Newsletter

Veronica lavaudiana Sun Hebe Endemic to Banks Peninsula Christchurch

PRESIDENT'S REPORT SPRING 2023

Greetings to all members,

I hope you are enjoying all the wonderful spring colours around the city. It's perhaps fortunate that our cherry trees around Hagley Park had finished flowering before these recent ferocious Norwest winds arrived. I hope your garden has not been too badly affected. You'll notice quite a few branches have come down around the Gardens, Hagley Park and the city in general so there has been a huge amount of clearing up going on.

Despite that, there have been many visitors to the Gardens, and plenty of takers on our daily walks which have started again, leaving the Kiosk at 1.30pm every day. On a recent walk I took, we went



Phlox collection in the Rock Gardens

to the Rock and Crevice Gardens. The Rock Gardens are looking spectacular with the growing collections of phlox, saxifrage and primulas, so a big thanks to curator Grant, who has been gradually rebuilding these collections.

Our plant stall has also been very busy, with regular filling up required, sometimes several times during the day. These sales contribute hugely to our income to then support the Gardens. One of our more recent projects is to help with the purchase of a greenhouse for Mona Vale staff to propagate and winter over plants, as they currently do not have any facilities for this.

A donations board is now in place, by the Gardens map, not far from the Plant Stall. We hope to get another one in place at the Rolleston Avenue end of the Gardens in due course, and that this will help supplement the Plant Stall sales.

You may have noticed that the new front gates, opposite the Arts Centre archway and in line with Peacock Fountain are now complete and in use. These have replaced the gates by the museum entrance, with the gates themselves being reused, a new wall created and planting just inside.



The new gates, on Rolleston Avenue, framing the Peacock Fountain

At our AGM in August we had two landscape architects who talked about residential and commercial, particularly inner citybased landscape designs. It was very interesting to hear about which plants are chosen for the planting beds along the busy inner city roads and the feedback that they have had. This landscape architect had also been involved with planting designs for the South Frame around the central city, so if you haven't walked along there yet, I strongly recommend it, as a great example of use of native plants in a challenging area, especially with the easterly winds blowing right along there. We've also had another great talk from Dr Don Jellyman on our freshwater native fish, particularly eels. In October we visited The Blue House in Amberley, with its beautiful garden and interesting approach to dry gardening. More talks are lined up for November and December so keep an eye on emails coming in with information on these.

On Sunday 29th October, we're having an Open Day with people from each volunteer group available to talk to anyone who would like to join the Friends and find out what we are all about. We're hoping for a busy day, though it may be a little quiet initially, since the Rugby World Cup final is on first thing in the morning! If you belong to the Friends and would like to volunteer, but are not sure what this might involve, please do come along and have a chat. The Gardeners themselves are always in need of additional assistance, at all times of year, but particularly now as the warm weather arrives, and the weeds take off at an ever faster pace.

If you are not sure that you can manage the more physical elements of this role, but you would love to share the Gardens with others, training to be a Guide could be an option. We have extensive training, resources and regular monthly meetings. Alternatively, helping out in the Kiosk on a Friday or Sunday in a role we call the Gardens 'ambassador', may suit you better. As the Kiosk is the first place visitors come to from the Armagh Street carpark, we often have people dropping in and needing information and directions, or to pick up our wheelchair for use with a relative or friend.



Do come and enjoy some of the beautiful colour and scents such as the azaleas near the Riccarton Avenue carpark bridge

We are also trying to encourage the Gardens staff to shout out if they need help with one off projects, so if you would like to volunteer occasionally, rather than making a more permanent commitment, please let us know via the Friends email address, and we can put your name onto a contact register. Areas where we can help out are the annual modern rose garden pruning, helping with cleaning the library shelves, mulch spreading and more recently, picking up pine cones from the lawns following the high winds.

We are planning to have a Christmas Friends event at 4pm on Sunday 10th December as our last gathering of the year, so will be sending out information to remind you closer to the time.

Meanwhile, if you haven't been into the Gardens recently, do come and enjoy some of the beautiful colour and scents such as the azaleas near the Riccarton Avenue carpark bridge.

Happy Gardening!

Jane Cowan-Harris
President of the Friends of the Botanic Gardens



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Having just voted in Forest and Birds 'Bird of the Century' competition and considering with some sadness the large number of native bird species that are 'in serious trouble' I felt it put a new twist on the little ditty 'spring is sprung, the grass is riz, I wonder where dem birdies is?'

All nature is linked, whether it is forest, ocean, bird or animal life, and all is currently under threat, for the most part from man's activities on the planet. A proactive approach to conservation is needed, to protect life on the planet, and a few articles in this spring edition do touch on conservation in one way or another.

In Jane's visit to the Adelaide Botanic Garden, she highlights their Bicentennial Conservatory which houses a lush display of lowland rainforest plants, many of which are at risk or endangered in their natural habitats.

Tigger and Dolina adventure along the west coast of Australia visiting many parks and reserves, and of note visit a garden called 'Fire and Beauty' which has been designed with managing fire risk in mind.

Alan highlights the NZ native kaiōmako (*Pennantia corymbosa*) with a view to promoting it being planted here in Christchurch.

And Margaret reports on a talk given to the Guides about biosecurity and the role that botanic gardens can play in protecting both flora and fauna through giving opportunities for scientific study and also education. We have a biosecurity trail here in the Christchurch Botanic Gardens with a brochure which is available from the kiosk. Each stop on the trail has an information board about a particular pest; myrtle rust, kauri dieback and the Queensland fruit fly are some of the featured 'guests'. Our November speaker, Murray Dawson will be speaking about some of his work with schools and in the wider community, raising awareness about 'alien plant invaders'.

As an aside on biosecurity, MPI visit our home every spring and hang fruit fly traps in our fruit trees, they visit these frequently throughout the growing season and check for 'foreigners'. So far, none have been found!

For those interested in honing their tree identification skills, Philip has recommended the 'Mitchell Beazly Pocket Guide to Trees.

Once again, there is some very interesting reading in the newsletter.

Annette Burnett Editor for FCBG newsletter



VISIT TO ADELAIDE BOTANIC GARDEN

I was lucky enough to have a trip to Christchurch's sister city, Adelaide recently and whilst there visited their Botanic Gardens. The Gardens opened in 1857, and like our own Gardens are within easy reach of the City Centre and provide an oasis for anyone working in or visiting the city.

We had an excellent guided tour from one of their guides with 20+ years of experience, who took us on a 90-minute walk around the more unusual parts of the Gardens. The highlights of the tour were firstly:

The wisteria walk, which was replanted a few years' ago after

The giant Amazon lily (*Victoria amazonica*) with flowers

drought killed the original plants, was an unexpected sight. Both purple and white flowers were flowering at the same time along 100m long walkways on each side of the SA Water Mediterranean Garden – an area showing the diversity of plants which can be grown to withstand drought conditions and wildfires; a common occurrence in South Australia.



The Wisteria walk

We moved on to the Amazon waterlily pavilion, where the original pond built in 1868 still holds the amazing Amazon waterlilies (*Victoria amazonica*). The pavilion itself was rebuilt in 2007 with the design of the energy-efficient glasshouse being inspired by the lily's giant leaves. We were lucky enough to see a flower from the lily as these only last for 48 hours.

The Palm House was our next stop. This houses a collection of plants from Madagascar which require warm, dry conditions. The house itself was originally imported from Bremen, Germany in

1875, and was a very advanced glasshouse design for its time. However, over the years the iron glazing bars started to rust and deteriorate, so it was

closed for many years, before finally being restored and reopened in 2018. Restoration included getting specially rolled glass imported from Germany. It is thought to be the only glasshouse of its kind in existence in the world and well worth the visit.

In contrast the Bicentennial Conservatory built in 1988 is the largest single span conservatory in the Southern Hemisphere. It houses a lush display of lowland rainforest plants from northern Australia, Papua New Guinea, Indonesia and the nearby Pacific Islands. Many of these plants are at risk or endangered in their natural habitats.

In front of the Palm House are the cactus and succulent beds with plants from South America on one side and Africa on the other. Each demonstrates how they have evolved to survive in challenging environments.



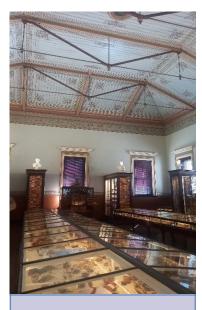
The Palm House, restored and reopened in 2018

We passed collections of giant cycads, with huge seed pods, gardens for school children to come and learn about gardening, an avenue of 150-year-old Moreton Bay figs (*Ficus macrophylla*) and many beautiful specimens of Australian trees. Like our own Gardens there were many quiet spots to sit and enjoy the peace and quiet, and then busier places where the cafes and shop run by the gardens volunteers were.

On a return visit I went into the Santos Museum of Economic Botany – built in 1881 and the last of its kind in the world, it is home to an amazing permanent collection of countless plants, fruits and their various uses, much of which dates back to the original museum display of 140 years ago.

So, should you ever be visiting Adelaide, don't forget to make time to visit the gardens and take one of their free guided tours to get a great insight into the history and the stories of the gardens.

Jane Cowan-Harris President of FCBG



Santos Museum of Economic Botany

A BOTANICAL TRIP TO WESTERN AUSTRALIA

This September, 24 of us joined a ten day, 3000 km trip with Botanica — an Australian gardens and travel group. Starting in Perth we headed North to Geraldton to look for the exclusive and elusive wreath flowers (*Lechenaultia macrantha*) which are primarily found east of Geraldton at Mullewa.

They are wreath shaped and mainly grow in disturbed sandy soil, usually after a fire.

They grow from a single stalk and spread their leafy branches in a circle with varying shades of white, pink and red frilled flowers around the outside. The plants take about 3 years to flower, have a 5-6-year lifespan and are both unique and very attractive as they grow either individually or in intertwining circles along the roadsides in the middle of nowhere.

From there our route took us south to Albany and Margaret River via various Parks and Reserves with many stops for roadside fossicking among the myriad of wild flowering plants including many orchids.



Tigger and Dolina travelled some 3000 km; from Perth to Geraldton, then South to Albany, Margaret River, and Smith's Beach near Yallingup





The elusive wreath flower (*Lechenaultia macrantha*) Growing east of Mullewa

Along the way we visited the weird Pinnacle Rocks, the Mammoth Cave near Albany, private gardens and sandalwood, truffle and winery enterprises as well as the famous Forest of the Giants where the giant karri (Eucalyptus diversicolor) and red tingle (Eucalyptus jacksonii) trees grow among a huge treetop walkway.

On our last day we were taken to 'Fire and Beauty', a garden above Smith's beach near Yallingup on the border of the Leeuwin-Naturaliste National Park. The property was bought in the 1980s by Bill Mitchell and his wife, as Bill was a keen surfer.

By 2000, with the increased risk of bushfires, Bill researched and created a plan for the property. His focus was on water, plants and technology. The site was cleared of all trees, lawn, other vegetation and bark chips. Two 200,000 litre concrete tanks now collect water from all surfaces for house use, irrigation and fire fighting.

Never having heard of succulents, Bill then planted 400 aloes, *Draceana draco*, *Euphorbia milli*, and cacti. He also had an 80 year old Queensland bottle tree (*Brachychiton rupestris*), plus five 20 year old ones shipped from Brisbane. Kept well watered this planting will boil rather than flame.

With modern technology Bill is able to remotely soak the house in minutes, activating the diesel-powered water pump remotely. Drones and cameras notify him if there are embers.

In creating a 30 metre fire blanket around the house, using local limestone for retaining walls, structural plants and sculptures, Bill has created a garden which has year round interest, as well as making their home as fireproof as possible.

It was a wonderful trip with an outstanding guide even if we did not see (as most of us had expected) wildflowers en masse. Apparently it depends on the season.

Tigger McKenzie and Dolina Barker

Editors note: Dolina and Tigger have been friends for many years. They both belong to Friends of the Botanic Gardens and volunteer at the Kiosk and Tigger helps at the Tuesday propagation group for the Plant Stall.



The 80 year old Queensland bottle tree (*Brachychiton rupestris*) that Bill had shipped in from Brisbane



Golden barrel catus (Kroenleinia grusonii)



Plants such as succulents, aloes, and cacti, store water and in a massive heat scenario the water stored inside the leaves boils and does not ignite.

NATIVE TREES OF CHRISTCHURCH

Pennantia corymbosa - kaikōmako

This is a lovely evergreen tree which, when mature, can smother itself with flowers and is followed by distinctive fruiting spurs producing small black fruit (drupes).

A check on INaturalist shows only 24 trees recorded across the flat part of Christchurch but many plants around the Port Hills and across Banks Peninsula. I suspect the recordings will increase as conservation plantings grow taller. One of the problems is identification of young trees. *Pennantia corymbosa* goes through three phases of growth juvenile, intermediate and adult. It can however flower and fruit at any stage.

It is in the adult stage that it is most attractive. It has formed a nice straight trunk, grown larger distinctive leaves and flowers and fruits extremely well. Even as an adult it can still hang onto juvenile branching and leaves.



A kaikōmako tree growing at Stanley Park in Akaroa

Metcalf (1987) states that growing this tree from semi hardwood cutting of adult material will enable it to skip the juvenile stages and form a mature flowering tree at an earlier age. This situation arises in several NZ plants, and it has proved successful. The downside is that cutting-grown material reduces the genetic pool of material, however for situations like specimen trees or street trees cutting grown plants from selected nicely formed trees may be desirable.

Seedling grown trees will start as a densely tangled shrub with zig-zagging branches bearing small leaves with 3-4 large lobes at the tip up to about 2 metres. Kaikōmako leaves in juvenile form make it easy to identify as they look like duck feet. It then passes through an intermediate stage to the adult stage. The juvenile leaves and branches will stay on the tree as well and may fall off at any time.

The adult stage is the most attractive. Leaves are dark green, quite large, and in ideal situations can be up to 10 cm long and 4 cm wide, but they are usually smaller and distinctly shaped with irregularly toothed or lobed margins.

Flowering in spring can be spectacular with the trees covered in blossom. The small white fragrant flowers may be male or female as both are produced on the same inflorescence. They are followed by the small black fruit which are a favourite food for bellbirds. The Māori name kaikōmako means food (kai) of the bellbird (kōmako/korimako).

Traditionally, Māori used the tree to make fire sticks to make fire by repeatedly rubbing a pointed stick into a groove on a piece of mahoe.

It is found throughout the North, South and Stewart Islands but is uncommon north of Auckland and on Stewart Island.

One of the best specimens I have seen locally is in Akaroa, on the Stanley Park walk. It stands on its own in grass and is about 12 metres high and 5 metres across. Many more should be planted.

A detailed description can be found at https://en.wikipedia.org/wiki/Pennantia corymbosa.

Also, Metcalf L.J. (1987), The cultivation of New Zealand trees and Shrubs, Reed Methuen, Auckland.





Left kaikōmako fruit and flowers

Biosecurity in the Botanic Gardens

In September Dr David AJ Teulon spoke to a large group of volunteer garden guides and gardens staff on this topic. Dr Teulon of Plant & Food Research, Lincoln, was for 10 years director of Better Border Biosecurity (B3), a multi-partner, cooperative science collaboration that researches ways to reduce the entry and establishment of new plant pests and diseases in New Zealand.

He introduced the topic by touching on the importance of plants to the national GDP and the potential economic impact of "invasive alien species" (IAS), and then on the need to protect the natural environment of New Zealand from harm. By international standards New Zealand and Australia have very good biosecurity; however IAS can still cross the border in boats and planes, or blow across the Tasman. The continuum of protection can be seen as a series of nets starting offshore, passing through border biosecurity, and ending with pest management and recovery. Climate change is going to have an impact on risks presented by IAS as new climatic ranges develop.

Botanic gardens can play a role in a variety of ways. Because they host plants from around the world they present opportunities for novel host interactions. Staff are interested in these issues, and some botanic gardens have scientific laboratories associated with them. There are strong international networks, and many make databases available. Finally, they have high visitation rates by the general public.

Dr Teulon then went on to describe two initiatives that the Christchurch Botanic Gardens has been involved in.

Educative biosecurity trails:

These were initially developed to target tourists going direct from Auckland Airport to spend time in the gardens while awaiting access to accommodation. Covid intervened and the project pivoted towards the wider public and was extended to Christchurch and Wellington Botanic Gardens. A brochure is available, and Christchurch has a walk with 7 information boards with a QR code to provide further information. Another change to the programme has been to add further information with a Te Ao Māori perspective, highlighting risk to precious examples of indigenous plants.



The Biosecurity Trail Brochure leads to seven information boards within the botanic gardens. Each one outlining a specific threat to New Zealand Bio security.

Using Sentinel Plants in early identification of pests and diseases:(*)

Examples of indigenous species in overseas botanic gardens, may give scientists a lead on areas of risk and management of issues. The project began with a search for NZ indigenous species growing in the open in botanic gardens with climatic similarities to New Zealand. It is envisaged that, in the future, New Zealand gardens may be able to offer a resource for overseas research. An example of this is the presence of two species of pine aphids, from North America and Europe, with distinct distributions among the international collection of pines of the Christchurch gardens.

In response to questions Dr Teulon discussed native New Zealand aphids, such as the totara aphid, which appear to be resistant to introduced aphid biocontrol agents.

The brown marmorated stink bug (BMSB) is a potential IAS of concern and planning is already underway for biocontrol of this if and when it breaches border controls.

Margaret Metherell Committee member of FCBG

(*) 'Sentinel plants': These are alternative susceptible host species that display visible symptoms of infection more rapidly — and could be introduced to at-risk populations and included in monitoring programmes to act as early warning beacons for infection.



THE MITCHELL BEAZLEY POCKET GUIDE TO TREES

By Keith Rushforth.

This book is a field guide to the trees of Europe that will enable the reader to identify almost any tree he or she encounters. Although Great Britain boasts only some 35 native species, many other introduced species will be familiar. In this book are illustrated over 350 species as well as mention of other species, varieties and cultivars. This means that all trees commonly encountered, with the exception of those rarely found outside arboreta, should be readily identifiable.

The book places the trees in a generally accepted tree families order based upon their evolutionary sequence from the more primitive to the advanced groups. Occasionally the author has deviated in order to place side by side species which bear a strong resemblance to each other so that they may be more readily identified.

Within families the genera have been ordered purely for the sake of convenience, and their sequence does not imply any botanical significance. A tree is usually defined as a woody perennial plant growing on a single stem to a height of 6 m or more, whereas a shrub does not attain this height and has a stem divided near the ground. But of course, plants do not fall obligingly into these man-made categories all the time, and some do occur as either a tree or a shrub. The rule that the author follows is that if a plant occurs with more than negligible frequency then it should be included. The author has also tried to pay particular attention to deciduous trees in winter, a phase of their existence all too often ignored in books.

The Mitchell Beazley
pocket guide to
Trees

Keith Rushforth

Reviewer: Philip N Skilton.

FRIENDS OF THE BOTANIC GARDENS EVENTS

Sunday 19 November 2023 at 4.00 pm in the Kiosk

WEEDY ADVENTURES

ENGAGING WITH COMMUNITIES ON INVASIVE PLANTS

Murray Dawson is a botanist at Manaaki Whenua — Landcare Research at Lincoln University. Murray will discuss some of his "weedy outreach" projects. Including engagement with schools and the wider community.

There will be a short presentation by Murray Dawson, MNZM AHRIH executive Member of the Royal New Zealand Institute of horticulture at the beginning of our meeting, recognising three recent members of the RNZIH. These are:

- Dr John Clemens. Retired Curator of the Chch Botanic Gardens. Distinguished career in horticulture, Associate of Honour of the RNZIH. Awarded 2022
- Susan Molloy. Botanical Resources Coordinator Chch Botanic Gardens, Fellow of the RNZIH. Awarded 2022
- Mr Christopher Barnaby of Christchurch. Plant Varieties Office Assistant Commissioner. Distinguished career within the NZ Plant Varieties Office and International Plant Varieties Organisations. Awarded 2023



Sunday 10 December 2023 from 4.00—6.00 pm in the Kiosk

This is a catered event with a talk by Paul Michael

ALL ABOUT FERNS

Paul Michael from Fern Factor, one of the country's largest specialist fern nurseries, will talk about the wonderful and varied world of ferns, from propagation to their uses in gardens and forests.

Sunday 18th February 10am

VISIT TO ŌHINETAHI GARDEN AT GOVERNERS BAY

Details to be announced





FRIENDS CONTACTS

Committee

President Jane Cowan-Harris 021 043 5342 Secretary Graham Chick 021 055 4111

Treasurer Carol Halstead Webpage queries Jane Cowan-Harris

Jeanette Christensen, Vicki Steven, Susan Lawrence, Ray McTeigue, Rachel Wood, Ric Acland Margaret Metherell.

Other Contacts

Guides Co-ordinator Susan Lawrence 021 120 6258 Group guided walks: Pat Whitman 384 3475

Newsletter editor Annette Burnett <u>dananbur@outlook.com</u>

Enquiries About Membership

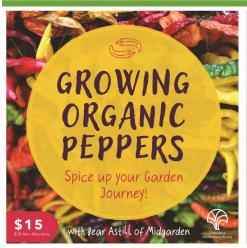
Phone: Ray McTeigue 027 569 9402

Email: friendsofthegardens@gmail.com

Post: PO Box 73036

Orchard Road Christchurch 8154 New Zealand

Gardens enquiries: Information Centre 03 941 7590



DEMONSTRATION \$35

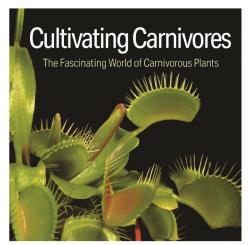


Growing Organic Peppers

Spice up your Garden Journey!

Tuesday 21 November 7 – 8.30pm

Curious about cultivating chilli peppers and capsicums, but unsure where to begin? Get the low-down on all things pepper from Bear Astill, a passionate local grower. \$15pp



Cultivating Carnivores

The Fascinating World of Carnivorous **Plants**

Wednesday 22 November 7 - 8.30pm

Unveil the secrets of cultivating thriving carnivorous plants for a lifetime! Explore the numerous varieties and gain insights into their optimal care.

\$20pp

Hanging Baskets Demo

Craft an Abundant Hanging Basket

Saturday 25 November 2pm Portstone Garden Centre

Price includes a complete hanging basket kit (plus an extra basket) to take home to create your own beautiful creation. Plus a 20% discount on any purchase made on the day for CHS Members! \$35pp



Terrariums

Create a Miniature Festive Forest

Tuesday 5 December 7-9pm

The Kiosk, Christchurch Botanic Gardens

Join our Christmas Terrarium Workshop for handmade festive decor and craft your personalised mini arid or temperate garden. Includes all materials, festive sweet treats and non-alcoholic bubbles.

\$65pp

Rustic Wreaths

Craft a Simple Natural Wreath Wednesday 29 November 7-9pm

The Kiosk, Christchurch Botanic Gardens

Discover the secrets of crafting with foliage and fresh or dried flowers. We'll guide you through weaving a grapevine wreath, adding a refillable container for fresh blooms, and teach you expert wiring techniques for attaching foliage and festive baubles. Includes all materials, festive sweet treats and non-alcoholic bubbles.

\$65pp

Garden Life

Wednesday 6 December 1pm and 7pm Main Speaker: Wolfgang Bopp The Gardens of Japan

Wolfgang Bopp, Director of the Christchurch Botanic Gardens, captivated by Japan's stunning gardens, has visited six times. From serene ponds to moss-covered sanctuaries and vibrant cherry blossoms, he'll unveil the beauty of Tokyo and Kyoto's remarkable gardens and temples.

Mini Speaker: Alan Jolliffe

New Zealand Mistletoe The Kiosk, Botanic Gardens \$5 (Non-Members: \$10) Pay on the door Tea, coffee and biscuits included

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