



WELCOME TO OUR
Winter Newsletter

Editor - Vicki Steven

After the driest May on record in Christchurch, our gardens were in severe water deficit. Figures recorded in the Gardens show that only 1mm of rain in TOTAL was recorded in May. The warmest May day was 23.5 on the 8th and the first frost was recorded on the 11th.

However, June turned records on their head with the highest ever June temperature, of 25.5 being recorded on the 20th, only a day shy of the shortest day!

Our June meeting on Fossils of Canterbury recorded one of our best attendances ever when over 80 people turned out to hear Morne Malambo talk about his fossil finds on the beaches of North Canterbury.

The Committee were sad to say good-bye to Rachel Woods who has worked hard as events and volunteer co-ordinator in addition to being a volunteer herself in both the Tuesday Propagation Team and with Heidi in the Heritage Rose Garden. Rachel has now returned to full-time work.

Something to look forward to in the spring is the Young Landscaper of the year competition taking place on the front lawn of the Visitor Centre in October.

The AGM is coming up on Sunday 9th August at 3pm in the Kiosk. The speaker is yet to be confirmed but we do need your attendance for an opportunity to have input and involvement in your organisation and to comply with our Constitution.

- Vicki Steven, Editor



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Gardens' Update

It's been a productive period across the Christchurch Botanic Gardens, with a strong focus on training, seasonal work, and celebrating the achievements of our team. We are proud to recognise two apprentice milestones. Mark Stagg and Emiliano Pereyra have successfully achieved their Level 4 in Amenity Horticulture, with Emiliano also completing his apprenticeship and taking up a role with the Grounds Team at the University of Canterbury. Big welcome to Piper McKeefry and Rock McLaren, who have joined the team as new apprentices and a warm welcome to Gabor Csontos as the new Collection Curator for the Alpine Area, bringing valuable expertise to this specialised collection.

Biosecurity and Sentinel Plant Research Project – Botanic Gardens Christchurch

The Botanic Gardens are actively involved in a plant biosecurity research project focused on surveying pinhole borer insects on NZ *Metrosideros* as potential vectors for the spread of *Ceratocytus*, a fungal pathogen responsible for the death of *Metrosideros* in Hawaii. Another side project is involved in looking at the effect of pinhole borer on native *Pittosporum*.

This project includes field collection, and analysis of samples to better understand the organisms associated with these plants and potential threats to our native species. This will help formulate a strategy for control of these diseases if they ever come to New Zealand. This work contributes to New Zealand's wider biosecurity efforts.

Alongside these projects we are also collaborating with the UK through the International Plant Sentinel Network (IPSN). As part of a pilot study, surveys are being undertaken on selected United Kingdom plant species growing in New Zealand, including at the Christchurch Botanic Gardens and Lincoln University Arboretum. Monitoring plants outside their native range provides an opportunity to detect potential pest threats early, helping prevent the introduction of invasive species that could have significant environmental, economic, or cultural impacts.

A notable finding from the survey is the identification of a ladybird species new to New Zealand (*Scymnus suturalis*). This small species (2–2.5 mm) was first detected on Scots pine and is known to feed on aphids and adelgids. Subsequent surveys indicate it is now well established in the Christchurch region, suggesting it has likely been present for some time but remained undetected due to its cryptic nature. This work is led by Dean Pendrigh, Collection Curator Botanic Gardens whose expertise is supporting both local and international biosecurity knowledge. Dean is training our trainee, Alannah Kwant, in these important projects. Reviews and discussions on findings are discussed with Royal Botanic Gardens Kew.

– **Nicky Brown, Deputy Director**



Gabor Csontos



Heidi & trainees planting out bedding at Mona Vale



President's Report

Welcome to winter in the Botanic Gardens. I hope that you take the opportunity to walk in the gardens at this time of year as there is always something interesting to see, even when the weather is not at its best.

In the Gardens, disabled access to the Icon Garden, with a deck over the lake, has been completed. Access is adjacent to the Fern frond sculpture along the Lime Walk. A collection of species Camellias has been planted in the Woodland Garden near the band rotunda. Funding for this has been donated by the Canterbury Branch of the NZ Camellia Society.

Your committee and volunteers have had a busy season. As always, the gardening volunteers continue to support the Gardens staff in their assigned areas. The propagation teams have farewelled stalwart Carolyn Dixon, welcomed some new members, are enjoying their upgraded nursery area, and have continued to supply our plant stall well. They will be taking a short break midwinter.

Guiding has wound up after another successful season with a farewell for Faye Fleming who, with her husband Neil, had been a key person in the training and accreditation of most of the current guides. Several new guides have joined our team and are contributing well. This year Jane Cowan-Harris successfully spearheaded our participation in the Christchurch Walking Festival. The goal was to provide a walking activity for the less mobile as well as promoting the Gardens and our daily walks.

The buildings of Mona Vale – Bathhouse, Homestead and Gatehouse – were on the programme for Open Christchurch. I would like to thank the Mona Vale subcommittee and their team for their research and preparation of information material, and development of a pamphlet for visitors. This material was of great value to our guides who took visitors through the buildings.

The trees in the ponds of the Water Garden are *Nyssa aquatica*, which grows in the swamps and flood plains of the South-Eastern United States. This tree has several common names including water tupelo or gum, and cottongum. The trunk develops a large swollen base and tolerates having its root system under water.

The Wollemi pines near the Ilex café and information centre have been given new soil to ameliorate pooling of water. There are more around the Gardens and Mona Vale, can you find them?

Wishing you a safe and healthy winter,

Margaret Metherell
President.



Nyssa aquatica in the Water Garden



Snippets from Mona Vale

As winter approaches Mona Vale continues to thrive under the watchful eye of Nicky Brown, who is also Deputy Director of the Botanic Gardens. Nicky has two full-time staff: Ben Lay and Susan Sanders who, with the help of a trainee and five Friends' volunteers, keep Mona Vale in great shape for visitors. The new bedding plants are in, new ready-lawn has been laid in front of the Homestead and the winter pruning and cleanup is underway.

During 'Open Christchurch' weekend the Mona Vale sub-committee prepared the Homestead, Bathhouse and Gatehouse to be visited by architecture enthusiasts. This was very successful with a record number of the public taking the tours over the two days.

Our thanks to Nona Milburn, Susan Lawrence, Penny Martin and Mary Carnegie, who gave up their time to organise this big event. Thank you also to the Friends' Guides who volunteered to take the tours. Your help was much appreciated.



Marseilles Tiles were imported for the restoration project

An Interesting Snippet :

When walking through Mona Vale I came across a man with a bucket and syringe taking samples out of the Avon River by the Queens Bridge. When I stopped to inquire what he was doing I learnt that he was taking water samples for ECAN to test the eDNA of flora and fauna in the river. On this particular day he was testing for invasive species; however the test could also identify other species such as native fish.

I was particularly interested in what might be in the Mona Vale streams and he offered to send the results to the Friends. When samples have been collected, they are sent to Wilderlab which does the testing. This is a particularly time-efficient way to identify species and their distribution. Biodiversity mapping allows detection of the microscopic genetic material left behind by fish, aquatic insects, and pest species without needing to see or catch them.

– **Jeanette Christensen**

What is eDNA?

Environmental DNA is genetic material that is shed by organisms as they move in, through, and around their environment. By isolating this material from different reservoirs such as waterways, we can gain valuable insights into the distribution of species through time and space, more sensitively monitor biosecurity threats, and better understand and track fluctuations in ecosystem health.

(By courtesy of wilderlab.co.nz)





Upcoming Events

Friday 17th July – Join us at 10am in the Kiosk for a talk by Soil Science and Sports Surface Specialist, Dr Richard Gibbs about the planning, installation and upkeep of the hi tech turf at Christchurch's new stadium, *Te Kaha*.

Dr Gibbs is a turf specialist who was responsible for the nearly one hectare hybrid turf system at the new Stadium. It is unique in that it is the first stadium in New Zealand that uses a full suite of artificial lighting rigs and a subsurface vacuum and ventilation system to moderate the growing environment, effectively growing a huge sports field indoors.

Sunday 9th August – Our AGM will be held at 3pm in the Kiosk.

Sunday 20th September at 4pm: Rima Herber will talk about her work as the Land and Water Coordinator for the Hurunui District Council.

Sunday 18th October at 10 am we will be visiting the delightful Casa Rossa garden in West Melton. More details will be given nearer the time but mark your diary now. Bookings will be essential.



Turf under the roof at *Te Kaha*



World Seed Banks

During my ship doctoring trips to Svalbard in the Arctic region, I became aware of one of the biggest seed banks of the world near Longyearbyen in Svalbard. Preserving flora from extinction is as important as saving endangered fauna.

Major seed banks of the world:

The most important is the Svalbard Global Seed Vault in the Arctic, (pictured above) often called the "Doomsday Vault." Built inside a frozen mountain, it stores backup seed collections from gene banks around the world at -18°C . It now holds over 1.3 million seed samples from more than 6,000 species. Seeds are still owned by the depositing country; Svalbard is the world's safety deposit box.

Another giant is the Millennium Seed Bank run by Royal Botanic Gardens, Kew. Unlike Svalbard's focus on crop backup, this concentrates heavily on wild plant species and conservation. It stores more than 2.4 billion seeds from around 40,000 species across over 100 countries.

Other important seed banks include:

- International Rice Research Institute in the Philippines – preserving rice diversity.
- CIMMT (translates - international maize and wheat improvement centre) in Mexico – vital for wheat and maize.
- CGIAR – (translates- genetic bank standards) a worldwide network holding huge crop collections, with 9,000 scientists, working in 100 countries.
- Together, the world has around 1,300 gene banks preserving millions of seed samples.

– Amama Thornley – guide



Svalbard Global Seed Vault



Book Review - The Time-Traveller's Guide to Hamilton Gardens

I hope many of you were able to catch the wonderful documentary film, *The Time Traveller's Guide to Hamilton Gardens*, which recently screened at Lumiere & elsewhere. I grew up in Hamilton and still recall Saturday trips to the Hamilton Dump with my parents, not knowing that this was an important Pa site of the Tainui iwi. Returning to the city as an adult, I was able to witness the incredible transformation into the World Class garden, or perhaps suite of gardens that it is today.

The documentary is based on a book of the same name by the Gardens' designer, Peter Sergel who worked at Hamilton Gardens for 43 years and still claims to have "a few more gardens to create".

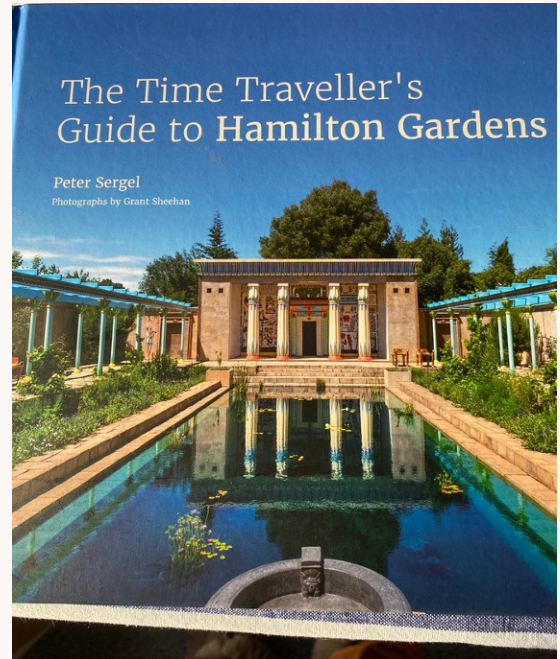
It is easy to stroll through the various themed gardens (currently 20 with at least 10 more either under development or proposed)) and be impressed by the concept, colours & staging of these impressive gardens, but to really appreciate the thinking & planning behind each garden you need to delve deeper. This large format, coffee-table book explains the history & cultural background to each garden whether it is located in a country or a particular era within a culture.

Hence on one level we have the Chinese, Indian, Japanese, & Italian-style gardens; whilst close by are the 1950s-style California garden, the Renaissance garden, the Katherine Mansfield garden complete with marquee set for afternoon tea on the tennis court and the Egyptian, Surrealist Gardens etc.

In this lavishly illustrated book, Peter Sergel details his extensive research into how cultures influenced garden styles through the ages, from the Chinese Scholars' gardens of the Ming Dynasty to the Colonial gardens of 19th Century New Zealand.

- **Vicki Steven**

Published by Phantom Press, 2024
ISBN: 978-1-7386250-0-0



Surrealist Garden, Hamilton Gardens (Photo by Susan Lawrence)



Introducing Dean Pendrigh

As a child I was always interested in Natural History, this was sparked by going on regular camping trips around the South Island with my parents, often exploring Kaikoura, Nelson and the West Coast. My first introduction to plants was in the garden helping mum and learning my first plant names such as Magnolia and Dahlia.

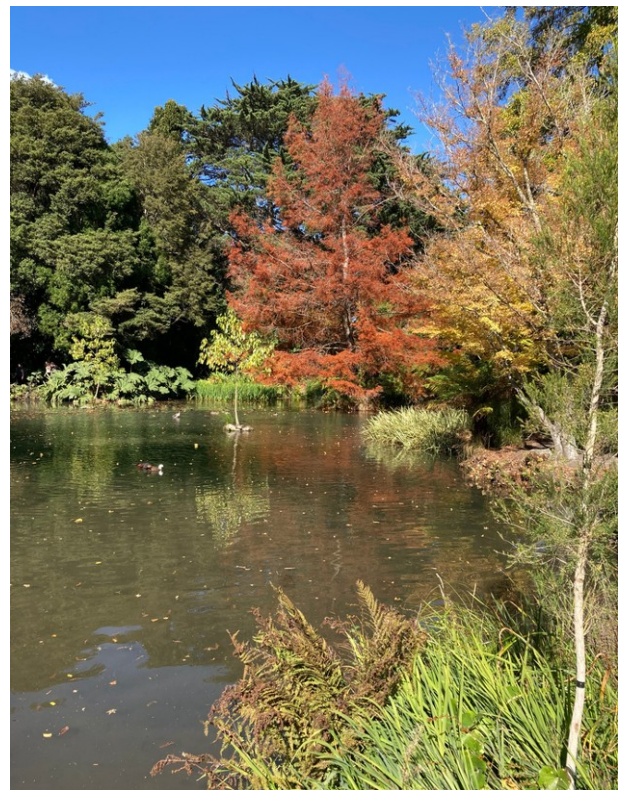
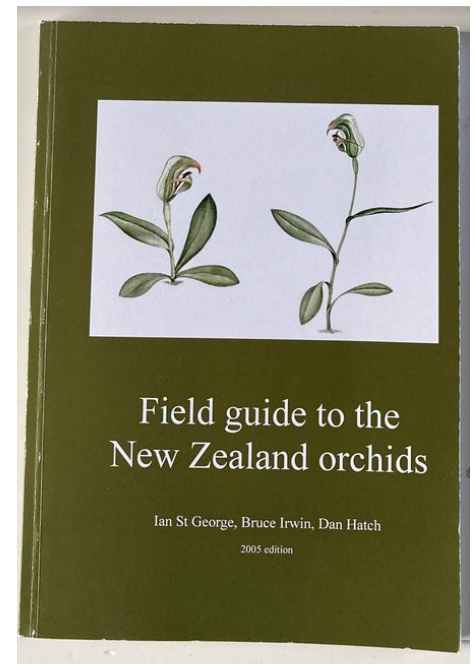
During the 1980's my interest became more specialised in Native Orchids and New Zealand plants under the influence of my Uncle Thom. His interest in Brian Molloy's book "Native Orchids of New Zealand" led to our first field trip together to Bottle Lake Plantation. We were looking for *Thelymita longifolia*, *Chiloglottis cornuta* and *Microtis unifolia*, which were quoted in his book, I found every one of them. Future field trips concentrated on the Oxford area which we regularly visited for the Orchids. Thom also introduced me to other native plants where we often tasted edible berries such as *Fuschia excorticata*.

My other main interest was in Meteorology which I was looking at as a career. I was about to have an interview for a Meteorological Technician's position, when in 1986 I saw an advertisement for a Horticultural Apprenticeship at the Botanic Gardens which I also applied for. I got an interview which was successful, so my career in Horticulture began. In the last year of my four-year contract, I won the PC Browne scholarship working in Melbourne council for 1 year. While in Australia I was able to experience Australian plants in the wild, going out on trips with the Melbourne Bush Walkers and joining trips with the Australian Native Orchid Society (ANOS). The highlight of my time was a two-week trip to Perth in Western Australia with ANOS timed for the spring wildflower season specifically to see Orchids.

On my return to New Zealand in 1990, I took up my full time position in the Botanic Gardens in the water garden, Azalea garden and Pinetum, which I still look after today. During these years I did further travel overseas, inspired by my time in Australia, basing my trips around plants. I visited Western Australia a second time, Malaysia, Mt Kinabalu and Southern Africa. This inspired me to keep my plant knowledge broad and expansive, always wanting to learn, rather than staying too specialised in one area.

The first major change made to my section was developing the pinetum with the removal of the Cotoneaster and Berberis beds and replacing them with Dwarf Conifers which complement the rest of the Pinetum – planted up over a 3-4 year period. The planting of new conifer species on the lawn is a continual process including replacements for trees as they age. During the 1990's while it was easy to import overseas seed, we took advantage of this and extended the size of the Yucca Collection.

The Kate Shepphard walk was developed in 1993, commemorating the 100th anniversary of women's suffrage in New Zealand and this addition expanded my section further into Hagley Park.



The Water Garden in Autumn



Later developments included the planting of a Veronica (Hebe) collection donated by Canterbury University adjacent to the New Zealand section.

The best aspect of working in Horticulture especially in an environment like the Botanic Gardens is that there is always something new to learn. It is nice seeing the garden changing with the seasons and the challenges it can bring and how the plant collections evolve over time with new plantings. Horticulture is such a vast field which at first seems such a daunting prospect to learn so many plants. It can take many years to build up a good plant knowledge but most rewarding passing this on to our young Trainees.

-Dean Pendrigh - PGMO, CBG



Guiding Report

Another successful Guiding season finished on April 30th, although there are a few tours booked in the near future. The highlight of our past season was the accreditation of six new Guides with two trainees almost ready to join the team. We have regular Tour companies who book our Group tours, and we have had a few overseas tour requests which have required some creative thinking on our part. One example is a group of 28 third year surveying undergraduate students, plus two of their professors from Hong Kong. They are visiting New Zealand with a theme of 'Sustainable Urban Design in NZ – resilience, climate adaptation and green innovations'. They have expressed a specific interest in visiting the ChCh Botanic Gardens and will be with us this month. Another upcoming booking is 3 groups of Japanese women in September, October and November this year, keen to learn about flower cultivation and NZ native plants.

We were encouraged to take part in the annual Breeze Walking Festival which took place over a three week period from the end of March to mid-April. The advertised General Interest walks were our regular daily walks from the Kiosk with a booking system in place so that we could monitor numbers. This proved somewhat unpredictable, but on the positive side, 78 places were booked out of a possible 120 over 15 days, many of whom were locals making new discoveries about their very own Botanic Gardens.

In May our Guides were involved in the Open Christchurch Architectural Festival with the opening of three of the Mona Vale buildings to the public.

This provided an opportunity to learn more about the architecture of the Mona Vale Homestead, Bath House and Gatehouse and subsequent earthquake repairs, which all helps expand our Mona Vale resources.

- Susan Lawrence, Guide Coordinator

Statistics:

- Over the seven month season we had 715 individual customers and roughly 344 in groups. In total 37% were locals, boosted by the walking festival. 58% were overseas visitors.
- Additionally there were 29 walkers at Mona Vale.
- Our fortnightly Monday Dementia Walks attract a regular following and this season 13 walks had a total of 212 participants showing what a popular event this is.



Fuchsia excorticata - Kotukutuku

This is the giant of the genus *Fuchsia*, a slow-growing tree reaching 12m in the wild with a trunk diameter of over 60 cm. When walking through our native bush one of the most recognisable shrubs or small trees is the Kotukutuku. Easily recognised by its light brown peeling bark and satin smooth green bark underneath, it stands out from the darker background in the bush. Possums love this tree and often scratch the bark off, so it is lying on the ground around the base of the tree.

It is very common on Banks Peninsula in bush areas and valleys, around forest margins, secondary growth areas, or places where trees have fallen in the bush leaving small clearings. It can make up a sizeable proportion of the plants in these situations. It is also very fire resistant and will survive forest fire where other trees will die.

The beautifully multicoloured flowers found all along the large and small branches are worth studying. The flowers open with green and purplish colours and become more red and dark purple with age. The stamens are dark purple in colour with yellow anthers

and blue pollen - an interesting and unusual colour combination. The berry fruit is long, black, juicy and are delicious to eat or can be made into jam.

Fuchsia excorticata is gynodioecious which is a plant reproductive system where female (pistillate) plants and hermaphroditic (bisexual) plants coexist within the same population. The female plants produce only flowers with female reproductive parts, while the hermaphroditic plants have flowers that contain both functional male and female parts. This is a natural method to ensure cross pollination to preserve vigour in the population. The leaves are green and highly veined on both sides almost giving it a puckered effect while the underside of the leaf has a silvery sheen. In colder areas it is deciduous but in warmer areas it will only be partially deciduous.

When growing it forms a spreading small tree with twisting branches, light brown peeling bark, and interesting shape. Most soils are suitable and trees will grow in any situation including full sun. The timber is strong and durable, deep brown in colour with streaks of paler colourings and black markings. The twisted, gnarled timber does not have many uses, but it has been used for ornamental cabinet work, inlaying, woodturning and for the making of brooches and ornaments.

It is common throughout New Zealand, from coastal areas to elevations of 1,100 metres. Banks and Solander first recorded it during their voyage to New Zealand on the Endeavour.

Propagating is easy from cuttings and it grows readily from seed. One cultivar, *F. excorticata* 'Purpurea' is available. There have been reports of a variegated form. In the 1970's there were a few hybrids produced by crossing *F. excorticata* with *F. procumbens* at Lincoln. Currently a small group of enthusiasts are hoping to piece together a story about these. Any information people have would be helpful.



Mature *F. excorticata*



F. excorticata flowers

- Alan Jolliffe, CHS



New Fuchsias in the Gardens

It's wintertime and fuchsias in Christchurch have mostly shut down for the season. They'll stay that way until early spring when they will reemerge for another season. The fuchsias in the Christchurch Botanic Gardens have provided a great display of colour this season and have been well photographed by many local and overseas visitors. In the fuchsia collection are two cultivars that are iconic in the world of fuchsias:

Fuchsia 'Sleigh Bells' – first registered in 1954 this white-flowering fuchsia cultivar is admired for its large single bell-shaped flowers with pure white sepals and a white corolla. Flowering from November onwards, it helps to give the fuchsia border a white Christmas look.

Fuchsia 'Checkerboard' – first registered in 1948 this cultivar produces a mass of starry bi-coloured flowers. The white sepals flushed with pink to red corolla gives the flowers a patterned, 'checkerboard-like' appearance.

Look out for these and many other fuchsia cultivars in the sales stall by the kiosk in spring.

– **Graham Neate, Fuchsia breeder**



Sleigh Bells



Chequerboard

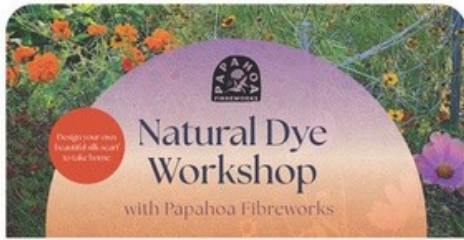


Plant Stall Reopens

Our regular customers will be delighted to know that the plant stall will reopen on Saturday 25th July after its winter recess.

There will be lots of bowls of colourful annuals as well as the usual exciting array of perennials and natives, all for \$7.

Canterbury Horticultural Society Events



Natural Dye

Saturday 18 July 2 - 4.30pm

From Garden to Cloth - Learn how to create your own naturally dyed material. *Includes a unique silk scarf to take home.*

\$150 (\$170 Non-Members)



Bud Vase Workshop

Sunday 2 August 10am - 12.30pm

Learn how to imprint botanical textures onto clay plus hand-building techniques for creating botanically inspired bud vases.

\$85 (\$105 Non-Members)

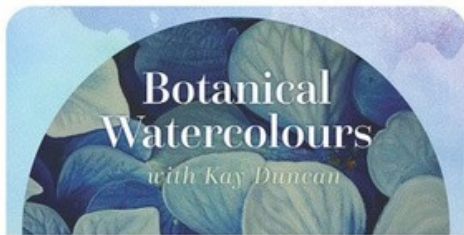


Bonsai Workshop

Sunday 9 August 9am - 1pm

Join bonsai artist Aaron Curtis for an in-depth 4-hour workshop experience in the Botanic Gardens. Includes all materials plus a nursery juniper and ceramic pot to take home.

\$185 (\$225 Non-Members)



Botanical Watercolours

Sunday 16 August 10am - 1pm

Beginner / Introductory Workshop - a gentle introduction to botanical watercolour techniques. *Intermediate Workshop follows in October*

\$125 (\$145 Non-Members)



Sunny Perennial Borders

Tuesday 18 August 6.30 - 8.30pm

Join Elizabeth Wilks for a creative and practical workshop exploring the beauty of hot, dry garden design.

\$129 (\$169 Non-Members)

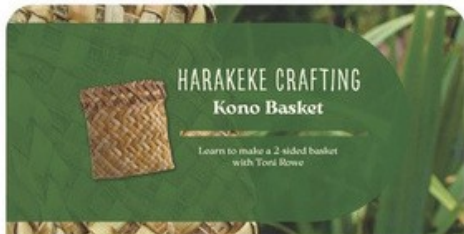


Botanical Platters

Sunday 23 August 10am - 12.30pm

Explore hand-built ceramics and the art of pressing botanical textures into clay to create unique, nature-inspired pieces.

\$85 (\$105 Non-Members)

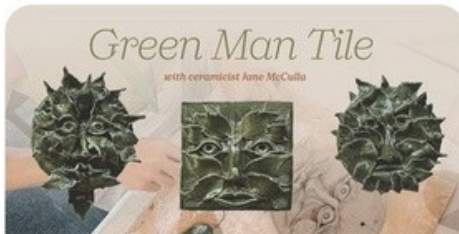


Harakeke Crafting

Saturday 5 September 1.30 - 4.30pm

Join our hands-on Harakeke workshop and learn the traditional art of creating a 2-sided kono basket.

85 (\$110 Non-Members)

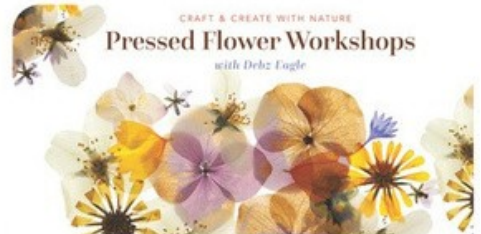


Green Man Tile

Sunday 18 October 10am - 12.30pm

Celebrate Heritage Week with Jane McCulla and make a traditional garden tile. Two weeks later you'll collect your fired and glazed tile ready to display in your home or garden.

\$85 (\$105 Non-Members)



Pressed Flower Art

Saturday 15 November 10 - 11.30am

Turn pressed flowers into beautiful paintings, collages, and mixed-media artworks with Debz Eagle.

\$85 (\$115 Non-Members)

Bloomers, Blooms & History : Discover the people, plants and places that have shaped Christchurch's horticultural heritage this spring.

As part of the Christchurch Heritage Festival, explore three unique events celebrating the gardens, stories and communities that continue to influence our city today.

- **Camellia Embroidery Workshop** with the Canterbury Embroiderers' Guild
- **Gardens, Bicycles and Bloomers: Dress Reform and Women's Freedom**
- **John Hall - Remembered in the Landscape**, talk by Kate Foster

Presented by Canterbury Horticultural Society and Te Whare Waiutuutu Kate Sheppard House.

Unless noted our workshops are held in The Kiosk in the Botanic Gardens. Scan the QR code to access our events on Humantix or head over to the CHS website:

www.chsgardens.co.nz



Friends of the Botanic Gardens are eligible for all CHS Member discounts!
when you make an online booking for a course or workshop, remember to select 'CHS Member' as the rate



Friends' Contact Details

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