury (1986: 266) said this tree was planted on 9/8/1976.

(2). Victoria Road terrace. Two specimens of *C. deodara* 'Aurea' were shifted from Vogeltown Walk (now Scanlan Walk) to nearby Victoria Road terrace on 30/8/1962 (planting book 1960–1962: 89). The specimen at the northern end of the terrace, which was noted by Medbury (1986: 297), may be one of them. Medbury's number plate is still on the tree.

Keteleeria evelyniana (Yunnan youshan pine). Laos, Vietnam and southern China.

(1). Chinese collection, Coronation Avenue entrance. One remaining of two specimens that were planted on 22/5/2002 (planting book 6/2000–7/2004: 24).

(2). Kunming Garden. Four remaining of six specimens that were planted on 12/8/2005 (planting book 7/2004–9/2007: 18).

Larix kaempferi (Japanese larch). Central Japan.

Chinese collection, Coronation Avenue entrance. One of three specimens that were planted here on 6/9/1993 (planting book 5/1993–13/10/1993: 43).

Picea abies (Norway spruce). Europe.

One of the world's most valuable timber trees. Sunken Dell, near the tea house. This is a large specimen whose planting date is not known. Its old nameplate has "*Picea excelsa*. European Spruce". It was identified by Burstall (1973: 32), Medbury (1986: 107) and Smith and Fuller (2007: 172) as *Picea abies* (Norway spruce). It is the only *P. abies* in the park.

***Picea abies* 'Aurea'** (golden Norway spruce). Europe.

Fred Parker Lawn. The planting date of this healthy specimen on the southern side of the lawn has not been ascertained. It is the only example of this cultivar in the park.

Picea omorika (Serbian spruce). Western Serbia and eastern Bosnia.

Rare in its native habitat (IUCN Red List status: endangered) . Children's playground, Pukekura. According to Medbury (1986: 58), this tree was planted on 23/9/1949. It still bears the Medbury number plate. There are another five (young) specimens of *P. omorika* in the park – one on the hilltop near the eastern lookout and four growing together on the western hillside above Scanlan Walk.

Picea sitchensis (Sitka spruce). North American west coast.

Monument Hill. A specimen near Goodwin Dell that was planted on 2/10/1959 (planting book 1956–1959: 77). It is the only *P. sitchensis* in the park. See conifer collection.

Picea smithiana (Himalayan spruce). Western Himalayas.

(1). Cannon Hill. There is a very large specimen at the western foot of the hill near the fire dump. Its planting date is not known.

(2). Above mid-section of Racecourse Walk. This smaller specimen was planted on 7/9/1965 (planting book 1965–1966: 40). It was recorded by Medbury (1986: 194) whose number plate is still on the tree.

Pinus ayacahuite (Mexican white pine). Mexico.

Eastern hillside plateau, above Racecourse Walk. Two large specimens, one planted in 8/1962 and the other in 6/1963, according to Medbury (1986: 210).

Pinus nigra (European black pine). Central and south-east Europe, Turkey and parts of North Africa.

Burstall (1973: 33) recorded what he considered to be the best specimen in a group of this species that is prominent on the eastern hillside plateau. This specimen was also noted by Medbury (1986: 211) and by Smith and Fuller (2007: 174–175, Fig. 161). Those authors identified these trees as *P. nigra* ssp. *laricio* (Corsican pine). Their planting date is not known. For other specimens of *P. nigra* in the park see pine collections.

Pinus patula (Mexican weeping pine). Mexico.

Two specimens are noted here.

(1) Eastern hillside plateau, above Racecourse Walk. According to Medbury (1986: 206), this tree was planted in 8/1962.

(2). Beside the pinetum, Brooklands. This specimen is of historic significance. It was planted on 9/3/2009 by descendents of Newton King, to commemorate the 75th anniversary of the gifting of Brooklands to the (now) New Plymouth District Council (*Taranaki Daily News* 10/3/2009: 5; planting book 9/2007–9/2010: 66).

Pinus pinaster (maritime pine). Western Mediterranean region.

The following specimens are noted here. Their planting dates are not known, but they are obviously of considerable age. They are readily identified by their characteristic bark.

(1). Kaimata Street entrance. A fine specimen is growing among several very large *Pinus radiata* on the eastern side of the pathway near the Kaimata Street entrance.

(2). Totara hill. There are at least two large specimens on the hillside immediately to the east of the Boatshed. One which Medbury (1986: 218) noted in this locality had root rot and fell down in a storm on 3/5/1990.

(3). Racecourse stables. There is another large specimen just inside the park boundary beside the racecourse stables area. This tree is conspicuous on the skyline from upper Brooklands Park Drive to the south.

Pinus pseudostrobus (false Weymouth pine). Mexico.

Eastern hillside plateau, above Racecourse Walk. There is a large specimen beside the track leading to the eastern lookout. Medbury (1986: 209) said it was planted in 8/1962.

Pinus radiata = *Pinus insignis* (*radiata* or Monterey pine). California.

In September 1931, Thomas Horton, curator of Pukekura Park at the time, advised the Pukekura Park Board that: "Regarding pines, I feel it is my duty to draw attention to the fact that many of these noble trees are decaying, and I make bold to say that in 25 years not many of these will be living. Out of the 300 odd *Pinus insignis* growing in the park today, probably not more than 25 or 30 will live, and these will only exist because they happen to be in particularly suitable positions. During the last five years about 20 or 30 have died or collapsed and others are dying today. This applies to *P. insignis* and *C. macrocarpa* only, not to those noble *P. torreyana*, *strobus*, *pinea* and a few others. Some of these may live for a long period, being hardier than *insignis* and of slower growth." (*Taranaki Herald* 1/10/1931, p.5).

Brooklands, with its own specimens of *P. radiata*, was added to Pukekura Park shortly after Horton wrote. Now, some 80 years later, the park as a whole still has at least 40 "noble" *Pinus radiata* which are alive and generally appear healthy. Most were probably planted in the late 1800s. One of them, a very large specimen growing in King Fern Gully at Pukekura Park, fell during a storm on 12/7/2011. It had about 130 annual growth rings, indicating it had been planted about 1881 and was therefore one of the original *P. radiata* planted in Pukekura Park after it was officially opened in 1876 (*Taranaki Daily News* 5/8/2011, p.1).

Each of the large, old *P. radiata* that still survive in the park is a significant tree in its own right. Four of them are selected for inclusion here.

(1). Kaimata Street. There is a row of 18 specimens of *P. radiata* on the southern boundary of the park near the Kaimata Street entrance. They are very prominent from nearby streets. One of these specimens, the most easterly and largest of the group, was recorded by Burstall (1973: 33) as a notable tree of local interest. It was described by Smith and Fuller (2007: 177, Figs. 163, 164) as a “magnificent” specimen. One of these trees was also recorded by Medbury (1986: 406) who thought it was a Newton King planting.

(2). Behind Brooklands Zoo. This tree is registered as a notable tree of international interest under TR/0714 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz). It is considered to be one of the largest *P. radiata* in New Zealand.

(3). East of the Fernery. This tree, which is on the hillside between the band room and the Fernery, was noted by Burstall (1973: 33) and described by Smith and Fuller (2007: 178, Figs. 165, 166) as a “skyline tree of gigantic proportions very dominant from the eastern hillside”. It is registered as a notable tree of local interest under TR/0767 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz) where it is described as being a healthy tree with some storm damage.

(4). Cannon Hill. This impressive tree on the western side of the hill was recorded by Burstall (1973: 20) as an historic tree of local interest. He thought it had been planted by Jane Carrington on 29/5/1876, at the official opening of the park. It was also regarded as such by Medbury (1986: 36). Smith and Fuller (2007: 178–179, Fig. 167) described it as a “healthy tree of massive proportions”. It is registered as a notable tree of local interest under TR/0769 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz). However, it is not the “Carrington” *P. radiata*, which ceased to exist some decades ago. It may have been planted at the same time as that tree, but it may not be possible to determine now which, if any, of the many trees planted on that occasion still survive (Medway 2008b).

Pinus strobus* var. *chiapensis = *P. chiapensis*. Mexico.

Hatchery Lawn, beside pathway at foot of Cannon Hill. This specimen was planted on 16/6/1999 (planting book 5/1997–6/2000: 38) as *P. chiapensis*.

Pinus thunbergii (Japanese black pine). Japan.

Japanese hillside. Five specimens were planted there on 27/10/2005 (planting book 7/2004–9/2007: 22). Only one remained as at 1/5/2012.

Pinus torreyana (Torrey pine). Southern California.

Children’s playground, Pukekura. This very large and healthy specimen is now the only *P. torreyana* in the park where, as at 2003, there were three of them. One of two growing close together beside Hughes Walk at the western corner of the children’s playground, was considered by Burstall (1973:25) to be a notable tree of national interest. Burstall and Sale (1984:154–155) said it was the “largest and tallest of this species recorded in New Zealand, and a giant compared with those in the natural habitat in North America”. It was also noted by Medbury (1986: 65) and by Smith and Fuller (2007: 181, Figs. 169,170) who considered it to be a “fabulous” specimen. Smith and Fuller recorded that it was damaged by lighting strike in 2/1994. In 2001, a pair of kingfishers (*Todiramphus sanctus*) successfully nested in one of the holes they made in the decayed portion of the trunk where it had been damaged by the lightning strike. By 2003, that decay had reached the stage where the tree was considered to be a threat to public safety and it was decided that it should be removed. Accordingly, the tree was felled in 9/2003,

its total removal being completed on 24/9/2003 (see article in *Taranaki Daily News* 6/9/2003). Its approximate ring count was 95–100. According to Medbury, this tree was planted in about 1890. The *P. torreyana* remaining at this site would appear to be of the same age. It is registered as a notable tree of national interest under TR/0952 on the New Zealand Notable Trees Trust New Zealand Tree Register

(www.notabletrees.org.nzC:\Users\Elise\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\2S4ZO60E\www.notabletrees.org.nz).

In 6/2006, another notable *P. torreyana* of about the same age that grew beside Fountain Lake near Bellringer Pavilion, which was mentioned by Burstall and Sale (1984: 154) and recorded by Medbury (1986: 23) and Smith and Fuller (2007: 182), was also found to have been damaged by lightning and to be severely decayed in its main trunk and branch structure. It too was considered to be a threat to public safety and was felled in stages between 6 and 8/2006 (see article in *Taranaki Daily News* 22/6/2006). At that time, this tree supported the only known nesting colony in North Taranaki of the protected native little shag (*Phalacrocorax melanoleucos*).

Family Podocarpaceae

Dacrycarpus dacrydioides = *Podocarpus dacrydioides* (kahikatea). New Zealand native.

There are many fine kahikatea trees of various sizes in the park. Several specimens are selected here.

(1). Lower Stainton Dell, beside Racecourse Walk. Medbury (1986: 158) considered this very large male specimen near Fred Parker Lawn to be the largest of the species in the park. He thought it was planted about 1910. It was also recorded by Smith and Fuller (2007: 50).

(2). Upper Stainton Dell. There are large male and female specimens growing close together at the head of the left lobe of the dell, and a large female specimen at the head of the right lobe of the dell. One of these specimens was recorded by Burstall (1973: 16), and Smith and Fuller (2007: 49–50, Figs. 35–37) recorded two of them. They described the male tree thus: “A stunning specimen with a symmetrical form and a straight single trunk. A striking and decorative feature on this tree is the white lichen (*Sticta*) that enshrouds the majority of the lower trunk.”

(3). Brooklands Road. A row of large specimens, both male and female, grow on the eastern side of the road on the boundary with kauri grove. These trees were planted by Thomas Horton in 1936 (Medway 2010c). Other specimens, not included here, were mentioned by Burstall (1973: 16) and Smith and Fuller (2007: 50) on Saxton Walk near the Boatshed, and by Medbury (1986: 12, 41, 139, 231) on Smith Walk, the west side of Fountain Lake, in Fillis Street Gully and in Rhododendron Dell. Individual mature female kahikatea trees produce varying amounts of fruit in autumn. The fruit is a very important food for numerous birds of the park, including New Zealand pigeons (*Hemiphaga novaeseelandiae*), tui (*Prothemadera novaeseelandiae*), silvereyes (*Zosterops lateralis*), blackbirds (*Turdus merula*), song thrushes (*Turdus philomelos*), starlings (*Sturnus vulgaris*), and mynahs (*Acridotheres tristis*). A photograph of a tui swallowing a kahikatea fruit appeared in the *Newsletter of the Friends of Pukekura Park* 2 (1) (2007): 8.

Dacrydium cupressinum (rimu). New Zealand native.

There are many excellent specimens of rimu in the park. Some of those noted during the present survey were:

(1). Smith Walk. There are several excellent specimens beside Smith Walk, between the Gilbert Street entrance and the car park entrance to Fountain Lake. Ten specimens of *D. cupressinum* were included in a comprehensive list compiled by Thomas Horton in the late 1920s of plants “Commencing at right-hand side of entrance from sports ground near lower lake and thence to Gilbert St gates” (Puke Ariki ARC2003–860, Box 3, Folder 28). Those trees were probably planted in 1909 or 1910 by W. W. Smith, then curator of the park, when he was working on and planting out the Gilbert Street entrance and Smith Walk between there and the car park entrance to Fountain Lake (*Taranaki Herald* 7/9/1909, p.4; *Taranaki Daily News* 5/7/1910, p.2).

(2). Fountain Lake. There is a group of five healthy specimens that are prominent beside the pathway at the south-eastern end of the lake. Burstall (1973: 14) considered that it would likely become a notable group in future. They were recorded by Medbury (1986: 26) and by Smith and Fuller (2007: 52, 54). Little shags (*Phalacrocorax melanoleucos*) have recently nested in one of them.

(3). King Fern Gully, Pukekura. One of the best and largest specimens of rimu in the park is to be found on the up-hill side of the track in upper King Fern Gully.

(4). Horton Walk. There are about 16 rimu beside the walk that were planted by Thomas Horton in 1924 (Medway 2011a). One of them was recorded by Medbury (1986: 112).

(5). Near the tea house. There are about 10 fine specimens beside and near the cutting on lower Racecourse Walk and in the nearby grove.

(6). Eastern lookout. There are about seven very healthy specimens on the plateau above the lookout. They all appear to be of the same age, but their planting date has not been ascertained.

Halocarpus biformis = *Dacrydium biforme* (yellow pine). New Zealand native.

Behind Brooklands Zoo, western boundary. One specimen that was planted on Arbor Day, 14/8/1971 (planting book 1970–1971: 80).

Manoao colensoi = *Dacrydium colensoi* (silver pine). New Zealand native.

Fillis Street Gully, in Thomas Horton’s Fillis Street native botanical reserve that was originally planted between 1935 and 1939 (see Medway 2010a). A specimen recorded as *D. colensoi* was planted in the gully in 7/1956 (planting book 1955–9/1956: 90). According to Medbury (1986: 141), the specimen that is growing now on the eastern side in the bottom of the gully, which has his number plate on a wooden post in the ground beside it, was planted in 8/1963 (planting book 1963–1964: 41) as a replacement for the one planted in 1956. *M. colensoi* is the sole member of the *Manoao* genus (*New Zealand Journal of Botany* 33 (1995): 183–201).

Phyllocladus alpinus (mountain toatoa). New Zealand native.

Two specimens are noted here.

(1). Southern end of Boatshed Bridge. Judging by its size, the healthy specimen growing here is probably the remaining one of the two specimens that were planted on 12/10/1979 (planting book 1979–1980: 35), rather than the specimen that was planted here in 5/1998 (planting book 5/1997–6/2000: 17).

(2). Traffic islands garden, Brooklands. The remaining one of five specimens that were planted here in late 1980 (planting book 1980–1981: 21).

Phyllocladus hypophyllus (Malesian celery pine). Malesia region.

Horton Walk. There has been some uncertainty about the specific identity of this plant near the curator's former office at the bottom of Horton Walk. It was recorded by Burstall (1973: 16) and Medbury (1986: 114) as *Phyllocladus glaucus* (= *P. toatoa*) of New Zealand, but in 1995 it was identified by Dr Brian Molloy of Landcare Research as *Phyllocladus hypophyllus* of Malesia (Smith and Fuller 2007: 170). Burstall gave 1933 as the planting date, but Medbury and Smith and Fuller believed it was related to the planting of Horton Walk some years earlier. This may be the specimen donated by Francis Morshead as "Tanekaha (*Phyllocladus alpinus*)" on 25/9/1924, which no doubt soon after its receipt was probably planted out along with the rest of John Street Walk, which was renamed Horton Walk in 1949 (Medway 2011a).

Phyllocladus trichomanoides (tanekaha, celery pine). New Zealand native.

There are several good specimens of *P. trichomanoides* in the park. Four are noted here.

(1). Cannon Hill, northern base. An impressive large specimen, probably the best in the park, which was recorded by Medbury (1986: 97). Its planting date is not known.

(2). Near Poets Bridge. There is another large specimen beside Saxton Walk a few metres from the bridge. Its planting date is not known.

(3). Fountain Lake, beside car park entrance. This tree, which has a new nameplate, is growing very close to the large *Nothofagus solandri* (black beech) noted previously. It was recorded by Medbury (1986: 19). This plant does not appear in a photograph held in the curator's former office depicting the car park entrance from the western side of Fountain Lake in about 1895. It is the seventh entry in a comprehensive list compiled by Thomas Horton in the late 1920s of plants "Commencing at right-hand side of entrance from sports ground near lower lake and thence to Gilbert St gates" (Puke Ariki ARC2003-860, Box 3, Folder 28). This tree was probably planted in 1909 or 1910 by W. W. Smith, then curator of the park, when he was working on and planting out the Gilbert Street entrance and Smith Walk between there and the car park entrance to Fountain Lake (*Taranaki Herald* 7/9/1909, p.4; *Taranaki Daily News* 5/7/1910, p.2).

(4). Children's playground, Pukekura. A large specimen at the northern end which was recorded by Medbury (1986: 70). Its planting date is not known.

Podocarpus brassii. New Guinea.

Smith Walk, near Waterwheel. This specimen was planted on 5/5/2010 (*Planting Book* 9/2007-9/2010: 87). It is the only *P. brassii* in the Park.

Podocarpus cunninghamii (formerly *Podocarpus hallii*). (Mountain Totara). New Zealand endemic.

(1). Smith Walk. Thirteen specimens planted as *P. hallii* are included in a comprehensive list compiled by Thomas Horton in the late 1920s of plants "Commencing at right hand side of entrance from sports ground near lower lake and thence to Gilbert St gates" (Puke Ariki ARC2003-860, Box 3, Folder 28). Those trees were probably planted in 1909 or 1910 by W. W. Smith, then Curator of the Park, when he was working on and planting out the Gilbert Street entrance and Smith Walk between there and the car park entrance to Fountain Lake (*Taranaki Herald* 7/9/1909, p.4; *Taranaki Daily News* 5/7/1910, p.2). Medbury (1986: 5) noted one of them.

(2). Monument Hill. There is a large specimen beside the upper track on the western side near Goodwin Dell. It was noted by Medbury (1986: 244). Its planting date is not known. (3). Traffic Islands garden. There are two conspicuous multi-stemmed specimens of similar size and age on the grass verge on the western side of the garden. Their planting date is not known but it was probably before the Traffic Islands garden was first planted out in late 1980 (*Planting Book* 1980-1981: 21-24)

Podocarpus elatus (Plum Pine). East coast of Australia.

The only known specimen of this *Podocarpus* in the Park is immediately beside the steps leading up to Claffey Walk from lower Horton Walk. Its planting date has not been ascertained. As *P. elatus* is dioecious, then presumably this lone tree - even if it is female - will never bear fruits.

Podocarpus henkelii (Henkel's Yellowwood). South Africa.

Goodwin Dell, southern end. There is a good male specimen of this dioecious tree that is protected in its native habitat. (IUCN Red List Status: Endangered). Its planting date has not been ascertained. Four smaller specimens growing nearby were transplanted to the western face of Monument Hill when the garden in Goodwin Dell was restructured in 2010. *P. henkelii* was named after Dr J. S. Henkel (1871-1962), a Conservator for Forests in the Cape Province and KwaZulu-Natal, and later Director of Forestry in Zimbabwe.

Podocarpus macrophyllus (Kusamaki). Southern Japan and China. Kunming Garden.

There are two specimens near the Moon Gate. They were planted on 12/8/2005 (*Planting Book* 7/2004-9/2007: 17). See Appendix 1.

Podocarpus totara (Totara). New Zealand endemic.

Numerous specimens, many now large, have been planted throughout the Park over the years, for example, by W. W. Smith on Totara Hill in 1908, and by Thomas Horton on Horton Walk in 1924 and in Kauri Grove in 1936-1938 (Medway 2008d, 2010c, 2011a). Only a few of many fine specimens are specifically mentioned here.

(1). Smith Walk. Three specimens of *P. totara* are included in a comprehensive list compiled by Thomas Horton in the late 1920s of plants "Commencing at right hand side of entrance from sports ground near lower lake and thence to Gilbert St gates" (Puke Ariki ARC2003-860, Box 3, Folder 28). Those three trees were probably planted in 1909 or 1910 by W. W. Smith, then Curator of the Park, when he was working on and planting out the Gilbert Street entrance and Smith Walk between there and the car park entrance to Fountain Lake (Taranaki Herald 7/9/1909, p.4; Taranaki Daily News 5/7/1910, p.2). Medbury (1986: 18) noted one of them.

(2). Beside Fountain Lake. A very large and excellent specimen on the northern side of the lake is one of several trees in the Park in which protected Little Shags (*Phalacrocorax melanoleucos*) nest. It may have been planted shortly after Fountain Lake was created in 1893. This tree was noted by Medbury (1986: 49) and it still has his number plate on it.

(3). Horton Walk. There are nine Totara beside the walk that were planted by Thomas Horton in 1924 (Medway 2011a). There is a specimen which appears to be of a golden form - *Podocarpus totara* 'Aurea' - growing at the commencement of Horton Walk near the Rogan Street entrance.

(4). Totara Hill. An unusual specimen with five leaders is near the southern end of the upper track. Presumably, it was planted in 1908 along with other large Totara in this area.

Ripe Totara fruits in the Park, which are available mainly in about February-April, are a favoured food of several bird species including Tui (*Prosthemadera novaeseelandiae*) which may rapidly denude a tree of its crop - see article "Rapid depletion of Totara fruits by Tui" at www.pukekura.org.nz.

Prumnopitys ferruginea (Miro). New Zealand endemic.

(1). Goodwin Dell. This is probably the largest and best specimen of Miro in the Park. It is very prominent on the northern edge of the Dell. It was noted by Medbury (1986: 259).

(2). Fountain Lake. A good specimen at the junction of Smith Walk and the entrance to Palm Garden in the northern corner of the lake is probably the one noted by Medbury (1986: 15). This tree fruits well and is frequented by New Zealand Pigeons (*Hemiphaga novaeseelandiae*) when its fruits are available.

Medbury recorded this species as *Podocarpus ferrugineus* which is a synonym of *Prumnopitys ferruginea*.

Prumnopitys taxifolia (Matai). New Zealand endemic.

Matai are not common in the Park. Some of those planted in Kauri Grove by Thomas Horton in 1936-1938 (Medway 2010c) still survive. Specimens worthy of note elsewhere in the Park include:

(1). Near Tea House. There is a good specimen beside lower Racecourse Walk near the foot of the steps leading up to the Eastern Lookout.

(2). Goodwin Dell. There is a very large two-trunked specimen – the largest of this species in the Park - beside the track on the north-eastern side of the Dell. It was noted by Medbury (1986: 255) as *Podocarpus spicatus* which is a synonym of *Prumnopitys taxifolia*. His number-plate is still on the tree.

(3). Near Boatshed Bridge. There is a good specimen at the northern end of what was formerly known as "Manhattan Island" at the southern end of the main lake. This healthy plant is visible from nearby Boatshed Bridge.

Family **Sciadopityaceae**

Sciadopitys verticillata (Japanese umbrella pine). Japan native.

There are two specimens of this unique and ancient conifer in the park. It is the only member of the family *Sciadopityaceae* and genus *Sciadopitys*, and is considered to be a living fossil.

(1). Victoria Road frontage. A good specimen is growing in a prominent position near the former tennis courts. Its planting date has not been ascertained. A photograph of the characteristic foliage of this plant appeared in the *Magazine of the Friends of Pukekura Park* 8 (2) (June 2013): 3.

(2). Cannon Hill. An older specimen is growing among *P. trichomanoides* (tanekahas) on the northern base of the hill. Medbury (1986: 96) said it was planted in 1959.

Family Taxaceae

Taxus baccata (English yew). Europe, North Africa, south-west Asia.

Beside Fountain Lake behind the fountain station. It was believed that this tree, which bears a nameplate, was “a shoot from the original yew, one of four trees planted the day the park was opened to the public” (*Taranaki Herald* 2/11/1968: 5; Medbury 1986: 25). However, an English yew was not one of the four special trees planted by Jane Carrington during the formal opening of the park on 29/5/1876. The present tree may, instead, be a shoot from the English yew planted by Mrs T.K. Skinner on the same occasion, which was “little more than a stump” in 1929 (Medway 2008b).

***Taxus baccata* ‘Fastigiata’** (Irish yew). Europe and Asia.

Monument Hill. Two of the three specimens that were planted here on 2/10/1959 (planting book 1956–1959: 77). See conifer collection.

***Taxus baccata* ‘Fastigiata Aureomarginata’** (golden Irish yew).

Shortland Street entrance. This specimen was planted on Arbor Day, 11/6/1983 (planting book 1983: 25).

Conifer Collection: Monument Hill

Many different conifers were planted on Monument Hill on 2/10/1959 and 28/8/1961 (planting books 1956–1959: 77; 1960–1962: 63). Their identities and positions on Monument Hill, and those of subsequent additions, are depicted on planting plan M100 dated 15/7/1976. Medbury (1986) noted a few of them. Many of the oldest conifers still in the collection were removed in about 3/2005. There were 152 ornamental conifers planted in their place on 27/9/2007 (*Newsletter of the Friends of Pukekura Park* 3 (1) (2008): 8; planting book 9/2007–9/2010: 51–52). There are still several conifers on Monument Hill that were almost certainly part of the original plantings. They include the following specimens:

Calocedrus decurrens = *Libocedrus decurrens* (incense cedar). Western North America.

One large specimen that was planted on 28/8/1961 as *Libocedrus decurrens* (planting book 1960–1962: 63). Botanical Records Officer Ian Hutchinson (August 2013) considered it an example of *Cupressus macrocarpa* ‘Aurea’.

x *Cupressocyparis leylandii* (unresolved generic name) (Leyland cypress).

A specimen, identified by Medbury (1986: 251) as this hybrid, was planted on 28/8/1961 (planting book 1960–1962: 63). Another was planted in 6/1963 (planting book 1963–1964: 2). Three specimens identified as this hybrid were noted on planting plan M100 dated 15/7/1976. One of them has since been removed. Botanical Records Officer Ian Hutchinson (August 2013) considered that the two remaining specimens depicted on the planting plan as *Cupressocyparis leylandii* were actually examples of *Calocedrus decurrens*.

Libocedrus plumosa = *Libocedrus doniana* (kaikawaka). New Zealand native.

Two were planted on 2/10/1959 as *Libocedrus doniana* (planting book 1956–1959: 77).

Thujopsis dolabrata (hiba cypress). Japan.

One was planted on 28/8/1961 (planting book 1960–1962: 63). It was noted by Medbury (1986: 252).

Abies grandis (grand fir). Western North America.

One that was planted on 2/10/1959 (planting book 1956–1959: 77).

Abies nordmanniana (Caucasian fir). Greece, Turkey, Caucasus.

One that was planted on 2/10/1959 (planting book 1956–1959: 77).

Picea sitchensis (Sitka spruce). North American west coast.

One that was planted on 2/10/1959 (planting book 1956–1959: 77). It is the only *P. sitchensis* in the park.

Taxus baccata ‘Fastigiata’ (Irish yew).

Two of the three that were planted on 2/10/1959 (planting book 1956–1959: 77).

Pine Collections

(1). Pinetum, Brooklands

This collection was originally planted in 9/1961 (planting book 1960–1962: 65). A planting plan (P100) drawn in 1977, indicates that the following 21 identified pines were in the collection at that time: ***P. canariensis*** (Canary Island pine) (1); ***P. coulteri*** (coulter pine) (1); ***P. densiflora*** (Japanese red pine) (4); ***P. densiflora*** ‘Globosa’ (dwarf Japanese red pine) (1); ***P. flexilis*** (limber pine) (1); ***P. mugo*** (mugo pine) (1); ***P. mugo*** var. ***mughus*** (dwarf mugo pine) (1); ***P. nigra*** (European black pine) (1); ***P. palustris*** (longleaf pine) (1); ***P. patula*** (Mexican weeping pine) (1); ***P. peuce*** (Macedonian pine) (2); ***P. thunbergii*** (Japanese black pine) (4); and ***P. uncinata*** (mountain pine) (2). Specimens of all but one of these (***P. peuce***) were noted by Medbury who also noted another specimen that had been received as ***P. armandii*** (Chinese white pine) (Medbury 1986: 324, 327–331, 333–338). Medbury’s number plates are still on some of the trees. Another specimen of ***P. thunbergii*** and a specimen of ***P. caribaea*** (Caribbean pine) were planted in the pinetum on 16/6/1999 (planting book 5/1997–6/2000: 38).

(2). Eastern hillside plateau near lookout

Specimens recorded as ***P. lawsonii*** (Lawson’s pine) (1); ***P. szemaensis*** (Chinese pinyin) (1); ***P. taeda*** (loblolly pine) (1); and ***P. yunnanensis*** (Yunnan pine) (2) were planted in this area on 16/6/1999 (planting book 5/1997–6/2000: 38). The ***P. taeda*** was removed after its trunk was broken by very strong westerly winds on or about 6/7/2011. A healthy pine identified as ***P. wallichiana*** (Bhutan pine), planting date not ascertained, is growing near the *Allocasuarina torulosa* (forest sheoak). A specimen of ***Pinus nigra*** var. ***laricio*** (Corsican pine) on the northern side of the area is of historic significance. It was planted on 20/11/2007 by representatives of the Friends of Pukekura Park to commemorate the 1907 change of name from Recreation Grounds to Pukekura Park (see *Newsletter of the Friends of Pukekura Park* 3 (1) (February 2008): 8; planting book 9/2007–9/2010: 54).

Photos of ferns, conifers and palms

Dicksonia squarrosa, Stainton Dell



Oldest Kauri in Pukekura



Dacrydium cupressinum, Rimu



Chamaerops humilis, European palm



Palm Lawn, Parajuba palm and Judas Tree



Swamp Cypress and Dawn Redwood



Brooklands traffic circle with palms, *Puya* and aloes



Pinus patula



Flowering Plants: Monocotyledons

Family Alstroemeriaceae

Bomarea multiflora (climbing alstroemeria). South America.

Three specimens, probably of this species, were planted as *Bomarea sp.* on the wire fence beside Jellyman Walk near the main entrance to Brooklands, on 8/5/2002 (planting book 6/2000–7/2004: 23). They flower well from August to September.

Family Arecaceae

Archontophoenix cunninghamiana (Bangalow or king palm). Eastern Australia.

(1). Traffic islands garden, southern end. One large specimen that was planted on 11/10/1983 (planting book 1983: 94).

(2). Palm Lawn. Two specimens, one at the south-eastern entrance to the lawn and the other on the western side of the lawn. See palm collection.

Butia capitata (jelly palm). Brazil and Uruguay.

(1). Traffic islands garden. Two specimens, planting date not ascertained. There is a photograph of one of these plants in Smith (2011). The one at the western end of the Jellyman Walk had abundant green fruit in late 6/2011.

(2). Palm Lawn. A group of four specimens by the Judas tree. Planting date not ascertained. See palm collection.

Chamaedorea microspadix (hardy bamboo palm). Eastern Mexico.

Smith Walk. A group on the eastern side opposite the waterfall. Ten specimens of *C. microspadix* were transferred to Palm Lawn from Lower Racecourse Walk on 20/5/2005 (planting book 7/2004–9/2007: 12). They were transferred from Palm Lawn to their present location on Smith Walk on 1/9/2009 (2009 work diary).

Chamaerops humilis (European fan palm). Western Mediterranean region.

The northernmost naturally occurring palm in the world.

Brooklands lawn. As Burstall (1973: 25) noted, this large plant – the only specimen in the park – is multi-stemmed with formidable spines on its leaf stalks. Its planting date is not known, but it is almost certainly considerably more than 50 years old because it was already a sizeable plant when one of the present authors was photographed beside it in the mid-1950s. Smith and Fuller (2007: 216) described it as a “healthy significant specimen”. Native New Zealand plants growing epiphytically on this palm at the commencement of this survey were *Macropiper excelsum*, the perching lily (*Collospermum hastatum*) and the ferns *Asplenium polyodon* and *Asplenium oblongifolium*.

Dyopsis baronii (Madagascan cane palm). Madagascar.

Smith Walk, near the waterwheel. This specimen was planted on 5/5/2010 (planting book 9/2007–9/2010: 87). It is the only *D. baronii* in the park.

Hedyscepe canterburyana (umbrella palm). Lord Howe Island native.

Smith Walk. There are two specimens on the western side of the walk near the junction with the Fillis Street entrance. They are the survivors of three that were planted there on 4/10/2001 (planting book 6/2000–7/2004: 15).

Howea belmoreana (curly palm). Lord Howe Island native.

(1). Palm Lawn. There is a specimen at the northern end of the lawn. Its planting date has not been ascertained. See palm collection.

(2). Smith Walk. There are two specimens on the western side of the walk near the junction with the Fillis Street entrance. One of them was originally planted in the Devon Street Mall as *Kentia belmoreana* in 1975 (planting book 1974–1976: 18).

Howea forsteriana (Kentia palm). Lord Howe Island native.

(1). Fillis Street frontage. A tall specimen of *H. forsteriana* is conspicuous outside the concrete wall on the park boundary. It was originally planted in the Devon Street Mall in 9/1978 (planting book 1978–1979: 55).

(2). Smith Walk. There are three specimens near the Fillis Street entrance. They were planted as *Kentia belmoreana* on 11/8/1975 (planting book 1974–1976: 54).

(3). Palm Lawn. Four specimens are to be found there: two at the south-eastern entrance, one on the eastern side and one at the northern end. One of the specimens at the south-eastern entrance was originally planted in the Devon Street Mall in 9/1978 (planting book 1978–1979: 55). See palm collection.

Linospadix monostachya (walking stick palm). Eastern Australia.

Two plantings are noted here.

(1). A group under trees behind the tea house. Planting date not ascertained.

(2). Palm Lawn. A row of about 20 plants on the eastern border of the lawn. Planting date not ascertained. See palm collection. This species has edible red fruit in April.

Phoenix reclinata (Senegal date palm). Tropical Africa.

Brooklands lawn. According to Medbury (1968: 372), this palm was planted about 1920 and Burstall (1973: 24) considered it to be a notable tree of national interest. It is registered as such under TR/0132 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz). It was also noted by Smith and Fuller (2007: 169) and there is a photograph of it in Smith (2011). However, although it bears a New Plymouth District Council notable tree plaque, it is not on the current list of notable trees in the district plan.

Phoenix roebelenii (pygmy date palm). South-east Asia.

Lower Racecourse Walk. Three specimens in the flower beds at the front of the tea house were planted on 15/10/2001 (planting book 6/2000–7/2004: 17). They were moved from there to a position beside lower Racecourse Walk near Fred Parker Lawn in 11/2012.

Rhapis excelsa (miniature fan palm). Southern China and Taiwan.

Smith Walk. Ten specimens that were planted on the western side near the entrance to Palm Lawn on 20/5/2005 (planting book 7/2004–9/2007: 12).

Rhopalostylis baueri (Kermadec nikau). Kermadec Islands.

Two specimens are noted here.

(1). Behind Bellringer Pavilion. Considered by Burstall (1973: 25) to be *R. cheesemanii*, and a notable tree of national interest. He said it was “a vigorous specimen growing in a very sheltered position”. Medbury (1986: 101) noted that its age was unknown, but that it was likely to have been at least 50 years old in 1986. Smith and Fuller (2007: 196) considered it to be a “healthy specimen in a moist sheltered site”. This tree is TR/P0128 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz).

(2). Beside Bellringer Pavilion. At least one large *R. baueri*, identified as this species by a new nameplate, is growing with other nikaus in a prominent position in the garden at the southern end of the pavilion. Its planting date is not known.

Rhopalostylis sapida (nikau). New Zealand native.

R. sapida is the southernmost naturally occurring palm in the world. There are numerous fine specimens in the park, including many examples in the dell between the tea house and Fred Parker Lawn. Their planting dates are not known. See article “The Nikau – New Zealand’s only native palm” at www.pukekura.org.nz. There is some evidence that *R. sapida* and *R. baueri* growing in the park may hybridise. Nikau fruit is a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

Syagrus romanzoffiana = *Cocos plumosa* = *Arecastrum romanzoffianum* (queen palm). South America.

(1). Brooklands Zoo compound. There are three specimens at the southern end of the free-flight aviary. Their planting dates have not been ascertained.

(2). Palm Lawn. There are two specimens at the southern end of the lawn. See palm collection.

(3). Fillis Street. Two of three specimens planted here as *Cocos plumosa* are immediately to the right of the main entrance to the park. They were planted in or about 6/1985 (planting book 1984–10/1985: 61).

Trachycarpus fortunei (Chinese windmill palm). Central China to northern Burma.

Several specimens of those in the park are selected for inclusion here. They flower from October to November.

(1). Brooklands lawn. One very tall specimen. The larger of two palms situated beside the main walk in 1973 was considered by Burstall (1973: 25) to be a notable tree of national interest. Smith and Fuller (2007: 216) recorded that this specimen ceased to exist in the early 1980s. The surviving specimen is probably about 100 years old. There is a photograph of it in Smith (2011).

(2). Traffic islands garden. Four specimens at the northern end. Their planting date has not been ascertained, but it was probably not before the garden was first planted out in about 11/1980.

(3). Brooklands Zoo compound. There are six specimens in a row alongside the free-flight aviary. Their planting date has not been ascertained.

(4). Palm Lawn. Three specimens are at the southern end of the lawn. Their planting dates are not known. See palm collection.

Washingtonia robusta (Mexican fan palm). North-west Mexico.

Traffic islands garden, southern end. A very tall and conspicuous specimen whose planting date is not known.

Palm Collection

The Palm Lawn, Pukekura. A significant collection of palms of many species, including the following as at 6/2011:

Archontophoenix cunninghamiana (Bangalow or king palm). Eastern Australia.

Two specimens, one at the south-eastern entrance to the lawn and the other on the western side of the lawn. The latter was planted on 29/5/2001 by Claire Stewart, mayor of New Plymouth, to commemorate the 125th anniversary of the park (planting book 6/2000–7/2004: 10; *Taranaki Daily News* 30/5/2001: 1).

Archontophoenix purpurea (Mount Lewis king palm). Queensland, Australia.

Found naturally only in the Mount Lewis area of Queensland.

One specimen beside *the A. cunninghamiana* on the western side of the lawn was planted on 4/10/2001 (planting book 6/2000–7/2004: 16).

Butia capitata (jelly palm). Brazil and Uruguay.

A group of four specimens by the Judas tree. Planting date not ascertained.

Caryota mitis (fishtail palm). South-east Asia.

Two specimens at the southern end of the lawn received from local horticulturalist Keith Adams. Planting date not ascertained.

Caryota obtusa (giant fishtail palm). Himalayas.

Two specimens at the southern end of the lawn, the remaining two of three planted at Palm Lawn on 4/10/2001 (planting book 6/2000–7/2004: 15).

Caryota ochlandra (Chinese fishtail palm). China.

One specimen at the southern end of the lawn, the remaining one of three planted at Palm Lawn on 4/10/2001 (planting book 6/2000–7/2004: 15).

Ceroxylon ventricosum (Andean wax palm). South American Andes.

One specimen at the southern end of the lawn, the remaining one of six planted at Palm Lawn on 4/10/2001 (planting book 6/2000–7/2004: 15).

Chamaedorea elegans (parlour palm). Southern Mexico and Guatemala.

One specimen at the south-eastern entrance to the lawn. It was planted on 18/7/2007 as *C. seifrizii* (planting book 7/2004–9/2007: 42).

Geonoma undata (red crownshaft palm). Ecuador.

One specimen which was transplanted from the Fernery to the eastern side of the lawn on 25/5/2011 when it was about 10 years old and 2.5 metres tall. Unfortunately, this plant died a few months later from unknown causes.

Howea belmoreana (curly palm). Lord Howe Island native.

One specimen at the northern end of the lawn. Planting date not ascertained.

Howea forsteriana (kentia palm). Lord Howe Island native.

Four specimens – two at the south-eastern entrance, one on the eastern side and one at the northern end. One of the specimens at the south-eastern entrance was originally planted in the Devon Street Mall in 9/1978 (planting book 1978–1979: 55).

Linospadix monostachya (walking stick palm). Eastern Australia.

A row of about 20 plants on the eastern border of the lawn. Planting date not ascertained.

Livistona australis (Australian fan palm). Eastern Australia.

The largest of three specimens at the southern end of the lawn was recorded by Burstall (1973: 25), under the name *Sabal montana*, as an exotic notable tree of national interest. It was also noted by Medbury (1986: 48) and Smith and Fuller (2007: 152, Fig. 138). There is a photograph of this plant in Smith (2011).

Parajubaea cocoides (Quito coconut palm).

Until recently this species had been recorded only as being cultivated in Ecuador and Colombia and was not known with certainty from the wild. A newly discovered population in Peru may be the only wild population existing in South America.

A group of three *P. cocoides* was adjacent to the Judas tree. One of them was planted on 29/5/2001 by Claire Stewart, mayor of New Plymouth, to commemorate the 125th anniversary of the park (planting book 6/2000–7/2004: 10; *Taranaki Daily News* 30/5/2001: 1). This specimen has a name plaque on a stand on the ground beside it. The other two were planted on 4/10/2001 (planting book 6/2000–7/2004: 15). One of them flowered and fruited for the first time in late 2012. The other died and was removed in 2013.

Parajubaea torallyi (Bolivian mountain coconut palm). Native to Bolivia where it is threatened by habitat loss. (IUCN Red List Status: Endangered).

Three specimens beside the *P. cocoides* were planted on 4/10/2001 (planting book 6/2000–7/2004: 16).

Phoenix rupicola (cliff date palm). Indian Himalayas.

A large old specimen in the middle of the lawn. The planting date is not known. Mentioned by Smith and Fuller (2007: 152) as *Phoenix sp.* There is a photograph of it in the *Newsletter of the Friends of Pukekura Park* 2 (2) (2007): 6.

Rhopalostylis baueri (Kermadec nikau). Kermadec Islands.

One specimen at the northern end of the lawn. The planting date has not been ascertained.

Rhopalostylis sapida (New Zealand nikau palm).

A collection of specimens from different localities which were planted on or about 18/6/1996 and 4/10/2001 (planting books 9/1994–1997: 39; 6/2000–7/2004: 16).

Sabal minor (dwarf palmetto). South-eastern United States.

Ten specimens planted at the northern end of the lawn on 13/4/2011 (planting book 9/2010–12/2011: 108861).

Syagrus romanzoffiana = *Cocos plumosa* = *Arecastrum romanzoffianum* (queen palm). South America.

Specimens at the southern end of the lawn which were planted on or about 18/6/1996 and 18/7/2007 (planting books 9/1994–1997: 39; 7/2004–9/2007: 42).

Trachycarpus fortunei (Chinese windmill palm). Central China to northern Burma.

Three specimens at the southern end of the lawn. The planting dates are not known.

Trithrinax acanthocoma (Brazilian needle palm). South Brazil.

One specimen at the southern end of the lawn. The planting date has not been ascertained.

Family Asparagaceae

Agave attenuata (foxtail agave). Central Mexico.

Traffic islands garden at the western end of Jellyman Walk. This agave is uncommon in its native habitat, but is commonly grown as a garden plant. There is a group of several large specimens at the commencement of Jellyman Walk. Their planting date has not been ascertained.

Agave victoriae-reginae (Queen Victoria's agave). Mexico.

Aloe beds, Brooklands lawn. *A. victoriae-reginae* is a protected plant in its native habitat, where over-collection and habitat loss have reduced its numbers, but it is common in cultivation. Five specimens were planted in the eastern aloe bed, at least one of them on 24/3/1993 (planting book 9/1992–5/1993: 38). *A. victoriae-reginae*, like other agaves, flowers only once in its lifetime. Plants in cultivation may take 15 to 20 or more years before they flower. They produce a massive flowering spike with hundreds or even thousands of small, cream-coloured flowers. The plant dies after it flowers.

Cordyline australis (cabbage tree). New Zealand native.

There are many large specimens of *C. australis* in the park. Some of them are undoubtedly of considerable age. The ripe fruit is a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

(1). Brooklands Park. Smith and Fuller (2007: 47) recorded that the large specimen near the two notable Norfolk Island pines at Brooklands, which had been noted by Burstall (1973: 14) and later by Medbury (1986: 367), died of natural causes sometime in the early 1990s. Smith and Fuller noted a nearby specimen which is in a very prominent position under the easternmost Norfolk Island pine beside a seat near the pathway. They observed that the lower canopy of this tree contains a variety of different epiphytes. Those native epiphytes include large plants of *Collospermum hastatum*, *Griselinia lucida*, *Pyrrosia eleagnifolia* and *Asplenium polyodon*.

(2). Brooklands Zoo. Also of note is the group of large, very visible specimens growing beside the car park at the zoo. Their planting date is not known.

Cordyline banksii (forest cabbage tree). New Zealand native.

There is a group of this species by the steps at the junction of Claffey Walk and lower Horton Walk. They may be the only ones in the park. Their planting date has not been ascertained.

Cordyline obtecta = *Cordyline kaspar* (Three Kings cabbage tree).

Specimens of *C. obtecta* can be seen in the free-flight aviary at Brooklands Zoo.

***Cordyline obtecta* 'Green Goddess'**.

There is a good specimen of the cultivar *C. 'Green Goddess'* (*C. australis* x *C. obtecta*) at Victoria Road car park where seven specimens were planted on 27/6/1996 (planting book 9/1994–1997: 41).

Dracaena draco (dragon tree). Canary Islands, Cape Verde, Madeira, western Morocco.

Traffic islands garden at the western end of Jellyman Walk. A large specimen whose planting date has not been ascertained. It bears copious fruit.

Collospermum hastatum (perching lily, kahakaha). New Zealand native.

A dioecious New Zealand native. *C. hastatum* is abundant in the park as an epiphyte on a wide variety of introduced and native New Zealand trees. Plants sometimes fall to the ground and continue growing there. An example is a large group of female plants on the ground beside Claffey Walk near its junction with upper Horton Walk. Individual plants do not flower every year. Fruit of *C. hastatum* is ripe from late March to August, and New Zealand pigeons (*Hemiphaga novaeseelandiae*), tui (*Prosthemadera novaeseelandiae*), blackbirds (*Turdus merula*), mynahs (*Acridotheres tristis*) and house sparrows (*Passer domesticus*) have been observed eating it (see article about *C. hastatum* at www.pukekura.org.nz). Honeybees (*Apis mellifera*) obtain pollen from male flowers, and female flowers are a source of food for common wasps (*Vespula vulgaris*) which are abundant in the park during summer and autumn (Medway 2011b).

Family Bromeliaceae

Puya alpestris (puya). Chile.

According to planting plan NB21/23H, dated 5/1994, the *P. alpestris* in one of the aloe beds in the north-eastern corner of Brooklands lawn were planted in about 1980. Their unique flowers are present from December to February. Tui (*Prosthemadera novaeseelandiae*), mynahs (*Acridotheres tristis*) and house sparrows (*Passer domesticus*) have been seen feeding on the floral nectar. See article “Another exotic nectar source for New Zealand birds” under “Birds of the Park” at www.pukekura.org.nz.

***Puya* hybrids**

There is a large and spreading group of puya at the northern end of the traffic islands garden. Seed, supposedly of *P. berteroniana*, was received on 18/1/1994 from Tresco Estate, Isles of Scilly, Cornwall (planting book 10/1993–9/1994: 70). Three plants grown from them were planted as *P. alpestris* in the traffic islands garden on 25/7/2002 (planting book 6/2000–7/2004: 27). They produced their first impressively tall flower stalk in 2008. They have produced an increasing number of flower stalks each year since with seven in 10/2012. These plants, rather than being *P. berteroniana* or *P. alpestris*, appear to be hybrids of *P. berteroniana* and *P. chilensis*. Their abundant flowers with copious nectar appear in late September to early October and are present until late November to early December. During this period, these puya are the most spectacular flowering plants in the park. In addition, their flowers provide a significant source of floral nectar for tui (*Prosthemadera novaeseelandiae*), mynahs (*Acridotheres tristis*) and starlings (*Sturnus vulgaris*). There is a photograph of a tui feeding at the flowers of one of these plants on the cover of the *Magazine of the Friends of Pukekura Park* 5 (3) (October 2010).

Family Cyperaceae

Carex testacea (carex, New Zealand sedge). New Zealand native.

Traffic islands garden. Thirty specimens of this native sedge were planted on the eastern side of the garden on 23/9/2009 (planting book 9/2007–9/2010: 80), but they were removed in 9/2012.

Family Doryanthaceae

Doryanthes palmeri (giant spear lily). Australia native.

Native to north-east New South Wales and south-east Queensland. It is listed as vulnerable in the wild in New South Wales.

(1). Beside the curator’s office. A large specimen whose planting date is not known. It is probably the one which Medbury (1986: 299) noted.

(2). Eastern lookout. A large specimen whose planting date has not been ascertained.

(3). Traffic islands garden. The remaining two (now large) of three specimens that were planted here in late 1980 (planting book 1980–1981: 21).

(4). Brooklands Zoo compound. At the commencement of this survey, there was a group of four plants at the southern end of the free-flight aviary. Their planting date was not ascertained. One of them flowered and fruited well in 2011. They were all removed in 2/2012 to accommodate nearby structural alterations.

(5). Former vireya bank. Six specimens were planted here on the southern slope above Fred Parker Lawn on 20/9/2007 (planting book 9/2007-9/2010: 51).

This species flowers in the park from September to November. The flowers are a source of floral nectar for tui (*Prothemadera novaeseelandiae*) and starlings (*Sturnus vulgaris*).

Family Musaceae

Ensete ventricosum (Abyssinian banana). Ethiopia to Angola.

Upper Primula Dell. Nine specimens were planted here as *E. ventricosum* 'Maurelii' on 15/8/2007 (planting book 7/2004–9/2007: 45). They grew very rapidly. Six of them flowered from January to April 2011, and some of these fruited from October 2011 to January 2012. All subsequently died or were removed.

Family Orchidaceae

Earina autumnalis (Easter orchid). New Zealand native.

Fountain Lake. A large group of plants is growing epiphytically on an English oak (*Quercus robur*) at the south-west corner of the lake.

Earina mucronata (hanging tree orchid). New Zealand native.

Rhododendron Dell. An outstanding large group is growing on an old kowhai (*Sophora microphylla*). *E. mucronata* is epiphytic on many native New Zealand and introduced trees in the park (see the *Magazine of the Friends of Pukekura Park* 3(3) (October 2008): 12). It is far more common in the park than *E. autumnalis*.

Family Philesiaceae

Lapageria rosea (Chilean bellflower). Chile.

This climber is the national flower of Chile.

Three specimens of *L. rosea* were planted on the wire fence beside Jellyman Walk near the main entrance to Brooklands on 8/5/2002 (planting book 6/2000–7/2004: 23). They flower well in March. Local plantsman Glyn Church observed that *L. rosea* plants were very hard to come by (*Taranaki Daily News* 11/3/2011, p.14).

Family Poaceae

***Bambusa* spp.** (bamboo).

(1). Kunming Garden. There are six groups, each of many plants, of at least three species – one on each side of the Moon Gate, one beside the nearby information plaque and three beside the pagoda. Their planting dates have not been ascertained.

(2). Victoria Road car park. There is a very large and healthy clump of *Bambusa* beside the track behind the curator's former house at 25 Victoria Road, at the entrance from the adjoining car park. Its planting date is not known.

Family Restionaceae

Chondropetalum tectorum = *Elegia tectorum* (Cape thatching reed). South Africa.

Traffic islands garden. Thirty specimens of this reed were planted on the western side of the garden on 23/9/2009 (planting book 9/2007–9/2010: 80).

Family Strelitziaceae

Strelitzia nicolai (giant white bird of paradise). Eastern South Africa.

Fred Parker Lawn. According to Medbury (1986: 159), this group of tall specimens was planted in about 1955. Their white flowers, which appear from late December to January, are an occasional source of floral nectar for tui (*Prosthemadera novaeseelandiae*). There are younger specimens of *S. nicolai* at the southern end of Palm Lawn and beside Bellringer Pavilion. The Palm Lawn specimen flowered for the first time on 1/1/2013.

Strelitzia reginae (bird of paradise). South Africa.

Traffic islands garden. There are four large groups that were planted here in late 1980 (planting book 1980–1981: 23). These plants flower in November when they are an occasional source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

Family Typhaceae

Typha orientalis (raupo or bullrush). New Zealand native.

Rhododendron Dell wetland. The only specimens of this indigenous plant that are known to be in the park are in this wetland, which lies between Rhododendron Dell and the lily pond at Brooklands Bowl. Twenty-five specimens were planted there on 12/7/2006 (planting book 7/2004–9/2007: 25).

Family Xanthorrhoeaceae

Aloe arborescens (Krantz aloe). South-eastern Africa.

Traffic islands garden. There is a large group of these plants on the eastern side of the garden. Their planting date is not known, but presumably it was not earlier than late 1981 when the traffic islands garden was first planted out. Their flowers, which appear in winter, are a favoured source of nectar for tui (*Prosthemadera novaeseelandiae*) (Medway 2008). Some of the plants in this group died (for whatever reason), collapsed, and were removed on or about 22/5/2013 leaving some healthy plants that were just beginning to flower.

Aloe capitata. Madagascar.

Traffic islands garden. Thirty-five specimens were planted at the northern and southern ends of the garden on 23/9/2009 (planting book 9/2007–9/2010: 80). Their yellowish flowers, which appear from September to October, are a favoured source of nectar for tui (*Prosthemadera novaeseelandiae*) (Medway 2013).

Aloe cryptopoda (crown aloe). South Africa.

Traffic islands garden. There are about nine plants at the northern end and three on the eastern border of the garden. Five of them were shifted there from the Brooklands lawn aloe beds on 28/9/2009 (planting book 9/2007–9/2010: 80). Their flowers, which appear from September to November, are a favoured source of nectar for tui (*Prosthemadera novaeseelandiae*) (Medway 2008; 2013).

Aloe ferox (Cape aloe). South Africa.

Brooklands lawn. A large group of fine plants in the garden beside the Norfolk Island pines, along with other plants of various sorts in the immediate vicinity, was completely removed in 4/2011. There is another group of *A. ferox* in the northern aloe bed. Their planting date is not known. This aloe flowers in winter. Silvereyes (*Zosterops lateralis*) have occasionally been seen feeding at its flowers.

Aloe maculata = *Aloe saponaria* (soap aloe). Southern Africa.

Traffic islands garden at the western end of Jellyman Walk. Ten specimens from the aloe beds at Brooklands lawn were planted here on 23/9/2009 (planting book 9/2007–9/2010: 80). Their flowers, which are present from October to November, are a favoured source of floral nectar for tui (*Prosthemadera novaeseelandiae*) (Medway 2013).

Aloe plicatilis (fan aloe). Western Cape of South Africa.

(1). Traffic islands garden at the western end of Jellyman Walk. There was a large specimen here, planting date not known, but presumably not earlier than late 1981 when this area was first planted out. The flowers of this plant, which opened in late winter, were a favoured source of nectar for tui (*Prosthemadera novaeseelandiae*). A New Zealand pigeon (*Hemiphaga novaeseelandiae*) was photographed eating its large flower buds on 24/8/2005 (see article “An urban New Zealand Pigeon nest – the sequel” at www.pukekura.org.nz). Unfortunately, this specimen developed extensive rot in its main stems as a result of which it was removed in early 5/2013. Fifteen specimens of *A. plicatilis* were planted at the southern end of the traffic islands garden on 23/9/2009 (planting book 9/2007–9/2010: 80).

(2). There is another significant *A. plicatilis* on the western side of the largest aloe bed on Brooklands lawn. Its planting date has not been ascertained.

Aloe striata (coral aloe). Southern Africa.

Traffic islands garden. Thirty-five specimens were planted in the garden on 23/9/2009 (planting book 9/2007–9/2010: 80). Their flowers, which appear from September to November, are a favoured source of nectar for tui (*Prosthemadera novaeseelandiae*) (Medway 2013).

Aloe thraskii (dune aloe). East coast of South Africa.

Traffic islands garden. Six specimens of this tree-like aloe were planted in the garden on 23/9/2009 (planting book 9/2007–9/2010: 80). Three quite tall specimens that were planted at the northern end were subsequently, at various times, blown over by gale-force south-easterly winds, the last in early 3/2012. There are still two specimens of *A. thraskii* at the southern end of the garden. Their yellowish flowers, which appear in winter, are an occasional source of nectar for tui (*Prosthemadera novaeseelandiae*).

Phormium cookianum (New Zealand mountain flax, wharariki). New Zealand native.

There are many specimens in the park including behind Brooklands Zoo, at the Victoria Road car park and on the Victoria Road frontage and at Scanlan Lookout. These plants, which flower from October to early December, are an important source of floral nectar for tui (*Prosthemadera novaeseelandiae*). See article “Tui and the flowers of native flaxes” at www.pukekura.org.nz. Another photograph of a tui feeding at *P. cookianum* flowers appeared on the cover of the *Magazine of the Friends of Pukekura Park* 7(1) (February 2012).

Family Xeronemataceae

Xeronema callistemon (Poor Knights lily). New Zealand native.

(1). Traffic islands garden. A specimen of *X. callistemon*, apparently about 40 years old, was donated to the park. It was divided into three parts which were planted on the western side of this garden on 24/3/2009 (planting book 9/2007–9/2010: 67). These plants were removed on or about 11/9/2012.

(2). Fernery entrance. A group of plants whose planting date has not been ascertained is near the Fred Parker Lawn entrance to the Fernery. This species flowers in October.

Photos of flowering plants

Camellia japonica 'Triumphans' near the Tea House, and the flower



Camellia japonica 'Emperor of Russia', Brooklands.



Rhododendron Dell



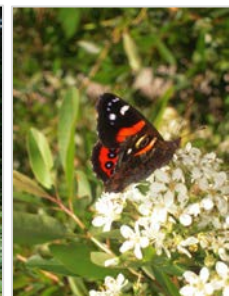
Sassafras albidum



Schefflera 'Condor'



Escallonia



Brooklands Lawn



Liriodendron chinense



Liriodendron tulipifera



Brooklands Lawn, *Rosa* 'Pillar Rose' with a *Liriodendron tulipifera* tree behind it



Kunming Garden and *Gordonia yunnanensis*



Metrosideros sp.



Brooklands *Metrosideros elegans* from New Caledonia



Several *Puya* species



Flowering Plants: Dicotyledons

Family Acanthaceae

Justicia aurea = *Jacobinia aurea* (yellow jacobinia). Mexico and Central America.

(1). Hatchery Lawn, southern end. There are several large specimens whose planting date is uncertain, but they may have been planted about 7/1987 when four *Jacobinia aurea*, some of which are still there, were planted at the nearby children's playground (planting book 9/1986–8/1987: 80). They flower in late May to June and are an occasional source of floral nectar for tui (*Prosthemadera novaeseelandiae*) and silvereyes (*Zosterops lateralis*). A photograph of the botanical records officer beside the Hatchery Lawn specimens in 5/2012 appeared in the *Magazine of the Friends of Pukekura Park* 7 (2) (2012): 8.

(2). Brooklands Zoo. Six specimens were planted here as *Jacobinia aurea* on 22/9/1986 (planting book 9/1986–8/1987: 4).

Family Altingiaceae

Liquidambar acalycina (Chang's sweetgum). Central and southern China.

(1). Chinese collection, Coronation Avenue entrance. One specimen that was planted in this garden on 22/5/2002 (planting book 6/2007/2004: 24).

(2). Kunming Garden. Three specimens were planted in Kunming Garden on 12/8/2005 (planting book 7/2004–9/2007: 18). One of them, at the southern end of the garden, was still extant at the beginning of this survey. One of its main limbs was broken off by gale-force south-easterly winds on 5/2/2013. The whole tree was removed by 25/2/2013.

Liquidambar orientalis (Oriental sweetgum). Eastern Mediterranean region.

Upper Stainton Dell. Medbury (1986: 185), who identified this healthy plant as *L. orientalis*, described it as a "sprawling shrub" and said it was planted in 8/1950. For whatever reason, it was cut down in early 2/2013.

Liquidambar styraciflua (American sweetgum). Eastern North America and eastern Mexico to Honduras.

(1). Brooklands lawn, western side. A very large specimen. Medbury (1968: 377) thought it was planted about 1900 by Thomas Boulton, Newton King's head gardener. Burstall (1973: 31) described it as a "handsome autumn tree". Smith and Fuller (1973: 149, Figs 132, 133) noted that a large cavity at the base of the tree was protected by tanalised timber inserted horizontally into the wound. Burstall and Sale (1984: 258) included this specimen in their list of notable trees. Sadly, this tree lost a few large limbs during gale-force south-easterly winds on 20/3/2012.

(2). The Gables. One large specimen. Unfortunately, this species is very susceptible to wind damage. The upper portion of this tree was damaged by strong south-easterly winds on 23/1/2011 and on 8/1/2012. It lost a few more limbs during gale-force south-easterly winds on 20/3/2012. A second large specimen that grew beside it was felled in 1/2010 after being damaged by strong south-easterly winds.

***Liquidambar styraciflua* 'Festeri'**.

Above Racecourse Walk. This specimen was planted as *Liquidambar* 'Festeri' on 7/9/1965 (planting book 1965–1966: 40). It was recorded by Medbury (1968: 195).

Family Anacardiaceae

Cotinus obovatus (American smoketree). South-eastern United States.

Above the mid-section of Racecourse Walk. Ten specimens are located here, six of which were planted on 17/7/1992 (planting book 11/1991–9/1992: 827).

Pistacia chinensis (Chinese mastic). Central and west China.

Kunming Garden. The remaining three of five specimens that were planted near the pagoda on 12/8/2005 (planting book 7/2004–9/2007: 18).

Family Aquifoliaceae

Ilex aquifolium (English holly). North Africa, west Asia, south and west Europe native.

(1). Horton Walk. There is a group of three specimens at the commencement of the walk near the Rogan Street entrance to the park. Medbury (1986: 117) said they were believed to have been planted during World War One. They are slowly declining in health. New Zealand pigeons (*Hemiphaga novaeseelandiae*) have been seen eating their fruit. Nearby, on the opposite side of the walkway, is another group of three large and healthy specimens of *I. aquifolium*. Their planting date is not known, but they appear to be younger than the first mentioned trees.

(2). Brooklands. The most spectacular example of *I. aquifolium* in the park is the unusual, multi-stemmed specimen which is prominent at the northern end of the lawn near the main entrance. Burstall (1973: 30) noted that this was a very old tree that had been kept pruned. Medbury (1986: 355) thought it was a Newton King planting of about 1900. Smith and Fuller (2007: 143, Fig. 127) described it as a "healthy interesting specimen that creates much curiosity".

(3). Another large specimen of *I. aquifolium* on the far side of the lawn near the pinetum is also worthy of inclusion here. It appears to be of similar age to the foregoing.

***Ilex aquifolium* 'Silver Queen'** (English holly).

There is a good specimen of the cultivar *I. aquifolium* 'Silver Queen' at the Kaimata Street entrance to Brooklands. It was planted on 10/9/1974 (planting book 1974–1976: 2). Medbury (1986: 402) noted it. This tree has abundant ripe fruit from February to March which is eaten by New Zealand pigeons (*Hemiphaga novaeseelandiae*).

Ilex pernyi (Perny holly). China.

There is a large specimen at the Kaimata Street entrance to Brooklands which was planted on 10/9/1974 (planting book 1974–1976: 3). It was noted by Medbury (1986: 404).

Family Araliaceae

Hedera canariensis (Canary Island ivy). Canary Islands.

An outstanding example of this evergreen plant as ground cover is on the northward-facing slope above Jellyman Walk. Its original planting date has not been ascertained.

Meryta sinclairii (puka). New Zealand native.

At the commencement of this survey, there were two large and healthy specimens at the New Plymouth District Council house beside the Brooklands Zoo car park. One of them was removed as a result of damage it suffered during strong south-easterly winds on 8/1/2012. For some reason, the remaining specimen subsequently declined rapidly in health and was dead by the end of 4/2012. Its remains were removed in 2/2013.

Pseudopanax crassifolius (lancewood). New Zealand native.

Two specimens are selected here.

(1). A specimen on the ridge north of the curator's former house at 25 Victoria Road is perhaps the largest of this species in the park.

(2). Rhododendron Dell. A large specimen in the central portion of the dell, which has a nameplate and still bears a Medbury (1986: 303) number. This tree has many native New Zealand plants as epiphytes including *Earina mucronata*, *Collospermum hastatum*, *Asplenium flaccidum* and *Pyrrosia eleagnifolia*. Silvereyes (*Zosterops lateralis*) have been seen eating its fruit.

Pseudopanax ferox (toothed lancewood). New Zealand native.

Seven specimens are noted here.

(1). Northern aloe beds, Brooklands. One large specimen whose planting date has not been ascertained.

(2). Victoria Road car park. There is a row of six specimens that were planted on 27/6/1996 (planting book 9/1994–1997: 41).

Pseudopanax laetus (large-leafed five finger). New Zealand native.

A healthy male specimen of the dioecious type is growing at the top of the track leading down from near the eastern lookout to the main lake near the Poet's Bridge. This plant is not very old, but its planting date has not been ascertained. Its flowers, which are present from August to September, are a source of floral nectar for tui (*Prothemadera novaeseelandiae*).

There are many *Pseudopanax* cultivars in the park. For example, specimens identified at the time as *P. 'Cyril Watson'*, *P. lessonii* (hybrid), *P. 'Purpurea'* and *P. 'Sabre'*, some at least of which are still present, were planted at the TSB Stadium entrance to Racecourse Walk on 4/8/1992 (planting book 11/1991–9/1992: 843).

Schefflera 'Condor'. Ecuador.

Upper Primula Dell. Five of six specimens of *Schefflera 'Condor'* received from Landsendts subtropical garden in Auckland were planted in upper Primula Dell on 4/10/2001 (planting book 6/2000–7/2004: 13, 16). Two of these plants still survived at the time of this survey. One of them flowered in late 2012. This apparently still unnamed very large-leafed *Schefflera* was introduced

to New Zealand by Dick Endt of Landsend. Endt named it 'Condor' after the Cordillera del C6ndor in Ecuador near where he found it in 1977 (Endt *The subtropical garden at Landsend – a plant collector's dream* 2009: p. 126–127. www.landsend.co.nz).

Family Argophyllaceae

Corokia macrocarpa (hokataka). Chatham Islands native.

Naturally uncommon in its native habitat.

Victoria Road terrace. There are three large specimens growing together near the northern end of the road frontage garden. Their planting date has not been ascertained. Tui (*Prosthemadera novaeseelandiae*) have been seen eating the ripe fruit.

Family Atherospermataceae

Laurelia novae-zelandiae (pukatea). New Zealand.

There are numerous large, naturally growing specimens of pukatea in the park, particularly in the Ambush Gully and Maranui Gully valleys. Smith and Fuller (2007: 61) observed that "large prominently buttressed trunks are common in this species in which many specimens decay at the base. It is common for large flanges to protrude from the lower trunk and remain as the major supportive structure as the core of the trunk decomposes." Several pukatea were noted by Burstall (1973: 15), Medbury (1986: 430, 157, 226) and Smith and Fuller (2007: 61–63, Figs. 46–49). Only two of many significant specimens are noted here.

(1). Lower Maranui Gully. According to Smith and Fuller (2007: 62, Fig. 49), "the best example of a massive hollow trunk with huge protruding buttress root flanges (only 5–10cm wide) characteristic of this species is found 110m from the Bowl of Brooklands security fence at the entrance to the Maranui Gully, located to the left of the track in a very swampy area. A truly remarkable tree that seems to be lifting itself out of the wet conditions." Burstall and Sale (1984: 258) included this specimen in their list of notable trees.

(2). Lower Stainton Dell, near the Fernery. There is a large and accessible specimen, which bears a nameplate, near the Fred Parker Lawn entrance to the Fernery. It was noted by Medbury (1986: 157).

Laurelia sempervirens (Chilean laurel). Chilean native.

Upper Primula Dell. This is the only specimen of *L. sempervirens* in the park. It was planted on or about 18/6/1996 (planting book 9/1994–1997: 39). *L. sempervirens* (Chile) and *L. novae-zelandiae* (New Zealand) are the only species in the *Laurelia* genus.

Family Berberidaceae

Berberis thunbergii 'Atropurpurea' (Japanese or red barberry). Japan.

Goodwin Dell. The remaining specimen of several that grew in the dell until the garden there was revamped in 2010. Its planting date has not been ascertained.

Mahonia lomariifolia (lily of the valley bush). Burma, western China.

(1). Upper Stainton Dell. There are three specimens together whose planting date has not been ascertained.

(2). Rogan Street entrance. Nine specimens were planted here on 9/8/2006 (planting book 7/2004–9/2007: 34).

Family Betulaceae

Alnus cordata (Italian alder). Southern Italy and Corsica.

(1). Ambush Gully. There are three large specimens at the northern end of the gully that were planted to replace all three *Alnus viridus*. Planted on 9/1976 (planting book 9/1976–6/1978: 4), one of which was recorded by Medbury (1986: 418).

(2). Near Pukekura Park tennis courts. Twenty specimens of *A. cordata* and other alders were planted here on 6/9/1993.

Alnus glutinosa (common alder). Europe and south-west Asia.

(1). Near Brooklands Bowl stage. There are two large specimens together on the eastern side of the stage, one of which was recorded by Medbury (1986: 317). Their planting date is not known.

(2). Brooklands Zoo compound. A good specimen in the alpaca enclosure is probably of this species. Its planting date has not been ascertained.

(3). Near Pukekura Park tennis courts. Ten specimens of *A. glutinosa* and other alders were planted here on 6/9/1993.

Alnus nepalensis (Nepalese alder). Himalayas.

Fountain Lake. There are two tall specimens of this fast growing species beside the landing at the southern end of the lake. They were planted about 1993, and are referred to in planting book 5/1997–2000: 14.

Betula pendula (silver birch). Europe, North Africa and northern Asia.

Two specimens are noted here.

(1). Children's playground, Pukekura. Medbury (1986: 61) said that the specimen on the eastern side of the playground was planted in about 1954.

(2). The Gables. Another specimen of unknown planting date is beside the driveway on the western side of the lawn.

Alder Collection: Near Pukekura Park tennis courts

Fifty specimens of the following *Alnus spp.* and cultivars were planted in this collection on 6/9/1993 (planting book 5/1993–13/10/1993: 42): ***A. cordata*** (20), ***A. glutinosa*** (10), ***A. glutinosa*** 'Imperialis' (1), ***A. rugosa*** (1), ***A. coburgii*** 'Ferdinand' = *A. ferdinandi-coburgii* (1), ***A. firma*** (2), ***A. inokuma*** = *A. trabeculosa* (4), ***A. glutinosa*** 'Laciniata' (1), ***A. rubra*** (10). Thirty-two of these specimens were extant as at late 8/2011.

Family Bignoniaceae

Handroanthus chrysotrichus = *Tabebuia chrysotricha* (golden trumpet tree). Venezuela.

Upper Racecourse Walk. There are five good specimens here. At least eight plants identified as *Tabebuia chrysotricha* have been planted in this area – three on 6/10/1986 (planting book 9/1986–8/1987: 11), two on 4/5/1992 (planting book 11/1991–9/1992: 823) and three on 4/5/1993 (planting book 5/1993–13/10/1993: 1). Their flowers appear in December. New Zealand pigeons (*Hemiphaga novaeseelandiae*) have been seen eating the new leaves.

Radermachera sinica (Canton lace). Subtropical mountain regions of southern China and Taiwan. Kunming Garden. Three specimens of this fast growing tree were planted beside the pagoda on 12/8/2005 (planting book 7/2004–9/2007: 18). One of them lost its top and a couple of limbs during gale-force south-easterly winds on 20/3/2012.

Tecomanthe speciosa (tecomanthe). New Zealand native.

A nationally critical New Zealand native found naturally only on the Three Kings Islands, but now grown extensively in parks and gardens. At the commencement of this survey, there were large and healthy specimens beside the free-flight aviary at Brooklands Zoo and on the netting fence below the pinetum. The plant at the zoo was probably one of the two planted there on Arbor Day, 14/8/1971 (planting book 1970–1971: 84, 85). It was removed in 2/2012 to accommodate nearby structural alterations.

Family Campanulaceae

Lobelia physaloides = *Colensoa physaloides*. New Zealand native.

An herbaceous northern New Zealand native that is in gradual decline in the wild. Its purplish flowers and unusual purplish berries are present from March to April. There is a group of these plants on the bank at the northern end of the lower lake in Stainton Dell, and another smaller group on the bank below the giant sequoia beside the pathway to the tea house.

Family Casuarinaceae

Allocasuarina torulosa = *Casuarina torulosa* (forest she-oak). Queensland and New South Wales. Eastern lookout plateau. A small specimen which is the remaining one of two that were planted here as *Casuarina torulosa* in 5/1998 (planting book 5/1997–6/2000: 17). It is the only specimen of *A. torulosa* in the park.

Casuarina equisetifolia (she-oak). Widespread in the Pacific.

Behind Brooklands Zoo on the western boundary. A large specimen planted on Arbor Day, 14/8/1971 (planting book 1970–1971: 82). Medbury (1986: 437) recorded it as this species.

Family Celastraceae

Euonymus lucidus (spindle tree). Himalaya region.

Two park specimens are noted here.

(1). Hughes Walk, near the children's playground. A large specimen that Medbury (1986: 74) said was planted on 23/9/1949. It was noted by Burstall (1973: 30) and by Smith and Fuller (2007: 133). This tree flowers well in November.

(2). Victoria Road terrace. There is another large specimen beside the road towards the northern end of the terrace that Medbury (1986: 285) recorded was planted about 1953.

Euonymus myrianthus (evergreen spindle tree). Western China.

Brooklands Zoo. The large euonymus on the eastern side of the zoo compound has been identified by local plantsman Glyn Church as this species (*Taranaki Daily News* 24/2/2012, p. 16). Its planting date has not been ascertained.

Maytenus boaria (mayten tree). Chile and Argentina.

Victoria Road terrace. At the commencement of this survey there were three very tall, multi-leadered and spindly specimens in a group beside the former tennis court steps. Medbury (1986: 291) recorded that they were planted on 6/9/1951. The largest one still bears his number plate. A dead leader of one of the other two was broken off near ground level in strong north-westerly winds on 2–3/3/2012. The whole tree was cut down on 20/8/2012.

Family Cercidiphyllaceae

Cercidiphyllum japonicum (katsura). China and Japan.

Boatshed Bridge. The largest and best specimen in the park, which was noted by Medbury (1986: 237), is conspicuous at the southern end of the bridge. It was planted on 12/10/1979 (planting book 1979–1980: 35). There are younger specimens on the Japanese hillside and in Goodwin Dell.

Family Chloranthaceae

Ascarina lucida (hutu). New Zealand native.

(1). Behind Brooklands Zoo on the western boundary. There are four good specimens growing together close to the zoo. One of them may be the specimen of *A. lucida* that was planted in this area on Arbor Day, 14/8/1971 (planting book 1970–1971: 82).

(2). Victoria Road car park. Ten specimens of *A. lucida* were planted here on 27/6/1996 (planting book 9/1994–1997: 41). There was a specimen beside the pathway behind the curator's former house at the commencement of this survey. It was subsequently removed.

Family Clethraceae

Clethra mexicana (Mexican clethra). Southern Mexico and Central America.

Above the mid-section of Racecourse Walk. This specimen was planted on or about 18/6/1996 (planting book 9/1994–1997: 37).

Family Compositae

Olearia argophylla (musk daisy bush). South-east Australia.

Beside Hughes Walk, near the Poet's Bridge. This large specimen was recorded by Smith and Fuller (2007: 165). Its planting date is not known.

Senecio grandifolius. Mexico.

Mid-section of Scanlan Walk. A group of large specimens whose planting date has not been ascertained. They flower profusely from February to March.

Family Cornaceae

Cornus capitata = *Benthamia capitata* = *Dendrobenthamia capitata* (Himalayan strawberry). Himalaya region.

This species has been in the park for many years and it is still represented there by mature and developing specimens most of which are undoubtedly chance seedlings. The fruit is a principal food for a large number and variety of birds, including tui (*Prosthemadera novaeseelandiae*) and New Zealand pigeons (*Hemiphaga novaeseelandiae*), when it is available from autumn to early winter (see, for example, the article "Himalayan Dogwoods as a food source for birds" in "Birds of the Park" at www.pukekura.org.nz). For this reason, it is important that mature and developing trees of this species be retained in the park.

Burstall (1973: 29) and Smith and Fuller (2007: 114, Fig. 96) recorded only a multi-trunked specimen beside Hughes Walk at the southern end of the main lake. The following specimens are selected for inclusion here because they are among those in the park that are the most visible or are regularly frequented by birds as a source of food when their fruit is available. At least three mature specimens that would have been included here were removed in the course of this survey.

- (1). Eastern hillside plateau. Two specimens, among the largest and perhaps the oldest in the park, that are growing close together. They may have been intentionally planted here.
- (2). Stainton Dell. Several mature specimens that are growing beside and overhang the pathway on the eastern side of the lower lake.
- (3). Poet's Bridge. A three-leadered specimen, which is prominent when flowering, at the eastern end of the bridge. It is host to the native New Zealand fern, *Pyrrhosia eleagnifolia*.
- (4). Near the tea house. A tall, two-leadered specimen that is beside the main lake outlet.

Cornus florida (flowering dogwood). Eastern North America.

Above the mid-section of Racecourse Walk. Four specimens were planted here on 7/9/1965 (planting book 1965–1966: 40). They were noted by Medbury (1986: 198).

Cornus kousa* var. *chinensis (Japanese flowering dogwood). Japan, China and Korea.

Rhododendron Dell. There are three healthy specimens on the southern slope of the dell. According to Medbury (1986: 238), they were planted between 1955 and 1957. Their flower heads in November and December have conspicuous large white bracts. Another specimen which Medbury noted (1986: 34) is at the southern end of Fountain Lake.

Cornus nuttallii (Pacific dogwood). Western North America.

Brooklands Zoo. It appears that at least three specimens of *C. nuttallii* were planted at the zoo at various times – one on Arbor Day, 7/8/1965, one by Mr. A. G. Honnor, mayor of New Plymouth, on Arbor Day, 5/8/1967 (*Taranaki Herald* 5/8/1967: 3) and one on 23/10/1979 (planting books 1965: 25; 1966–1967: 67; 1979–1980: 43). According to Medbury (1986: 466), the surviving specimen is the one planted on 7/8/1965. It is the only *C. nuttallii* in the park.

Davidia involucrata (handkerchief tree). Central and south-west China.

(1). Brooklands lawn, western side. According to Medbury (1986: 375), this large specimen was planted in about 1976.

(2). Kunming Garden. One specimen on the western border that was planted on 12/8/2005 (planting book 7/2004–9/2007: 18).

Griselinia littoralis (New Zealand broadleaf, kapuka). New Zealand native.

Middle section of Victoria terrace. There is a very large and healthy specimen on the road frontage near the former tennis court steps. Presumably this specimen was planted, but its planting date is not known.

Griselinia lucida (puka). New Zealand native.

Much information about the biology and ecology of *G. lucida* can be found in the *New Zealand Journal of Botany* 49 (2011: 461–479). There are many fine examples of *G. lucida* in the remnant native bush areas of Brooklands. Several large specimens can readily be found in the bush on the western and southern sides of Brooklands lawn where all of those noted are epiphytic on mature kohekohe trees, which are the dominant canopy trees in that area.

(1). An outstanding example of *G. lucida* is growing on a kohekohe in the bush immediately outside the western courts at the Pukekura Park Tennis Club. This impressive plant almost completely envelops the trunk of the host tree on which it is epiphytic along with *Collospermum hastatum*, *Astelia solandri*, *Pyrrhosia eleagnifolia*, *Asplenium flaccidum*, *Microsorium pustulatum*, and *Blechnum filiforme*.

(2). The specimen which was epiphytic on a kohekohe beside Fuller Walk on the eastern side of upper Maranui Gully, which Burstall (1973: 15) described as a “unique example of an epiphyte gradually assuming tree-size dimensions” and which Medbury (1986: 431) said was an “amazing” plant, had died and collapsed by 2002 following the death of its host plant (Smith and Fuller 2007: 58). Burstall and Sale (1984: 258) included this specimen in their list of notable trees.

(3). A large specimen also grew on one of the kohekohe which formed the mahogany archway on the racecourse bowl road. Unfortunately, the host plant became structurally unsafe and it, together with the *G. lucida*, was removed on 1/2/2012.

Nyssa sinensis (Chinese tupelo). China.

Kunming Garden. The remaining one of three specimens planted in Kunming Garden on 12/8/2005 (planting book 7/2004–9/2007: 18).

Nyssa sylvatica (tupelo). Eastern North America.

There are two large specimens in the park.

(1). Sunken Dell, near the tea house. Noted by Burstall (1973: 32), Medbury (1986: 106) who said it was planted on 6/7/1951, and Smith and Fuller (2007: 163).

(2). Primula Dell. Noted by Smith and Fuller (2007: 163) as being of almost identical appearance and proportions to that in Sunken Dell. Medbury (1986: 170) said it was planted in 6/1951. He recorded that both trees came to the park from Walter Hazelwood in Australia via W. D. Cook of Eastwoodhill.

Family Corynocarpaceae

Corynocarpus laevigatus (karaka). New Zealand native.

There are numerous karaka of all sizes and innumerable seedlings throughout the park. Ripe karaka fruit is an important source of food for birds in the park (Medway 2010d).

(1). Children's playground, Pukekura. A large and healthy specimen in a prominent position. It was laden with fruit on 29/1/2010, some ripening.

(2). Kunming Garden. There are three large specimens of the same size and age near the Moon Gate. At least two of them fruit prolifically each year. Their planting date is not known.

(3). Brooklands bush. A large, double-leadered specimen. Burstall (1973: 13) included it as an indigenous notable tree of national interest, and it is registered as a notable tree of local interest under TR/0138 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz). It was noted by Medbury (1986: 433) and Smith and Fuller (2007: 48, Figs. 33, 34).

(4). Nature trail, Brooklands. Another very large specimen is beside the former nature trail in the bush behind the zoo.

(5). List Street entrance, Brooklands Park. There is a significant grove of many large *C. laevigatus* trees at this entrance. Unfortunately, several of these trees were blown down by one of the tornadoes that struck New Plymouth on 19/6/2011 (*Taranaki Daily News* 20/6/2011).

Family Cunoniaceae

Ackama rosaefolia (makamaka). Northern New Zealand native.

(1). Behind Brooklands Zoo, western boundary. One of two specimens that were planted here on Arbor Day, 14/8/1971 (planting book 1970–1971: 81).

(2). Primula Dell. This specimen was noted by Medbury (1986: 166) who thought it was planted about 1954 during the initial development of Primula Dell.

Callicoma serratifolia (black wattle). Australia.

Kunming Garden. One specimen on the western border, planting date not ascertained but probably while that area was still part of the former nursery.

Weinmannia racemosa (kamahi). New Zealand native.

There are several specimens of *W. racemosa* in the park of which the following are noted here.

(1). Brooklands Park Drive. One of the best specimens in the park is at the entrance to kauri grove beside Brooklands Road. It usually flowers well from October to November.

(2). Sunken Dell. There are two specimens in a prominent position at the southern end of Sunken Dell near the tea house.

Weinmannia silvicola (tawhaero). New Zealand native.

Three specimens in the park are noted here.

(1). Horton Walk. A good specimen at the bottom of the walk is of historic significance. It was planted on 24/2/1991, during the Horton family reunion (23–24/2/1991) as a memorial to Thomas Horton (planting book 1990–2/1991: 243; *Taranaki Daily News* 25/2/1991: 4).

(2). Near The Gables. There is another good specimen standing alone on the frontage of the large lawn on the zoo side of The Gables. It flowers well from January to February. Wasps and other insects feed at the flowers. Its planting date is not known.

(3). Near Brooklands Zoo. A mature specimen is growing beside the track outside the western boundary of the zoo. It was planted on Arbor Day, 14/8/1971 (planting book 1970–1971: 81). Medbury (1986: 435) recorded it.

Family Elaeagnaceae

Elaeagnus x reflexa (elaeanus). Japan.

Sports ground. A remnant of what obviously was a much more extensive hedge of this plant is on the hilltop above the eastern terraces at the sports ground. This elaeagnus is classed as a weed in New Zealand. Nevertheless, this hedge is of some historic significance because it has been there since the very early days of the park. Being dense and spiny, it was probably planted as a deterrent to persons gaining free access when events for which an admission charge was payable were taking place at the ground. It was already a large hedge by 1914, when it is visible in a photograph by F. G. Radcliffe which depicts the eastern terraces from Fountain Lake (F.G.R. 4749 held in the park curator's office). Thomas Horton, curator of the park, referred to this hedge in 1936 when he did not recommend planting pines or similar large growing trees "near the top of the eastern terraces and on the sports ground side of the hedge" (*Taranaki Herald* 22/4/1936, p. 3).

Family Elaeocarpaceae

Aristotelia serrata (wineberry). New Zealand native.

Behind Brooklands Zoo on the western boundary. This is probably the specimen planted here on Arbor Day, 14/8/1971 (planting book 1970–1971: 81).

Elaeocarpus dentatus (hinau). New Zealand native.

Hughes Walk, near the Victoria Road entrance. A large specimen that Medbury (1986: 72) thought was planted about 1920. It was also noted by Burstall (1973: 15), who considered it to be the finest hinau in the park, and by Smith and Fuller (2007: 56–57, Fig. 45). Burstall and Sale (1984: 255) included this specimen in their list of notable trees. The only other hinau found in the park during the present survey is a large specimen that is growing in the bush on the northern hillside above the lily pond near Brooklands Bowl.

Elaeocarpus reticulatus = *Elaeocarpus cyaneus* (blueberry ash). Eastern Australia.

(1). Victoria terrace, northern end. Medbury (1986: 294) recorded this specimen as *E. cyaneus* and said it was planted on Arbor Day, 1950. His number plate was still on the tree at the commencement of this survey. The plant flowered well in 12/2002. An immature tui

(*Prosthemadera novaeseelandiae*) was seen feeding at its flowers on 31/12/2002. Unfortunately, the specimen has slowly declined in health over subsequent years.

(2). Sunken Dell. A large, healthy specimen at the southern end of the dell appears to be this species. Its planting date is not known.

Family Ericaceae

Agapetes serpens. Himalayan region.

Fred Parker Lawn. There is a large specimen at the base of the steps leading up to the eastern lookout. Its planting date has not been ascertained. Its flowers in October and November are a source of nectar for tui (*Prosthemadera novaeseelandiae*) and silvereyes (*Zosterops lateralis*).

Dracophyllum latifolium (neinei). New Zealand native.

A New Zealand native which is not common in Taranaki. There is a specimen of *D. latifolium* in the Fernery. The only outdoor specimens in the park, whose planting dates have not been ascertained, are:

(1). A good specimen on the bank at the bottom of Scanlan Walk near the waterfall.

(2). A larger specimen, noted by Medbury (1986: 223), which is prominent in the garden on the eastern side of the Poet's Bridge.

Dracophyllum strictum (totorowhiti). New Zealand native.

A New Zealand native which has a long flowering period. Two groups in the park are worth noting here. Their planting dates have not been ascertained.

(1). A group on the bank of the mid-section of Horton Walk near the Fernery.

(2). Another group on the cutting at the bottom of Racecourse Walk near the tea house.

Enkianthus campanulatus (red-veined enkianthus). Japan.

Rhododendron Dell. There is a large plant beside Brooklands Park Drive on the southern side of the dell. Its planting date has not been ascertained. Its many flowers, which are present from October to November, are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

Oxydendrum arboreum (sourwood or sorrel tree). Eastern North America.

Brooklands Zoo. A large and healthy specimen of this plant is conspicuous in the compound. One specimen of *O. arboreum* was planted there on Arbor Day, 7/8/1965 and another on 24/7/1967 (planting books 1965: 25; 1966–1967: 65). Medbury (1986: 478) noted the better of the two specimens in the zoo compound at the time of his survey. One of them no longer exists. The remaining tree flowers well in January.

Pieris formosa = *Pieris forrestii* (lily of the valley). South-west Asia, Himalayas and north Burma.

There are several good specimens in the park.

(1). Ambush Gully. Two specimens of *Pieris forrestii* and two specimens of *Pieris forrestii* 'Lord Wakehurst' were planted in the gully on Arbor Day, 9/8/1969 (planting book 1968–1970: 61).

(2). Kaimata Street entrance. Nine specimens of *Pieris forrestii* 'Lord Wakehurst' were planted here on 10/9/1974 (planting book 1974–1976: 3).

***Rhododendron* 'Boddaertianum'.**

Brooklands lawn, southern end. This tree by the pathway at the entrance to the native bush was noted by Medbury (1986: 389). Its original planting date is not known. It may have been one of the already large rhododendrons that were obtained by Newton King from nearby Mitchinson's Caledonian Nursery in 1898 (*Taranaki Daily News* 4/9/1933, p. 9).

***Rhododendron* 'Coccineum Speciosum'.**

Brooklands lawn. Medbury (1986: 363) identified this plant as Ghent hybrid azalea. He believed it was planted by Newton King about 1920. In 5/2011, it was moved to a new position beside the nearby zoo boundary. Unfortunately, it subsequently died.

***Rhododendron* 'Cornubia'.**

Near the tea house. A fine example of this cultivar flowers from August to September on the hillside by the wisterias near the tea house. This may be the large specimen of *Rhododendron* 'Cornubia' that was planted in 8/1969 to complete the group by the tea house (planting book 1968–1970: 69).

***Rhododendron* 'Sir Robert Peel'.**

There are several large, healthy specimens of this cultivar in the park, of which the following may be noted here. Their planting dates are uncertain, but they are clearly of considerable age. They flower well from July to August.

(1). Beside Fountain Lake, eastern side. A notable specimen that was recorded by Burstall (1973: 34), Medbury (1986: 16) and Smith and Fuller (2007: 195–196, Figs. 188, 189). It bears a new nameplate. This plant is referred to simply as rhododendron, being the 26th entry in a comprehensive list compiled by Thomas Horton in the late 1920s of plants "commencing at right-hand side of entrance from sports ground near lower lake and thence to Gilbert St gates" (Puke Ariki ARC2003–860, Box 3, Folder 28). This tree was probably planted in 1909 or 1910 by W. W. Smith, then curator of the park, when he was working on and planting out the Gilbert Street entrance and Smith Walk between there and the car park entrance to Fountain Lake (*Taranaki Herald* 7/9/1909, p.4; *Taranaki Daily News* 5/7/1910, p.2).

(2). Beside Hatchery Lawn. An outstanding multi-trunked specimen, which is perhaps the most prolifically flowering 'Sir Robert Peel' in the park, is prominent at the north-eastern corner of the lawn.

(3). Brooklands lawn. There is an impressive group of large specimens at the south-eastern corner of the lawn, one of which was noted by Medbury (1986: 387) who thought it was planted by Newton King in about 1900.

Azalea Collection: Goodwin Dell

This is a significant collection of Ilam hybrid azaleas of various planting dates. At least 57 specimens of various colours were planted in Azalea Dell in 9/1955 (planting book 1955–9/1956: 42). Azalea Dell became Goodwin Dell in commemoration of J. W. Goodwin who was curator of

Pukekura Park and later director of New Plymouth Parks and Recreation between 1949 and 1977.

Rhododendron Collection: Rhododendron Dell

This large collection was first planted in 1934 (see Jellyman, A.D. "Rhododendrons in Pukekura Park". Rhododendrons with camellias and magnolias 1992: 49–51). In about 9/1963, the collection was enhanced and extended on to the southern hillside of the dell by the addition of many specimens of species and named cultivars (planting book 1963–1964: 47–50). On 5 and 6/5/1999, many more specimens, mostly of named cultivars, were planted in the area that became known as the Rhododendron Dell extension, being mainly the north-facing slope to the east of the dell proper through which Jellyman Walk passes (planting book 5/1997–6/2000: 32–35). Most recently, in 10/2011, about 21 inferior specimens of various cultivars were removed from the collection, primarily because of their tendency to be badly affected by thrips. The following rhododendrons, being five small specimens of each of 10 cultivars, were planted in late 10/2011:

R. 'Bonnie Doon', *R.* 'Caroline Allbrook', *R. cilipinence*, *R.* 'Cupcake', *R.* 'Dora Amateis', *R.* 'Harry Tagg', *R.* 'John Bull', *R.* 'Morning Cloud', *R.* 'Noyo Brave' and *R.* 'Summer Cloud'.

Only a few of the numerous rhododendrons in the dell and its extension are significant as a source of floral nectar for tui (*Prosthemadera novaeseelandiae*) (Medway 2008c). They are:

(1). ***Rhododendron arboreum* spp. *delavayi***. A large specimen beside the pathway through the dell. It was planted in 1934. This specimen flowers prolifically in most years. It was noted by Medbury (1986: 241).

(2). ***Rhododendron arboreum* 'Kermesinum'**. Three large specimens together on the southern hillside, which were planted about 9/1963 (planting book 1963–1964: 47). They flower prolifically every year. The flowers of three younger specimens of *R. arboreum* 'Kermesinum', which were planted nearby in the Rhododendron Dell extension in early 5/1999 (planting book 5/1997–6/2000: 33), are a favoured source of nectar for silvereyes (*Zosterops lateralis*).

(3). ***Rhododendron arboreum* 'Pink Delight'**. Two specimens, one in the centre of the dell and the other on the southern hillside. Planting dates have not been ascertained. They flower prolifically every year.

(4). ***Rhododendron arboreum* 'Rubrum'**. A large specimen beside the pathway through the dell. It is the remaining one of two of this cultivar that were planted in 1934. It flowers prolifically every year. It was noted by Medbury (1986: 242).

(5). ***Rhododendron arboreum*** (unknown hybrid). This large plant in the centre of the dell is identified by a label attached to it and on planting plans as *Rhododendron strigillosum*, but it is not that species. It appears to be an unknown hybrid (ref. Alan Jellyman 18/8/2005). It was planted about 9/1963 (planting book 1963–1964: 49). It is one of the earliest rhododendrons in the dell to flower and it flowers prolifically every year.

(6). ***Rhododendron* 'Flamingo'**. A large specimen on the southern hillside that was planted in about 9/1963 (planting book 1963–1964: 49). It flowers prolifically every year.

Family Escalloniaceae

Escallonia bifida (white escallonia). Brazil and Uruguay.

Kunming Garden. There is a large plant on the western border near the pagoda. Its planting date has not been ascertained but it was probably planted when that area was still part of the former nursery. Its flowers in February and March are a much-favoured source of nectar for many monarch butterflies and the occasional red and yellow admiral butterflies, as well as for bumblebees and honeybees. A photograph of a yellow admiral butterfly feeding at the flowers appears on the cover of the *Magazine of the Friends of Pukekura Park* 8(1) (February 2013).

Family Fagaceae

Fagus sylvatica var. *purpurea* (copper beech). Europe.

Four specimens are noted here.

- (1). Western hillside, Pukekura. A large specimen, which bears an old nameplate, is beside the pathway leading up from the Moreton Bay fig to the curator's former house at 25 Victoria Road. Its planting date is not known but, judging by its size, it was earlier than the planting of this hillside by Thomas Horton in 1931 (Medway 2010b).
- (2). List's Garden, Maranui Gully. An impressive specimen whose planting date is not known.
- (3). Brooklands lawn. This notable tree was severely damaged by strong southerly winds on 23/1/2011 and was taken down on 31/1/2011.
- (4). Western hillside, above Scanlan Walk. There is a large specimen with a trunk of unusual shape beside the pathway leading to the Victoria Road car park. Its planting date is not known.

Fagus sylvatica 'Riversii' (copper beech). Europe.

Brooklands lawn. Burstall (1973: 23) considered this to be a notable tree of national interest. It is TR/P0137 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz). Burstall and Sale (1984: 258) included this specimen in their list of notable trees. Medbury (1986: 351) thought it was planted about 1935 and Smith and Fuller (2007: 136, Figs. 119, 120) noted it.

Fagus sylvatica 'Swat Magret' (copper beech). Europe.

- (1). Brooklands lawn, near the Norfolk Island pines. Thomas Horton advised the Pukekura Park Committee in August 1939 that 35 or 40 years previously, the late Mr Newton King had bought a 'Swat Magret' from him, and that this tree was to be seen just outside the Brooklands main gateway (*Taranaki Herald* 9/8/1939, p.13). Burstall (1973: 23) considered it to be a notable tree of national interest. Smith and Fuller (2007: 137, Fig. 121) recorded that in 1982 the specimen was in a very advanced state of degeneration and was expected to die. An emphasis was put on maintaining the original clone. Cuttings and scions for grafting were collected. The present Brooklands tree is from the grafting procedure. It was 2.3 metres high when Medbury (1986: 366) measured it in 1986, and 9.5 metres high when Smith and Fuller measured it in 2001.
- (2). Brooklands Bowl, at the bottom of the road from the main entrance. Thomas Horton recorded in his work diary on 11/7/1939 that he planted copper beech at Brooklands. This planting was described in the *Taranaki Herald* of 9/8/1939, p. 13 as follows: "The planting in the meadow at Brooklands of a rare and beautiful purple beech tree known by the name of 'Swat Magret', a variety from Holland, was reported to the Pukekura Park Committee last night by the

superintendent, Mr. T. Horton, who described the variety as ‘the most beautiful of all the beeches in the world’. He had imported the tree himself from Holland 12 years ago. It was a beautiful specimen of a variety noted for its brilliant colouring and should do well and be a great attraction in its present position.”

This tree in its original position features in several published photographs (e.g. *Taranaki Herald* 19/11/1949, p.7; 11/6/1957, p.1). Burstall (1973: 30) said that the specimen “is of particular note because it was ‘in the way’ when it was decided to construct the Bowl in 1956–7. It was shifted to the east and is now a feature on its new site.” Smith and Fuller (2007: 134-135, Fig. 118) described it as a “fine specimen”. They, and Burstall, identified it as *Fagus sylvatica* var. *purpurea*.

***Fagus sylvatica* ‘Tricolor’** (copper beech). Europe.

Brooklands lawn, four seasons border. This tree was planted on 23/10/1979 (planting book 1979–1980: 44). It was noted by Medbury (1986: 361).

***Fagus sylvatica* ‘Zlatia’** (copper beech). Europe.

Above the waterfall, Pukekura Park. This large and distinctive specimen was noted by Medbury (1986: 268). It was planted on 22/7/1964 (planting book 1963–1964: 75).

***Fagus sylvatica* ‘Asplenifolia’ = *Fagus sylvatica* ‘Laciniata’** (fern leaf beech). Europe.

Upper Scanlan Walk. Two specimens were planted as *Fagus sylvatica* ‘Laciniata’ on Arbor Day, 11/6/1983 (planting book 1983: 27; *Daily News* 13/6/1983: 1).

***Fagus sylvatica* ‘Fastigiata’** (Dawyck beech). Europe.

Upper Scanlan Walk. One specimen was planted on Arbor Day, 11/6/1983 (planting book 1983: 27; *Daily News* 13/6/1983: 1). Another smaller specimen is at the southern end of Hatchery Lawn.

Quercus ilex (Holm oak). Mediterranean region.

Several significant specimens are noted here.

(1). Victoria Road terrace. On 17 and 18/6/1932, Thomas Horton “planted tall growing conifera and other trees on all hilltops, also the *Quercus ilex* etc near tennis and croquet greens” (Horton’s work diary for 4/2/1928–30/11/1932, now in Puke Ariki ARC2003–860, Box 1, Item 21). There are still many large specimens of Holm oak in a row on the eastern border of the terrace. The largest is immediately beside the western lookout. Medbury (1986: 290) recorded the “biggest of two score specimens on this hillside” and said they were a “Thomas Horton planting c 1930s. Additional plantings were made in the 1950s.” One of these trees was also recorded by Smith and Fuller (2007: 189). A Holm oak in the park is included as Notable Tree DP 29 in Appendix 13 to the New Plymouth District Council Operative District Plan.

(2). Near the curator’s office. Another very good Holm oak is prominent on the hillside behind the curator’s office. Its planting date is not known.

Quercus oblongata* = *Quercus leucotrichophora (Himalayan oak). Himalayas.

This evergreen oak is now rare and in danger of extinction in the wild.

Kunming Garden. There is a small and healthy specimen in the north-western corner of the garden. It was purchased by a private individual from the Ranichauri Eastwoodhill Trust. It later found its way to the park Fernery from whence it was planted out in Kunming Garden on 1/10/2010 (planting book 9/2010–12/2011: 108852).

Quercus palustris (pin oak). Eastern United States.

Two specimens are noted here.

Brooklands lawn, south-eastern corner beside the main path. This very large specimen was noted by Burstall (1973: 34), by Medbury (1986: 388) who thought it was planted in about 1910, and by Smith and Fuller (2007: 190, Figs. 178, 179). There is another large specimen of unknown planting date on the western border of the lawn beside the Zoo fence.

Quercus robur (common oak). England, southern Europe, North Africa, Asia Minor.

There are many significant specimens in the park, all of which were undoubtedly planted but on unknown dates. Only two of them are included here.

(1). Near the tea house. Smith and Fuller (2007: 192) recorded that two *Q. robur* “of equal proportions were sited in this area, however, the one nearest to the tea house fell in October 1997. During heavy rainfall, the tree failed at or near ground level, badly damaging the public toilets and a nearby elm. This failure was unexpected and came as a great surprise to park staff as the tree had not displayed previous symptoms.” It is unclear which of these two trees was the one noted by Burstall (1973: 34) and Medbury (1986: 153). Medbury considered the one he noted to be one of the largest, if not the largest, *Q. robur* in the park. He thought it was planted between 1920 and 1925. Smith and Fuller (2007: 192–193, Figs. 185, 186) described the remaining tree as a “meritorious specimen, which is likely to have reached its climax in height”.

(2). Brooklands lawn. An excellent specimen at the southern end of the lawn beside the pathway and next to the notable common walnut (*Juglans regia*) is remarkable for the exceptional number of large clumps of the native New Zealand *Collospermum hastatum* that are growing as epiphytes on all of its limbs. Burstall (1973: 34) described a specimen beside the main path at Brooklands, presumably this one, as “a lawn specimen with classic habit of spreading oak with its horizontal branches”. It was noted by Smith and Fuller (2007: 192, Figs. 183, 184) who considered it to be an “excellent” specimen.

Quercus rubra (northern red oak). North America.

Smith Walk, near Fillis Street entrance. A large specimen, now the only *Q. rubra* in the park. It was noted by Medbury (1986: 13) and Smith and Fuller (2007: 193) who observed that it was “totally unbalanced with a severe bow in the trunk. This is due to the influence of several large dominant pohutukawas sited on the westerly side of the tree.” This may be the plant identified as *Quercus americana* in the 87th entry in a comprehensive list of plants compiled by Thomas Horton in the late 1920s: “commencing at right-hand side of entrance from sports ground near lower lake and thence to Gilbert St gates” (Puke Ariki ARC2003–860, Box 3, Folder 28). This tree was probably planted in 1909 or 1910 by W. W. Smith, then curator of the park, when he was working on and planting out the Gilbert Street entrance and Smith Walk between there and the car park entrance to Fountain Lake (*Taranaki Herald* 7/9/1909, p.4; *Taranaki Daily News* 5/7/1910, p.2). The *Q. Rubra*, at the nearby Palm Lawn, which was noted by Burstall (1973: 34) was removed in 6/2001 (Smith and Fuller 2007: 193).

Family Hamamelidaceae

Corylopsis spicata (winter hazel). Japan.

Stainton Dell, magnolia hillside. Three large specimens that were planted here in 9/1959 (planting book 1956–1959: 72). They were noted by Medbury (1986: 188). These plants, which flower in September, are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

Fothergilla major (mountain witch hazel). South-eastern United States.

Upper Stainton Dell. This specimen, which has a name label, was planted on 28/10/1975 (planting book 1974–1976: 73). It flowers from September to October.

Loropetalum chinense (Chinese fringe flower). China.

(1). Smith Walk. The largest specimen in the park is beside the walk near the Gilbert Street entrance. A notation on planting plan S112 dated 10/8/1994 indicates that it was planted about 1950.

(2). Mid-section of Scanlan Walk. There was a group of four healthy plants beside the exit to the Victoria Road car park at the commencement of this survey. For whatever reason, these plants were removed in late 1/2013.

(3). Kunming Garden. Thirty-five specimens were planted beside the pagoda on 12/8/2005 (planting book 7/2004–9/2007: 19). For whatever reason, these plants were removed about 1/7/2013.

(4). Chinese collection. Six specimens were planted in the collection on 12/10/2005 and 10 more on 27/7/2007 (planting book 7/2004–9/2007: 20, 43).

The park specimens flower well from August to October.

Parrotia persica (Persian ironwood). Northern Iran.

Upper Scanlan Walk. One of two specimens planted on Arbor Day, 11/6/1983 (planting book 1983: 27; *Daily News* 13/6/1983: 1).

Family Hydrangeaceae

Hydrangea heteromalla (Himalayan hydrangea). Himalayas and China.

Kunming Garden. Five specimens were planted as this species beside the Moon Gate on 12/8/2005 (planting book 7/2004–9/2007: 17).

Philadelphus mexicanus (mock orange). Mexico and Guatemala.

Upper Primula Dell. A very large and spectacular specimen of this *Philadelphus*, which is climbing high on an immediately adjoining karaka and kahikatea. Medbury (1986: 169) identified this plant as *P. coulteri* and said it was transplanted there from the site of the present waterwheel in about 1954. It flowered profusely in late 11/2012.

Family Iteaceae

Itea ilicifolia (holly leaf sweetspire). China.

Mid-section of Racecourse Walk. Its planting date has not been ascertained.

Itea yunnanensis (Chinese sweetspire). China.

Mid-section of Racecourse Walk. A specimen planted here on 11/8/1992 was removed in 7/2012, when the walk was widened to allow large vehicle access to Fred Parker Lawn for renovations and additions at the Fernery and glasshouses.

Family Juglandaceae

Juglans ailantifolia (Japanese walnut). Japan.

Band room lawn. A large and healthy specimen is very prominent on the southern border of the lawn. This tree bears abundant fruit in March. Its planting date is not known.

Juglans regia (common walnut). South-eastern Europe and temperate Asia.

The three specimens known to be in the park are noted here. All bear copious fruit.

(1). Brooklands lawn, southern end. A venerable old specimen, planting date not known, which has a nameplate on it. It was recorded by Smith and Fuller (2007: 144–145, Fig. 128). This tree is remarkable for the number and variety of native New Zealand plants that grow upon it as epiphytes including *Collosporum hastatum*, *Astelia solandri*, *Huperzia varia*, *Earina mucronata*, *Griselinia lucida*, *Asplenium polyodon*, *Microsorium pustulatum*, *Pyrrhosia eleagnifolia* and *Asplenium flaccidum*. There is even a healthy specimen of *Dicksonia squarrosa*, about two metres high, growing from a clump of *Collosporum* on one of its limbs. The *J. regia* noted by Medbury (1986: 348), which grew nearby on the historic fireplace side of the main pathway through the lawn, was felled in 1997 because it was considered to be unsafe. Both trees were noted by Burstall (1973: 31).

(2). Behind Brooklands Zoo, beginning of the former nature trail. A large specimen whose planting date is not known.

(3). Children's playground, Pukekura. Another large specimen nearby among other tall trees on the northern boundary of the park. Its planting date is not known.

Pterocarya fraxinifolia (Caucasian wingnut). Caucasus Mountains to Iran.

Beside the sports ground. This large, fast growing tree was planted on 11/8/1975 (planting book 1974–1976: 56). It was noted by Medbury (1986: 110) and Smith and Fuller (2007: 224).

Family Lamiaceae

Vitex lucens (puriri). New Zealand native.

There are many large puriri in the park, particularly in the remnant semi-coastal native forest areas at Brooklands. Burstall and Sale (1984: 148) thought there were probably nearly a score of puriris about 1000 years old or more in the Brooklands bush. The following five significant specimens have been selected for inclusion here:

(1). Near Kaimata Street. This is the notable, historic puriri in the bush near Kaimata Street (see "The Brooklands Puriri" *Magazine of the Friends of Pukekura Park* 5(3) (October 2010: 11). Burstall (1973: 11) recorded it as an historic tree of local interest. Burstall and Sale (1984: 148–149) considered that "the tree is ageing but, being well sheltered, it should remain for many years the most outstanding of New Plymouth trees, a status it has held since the splendid large chestnut which used to grow nearby died in 1973". This puriri was also noted by Medbury (1986:

432) and by Smith and Fuller (2007: 75–76, Figs. 62,63). It is registered as a notable tree of local interest under TR/0135 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz). This tree is also notable for the many large clumps of *Collospermum hastatum* that are epiphytic on its upper limbs.

(2). Former nature trail, Brooklands. A very large and impressive specimen, which is hidden from view among neighbouring trees on a promontory to the north of the trail near Kaimata Street. Unfortunately, one of its main limbs was broken during gale-force south-easterly winds in early 2012.

(3). Former nature trail, Brooklands. Another large specimen that was mentioned by Burstall (1973: 17) as a notable tree of local interest, and by Smith and Fuller (2007: 78) is immediately beside the former nature trail at Brooklands between the historic puriri and the nearby two-leaved karaka (*Corynocarpus laevigatus*) that is included in this database.

(4). The racecourse bowl road. This large puriri, situated on the uphill side of the access road from the racecourse to the Bowl of Brooklands, was recorded by Burstall (1973: 17) as a notable tree of local interest. Burstall and Sale (1984: 149) mentioned it. This puriri was also noted by Smith and Fuller (2007: 77, Fig. 64). In 2009, George Fuller named this puriri “Enigma” when it featured prominently in on-site discussions, submissions and newspaper articles on the proposal for a new access road into the Bowl of Brooklands from Pukekura Raceway (see for example, “The Racecourse-Bowl Road” in the *Magazine of the Friends of Pukekura Park* 4 (2) (June 2009): 10–11 and “A tree, a man, a council and a decision” in the *Taranaki Daily News* 27/6/2009: 9, 11).

(5). Near the racecourse bowl road. This “unique and extremely large puriri” (Smith and Fuller 2007: 74) is in the gully beside the racecourse bowl road not far from puriri “Enigma”. Burstall (1973: 13) recorded it as a notable tree of national interest and quoted George Fuller who described it as “A most irregular shaped tree, the configurations of which are very difficult to describe, but it would probably rank as the most unorthodox tree in the park.” A description by Fuller was also included in Burstall and Sale (1984: 148–149). It was noted by Medbury (1986: 428), and by Smith and Fuller (2007: 74, Figs.60–61) who described this “arboreal spectacle” in detail. It is registered as a notable tree of local interest under TR/0141 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz).

Puriri fruit is a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*) and the flowers are an important source of nectar for tui (*Prothemadera novaeseelandiae*).

Family Lauraceae

Beilschmiedia tarairi (taraire). New Zealand native.

There are at least 12 planted taraire in the park of which five are noted here.

(1). Fillis Street Gully. This specimen, the largest in the park, is in Thomas Horton’s Fillis Street native botanical reserve that was originally planted out between 1935 and 1939 (see Medway 2010a). It was noted by Burstall (1973: 14), Medbury (1986: 135) and Smith and Fuller (2007: 46) who mentioned its “healthy appearance, which is more notable in the upper canopy”. According to Medbury, it was planted in 1936. This tree narrowly escaped being significantly damaged or destroyed when the very large adjoining eucalyptus, which was noted by Medbury (1986: 136), fell in 1/2010.

(2). Behind Brooklands Zoo. The planting date of this large specimen behind the western boundary of the zoo has not been ascertained.

(3). Kauri grove. There are at least two tall specimens in the grove that no doubt were among the many trees planted there by Thomas Horton from 1936 to 1938 (Medway 2010c).

(4). Near Victoria Road car park. According to Medbury (1986: 84), this specimen behind the curator's former house at 25 Victoria Road was planted in 1936. Smith and Fuller (2007: 46) described it as a "fine specimen with good health and form".

Beilschmiedia tawa (tawa). New Zealand native.

There are many large and healthy tawa in the park, particularly in the remnant semi-coastal native forest areas at Brooklands. Tawa fruit is a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

(1). Maranui Gully. Burstall (1973: 14), Burstall and Sale (1984: 258), Medbury (1986: 429) and Smith and Fuller (2007:47) recorded a specimen here.

(2). Former nature trail, Brooklands. Some of the several other significant specimens noted during the present survey include a group of tawa growing on the promontory to the north of the trail near Kaimata Street, close to the large puriri (*Vitex lucens*) which is noted elsewhere in this database. This group includes one of the best and largest tawa in the park. There is another significant specimen in the bush beside the trail behind the zoo. This tree has a large *Griselinia lucida* vine growing on it.

Laurus nobilis (bay laurel). Mediterranean region.

Cannon Hill. There is a large specimen on the right-hand side of the pathway from Bellringer Pavilion to the tea house at the northern foot of Cannon Hill and another younger, multi-stemmed specimen near the fire dump at the western foot of Cannon Hill. Their planting dates are not known. This species flowers from September to October.

Litsea calicaris (mangaeo). New Zealand native.

There are many specimens of mangaeo, large and small, in the park where it is now regenerating naturally. The large specimen on the northern side of the children's playground at Pukekura, which was noted by Medbury (1986: 68), had effectively died but was still standing at the time of this survey.

The two largest specimens found in the park during the present survey are:

(1). Near TSB Stadium entrance. A very large specimen with an impressive trunk is growing near the skyline above upper Stainton Dell near the entrance to Racecourse Walk. Several smaller specimens in the immediate vicinity may originate from this tree.

(2). Totara hill. Another very large specimen with an impressive trunk is growing on the downhill side at the southern end of the lower track on totara hill. This tree is somewhat concealed among surrounding tall vegetation.

Neolitsea sericea (neolitsea). Japan, Korea, Taiwan and China.

N. sericea is endangered in the wild.

Upper Stainton Dell. There is a healthy specimen at the head of the dell, near the pathway up to Racecourse Walk. It was planted on 8/7/1996 (planting book 9/1994–1997: 37, 43).

Sassafras albidum (sassafras). Eastern North America.

(1). Upper Primula Dell. According to Medbury (1986: 174), the present tree evolved from a sucker that appeared about 1960 from a specimen planted in 1951. Its leaves colour well in autumn.

(2). Near Fred Parker Lawn. There is a large and healthy sassafras, which is probably *S. albidum*, beside the steps leading up from Fred Parker Lawn towards the eastern lookout. Its planting date has not been ascertained.

Sassafras tzumu (Chinese sassafras). Central and south-western China.

Kunming Garden. There is one specimen beside the pagoda. Four specimens were planted in Kunming Garden on 12/8/2005 (planting book 7/2004 – 9/2007: 18). Three were still present at the commencement of this survey. Two of them were removed in 3/2011.

Family Leguminosae

Acacia melanoxylon (Australian blackwood). Eastern Australia.

Four large Australian blackwoods that were growing at the north-western corner of the Pukekura main lake near the waterfall collapsed into the lake in late 12/1954. It was noted that these trees grew from suckers and their replacements were already growing quite healthily on that corner of the lake (*Taranaki Herald* 21/12/1954, p.3). Presumably, these replacements were the “several large trees” that Burstall (1973: 26) mentioned were growing there some years later. Smith and Fuller (2007: 82) recorded that all of these trees had been removed by late 8/1982. Three specimens are included here.

(1). Monument Hill. A large specimen that was noted by Medbury (1986: 254). Its planting date is not known.

(2). Goodwin Dell. Two large specimens at the southern end of the dell beside Brooklands Park Drive. Their planting date is not known.

Argyrocytisus battandieri = *Cytisus battandieri* (pineapple broom). Morocco.

One specimen is growing at the lookout beside the *Doryanthes palmeri*. This plant flowers in late November. Its planting date has not been ascertained.

Ceratonia siliqua (carob tree). Mediterranean region.

Victoria Road terrace. There are three specimens growing together at the Shortland Street entrance at least one of which, noted by Medbury (1986: 275), was planted on 23/8/1961 (planting book 1960–1962: 61). This species is widely cultivated for its edible legume beans and as an ornamental tree in gardens. See article “Gems on a Guided Walk” by Val Smith in the *Magazine of the Friends of Pukekura Park* 8 (2) (June 2013) at pp. 2–3.

Cercis canadensis ‘Alba’ (eastern redbud). Eastern North America native.

Brooklands lawn, eastern border. This specimen was planted about 26/8/1994 (planting book 10/1993–9/1994: 97).

***Cercis canadensis* 'Forest Pansy'** (eastern redbud). Eastern North America native.

Brooklands lawn, eastern border. The planting date of this specimen has not been ascertained.

Cercis chinensis (Chinese redbud). Eastern Asia.

Chinese collection, Coronation Avenue entrance. Several specimens of *C. chinensis* and/or *C. chinensis* 'Avondale' were planted on 6/9/1993 (planting book 5/1993–13/10/1993: 42) and on 20/6/2000 (planting book 6/2000–7/2004: 1). Two specimens of *C. chinensis* and three specimens of *C. chinensis* 'Avondale' were extant as at 7/5/2011.

Cercis siliquastrum (Judas tree). East Mediterranean region.

Palm Lawn. An outstanding, large, old specimen. Its planting date is not known. Burstall (1973: 27) described this tree as a "characteristically sprawling specimen". It flowers profusely from September to October every year. Medbury (1986: 52) included this plant in his survey. Smith and Fuller (2007: 108) described it as "a striking specimen that has a canopy propped up in six different places by timber rounds". The tree is also significant for the number and variety of native New Zealand plants that are growing on it as epiphytes, including the ferns *Microsorium pustulatum*, *Pyrrosia eleagnifolia*, *Asplenium flaccidum*, *Asplenium oblongifolium*, the orchid *Earina mucronata* and the perching lily *Collospermum hastatum*.

***Clianthus maximus* 'Kaka King'** (kaka beak). New Zealand native.

The species is at very serious risk of extinction in the wild, but this cultivar is now widely grown in cultivation. Five specimens were planted at the Exeter Street entrance to Brooklands on 31/7/2007 (planting book 7/2004–9/2007: 43). They flower prolifically from August to September.

Erythrina crista-galli (cockspur coral tree). South America.

Rhododendron Dell. This previously large specimen was planted no later than 1936 when the original rhododendrons were planted in the dell. Its flowers, which appeared in January, were favoured by tui (*Prosthemadera novaeseelandiae*) as a source of nectar. The main trunk of this plant, which was rotten, collapsed on 28/1/2009 leaving one substantial stem which recovered well. This stem was cut down to ground level on 6/10/2011. New shoots had appeared by 31/12/2011, and were growing well, but were subsequently removed.

Genista stenopetala (sweet broom). Canary Islands.

Eastern lookout, Pukekura. There were several large plants below and near the lookout at the commencement of this survey. Some or all of them may have been self-sown. Most were removed in 11/2012. They flower from September to October. Their leaves are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

***Gleditsia triacanthos* 'Imperial'** (honey locust). Eastern and central United States.

There is a specimen above lower Scanlan Walk near the waterfall. It was planted in about 7/1986 (planting book 1984–10/1986: 90). It is growing near the specimen of *G. triacanthos* 'Sunburst' (noted below). There is another one on the western hillside of Pukekura Park.

***Gleditsia triacanthos* 'Moraine'** (honey locust). Eastern and central United States.

Upper Stainton Dell. Medbury (1986: 187) recorded this specimen in the top of the dell as *Gleditsia triacanthos* 'Moraine'. It was planted on 28/10/1975 (planting book 1974–1976: 73).

***Gleditsia triacanthos* 'Sunburst'** (honey locust). Eastern and central United States.

(1). Western hillside, Pukekura. There is a specimen above lower Scanlan Walk near the waterfall. Medbury (1986: 270) recorded it was planted in 9/1972 (planting book 1972–1973: 83). It is growing near the specimen of *G. triacanthos* 'Imperial' (noted above).

(2). Ambush Gully. A large, healthy specimen beside the former nature trail through the gully is identified as this cultivar on planting plan NB21/23H dated 27/7/1994. Its planting date has not been ascertained.

Robinia pseudoacacia (black or shipmast locust). Eastern United States.

List's Garden, Maranui Gully. According to Medbury (1986: 395), this tree on the eastern side of the garden is "a special clone selected for its strong straight bole, hence the name shipmast locust, another George Huthnance planting of the early to mid-thirties, when he was gardener for Thomas List".

Sophora chathamica (coastal kowhai). New Zealand native.

Fountain Lake. A good specimen, which is identified as this species, is beside the pathway near the inlet from the main lake into Fountain Lake. Its planting date has not been ascertained. It has a new nameplate. Other specimens of the same taxon are to be found around the lake edge.

Sophora microphylla (kowhai). New Zealand native.

There are many good individual specimens of *S. microphylla* – previously usually recorded as *S. tetraptera* – throughout the park, including a large specimen near the Fred Parker Lawn entrance to the Fernery and glasshouses which was preserved and incorporated as a special feature in the 2012 extensions to that complex. The following three groups are selected for inclusion here:

(1). Gover Street entrance. There are several specimens, including some of impressive size, that encircle the band room lawn. Seven specimens from elsewhere in the park were planted there on 1/10/1968, and six more from the same source were planted in 8/1969 (planting book 1968–1970: 6, 68). Medbury (1986: 143) noted one of them. Most of these specimens flower prolifically each year. A specimen of historic significance which was in nearby upper Primula Dell may be mentioned here. It was noted by Smith and Fuller (2007: 74) who recorded that it was planted in 1928 to commemorate the second marriage of Thomas Horton, curator of the park from 1924 to 1949. It has since been removed.

(2). Rhododendron Dell. Trees in this group, which includes some very large specimens, were noted by Burstall (1973: 17), Medbury (1986: 239) and Smith and Fuller (2007: 73, Fig. 59). An excellent example of the large mat which may be formed by the roots of the native hanging tree orchid (*Earina mucronata*) can be seen on one of these trees. The kowhai is the native tree on which this orchid is most commonly found in the park (see the *Magazine of the Friends of Pukekura Park* 3 (3) (October 2008): 12).

(3). Upper Brooklands Park Drive. There is a row of five specimens of varying quality which, when flowering, are prominent along the eastern side of the drive opposite the traffic islands

garden. For whatever reason, these plants differ individually in their attractiveness to tui as a source of floral nectar.

Kowhai are a very important source of floral nectar for tui (*Prosthemadera novaeseelandiae*) when they are flowering in September and October. They are also a valuable food source for New Zealand pigeons (*Hemiphaga novaeseelandiae*) which eat the flowers and new leaves, and house sparrows (*Passer domesticus*) which rob the floral nectar. See, for example, the articles “Tui and flowering Kowhai” in the *Magazine of the Friends of Pukekura Park* 3 (3) (October 2008): 3 and “House Sparrows robbing Kowhai nectar” at www.pukekura.org.nz under “Birds of the Park”.

Sophora molloyi (Cook Strait kowhai). New Zealand native.

A naturally uncommon New Zealand native.

(1). TSB Stadium entrance. There is a good specimen, presumably of the cultivar ‘Dragons Gold’, at the entrance to Racecourse Walk. Its planting date has not been ascertained.

(2). List Street entrance. Another good specimen of the same cultivar is growing here. Its planting date has not been ascertained.

S. molloyi flowers for a long period during the winter to early spring months when it is a favoured source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

Sophora tetraptera (kowhai). New Zealand native.

This species is much less common in the park than *S. microphylla*. The following specimens are noted here.

(1). Victoria Road car park. Six specimens identified as this species were planted on the frontage to the car park on 27/6/1996 (planting book 9/1994–1997: 41). Two good specimens were still present as at 1/9/2012.

(2). There are single specimens which appear to be *S. tetraptera* at the southern end of Palm Lawn and in the north-western corner of the nearby children’s playground. Their planting dates have not been ascertained.

Wisteria floribunda ‘**Macrobotrys**’ (Japanese wisteria). Japan.

Brooklands lawn. There are four specimens of this cultivar, growing on a pergola in a very prominent position beside the pathway at the southern end of the lawn. Medbury (1986: 386) thought they were planted by Newton King as cover for a glasshouse and as a feature of the adjoining driveway. They may have been planted between 1910 and 1920 (*Daily News* 23/2/1991, p. 16). These plants were trimmed in early 2013 and their old pergola was replaced.

Wisteria sinensis (Chinese wisteria). China.

Beside the tea house. This spectacular wisteria was recorded by Medbury (1986: 150, 151) as *W. sinensis* ‘Plena’. It was probably planted on or very soon after the construction of the original pergola in September 1908 (see articles and photos in the *Newsletter of the Friends of Pukekura Park* 2 (2) (October 2007): 2–3, and the *Magazine of the Friends of Pukekura Park* 4 (3) (October 2009): 4).

Family Magnoliaceae

Liriodendron chinense (Chinese tulip tree). China and northern Vietnam.

L. chinense is now a very rare and endangered species in the wild. (IUCN Red List status: near threatened). There are five specimens in the park (see article in the *Magazine of the Friends of Pukekura Park* Volume 7 (1) (February 2012): 10–11).

(1). Eastern hillside plateau, above Racecourse Walk. One specimen that was planted on 15/6/1993 (planting book 5/1993–13/10/1993: 11).

(2). Chinese collection, Coronation Avenue entrance. Four specimens that were planted here on 6/9/1993 (planting book 5/1993–13/10/1993: 42). The largest and best specimen is beside the pathway leading down to Fuller Walk from the Coronation Avenue entrance. It was flowering well in early 12/2011.

Liriodendron tulipifera (tulip tree). Eastern North America.

There are at least five specimens in the park (see article in the *Magazine of the Friends of Pukekura Park* Volume 7 (1) (February 2012): 10–11).

(1). Eastern hillside plateau, above Racecourse Walk. A large specimen that Medbury (1986: 204) thought was planted in about 1962. It flowers from November to December.

(2). Behind Bellringer Pavilion. A very large specimen which was noted by Medbury (1986: 103). Its planting date is not known.

Neither of these specimens was noted by Smith and Fuller (2007: 150–151). Medbury (1986: 316) also recorded a *L. tulipifera* behind the sound shell at Brooklands Bowl, which was believed to have been planted by Newton King about 1900. It was noted by Burstall (1973: 31) as a “spectacular tree in a spectacular setting”, but was removed about 2001 as it was considered to be in poor health (Smith and Fuller 2007: 150–151).

(3). Rhododendron Dell. A specimen on the southern hillside that was planted on 5 or 6/5/1999 (planting book 5/1997–6/2000: 33).

(4). Brooklands lawn. This *L. tulipifera* at the southern end of the lawn near *Rosa* ‘American Pillar’ was planted on 27/9/2005 (planting book 7/2004–9/2007: 20) by the New Plymouth branch of Soroptimist International, as a replacement for one they had planted on 13/9/2000 which was removed to make space for the Womad main stage on Brooklands lawn.

(5). Japanese hillside. A young, rapidly growing specimen in the lower section of the hillside was planted on 1/3/2010 by the Mishima City Chapter of Soroptimist International (planting book 9/2007–9/2010: 84). It has a name plaque on a stand on the ground beside it.

Burstall (1973: 31) considered that good trees of this species were rare in this region, but many good specimens of *L. tulipifera* and its cultivars ‘Aureomarginatum’ and ‘Fastigiatum’ can now be found in other public places in New Plymouth including the Te Henui Walkway, Te Henui Cemetery, Audrey Gale Park and Tupare.

***Liriodendron tulipifera* ‘Fastigiatum’** (tulip tree). Eastern North America.

There is a large specimen of *L. tulipifera* ‘Fastigiatum’, also known as ‘Arnold’, just outside the southern boundary of Brooklands Zoo which was recorded by Medbury (1986: 442). It was planted on Arbor Day, 9/8/1969 (planting book 1968–1970: 63).

Magnolia campbellii (pink tulip tree). Himalayas.

Pinetum, Brooklands. A large specimen that flowers prolifically in July. According to Medbury (1986: 332) it was planted in 9/1949.

Magnolia campbellii* var. *alba. Himalayas.

Mid-section of Racecourse Walk. This specimen was planted on 7/9/1965 (planting book 1965–1966: 41). It was noted by Medbury (1986: 190).

***Magnolia campbellii* ssp. *mollicomata* 'Lanarth'**. Yunnan, China native.

Jellyman Walk. Planting date not ascertained. The flowers of this plant are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

Magnolia cavaleriei* var. *platypetala = *Michelia platypetala* (ivory-flower michelia). China.

Rhododendron Dell extension, beside Jellyman Walk. This specimen was planted in early 5/1999 as *Michelia platypetala* (planting book 5/1997–6/2000:34). It flowers from July to September.

Magnolia champaca = *Michelia champaca* (champak). Indomalaya region.

Brooklands lawn, eastern border. A large specimen near the compound that was planted as *Michelia champaca* on 11/4/1994 (planting book 10/1993–9/1994: 87, 88).

Magnolia delavayi (Chinese evergreen magnolia). Yunnan, China.

Two specimens.

(1). Rhododendron Dell. A very large specimen. Medbury (1986: 240) said it was planted between 1955 and 1957. This tree flowers from December to January.

(2). Kunming Garden, near the Moon Gate. Another, much younger specimen that is one of two planted in Kunming Garden on 12/8/2005 (planting book 7/2004–9/2007: 17).

Magnolia denudata (yulan magnolia). Central China.

(1). Stainton Dell, magnolia hillside. One specimen, noted by Medbury (1986: 180), was planted in 9/1959 (planting book 1956–1959: 72). It has a nameplate.

(2). Kunming Garden. Nine specimens were planted here on 12/8/2005 (planting book 7/2004–9/2007: 17). Five were still present on the eastern border as at 1/8/2012. New Zealand pigeons (*Hemiphaga novaeseelandiae*) eat the new leaves when they appear in late August.

(3). Chinese collection, Coronation Avenue entrance. Three specimens of *M. denudata* were planted here on 20/6/2000, and one on 16/9/2002 (planting book 6/2000–7/2004: 1, 30). One of them was extant at the time of this survey.

Magnolia doltsopa = *Michelia doltsopa* (sweet michelia). South-west China, Himalayas.

There are several specimens of *M. doltsopa* in the park. Four specimens are selected here. *M. doltsopa* flowers well in June.

(1). Beside the band room lawn. According to Medbury (1986: 145), this tree was planted about 1968. It fruits prolifically in March.

(2). Pinetum, Brooklands. This specimen was planted in 9/1961 along with the adjacent pines (planting book 1960–1962: 65).

(3). Herbaceous border, Brooklands. A good specimen whose planting date has not been ascertained.

(4). Beside the main entrance, Brooklands. Another good specimen whose planting date has not been ascertained.

Magnolia figo = *Michelia figo* (port wine magnolia). South-east China.

Children's playground, Pukekura. This specimen flowers from November to January. According to Medbury (1986: 57), it was planted about 1954. *M. figo* is widely cultivated for its fragrant flowers.

Magnolia grandiflora (southern magnolia). South-east United States.

List's Garden, Maranui Gully. A large specimen that Medbury (1986: 393) said was "presumed to have been planted during List's time, about 1900 to 1920".

Magnolia grandiflora '**Goliath**'. South-east United States.

Fountain Lake, near the outflow. This tree is of historic significance. It was planted on 1/5/1976 by Mrs A. N. Gale, chairman of the New Plymouth City Council Parks and Recreation Committee, as part of Pukekura Park's centennial celebrations (planting book 1974–1976: 75; *Taranaki Herald* 1/5/1976: 1; Medbury 1986: 45; Smith and Fuller 2007: 154).

Magnolia hodgsonii = *Talauma hodgsonii*. Himalayas and south-eastern Asia.

Upper Racecourse Walk. This is the remaining one of two specimens that were planted here on 6/10/1986 (planting book 9/1986–8/1987: 11).

Magnolia hookeri = *Manglietia hookeri*. South-west China, north Burma, Thailand.

Brooklands Zoo, southern end. A very large specimen, which was recorded by Medbury (1986: 443) as this species. It was planted as *Manglietia hookeri* on Arbor Day, 9/8/1969 (planting book 1968–1970: 63). Glyn Church (*Taranaki Daily News* 24/2/2012, p. 16) identified it as *Manglietia insignis* from the Himalayas. This tree flowers well from November to December.

Magnolia kobus. Japan.

Mid-section of Racecourse Walk. A specimen whose planting date is not known. It was noted by Medbury (1986: 196). Its flowers are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

Magnolia kobus '**Borealis**'. Japan.

Stainton Dell, magnolia hillside. A very large specimen apparently planted in 9/1959 (planting book 1956–1959: 72). It was noted by Medbury (1986: 176).

Magnolia lanuginosa = *Michelia lanuginosa*. Yunnan, China and Nepal.

Gilbert Street entrance. This tree was planted on 29/5/1992 (planting book 11/1991–9/1992: 825). It produces abundant fruit which is ripe from April to June.

***Magnolia liliiflora* 'Nigra'**. Eastern and central China native.

Stainton Dell, magnolia hillside. It was planted in 9/1959 (planting book 1956–1959: 72). Medbury (1986: 178) noted it.

Magnolia nitida (glossy magnolia). North-west Yunnan, China.

Upper Racecourse Walk. A specimen that was planted in or about 10/1986 (planting book 9/1986–8/1987: 19). It is the only example of this evergreen magnolia in the park. Unfortunately, its top was snapped off by the limb of an adjacent *Cordyline australis*, which fell on it during gale-force south-easterly winds on 20/3/2012. Its yellowish flowers appear in August.

Magnolia sargentiana* var. *robusta. Sichuan, China.

Two specimens.

(1). Stainton Dell, magnolia hillside. A very large specimen apparently planted in 9/1959 (planting book 1956–1959: 72). It was noted by Medbury (1986: 182). Its flowers are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

(2). Brooklands lawn, northern end. A smaller specimen which Medbury (1968: 354) recorded was planted on Arbor Day, 7/8/1965 (planting book 1965: 23).

Magnolia sieboldii. Southern China, Korea, Japan.

Mid-section Racecourse Walk. This specimen was planted on 7/9/1965 (planting book 1965–1966: 41).

***Magnolia stellata* 'King Rose'**. Japan native.

Rhododendron Dell extension, beside Jellyman Walk. These plants were among the 16 specimens of white and pink forms of *M. stellata* that were planted here in early 5/1999 (planting book 5/1997–6/2000: 34). Their flowers are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

***Magnolia stellata* 'Royal Star'**. Japan native.

Rhododendron Dell extension, beside Jellyman Walk. These plants were among the 16 specimens of white and pink forms of *M. stellata* that were planted here in early 5/1999 (planting book 5/1997–6/2000: 34). Their flowers are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

Magnolia yunnanensis* = *Michelia yunnanensis. South-east Yunnan, China.

Kunming Garden. A group of five specimens of this evergreen magnolia was planted at the southern end of the garden on 12/8/2005 (planting book 7/2004–9/2007: 17). Unfortunately, one of them was blown over by south-easterly gales on 14/7/2013 and others were removed soon afterwards, leaving one specimen surviving as at 30/7/2013. There are two groups of excellent specimens of this plant in the eastern border of Brooklands lawn.

***Magnolia x loebneri* 'Merrill'.**

Brooklands lawn. A large specimen at the southern end of the lawn whose planting date has not been ascertained. This tree flowers prolifically in July and August. Its flowers are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

***Magnolia* 'Mark Jury'.**

Stainton Dell, magnolia hillside. A large specimen that flowers well from late August to September. Its planting date has not been ascertained.

***Magnolia* 'Milky Way'.**

Jellyman Walk. There are three large specimens beside and near the walk whose planting dates have not been ascertained.

***Magnolia x soulangeana*.**

(1). Brooklands lawn. The notable specimen on the western side of the lawn was recorded by Burstall (1973: 20), who thought that this "fine" tree had been planted by Newton King about 1890. Medbury (1986: 374) thought it had been planted between 1890 and 1905. Smith and Fuller (2007: 155–156, Figs. 140, 141) considered it to be one of the most significant trees in Brooklands Park. They described it as "a beautiful specimen, supporting many native epiphytes including orchids". Those epiphytes include *Collosporum hastatum*, *Earina mucronata* and *Pyrrhosia eleagnifolia*. Tui (*Prosthemadera novaeseelandiae*) and other birds have been observed eating the ripe fruit (see article "Magnolia fruits as food for birds" in "Birds of the Park" at www.pukekura.org.nz). Unfortunately, in recent years, wounds in this tree have provided a foothold for a seemingly increasing number of *Agrocybe parasitica*, a wood-rotting fungus that fruits from about November to May. This tree flowers prolifically in August and September.

(2). Brooklands lawn. There is another large specimen of *Magnolia x soulangeana* nearby on the southern side of the two notable Norfolk Island pines.

(3). The Gables. The new leaves and flowers of the healthy specimen which is prominent beside the front of the building are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*). Its planting date is not known.

***Magnolia x soulangeana* 'Lennei'.**

Stainton Dell, magnolia hillside. Medbury (1986: 181) noted this specimen, which was planted in 9/1959 (planting book 1956–1959: 72).

***Magnolia x soulangeana* 'Picture'.**

Hillside near the eastern lookout. This specimen was planted about 7/1986 (planting book 1984–10/1986: 86).

***Magnolia x soulangeana* 'San Jose'.**

Upper Racecourse Walk. One specimen whose planting date has not been ascertained. New Zealand pigeons (*Hemiphaga novaeseelandiae*) have been observed eating its flowers.

Magnolia x veitchii (Veitch's magnolia).

Stainton Dell, magnolia hillside. A very large specimen planted in 9/1959 (planting book 1956–1959: 72). It was noted by Medbury (1986: 177). Another large specimen, apparently of this hybrid, is growing nearby at the top of the steps leading down from Racecourse Walk to Stainton Dell.

Magnolia 'Vulcan'.

Two specimens are noted here.

- (1). Stainton Dell, magnolia hillside. Planted circa 1993.
- (2). Above the pathway near the lily pond. Planting date not ascertained. The flowers of this plant are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

Family Malvaceae

Abutilon x hybridum (Chinese lantern). Brazil.

- (1). Brooklands lawn, eastern border beside the bush. A large group whose planting date has not been ascertained. Its flowers are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*).
- (2). Kunming Garden. A group of five specimens were planted on 10 or 11/2004 (planting book 7/2004–9/2007: 18). For whatever reason, these plants were removed on or about 1/7/2013.

Chiranthodendron pentadactylon (monkey hand tree). Mountains of Mexico and Guatemala.

Brooklands Zoo. *C. pentadactylon*, which produces one of the most extraordinary flowers of any tree, is uncommon in cultivation in New Zealand. A specimen of *C. pentadactylon* was included in a purchase from Duncan and Davies on 5/9/1956 (inwards records 1949–1971 – Puke Ariki 2003–860, Box 1), but its subsequent history is not known. The large specimen at the zoo is the only one in the park. Its planting date has not been ascertained, but it was probably between 12/1984 when its presence at the zoo is not referred to and 1/1995 when it is (see zoo planting plans Z103(i) and Z103(i)2). It was not recorded by Burstall (1973), Medbury (1986), or Smith and Fuller (2007). It flowers well from July to November. The flowers are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*) (Medway 2008). Lynmouth Park has the only other specimen of *C. pentadactylon* known to be in a public park in New Plymouth.

Hoheria populnea (lacebark). New Zealand native.

There are several good specimens in the park. Tui (*Prosthemadera novaeseelandiae*) obtain nectar from the flowers, which appear from February to April, and New Zealand pigeons (*Hemiphaga novaeseelandiae*) eat the new leaves.

- (1). Rhododendron Dell. A large specimen at the western end of the dell is perhaps the best specimen of *H. populnea* in the park.
- (2). Poet's Bridge. There is another large specimen in the garden near the bridge. It may have been self-sown there. Medbury (1986: 225) noted a variegated specimen near the Boatshed Bridge as *H. populnea* 'Alba Variegata'. It has since been removed.

Lagunaria patersonii (Norfolk Island hibiscus). Norfolk and Lord Howe Islands native.

Near Bellringer Pavilion. The large specimen there is the only one in the park. While the planting date is not known, it was earlier than the mid-1930s. It was noted by Burstall (1973: 31) and Medbury (1986: 99). Smith and Fuller (1973: 147, Fig. 131) observed that it was “a healthy tree that has peculiar structure”. It flowers well in January and February. The flowers are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*), and the new leaves are eaten by New Zealand pigeons (*Hemiphaga novaeseelandiae*).

Family Meliaceae

Dysoxylum spectabile (kohekohe). New Zealand native.

There are innumerable large kohekohe and kohekohe saplings and seedlings in the park, particularly in the remnant semi-coastal native forest areas at Brooklands where this species is abundant and is the dominant canopy tree. Kohekohe flower prolifically from late May when they are a favoured source of floral nectar for tui (*Prosthemadera novaeseelandiae*) and silvereyes (*Zosterops lateralis*) (Medway 2008c; see also the article “Kohekohe - a spectacular New Zealand tree” at www.pukekura.org.nz under “Ecology of the Park”). The following significant specimens have been selected for inclusion here:

(1) A very large specimen in the centre of the track on the western side of upper Maranui Gully above Lists’s Garden.

(2) A very large specimen beside the disused track in the bush at the southern end of Brooklands lawn.

(3) The mahogany archway on the racecourse bowl road. A photograph of this archway appeared in the *Magazine of the Friends of Pukekura Park* 4(2)(June 2009):10. In late 1/2012, it was noticed that the large specimen on the uphill side, which leaned over the roadway and had an impressive specimen of *Griselinia lucida* on it, had developed a significant longitudinal crack in the base of its trunk. It was deemed to be a safety risk and was felled on 1/2/2012. The kohekohe on the lower side of the roadway, which was trimmed at the same time, was noted by Burstall (1973: 14) and Smith and Fuller (2007: 55, Fig. 43).

(4) Near Pukekura Park tennis courts. There is an outstanding example of a kohekohe/*Griselinia lucida* combination on the edge of the bush near the tennis courts. This kohekohe has many other native New Zealand plants growing as epiphytes on it including *Collospermum hastatum*, *Astelia solandri*, *Pyrrhosia eleagnifolia*, *Asplenium flaccidum*, *Phymatosorus pustulatum*, and *Blechnum filiforme*.

Melia azedarach (Indian bead tree). South-east Asia and Australia.

Brooklands Zoo, southern end. This tree was noted by Medbury (1986: 444) who recorded that it was received from Palmerston North on 30/4/1971. It flowers well in November and December.

Toona sinensis (Chinese toon). Eastern and south-eastern Asia.

Fred Parker Lawn border. There is a group of young specimens on the southern side whose planting date has not been ascertained.

Family Monimiaceae

Hedycarya arborea (pigeonwood). New Zealand native.

Specimens of *H. arborea* of varying sizes are to be found growing naturally throughout the park, mostly in the native bush areas of Brooklands. There are at least two large, old specimens a few metres inside the fence line behind the Highlands Intermediate School baths in upper Maranui Gully. One of them was noted by Burstall (1973: 15), by Burstall and Sale (1984: 256) in their list of notable trees, and by Smith and Fuller (2007: 59). Ripe pigeonwood fruit is a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

Family Moraceae

Ficus elastica 'Burgundy' (Indian rubber tree). Tropical Asia.

Upper Primula Dell. One specimen whose planting date has not been ascertained.

Ficus macrophylla (Moreton Bay fig). Eastern Australia.

This huge tree is at the junction of Hughes Walk and the track leading up to the curator's former house at 25 Victoria Road. The only specimen of *F. macrophylla* in the park, Burstall (1973: 30) believed it to be one of the tallest recorded. It was noted by Medbury (1986: 82). Smith and Fuller (2007: 138, Figs. 122,123) described it thus: "A massive tree that is healthy and towers above the far end of the Hatchery Lawn with great eminence, the main characteristic being the aerial roots displayed in the lower canopy and on the trunk." It is registered as a notable tree of local interest under TR/0768 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz).

F. H. Arden, a local "skilled gardener", was engaged by the Recreation Grounds Board in 1893 to advise and assist it with the planting of trees and shrubs in the grounds (*Taranaki Herald* 11/7/1893, p.2). *Ficus macrophylla* was one of the many named plants of which Arden sought donations from the public in April 1895. He indicated that May would be the best time to send plants as he would be in the grounds constantly during that month (*Taranaki Herald* 23/4/1895, p.2). *Ficus macrophylla* plants may have been available at the time from one or both large, local nurseries – Mitchinson's Caledonian Nursery and Morshead's South Road Nursery. Whatever its source, it is probable that the park specimen, which is the only specimen of *Ficus macrophylla* known to have been planted in the park, was received as a result of Arden's request and that it was planted in its present position shortly afterwards on one of the working bees that were held in the grounds in May 1895 (*Taranaki Herald* 15/5/1895, p.2). It is almost certainly this specimen of a fast growing species that is clearly visible in the photograph of the lily pond, now Hatchery Lawn, which is reproduced in Medway (2012b: 7). The photograph is undated but is entitled "Recreation Grounds". Presumably it was taken before November 1907 when the name of the park was changed from Recreation Grounds to Pukekura Park.

Ficus macrophylla is pollinated by the Australian wasp, *Pleistodontes froggatti*. Evidence of the arrival of this wasp in New Plymouth between 1994 and 2000 was provided by fruit collected from this tree (*New Zealand Journal of Botany* 34 (1996): 103–110; *New Zealand Entomologist* 23 (2000): 27–32). It now produces plentiful ripe figs. Blackbirds (*Turdus merula*) and New Zealand pigeons (*Hemiphaga novaeseelandiae*) have been seen eating them. Two seedlings that undoubtedly emanated from seeds from this tree had been found and removed by 6/2011. One of them was epiphytic on a *Sophora microphylla* (kowhai) beside Fred Parker Lawn about 300

metres from the parent *Ficus* tree, and the other was epiphytic on a *Cupressus macrocarpa* 'Aurea' (golden macrocarpa) on Victoria Road terrace about 200 metres from that tree.

Ficus pumila (creeping fig). Eastern Asia.

Fillis Street wall. This woody, evergreen creeper covers about half of the concrete wall on the Fillis Street boundary of the park. It was planted in 1938 at the same time as the wall and Memorial Gates were constructed: "A creeper, probably the fine fig, will be grown along the wall and will in time cover it. Fine fig is the possible choice because it is quick growing, easy to cut back, will not interfere with the concrete work and in two or three years should present a mass of green." (*Taranaki Herald* 16/9/1937, p. 6)

Ficus (ex Felix Jury).

Upper Racecourse Walk. Medbury (1986: 201) noted that this *Ficus* of unknown identity was planted between 1970 and 1975. It has been suggested that it is *F. antiarus*, but we have been unable to find any *Ficus* with that specific name. No such *Ficus* is included among the numerous plants of that genus in the "Census of Vascular Plants of Papua New Guinea" at www.pngplants.org/PNGCensus. The fruit of this plant is ripe from late January to March.

Morus alba (white mulberry). Northern hemisphere.

Brooklands Zoo. This large specimen was planted on 24/7/1967 (planting book 1966–1967: 65). It was noted by Medbury (1986: 473).

Streblus banksii = *Paratrophis banksii* (large-leafed milk tree). New Zealand native.

In Thomas Horton's Fillis Street Gully native botanical reserve which was originally planted between 1935 and 1939 (see Medway 2010a). This large specimen was planted as *Paratrophis* in 7/1956 (planting book 1955–9/1956: 90). It was noted by Medbury (1986: 138).

Streblus smithii = *Paratrophis smithii* (Smith's milkwood). New Zealand native.

An uncommon New Zealand native found naturally only on the Three Kings Islands.

(1). Upper Racecourse Walk near TSB Stadium entrance. A group of five *S. smithii*, of which two are large specimens, that were planted as *Paratrophis smithii* on 4/8/1992 (planting book 11/1991–9/1992: 843). Two of these plants have produced green fruit in May.

(2). Kunming Garden. A large specimen on the western border. Planting date not ascertained, but probably while that area was still part of the former nursery.

Streblus smithii was named for Stephenson Percy Smith (Transactions of the New Zealand Institute 20 (1888): 148) who became a prominent member of the Recreation Grounds (later Pukekura Park) Board.

Family Myrtaceae

Agonis flexuosa (willow myrtle). Western Australia.

Victoria Road terrace. There is a group of six tall specimens that were planted on 10/8/1953, according to Medbury (1986: 289). There were eight specimens at the time of Medbury's survey. Seven remained at the commencement of the present survey. One of them was removed in 5/2010 because of its ill health. There was another healthy specimen just outside the western

boundary of the zoo. About half of it was destroyed by gale-force south-easterly winds on 20/3/2012.

***Agonis flexuosa* 'Nana'.**

Traffic islands garden. Two large plants at the northern end that have been there since the traffic islands garden was first planted out in late 1980 (planting book 1980–1981: 23).

Backhousia citriodora (lemon myrtle). Queensland and northern New South Wales, Australia.

Two specimens, which flower prolifically from March, are noted here. Both are an occasional source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

(1). Residence beside the Brooklands Zoo. There is a large specimen that is prominent from the nearby car park. According to Medbury (1986: 479), it was planted between 1950 and 1952.

(2). Traffic islands garden, at western end of Jellyman Walk. This smaller specimen was planted on 20/10/1981 (planting book 1981–1983: 2).

Callistemon salignus (willow bottlebrush). Australia.

Victoria Road terrace. A group of four tall specimens that were planted on 10/8/1953, according to Medbury (1986: 283). They flower in November and are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

Eucalyptus ficifolia (red flowering gum). South-western Australia.

There are several large specimens of *E. ficifolia* in the park.

(1). Sports ground terraces. There are two specimens of *E. ficifolia* on the hilltop above the eastern terraces, and one specimen halfway up the western side of the southern terraces. Their planting dates are not known.

(2). Victoria Road terrace. There are four specimens on the terrace, three of which are growing in close proximity to each other in the vicinity of the former tennis courts. Nine specimens of *E. ficifolia* were shifted from Vogeltown Walk (now Scanlan Walk) to nearby Victoria Road terrace on 30/8/1962 (planting book 1960–1962: 89) and three more were planted on the terrace in 6/1963 (planting book 1963–1964: 1).

(3). Brooklands lawn, eastern border. This specimen was noted by Medbury (1986: 344), who considered it to be a Newton King planting.

It appears that *E. ficifolia* must have been among the earlier species planted in the park, and one which warranted attention when flowering. The following note appeared in the *Taranaki Herald* of 24/2/1908, p.3: "Visitors to the park should notice the beautiful scarlet blossoms of the *Eucalyptus ficifolia* ... There are two nice trees about halfway between the boathouse and the head of the lake, another between the tea house and the Oval and another on the higher level behind the racecourse." None of these trees survive.

Eucalyptus pulchella = *E. linearis* (white peppermint). Eastern Tasmania.

Claffey Walk, above Fillis Street Gully. This is probably the tree that Medbury (1986: 129) recorded as *E. linearis*. He thought it was planted between 1930 and 1935.

***Eucalyptus* spp.** Australia.

Maranui Gully. There is a group of several very large eucalypts in the List's Garden area. Medbury (1986: 398–399) noted that nine species of *Eucalyptus*, planted in about the 1920s, were identified in this area in 1949, but most had toppled by 1986. Others have toppled since then. Medbury considered that two of those examined by him might be *E. procera* (also known as *E. obliqua*) and *E. fastigata*.

Eugenia uniflora (Surinam cherry). Tropical America.

Traffic islands garden, at the western end of Jellyman Walk. This specimen was planted on 20/10/1981 (planting book 1981–1983: 2).

Kunzea ericoides* var. *linearis = *Leptospermum ericoides* (kanuka). New Zealand native.

Behind the Brooklands Zoo on the western boundary. A group of the remaining five of six specimens planted on Arbor Day, 14/8/1971 (planting book 1970–1971: 82). They were noted by Medbury (1986: 441). This variety of kanuka is considered to be in serious decline in the wild.

Luma apiculata (Chilean myrtle). Central Andes mountains.

Beside The Gables and eastern border of Kunming Garden. Two specimens. The larger one beside The Gables was probably planted in the 1980s, the other more recently. *L. apiculata* flowers from November to March. Unfortunately, the larger specimen was blown over by gale-force south-easterly winds on 20/3/2012.

Metrosideros bartlettii (Bartlett's rata). Northern New Zealand native.

Bellringer Pavilion. Three small specimens of this critically endangered (IUCN Red List status) northern New Zealand native were planted in the garden at the southern end of the pavilion on 20/4/2012.

Metrosideros carminea (crimson rata vine). New Zealand native.

Upper Stainton Dell, beside the pond. A healthy plant which is growing on a stump of *Dicksonia fibrosa*. It is a mass of flowers in September. This is no doubt one of the six *Metrosideros* planted as *M. carminea* on "ponga stumps" in Upper Stainton Dell on 15/6/1993 (planting book 5/1993–13/10/1993: 11). It was trimmed in February 2013.

***Metrosideros collina* 'Tahiti'**.

There is a prolifically flowering specimen of this cultivar behind the tea house. This plant, which was a display plant in the Fernery, was moved to its present position on 23/8/1993 (planting book 5/1993–13/10/1993: 40).

Metrosideros elegans = *Carpolepis elegans*. New Caledonia.

Traffic islands garden, at the western end of Jellyman Walk. This large specimen, received from the Wellington City Council, was planted on 20/10/1981 (planting book 1981–1983: 2). It is the only specimen in the park of a species that is very rare in cultivation in New Zealand (see http://kete.pukekura.org.nz/david_medway_birds_and_plants/images/show/567-metrosideros-

from-new-caledonia). This tree flowers from late March into May. Tui (*Prosthemadera novaeseelandiae*) have been seen feeding at the flowers.

Metrosideros excelsa (pohutukawa). New Zealand native.

There are many significant specimens of *M. excelsa* in the park, notably on the northern side and top of the eastern terraces at the sports ground, between Horton and Claffey walks, on the western boundary of the park beside lower Victoria Road and on the boundary between Kunming Garden and kauri grove at Brooklands. They were planted by Thomas Horton in the 1920s and 1930s (see, e.g., Medway 2010c, 2011a). The reason why Horton planted so many pohutukawas in the park was recorded by him in the *Taranaki Herald* of 1/10/1931 p.5 (reproduced in the *Magazine of the Friends of Pukekura Park* 7(2) (June 2012): 6) as follows:

“During my period at the park (over seven years) I have planted about 1200 trees, a great proportion of which are pohutukawa. Some people have asked the reason, and I am pleased to give it here. This is, if not our best native coastal tree, certainly one of the best. Many consider it one of the world’s best ornamental flowering trees. It withstands heavy wind, even gales, is not affected by salt spray, is evergreen, not so subject to disease as many other varieties, is easily controlled, responds readily to treatment, is free flowering and makes an effective breakwind; and, as it is a native, I consider it the most valuable tree to plant on the weather side of any park area which requires shelter and on the hill-tops. The only complaint made against this tree is that it is slow growing. That is quite true, when allowed to grow with grass and rubbish growing all around, as many people do, but with cultivation it is really astonishing how they respond and the wonderful growth they put on. Many of the trees planted in the park have made six feet of growth in five years, and would do even better if we had the labour to dig all the ground, instead of a limited area around each tree. There are trees in New Plymouth that have grown ten feet or more in three or four years. For these reasons I have adopted it as the most suitable tree for the purpose for which it has been planted. I think it unfortunate that this tree was not planted on the hill-tops of the park fifty or sixty years ago when the pines were put in. Had this been done there would be today a permanent body of growth on the hill-tops which might have been the special pride of the park and a pleasure to the whole community.”

The several large specimens between Horton and Claffey walks are noted here. They are no doubt the survivors of the 75 Pohutukawas that Horton planted in this area in 1924 (Medway 2011a). One of them was noted by Medbury (1986: 120). Pohutukawa flowers are a favoured source of nectar for tui (*Prosthemadera novaeseelandiae*).

Metrosideros excelsa* var. *aurea (golden pohutukawa).

Rogan Street entrance. The two trees in the adjacent children’s playground are the only specimens of this golden-flowering variety of *M. excelsa* in the park. It was discovered on Motiti Island in the Bay of Plenty and introduced by Duncan and Davies in 1954 (see Jellyman, A. 2011 *The growing world of Duncan Davies. A horticultural history 1899 – 2010*). There are now many large specimens in New Plymouth. They flower from November to December.

Metrosideros fulgens (red rata vine). New Zealand native.

This species is plentiful in the park. Among the most accessible and best examples of *M. fulgens* are the large and prolifically flowering specimens which are growing to a considerable height on the group of tall *Knightia excelsa* on the eastern side of Fred Parker Lawn. They are an important

source of floral nectar for tui (*Prosthemadera novaeseelandiae*) when in flower during the cooler months of the year (Medway 2008c).

Metrosideros kermadecensis (Kermadec pohutukawa). Kermadec Islands.

Victoria Road terrace. There is a group of three tall specimens at the southern end of the terrace. According to Medbury (1986: 282), they were planted in 8/1953.

***Metrosideros kermadecensis* 'Variegata'** (variegated Kermadec pohutukawa). Kermadec Islands.

A large and healthy specimen of the cultivar *Metrosideros kermadecensis* 'Variegata', which flowers well in December, is prominent beside upper Brooklands Park Drive to the north of the traffic islands garden. It was noted by Medbury (1986: 307) who said it was relocated to this position in 1978 from Rhododendron Dell where it had been planted as an advanced specimen in about 1968. There is another, smaller specimen of 'Variegata' immediately beside the eastern lookout at Pukekura.

Metrosideros nervulosa (mountain rose). Lord Howe Island native.

Victoria Road car park. There are at least two large and healthy specimens of a bushy *Metrosideros* that appear to answer best to this species (refer Ian Hutchinson, botanical records officer). Their planting date is uncertain, but it may have been on 27/6/1996 when many plants, including seven specimens identified at the time as *Metrosideros carminea*, were planted in the car park area (planting book 9/1994–1997: 41–42). The prolific flowers of this *Metrosideros*, which appear briefly in November, are a source of floral nectar for silvereyes (*Zosterops lateralis*) and tui (*Prosthemadera novaeseelandiae*).

Metrosideros perforata (white rata vine). New Zealand native.

This species is plentiful in the park. They can be seen growing nearby on tree ferns at the northern end of the lower lake in Stainton Dell.

Metrosideros robusta (northern rata). New Zealand native.

There are three significant specimens of this *Metrosideros* in the park. Their planting dates are not known.

(1). Eastern hillside plateau. A very tall specimen is growing at the commencement of the upper track on totara hill behind the former racecourse caretaker's house. It was noted by Burstall (1973: 16) and Burstall and Sale (1984: 258) as *M. umbellata* (southern rata), and by Medbury (1986: 217) as *M. robusta*. Medbury said the species needed to be verified. Smith and Fuller (2007: 67, Fig. 53), who recorded this specimen as *M. umbellata*, considered it to be a "healthy tree, good form with no obvious defects, tucked away in a secluded corner of Pukekura Park". They commented that verification of its identity was still required.

(2). Tea house. A tall specimen is growing beside the Sunken Dell near the outlet to the main lake.

(3). Brooklands. A tall specimen grows just inside the bush at the southern end of the main lawn. These three trees – with tall, straight, symmetrical trunks and comparatively small crowns – are specimens of the terrestrial form of *M. robusta* known as "Stony River Blue Rata". The Blue Rata Scenic Reserve near Okato contains the only preserved remnant of this forest that originally covered "many scores of acres of stony ground on either bank of the Stony River where it

emerges from Egmont Park Reserve” (see Maxwell, M. G. 1947. Stony River Blue Rata. *Wellington Botanical Society Bulletin* 15: 6; Clarkson, B. R. and Boase, M. R. 1982. Scenic Reserves of West Taranaki: 5–8).

Syzygium anisatum = *Backhousia anisatum* (aniseed tree). Australia.

A rare Australian rainforest tree whose natural distribution in the wild is restricted to two valleys in subtropical New South Wales.

Traffic islands garden, at the western end of Jellyman Walk. A healthy, young specimen which was planted as *Backhousia anisatum* on 24/11/2005 (planting book 7/2004–9/2007: 23).

Syzygium maire (swamp maire). New Zealand native.

Below Scanlan Lookout, at the foot of the hill. This may be the only specimen of *S. maire* in the park. It may be growing naturally there, otherwise its planting date is not known. The fruit is ripe in December.

Syzygium paniculatum (Australian brush cherry). Eastern Australia.

Near Racecourse Walk. There are two large specimens a few metres apart beside the north-western boundary of the house property formerly occupied by the racecourse custodian. They were noted by Burstall (1973: 35) and Smith and Fuller (2007: 210).

Syzygium smithii = *Acmena smithii* = *Acmena floribunda* (lilly pilly). Australia.

(1). Smith Walk. The largest of several now very large specimens beside Smith Walk between the Gilbert Street entrance and Fountain Lake was noted by Burstall (1973: 26). Medbury (1986: 8) also noted one of them, as did Smith and Fuller (2007: 84). Three specimens of *S. smithii* are included, under the name *Acmena floribunda*, in a comprehensive list compiled by Thomas Horton in the late 1920s of plants “Commencing at right-hand side of entrance from sports ground near lower lake and thence to Gilbert St gates” (Puke Ariki ARC2003–860, Box 3, Folder 28). Those three trees were probably planted in 1909 or 1910 by W. W. Smith, then curator of the park, when he was working on and planting out the Gilbert Street entrance and Smith Walk between there and the car park entrance to Fountain Lake (*Taranaki Herald* 7/9/1909, p.4; *Taranaki Daily News* 5/7/1910, p.2).

(2). Children’s playground, Pukekura. Another very large specimen was present until recently near the bridge to Palm Lawn. Medbury (1986: 63) thought it was planted in about 1930. Unfortunately, one of the two trunks of this tree was felled by gale-force south-easterly winds on 20/3/2012 and the whole tree was taken down several days later.

Family Nothofagaceae

Nothofagus cunninghamii (myrtle beech). South-east Australia and Tasmania.

Main lake, Pukekura. The only specimen of this evergreen species in the park is growing immediately beside the boat landing at the northern end of the lake. It was planted in 10/1982 (planting book 1981–1983: 88).

Nothofagus fusca (red beech). New Zealand native.

(1). Claffey Walk/upper Horton Walk junction. Two large specimens were there at the commencement of this survey. The larger was uprooted by gale-force south-east winds on 26 and 27/4/2011, and the smaller was cut down in late 5/2011. The larger specimen was probably the one noted by Medbury (1986: 134).

(2). Racecourse Walk. A large specimen is growing beside the track near the middle of Racecourse Walk. Its planting date is not known.

(3). Kauri grove. A total of 100 red beech were planted there from 1936 to 1938 (Medway 2010c). Some of them still survive.

Nothofagus menziesii (silver beech). New Zealand native.

There are several large specimens of *N. menziesii* in the park. The following are noted here:

(1). Brooklands. One of the most impressive specimens of *N. menziesii* in the park, is the largest of the three growing close to each other beside the rows of lawsoniana on the former nature trail near Kaimata Street. Their planting date is not known.

(2). Beside Horton Walk. This specimen was noted by Medbury (1986: 122), who thought it was likely to be a 1925 planting coinciding with the development of Horton Walk. Medbury's number plate is still on the tree.

(3). Kauri grove. A total of 50 silver beech were planted there from 1936 to 1938 (Medway 2010c). Some of them still survive.

Nothofagus solandri (black beech). New Zealand native.

Three specimens are noted here.

(1). Fountain Lake. There is a large specimen immediately to the right of the Bellringer Pavilion car park entrance to Fountain Lake. It was noted by Burstall (1973: 16), Medbury (1986: 20) and Smith and Fuller (2007: 70, Fig. 56). Burstall and Sale (1984: 255) included this specimen in their list of notable trees. This plant does not appear in a photograph held in the curator's office which depicts the car park entrance from the western side of Fountain Lake in about 1895. It is the third entry in a comprehensive list compiled by Thomas Horton in the late 1920s of plants "Commencing at right-hand side of entrance from sports ground near lower lake and thence to Gilbert St gates" (Puke Ariki ARC2003-860, Box 3, Folder 28). This tree was probably planted in 1909 or 1910 by W. W. Smith, then curator of the park, when he was working on and planting out the Gilbert Street entrance and Smith Walk between there and the car park entrance to Fountain Lake (*Taranaki Herald* 7/9/1909, p.4; *Taranaki Daily News* 5/7/1910, p.2).

(2). Fernery, eastern side. An impressive specimen which is prominent on the top of the bank beside the Fernery. It bears an old nameplate. Its planting date is not known, but it was probably sometime in 1924 or 1925 when Horton Walk and immediately adjoining areas were planted out (see Medway 2011a).

(3). Brooklands Zoo. There is a large specimen on the western-facing slope behind the zoo. It was noted by Medbury (1986: 436). Single *Nothofagus* specimens which were identified as *Nothofagus cliffortioides* and *Nothofagus solandri* were planted in this area on Arbor Day, 14/8/1971 (planting book 1970-1971: 81).

Nothofagus truncata (hard beech). New Zealand native.

Beside the mid-section of Scanlan Walk. The specific identity of this *Nothofagus* has eluded us, but it appears to answer best to *N. truncata* (hard beech), a New Zealand native. Its planting date is not known.

Family Nyctaginaceae

Pisonia brunoniana = *Heimerliodendron brunonianum* (parapara). New Zealand native.

There is a group of these plants at the Fillis Steet entrance to Pukekura Park which were probably planted on or about 16/9/1997 (refer Ian Hutchinson, botanical records officer 16/8/2012). The large specimen of *P. brunoniana* at Palm Lawn, which Medbury (1986: 53) recorded under the name *Heimerliodendron brunonianum*, was removed several years ago. Presumably it was the “one specimen in the park” to which Thomas Horton referred in 1932 (*Taranaki Herald* 30/7/1932, p. 2).

***Pisonia brunoniana* ‘Variegata’** = *Heimerliodendron brunonianum* ‘Variegata’ (variegated parapara).

This is a cultivar of a naturally occurring variegated variety. There are several specimens of various sizes in Sunken Dell near the tea house and beside upper Horton Walk. The best specimen is beside the western pathway from the Bellringer Pavilion car park to the tea house. Their planting dates have not been ascertained.

Family Oleaceae

Fraxinus sieboldiana = *Fraxinus mariesii* (Japanese flowering ash). Japan.

Upper Scanlan Walk. There is a good specimen growing immediately beside the walk. It was planted on 16/6/1999 (planting book 5/1997–6/2000: 38) as *Fraxinus mariesii*.

Nestegis cunninghamii (black maire). New Zealand native.

There are several good specimens of *N. cunninghamii* in the park among which the following are noted here.

(1). King Fern Gully, Pukekura. Burstall (1973: 16) and Smith and Fuller (2007: 68) noted the several very tall specimens of *N. cunninghamii* in the gully. Unfortunately, some of these trees were lost as a result of a nearby large *Pinus radiata* falling on them during a storm on 12/7/2007.

(2). Horton Walk. There is a very large and healthy specimen of *N. cunninghamii* at the top of Horton Walk, a few metres from the Rogan Street entrance to the park. Medbury (1986: 118) identified it as this species. He thought it was planted in about 1925.

(3). Eastern lookout plateau. There is a good specimen on the southern corner of the plateau next to a specimen of *Alectryon subcinereus* (Australian native quince). Its planting date has not been ascertained.

Nestegis lanceolata (white maire). New Zealand native.

There are several good specimens of *N. lanceolata* in the park among which the following are noted here.

(1). Fillis Street Gully. A tall and healthy multi-leadered specimen, bearing a nameplate, is on the eastern side in the bottom of the gully. This area was originally planted by Thomas Horton from 1935 to 1939 as the "Fillis Street native botanical reserve" (see Medway 2010a). The specimen of *N. lanceolata* noted here was planted as *Olea montana* also known as *Nestegis montana* (narrow-leafed maire) in 7/1956 (planting book 1955–9/1956: 90). Medbury (1986: 142) identified it as *N. lanceolata*.

(2). Monument Hill. A good young specimen is beside the northern point of the track around Monument Hill. It sometimes fruits well in November and December.

(3). Hatchery Lawn. There is a healthy specimen among other trees at the southern end of the lawn near the steps to the waterfall.

(4). Near Poet's Bridge. A large and healthy specimen is beside Saxton Walk a few metres to the south of the bridge.

Olea europaea (olive). Mediterranean region and North Africa.

Unfortunately, the best specimen which was in the traffic islands garden at Brooklands, was significantly damaged by very strong south-easterly winds on 23/1/2011. It was removed two days later. However, there are five good specimens on the north-facing slope above nearby Jellyman Walk. Their planting dates have not been ascertained.

Osmanthus delavayi (tea olive). China.

(1). Traffic islands garden, at the western end of Jellyman Walk. One large specimen that was planted on 20/10/1981 (planting book 1981–1983: 2). It flowers well from September to October.

(2). Kunming Garden. Some of the nine specimens that were planted beside the pagoda on 12/8/2005 (planting book 7/2004–9/2007: 17).

Family Onagraceae

Fuchsia arborescens (lilac fuchsia). Southern Mexico to Panama.

Two specimens are worthy of note here.

(1). Palm Lawn. There is a large specimen at the southern end of the lawn which is the remaining one of several that were planted in this area on 7/10/1991 (planting book 1991: 749). Its winter and spring flowers are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

(2). Brooklands. There is another large specimen at the Exeter Street entrance to Brooklands. Its planting date has not been ascertained.

Fuchsia excorticata (tree fuchsia). New Zealand native.

There are a few dozen small specimens scattered throughout the park, mostly in the Rhododendron Dell and Maranui Gully areas. Unfortunately, the most significant specimen among them, which was beside the pathway through List's Garden, apparently died and was removed in 9/2011. It was a source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

Family Pennantiaceae

Pennantia baylisiana = *Plectomirtha baylisiana* (Three Kings kaikomako). New Zealand native.

A nationally critical New Zealand native. (IUCN Red List status: Critically Endangered). This species, which is New Zealand's rarest tree, was originally known from only one specimen found on Great King Island of the Three Kings Islands. Behind the zoo on the western boundary is a fine specimen that was planted on Arbor Day, 14/8/1971 (planting book 1970–1971: 82) under the name *Plectomirtha baylisiana*. This specimen was recorded by Medbury (1986: 438). It flowers in October and November.

Family Phytolaccaceae

Phytolacca dioica (ombu tree). Argentina.

Eastern lookout plateau. A large, probably male specimen of this unusual dioecious species is growing near the track to totara hill. It is the surviving one of three specimens that were planted on 6/10/1980 (planting book 1980–1981: 17). It was noted by Medbury (1986: 207). New Zealand pigeons (*Hemiphaga novaeseelandiae*) have been seen eating the new leaves.

Family Pittosporaceae

Hymenosporum flavum (Australian frangipani). Eastern Australia.

There are two large specimens in the park. Tui (*Prosthemadera novaeseelandiae*) obtain nectar from the flowers which are present from September to November.

(1). Beside upper Racecourse Walk. This specimen was planted on 4/5/1993 (planting book 5/1993–13/10/1993: 1).

(2). Ambush Gully, western hillside. This specimen was planted in 8/1975 according to Medbury (1986: 414).

Pittosporum eugenioides (lemonwood or tarata). New Zealand native.

There are many specimens of *P. eugenioides* in the park of which the following are selected here. Presumably, most of them were planted but on dates that have not been ascertained.

(1). Children's playground, Pukekura. An older specimen recorded by Medbury (1986: 59) was beside the bridge to Palm Lawn at the commencement of this survey. Medbury said it was planted in about 1954 in association with the development of the playground. Unfortunately, it was flattened by the very large trunk of a nearby lilly pilly (*Acmena smithii*) that fell on it during gale-force south-easterly winds on 20/3/2012.

(2). Eastern lookout plateau. There is a large specimen near the centre of the plateau.

(3). Rogan Street entrance. At the commencement of this survey, there was a group of about eight healthy specimens at the entrance to the compound at the top of Horton Walk. For whatever reason, four of the best of them were cut down in 8/2013.

(4). Goodwin Dell. There is a large and healthy specimen on the eastern margin of the dell. It flowers well in October.

(5). Swan Walk. One of the best specimens in the park is about midway along the walk where it borders Brooklands Road.

(6). Brooklands lawn. There is another good specimen that is conspicuous on the bush edge at the southern end of the lawn.

(7). Fuller Walk. Probably the most outstanding specimen in the park is beside the eastern portion of Fuller Walk near the boundary with Highlands Intermediate School. It is a tall, multi-leadered specimen with an impressive trunk. It, and other large specimens nearby, may have grown naturally there.

Pittosporum umbellatum (haekaro). New Zealand native.

Victoria Road terrace. Medbury (1986: 288) recorded that two specimens were planted here in 10/1952. The one remaining near the centre of the terrace at the commencement of this survey had been gradually deteriorating in condition during recent years and was effectively dead by 1/2012. It was cut down on 26/3/2012. When alive, its flowers were a source of nectar for tui (*Prosthemadera novaeseelandiae*).

Family Platanaceae

Platanus orientalis (Oriental plane). Eurasia.

Hughes Walk, above Hatchery Lawn. One very large, two-trunked specimen. Its planting date is not known, but its size indicates it may have been an early planting. It bears a nameplate, and the following native New Zealand plants as epiphytes: the orchid, *Earina mucronata*; the perching lily, *Collospermum hastatum*; and the ferns, *Pyrrosia eleagnifolia* and *Microsorium pustulatus*.

Platanus x hispanica = *Platanus x acerifolia* (London plane).

There are several large specimens of *Platanus x hispanica* throughout the park of which the following are especially noted.

(1). Rhododendron Dell. Burstall (1973: 25) identified these two very large and outstanding specimens as American sycamores (*Platanus occidentalis*). Medbury (1986: 233) identified them as *Platanus x hispanica* and recorded that they were purchased by Newton King from Thomas Horton's nursery in about 1898. They were noted as *Platanus x acerifolia* by Smith and Fuller (2007: 183–184, Figs. 171-173). The larger of these two trees bears a notable tree plaque and, as *P. occidentalis*, is TR/P0129 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz).

(2). Brooklands Bowl amphitheatre. There are five large specimens on the western side of the amphitheatre whose planting dates are not known.

Family Polemoniaceae

Cantua buxifolia (sacred flower of the Incas). Peru, Bolivia and north Chile.

The national flower of Peru.

Traffic islands garden, northern end. A group for which the planting date has not been ascertained. These plants flowered from September to October. Unfortunately, for whatever reason, some were removed in 10/2012.

Family Proteaceae

Alloxylon pinnatum (Dorrigo waratah). Eastern Australia.

This waratah is rare and threatened in its native habitat. There were two large specimens in the park at the commencement of this survey. Their flowers, which are abundant in December and January, are a favoured source of nectar for tui (*Prosthemadera novaeseelandiae*).

(1). Upper Racecourse Walk. Two specimens were planted here as *Embothrium wickhamii* on 6/10/1986 (planting book 9/1986–8/1987: 11). They are identified on planting plans as *Telopia wickhamii*. One of the two main trunks of a large specimen of *Alloxylon pinnatum* was snapped off at ground level by very strong south-easterly winds on 5/7/2003. The remainder of the tree was cut down a few days later. A much smaller *Alloxylon* which was growing immediately behind it grew rapidly and flowered soon afterwards. Unfortunately, this specimen was also blown over by gale-force south-easterly winds on 20/3/2012, and was removed. There is a small specimen immediately beside where it grew.

(2). Fillis Street frontage, bank at the western end. A large specimen whose planting date is not known. It is very conspicuous on the bank when flowering.

Grevillea hilliania (white silky oak). New South Wales and Queensland.

This plant is classified as an endangered species in New South Wales.

Victoria terrace. According to Medbury (1986: 287), this group of five healthy specimens near the centre of the terrace was planted on 10/8/1953. One of them bears Medbury's number plate. They flower in February.

Grevillea robusta (silky oak). New South Wales and Queensland.

There is a large specimen, bearing a nameplate, beside the western pathway from Bellringer Pavilion to the tea house. According to Medbury (1986: 105), it was planted about 1924. This tree flowers from December to January. It is the only specimen of *G. robusta* in the park.

Knightia excelsa (rewarewa, New Zealand Honeysuckle). New Zealand native.

There are numerous specimens of *K. excelsa* in the park, among which the following are noted here. Their flowers are a favoured source of nectar for tui (*Prosthemadera novaeseelandiae*).

(1). Children's playground, Pukekura. This specimen at the northern end of the playground is debatably the largest in the lower part of the park. It was noted by Medbury (1986: 71) who thought it was possibly a natural seedling, he estimated it to be about 60 years old.

(2). Near Brooklands Bowl stage. Many specimens of *K. excelsa* of similar size and age are conspicuous on the hillside between the rear of the stage and the racecourse. This large group appears to have been planted there, but the date is not known.

(3). Brooklands bush. There is a group of *K. excelsa*, which are presumably natural seedlings, near the large puriri at the southern end of the former nature trail. It includes what is probably one of the best and largest examples of this species in the park. A large specimen in the bush at Brooklands, which was noted by Burstall (1973: 13), Burstall and Sale (1984: 258) and Medbury (1986: 498), failed in the early 1990s (Smith and Fuller 2007: 60).

(4). Near Kaimata Street. There is a very large and healthy specimen a few metres inside the bush near the junction of the former nature trail and the Kaimata Street entrance. It is no doubt growing naturally there.

Macadamia tetraphylla (macadamia nut). Eastern Australia.

Victoria terrace, southern end. The larger of two specimens growing close together was identified as this species by Medbury (1986: 277), who recorded that it was planted on 8/10/1953.

Stenocarpus sinuatus (fire wheel tree). Queensland and northern New South Wales.

Victoria terrace. A specimen of unknown planting date that was recorded by Medbury (1986: 292), whose number plate is still on the tree.

Toronia toru = *Persoonia toru* (toru). New Zealand native.

Southern end of the Boatshed Bridge. A good specimen which was planted on 12/10/1979 (planting book 1979–1980: 35) as *Persoonia toru*. This plant flowers well in September.

Family Rhamnaceae

Colletia paradoxa = *Collectia cruciata* (anchor plant). Southern South America.

Brooklands lawn border. A large and generally healthy specimen of this rare and unusual plant, the only one of *C. paradoxa* in the park. Unfortunately, for whatever reason, it was cut right back in 8/2011. Hopefully it will come away again. Medbury (1986: 360) noted it as *C. cruciata*. It was planted in 7/1985 (planting book 1984–10/1986: 91).

Pomaderris apetala (Tainui). New Zealand native.

This native New Zealand plant is nationally critical in the wild. It was not listed by Medbury (1986) or by Smith and Fuller (2007). The following park specimens have been selected for inclusion here.

(1). Brooklands. A plantation comprising numerous large and healthy specimens of *P. apetala* is beside the upper track on the south-eastern boundary of Brooklands with Highlands Intermediate School, between Fuller Walk and the List Street entrance. The planting date of this significant collection has not been ascertained.

(2). Pinetum, Brooklands. There is a good specimen of *P. apetala* on the western hillside of the pinetum. Its planting date has not been ascertained.

Family Rosaceae

Eriobotrya japonica (loquat). South-eastern China, Japan.

This plant is indigenous to south-eastern China and naturalised in Japan.

Compound beside the band room lawn. One large specimen whose planting date has not been ascertained. New Zealand pigeons (*Hemiphaga novaeseelandiae*) sometimes eat the large, yellowish fruit which is ripe in November and December (see photo in the *Newsletter of the Friends of Pukekura Park* 2(2)(2007): 1).

Malus coronaria (sweet crab apple). Eastern North America.

Upper Scanlan Walk. One of three specimens planted on Arbor Day, 11/6/1983 (planting book 1983: 27; *Taranaki Daily News* 13/6/1983: 1).

Photinia beauverdiana (photinia). Taiwan, Bhutan, northern Vietnam, nearby parts of China. Eastern hillside. A specimen of this deciduous plant that is conspicuous near the seat on the slope above the eastern lookout is the remaining one of five that were planted there on 8/5/2002 (planting book 6/2000–7/2004: 23).

Photinia x fraseri = *P. glabra x serratifolia* (photinia). Temperate Asia.

Five large specimens were present at the commencement of this survey.

- (1). Victoria Road terrace. Three specimens growing together on the terrace, which Medbury (1986: 295) identified as *Photinia x fraseri* 'Robusta', were removed on 21 or 22/4/2010.
- (2). Jellyman Walk, western end. The planting date of this specimen has not been ascertained, but it was probably not before 20/10/1981 when other trees in the immediate area were planted out (planting book 1981–1983: 2–3). Unfortunately, this healthy specimen was removed as a result of severe damage suffered by it during gale-force south-easterly winds on 20/3/2012.
- (3). Above the waterwheel, Pukekura Park. A large specimen was planted in about mid-1965 as *Photinia glabra* 'Rubens' = *Photinia x fraseri* (planting book 1965: 6). It flowers well in October.

Prunus avium (wild cherry). Europe.

Brooklands lawn. A good specimen of this cherry is growing between the wisteria and *Rosa* 'American Pillar' at the southern end of the pathway through the lawn. It flowers prolifically in September. Tui (*Prosthemadera novaeseelandiae*) feed on the floral nectar, and New Zealand pigeons (*Hemiphaga novaeseelandiae*) eat the flowers. Its planting date has not been ascertained.

Prunus campanulata (Formosan cherry). Taiwan and southern Japan.

There are several mature specimens of *P. campanulata* in the park most of which are probably chance seedlings. The following have been selected for inclusion here.

- (1). Two large specimens on Swan Walk beside Brooklands Road.
- (2). A large specimen towards the southern end of the zoo compound, together with two specimens of *P. campanulata* 'Superba'.
- (3). A large specimen beside the track at the southern end of Ambush Gully.

All of these specimens are very important winter sources of floral nectar for tui (*Prosthemadera novaeseelandiae*), particularly the larger of the two specimens on Swan Walk in which as many as 21 tui at a time have been seen feeding at its flowers (Medway 2008c). Photographs of tui feeding at *P. campanulata* flowers also appeared on the cover and on page 2 of the *Magazine of the Friends of Pukekura Park* 7(1) (February 2012).

Prunus campanulata 'Superba' (Formosan cherry).

There are several mature specimens of this cultivar in the park. This cultivar flowers later than *P. campanulata*. The following specimens of 'Superba' have been selected for inclusion here.

- (1). Several large specimens beside the Rogan Street car park.
- (2). Two large specimens towards the southern end of the zoo compound together with a specimen of *P. campanulata*. These specimens of 'Superba', which flower well in August and September, are favoured by tui (*Prosthemadera novaeseelandiae*) as a source of floral nectar.
- (3). One large specimen on the eastern border of Brooklands lawn is also favoured by tui. The planting dates of these specimens have not been ascertained.

***Prunus* 'Pink Perfection'** (flowering cherry).

Brooklands lawn, southern end. A large specimen that is the remaining one of two planted on Arbor Day, 7/8/1965 (planting book 1965: 23). It was recorded by Medbury (1986: 383).

Prunus laurocerasus (cherry laurel). Eastern Europe and south-west Asia.

Children's playground, Pukekura. There is a group of large specimens at the northern end of the playground, which Medbury (1986: 67) considered to be the remnant of a large group planted possibly about 1920.

Prunus serrulata (Japanese cherry). Japan, Korea and China.

The following park specimens are noted here:

(1). Beside the main lake, in the north-western corner near the waterfall. One of the two largest individuals among six specimens of varying sizes was felled on 6/10/2011 because it was apparently beginning to collapse into the lake. These cherries are a feature in this corner of the lake when they are flowering in September and October. Their planting date has not been ascertained. New Zealand pigeons (*Hemiphaga novaeseelandiae*) eat the flower buds, flowers, new leaves and fruit.

(2). Near Goodwin Dell. This specimen, which is growing to the west of the dell on the Brooklands Road frontage, has a huge trunk. It is the largest *P. serrulata* in the park. It is not known whether this tree was purposely planted, or was a chance seedling.

(3). Brooklands lawn. This large specimen is growing in the centre of the lawn and was beside the notable copper beech (*Fagus sylvatica* var. *purpurea*) before that tree was lost in 1/2011. Its planting date is not known. It flowers well in September and October. The flowers are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

***Prunus serrulata* 'Shirotae'** (Mt Fuji cherry).

The Gables entrance. This large specimen in a conspicuous position is probably the one noted by Medbury (1986: 493). It was planted on 17/9/1962 (planting book 1960–1962: 94). Tui (*Prosthemadera novaeseelandiae*) feed on its floral nectar, and New Zealand pigeons (*Hemiphaga novaeseelandiae*) eat its flowers.

***Prunus subhirtella* 'Fukubana'**.

Brooklands lawn, four seasons border. A good specimen of this cultivar is growing on the border just inside the entrance. Its planting date has not been ascertained.

***Prunus subhirtella* 'Pendula'** (weeping rosebud cherry).

Brooklands lawn, southern end. This specimen, recorded by Medbury (1986: 385), was planted in 8/1963 (planting book 1963–1964: 41). It bears the nameplate *Prunus serrulata* x *subhirtella* 'Pendula'. The native New Zealand epiphytes, *Pyrrhosia eleagnifolia* and *Collospermum hastatum* are growing on it.

***Prunus* x *yedoensis* 'Awanui'** (flowering cherry).

Kaimata Street entrance. The two large and prolifically flowering specimens, which were prominent at the entrance at the commencement of this survey, were planted on 24/8/1994

(planting book 10/1993–9/1994: 96). The other less healthy looking specimen beside the nearby lawn was probably planted at or about the same time. They may have been the only specimens of *P. 'Awanui'* in the park. Unfortunately, the two larger specimens were removed in late 4/2013 to make way for the redevelopment of the entrance. *P. 'Awanui'*, one of the best spring-flowering cherries, has achieved international fame. It originates from a seedling first spotted and marketed by local plantsman Keith Adams (*Taranaki Daily News* 1/4/2011, p. 12).

Prunus x yedoensis 'Shidare Yoshino' (Yoshino cherry).

Brooklands lawn, just inside the entrance. A large specimen that was planted on Arbor Day, 7/8/1965 (planting book 1965: 23). It was recorded by Medbury (1986: 362). Tui (*Prosthemadera novaeseelandiae*) feed on the floral nectar, and New Zealand pigeons (*Hemiphaga novaeseelandiae*) eat the flowers.

Pyrus canadensis = *Amelanchier canadensis* (shad bush). Eastern United States.

Above the mid-section of Racecourse Walk. Eight specimens were planted here as *Amelanchier canadensis*. Five were planted on 7/9/1965 (planting books 1965–1966: 40). These were recorded by Medbury (1986: 197).

Rosa 'American Pillar'.

Brooklands lawn. There are four large plants growing together at the southern end of the lawn. They flower prolifically in November and December. Their planting date is not known, but it must have been before 1934 if they are some of the same plants as are depicted in a photograph that appears in the souvenir programme for the official opening of Brooklands, on 10 March 1934.

Family Rubiaceae

Alberta magna (Natal flame bush). South Africa.

Traffic islands garden, western end of Jellyman Walk. In late 7/2010, the group of three large *A. magna* near Brooklands Park Drive, which flowered well, were cut right back but various lengths of trunk were left standing. They recovered quickly and one of them had a few flowers again in 1/2013. Tui (*Prosthemadera novaeseelandiae*) were seen feeding at the flowers of these plants before they were cut back. Their planting date has not been ascertained.

Coprosma repens (taupata). New Zealand native.

Stainton Dell. There is a large plant which overhangs the western side of the lower pond in the dell. It may have been planted there.

Family Rutaceae

Citrus x paradisi (grapefruit).

The Gables. There is a large and healthy specimen behind The Gables. It fruits bountifully every year. It appears to be quite old. Its planting date is not known, but no doubt it was after 1904 when the nearby building was moved to this site.

Flindersia brayleyana (Queensland maple). Northern Queensland.

Eastern lookout plateau. One specimen which is no doubt one of the two specimens of *F. brayleyana* that were planted in Pukekura Park on 6/10/1980 (planting book 1980–1981: 17). This plant was noted by Medbury (1986: 212).

Melicope ternata (wharangi). New Zealand native.

Victoria Road terrace. A large and healthy specimen towards the northern end of the terrace whose planting date is not known.

Family Salicaceae

Carrierea calycina (goat horn tree). Southern China.

Eastern hillside plateau above Racecourse Walk. A good specimen of this rarely cultivated deciduous or semi-evergreen tree, noted for its extraordinary flowers, is growing beside the track to totara hill.

Idesia polycarpa (wonder tree). China and Japan.

Three significant specimens are recorded here.

(1). Eastern hillside plateau above Racecourse Walk. Two specimens – a male and a female – of the five planted in this area on 7/9/1965 (planting book 1965–1966: 40; Medbury 1986: 208), were present at the commencement of the present survey. The deterioration of the female tree, which bore abundant fruit that was a favoured food of blackbirds (*Turdus merula*), was evident by 2/2012. It had died by the end of that year and was subsequently removed. This tree was situated only a few metres from the *Dais cotinifolia* (pom pom tree) that was removed in 4/2011, apparently because of ill health. Both plants may have succumbed to the same cause. The remaining male *I. polycarpa* is large and healthy.

(2). Hatchery Lawn, eastern side. Two large specimens which no doubt are the two seedlings planted there on 27/7/1962 (planting book 1960–1962: 82).

Poliiothisis sinensis (Chinese pearl-bloom tree). China.

Brooklands Zoo. There is a good specimen of this rare tree beside the information sign just inside the zoo entrance. It was planted on Arbor Day, 7/8/1965 (planting book 1965: 25). It was noted by Medbury (1986: 468). This plant flowers well in February and March.

Populus eugenei (Carolina poplar).

Behind the Brooklands Zoo, western boundary. These are the remaining two of seven specimens that were planted here on Arbor Day, 14/8/1971 (planting book 1970–1971: 82).

***Populus nigra* 'Italica'** (Lombardy poplar). Western Asia.

There is a row of four trees on the old boundary between Brooklands and Pukekura near upper Rhododendron Dell. The lowest, which is a very large and old specimen, is probably the one noted by Medbury (1986: 228).

Populus yunnanensis (Yunnan poplar). China.

A very fast growing species. Chinese collection, Coronation Avenue entrance. Six of seven specimens that were planted here on 6/9/1993 (planting book 5/1993–13/10/1993: 42). Several limbs were broken off these trees by gale-force south-easterly winds in late 3/2012.

Family Sapindaceae

Acer buergerianum = *Acer trifidum* (trident maple). China.

(1). Goodwin Dell. There is a row of three large specimens of this deciduous maple on the western side of the dell. They were planted as *Acer trifidum* in 9/1955 (planting book 1955–9/1956: 42). Medbury (1986: 258) noted one of them.

(2). Ambush Gully. There are two large specimens on the western side of the gully. Their planting dates have not been ascertained.

Acer capillipes (red snakebark maple). Japan.

Ambush Gully. A specimen that was planted in the gully on Arbor Day, 9/8/1969 (planting book 1968–1970: 59).

Acer cappadocicum ‘**Auream**’ (Cappadocian maple). Turkey, the Caucuses and south-west Asia native.

Western hillside above Scanlan Walk near the lookout. One specimen planted on Arbor Day, 11/6/1983 (planting book 1983: 26; *Taranaki Daily News* 13/6/1983: 1).

Acer cappadocicum ‘**Rubrum**’ (Cappadocian maple). Turkey, the Caucuses and south-west Asia native.

Brooklands lawn, western side. A large specimen which was planted on Arbor Day, 7/8/1965 (planting book 1965: 23). It was recorded by Medbury (1986: 376). There is another smaller specimen of this cultivar in Upper Stainton Dell that was planted on or about 18/6/1996 (planting book 9/1994–1997: 37).

Acer caudatifolium = *Acer kawakamii* (Kawakami maple). Taiwan.

Western hillside above Scanlan Walk, beside the track near the lookout. One of three specimens that were planted on Arbor Day, 11/6/1983 (planting book 1983: 26; *Taranaki Daily News* 13/6/1983: 1) as *Acer kawakamii*. One of them was noted by Medbury (1986: 273).

Acer davidii* ssp. *grosseri = *Acer hersii* (Hers’s maple). China.

There are several specimens in the park that were planted as *A. hersii*.

(1). South-west corner of Brooklands beside Kaimata Street. The remaining six of eight specimens planted on 13/8/1968 (planting book 1967–1968: 87).

(2). Ambush Gully. The remaining two of five planted on Arbor Day, 9/8/1969 (planting book 1968–1970: 59). One of them was noted by Medbury (1986: 422).

Acer laurinum (Indonesian maple). Indonesia.

This evergreen species, which is the only true tropical maple, is relatively rare in the wild. It is represented in the park by the following specimens:

- (1). Upper Stainton Dell. A large healthy specimen which was planted on 8/7/1996 (planting book 9/1994–1997: 37, 43). It was received and planted as *Acer fabri* but it may in fact be *A. laurinum*.
- (2). Upper Racecourse Walk. This specimen was planted as "*Acer laurinum* (syn. *oblongifolium*)" on 16/9/1997 (planting book 5/1997–6/2000: 8).
- (3). Kunming Garden. Four smaller specimens in a group near the Moon Gate, which were planted as *A. laurinum* on 12/8/2005 (planting book 7/2004–9/2007: 17).

Acer negundo (box elder). North America.

Brooklands lawn, western side. Medbury (1986: 373) noted a tree at Brooklands as *A. negundo* 'Variegatum' (which is a cultivar of *A. negundo*). He recorded that it was an early J. W. Goodwin planting of about 1950 and observed that "Some reversion to straight green foliage can be seen at the top of the tree." A later note on his entry indicates that this tree was felled in 1993 because of poor structure and 70 per cent reversion. A specimen identified as *Acer negundo* 'Argenteomarginatum' (which is also a cultivar of *A. negundo*) was planted at Brooklands on Arbor Day, 7/8/1965 (planting book 1965: 23). This may be the specimen near the Senegal date palm (*Phoenix reclinata*) that now bears Medbury's number plate.

Acer palmatum (Japanese maple).

Specimens of some of the innumerable cultivars of *A. palmatum* – there are more than 1000 – are found in the park. For example, there are many specimens of several cultivars on the western hillside above Scanlan Walk and on the Japanese hillside which were planted at various times. Burstall (1973: 26) noted a large specimen of *A. palmatum* at Hatchery Lawn, which died in 1981 and was replaced on 19/9/1981 by the healthy cultivar growing between the stage and the small waterfall at the southern end of the lawn (Smith and Fuller 2007: 84). Medbury noted several specimens (1986: 32, 60, 163, 267, 271, 272, 392, 462). The following small selection of *A. palmatum* cultivars in the park may be included here. There is a large and healthy specimen of *A. palmatum* nearby on the Palm Lawn side of the bridge which connects the lawn with the children's playground.

***Acer palmatum* 'Atropurpureum'** (purple Japanese maple).

Upper Stainton Dell. Two large specimens that were planted here on 28/10/1975 (planting book 1974–1976: 73). One of them has a nameplate *A. palmatum* 'Purpureum'.

***Acer palmatum* 'Aureum'** (Golden Japanese maple).

Stainton Dell. A large specimen bearing a nameplate at the Fred Parker Lawn entrance to the dell is no doubt one of the two noted there by Medbury (1986: 163) simply as *A. palmatum*. He thought they were planted in about 1926. There is another large specimen of *A. palmatum* in List's Garden in Maranui Gully which Medbury (1986: 392) identified as this cultivar.

***Acer palmatum* ‘Crimson King’.**

Japanese hillside. Three specimens of *A. palmatum* ‘Crimson King’ were planted here between 5 and 19/10/2001 (planting book 6/2000–7/2004: 17).

***Acer palmatum* ‘Senkaki’.**

Japanese hillside. Three specimens of *A. palmatum* ‘Senkaki’ were planted here between 5 and 19/10/2001 (planting book 6/2000–7/2004: 17).

***Acer palmatum* ‘Shindeshojo’.**

Japanese hillside. Five specimens of *A. palmatum* ‘Shindeshojo’ were planted on the hillside on 27/10/2005 (planting book 7/2004–9/2007: 22).

***Acer palmatum* ‘Suminagashi’.**

Children’s playground, Pukekura. There is a specimen on the eastern side of the playground that Medbury (1986: 60) identified as this cultivar. It was planted on 4/8/1959 (planting book 1956–1959: 63).

***Acer palmatum* ‘Viridis’.**

Japanese hillside. Five specimens of *A. palmatum* ‘Viridis’ were planted here between 5 and 19/10/2001 (planting book 6/2000–7/2004: 17) and 10 more specimens of *A. palmatum* ‘Viridis’ were planted on the hillside on 27/10/2005 (planting book 7/2004–9/2007: 22).

***Acer pentaphyllum* (star-like maple). South-west Sichuan, China.**

A good specimen of this species, which may be extinct in the wild and which is uncommon in cultivation. It was planted in 6/1991 (planting book 1991: 714).

***Acer platanoides* (Norway maple). Europe.**

Ambush Gully. A specimen of the cultivar *A. platanoides* ‘Walderseei’ was planted here on Arbor Day, 9/8/1969 (planting book 1968–1970: 60). It was noted by Medbury (1986: 420) and still bears his number plate.

***Acer pseudoplatanus* (sycamore). Central Europe.**

Swan Walk. There are large specimens at the northern end of Swan Walk near the junction with Scanlan Walk. They have probably regenerated naturally there. *A. pseudoplatanus* was a plant of weed-like proportions in the park in earlier years.

***Acer pseudoplatanus* ‘Brilliantissimum’.** Central Europe.

A specimen of the cultivar *A. pseudoplatanus* ‘Brilliantissimum’, which was planted in the mid-section of Racecourse Walk in 10/1984 (planting book 1984–10/1986: 1), was removed in 7/2012 when the walk was widened to allow large vehicle access to Fred Parker Lawn for renovations and additions at the Fernery and glasshouses.

***Acer saccharinum* 'Laciniatum'** (cut leaf silver maple). Eastern North America native.

Lily pond, Brooklands Bowl. A large specimen of a fast growing species. Apparently, it was originally planted at Brooklands on Arbor Day, 7/8/1965 and relocated to its present position in about 1978 (planting book 1965: 23; Medbury 1986: 309).

Acer sikkimense = *Acer hookeri*. China.

Ambush Gully. A specimen that was planted in the gully as *A. hookeri* on Arbor Day, 9/8/1969 (planting book 1968–1970: 59).

Aesculus hippocastanum (common horse chestnut). Border region between Greece and Albania.

Brooklands Bowl. There were two large specimens of *A. hippocastanum* at the top of the Brooklands Bowl amphitheatre, which were noted by Burstall (1973: 26), Smith and Fuller (2007: 85) and Medbury (1986: 325). Medbury thought they were planted about 1900. Burstall and Sale (1984: 255) included the larger specimen in their list of notable trees. Both featured in a photograph in Salmon and Salmon (1999: 150). By 2010, one of them was less healthy looking than the other. On 3/2/2010, one of the three large trunks of this specimen collapsed and was cut up. The other two trunks were cut down and removed on 4/2/2010. The remaining specimen is now the only common horse chestnut in the park.

Aesculus indica (Indian horse chestnut). Himalayas.

Brooklands Zoo, southern end. This large specimen, which was noted by Medbury (1986: 445), was planted on Arbor Day, 9/8/1969 (planting book 1968–1970: 63). It is the only Indian horse chestnut in the park. It flowers prolifically from October to December.

Alectryon excelsus (titoki). New Zealand native.

There are many titoki in the park with the largest and most significant specimens being in the semi-coastal native forest areas at the southern end of Brooklands lawn and in lower Maranui Gully. Three other specimens are noted here. *A. excelsus* has ripe fruit in May.

(1). Hughes Walk, near Victoria Road entrance. A large and very visible specimen that Medbury (1986: 73) thought was a W. W. Smith planting between 1908 and 1920.

(2). Brooklands Park. An “unusually tall tree” on the steep slope on the western side of the Maranui Gully behind the “rubbish dump” was noted by Burstall (1973: 14). Smith and Fuller (2007: 45) thought that the life expectancy of this tree would be greatly reduced because of the loss of a large portion of its trunk. More of the trunk portion of this tree was broken in late 2012. Because of these losses it is no longer a significant specimen.

(3). Near Pukekura Park tennis courts. There is a large and healthy specimen in a prominent position on the edge of the bush near the alder collection.

Alectryon subcinereum (Australian native quince). Eastern Australia.

Eastern lookout plateau. There are two specimens in Pukekura Park. No doubt they are two of the three specimens of *A. subcinereum* that were planted on 5/10/1977 (planting book 1976–1978: 73). Medbury (1986: 213) noted one of them. Two native New Zealand ferns are epiphytic on them – *Pyrrhosia eleagnifolia* and *Microsorium pustulatum* on one, and *Pyrrhosia eleagnifolia* and *Asplenium flaccidum* on the other.

Dodonaea viscosa (akeake). New Zealand native.

Eastern lookout. There is a group of four or five large specimens on the bush edge on the southern side of the lawn near the lookout. Their planting date is not known.

Koelreuteria paniculata (golden rain tree). China and Korea.

Kunming Garden. The specimen beside the “Friendship Force Stone” was planted at the time of the formal opening of the garden on 27/2/2005 (planting book 7/2004–9/2007: 19).

Family Sapotaceae

Planchonella costata = *Planchonella novo-zelandica* (tawapou). Northern North Island and Norfolk Island.

Behind Brooklands Zoo, western boundary. Medbury (1986: 439) recorded this specimen as *P. novo-zelandica* and said it was planted in 6/1972.

Family Scrophulariaceae

Isolexis canariensis (Canary Islands foxglove). Canary Islands native.

Fred Parker Lawn, western border. Three of five specimens planted here on 13/4/2011 (planting book 9/2010–12/2011: 108861) were still alive and doing well in 4/2012. They flowered in the following October.

Family Solanaceae

Brugmansia aurea (golden angel’s trumpet). Ecuador.

Smith Walk. The large specimen by the pohutukawa near the waterwheel was planted on 8/1955 (planting book 8/1955–9/1956: 41).

Lochroma cyanea (blue cestrum). North-western South America.

Upper Racecourse Walk. This is the only specimen of *L. cyaneum* in the park. It was planted on 4/5/1993 (planting book 5/1993–13/10/1993: 1). It has been cut back more than once since then, but regrows rapidly. The flowers of this plant, which appear throughout the year, are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*), and its leaves are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*). A large specimen of an *Lochroma*, growing behind the band room at the Rogan Street entrance to the park, is the survivor of seven that were planted there on 1/10/1968 as *Lochroma tubulosa* (planting book 1968–1970: 6).

Family Styracaceae

Styrax japonicus (Japanese snowbell tree). China, Korea and Japan.

Fountain Lake, southern end. A large specimen that was noted by Medbury (1986: 31). It was planted on 24/7/1962 (planting book 1960–1962: 80). It flowers in November and December.

Family Theaceae

***Camellia hiemalis* 'Kanjiro'.**

Victoria Road terrace. A large and healthy specimen of this cultivar is prominent beside Scanlan Walk near the Shortland Street entrance. It is probably one of the three specimens planted in that area as *Camellia* 'Hiryu' on 23/8/1961 (planting book 1960–1962: 61).

***Camellia japonica* 'Emperor of Russia'.**

Brooklands lawn, northern end near entrance. The planting date of this outstanding plant, which also bears many flowers of the sport *C. japonica* 'Emperor of Russia Variegated', is not known but it is obviously of considerable age. It is the largest and best specimen of this cultivar known in the New Plymouth area. It was heavily cut back in late April 2005, but has continued to flourish. The flowers of this plant were one of the most favoured sources of nectar for tui (*Prosthemadera novaeseelandiae*) during the cooler months from June to August 2003 and June to August 2004 (Medway 2008c).

***Camellia japonica* 'Great Eastern'.**

Brooklands lawn, beside the wisterias. This outstanding camellia has recently (August 2013) been identified as *C. japonica* 'Great Eastern'. It was already a large plant when it featured in a 1923 panoramic photograph of Brooklands. It was probably this plant to which Thomas Horton referred in his work diary, on 27/10/1948, when he recorded "Pruned back the big 'Great Eastern' Camellia tree" (Puke Ariki ARC 2003–860, Box 1, Folder 3).

***Camellia japonica* 'Kaka'.**

Three large, single-flowered *C. japonica* plants, almost certainly unnamed seedlings, were given tag names by Pukekura Park Curator Chris Connolly. They are *C. japonica* 'Kaka', an old, pink-flowered plant situated near the curator's office, which Connolly suggested be given the name 'Kaka' because its flowers were a favoured source of nectar for a North Island kaka (*Nestor meridionalis*) in 2009. They are also a favoured source of floral nectar for tui (*Prosthemadera novaeseelandiae*) (Medway 2009b).

***Camellia japonica* 'Kate Sheppard'.**

Kunming Garden, north-west corner. Three specimens were planted there in 1993, when the area was still part of the former nursery, to commemorate 100 years of women in New Zealand gaining the right to vote.

***Camellia japonica* 'Lady Loch'.**

Goodwin Dell. There is an excellent, prolifically flowering example at the southern end of the dell beside the exit to Brooklands Road. This camellia, a sport of *Camellia japonica* 'Aspasia Macarthur', was first named in Australia in 1898. This specimen is probably the one planted as "Camellia ?" in 10/1975 (planting book 1974–1976: 71).

***Camellia japonica* 'Pukekura'. New Zealand.**

Fountain Lake, beside the entrance from the car park. This camellia, which bears a new nameplate, is TR/P0130 on the New Zealand Notable Trees Trust New Zealand Tree Register

(www.notabletrees.org.nz). J. W. Goodwin, curator of the park at the time, observed that it “produces masses of the large white flowers in spite of poor soil and strong root competition” (*New Zealand Camellia Bulletin* 2(4) (1961): 5–8). Burstall (1973: 22) considered it to be a notable tree of national interest. It was also recorded by Medbury (1986: 21) and Smith and Fuller (2007: 98, Figs. 79, 80) who considered it to be a healthy tree that was notable for its flowers. All those authors called it ‘Pukekura White’, but the correct cultivar name is ‘Pukekura’. Professor E. G. Waterhouse, the eminent Australian camellia expert, described, named and illustrated it as ‘Pukekura’ in his *Camellia Trail* (1952: 28, Plate 19). His description is as follows: “This is a camellia of great beauty and distinction. It was found growing at Pukekura Park, New Plymouth, New Zealand, and is probably a local seedling, as it has not been observed elsewhere. It bears flowers freely and over a long period. The large, informal, double white blooms are five inches in diameter and have very large outer rounded petals two inches across. The tall, central stamens are pure white and bear golden anthers. Some of the stamens are transformed into petaloids, and surrounding these are five or six tall, folded petals.”

Medbury thought that this camellia was raised from seed, perhaps by Thomas Horton. However it featured, when already quite large and in its present position, in a panoramic photograph of part of Fountain Lake taken in 1923, the year before Horton commenced duty as curator of the park. This plant did not appear in a photograph held in the curator’s office which depicted the car park entrance from the western side of Fountain Lake in about 1895. It was the first entry, recorded simply as “Camellia”, in a comprehensive list of plants compiled by Thomas Horton in the late 1920s, “commencing at right-hand side of entrance from sports ground near lower lake and thence to Gilbert St gates” (Puke Ariki ARC 2003–860, Box 3, Folder 28). This camellia was probably planted in 1910 by W. W. Smith, then curator of the park, when he was working on and planting out the Gilbert Street entrance and Smith Walk between there and the car park entrance to Fountain Lake. Smith reported to the meeting of the Pukekura Park Board on 4/7/1910 that “they were now at work on the slope clearing away the gorse and grass preparatory to digging for planting azaleas and camellias in groups” (*Taranaki Herald* 7/9/1909, p.4; *Taranaki Daily News* 5/7/1910, p.2). The flowers of this notable specimen of *C. japonica* ‘Pukekura’ are an occasional source of nectar for tui (*Prothemadera novaeseelandiae*).

***Camellia japonica* ‘Tui’s Mate’.**

Three large, single-flowered *C. japonica* plants in the park, almost certainly unnamed seedlings, were given tag names by George Fuller when he was curator. They are the pink-flowered *C. japonica* ‘Tui’s Mate’, situated near the Shortland Street entrance. Fuller applied the tag name to this plant because tui obtain nectar from its flowers (see Medway 2008, 2009b).

***Camellia japonica* ‘Tui’s Tucker’.**

In similar vein, George Fuller gave the tag name ‘Tui’s Tucker’ to three large, single-flowered *C. japonica* plants with white flowers that were also probably unnamed seedlings. A favourite nectar source for tui, they too feature near the Shortland Street entrance to the park (see Medway 2008, 2009b).

***Camellia japonica* ‘Madame de Strekaloff’.**

There are several other old *C. japonica* cultivars in the park. These specimens are significant both botanically and historically and should be preserved. Among them are those that Professor E. G.

Waterhouse, the eminent Australian camellia expert, indicated were grown in New Zealand (*American Camellia Yearbook No. 4* (1949): 155–158).

The camellia near the band room, Rogan Street entrance, has recently (August 2013) been identified as *C. japonica* 'Madame de Strekaloff'. It appears to be on a boundary of the property that was purchased by the New Plymouth City Council from the estate of Harry Frethey in 1965 (see Pukekura Park Management Plan 2004, Part A, p. 35). This property had been owned by the Frethey family for many years. In August 1923, the Pukekura Park Board declined a request from Mrs Frethey that a tree overshadowing her garden in John Street (now Rogan Street) be cut down (*Taranaki Herald* 29/8/1923, p. 5). This specimen of *C. japonica* 'Madame de Strekaloff' was probably planted by a member of the Frethey family during their tenure of the property which is now part of the park.

***Camellia japonica* 'Pilida'.**

Beside The Gables. This camellia has recently (July 2013) been identified as *C. japonica* 'Pilida' (but could be *C. japonica* 'Euterpe'). Medbury (1986: 490) said it was thought to be very old, perhaps planted about 1904 when The Gables was shifted to this site. A large specimen of this cultivar growing in Cambridge is protected under the district plan of the Waipa District Council.

***Camellia japonica* 'Triumphans'.**

Sunken Dell, Pukekura Park. This notable, old camellia, growing at the southern end of the dell beside the outlet to the main lake, has recently been identified as this cultivar (Medway 2012a). Its planting date is not known, but it featured prominently as an already large plant of perhaps 15 to 20 years of age in a photograph of the southern end of Sunken Dell, taken by F. G. Radcliffe in 1914 (Sir George Grey Special Collections, Auckland Libraries, 35–R940).

***Camellia japonica* 'Welbankiana'.**

Hatchery Lawn, southern end. The largest and one of the oldest camellias in the park, Burstall (1973: 22) considered it to be a notable tree of national interest. Medbury (1986: 38) and Smith and Fuller (2007: 97, Fig. 78) included this plant as *C. japonica* 'Double White'. It has recently been identified as *C. japonica* 'Welbankiana' (Medway 2007b). This plant, registered simply as "*C. japonica* cultivar", is TR/P0131 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz).

***Camellia japonica* (unnamed camellias).**

There are other large, single-flowered *C. japonica* plants throughout the park, most of which are probably also unnamed seedlings. These camellias are significant, both as specimens in their own right, and because they too are a source of floral nectar for tui (Medway 2008). Included among them are:

- (1). Two pink-flowered specimens at the top of the steps on the western side of List's Garden.
- (2). A very old, pink-flowered specimen at Brooklands lawn in the four seasons border.
- (3). A pink-flowered specimen beside Saxton Walk near Poet's Bridge.
- (4). A white-flowered specimen on the western side of Stainton Dell, which may be *C. japonica* 'Alba Simplex'.
- (5). Two pink-flowered specimens beside the pathway on the northern side of Fountain Lake.

***Camellia reticulata* 'Captain Rawes'.**

Upper Primula Dell. There is a large and healthy specimen beside the pathway on the northern side of the dell that flowers well in August and September. Its planting date is not known.

***Camellia reticulata* 'Dr Clifford Parks'.**

Kunming Garden. Twenty specimens of this cultivar were planted in Kunming Garden on 12/8/2005 (planting book 7/2004–9/2007: 18). About 16 of them were still present at the time of this survey. They flower prolifically in August.

***Camellia reticulata* 'Inspiration'.**

Brooklands Zoo. An excellent specimen of this cultivar is on the right-hand side of the entrance to the zoo. It was planted on Arbor Day, 7/8/1965 (planting book 1965: 24).

***Camellia sinensis* (tea plant).**

(1). Brooklands lawn. A large specimen “of impressive proportions” noted by Burstall (1973: 22), who considered it to be a notable tree of national interest; by Medbury (1986: 352), who thought it was planted by Newton King about 1890; and by Smith and Fuller (2007: 99, Fig. 81). It is TR/P0134 on the New Zealand Notable Trees Trust New Zealand Tree Register (www.notabletrees.org.nz). This plant flowers prolifically for a long period from late March.

(2). Japanese hillside. There are two specimens of the pink-flowered form *C. sinensis* var. *rosea* at the lower northern end of the Japanese hillside near the tulip tree (*Liriodendron tulipifera*) that is noted herein. They were planted on 5/10/2001 (planting book 6/2000–7/2004: 17). They also flower well from late March.

***Camellia x williamsii* 'Donation'.**

Brooklands Zoo. On the left side of the entrance to the zoo is a specimen of *Camellia* 'Donation' which was planted on Arbor Day, 7/8/1965 (planting book 1965: 24).

Camellia Collections

(1). Racecourse Walk

A significant collection of camellia species, cultivars, and hybrids is growing beside the Racecourse Walk. They were planted at various times from 1965. There have been additional and/or replacement plantings since, thereby making it very difficult to ascertain the exact planting date of many specimens that are in the collection. Their identities and locations as at 1997 – 98 are shown on planting plans NP 65/11H, NP 65/12H and NP 65/13H. The following are among the more important of those still in the collection at the time of this survey, and where probable planting dates have been ascertained. The plants marked with an asterisk (*) have been recorded as a source of floral nectar for tui (*Prosthemadera novaeseelandiae*) when they are flowering during the cooler months of the year (Medway 2008c).

C. chekiangoleosa*, at least one was planted on 30/4/1992 (planting book 11/1991–9/1992: 817). ***C. cuspidata****, at least one was planted on 30/4/1992 and three on 6/11/1995 (planting books 11/1991–9/1992: 817; 9/1994–1997: 27). ***C. fraterna* 'Pink'***, one was planted on 29/4/1992 (planting book 11/1991–9/1992: 816). ***C. granthamiana***, three were planted on 6/11/1995 (planting book 9/1994–1997: 27). ***C. japonica* 'Kon-wabisuke'***, one was planted as ***C.***

'Fuyajo Purpurea' in 9/1973 (planting book 1973–1974: 33). *C. japonica* *'Ochroleuca'*, one was planted in 9/1973 (planting book 1973–1974: 33). *C. nitidissima* = *C. chrysantha*, one of the *C. nitidissima* specimens in the collection, whose yellow flowers appear in August, was planted on 7/7/1986 by a delegation from the Chinese city of Wuxi, to commemorate their visit to New Plymouth (planting book 1984–10/1986: 89; Medbury 1986: 179). Another three were planted on 6/10/1986 and 9/5/1996 (planting books 9/1986–8/1987: 12; 9/1994–1997: 34). *C. reticulata* *'Confucius'**. *C. reticulata* *'Shot Silk'**. *C. reticulata* *'William Hertrich'**. *C. reticulata* *'Willow Wand'**. *C. rosiflora**, one was planted in 9/1973 (planting book 1973–1974: 33). *C. transnokoensis**, two were planted on 6/11/1995 (planting book 9/1994–1997: 27). *C. tsaii* hybrid*, two *C. tsaii* were planted in 9/1973, three were planted on 29/4/1992 and five were planted on 6/11/1995 (planting books 1973–1974: 33; 11/1991–9/1992: 816; 9/1994–1997: 27). Hybrids: *C. 'Citation'**, one was planted on 9/8/1969 (planting book 1968–1970: 65); *C. 'Clarrie Fawcett'**, one was planted on 9/8/1969 (planting book 1968–1970: 65); *C. 'Cornish Snow'**, two were planted on 7/9/1965 (planting book 1965–1966: 41); *C. 'Dr Lesley'**; *C. 'Fairy Blush'**, one was relocated here on 11/8/1993 (planting book 5/1993–13/10/1993: 35); *C. 'Margaret Waterhouse'**, one was planted on 9/8/1969 (planting book 1968–1970: 65).

(2). South-western corner of Brooklands beside Kaimata Street.

Important named specimens in this collection, which were planted on 13/8/1968 (planting book 1967–1968: 87) are: *C. japonica* *'Chitosegiku'* (planted as *Camellia* *'Chitose Siguba'*, a corruption of the Japanese name), an old *C. japonica* cultivar first named in 1858. *C. japonica* *'Dorothy Jessep'*. *C. japonica* *'Finlandia Variegated'* = *C. 'Margaret Jack'*, planted as *Camellia* *'Margaret Jack'*. *C. japonica* *'Lady Parker'*, an old *C. japonica* cultivar first named in 1866. Other important specimens in this collection on the western boundary are a row of about 30 probably mostly unnamed seedlings, nearly all of *C. saluenensis* parentage, which were planted in 1972. An identified non-saluenensis *Camellia* in this row is a specimen of the old cultivar *C. japonica* *'Hikarugenji'*. Many of the plants in this collection are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*) when they are flowering during the cooler months of the year (Medway 2008c).

Gordonia axillaris (fried egg plant). China and Vietnam.

(1). Upper Racecourse Walk. This specimen from the Fernery was planted on 4/5/1993 (planting book 5/1993–13/10/1993: 1).

(2). Shortland Street entrance. This specimen beside Scanlan Walk was planted on 22/12/1992 (planting book 9/1992–5/1993: 24).

Gordonia chrysantra. China and northern Burma.

Above lower Racecourse Walk. Medbury (1986: 192) recorded that this specimen was planted on 7/10/1968 (planting book 1968–1970: 7). Its flowers, which appear from late April, are a favoured source of floral nectar for tui (*Prosthemadera novaeseelandiae*) (Medway 2008).

***Gordonia yunnanensis* 'Moonlight Magic'** (crepe camellia). Yunnan, China.

(1). Kunming Garden. There are five specimens near the pagoda and "Friendship Force Stone". Eight specimens were planted in Kunming Garden in 10 and 11/2004 (planting book 7/2004–9/2007: 19). Three of them were removed in 3/2011. The remaining healthy specimens, which

flower prolifically from April to August, are a source of floral nectar for tui (*Prosthemadera novaeseelandiae*).

(2). There is another specimen of *G. yunnanensis* in the Chinese collection at the Coronation Avenue entrance to Brooklands. Its planting date has not been ascertained.

***Schima* spp.** Tropical and subtropical Asia.

Some authorities consider the genus *Schima* of tropical and subtropical Asia to comprise one extremely polymorphic species, ***S. wallichii***, previously interpreted as many species. There are several specimens of *Schima* in the park whose specific identities are unknown or uncertain.

(1). Brooklands Zoo. There are single specimens of two *Schima* species growing close together on the eastern side of the compound. Glyn Church (*Taranaki Daily News* 24/2/2012, p. 16) identified them as *S. argentea* and *S. khasiana*. The one with a nameplate was planted on 10/8/1967 as *S. superba* (planting book 1966–1967: 84). It is identified on planting plans as being either *S. superba* or *S. khasiana*. Medbury (1986: 456) recorded it as *S. wallichii*, but noted that its identity needed to be verified. This tree flowers well in January.

(2). Above Jellyman Walk. There is a large *Schima* near the picnic table in the rhododendron extension area that was planted as *S. argentea* on 16/6/1999 (planting book 5/1997–6/2000: 38). This tree flowers in March.

(3). Ambush Gully. One specimen identified as *Schima superba* and three specimens identified as *Schima wallichii* were planted in the gully on 22/5/2002 (planting book 6/2000–7/2004: 24).

Stewartia ovata (mountain camellia).

Goodwin Dell, western side. The specific identity of this plant is uncertain. It may be *S. ovata*, but its flowers appear to be too small and its bark the wrong colour for that species. *S. ovata* is a rare tree which is native to the southern Appalachian region of the United States. (IUCN Red List status: Least Concern). Two specimens identified as *S. ovata* were planted in the dell in 9/1976 (planting book 1976–1978: 11). The surviving plant flowers in January.

Stewartia sinensis (Chinese stewartia). China.

Western hillside. There are three specimens together below lower Scanlan Walk. Their planting date has not been ascertained. One of them was recorded by Medbury (1986: 265).

Family Tiliaceae

Sparmannia ricinocarpa = *Sparmannia africana* (African linden). Africa and Madagascar.

Ambush Gully. There are specimens of *S. ricinocarpa* on the western slope. According to Medbury (1986: 410), they were planted between 1977 and 1978.

Tilia x euchlora (*T. cordata* x *T. dasystyla*) (Crimean linden).

Hatchery Lawn, southern end. The only *T. x euchlora* in the park. It is also of historic and ecological significance. It was planted by Mrs Eliot King on 1/5/1976 as part of Pukekura Park's centennial celebrations (planting book 1974–1976: 75; *Taranaki Herald* 1/5/1976: 1; Medbury 1986: 37; Smith and Fuller 2007: 216). New Zealand pigeons (*Hemiphaga novaeseelandiae*) eat the leaves.

Family Thymelaeaceae

Dais cotinifolia (pompom tree). Southern Africa.

Above Racecourse Walk. This specimen was the remaining one of three planted in this area on 7/9/1965 (planting book 1965–1966: 40). It was cut down in 4/2011, apparently because of ill health.

Daphne bholua (Himalayan daphne). Mountainous areas from Nepal to southern China.

Stainton Dell, magnolia hillside. There is a large group of this plant growing under the *Magnolia sargentiana* 'Robusta'. Twenty-five specimens were planted there on or about 18/6/1996 (planting book 9/1994–1997: 37).

Edgeworthia gardneri (Nepalese paper bush). Nepal.

Brooklands lawn, eastern border. According to a notation on planting plan NB62/8H dated 7/11/1997, entitled "Herbaceous Border Brooklands Park", six specimens of *E. gardneri* were planted there on 14/4/1994. We have not found a reference to them in the relevant planting book. The flowers of these plants are a source of nectar for tui (*Prosthemadera novaeseelandiae*).

Tetracentron sinense. Southern China and eastern Himalaya.

Kunming Garden. A rare plant in cultivation in New Zealand, one specimen was planted near the northern border of the garden on or about 18/10/2010 when it was about 2 metres tall.

Family Ulmaceae

***Ulmus glabra* 'Camperdownii'** (Camperdown elm).

(1). Band room lawn. According to Medbury (1986: 144), this fine specimen was shifted from near the waterfall in Pukekura Park to its present position on the band room lawn about 1970–71. Its original planting date is not known.

(2). Fountain Lake. This is another fine specimen, which Medbury (1986: 46) recorded was shifted in about 1965 from the site of the band room to its present position in the middle of the pathway at the western corner of Fountain Lake. Its original planting date is not known. The new leaves of this plant are a favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

(3). Brooklands lawn. According to Medbury (1986: 382), this large specimen at the south-western corner of the lawn was shifted from a private property in New Plymouth to its present position between 1964 and 1965, when it was already an established plant of at least 30 years of age. It is host to many native New Zealand epiphytes including *Collospermum hastatum*, *Pyrrosia eleagnifolia* and *Asplenium flaccidum* and at least one small *Griselinia lucida*.

***Ulmus glabra* 'Horizontalis'** (horizontal elm).

Beside the tea house. This tree was noted by Burstall (1973: 36) and Medbury (1986: 152) as *Ulmus glabra* 'Pendula'. Medbury thought it was planted between 1920 and 1925. Smith and Fuller (2007: 217) identified it as *Ulmus glabra* 'Horizontalis'. They recorded that it was very badly damaged in 1997 by a nearby falling oak (*Quercus robur*), and that "the remains comprise of a 2.3m leaning stump with one original branch and three developed sprouts (shoots). It is supported (propped up) by a large timber round." Smith and Fuller considered it to be an ailing

tree that might not survive long. It is host to a very healthy growth of the New Zealand native orchid *Earina mucronata*.

Ulmus glabra (wych or Scots elm). Europe.

There is a very large and impressive specimen in a prominent position on the south side of Rhododendron Dell beside Brooklands Park Drive. It bears a nameplate. The planting date of this tree is not known. Its new leaves are a much favoured food of New Zealand pigeons (*Hemiphaga novaeseelandiae*).

Ulmus parvifolia (Chinese elm, lacebark elm). China, North Korea, Japan and Vietnam.

Chinese collection, Coronation Avenue entrance. There are four of five specimens that were planted there on 6/9/1993 (planting book 5/1993–13/10/1993: 43). The trunk of *U. parvifolia* has handsome, flaking bark of various colours and patterns which gives rise to its other common name of lacebark elm (see article in the *Magazine of the Friends of Pukekura Park* 8(1)(February 2013): 8–9).

Ulmus procera (common English elm). Southern England.

(1). The Gables. A large specimen at the front of the site is susceptible to damage by strong winds, as occurred in 2/2010 when some of its branches were broken off. New Zealand pigeons (*Hemiphaga novaeseelandiae*) have been observed eating the newly emerged leaves. Its planting date is not known.

(2). Near Kaimata Street entrance, Brooklands. There are two very tall specimens close to the historic puriri (*Vitex lucens*), one of which was noted by Burstall (1973: 36); Medbury (1986: 390), who thought it had been planted by Newton King; and by Smith and Fuller (2007: 218). One of them has large clumps of the New Zealand native *Collospermum hastatum* on its limbs.

Family Urticaceae

Cecropia albida (snake tree). Ecuador.

Upper Stainton Dell. The larger and better of two specimens of this striking plant with its giant silver leaves and red leaf bracts is on the western side of the pond. They are the remaining two of three specimens received from Landsendts subtropical garden in Auckland that were planted here on 4/10/2001 (planting book 6/2000–7/2004: 13, 16). Dick Endt, of Landsendts, introduced this species into New Zealand from southern Ecuador in 1977. He called it *Cecropia albida*, a species name we have not found in this genus (Endt *The subtropical garden at Landsendts – a plant collector's dream* (2009: 120–121).

Debregeasia longifolia (orange wild rhea). Indo-malaysian region, south-west China.

Very common in south-west China. Primula Dell. One large specimen that Medbury (1986: 168) said was planted about 1954.

Elatostema rugosum (parataniwha). New Zealand native.

Impressive groups of this plant are growing beside the waterfall. They also border the walkway around the margins of the area that was formerly known as Manhattan Island, at the upper end of the main lake near Goodwin Dell.

Family Verbenaceae

Rhaphithamnus spinosus (arrayan macho). Chile.

Two specimens identified as this species have been recorded in the park.

(1). Above Racecourse Walk. This specimen beside the track, near the false Weymouth pine (*Pinus pseudostrabus*), was planted on 4/5/1993 (planting book 5/1993–13/10/1993: 2).

(2). Fountain Lake. The planting date of the specimen near the implement shed on the eastern side of the lake is not known.

Family Violaceae

Melicytus ramiflorus (mahoe). New Zealand native.

There are many mahoe in the park. Three specimens are noted here.

(1). Totara hill. There is a large specimen, probably the largest *M. ramiflorus* in the park, at the southern end of the upper track on totara hill. Medbury (1986: 229) noted that this specimen, because of its age and size, was believed to be a remnant of the original bush that grew there. His number plate is still on the tree.

(2). Eastern hillside plateau, above Racecourse Walk. There is a large and healthy specimen under the false Weymouth pine (*Pinus pseudostrabus*) beside the track leading to the eastern lookout. It may have been planted there.

(3). Fernery. There is a good specimen near the Fred Parker Lawn entrance to the Fernery.

Family Vitaceae

Vitis vinifera (common grape).

The Gables. The history of the early vineyard in Pukekura Park, and of the two vines now growing on the back fence at The Gables, is given in detail in the *Magazine of the Friends of Pukekura Park* 7(3)(October 2012): 3–4. The vines bear fruit in January and February.

Plants providing food for birds

New Zealand Pigeon (*Hemiphaga novaeseelandiae*)

Aloe plicatilis

Beilschmiedia tawa

Collospermum hastatum

Cordyline australis

Cornus capitata

Corynocarpus laevigata

Dacrycarpus dacrydioides

Ficus macrophylla

Eriobotrya japonica

Genista stenopetala

Handroanthus chrysotricus

Hedycarya arborea

Hoheria populnea

Ilex aquifolium

Lochroma cyaneum

Lagunaria patersonii

Magnolia campbellii ssp. *mollicomata*

Magnolia denudata, *kobus*, *sargentiana* var. *robusta*

Magnolia stellata, *M. stellata* 'Royal Star', *M. stellata loebneri* 'Merrill'

Magnolia x soulangeana, *M. x soulangeana* 'San Jose'

Magnolia 'Vulcan'

Phytolacca dioica

Prunus avium, *P. serrulata* 'Shirotae', *P. yedoensis*

Rhopalostylis sapida

Tilia x euchlora

Ulmus glabra 'Camperdownii'

Ulmus procera

Vitex lucens

Silvereye (*Zosterops lateralis*)

Agapetes serpens

Aloe ferox

Dacrycarpus dacrydioides

Dysoxylum spectabile

Justicia aurea

Metrosideros nervulosa

Pseudopanax crassifolius

Tui (*Prosthemadera novaeseelandiae*)

Abutilon hybridum

Agapetes serpens

Alberta magna

Alloxylon pinnatum

Aloe capitata, cryptopoda, maculata, plicatilis

Aloe striata, thraskii

Backhousia citriodora

Callistemon salignus

Collospermum hastatum

Camellia collection, various

Camellia japonica 'Kaka', 'Emperor of Russia', 'Pukekura'

Camellia japonica 'Tui's Mate', 'Tui's Tucker'

Chiranthodendron pentadactylon

Cornus capitata

Corokia macrocarpa

Corylopsis spicata

Dacrycarpus dacrydioides

Doryanthes palmeri

Dysoxylum spectabile

Edgeworthia gardneri

Enkianthus campanulatus

Erythrina crista-galli

Fuchsia arborescens, excorticata

Gordonia chrysandra, yunnanensis

Handroanthus chrysotrichus

Hoheria populnea

Hymenosporum flavum

Lochroma cyaneum

Justicia aurea

Knightia excelsa

Lagunaria patersonii

Magnolia x soulangeana

Metrosideros elegans, fulgens, nervulosa

Phormium cookianum

Pittosporum umbellatum
Prunus avium, campanulata, serrulata 'Shirotae'
Prunus serrulata, yedoensis
Pseudopanax laetus
Puya alpestris and hybrids
Rhododendron arboreum spp. *delavayi*, 'Kermesinum'
Rhododendron arboreum 'Pink Delight', 'Rubrum'
Rhododendron 'Flamingo'
Sophora spp.
Strelitzia nicolai, reginae
Vitex lucens

Other birds

Blackbirds (*Turdus merula*) feed on *Collospermum*, *Ficus macrophylla* and *Idesia polycarpa*
Kaka (*Nestor meridionalis*) feed on *Camellia japonica* 'Kaka'
Mynahs (*Acridatheres tristis*) feed on *Puya* and *Collospermum*, *Dacrycarpus dacrydioides*
Sparrows (*Passer domesticus*) feed on *Collospermum*
Starlings (*Sturnus vulgaris*) feed on *Doryanthes*, *Dacrycarpus dacrydioides*
Song thrush (*Turdus philomelos*) feed on *Dacrycarpus dacrydioides*

Insects

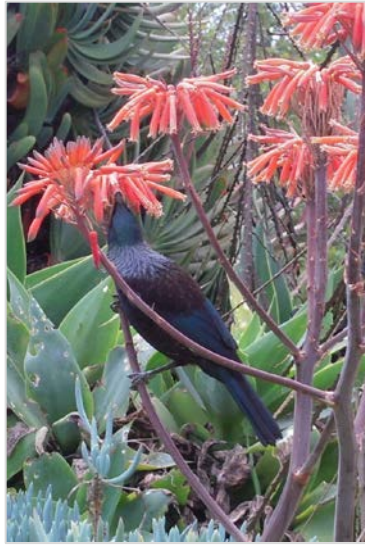
Bees and wasps feed on *Collospermum*, *Weinmannia silvicola*, *Escallonia bifida*
Butterflies feed on *Escallonia bifida*

Photos of birds

Tui on *Phormium cookianum*,



Aloe maculata



Aloe cryptopoda



Aloe striata



Aloe capitata



Prunus campanulata



Puya sp.



Kereru on *Macropiper excelsum*



Silvereye on Karaka, *Corynocarpus laevigatus*



Investigation of Karaka fruit size



APPENDIX 1

Kunming Garden collection

The following is an arbitrary selection of significant plants in Kunming Garden at the time of this survey. All are included above. Kunming Garden was formally opened on 27/2/2005 (*Taranaki Daily News* 28/2/2005: 2).

Abutilon x hybridum (Chinese Lantern). A group of five specimens that were planted in 10-11/2004 (*Planting Book* 7/2004 – 9/2007: 18). For whatever reason, these plants were removed on about 1/7/2013.

Acer laurinum (Indonesian Maple). Four specimens which were planted in a group near the Moon Gate on 12/8/2005 (*Planting Book* 7/2004 – 9/2007: 17).

Bambusa spp? (Bamboo). There are six groups, each of many plants, of at least two species - one on each side of the Moon Gate, one beside the nearby Information Plaque, and three beside the Pagoda. Planting dates not ascertained.

Callicoma serratifolia (Black Wattle). One specimen on the western border, planting date not ascertained but probably while that area was still part of the former Nursery.

***Camellia japonica* 'Kate Sheppard'**. Three specimens were planted in the northwest corner of the garden in 1993 - when the area was still part of the former Nursery - to commemorate 100 years of women in New Zealand gaining the right to vote.

***Camellia reticulata* 'Dr Clifford Parks'**. Twenty specimens of this cultivar were planted in the garden on 12/8/2005 (*Planting Book* 7/2004 – 9/2007: 18). About sixteen of them were still present, mostly on the southern border, at the time of this survey.

Davidia involucrata (Handkerchief Tree). One specimen on the western border that was planted on 12/8/2005 (*Planting Book* 7/2004-9/2007: 18).

Escallonia bifida (White Escallonia). There is a large plant on the western border near the Pagoda. Its planting date has not been ascertained but it was probably planted when that area was still part of the former Nursery.

Ginkgo biloba (Maidenhair Tree). Eight specimens bordering the pathway from the Moon Gate to the Pagoda of which six were planted in 10-11/2004 (*Planting Book* 7/2004 – 9/2007: 19).

Glyptostrobus pensilis (Chinese Swamp Cypress). One specimen on the southwestern corner that was planted on 12/8/2005 (*Planting Book* 7/2004 – 9/2007: 18).

***Gordonia yunnanensis* 'Moonlight Magic'**. There are five specimens near the Pagoda and Friendship Stone. Eight specimens were planted in Kunming Garden in 10-11/2004 (*Planting Book* 7/2004 – 9/2007: 19). Three of them were removed in 3/2011.

Hydrangea heteromalla (Himalayan Hydrangea). Five specimens were planted as this species beside the Moon Gate on 12/8/2005 (*Planting Book* 7/2004-9/2007: 17).

Keteleeria evelyniana (Yunnan Youshan). Four specimens on the western border that are the remainder of six planted in the garden on 12/8/2005 (*Planting Book 7/2004 – 9/2007*: 18). One of these specimens produces both male and female cones.

Koelreuteria paniculata (Goldenrain Tree). The specimen beside the Friendship Stone was planted at the time of the formal opening of the garden on 27/2/2005 (*Planting Book 7/2004 – 9/2007*: 19).

Liquidambar acalycina (Chang's Sweetgum). Three specimens were planted in Kunming Garden on 12/8/2005 (*Planting Book 7/2004 – 9/2007*: 18). One of them, at the southern end of the garden, was still extant at the beginning of this survey. Unfortunately, one of its main limbs was broken off by gale-force south-easterly winds on 5/2/2013. The whole tree was removed by 25/2/2013.

Loropetalum chinense (Chinese Fringe Flower). Thirty-five specimens were planted beside the Pagoda on 12/8/2005 (*Planting Book 7/2004-9/2007*: 19). For whatever reason, these plants were removed on about 1/7/2013.

Luma apiculata (Chilean Myrtle). One small specimen on eastern border, planting date not ascertained.

Magnolia delavayi (Chinese Evergreen Magnolia). A specimen near the Moon Gate is one of two that were planted in Kunming Garden on 12/8/2005 (*Planting Book 7/2004 – 9/2007*: 17).

Magnolia denudata (Yulan Magnolia). Nine specimens were planted in Kunming Garden on 12/8/2005 (*Planting Book 7/2004-9/2007*: 17). Five were still present on the eastern border as at 1/8/2012. New Zealand Pigeons eat their new leaves when they appear in late August.

Magnolia yunnanensis. A group of five specimens of this evergreen Magnolia was planted at the southern end of the Garden on 12/8/2005 (*Planting Book 7/2004 – 9/2007*: 17). Unfortunately one of them was blown over by south-easterly gales on 14/7/2013, and others were removed soon afterwards, leaving one specimen surviving as at 30/7/2013.

Nyssa sinensis (Chinese Tupelo). One specimen on the western border. It is the remaining one of three specimens of *N. sinensis* planted in Kunming Garden on 12/8/2005 (*Planting Book 7/2004 – 9/2007*: 18).

Osmanthus delavayi (Tea Olive). Some of nine specimens that were planted beside the Pagoda on 12/8/2005 (*Planting Book 7/2004-9/2007*: 17).

Pistacea chinensis (Chinese Mastic). The remaining three of five specimens that were planted near the Pagoda on 12/8/2005 (*Planting Book 7/2004 – 9/2007*: 18).

Podocarpus macrophyllus (Kusamaki). There are two specimens near the Moon Gate. They were planted on 12/8/2005 (*Planting Book 7/2004-9/2007*: 17).

Quercus oblongata (Himalayan Oak). (***Quercus leucotrichophora*** is now a synonym). One small specimen in northwestern corner. It was purchased by a private individual from the Ranichauri

Eastwoodhill Trust. It later found its way to the Park Fernery from whence it was planted out in Kunming Garden on 1/10/2010 (*Planting Book* 9/2010-12/2011: 108852).

Radermachera sinica (Canton Lace). Three specimens of this fast-growing tree that were planted beside the Pagoda on 12/8/2005 (*Planting Book* 7/2004 – 9/2007: 18). One of them lost its top and a couple of limbs during gale-force south-easterly winds on 20/3/2012.

Rhododendron yunnanense. This specimen beside the Pagoda, donated by the Pukeiti Rhododendron Trust, was planted on 31/7/2009. It flowers well in August-October.

Sassafras tzumu (Chinese Sassafras). One specimen beside the Pagoda. Four specimens were planted in Kunming Garden on 12/8/2005 (*Planting Book* 7/2004 – 9/2007: 18). Three were still present at the commencement of this survey. Two of them were removed in 3/2011.

Streblus smithii (Smith's Milkwood). One large specimen on the western border, planting date not ascertained but probably while that area was still part of the former Nursery.

Tetracentron sinense. One specimen that was planted near the northern border on or about 18/10/2010 when it was about 2m tall. It is a rare plant in cultivation in New Zealand.

APPENDIX 2

Chinese Collection: Coronation Avenue entrance

The following is an arbitrary selection (from the text) of significant plants in the Chinese Collection at the Coronation Avenue entrance to Brooklands Park at the time of this survey.

Cercis chinensis (Chinese Redbud). Several specimens of *C. chinensis* and/or *C. chinensis* 'Avondale' were planted on 6/9/1993 (*Planting Book* 5/1993-13/10/1993: 42) and on 20/6/2000 (*Planting Book* 6/2000-7/2004: 1). Two specimens of *C. chinensis* were extant as at 7/5/2011.

***Cercis chinensis* 'Avondale'**. (Chinese Redbud). A smaller-growing selection of *C. chinensis*. Several specimens of *C. chinensis* and/or *C. chinensis* 'Avondale' were planted on 6/9/1993 (*Planting Book* 5/1993-13/10/1993: 42) and on 20/6/2000 (*Planting Book* 6/2000-7/2004: 1). Three specimens of *C. chinensis* 'Avondale' were extant as at 7/5/2011.

Ginkgo biloba (Maidenhair Tree). Seven specimens near the street that were planted on 20/6/2000 (*Planting Book* 6/2000-7/2004: 1).

***Gordonia yunnanensis* 'Moonlight Magic'**. One specimen, planting date not ascertained.

Keteleeria evelyniana (Yunnan Youshan). One remaining of two specimens that were planted on 22/5/2002 (*Planting Book* 6/2000-7/2004: 24).

Larix kaempferi (Japanese Larch). One of three specimens that were planted here on 6/9/1993 (*Planting Book* 5/1993-13/10/1993: 43).

Liquidambar acalycina (Chang's Sweetgum). One specimen that was planted on 22/5/2002 (*Planting Book* 6/2000-7/2004: 24).

Liriodendron chinense (Chinese Tulip Tree). Four specimens that were planted here on 6/9/1993 (*Planting Book* 5/1993-13/10/1993: 42). The largest and best specimen is beside the pathway leading down to Fuller Walk from the Coronation Avenue entrance. It was flowering well in early 12/2011. See article in *The Magazine of the Friends of Pukekura Park* Volume 7(1)(February 2012): 10-11.

Loropetalum chinense (Chinese Fringe Flower). Six specimens were planted in the collection on 12/10/2005 and ten more on 27/7/2007 (*Planting Book* 7/2004-9/2007: 20, 43).

Magnolia denudata (Yulan Magnolia). Three specimens of *M. denudata* were planted in this collection on 20/6/2000, and one on 16/9/2002 (*Planting Book* 6/2000-7/2004: 1, 30). One of them was extant at the time of this survey.

Populus yunnanensis (Yunnan Poplar). Six of seven specimens that were planted here on 6/9/1993 (*Planting Book* 5/1993-13/10/1993: 42). Several limbs were broken off these trees by gale force south-easterly winds in late 3/2012.

Ulmus parvifolia (Chinese Elm). Four of five specimens that were planted here on 6/9/1993 (*Planting Book* 5/1993-13/10/1993: 43).

APPENDIX 3

The New Zealand Tree Register

Four of the notable trees of Pukekura Park that were included in the New Zealand Notable Trees Trust *New Zealand Tree Register* (www.notabletrees.org.nz) as at 1 January 2013 were no longer extant at that date. They are:

TR/P0133. *Castanea sativa* 'Paragon' (Sweet Chestnut). Brooklands Lawn. Recorded by Burstall (1973: 22) as a notable tree of national interest. It was also recorded by Burstall & Sale (1984: 258) and Medbury (1986: 349). Smith & Fuller (2007: 103) note that this tree fell into decline and was removed in about 1997.

TR/P0136. *Fagus sylvatica* var. *purpurea* (Copper Beech). Brooklands lawn. Also included as Notable tree DP 30 in Appendix 13 to the New Plymouth District Council operative District Plan. Burstall (1973: 23) considered this specimen to be a notable tree of national interest. He thought it was planted in the 1890s. It was also noted by Medbury (1986: 370), and Smith & Fuller (2007: 134, Figs 116, 117) who considered it to be in excellent health. A photograph of the tree appeared in Salmon & Salmon (1999: 46). This tree was severely damaged by very strong southerly winds on 23/1/2011, and the remainder was taken down on 31/1/2011 (see *Taranaki Daily News* 25/1/2011, p.1; 26/1/2011, p. 3; 29/1/2011, p. 5; 1/2/2011, p.3).

TR/P0139. *Dysoxylum spectabile* (Kohekohe). Burstall (1973: 13) considered a Kohekohe on the former Nature Trail at Brooklands to be "the largest of this species seen in any city". Burstall & Sale (1984: 144-145) thought that this tree may be "the largest remaining specimen from extensive tracts of the species in lowland forest in damp areas over the whole of the North Island and the very north of the South Island. European development of the coastal lowlands has left it only in a few places, mainly in reserves. It is vulnerable to damage by opossums". This tree was also noted by Medbury (1986: 407) and Smith & Fuller (2007: 54). Unfortunately, it was felled by Cyclone Bola in 3/1988 (*Taranaki Herald* 25/6/1988: 9).

TR/P0140. *Aesculus x carnea* 'Briotii' (Red Horse Chestnut). Brooklands Bowl. Burstall (1973: 22) considered this specimen to be a notable tree of national interest. It was also included by Medbury (1986: 326). A photograph of the tree appeared in Salmon & Salmon (1999: 152). Smith & Fuller (2007: 85) note that this tree was removed in July 2001 during extensive modifications to the seating area of the Bowl of Brooklands.

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