



## PRESIDENT'S REPORT SPRING 2022

Welcome to a challenging springtime for all gardeners – snow one minute and then hot Norwest gales the next! In amongst all of that, we have some lovely wetter soil from the winter rains, which will hopefully stand us in good stead as we head into summer. Meantime, enjoy all the Spring colour that is around. I'm very lucky to be able to grow cinerarias in the garden but if frost is an issue in your garden, go and have a look at the magnificent display of these beautiful spring flowers in Townend House. Some of them have been bred by Greg Salton (curator of the conservatories), and his team in the Gardens, and they are quite spectacular!



Spring flowers, bulbs with cineraria, taken at Jane's Garden, Clifton Hill.

The Friends have been lucky enough to be involved in some of the recent celebrations within the Gardens. One event was for the 160<sup>th</sup> anniversary of the Canterbury Horticultural Society, with an excellent review of the 160-year history given by Neiel Drain who as well as being head of Parks & Reserves, has been a very active participant with the CHS. If you are interested in their history, there is a lovely pictorial version of their history on boards in the Kiosk. As partners in using the Kiosk and with many shared interests in the Gardens, it is lovely to foster these close ties.

The other celebration which was attended by myself and several Committee members, was a thank you and formal opening of the Magnetic Observatory.

This was organised by the Botanic Gardens Trust who coordinated the fund raising to restore the building and contents, and was attended by people who had been involved in the planning, design and restoration of

the building as well as donors and other people involved in its re-opening. The Friends donated some money towards this venture. If you haven't been to look at this yet, I recommend you do. It has been beautifully restored and has some fascinating history which is well displayed. The Magnetic Observatory is on the path just to the left of the Kiosk and is open between 10am and 4pm every day.

Other activities that we are involved with in the Gardens continue with great enthusiasm. The Propagating team are kept extremely busy with keeping up with the demands of the plant stall and the busy growing time of year. The volunteers are busy as always, keeping up support for the gardeners as the weeds flourish, and the Guides



The unassuming magnetic conservatory building.



Inside the historically significant magnetic conservatory.

have just started their daily walks again. An increase in visitors to the Gardens, particularly more tourists, has been noticeable and is great to see and there have been several requests for group tours.

This means that our Garden Ambassadors who work on Fridays and Sundays in the Kiosk, are also busier. So, if you have a spare 2 or 3 hours and would like to help out in the Gardens, volunteering in the Kiosk, or as a Guide, do get in touch with us either myself [janechbythesea@gmail.com](mailto:janechbythesea@gmail.com) or [friendsofthegardens@gmail.com](mailto:friendsofthegardens@gmail.com).

Finally, a sad farewell to two of our long standing members, Bidy Pollard and Nedra Johnson, who sadly passed away in the last two months. They both contributed a lot to the Friends for many years and will be missed.

**Jane Cowan-Harris:**  
**President of the Friends of the Christchurch Botanic Gardens**

## KIOSK VOLUNTEERS NEEDED!

Did you know that members of the Friends volunteer their time to work in the Kiosk on two days each week? Every Friday and Sunday volunteers from Friends of the Botanic Gardens are present to assist the public with a number of issues. It can be as simple as directing the public to the Ilex Centre for coffee, or the information desk in the gift shop, or to the nearest toilets. It can be answering questions about plants and flowers currently catching the eye in the Gardens, it may be to give instructions and maps to specifically asked for areas within the Gardens.

In winter months (May - August) there are two shifts – from 10.00am to 12.30pm, and 12.30pm to 3.00pm, and in summer months (September - April) from 10.00am to 1.00pm and 1.00pm to 4.00pm, with one volunteer for each shift.

Those who volunteer their time are placed on a roster, these time slots may be swapped among the Volunteer team.

**We need more Volunteers!** Training will be given.

If you enjoy working and helping the public, and enjoy the ambiance of the Kiosk and its surroundings, then this may appeal to you. I really enjoy this aspect of my many experiences within the Christchurch Botanic Gardens.

Please reply to me if you are willing to join this “elite” volunteer group.

Graham Chick, Kiosk Roster Coordinator

[grahamandlois@xtra.co.nz](mailto:grahamandlois@xtra.co.nz): 021 0554111.

## Canterbury Horticultural Society 2023 Scholarship Awards on Offer.

The 2023 Canterbury Horticultural Society Scholarships will be awarded in March next year. If you know of anyone who may be eligible please do let them know about the opportunity and advise them to contact us via the CHS website [www.chsgardens.co.nz](http://www.chsgardens.co.nz).

The Jeannie Dunlop Scholarship (valued up to \$500) is to assist persons interested in horticulture to further their knowledge and/or experience in some form of amenity horticulture for the potential benefit of the recipient and possible benefit to the Society.

The P C Browne Scholarship (valued up to \$1,000) is to encourage and assist horticultural students and others similarly engaged to extend their knowledge on a special horticultural topic of their choice, by means of additional work experience, study and/or research.



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Spring blossom above and peace bell below taken by Annette Burnett in the Gardens on a Sunday afternoon mid October





## PEACE TRAIN IN BOTANIC GARDENS



“Chugger” is a new attraction in the Botanic Gardens

Chugger is a brightly painted train, towing four carriages designed to carry about 16 people in total. It is also wheelchair accessible. It has been described as “a battery powered ride along with songs and messages of peace played as passengers travel the virtual tracks of peace.”

The Peace Train was donated to the city of Christchurch following the Mosque attacks and was the gift of Yusuf Islam who is better known as the pop singer of old called Cat Stevens. One of his greatest hits was the song “Peace Train”. Yusuf performed that song at the memorial service held in Christchurch two weeks following the attacks.

Chugger performs every 1st and 3rd Sunday of the month (apart from in Winter), between 10.00 am and 2.00 pm. Its station is on the south side of the Kiosk, and each train ride is a loop around the paths surrounding the children’s playground in our Botanic Gardens. A volunteer team of about 40 ensure the maintenance and safe operations of Chugger.

**Graham Chick.**

## HAPPENINGS AT MONA VALE

A Friends’ sub-group meet with Nicky Brown (Team Leader Heritage Gardens and City Centre) every month to offer support for the staff working in this beautiful heritage garden.

Currently we have a small group of volunteers helping Heidi and Ben keep the gardens in tip-top condition. Three new rose beds have just been planted up and both the modern and heritage roses are looking great.

The fuchsia collection on the east side of the rose garden is being revamped and work has begun to remove the old fuchsias and prepare the bed for the new plants.

We would like to thank Michael Coulter, CHS member and former Fuchsia Society president, for propagating a wide range of fuchsias, both species and cultivars to restore this collection. The Growing Friends have potted these cuttings at the Friends’ nursery, and they will be planted out later this month.

Early in the year we worked with society members to replace irises that had moved out of named spots in the Iris Collection. We would like to thank members of the Society for their valuable help to restore the collection. Do visit the iris garden (past the Homestead, opposite the Avon) during October/November when they will be in flower.

The ‘Hot Garden’ at the side of the Bathhouse, will also undergo a re-vamp next month. The Friends have sourced some of the plants ready to be planted which will bring this garden back to its former glory.



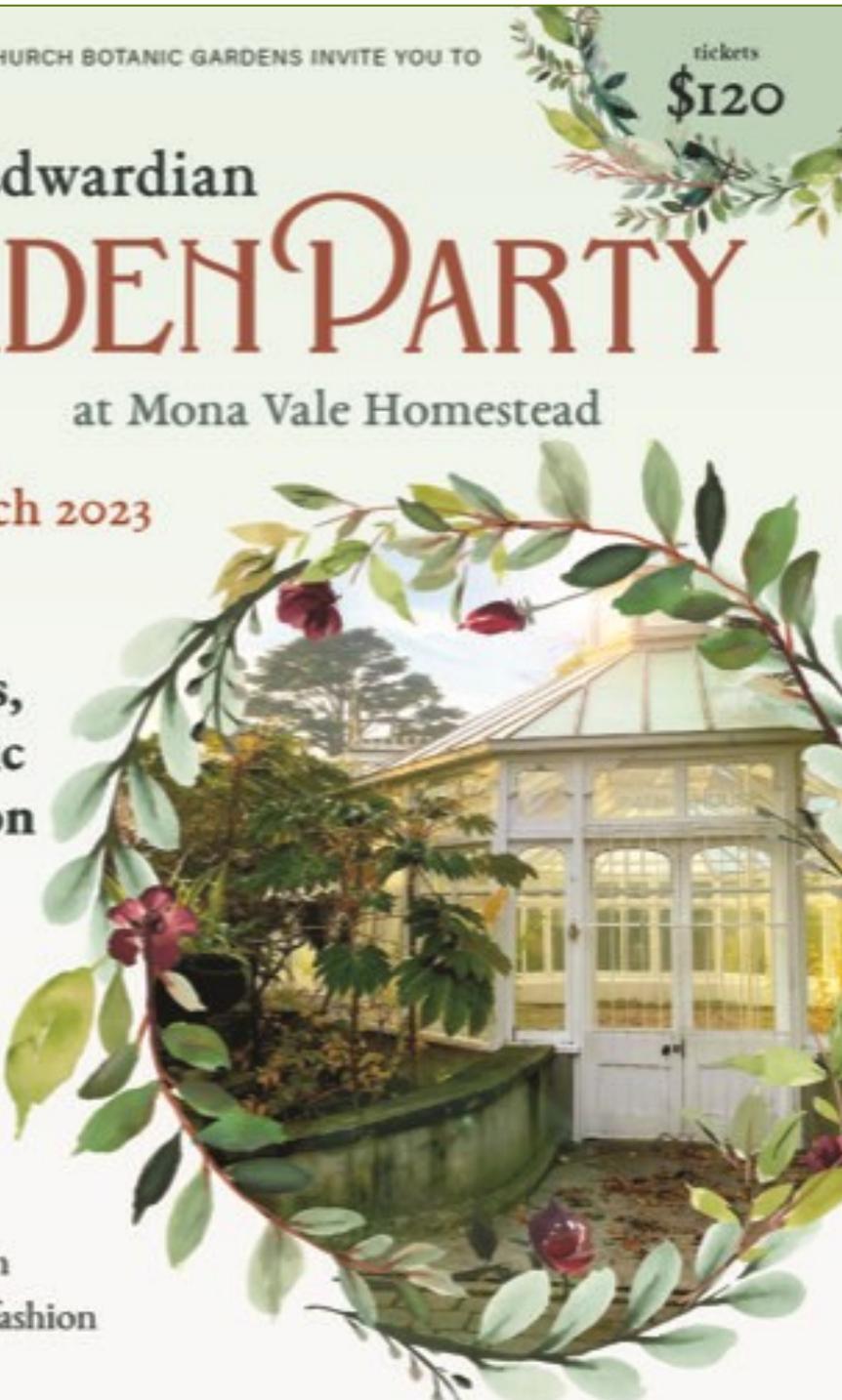
Fuchsias, both species and cultivars being propagated by Michael Coulter and potted on by the ‘Growing Friends’

Work has also begun to create a formal 'white' garden in the west corner by the fernery.

Nicky is very excited about this new development and has employed contractors to work to her design ideas. Watch this space as it will be a lovely addition to the peace and serenity of the Mona Vale Garden.

We would also like to draw your attention to our planned Edwardian Garden Party. We have been working very hard to make this a great event for 2023. The purpose of this fundraising event is to help the City Council to restore the Bathhouse which has been closed since the earthquake. Please spread the word and join us for a fabulous time on March 12<sup>th</sup> 2023.

**Jeanette Christensen**



THE FRIENDS OF THE CHRISTCHURCH BOTANIC GARDENS INVITE YOU TO

tickets  
**\$120**

# An Edwardian GARDEN PARTY

at Mona Vale Homestead

**Sunday 12 March 2023**  
**from 3-6pm**

**Enjoy bubbles,  
canapés, music  
and croquet on  
the lawn**

Proceeds to help  
restore the historic  
Bathhouse to its  
former glory

Dress for the occasion  
Edwardian-inspired fashion  
encouraged

tickets **\$120** secure now from  
[www.friendschchbotanicgardens.org.nz](http://www.friendschchbotanicgardens.org.nz)



 **Friends of the  
Christchurch Botanic Gardens** Tel: 021 263 7229 or Email: [monavalefundraising@gmail.com](mailto:monavalefundraising@gmail.com)

## GARDENS DIARY NOTES JULY — OCTOBER

I'm over halfway into my second apprentice year with the Botanic Gardens. Building my horticultural plant knowledge and skills everyday, always thankful to have been chosen as the recipient of the Helen Irvine Scholarship. I imagine Helen is happy with my progress, teamwork and plant enthusiasm. Hopefully there will be funding for another apprentice in the near future.

Donations and volunteers are much appreciated among all the staff here at the gardens. I have also met a number of the Friends of the Gardens volunteers and you are all wonderful!

I'd like to share some photos of everyday jobs over the past few months.

### **Breanna Hill** **Gardens apprentice**

#### 1) Mona Vale, 15th July

Weeded and generously mulched the lower Iris border. We used some top notch mushroom blended compost.

#### 2) Mona Vale, 1st August

Trimming *Miscanthus* and tidying up the weir entrance. Raking, cutting, shaping, removing rubbish and general tidy up.

#### 3) Mona Vale, 17th August

Behind the scenes of tidying up the bedding along the driveway. Removing weeds and leaves, cultivating carefully so as to not hit Tulip bulbs.

#### 4) Mona Vale, 30th August

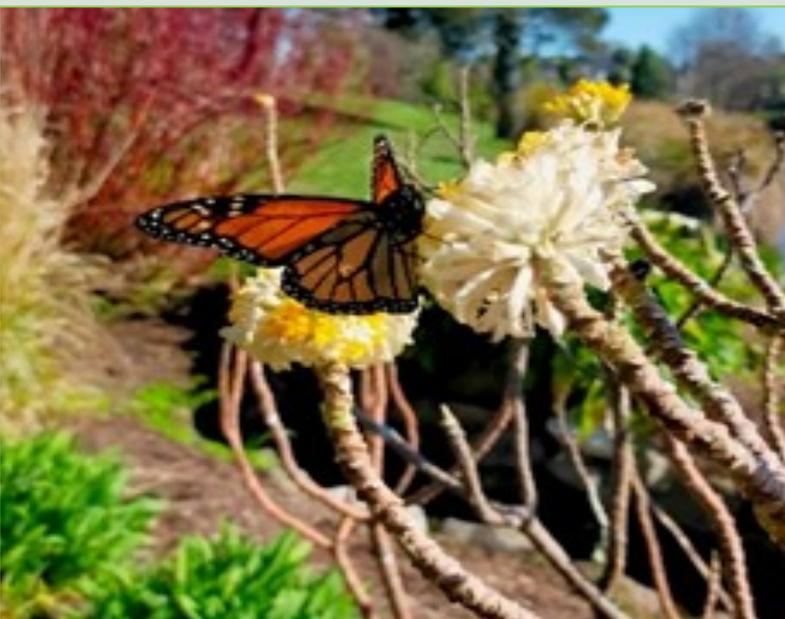
Taking a moment to smell the flowers, along with the butterflies.



1 Mona Vale, 15th July



2 Mona Vale, 1st August



4 Mona Vale, 30th August



3 Mona Vale, 17th August

5) Mona Vale, 31st August - 7th September

Removing and replacing soil from several rose beds. After many, many barrow loads of soil out and back in, healed in, raked level, healed again and a final rake. We were able to fill the rose beds again with new varieties of lovely David Austin roses.

6) Herbaceous Border, Botanic Gardens, 20th September

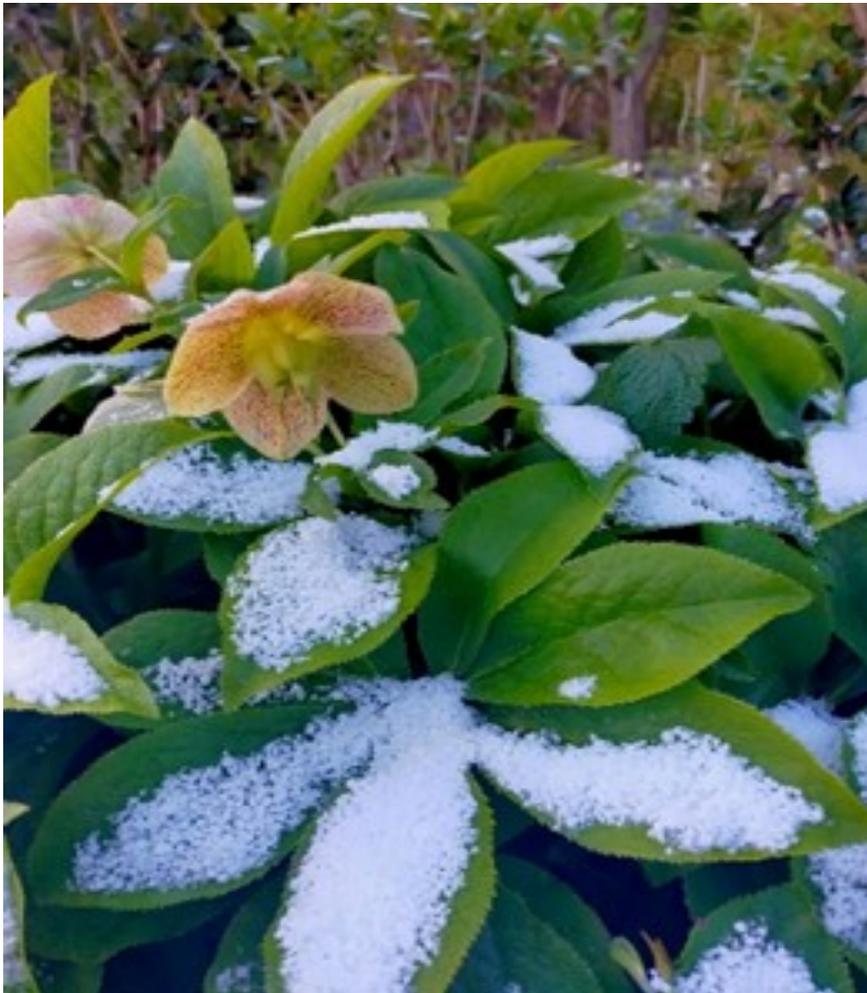
A quick bark & compost blend dressing before the perennials take off.

7) Maple Border, Botanic Gardens, 6th October

Spring snow flurries on *Helleborus*.



5 Mona Vale, 31st August - 7th September



7 Maple Border, Botanic Gardens, 6th October



5 Mona Vale, 31st August - 7th September



6 Herbaceous Border, Botanic Gardens, 20th September

## HIGHLIGHTS OF THE 7<sup>TH</sup> GLOBAL BOTANIC GARDENS CONGRESS

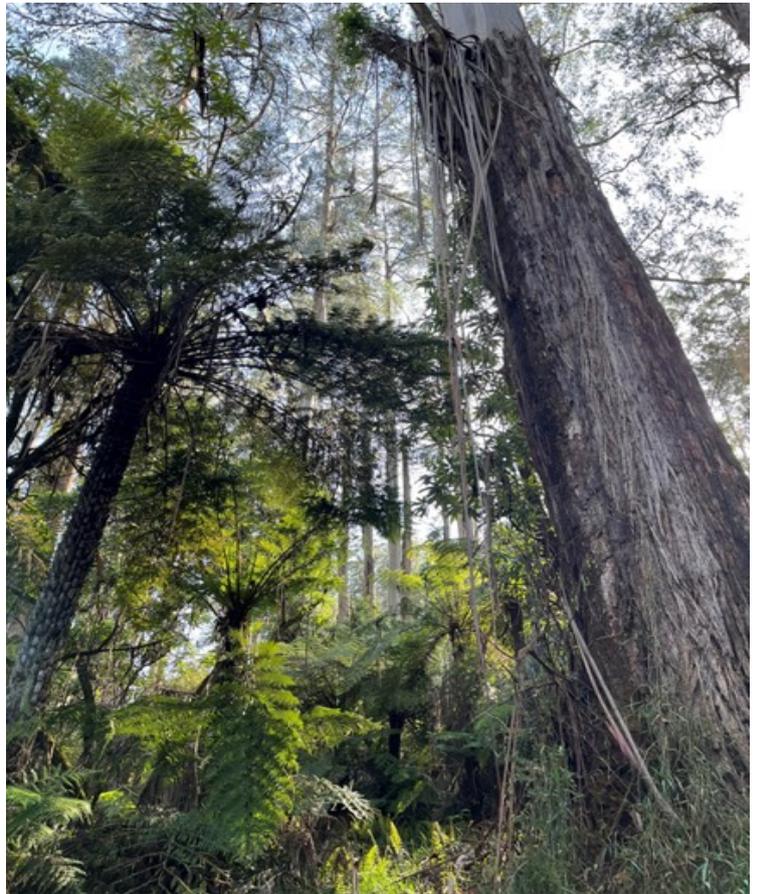
**Paula Candiotta**

Firstly, I would like to say thank you to the Friends of the Christchurch Botanic Gardens for facilitating my attendance to the congress in Melbourne. As part of the experience, the congress organisers included two field trips. These were great opportunities to learn more about the local flora and their habitats.

On day one, we visited the majestic forests of Dandenong Ranges. The different layers of plants found in these cool temperate rainforests were mesmerising. They ranged from tiny gems like the *Cyathophorum bulbosum* moss to giant trees such as *Eucalyptus regnans*, which are the tallest flowering plants on Earth. Amongst these, there are many other plants, including epiphytes such as *Microsorium pustulatum* and other ferns like *Cyathea australis* and *Dicksonia antarctica*, to mention a few.

Later that day, we stopped for a visit at the Healesville Sanctuary where a *Eucalyptus viminalis* had a sign asking 'Who lives here?' The names of more than 20 different species of animals which rely on these trees for habitat were listed, an interesting way to help visitors reflect on the interconnections of the natural world.

Cranbourne Gardens was the second trip, a botanic garden which has been increasing their focus on conservation programs. One of the highlights was visiting their nursery where rare and endangered native orchids are grown as part of their Orchid Conservation Program led by Dr. Noushka Reiter, Ms. Maja Zweck, Dr. Caroline Cristofolini and volunteers. Each orchid is hand pollinated and the seeds are meticulously collected, cleaned, dried and stored. For successful germination, the orchid seeds require symbiotic relationships with specific mycorrhizae fungi. The program has collected over 4000 isolates of mycorrhizal fungi which are stored, at minus 80 °C, for future use in conservation and research.



The majestic forests of Dandenong Ranges.



Orchid seedlings at Cranbourne Nursery



*Caladenia latifolia*



*Diuris orientis*



*Caladenia versicolor*

The theme for this year's congress was **Influence & Action, Botanic Gardens as Agents of Change**. The congress was divided into six different, yet interconnected topics. These were Plant and Biodiversity Conservation, Impactful Engagement and Education, Adapting to Climate Change, Greener & More Livable Cities, Surviving and Thriving in a post COVID world and Global Conversations. The latter explored how botanic gardens can help combine traditional ecological knowledge and science. I was particularly drawn to this topic after completing an Ethnobotany course. The BGCI (Botanic Gardens Conservation International) panelists emphasized the importance of an integrated approach for successful biodiversity protection which also embraces biocultural diversity.

It has been said that trees are the backbone of terrestrial ecosystems and that 1 in 3 species are endangered<sup>1</sup>. A Symposium called '**Securing a Future for the World's Threatened Trees: Sharing lessons learnt from twenty years of tree conservation projects across six continents**', shared some interesting projects:

One of the projects presented was developed by Ms. Xiangying Wen, who is an executive director at BGCI and for the last 15 years has helped conserve over 70 species of rare and threatened trees in China. **Integrated conservation** programs were used to encourage and facilitate the active participation of local communities. This involves organising BGCI workshops which help provide training for plant conservation, taxonomic identification and propagation techniques. This led to local communities starting their own nurseries to propagate rare and endangered species, as well as receiving grants with the support of BGCI.

Another great project was shared by Dr. Silvia Alvarez-Clare, the Director of Global Tree Conservation at Morton Arboretum. This is a community-based oak conservation project and focuses on the *in-situ* conservation of *Quercus insignis*. This tropical oak native to high elevation areas (1000m to 2000m altitude) grows in cloud forests from Southern Mexico to Panama and has the largest acorns in the world. Its natural range is an area known as the coffee belt, where much of the world's coffee is produced. Agriculture can be the cause of major habitat degradation and species loss. This community-led conservation project helps provide incentive for agroforestry systems where coffee and other economic crops can be planted under the canopy of *Quercus insignis*. This then becomes a sustainable way to protect the rare and endangered trees while supporting the livelihoods of local farmers. Forms of agroforestry systems have been traditionally used by indigenous people for thousands of years, and have been proven a very important tool in supporting biodiversity.

Growing and sharing food are great ways to bring people together. Tracy McCledon from the Atlanta Botanic Gardens presented a project that was created in partnership with the Clarkson-based Friends of the Refugees. The programs developed with and for refugees included the **Refugee Recipe Celebration**. This project invited refugees to grow edible plants used in some of their favourite recipes. The gardens hosted celebration days where meals from their homelands were prepared and shared, providing an opportunity for cultural exchange to happen within the wider community.

As part of my involvement in the congress, I wrote an abstract called 'How plants shape the world: The intrinsic link between botanical and cultural diversity' and presented a poster on the subject. I like to think that by integrating biocultural narratives to our collections, we can help elevate peoples' appreciation for diversity, minimize discrimination and create a better collective future.

**Paula Candiotta: Conservatories Maintenance Officer**

Reference: 1. <https://mortonarb.org/plant-and-protect/global-tree-conservation/>

All photo's taken by Paula Candiotta

## **HOW PLANTS SHAPE THE WORLD: THE INTRINSIC LINK BETWEEN BOTANICAL AND BIOCULTURAL DIVERSITY.**

**Paula Candiotta**

**Christchurch Botanic Gardens —Te Māra Huaota o Waipapa**

Ethnobotany is the study of the relationship between people and plants, and it is known as the science of survival. Traditional ecological knowledge has been gathered through observation and interaction in diverse ecosystems for millennia. Indigenous cultures have developed a deep and complex understanding of plants and the interconnectedness of nature. Unfortunately, this is often downplayed and unrecognised. Many of the problems that we face today are due to the disconnection that modern societies have from the natural world. Indigenous people are known as the guardians of the forest and play a major role in conservation.

Acknowledging their intellectual and cultural rights and bringing their perspectives into botanic gardens can help strengthen the links between traditional knowledge and modern science.

Botanic gardens can draw attention to the relationship between people and plants while showcasing the astonishing diversity of the natural world.

An ongoing project is to promote the importance of these relationships for future generations and, most recently included a holiday program that focused on the Pasifika community. This included working with the Pasifika community to provide information for signage and activities for children to complete during the holidays. The gardens were able to use their conservatories to showcase culturally important plants that would not grow in Christchurch's climate, giving a window into a world not readily available to the local community. Botanic Gardens can influence positive change and add layers to the meaning of plant collections by acknowledging different perspectives and highlighting the interconnectedness between plants and cultures.

**How plants shape the world**

Botanic Gardens act as positive agents of change through the sharing of biocultural stories that weave people and plants together to create a better collective future.

Ongoing school holiday programmes in the Christchurch Botanic Gardens recognise traditional knowledge, encourage learning from nature and integrate te reo Māori.

The 'enua mai Plants of the Pacific discovery trail collaborated with the Pasifika community to educate children on traditional methods in which plants are grown and used. Tropical Pacific plants were displayed in the Conservatories and an activity booklet offered new perspectives about the relationship between people and plants, and how this influences the development of cultures.

Interpretation panels created for the Conservatories collection highlight agroforestry methods. Indigenous cultures have integrated wild and tamed plants in agroforestry systems for millennia.

These multi-layered and biodiverse systems can be used to better the social-ecological resilience in the production of commercial crops. Regenerative polycultures support biodiversity and ecosystem services, increasing stability in a changing climate.

The exhibition space in the Botanic Gardens was developed by local hapū Ngāi Tūshuriri.

The space displays informative panels and examples of regional plants and indigenous crafts. This offers visitors an insight to the botanical and cultural landscape of the region and acknowledges the importance of the relationship between people, plants and place.

The Botanic Gardens Spatial Plan that guides future development includes a project recommended by representatives of Ngāi Tūshuriri.

The Mahinga Kai trail will introduce visitors to the sustainable resource management system that provided food, medicine and building materials to Māori living in the Ōtākaro-Avon river region. The interactive trail will focus on indigenous perspectives and help create a link between traditional ecological wisdom and modern day innovation.

Global Strategy for Plant Conservation Target 13: Indigenous and local knowledge, traditions and practices associated with plant resources maintained or increased, as appropriate, to support customary use, sustainable livelihoods, local food security and health care. <https://www.cbc.org/targets/13.html>

Author: Paula Candiotta (Paula.Candiotta@ccc.govt.nz.)  
Organisation: Te Māra Huaota o Waipapa - Christchurch Botanic Gardens, Christchurch City Council

Christchurch City Council

### **Marcela Moreno**

Attending a global congress was a first for me. There is an almost infinite number of conversations, places, people, plants and projects that stood out. However, throughout the congress a key point was consistently emphasised: Botanic gardens are uniquely positioned to make a significant contribution to plant conservation as well as education and awareness around the value of plants. Furthermore, in a post-COVID environment, there is now greater appreciation for green, open spaces, and visitor numbers to botanic gardens, parks and arboreta have been steadily increasing as a result. In this context, I would like to share two projects that stood out because of their contribution to conservation of local plant species and importantly because of their impact on public awareness regarding these species.

### **Raising Rarity Project - Botanic Gardens Victoria**

#### **The 'Eukis' of Victoria**

A team leader at the Cranbourne Botanic Gardens referred to the 'Eukis' as one of his favorite groups of plants. After visiting Cranbourne and learning about the great variety of eucalypts in Victoria alone, I understood why. There is huge variety of foliage, bark, flowers and growing habits amongst these plants. There are close to 900 species of eucalypts (a term that encompasses three genera, *Eucalyptus*, *Corymbia* and *Angophora*) widely distributed around Australia. Anecdotally, *Eucalyptus* was also called a very 'promiscuous genus' mainly because they hybridize readily giving origin to great diversity.

With such a big group of plants, us horticulturists must find ways to lump things into some sort of order. For *Eucalyptus*, the terms ironbarks, stringybarks and box eucalypts for instance are part of a somewhat arbitrary yet useful classification. Ironbarks' bark, for instance, has a deeply fissured appearance, as the tree ages the dead outer layer becomes impregnated with a substance known as kino which turns black over time. The bark is resistant to fire and heat and protects epicormic shoots from which trees can regenerate after fire.



*Eucalyptus sideroxylon*, the darkest bark of all the ironbarks from Victoria



*Eucalyptus sideroxylon* foliage and flowers

Photographs by Bide, distributed under [CC BY 3.0](https://creativecommons.org/licenses/by/3.0/) license

### **Raising Rarity: from threatened to widely cultivated**

But amongst this great variety, just a few species are widely cultivated. We were told that the public in general weren't overly keen on planting *Eucalyptus* in their home gardens. And who could blame them. Fast growing trees that tend to drop branches and can easily catch fire is hardly a selling line. But thanks to the Raising Rarity project, the less-known, smaller *Eucalypt* species and many more native plants have more of a chance to make it into people's back yards.

This project is about really looking at native plants and their horticultural potential in the botanic gardens but more importantly in home gardens across Victoria. The project was started by a passionate group of horticulturalists from the ground up. Their effort to collect and document rare and new species was eventually recognized by the organization and incorporated into management plans. From then on, the project focused heavily on collecting wild specimens from the most biodiverse areas of Victoria. Specimens included *Eucalypts*, *Grevilleas* as well as several terrestrial orchids. Many plants were brought into cultivation to check their performance in a garden setting, lots of them successfully established in the gardens.



*Caladenia amoena* photograph by Paula Candiotto,



*Caladenia rosella* photograph by Paula Candiotto



*Grevillea bipinnatifida* subsp. *bipinnatifida*,

### Wildfires, a wakeup call for plant conservation

Following the 2019-2020 wildfires, collections have become much more targeted. By working alongside conservation geneticists, the Victorian Conservation Seedbank, and regional botanic gardens, the team is trying to build ex situ populations of species that are at risk, building both genetic and geographic representation into these populations. The focus is now on integrating horticulture with scientific pursuit and joining efforts to contribute to the ongoing conservation of Victoria's rare and threatened plants.



*Grevillea synapheae*



*Eucalyptus landsdowneana* photograph by Nadiatalent distributed under a [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/) license.

### Million Orchid Project - Fairchild Tropical Botanic Garden Florida

#### Orchid seed germination, a biological lottery of sorts

About a decade ago, I first learned about the complex biology of orchids. Dr. Ross Bicknel from Plant and Food Research almost poetically described how orchids produce millions of dust-like seeds, in the hope that when scattered one might land in the right place. Indeed, germination of orchid seeds is a biological lottery of sorts. Remarkably, orchids produce seeds with no food storage tissue around them so, for this seed to germinate it must be infected by a specific fungus. For a short while the seed lives off a fungus that is trying to live off it. Orchid seed germination is not for the faint hearted and in cultivation, it requires a great deal of technical expertise and specialist equipment in sterile conditions to be successful.



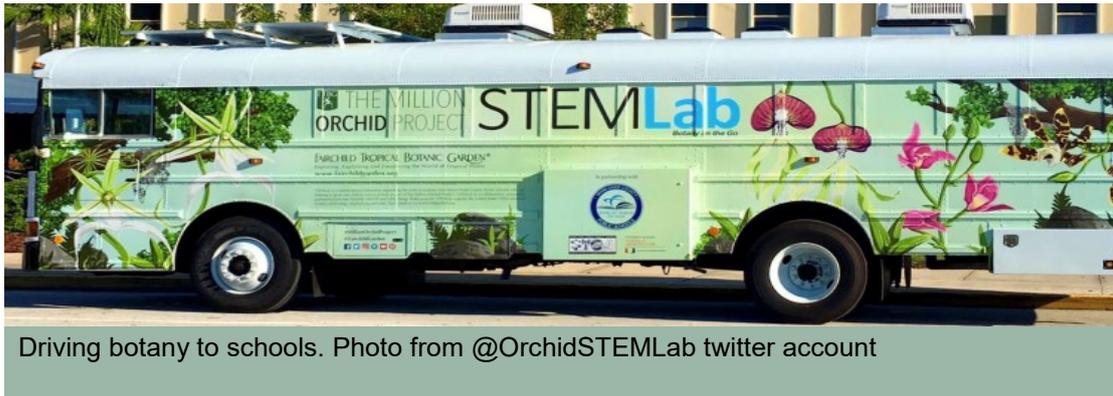
The dust like seeds of orchids. Photo by TheAlphaWolf distributed under a CC BY-SA 3.0

#### 500,000 and counting, the work of children and volunteers

What are the chances then, of school children and volunteers getting together with their botanic garden to propagate one million native orchids from seed, grow them on and eventually place them in the most densely populated urban areas of South Florida? Dr. Carl Lewis, Director of the Fairchild Tropical Botanic Garden in Miami explained how this project has gradually been growing and talked about its contribution to orchid conservation as well as science education.

The Million Orchid Project was launched in 2012 with the aim of restoring native orchid populations that once thrived in the area. It all started with inspiration from the city of Singapore's 30 year-long orchid conservation program which has successfully established over 80% of the orchids reintroduced. Today, thousands of native orchids are flowering and reproducing all around the city. Over in South Florida they went for a very ambitious

goal, aiming to propagate from seed and reintroduce one million native epiphyte orchids to the urban landscape. The opening of the micro-propagation lab at Fairchild marked the start of the project. Since then, many schools and volunteers have been involved all the way from seed germination through to attaching orchids to trees in their local communities. This effort has truly popularised the field of botany, achieving an impressive 500,000 plants being reintroduced so far and hundreds of engaged students.



A few years in, the project began to outgrow the lab at Fairchild. Volunteers were recruited to assemble 30 sets of shelves fitted with artificial lighting and capable of holding thousands of orchid seedlings. These shelves were distributed to 30 high schools across South Florida which have since become partners. Students nurture orchid seedlings in mini botany labs housed in their classroom and collect and analyse related data. They regularly conduct experiments to determine the best growing conditions. For the first few years, students used to visit Fairchild micro-propagation lab in order to germinate their seeds and establish seedlings. In 2015 a decommissioned accessible school bus was retrofitted and, in partnership with the University of Miami School of Architecture turned into a state-of-the-art mobile orchid propagation lab outfitted with specialised laboratory equipment. The bus is taken to schools so that students can perform propagation and conduct research aboard in a similar way that scientists do back at Fairchild. This is maximizing the impact of the program with education and conservation going hand in hand.

This project continues to evolve as time goes by. Given its scale, this project highlights the important role children and volunteers as well as other partners in the community can play in conservation of native flora. We all can contribute, particularly when working together. When orchids are planted in urban areas people can appreciate, enjoy and therefore care for them. They become an asset to their surroundings. Students not only plant orchids, but they also monitor their growth and gather data to keep track of successes and challenges. Through these efforts Fairchild is beautifying urban areas, engaging the community, increasing biodiversity in public places around the city as well as nurturing budding plant scientists and conservationists.

Botanic Gardens are called to strengthen their involvement in plant conservation, particularly that of their local flora. Preserving the heritage of our gardens is crucial to acknowledge our origin and history. Moving forward, however, and in order to continue to be relevant and better serve our communities, our native plants must take center stage in our conservation efforts.

**Marcela Moreno:**  
**Conservatories Maintenance Officer**

### **Acknowledgements**

Many thanks for the financial support provided by the Friends of the Christchurch Botanic Gardens to make attendance of this congress possible.

### **Sources**

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<https://www.eucalyptaustralia.org.au/resources/eucalypts-for-the-home-garden/>

<https://anpsa.org.au/genera/eucalypts-eucalyptus-corymbia-angophora/>

<https://fairchildgarden.org/science-and-education/science/million-orchid-project/>

Photos are my own unless otherwise stated.



## 'FORGOTTEN' NATIVE TREES OF CHRISTCHURCH

### *Elaeocarpus hookerianus*. Pōkākā

This lovely tree has been overlooked for too long.

Brother/sister to hinau, *Elaeocarpus dentatus* var *dentatus*, which has received all the publicity and has been written about everywhere.

Metcalf (1987) does not rate this tree highly which I think was a mistake. Wall (1953) records it growing in Riccarton Bush. Molloy (1995) notes that "it is of next importance to the kahikatea, the most dominant tree in Riccarton Bush. It is plentiful and grows vigorously among the conifers, it does not reach the same height, [and] it is conspicuous because of its rounded heads of fresh green foliage". Burstall (1984) records a large notable tree in Dennistoun Bush, Peel Forest Park, Geraldine. Other authors provide scant description.

Part of the problem pōkākā has not received favourable comments is that it is constantly compared with hinau. While botanically this may be the case, take pōkākā away from hinau and look at it in its own right — it is a great flowering tree.

Possibly its main drawback in this comparison is that it goes through a juvenile phase, however in open areas it soon grows out of this. A great example is the one growing in Travis Wetland on the track to the bird hide and it is labelled.

iNaturalist observations show it is not widely growing or planted on Bank Peninsula or Christchurch with 8 iNaturalist records on Banks Peninsula, 18 records in Christchurch City and quite a few on the nearby lower slopes of the hills from Mt Grey in the North to Staveley in the south. It is endemic to New Zealand and grows in the North, South and Stewart Islands but is uncommon from Auckland north. It is a common tree of native lowland forests and can be found in montane forests.

Overall it is a small to medium sized tree with its mature leaves up to 10 cm long and 3 cm wide. Juvenile leaves of various sizes and shapes are on zig zag or divaricating round branchlets which are nicely veined. While it grows in forests it is known to be quite drought tolerant.



Young pōkākā tree growing in Westmorland.



Pōkākā leaves.



Immature fruit of pōkākā.



Flowering from October to January it produces abundant sprays of creamy white, drooping, bell shaped, pretty flowers with many incisions around the edge giving a lacy effect. The stamen and anthers are quite prominent as well when viewed from below.

After flowering large green fruit are produced which turn purple when ripe. The only bird I can envisage eating these is the keruru.

Propagation is from fruit which can be slow to germinate but well worth the wait and growing on ready for planting.

Its botanical name elaeocarpus refers to its resemblance to olive fruit. Its specific name hookerianus is after Sir Joseph Dalton Hooker (1817-1911), son of Sir William Hooker the first Director of Kew. He was a world famous botanist who travelled on the Antarctic expedition of 1839 under the command of Sir James Ross and wrote "Handbook of New Zealand Flora" published in 1864-67 describing many specimens sent to Kew

The creamy white flowers of pōkākā can be seen from October to January.

by collectors. Sir Joseph Dalton Hooker followed his father as the second Director of Kew.

Like the hinau, pōkākā needs to be planted more in and around Christchurch and Banks Peninsula. It is hardy, drought resistant and a beautiful tree when in flower.

### Alan Jolliffe

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Metcalfe, L.J. (1987). *The cultivation of New Zealand trees and shrubs*. Reed Methuen. Auckland.

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Molloy, B., Ed. (1995). *Riccarton Bush: Putaringamotu*. Riccarton Bush Trust. Christchurch.

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<https://www.nzpcn.org.nz/flora/species/elaecarpus-hookerianus/> accessed 19 July 2022.

[Elaeocarpus hookerianus. Pōkākā - Art and Science of Horticulture \(weebly.com\)](http://www.elaecarpus-hookerianus.com)



## FRIENDS CONTACTS

### Committee

President	Jane Cowan-Harris	021 043 5342
Secretary	Graham Chick	385 9264
Treasurer	Carol Halstead	
Webpage queries	Jane Cowan-Harris	

Jeanette Christensen, Penny Martin, Vicki Steven, Susan Lawrence, Ray McTeigue, Rachel Wood, Richard Acland, Bernadette Hall.

### Other Contacts

Guides Co-ordinator	Susan Lawrence	021 120 6258
Group guided walks	Pat Whitman	384 3475
Newsletter editor	Annette Burnett	<a href="mailto:dananbur@outlook.com">dananbur@outlook.com</a>

### Enquiries About Membership.

**Phone:** Jane Cowan-Harris 021 043 5342

**Email:** [friendsofthegardens@gmail.com](mailto:friendsofthegardens@gmail.com)

### Post:

PO Box 73036  
Orchard Road  
Christchurch 8154  
New Zealand

**Botanic Gardens enquiries:** Information Centre 03 941 7590

**Website:** <https://friendschchbotanicgardens.org.nz/>



Canterbury Horticultural Society

# NEWS & EVENTS

## Bot Tots

**Mondays 10 - 11:30am** (term time only)

Gardening and nature themed activities for preschoolers. Drop-in during school term time (gold coin entry). [Facebook Event](#)

## Botanic Gardens Uncovered

**Thursday 10 November 9.30am**

**Toby Chapman - Throughout the Gardens**

Free for CHS Members & Friends  
Meet at The Kiosk

## Green Thumbs Podcast

**Monday 14 November 9am**

**Plains FM 96.9** Along with seasonal gardening advice Ray and Lorraine chat to interesting folk from the horticultural world.

If you miss a session you can find the recordings on the [CHS website](#).

## Christchurch Paeony Flower Show

**Saturday 12 November 11am - 4pm**

Beautiful flower displays and flower arrangements by local florists.

Free. For flower entry email [chchpaeony@gmail.com](mailto:chchpaeony@gmail.com) - chance to win awards and prizes!

The Kiosk, Free entry

## Gardening Quiz

**Tuesday 22 November 9.45am**

**Quiz, Croissant & Coffee!**

Grasp this opportunity for leafing through your memory with a black spot of mental grafting and more horticultural conundrums than you can poke a celery stick at. Come eat, drink and be rosemary and see if you parsley the test! Sorry that was a bit mulch.....

\$5 entry, includes croissants and preserves, The Kiosk

## Handy Home Hydroponics

**Thursday 24 November 7 - 9pm**

**Take your green thumb indoors!**

Join tutor Matthew Crampton and discover how to grow food hydroponically at home with everyday re-purposed materials.

\$40 (\$50 Non-Members)

[Book online](#)

## Canterbury Rose Society Display

**Saturday 26 November 10am-4pm**

**Sunday 27 November 10am - 3pm**

The Kiosk, Free entry

## Garden Life Meeting

**Wednesday 7 December 1pm and 7pm**

**Main Speaker:** Mark Chandler  
Head Gardener, Ōhinetahi

With over 125 hectares of garden, Ōhinetahi is also home to two galleries, sculpture and woodland trails, and a significant 19th century homestead. It was gifted to the nation in 2012 and is now run by the Ōhinetahi Charitable Trust. Mark will talk about the history of this unique and special property, the connections it has with the CHS and the development of the garden during Sir Miles Warren's time.

**Mini Speaker:** Bel Monypenny

Marketing Manager, Scorpio Books

Bel introduces the December Book of the Month by Juliet Nicholas, "New Zealand Gardens to Visit" An inspiring guide to outstanding gardens that are open to visit (and sometimes to stay).

**The Kiosk**

\$5 Members & Friends (\$10 Non-Members)

Tea, coffee & biscuits included

See our [website](#) and [Facebook](#) for updates.

## Christmas Workshops

**Get the calendars ready for these wonderful workshops at The Kiosk!**

All Workshops - \$58 (\$70 Non-Members)

### Christmas Kokedama

**Tuesday 29 November 7-9pm**

### Christmas Succulent Tree Workshop

**Thursday 1 December 7-9pm**

### Christmas Terrariums

**Thursday 8 December 7-9pm**

Online booking available soon

or email [office@chsgardens.co.nz](mailto:office@chsgardens.co.nz)

to be first in line



## HANDY HOME HYDROPONICS

**Take your green thumb indoors!**

Thursday 24 November 7-9pm

BOOK ONLINE  
[www.chsgardens.co.nz](http://www.chsgardens.co.nz)

**\$40**

\$50 Non-Members

 **The Kiosk**  
Canterbury Horticultural Society

## Handy Home Hydroponics

**Thursday 24 November 7-9pm**

**Take your green thumb indoors!**

From salad greens and root crops to fruits and herbs, a home hydroponic system ensures a variety of plants all season long. Although often used in large scale commercial food production there are many quick and easy ways to grow small scale edibles hydroponically at home.

This workshop is for anyone interested in starting hydroponics at home.

Perfect for gardeners with limited space and for those keen to grow sustainably using minimal resources.

Tutored by Matthew Crampton  
M.Sc, B.Sc, Cert.

The Kiosk, Christchurch Botanic Gardens  
\$40 (\$50 Non-Members)

Book online [www.chsgardens.co.nz](http://www.chsgardens.co.nz)

*Friends of the Gardens are eligible for all CHS Member discounts!*

*When you make an online booking for a course or workshop just remember to select 'CHS Member' as the rate.*