

FERNGLEN NATIVE PLANT GARDENS NEWSLETTER

Autumn 2021



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News from Fernglen

by Kelly Hayward

The Fernglen committee enjoyed welcoming new and regular visitors during the Open Day in March. As always, many thanks to everyone who made it happen. An interesting addition to the event was botanical illustrator Lesley Alexander painting in the education room. It was a good opportunity to admire her art work. There was also interest in the different plants for sale, thanks to Barry Brown and Romily Atkinson for supplying some of them.

The track to Ben's Ridge was open for the Open Day, but has mostly been shut due to the on going work by the Council to minimise kauri die-back. The track work has included altering and up-grading them to a standard that complies with regulations. Because of this, sadly the character of the curving, narrow foot tracks, dug by the Fisher family, has changed. The bridge linking the fern house track to Malcolm's Descent (the track leading to Ben's Ridge) has been replaced and its engineering and construction has further delayed the work being finished.

We are expecting the tracks to open in the very near future and realise how hard their closure has been on neighbours, particularly since Kauri Park is closed. Thanks for your patience. We look forward to the return of groups visiting the park once the work is complete.

Below, Nev's article about 'Maintaining a fernery during long dry summers' provides information about his fern collection in Mt. Albert and it is interesting to relate this to the large fern collection growing at Fernglen or perhaps your own.

Also in this newsletter there is a chance for escapism in a piece written by committee member Mandy who currently living in an interesting location across the seas.

Take care.

Kelly

Book review: *Thomas Potts of Canterbury – Colonist and Conservationist* by Paul Star

by Neville Arbury

Thomas Potts can be justifiably regarded as one of our first conservationists. This publication records his life in New Zealand, especially how his concerns for the environment developed.

The book is divided into three sections:

Part 1: Thomas Potts and the environment

Part 2: Selections from the Diary of Thomas Potts 1851-58

Part 3: Eleven Essays by Thomas Potts 1882-88.

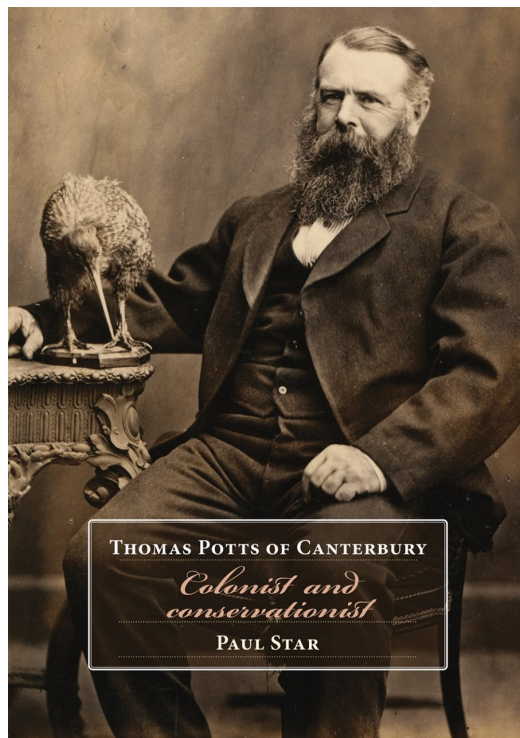
When Thomas Potts arrived in New Zealand, he was thirty years old and financially well-off. He eventually settled in Governor's Bay near Lyttleton where on 240 hectares he grew wheat, barley, and peas, as well as raising pigs and chickens. Fruit growing and tree planting were described as his "consuming passions".

As a pioneering colonist, he was from the early days aware of the need to balance development and conservation. He quickly became concerned with the destruction of native forests. In 1858 he publicly protested against the loss of large strands of totara on the Port Hills near Christchurch. In 1868 during a brief spell as a member of parliament, he promoted conservation as a national issue. He raised the idea of protecting native birds on island reserves and that New Zealand should have national parks and domains. Potts wanted the government to do more than supply seeds and seedlings, or encourage planting. In his opinion, it should actually be planting trees. In 1872 Potts called for acclimatisation societies to expend some energy in the re-establishment of the most valuable of our native trees at a time when acclimatisation societies were focused on the introduction of exotic animals, birds, and fish.

Birds were always close to Potts' heart. His knowledge of New Zealand birdlife was recognised as second to none. He was the first person to consider the concept of island reserves for endangered bird species.

A prolific writer throughout his life, Thomas Potts historically is an important figure in the conservation of our native plants. This publication has been well researched. Highly recommended as another addition to the biographies of early figures concerned with our native plants.

It is worth noting that one of Thomas Potts' grandchildren, Norman Potts a solicitor in Opotiki, was instrumental in establishing the Hukutaia Domain, a living museum of native plants. From here seed and plant material was distributed around New Zealand in the 1950s, well before its time. The plant collection is still in existence and well worth a visit.



Maintaining a fernery during long dry summers

by Neville Arbury

As a fern lover, I have been collecting and cultivating ferns at my home in Mt. Albert with varying success for the past thirty-odd years. The two recent exceptionally dry summers have been a challenge especially with the severe water restrictions over the past summer.

Tree ferns have struggled even though they are well mulched. *Cyathea dealbata*, our silver tree fern as always is by far the hardiest of all tree ferns. Next, come the two dicksonias, they have grown considerably. However, they require as much supplementary watering as was allowed. *Cyathea smithii* has just survived summer looking rather "slim". My large mamaku died during last summer's drought. A classic case of "If it dries out, it dies out". The same happened to my superb specimen of *Cyathea cunninghamii*, which also died last summer. It is worth noting that most of these tree ferns were planted over 20 years ago and have been heavily mulched every year since planting. This illustrates how low the water table is after two years of very low rainfall. Ironically in my front garden is a superb specimen of *Cyathea brownii*, the Norfolk Island tree fern that just appeared one day as a young plant. There are very few specimens in Auckland. One near the St. Lukes mall and another small group in Richmond Road, near a cluster up from Grey Lynn shops.

I will list some of my other ground ferns and how they "survived" the drought.

King ferns – There are two clumps in the garden, the older clump survived well while the younger plants would regularly collapse and lie flat on the ground. Amazingly they quickly recovered when watered.

Adiantum hispidulum 'Rosy Maidenhair' – One of the most robust of my ground ferns, growing near full sun. The clump has continued to expand throughout summer!

Asplenium bulbiferum 'Hen and Chicken Fern' – Growing in a shady part of the garden, well mulched, the cluster of these ferns have all survived well. Some covered with young 'chickens'.

Doodia australis – Growing in full sun and thriving, just requiring the removal of old fronds occasionally.

Todea barbara – An endangered species that has thrived in full sun for many years. Can be infected with thrips in late summer but this year no sign of thrips.

Christella dentata – The great success story of my fernery for many years! New plants are spreading through my garden, both sunny and shady areas. This fern should not be an endangered species.

Lastreopsis glabella – Another ongoing success story growing near full sun. The clump just continues to spread year after year.

Microsorium pustulatum – This attractive fern has always struggled in my garden. Possibly better cultivated as an epiphyte, however, it can also grow as a ground fern. Really struggled during the hot dry summer.

Polystichum vestitum – A fascinating fern in that it rapidly responds to care and attention. Mulching and deep watering improve the appearance of the fern quickly, The specimen in my garden must now be 10-12 years old.

The pollination of native plants

by Neville Arbury

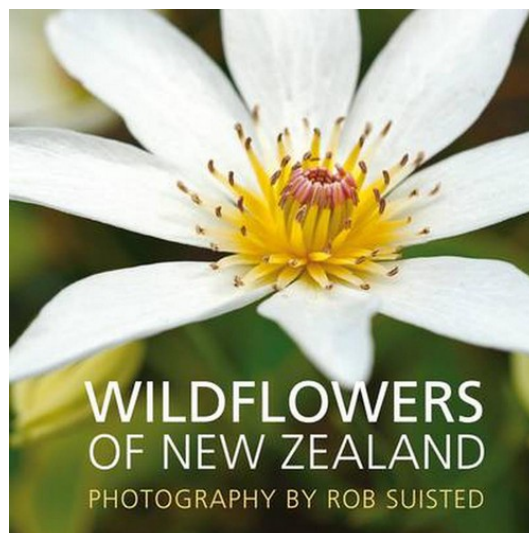
Typically bird pollinated flowers produce the most nectar which is an energy-rich food for foraging birds. Bird pollinated flowers are often brightly coloured, but not scented as most birds have good colour vision, but a poor sense of smell. The bright red blossoms of pohutukawa and rewarewa, and the tubular flowers of kowhai and puriri are typical examples of bird pollinated plants.

Blue flowers are rare in New Zealand as there are no long-tongued bees that are strongly attracted to blue. The shape of flowers can modify the behaviour of pollinators, encouraging them to interact, resulting in maximum contact with anthers and stigmas. Only a small number of trees have specialised flowers and specific pollinators, the majority of trees are visited by a wide range of small insects including flies, beetles, bees and moths. Native flowers are often small, white/cream and open widely, e.g. manuka.

With wind-pollinated plants like beech and coprosmas, there is no need to produce attractive displays. Wind-pollinated flowers are often single-sexed. Male flowers that have developed for pollen dispersal by the wind often hang downwards or have large hanging anthers, e.g. *Coprosma grandiflora*. Because wind pollination is less efficient than insect pollination, large quantities of pollen must be produced.

Book review: *Wild Flowers of New Zealand* – photography by Bob Suisted, text by Matt Turner, published 2012

by Neville Arbury



It is amazing what you can find in some of our outstanding suburban libraries. This little gem was tucked away in the trees section of the Mt. Roskill Library, dwarfed by massive tomes on exotic trees.

A common complaint about New Zealand natives that I often receive is that they lack colour. What people forget is that the exotic plants we have in New Zealand have been cherry-picked from their countries of origin. The author of this small publication in a brief introduction writes:

"In the right season, whether you are at the beach, in the forest, or open country, you will find New Zealand alive with flowers. In spring delicate alpines push up among the tolling tussocks of the herbs fields, while the brilliant blooms of kowhai and rewarewa punctuate the forest green. And with the approach of summer warmth, forests and shorelines light up with the crimson blossoms of pohutukawa and rata."

The book is divided into several sections: Coast, open country, wetlands, forests, and alpine, with superb photographs of numerous plants found in each zone. Accompanying each photograph are notes on the special features of the plants illustrated.

Possibly my favourite photograph in this publication is of matagouri, one of my favourite South Island plants. I have never seen images of the flower before, small clusters at the base of the stiff spines that can be quite lethal. The author notes that these spines were used by early Maori as tattoo needles, something I was unaware of.

This small publication, 80 pages long, is an absolute gem. The photography is quite outstanding, obviously taken over the number of years it would require to track down the range of plants with their varying flowering times. Hopefully, this book will be reprinted at some time. Otherwise, try our local library (582.13 S94 or 582.13 SUI – Dewey System).

The continued misuse of *Griselinia littoralis* in Auckland Gardens

by Neville Arbury

It is often forgotten or not known that *Griselinia littoralis* is a tree growing up to 10-12 metres. Naturally occurring throughout both islands and Stewart Island. It is a very attractive tree with a naturally spreading habit. Difficulties are experienced when the tree is planted, often in close proximity to other specimens, to form a hedge, with a maximum required height of two metres. All is well until we experience what is now becoming the norm, i.e. a very dry summer in Auckland. Sadly, with griselinias, as the leaves turn a paler green colour and then begin to drop, "the die is cast", very simply. If they dry out, they die out.

Amazingly, in extensive plantings of public gardens where significant numbers die out in summer, they are replaced over winter with new specimens and the following summer the cycle is repeated. Auckland, at the moment, has tens of thousands of dead griselinias, a sad outcome for this handsome native tree. The only solution to this carnage of course is to avoid planting *Griselinia littoralis* as hedges in the first place. This does not mean we ignore *Griselinia littoralis* as a native plant, rather we respect the tree as a 10-12 meter high, spreading specimen and plant it where it can successfully develop to its natural dimensions.

The tragic misuse of *Griselinia littoralis* reminds me of the plight of *Pittosporum tenuifolium* in the 1970s and 1980s. At this time *Pittosporum tenuifolium* was planted in large numbers throughout Auckland as a hedge plant to be clipped at around 2 metres height. Of Course, *Pittosporum tenuifolium* is a small to medium-sized tree, and as it grew, it developed its natural open habit, much to the horror of those who planted it as a hedge plant. The eventual outcome of this experiment was the removal of many *Pittosporum tenuifolium* plants. As a free-standing tree, like *Griselinia littoralis*, the kohuhu is a very handsome medium-sized tree.

Hello from Pitcairn Island

by Mandy Osborne

Nev has asked me to give a brief report back on the natural habitat on Pitcairn Island.

I am fortunate enough to be here with my husband Andy who is working as the Island Policeman for one year. It certainly feels a long way from anywhere and even more so at the moment with Covid. Normally you could travel here via a Flight to Tahiti or visit on a Cruise Ship. For now it is just 46 people including residents and contracted staff on a small Island.



At first the natural beauty is overwhelming, there are many tropical species such as coconut, banana, hibiscus, plumeria, Breadfruit, Banyan, interspersed with Norfolk Pines. The island has a history of Polynesian inhabitants which came and went and then more famously the arrival of the Bounty Mutineers and their companions.



Vaine Peau and his coffee plants



Christian's Cave





"Down Rope" Beach

There is a nature trail that gives an overview of the native and introduced plants on the Island and I have included some photos.

Stop 1. Pitcairn and Polynesian Plant Uses

Polynesian settlers were thought to have reached Pitcairn between 1200 and 1650 AD. The rich resources of timber and rock accounted for the prehistoric habitation of the island.

It is also thought that the polynesians introduced a lot of plants to the island such as Banana (*Musa x paradisiaca*), Coconut (*Coco nucifera*), Taro (*Colocasia esculenta*), Swamp Taro (*Cyrtosperma merkusii*) and probably even the famous breadfruit (*Artocarpus altilis*). All these plants are found at this stop.





Swamp Taro


The Bounty Mutineers arrived to an empty island in 1790. The Tahitians who travelled with them would have been thrilled to discover some of their familiar food plants growing on Pitcairn left behind by their ancestors.

Since then new plant uses have been developed using both Polynesian and English ingenuity. The people of Pitcairn today have many uses for the island plants.

The pretty hand made carvings are made from the timber of miro (*Thespesia populnea*) and Tau (*Cordia subcordata*). Some fine old Miro trees are found at this stop.



The Bounty



Miro in seed


Stop 2. The Roseapple Project

The plant pictured to the right is the Roseapple (*Syzygium jambos*). Despite its harmless appearance this plant poses the greatest threat to native pitcairn island plants. There are many roseapple trees in this area. They form an oppressive and dark canopy.


Roseapple (*Syzygium jambos*) is originally from S.E. Asia and it was brought to Pitcairn Island as a source of firewood. The decline in demand for roseapple coupled with the population decline on the island has allowed roseapple to invade much of the land (see map below from Kingston, N. 2001. The flora and vegetation of Pitcairn Island - its phytogeography and conservation).

The native Pitcairn plants find it difficult to survive or grow in the deep shade of roseapple and thus have been in severe decline. The "Roseapple Project" sponsored by the United Kingdom Overseas Territories Environment Fund has been investigating different ways of dealing with roseapple on Pitcairn. In this plot we have cut two 10 x 10 m plots and left two 10 x 10 m plots filled with roseapple. In all plots we planted some native and useful plants. There are twenty - one trial plots like this one in different parts of the island.


Further information on the project can be obtained from the islanders who have all worked on this worthwhile project the Island Conservation Officer Mr. Jay Warren and the Botany Department of Trinity College, Dublin 2, Ireland (www.ict.ac).



Roseapple in flower




Frilling at the base of Roseapple.




Stop 5. Native Forest and Endemic plants

Pitcairn Island's flora is of huge scientific interest, it has a tiny native flora of 82 species; 11 of these species are endemic and thus have globally threatened status (Kingston & Waldren 2003, Annals of Botany 91: 31-40). The number of introduced species however, stands at 250, a huge number. Those introduced plants put the native plants under huge survival pressures, as the island plants are not used to competing for space in their own home.


On the left, the native forest trees, such as Thatch, Rata and Mahame are in the decline and are only found in small numbers throughout the island. The endemic plants (featured on the right) are under extreme threat. The Yellow Fatu which was presumed extinct, was rediscovered by Carol Warren in 2003, near Tedside. This newly discovered plant was destroyed in a landslide in 2004, fortunately cuttings were taken before its demise and we have some representatives growing here. Only eleven, Red Berry remain in the wild on Pitcairn, an intensive propagation programme has brought the numbers up, and only a few populations of Artibau remain. This is the only place in the world that these plants are found! The island nursery plays a key role in conserving and propagating these extremely rare plants. Look around we have planted lots of native plants at this stop.




Thatch (*Pandanus tectorius*)




Rata (*Materaleuca collina*)




Mahame (*Glochidion pitcairniensis*)



Yellow Fatu (*Aloellia peltocarpa*)



Red Berry (*Coprosma bartramia*)




Artibau (*Sida acuta*)


Stop 6. View to Christian's Cave and Invasive species

There is a dramatic view towards Christian's Cave from this stop. It is thought that in the past the cave was hidden away by vegetation which would have made it the perfect hideout for Fletcher Christian. Soil erosion - and the decline in native plant species on the island leaves the cave exposed today. Along the route to Christian's Cave there are very few native plant species binding the soil. Invasive weeds, such as the aptly named Grab a leg (*Cenchrus echinatus*), have taken advantage of the exposed conditions. The islanders strongly urge you to take a few moments to remove any of the spiky seeds (probably attached to lower clothing and shoes) and place them in the bin provided before returning to the village. Your assistance will help reduce the spread of Grab a leg throughout the island. The seed head is pictured on the top left. Be sure to get them all! Other very pretty, though highly invasive plants along the way are Lilly and Lantana. These, have outcompeted the native plants in this area. The plants which Fletcher Christian would have encountered on his way to the cave are Thatch (*Pandanus tectorius*), Tappau (*Homalium tappau* - bottom right) and Palau (*Hibiscus filicosus*).


We hope you have enjoyed Pitcairn's first eco-trail!




Grab a leg (*Cenchrus echinatus*)




Lilly (*Centropogon*)




Lantana (*Lantana camara*)




View of Christian's Cave



Thatch (*Pandanus tectorius*)



Tappau (*Homalium tappau*)



Palau (*Hibiscus filicosus*)



The miro tree is the dominant endemic species on the island and was traditionally used for building. Now it is used for making craft items to sell to tourists.

The rose apple tree was introduced for firewood but now is classed as an invasive species. It covers a lot of the island. For a time feral goats kept the invasive species under control, but in the mid to late 2000's they culled about 500 of them. Since then the weeds have become a problem again. There is a lot of blue morning glory, introduced by a visiting school teacher and a climbing "wild bean".

There is currently no eradication programme partly due to the small numbers of people who work here. The local workforce use weed eaters to keep the weeds back from the roads but nature is just taking it's course otherwise. The Norfolk pines were brought here from, of course, Norfolk Island which has strong ties to Pitcairn. They are not used for anything being a fairly useless tree for building products.

Some locals have started growing coffee with a view to establishing an industry here. Most everything grows well here and fast. Many plants will produce twice and there are no real seasons like we have back home. It is usually in the high 20s to mid 30s in the Summer and the coldest it will get is 18 degrees. Combine this with the rich volcanic soil and it is a gardener's paradise.

Unfortunately the Queensland fruit fly has made it here so this gets into your tomatoes etc. and most fruit. It is not really cold enough to grow some species like stone fruit that have a dormant period.

I could go on and on as there is so much here to share but I will sign off for now.

Take care

Mandy

What's happening at Fernglen?

Working bees

Regardless of the weather, working bees occur at Fernglen **on the second Saturday of every month from 9am onwards, until about 12 noon.**

The working bee is a great way to meet others, learn more about native plants, weeds and pest control. There is always a job to be done in the garden or in the education room.

No gardening experience is necessary and all ages and abilities are welcome. Gloves and gardening tools can be supplied.

Looking forward to seeing you there.

Educational tours

Are you involved with a school or an education group and would like to learn about New Zealand native plants? A unique collection of plants from all over New Zealand grows at Fernglen. To see what is on offer please contact us

on email: fernglen.nz@gmail.com

or phone: 021 236 5800

Pest Free Kaipatiki

Did you know Pest Free Kaipatiki Restoration Society are located in the Fernglen education room office? Check out news about pest plants, kauri dieback prevention, pest animals and events at www.pestfreekaipatiki.org.nz

Room hire

The Fernglen Education Room is available for hire at very competitive rates. Please contact us

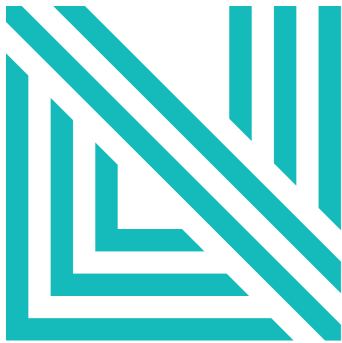
on email: fernglen.nz@gmail.com

or phone: 021 236 5800

Naylor Love

Naylor Love are committed to seeking sustainable construction practices. Their history in New Zealand makes an interesting read on their website:

<https://www.naylorlove.co.nz/about-us/our-history/>



**Naylor
Love**



Botanical Art at Fernglen

Interested?

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