

FERNGLEN NATIVE PLANT GARDEN

NEWSLETTER AUTUMN 2016



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1. Curators Report February 2016

It has been a quiet time at Fernglen since the December meeting, but the irrigation system for the fern area was at last restored before Christmas. Since then I have tinkered with the system so that there is better coverage. With that work done, plus the ongoing rain, the watering duty has been reduced. While the rain has been helpful there are adverse side effects such as an increase of weeds and insects. Mosquitoes and passion vine hoppers are particularly bad. Last month two common wasp nests were efficiently eliminated by NZ Biosecurity.

It seems, after talking to Maureen Robertson, that the school education for sustainability programme, that had a test-run here two years ago, will not be making use of Fernglen this year. Inadequate toilet facilities and poor bus-turning space is part of the problem.

On the bright side the Kaipatiki Board is considering a pest-free action plan, with the aim of having the Kaipatiki area pest and weed free by 2026. And the board is providing money, on application, to some volunteer groups to help with their environmental projects (e.g. weeds, interpretive signs, pest control).

There is not a big issue with environmental weeds in Fernglen's bush, but just west of adjoining Kauri Park there is a large ginger problem. There is a need to establish an environmental group from Fernglen to help look after this area. This group would then be able to apply for Kaipatiki Board funding for the ginger problem.

Addendum: Since the committee meeting the funding for the ginger eradication in Kauri Park has been approved. The committee also met with Nicki Malone from the council, and have attended a Kaipatiki board meeting on March 16th to progress plans for the ongoing Fernglen development particularly for the former site of Muriel Fisher's house.

Malcolm Fisher

Next Fernglen management committee meeting Tuesday April 5th at Fernglen

New members welcome .

2. Assessment of Pohutukawa Flowering Christmas 2015

After a brilliant 2014 Christmas season of pohutukawa flowering, it was hoped that the El Nino weather pattern would repeat another superb display of blossoms. After some very early flowering in November, and wonderful displays on some isolated trees, overall, this Christmas period was a disappointment. Both the New Zealand Herald and National Radio commentators opined that after the last years superb blooming season, pohutukawa need time to recover. Prolific vegetation growth rather than flower production is anticipated.



*Original "Maori Princess"
Pohutukawa tree New Plymouth
Photo Rainbow Trees*

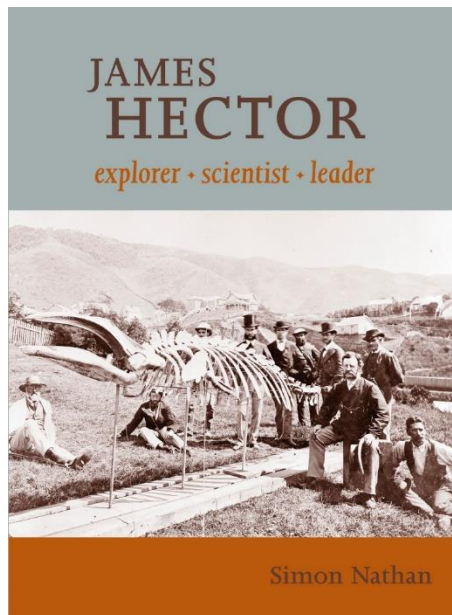
In Auckland the 'Maori Princess' pohutukawa planted in streets, parks, and schools consistently flowers every year. It has a clean straight and often-single trunk, compact upright crown and lack of aerial roots. The original 'Maori Princess' is a large tree planted in New Plymouth possibly in the 1940's. Its geographic origin is unknown but since its merits were discovered, many thousands of its cutting grown offspring have been planted throughout New Zealand's urban areas.



Original Parnell Pohutukawa. Photo Annie Irving

Auckland's largest, certainly most spreading, pohutukawa is in Parnell Gardens. Situated on a slope between the restaurant and railway lines, this magnificent tree spreads over 50m while reaching a height of less than 15m. The ground level branches provide a wonderful playground for generations of tree climbing children. Burstall asserts in the Notable Tree Register (1971) that it was planted in the 1850s. He suggested three notable early residents of the land as potential planters: Sir

William Swainson, Robert Gillies or Sir John Logan Campbell. There is also a suggestion that it predates European settlement as Campbell's obituary stated that he 'left native trees to themselves.' "Parnell" cultivars are clones of this particular tree and can be planted where a spreading, not overly tall, Pohutukawa is required. Nev has successfully used this particular cultivar when planting at a northern coastal beach settlement. Planted in sand with added compost they are slowly establishing a presence. They provide the double advantage of coastal erosion prevention and maintaining sea views.



3. Book Review: James Hector-Explorer Scientist, Leader by Simon Nathan

As the title suggests Hector was a polymath, and is credited as New Zealand's pre-eminent scientist of his day. Born in Edinburgh in 1834, upon leaving school he followed the only academic route to a scientific career, which was to study medicine. The medical curriculum of the time included diverse sciences such as botany, geology and mineralogy. Upon graduating Hector joined the Palliser expedition to Western Canada in 1857. As geologist and surgeon for the party he contributed to the route for the Canadian Pacific Railway. Returning to Britain with a large botanical collection he became a lifelong friend of Joseph Hooker, who was the director of Kew Gardens. In 1861, at the age of 27, he accepted a

post in Otago to complete a geological survey. Along with John Buchanan he collected botanical specimens, which he then sent to Hooker at Kew. These were later included in the "Handbook of the Flora of New Zealand". In 1865, the government appointed Hector the national geologist, despite his rival, Julius von Haast, having more experience. This probably reflected the preference for British appointments to ensure the proliferation of colonial institutions around the empire. Over the next five years Hector was credited with the instigation of the Geological Survey, the Colonial Museum, Colonial Laboratory, Colonial Botanic Gardens, and Colonial Observatory (now known as GNS Science, Te Papa, ESR, and Wellington Botanic Gardens). The Botanic Gardens had a close association with Kew Gardens and was established in 1869. Among the experimental planting of introduced species the Botanic Gardens nursery pioneered the introduction of the Monterey pine and macrocarpa (*Pinus radiata* and *Cupressus macrocarpa*) to the New Zealand landscape and economy. The New Zealand Institute Act (1867) saw Hector manage both the museum and laboratory until 1903. The development of the Institute (later to be known as the Royal Society of New Zealand), and his scientific publications, are among Hector's lasting legacies. The Hector Memorial Medal for science is still awarded by the Royal Society of New Zealand. As the only scientist of standing in a developing country, Hector had a wide sphere of influence, including; standardised New Zealand time, weights and measures, and the meteorological service. The 1870's saw Hector involved in the design and installation of the New Zealand exhibitions in Vienna, Philadelphia and Sydney.

James Hector married Georgiana Monro in 1868, who was the daughter of the Speaker of the House, and they had eight children. The family homestead was built in Petone in the early 1880's. Although he died in 1907 his name lives on. Hector is a town on the West Coast, a Mount Hector is in both Otago and Canada, the well-known Hector's dolphin, as well as a whale, weka, a snail, and a lamp shell share the classification *hectorii*.

4. Conservation of Flora in Vietnam.



On a recent motorcycle trip through Vietnam Nev travelled from the temperate north to the tropical south. He revelled at the sight of tropical rainforests with large trees festooned with vines and epiphytic ferns and orchids, and breath-taking vast bamboo forests. He marvelled at the efforts made to conserve virgin forest and restore degraded areas.

There is enormous pressure for a small land mass to support a population of over 90million people. The commitment to conservation is highlighted by the 30 national parks, and 58 native reserves destined to become national parks. Formal conservation efforts began soon after independence. The then North Vietnamese president Ho Chi Minh, launched a tree planting campaign called the Tet Tree Planting festival. The aims were to provide timber, fuel, fruit, reduce erosion, re-forestation, and to improve both landscape and environment. In 1962 during the “American war” he established Cu Phong the first National Park. This was in stark contrast to the 72million litres of the defoliant Agent Orange deployed near the Ho Chi Minh trail during the war.

Commerce is a threat to native plants internationally. Fruit, flowers, bark roots, resins, wood, and entire plants are harvested, to supply everything from food and medicine, to furniture, textiles, and horticulture. In Vietnam cultivated land for traditional crops such as rice, sugar, maize, and bananas, are augmented with introduced crops such as rubber, tea, and coffee. Vietnam is now the 4th largest coffee producer in the world with 400,000 hectares planted between 1990 and 2000. The recent governments have legislated for improved conservation efforts to protect wildlife, develop protected areas, conserve species, and encourage biodiversity, by providing economic incentives. The two most threatened plant groups in Vietnam are cycads and orchids. Vietnam is home to the greatest variety of cycads in the Asian region boasting 24 species. New orchids are still being discovered and are expected to exceed over 1000 species. On a comparatively limited budget the Vietnamese government appear to be achieving a lot to address the threat to plant species, habitats, and ecosystems.



5. Okura Bush Walkway to Stillwater



This very impressive walk through native bush is a popular day tramp on Auckland's North Shore. From Haigh Access Road off the East Coast Road, it starts at a finger of the Okura River. The initial vegetation is classic Northern New Zealand rainforest, consisting of nikau, tree fern, kahikatea, tarairi, puriri, karaka and kiekie. Rising along the track is a ridge predominantly covered by kauri and tanekaha. From here a steep stairway down to sea level leads to the Dacre cottage built in 1855. Described as an adventurer and merchant, Captain

Ranulph Dacre purchased the land, which was later farmed by his sons and grandsons. Much of Dacre's commercial interest in New Zealand involved providing the Royal Navy with Kauri. The bricks used in the cottage are believed to have been from the ballast from one of Dacre's sailing ships. After falling into disrepair the Historic Places Trust fully restored the building in 1984. The walk is best enjoyed at low tide as the coastal route continues along the beach, where beautiful pohutukawa, bushy kowhai, karaka, kawakawa, mahoe and pseudopanax form a backdrop. There is an alternative cliff route if the tides are not with you. The final track is through grassland among over century old macrocarpa to the Stillwater carpark. The one way trip can take approximately 3 hours.

Note: The nearby Albany Scenic Reserve was closed in March 2015 due to kauri dieback.



Okura River



Dacre Cottage

6. Motorway Planting in the Auckland Region.

In response to criticism that Auckland motorway planting has a limited range of species, repetitive planting, lack of trees, overcrowding, overplanting of fast growing short lived species, and a lack of follow up care, a review of the available online resources outlines the complexity of the design process. The NZTA Landscape Guidelines (2014) shows how contemporary highway landscape designs represent a shift away from trimmed grass, manicured exotic tree planting and exotic flower beds; to an approach that is context specific, biologically diverse, and focused on conservation, community, resource re-use, sustainability and cost efficiency. Ten landscape principles are in the guidelines: 1. A context sensitive and place based approach 2. Facilitate green infrastructure and landscape integration 3. Understand the physical conditions 4. The right plant in the right place 5. Promote biodiversity and build in resilience 6. Champion water sensitive design 7. Deliver visual quality and a quality user experience 8. Facilitate community engagement and a collaborative approach 9. Low maintenance and whole of life value 10. Safety in design.

A raft of legislative, government guidelines and protocols need to be addressed. Land Transport Management Act (2003), Resource Management Act (1991). The New Zealand Urban Design Protocol (2005) The 2006 Guidelines for Highway Landscaping include tables of suggested species for topography, terrain, and climate, of different areas. The Transport Agency (NZTA) formulated a Visual Quality Plan with the Auckland Motorway Alliance (AMA). In 2009-2011 alone, 11 hectares of the Auckland 220km motorway system was replanted. Privet, Brush Wattle, Agapanthus, and Woolly Night Shade were removed. They were replaced with flaxes, cabbage trees, nikau palms, kowhai and pohutukawa, as well as some rare natives. Kaka-beak, Maori musk, Coromandel koromiko and New Zealand myrtle were among a total of 155,000 natives planted at a 100 sites. Work was conducted at night to avoid traffic disruption, when contractors spread over 1500m³ of compost and 9000m³ of mulch.

With traffic congestion it is understandable that reducing maintenance and avoiding visual and physical obstruction, dictates the landscape decisions for motorway planting. Safety guidelines include; using less slippery ground plants to reduce skidding, and dense, impact resistant plants like flax, to reduce injury from accidents. With organisations like Landcare Research involved, experimental plantings can be used to compare different species. For example, a swale planting study is comparing three species of vegetation to deliver improved value and resilience, minimum maintenance, better delineation of asset, and water quality improvements. Initial results show *Cyperus ustulatus* is particularly good at screening litter; mainly due to the density of the foliage. *Apodasmia similis* and *Ficinia nodosa* needed to fully establish before a comparison can be made.

Motorway planting continues to evolve, but the direction is heartening. In 2012 the NZPCN gave a special award to the NZTA for their commitment to planting roadways in native species. Further information can be found online -including the following link.

<https://www.nzta.govt.nz/assets/resources/nzta-landscape-guidelines/docs/nzta-landscape-guidelines-20140911.pdf>



Barry Brickell spent more than 30 years constructing the miniature railway. Photo / Richard Robinson NZ Herald

7. A Tribute to Barry Brickell 1936-2016

It was sad news to hear of Barry Brickell's death in late January. As described in two previous articles in the Fernglen newsletter, Barry was an inspirational ecologist. He regenerated native bush at his property at Driving Creek in Coromandel by propagating and planting over 100,000 plants. As a potter Barry chose the clay hills of the Coromandel to establish his business. Poor soils and dry summers are challenging for revegetation but Barry developed successful

planting techniques that overcame the difficulties. The same determination and drive saw the establishment of successful pottery, narrow gauge railway, and tourist attraction. Surveying his lifetime achievements from the "Eyeful Tower" at the summit of the railway, is a living testament to the man. Over 10,000 kauri alone, along with tanekaha, rimu, miro, matai, rewarewa and totara, are all flourishing, with the earliest plantings now reaching 7metres.

Thanks to the friendship and generosity of Barry Brickell, Fernglen Gardens are honoured to display his gifts of the pottery troughs, as well as the "Madonna" pot that houses a number of native epiphytes near the gazebo. In gifting his Driving Creek Railway to the nation his legacy will continue to bring joy to thousands of people from around the world and inspire environmental conservation.



Barry Brickell planters Fernglen gardens. Photo Kelly Lynch