

Fernglen Native Plant Gardens

Summer Newsletter 2013-2014



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Editorial apology: In the Winter newsletter the creator of the Garden des Antipodes in Menton, France as erroneously credited to Catherine Stewart when it should have read Alexandra Boyle Well done Alexandra on this beautiful garden representing NZ in France.

Merry Xmas



to all of the friends of Fernglen

Please visit the gardens over the summer.

1. Summer at Fernglen – Curator report

Curator's Report December 2013

A working bee took place in early October and a lot was achieved. Special thanks must go to Nev who enlisted a very capable bunch of volunteers in the form of family and friends.

The weather was favourable for our open day a few weeks later and visitors were treated to a great spread of food and beverages. Thank you to Leith and Ruby, who entertained us with an array of well-chosen songs.

Spring has encouraged more visitors. There have been several groups through in the last couple of months including the Outdoor Activities Club in November. And on Sunday 15 December at 2pm a public walk will take place through Fernglen and adjacent Kauri Park as part of the Kaipatiki Summer Fun events from Kaipatiki Community Facilities Trust.

Spring has been a period of lower humidity resulting in less insect and fungal damage. Most plants have been resplendent with a fine covering of fresh spring foliage. There has been plenty of flowering. *Rhabdothamnus sinclairii* (Matata) growing beside the path to the Fernery had been flowering profusely. The Fernglen Matata is a Hen Island form with larger leaves and flowers. The local species does not grow in Fernglen but can be found in nearby Eskdale Bush where it occupies sheltered sites in the valley. Yet this seemingly shade-loving plant also grows in harsh exposed coastal conditions such as on the headlands near Bethells Beach where it is shorn by the wind to knee-height, just like its neighbouring manuka and corokia..

Jovellana sinclairii or NZ *calceolaria*, growing in the *Dracophyllum* collection below the house, has been flowering abundantly, but the nearby ground hugging relative, *Jovellana repens*, has remained flowerless. Next to it, though, the recently discovered *Veronica jovellanoides* has been sporting a few flowers just above ground level. In a nearby rockery the not-so-well-known *Teucrium parviflorum* shrub has been having a busy flowering session.

Honey bees have been very active with the abundance of Reinga lily flowers. Meanwhile at Ben's Ridge, dozens of native bees have been busily harvesting pollen from the planted off shore island Titoki (*Alectryon excelsus* variety *grandis*.)

Projects ahead of us include refurbishing the Alpine House and providing a structure to encourage Kiekie to overhang the glow worm area on the Canal Track, thus making it a darker recess. The committee, through Barry Brown, is working with Auckland Transport about the feasibility of altering the Kauri Road turning circle so that a bus can easily turn and allow visitors to disembark in a widened driveway.

2. Trial of “Education for Sustainability” programmes at Fernglen

The Auckland Council has actioned the development of three exciting “Learning Through Experience” programmes at Fernglen.

Educator and secondary teacher Sarah Robinson was contracted to write and trial three programmes under the guidance of Sarah Sheeran, Senior Education for Sustainability Advisor at the Environmental Services Unit. Maureen Robertson, an Education for Sustainability teacher from Verran Primary school and Shanthie Walker, a teacher have been trained to deliver these LTE programmes.



Make a tree - Verran Primary at Fernglen LTE 2013

Two educators work with single classes delivering the same two hour programme. This has worked well in the available space with minimal impact on plants and animals and the single toilet!

Verran School jumped at the chance to trial “Investigating Invertebrates”, “Fantastic Forests” and “Sensory Sensations”. The first two programmes are suited to Year 4 to 6 children and the latter is ideal for junior primary and kindergarten age children.

Investigating Invertebrates includes many hands on activities including building a bug hotel, searching for invertebrates in the soil at ground level and on plants with the use of pooters and magnifying glasses. Students enjoy a camouflage activity where they search for hidden plastic invertebrates and learn how to stave off mosquitoes with Kawakawa leaf rub. They become adept at spotting the Puriri grub holes in many of the natives such as Lacebark and Kumerahou and are treated to a peek at the glistening fishing lines of the resident glow worms. The children are also taught how to make a mini worm farm and a tracking tunnel to check out the visitors to their gardens.

It was particularly encouraging to have several students experiment with the tracking tunnels and bring examples of prints found back to Fernglen to share with the educators. Eli Pratt had obtained excellent prints of slugs, mice and a ferret at work.

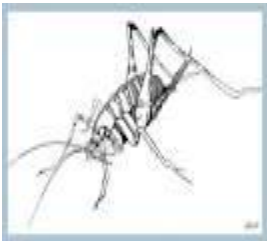


Fascinating Forests is an apt title for this programme and native trees and plants take on a new significance for the children. Sarah introduces the topic in the classroom with a small group activity sorting pictures and labels to answer the question -Why are forests important? She also teaches the students about how plants manufacture food and likens the leaves to food factories and solar panels. An understanding of the exchange of CO₂ and O₂ is developing and there is always a bright spark who has heard of photosynthesis!

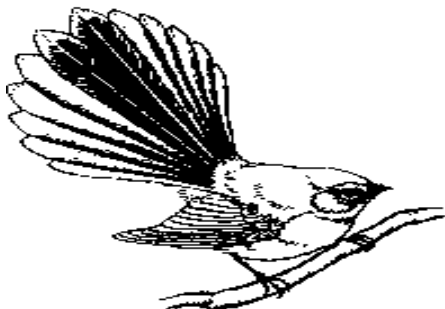


Oxygen - Verran Primary LTE November 2013

Children are quickly moved outdoors as these programmes are all about interaction with the environment, experiential learning and minimal teacher talk. Students take a close look at the variety of plants in the rockery, comparing leaf design, shape, size, texture and food making capacity. They take a mirror walk checking out the canopy on the track to the Fern house. A get to know a fern activity informs them about the uses of many ferns and they share this knowledge with others. Their favourite is probably the “Meet a Tree” activity where they need to be super observant while blind folded and guided by a partner to a specific tree. They use senses other than sight to get to know the tree so they can identify it when taken a distance away and un-blindfolded. Care of the fauna and flora is emphasised at all times.



The third programme, Sensory Sensations, encourages younger children to explore the sights, sounds and smells of the forest and learn about some of our iconic native species. As blindfolded weta they explore the texture of plants; as fantails they get a bird’s eye view of the forest during the insect hunt and discover the importance of camouflage. As caterpillars they get a chance to study leaves up close and even taste one! The activities are hands-on, educational and fun.



Feedback from teachers and students

Teachers and students attending the trial sessions have filled out evaluation forms and the comments have been useful to the educators, highlighting the most liked activities. The students comment on what they have learned. Here are two comments from the Fascinating Forests programme.



Forests are important to everyone whether they know it or not and we should look after them with care. Trees and ferns have many different uses like medicines, food, bedding, building materials and more.

Forests play a big role in our lives so it is very important that we look after them.

Tamara and Piper

After this successful trial it is hoped that the “Learning Through Experience” programmes will be offered to other schools in 2014.



Fernglen Rotary Classroom - LTE Verran Primary October/November 2013

3 . A Look at our Native Mosses



Mosses are an ancient group of very simple plants having been in existence for over 360million years. In the evolutionary scheme they are a step up from algae, which are the simplest form in the plant kingdom. World wide there are over 10,000 species of moss. New Zealand has over 500 species with roughly one fifth endemic to New Zealand .There are relatively fewer endemic mosses because their lightweight spores are dispersed by the wind, as well as the feet and feathers of migrating birds. Moss, liverworts and hornworts, form the botanical division *Bryophyta*. Mosses have a simple physiology showing little differentiation of cells and no root system.

Mosses are commonly found in many different sites , near lakes, rivers, on forest floors,tree bases ,trunks and branches. They are geographically spread from sea level to the alpine regions. They survive in diverse sites because they can withstand dessication when little water is available, and return to their normal state when water is

restored. Both water and nutrients are absorbed through leaf surfaces, and water is essential for moss reproduction and metabolism.

Mosses vary considerably in their dimension and can from mats and cushions from 1mm to 1m. A personal favourite is the native moss *Dawsonia superba* which is nearly 40cm high.

The most valuable moss is the *Sphagnum* moss which is harvested in Westland and Southland primarily for horticulture and exported to Japan for the cultivation of orchids. There are at least nine sphagnum moss in New Zealand. Constructed like a big sponge, sphagnum moss retains water. . By releasing hydrogen ions it maintains a high acidity. One result is that the bacteria which normally breakdown plant matter can't thrive and the dead sphagnum moss accumulates, eventually forming peat. The acidity of sphagnum moss inhibits most bacterial growth and was used during World War One as a wound dressing, Maori traditionally used it to insulate and waterproof flax garments such as capes. .

Interestingly, moss is also a carbon sink It stores approx 400 billion tonnes of carbon which is approximately 14% of the worlds total. The next time your are in the bush, or visiting us at Fernglen check the shady sides of the tracks for mosses, there is also an impressive display on the roof of the Alpine House. They are very successful colonisers! In 2012 there was a new moss discovered on Stewart Island previously only ever seen in Tasmania. Proving that there are still more plants out there waiting to be found!



Harvesting sphagnum moss Te ARA NZ Govt

4. Book Review **Living with Natives – New Zealanders talk about their love of native plants** Ed. Ian Spellerberg & Michelle Frey



This book tells stories from 55 New Zealanders and their passion for New Zealand native plants. All of the chapters are interesting, but possibly the most fascinating accounts are from Barry Brickell, Geoff Davidson, Rob Fenwick, Bob Harvey, Jeanette Fizzsimons, Tim Shadbolt, and Hugh Wilson. These notable New Zealanders discuss their involvement in their private gardens, corporate plantings, eco-restoration projects, community and neighbourhood gardens. The themes that thread through the publication help to inspire and encourage others by asking the questions: Why do they do it?

What have they learned? What are their successes and failures? What were the greatest challenges? The aim expressed by the editors was to “write personal stories about living with native plants...the anecdotes among their narratives will inspire, entertain and in some cases amaze you”

One story that was unusual was from Simon Goodenough, the curator of Ventnor Botanic gardens in the Isle of Wight. After a very destructive storm in 1987 much of the garden needed re-development. This provided an opportunity to establish an extensive New Zealand native collection, which continues to expand with ongoing new plantings. Over 300,000 visitors every year enjoy this collection.

5. **Planting Your Berm- A guide for mower-less Aucklanders.**

The council in Central Auckland has reneged on the responsibility for mowing their berms. Affected Aucklanders can now turn otherwise boring lawn into interesting and attractive native plantings, which can include rare and endangered species. Berms are often difficult sites with poor unaltered soils, in windy exposed areas with poor access to irrigation. This is ideal for many of our exceptionally hardy native plants. The council requirements for berm planting include that the species chosen should be hardy, low maintenance, and low growing (<1m)- so as not to obscure traffic visibility. They must also have a dense habit to suppress weed invasion. The following lists are recommendations:



Ground covers: *Coprosma acerosa*, *C hawera*, *C Te puna*. *C propinqua var laticula*, *C repens* (*Poor Knights*), *C taiko*,

Low growing shrubs: *Coprosma neglecta*, *C rhamnoides*, *C crenulata*, *Melicythus crassifolius*, *Melicythus odoratus* , *Muehlenbeckia astonii*

Non Woody plants: *Arthropodium cirratum*. *Astelia banksii*, *Libertia grandiflora*, *L. ixiodes*, *L. peregrinans*

6. New Coprosma Collection at Fernglen's "Bens Ridge"

With over 50 species of *Coprosma* in New Zealand Inhabiting almost all vegetation types from the coastline to the mountain areas and with forms varying from prostrate groundcovers to small trees, a *Coprosma* collection at Fernglen is long overdue. The aim is to cultivate as many *Coprosma* that can be successfully grown in Auckland conditions. The collection will be extended once the rarer *Coprosma* are located – any donations of other and rare species are gratefully received by Fernglen- please contact us on the website if you can support us. We are happy to propagate by seed or cuttings. We have started by planting 22 species at a working bee at the end of October – only 28 more coprosma to go!

Coprosma already planted:

Coprosma arborea

Coprosma areolata

Coprosma chantamica

Coprosma crassifolia

Coprosma dodonaeifolia

Coprosma intertexta

Coprosma lucida

Coprosma macrocarpa

Coprosma neglecta

Coprosma parviflora

Coprosma petiolata

Coprosma porpinqua

"*porpinqua* var *latiscula*

"*.propinqua* var *martini*

"*.pseudocuneata*

"*.repens*

"*rahaminoides*

"*spathulata*

"*.virescens*

"*.wallii*



Coprosma arborea Bec Stanley photo
NZPCN

The Coprosma Collection is a memorial to

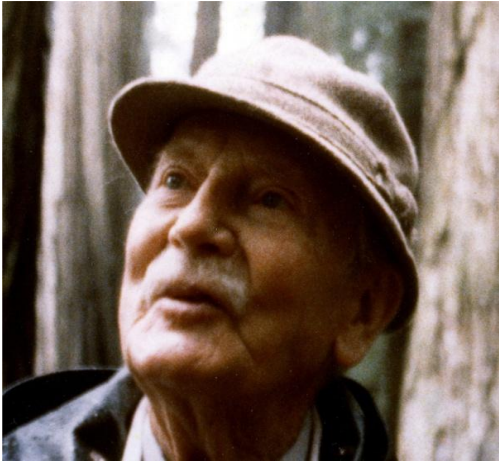


Nev's wife Jackie Arbury

who sadly passed away on September 17th.

Fernglen Gardens extends deep condolences to the Arbury family and especially to Nev who is a tireless volunteer and committee member, and also writes this newsletter.

7.A Look Back in History: The Remarkable Richard St Barbe Baker (1889-1982)



On reading a 1944 edition of the book “I Planted Trees” I was inspired to write an article about the author. This man probably had more impact upon tree planting in the 20th century than any other individual. By some estimates, organizations he founded or assisted have been responsible for planting at least 26 trillion trees internationally.

His father was a nurseryman, and Baker was later to state that he “had trees in his blood”. Before his teens he was already budding and grafting fruit trees. As a missionary in Canada he recognised the degradation of the soil brought about by deforestation and large scale agriculture. At Cambridge he studied forestry but his studies were interrupted by World War

1. In 1918, and after being wounded twice, he returned to Cambridge. After graduating in 1920, the Colonial service sent him to Kenya to study the potential use of local trees, nursery practices, and sustainable forestry. He wrote of his African experience that “modern man has bartered his forest inheritance for beer, meat and wheat... The forest is indeed the cradle of mankind and yet man has been ruthless in the destruction of it”. In 1922 he set up a tree nursery and founded an organization with Kenya’s Kikuyu people to carry out managed reforestation in the region, utilizing native species. In the regional dialect, the local society was called “Watu wa Miti”. A literal translation “The Men of Trees” it formed the foundation stone for what was to become an international organization. In 1924 he returned briefly to England, became a Baha’i, and then returned to Nigeria for 4 years as the Assistant Conservator of Forests reproducing similar projects to Kenya. Discharged from the Colonial service after a dispute, he travelled to Palestine a country he describes as “desperately needing trees”. He established Men of Trees with the help of Shoghi Effendi, head of the Bahá’í Faith in Palestine, this later evolved into the world renowned International Tree Foundation. After a US lecture tour in the 1930’s he also established the Save the Redwoods Campaign. Post World War II Baker made his first visit to New Zealand. His book contains a chapter entitled A-O-Tea Roa, where he warmly describes Maori people and their customs, the majestic Southern Alps, and endemic forests. He also added a note of caution about the cost of New Zealand’s pastures, noting that indiscriminate burning, overstocking, and devastation by rabbits was destroying vegetation. In the 1950’s Baker turned his attention to the replanting of the Sahara. Unfortunately his ambition to meet this ultimate challenge was unfulfilled, partly due to politics and inadequate silviculture. Undeterred Baker continued to promote the International Tree Foundation and repair the ravages of the environment. He died in Canada at 93 still writing his 31st book.

Addendum: In Palestine St Barbe Baker attended the Jewish festival “the feast of trees” when thousands of children plant trees in the streets of Jerusalem. Not surprising then that such a culture embraced the efforts of The Men of Trees organisation. Now in Israel all occasions are celebrated by tree planting. I had personal experience of the enduring tree planting culture, I have been heartened to see that trees I was involved in planting in the Negev Desert around the Kibbutz Hazerim in the 1970’s are still growing - thank you Google Earth.

8. Early Pohutukawa bloom in Auckland

Unbelievably early flowering of pohutukawa have been sighted in various suburbs of Auckland, including Onehunga and Mt Albert. There are some mature pohutukawa significantly blooming. These are pure mainland pohutukawa, not crossed or pure Kermadec Island which flower in winter months. If the majority of pohutukawa do flower early this summer -will it mean we have to bring Christmas forward? Only time will tell if we will have our true blooming Yuletide tree on December 25th.

