

FERNGLEN NATIVE PLANT GARDENS NEWSLETTER

Summer 2019



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Curator Autumn Report

The unusually hot and dry days carried on throughout March, the second-hottest March ever recorded in NZ. Although a total of 45mm of rain was sprinkled through March, the soil at Fernglen continued to be parched until some cooler southerly winds arrived along with 55mm of rain in the first week of April. The Fernglen forests do have a refreshed appearance, but we still need a lot more rain to reach all the dry spots.

As well as a return to modest rainfall, April has brought Fernglen a further gift in the form of two new volunteers: Audrey and Ngaire, who have very kindly weeded out many undesirable plants around the rock gardens. Romily has also been helping on Tuesdays during March and April, doing some badly needed tidying up and installing some new plants from her home garden, in some of the bare patches vacated by drought-stricken (dead) plants. Between our hard-working volunteers at monthly working bees, and volunteers during the week, it seems we may now have a chance to get on top of the weeds which took full advantage of having no paid curator at Fernglen for 5 months.

Our summer newsletter had a photo of large *Tecomanthe* seed pods, which are still maturing on the vine. Fernglen's five large *Tecomanthe* vines are an impressive feature, with an interesting history. They were planted at Fernglen in the 1950's, grown from cuttings collected in 1952 from a solitary surviving *Tecomanthe speciosa* vine on the Three Kings Islands¹. After having been decimated by browsing goats, this solitary survivor was the only *Tecomanthe speciosa* plant left on planet Earth in 1952. Snatched from the jaws of extinction, there are now thousands of *Tecomanthe* offspring surviving all around NZ, all descendents of those few 1952 cuttings. However, Fernglen's large old *Tecomanthe* vines may well represent the oldest planting of *Tecomanthe speciosa* surviving on the main islands of NZ.



The 60 year old *Tecomanthe* vine 10 metres high in the top of a large cabbage tree

1 Muriel Fisher, in her report to the meeting of the Onewa Community Board, 8 November 1990, on the history of Fernglen and its plants. The purpose of the meeting was to form a Management Committee for the new Council reserve at Fernglen.



60 year old *Tecomanthe* vines

I looked around Fernglen for something pretty to photograph. A flowering plant perhaps? There aren't many flowers out in early April, but no matter, at any time of year we can see plenty of interesting features at Fernglen. I noticed a very silvery *Astelia chathamica* highlighted by the low afternoon sun. If you want a big bold colour contrast in your garden, a silvery *Astelia* would be ideal. But ensure you plant them at least 1 metre away from any paths to avoid tripping on the long leaves.



Astelia chathamica

Plants of the diminutive and very common divaricating shrub, *Coprosma rhamnoides* currently have a fine display of bright red berries which add a lot of colour to the branches. *Coprosma* is related to coffee and all *Coprosma* berries are edible. We also have a crop of the larger red berries of *Elingamita johnsonii* on display near the Alpine House for the second time this year. We have three larger *E. johnsonii* trees just beside the Fernglen entrance gate, but unfortunately these must be male and monoecious, as they don't bear any of the colourful fruit. In 1902 the steamship Elingamite foundered on the west island of the Three Kings. In 1950 Major M.E. Johnson discovered Elingamite trees near the site of the Elingamite shipwreck and the newly discovered tree later became named after the ill-fated ship and Major Johnson.



Elingamita johnsonii



Coprosma rhamnoides

Near the Alpine ouse we have some very pretty Hibiscus, and one which is flowering now (albeit, for only one day per flower) is the fragile *Hibiscus trionum*, which can be found growing in various parts of NZ on well-drained soils. Once these are in your garden, they seed prolifically and grow readily so you will have them for a long time, flowering from summer through until May.



Hibiscus trionum

Steve Cook

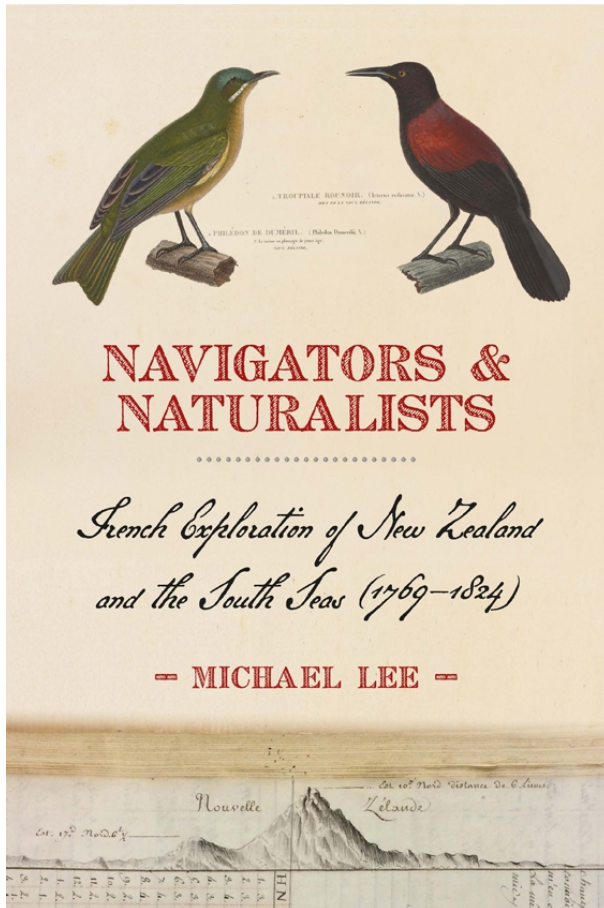
An update on Myrtle Rust

Myrtle Rust first arrived in New Zealand in May 2017. It is presumed that it had blown across the Tasman Sea from Australia. Since then Myrtle Rust has spread to most parts of the North Island and to the northern tip of the South Island, Taranaki has the most number of recorded sights. It is thought that Myrtle Rust originated in Brazil and is now found in over 20 countries.

Ramarama, *Lophomyrtus* species have proven to be the most susceptible natives to infection. Rata and Pohutukawa are also highly susceptible but have been less affected to date. Most infection occurs in warm summer conditions, Myrtle Rust is less active in winter.

Considerable research has been undertaken by M.P.I., DOC, plants and food research, Landcare research and NIWA. Key areas of research include climatic risk assessment, screening susceptibility of New Zealand Myrtles, seed banking against the possible loss of species in the wild, understanding host genetic resistance and developing control options to protect Taonga trees.

Book review: *Navigators and Naturalists* by Michael Lee - French exploration of New Zealand and the south seas 1769-1824



Divided into five parts, this publication documents an incredible detail the journeys of the great French navigators and naturalists. To quote the author

“French navigators and naturalists Bouganville and those who came after him, Surville, Marion Dufresne, La Perouse, d’Entrecasteaux, Duperrey, Lesson and d’Urville remain on the navigational charts to this day and are a testament to their achievements, relics of the Age of Discovery, a fixed to far-flung islands and reefs and the scientific names of birds, animals and plants of the Pacific and Southern oceans”.

Author Mike Lee, early in this magnificent work, makes the point that James Cook has been emphasised to the unfair exclusion of the massive French contribution to European knowledge of New Zealand. This book attempts

to redress the balance, focusing on the key characters of the age of French exploration.

The second chapter titled “The Race for the Great Southern Continent” explains concisely the impetus for the French exploration of the South Pacific, the idea of a great Southern Continent. England and France, at this time, were in a struggle for world supremacy to quote the author

“The first country to discover the continent and secure its undoubted riches would become the unchallenged world power.”

Amazingly in late 1769 Cooks ship the Endeavour and Survilles ship the St Jean Baptiste the two ships passed each other about 30 nautical miles apart!

While primarily an account of the voyages of the French navigators there is considerable detail outlining the contact they had with the various indigenous people they met and the natural vegetation of these ‘new’ lands. Plant species collected by Dumont d’Urville and his botanist Lesson were deposited in the museum natural d’Histoire in Paris and were the material from

which an eminent French botanist A. Richard published detailed descriptions of 379 species of New Zealand plants.

I can only wonder at the amount of research Mike Lee carried out to produce this monumental publication, obviously a work of many years and requiring a thorough understanding of the French language. I would highly recommend this book to anyone interested in the early exploration of New Zealand and the South Seas or as a general read into some of our early histories.

Kauri seed collection Autumn 2019, the search for genetic resistance to Kauri dieback

Fourteen Iwi groups working in partnerships with scientists have been active in the upper North Island in one of the largest seed collections in decades. Dr Nari Williams, leader of the joint 'healthy trees healthy future programme' recently stated

"by taking seeds from mature trees we are hoping to get a better understanding of the range of genetic resistance present. This is one part of understanding why and how some trees succumb to dieback and others remain apparently disease free."

With the seed collected, seedlings are raised to the age of 15 months when they are sent to Manaaki-Whenua land care research in Auckland where they are screened for Kauri dieback. This is achieved by flooding the plants with water containing *Phytophthora agathidicida* to encourage infection. The plants are then monitored to observe how the disease takes hold and how long the young plants survive after infection. The plants are analysed to see what chemical reactions are triggered, hoping to find one that may be effective in neutralising the disease. Scientists have begun to observe a range of responses as the plants succumb to infection. Of course, there is a big difference between what happens in the glass house and for vulnerable trees in the forest, but the ongoing research gives hope for the future of Kauris.

To find out more have a look at the [press release](#) or listen to an [interview on Radio NZ](#).

A look at the worlds largest fuchsia, *Fuchsia excorticata*, an article contributed by Bruce Goodfellow

The large New Zealand fuchsia tree *Excorticata* grows in all native forest and is the worlds' largest growing Fuchsia. It is one of New Zealand's most common native trees and was prolific in all districts. Specimens often grow up to 13m high.

Oddly in two regions, the "Catlins" in Southland and "Mt Pirongia", (west of Te Awamutu), there are groves of these which are 16m tall. The reason for this is as yet unknown as DNA of the soil has not shown any differences to other areas.

Excorticatas often tend to grow in large groves and have trunks up to one metre in diameter, which are usually quite gnarled and also have a habit of shedding their bark which is pinkish-brown in colour and it then hangs in festoons from the trunk and branches. If this old bark is peeled off, a new layer of bark is exposed which is of a lighter colour and if the inner bark is peeled, it exposes the wood itself, which is a bright green, really smooth and cool to the touch. The wood itself has an attractive grain and is highly suited for inlay work.

Over the years many large *excorticate* trees have been felled and cut up for firewood but unfortunately, the wood does not burn easily, even when completely dry.

Excorticata has very distinctive leaves which are up to 100mm long, very tapered and are dull green and slightly crinkled on the upper surface with greyish-white underneath. The leaves are suspended on very slender stems so when a breeze disturbs the leaves, the colour contrast is quite spectacular.

The flowers are small but distinctive in shape and about 40mm in length, they too have slender stems which grow either from the leaf axils or directly from the trunk and branches.

The flowers are a soft green, streaked with purple when first open, then later become reddish-purple. Each flower has an ovary connected to a funnel-shaped tube. This terminated in four sepals which are pointed and curve backwards, four small dark purple petals and eight stamens. The ovary has a long slender style which is longer than the stamens which contain grains or bright blue pollen.

This is a most unusual colour for pollen but is a distinctive feature of the New Zealand species. The berries, known to the Maoris' as Konini, are dark purple when ripe with many seeds and as with all fuchsias, they are edibles. The first Europeans to discover *Excorticata* are Joseph Banks, a botanist, and Daniel Solander, a biologist on Captain Cook's first voyage of the "Endeavour" in 1824.

Fernglen represented at Ecofest North, 9th March

Held at Marlborough Park, Glenfield, many environmental groups and individuals from Auckland North gathered together to display their wares. Fernglen had a stand with leaflets, small rare native plants for sale, a 'native' word finder for children, all designed to educate and enlighten the public about the existence of Fernglen.

Sadly, in such a dry summer heavy rain dampened the enthusiasm of visitors with numbers well down on expectations. It was interesting talking to visitors, some had heard of Fernglen, some had visited years ago, however many people had never heard of the gardens, even what we term 'green-people' living on the North Shore. A reminder that we have to work hard to raise our profile. Kauri dieback was a common topic of conversation with the public that approached our stand.

Autumn 2019 - A 'mega-mast' season on the way for many of our native plants

Every few years many of our native plants ranging from giant Beech and Rimu trees to our native Tussocks have a very heavy flowering season followed by a bump of crop of seed and fruit. This event can be brought about by increases in summer temperatures, with temperatures on the rise we are experiencing more frequent mast seasons.

While mast years are beneficial for native birds, bats and insect populations as well as seedling regeneration of native plants, there is sadly a dark side to such an event. With the production of massively increased amounts of food in our native forests populations of rats and mice increased dramatically followed by a plague of stoats! When the fruit and seed either germinate or had been eating the rats and stoats turn to native species for food with disastrous consequences. It is predicted that this autumn the mass seeding and fruiting will occur throughout New Zealand, not just in the southern parts where it normally happens. Native birds, bats, lizards and insects, unfortunately, are in for a mauling.