BOTANJC Spring 2020



- Plant miniatures
 Scholarship Report
- Banksia exploration

THE ART OF BOTANICAL ILLUSTRATION 15th Biennial Exhibition

19 September -31 December 2020

Virtual exhibition To see this fabulous exhibition visit www.rbgfriendsmelbourne.org All art available for purchase

Agapanthus Seed Head By Vicki Philipson

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The Friends of the Royal Botanic Gardens, Melbourne Inc.was formed to stimulate further interest in the Gardens and the National Herbarium and to support and assist them whenever possible.

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from the president



It was an exciting moment when the RBGV Melbourne and Cranbourne Gardens reopened to the public at the end of autumn. The horticultural staff had obviously been busy in the absence of visitors and everything looked magnificent. The weather in the city at the time was generally mild and sunny and perfect for relaxing walks to reacquaint ourselves with favourite plants and views. The weekend crowds were a testament to how important the Gardens are to the people of Melbourne; as a place to walk or to sit and relax, or to meet and have picnics, all while remaining suitably distanced. To see the pleasure on the faces of visitors as they returned to the Gardens was a useful reminder of why we, as Friends of the Melbourne Gardens, work to support the RBGV and its vision for a future sustained and enriched by plants.

With Stage 4 restrictions in force and the Gardens closed once again, we are not necessarily isolated from each other. Our wonderful Events team has kept us glued to our chairs and devices by offering a wide range of presentations for us to enjoy. We have ranged from the Gardens and beyond and have travelled overseas, all while waving to friends and safely ensconced in our little Zoom boxes. Heartfelt thanks go to everyone who has helped keep us both entertained and distracted.

Online presentations have allowed people who are not usually able to come into the Gardens to also participate in the programs, which has been wonderful. Our botanic art classes have also continued to attract students and we are grateful to the tutors for adapting their teaching to manage classes online. I hope you will all take the opportunity to see some of the best in botanical illustration from around the world by visiting this year's The Art of Botanical Illustration Exhibition, which is being presented in virtual form from 19 September to 31 December. Art works will still be available for sale and the exhibition will be open to viewers around the world. It doesn't happen without a lot of behind-the-scenes organising, so a big thank you to all involved.

I hope we shall all be able to spend time in the Gardens later in spring. If so, remember to check on work in the new Sensory Garden adjacent to Fern Gully and Central Lake, the development of which is being funded by the Friends, and the new Arid Garden will most definitely be worth exploring.

We have become used to watching presentations and conducting our meetings while we sit comfortably in unseen cosy slippers. It has all worked, thanks to the efforts of dedicated staff and volunteers and all of you, our members, who have continued to encourage and support us. We cannot do these things without your support and I hope we can enjoy getting together in person for events before too long.

It was sad to hear of the death of our founding *eNews* editor and former Membership and Marketing Convener Lee Tregloan last month. Without her drive our *eNews*, so important now, may never have eventuated. We would also like to acknowledge former RBGV Executive Director, Corporate, Jenny Steinicke, who died recently. Jenny worked closely with the Friends and her professionalism in all things was very much appreciated.











Mary Ward

Spring in the Melbourne Gardens

 John Harrison -Daffodils
 Keith Ross-*Doodia* sp
 John Harrison -Rhododendron
 Karen Pyke -Wattle
 Nicky Rollerson -White Azalea

Cover Image Knightia excelsa -Kate Roud

volunteer profile

'To be a Friend is reward in itself, but there are other benefits such as lectures, guided tours, special visits and events.'

David Churchill, Director and Government Botanist, writing in the first Friends' newsletter. No 1, July 1982.

Pam's painting of *Monstera* deliciosa.

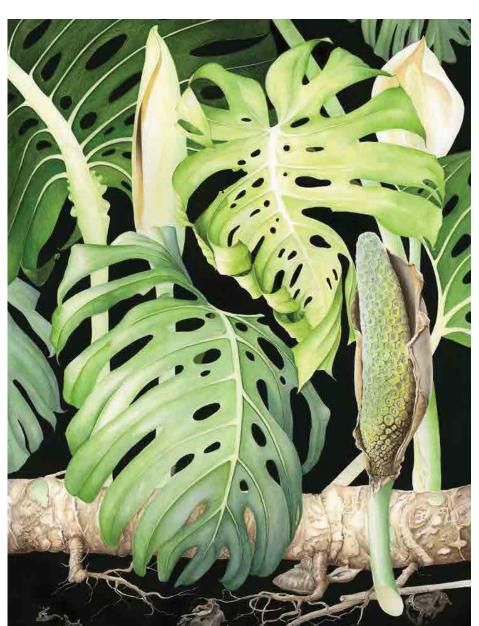
as she sees people working in different mediums and enjoys learning more about each plant she chooses to illustrate and the challenge of portraying a specimen as accurately yet artistically as possible. Of all the elements to consider in botanical illustration, she considers arriving at a good composition is perhaps the most important. To her mind a technically correct and well-mastered command of a medium will not create a great work if the underlying composition is flawed.

"In the end, I am undergoing a journey to improve my own botanical illustrations by close observation of nature, talking with and observing the works of other artists, and mastering the use of a wide variety of mediums to achieve the most satisfying and accurate rendition possible of my chosen subject.

Whilst striving for perfection, perhaps at the end of the day, the only person you have to please with your finished art work is yourself".

I hope these words from Pam will encourage everyone to try something new as there are so many interesting groups that make up the Friends of the Botanic Gardens.

> Diana Barrie Volunteer Convener



Volunteer Profile – Pam McDiarmid

Pam McDiarmid is one of the many volunteers of the Friends of the Royal Botanic Gardens, and here she gives us insight into ideas of what botanical art gives her and others. As you can see, Pam looks at the journey that can be achieved by being involved in an area that often starts as an interest, that translates to a passion.

Pam has been the instigator of many important activities including the recently completed Acacia Project. This project involved her working with the Botanical Illustrators of the RBGM (Whirlies) and, with the support of the Gardens' botanists, representing 24 rare and endangered species of acacia growing in the Melbourne Gardens. Throughout the project gardeners delivered fresh specimens to the artists when required, and over months the work morphed into an important record of acacia illustrations that will be donated to the Herbarium's art collection. As well as being interesting works of art, these botanical illustrations will be a valuable resource for botanists.

Pam belongs to the Whirlies botanical illustrators group and finds the companionship of the members most enjoyable and their willingness to offer critical advice in a supportive environment provides great encouragement. She is inspired



Chris and his dog working from home. Photo RBGV

Gardens closed again on 6 August, this time with much-reduced staff levels on site Closing the Gardens' gates threw up many challenges, offered some unique opportunities, and presented some surreal experiences - at times we felt as if we were working in a private garden, or indeed wandering through our own estate! It felt as if the Gardens were taking a breather - they were eerily quiet, and it felt strange not to bump into the locals who have used the site daily for years. Commuting to work also got a whole lot easier, with roads and public transport deserted, and cycling had become an attractive alternative.

Fuelled by the unseasonal wet weather from mid-summer through to the end of autumn, the grass, the weeds, and our treasured plants

Unprecedented times at **Royal Botanic Gardens** Victoria

There is no doubt that 2020 has already been an extraordinary year in our own lives and that of the Royal Botanic Gardens Victoria (RBGV). During the summer, bushfires raged across many parts of Australia, impacting everything in their path; and of course, now we continue to live through the COVID-19 pandemic.

At a very early stage, RBGV committed significant resources and quickly developed an Action Plan to guide the organisation through the preparedness and response stages of the pandemic. A COVID-19 response structure was set in place and priorities were recast managing the organisation through these times became top priority. Staff demonstrated great agility, compassion, and teamwork as we all adapted to the evolving situation. Keeping staff safe and informed was paramount, all the while responding to the rapid changes in line with State Government directions.

The pandemic resulted in a sevenweek closure of Melbourne Gardens and Cranbourne Gardens, from 26 March to 13 May. More recently as we entered stage 4 restrictions, the



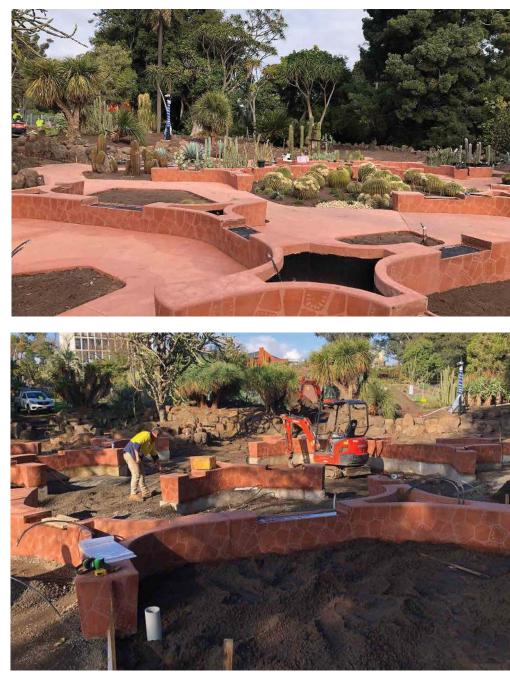
from the gardens

continued to grow at a pace behind the closed Garden gates. Contractors pressed on with construction of the new Arid Garden and Gardens staff took the opportunity to tackle some significant renovation projects of their own – for once they could make a mess, leave tools, equipment and vehicles where convenient, have no concern about curious visitors, and even use their bicycles to traverse the site – it's surprising how steep some of the hills are, and how difficult it is to keep to 8 km/h!

Melbourne Gardens staff have been scattered across the site for months using Plant Craft Cottage and Eastern Lodge as satellite bases, and Domain House as a wet weather contingency. Having these options available helped tremendously in managing risk and keeping our on-site teams safe. Where possible, many RBGV staff have been working from home, and one thing is for sure we have become accustomed to meeting via our computer screens, often getting a sneak peek into spare bedrooms being used as makeshift offices. Dealing with home schooling, spending a lot of work time in the company of our families, and dressing down for work became the norm. Phrases such as 'you're on mute', 'can anyone hear me?' and 'hold on, there's a truck's going past' were commonplace during meetings.

One thing that has remained constant, and perhaps increased, during these turbulent, unprecedented times, is the appreciation of our beautiful Gardens by staff and visitors alike.

Chris Cole Executive Director Melbourne Gardens





Left: Morning sun in the Fern Gully Above, this page: Arid Garden during planting Centre and below: Pathways and stepping stones being installed in the Sensory Garden. Photos supplied by the author.



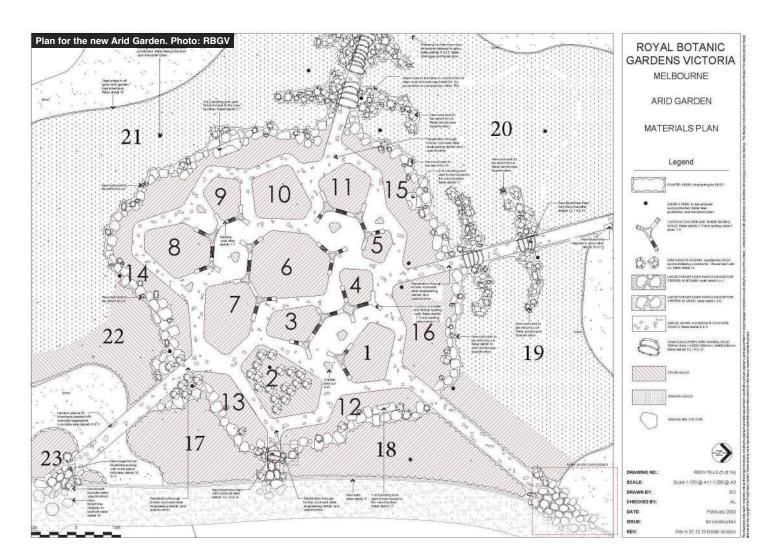
Growing Friends and COVID-19

The restrictions due to the presence of the coronavirus have continued so the Nursery remains closed to the Growing Friends and to customers. Under these circumstances the possibility of a Spring Plant Sale is slim, but if there is a sale the format will be totally different from previous events. The lack of preparation time will mean that the variety and number of plants will be limited and the social distancing rules will prohibit the usual large crowds. For the Nursery Open Days it may be easier to meet the requirements so it is hoped that those plant sales will commence quickly once restrictions are relaxed. In any case the Growing Friends and their Nursery are still here so at some time in the future there will be a good range of unusual plants for sale.

The COVID-19 restrictions have meant that volunteering in most public gardens has been stopped. While this is unfortunate there has been a silver lining to the dark cloud. Many home gardens are in shock at the changes, clean-ups, pruning and replanting that have taken place as the gardeners use the extra time to do the jobs which have been on the 'back burner' for months if not years. This has been the situation for some of the Growing Friends but there is another silver (or gold?) lining in that the RBGV Melbourne Staff have used over 500 of the plants in the Nursery for the establishment of the Arid and Sensory Gardens. The photos on this and facing page show the structure of the garden and the Growing Friends' plants awaiting planting into the Liriodendron bed which borders the Arid Garden.

Michael Hare Growing Friends Convenor

Below: The map of the Arid Garden. Photographs by Philip Bowyer-Smyth.



growing friends 🟉









Painting of Acacia argyrophylla by Audrey Baillie

The Acacia Project Illustrating the Rare, Endangered and Unusual Acacias of the RBGV Melbourne Gardens Talking ONLINE with Pam McDiarmid Tuesday 1 September at 4 pm Friends \$5 Non-members \$10 Bookings essential to receive the Zoom link.

Commonly known as Wattle, Acacia is the largest genus of vascular plants in Australia with almost all the known 1070 species occurring naturally on our continent. Our FRBGM Botanical Illustrators, the Whirlybirds, established The Acacia Project in 2019 to document and depict the most rare, endangered and unusual of these trees or shrubs. Twenty-four artworks have now been produced by these talented artists from specimens collected and will be donated to the National Herbarium of Victoria. Aptly on National Wattle Day, Pam McDiarmid, creator and manager of this highly valued project, will talk to us about the process that's been involved in bringing this project to life and celebrate these fire-resistant shrubs that form the second most common forest after eucalypts.



Companion Planting (why good neighbours matter) Talking ONLINE with Craig Castree Saturday 5 September at 10 am Friends \$5 Non-members \$10 Bookings essential to receive the Zoom link.

Planting different garden plant species next to each other so that one or both of the plants benefit one another is not new. Craig will talk us through this time-honoured botanical "buddy system" so that the right combination of planting vegetables, herbs and flowers can help repel annoying insects and limit the spread of diseases. The comprehensive talk will ensure you save valuable gardening space and obtain bountiful, healthy harvests from your vegetable garden.

Curious Carnivores Talking ONLINE with Alastair Robinson Wednesday 9 September at 6 pm Friends \$5 Non-members \$10 Bookings essential to receive the Zoom link.

We are delighted to present Alastair Robinson, recipient of the Friends' 2019/20 Helen McLellan Research Award. Alastair's thesis supports an Australia-led resurgence into the study of Nepenthes, developing further the expertise of scientists at the National Herbarium of Victoria from carnivorous plants grown at the Gardens. These plants are wonders of the plant kingdom that have evolved various mechanisms to trap prey in order to compete effectively in nutrient-impoverished habitats. Alastair's thesis concentrates on the most striking of all carnivorous plants, the Nepenthes, a genus of mostly vining tropical pitcher plants and his work underscores the urgency with which these naturally rare yet spectacular plants must be documented and preserved before it is too late.



Nepenthes northiana Photo Alastair Robinson





The Garden at Tea Trees, Mt Martha Talking ONLINE with Pamela Carder Wednesday 16 September at 2 pm Friends \$5 Non-members \$10 Bookings essential to receive the Zoom link.

Designing a garden brings much joy to us all even if we're not professional garden designers. Pamela has found such joy in the garden she and her family have owned for 20 years. She describes it as a framework of mature trees, amongst which are three magnificent Tea Trees and several Banksias surrounding a cottage-style garden. There is a large vegetable garden, an orchard, several citrus and an established Australian Garden which completes the 0.3 hectares (0.75 acres).



New Members' Welcome Tuesday 22 September at 10 am FREE but bookings essential to receive the Zoom link.

Our wonderful President, Mary Ward, will welcome our new members online and provide a short overview of how the Friends have supported the Gardens since our establishment in 1982 and what our current projects are to support development, restoration and research. New members will also be introduced to the various convenors of the interest groups that make up the Friends. Invitations will be sent to all recently-joined Friends and, if you have not been able to attend a previous New Members' Welcome, please ring our office on 9650 6398 and we'll make sure you're included.



Painting of Agapanthus seed head by Vicki Philipson

The Art of Botanical Illustration - An Overview of our 2020 Virtual Online Exhibition

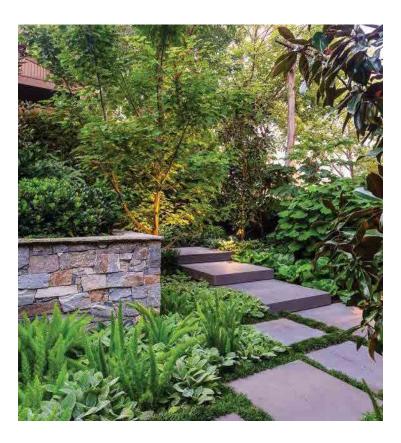
Wednesday 23 September at 10 am FREE but bookings essential to receive the Zoom link.

The Art of Botanical Illustration Exhibition was first held in 1992, and is a sublime collection of some of the very best botanical illustration around the world, that enjoys a faithful following among Melbournians and botanical art lovers. For the first time in its 18-year history, the biennial Exhibition will be held online in light of COVID restrictions. Enjoy this virtual tour hosted by Susan Foran, our Botanical Illustrators Convenor, to hear the background of the artworks and artists included in our fabulous Exhibition. The winning artwork of the Celia Rosser Award will be shown alongside the Honourable Mentions.



Plants I Can't Live Without With Lisa Ellis Wednesday 30 September at 6 pm Friends \$5 Non-members \$10 Bookings essential to receive the Zoom link.

Climbing plants can bring about heavenly draped greenery effects and soften structures, perfumed plants can evoke nostalgic and distant memories, strappy plants can provide form and a foliage garden can stop us in our tracks with its scale and palette. Plant options are limitless and it's getting the scale of planting right in relation to its foliage shape and size and in a garden space that is ever evolving and embracing seasonal change. Award-winning horticulturist and landscape designer, Lisa Ellis, takes great delight in devising new combinations that surprise and delight. She enjoys using an array of plants that can bring definition, through textural and tonal contrast, depth and emotion, through colour, to the garden. Lisa will talk to us about her favourite plants she cannot live without and why they're so precious.





Chelsea Physic Garden Talking ONLINE with Lynsey Poore Thursday 8 October at 10 am Friends \$5 Non-members \$10 Bookings essential to receive Zoom link.

Tucked away beside the Thames, the Chelsea Physic Garden is the oldest botanic garden in London and has 5,000 different medicinal, herbal, edible and useful plants laid out in 1.6 hectares. It was established as the Apothecaries' Garden in 1673 by the Worshipful Society of Apothecaries to grow medicinal plants. Sir Hans Sloane purchased the property in 1713 and leased it in 1722 to the Society of Apothecaries for five pounds in perpetuity and insisting that the garden supply the Royal Society with five pressed plants per year until 2,000 had been achieved. The rock garden is the oldest in Europe and showcases alpine and Mediterranean plants. Today the collection of some 5,000 plants includes unusual and endangered species rarely seen elsewhere. The Garden is true to the wishes of Sir Hans Sloane as it continues to connect people with plants. A gem of a garden to see if in London.



Perfect Peonies

Talking ONLINE with Jill Holmes-Smith

Wednesday 14 October at 10 am Friends \$5 Non-members \$10 Bookings essential to receive the Zoom link.

An ancient Greek poem referred to them as "the Queen of all herbs" and the ancient Chinese considered the tree peony to be the 'King of flowers". It seems we all agree that peonies are outrageously stunning in bloom. With their delicate layers and ultra-feminine blooms, this is one plant that is truly a beauty to have in the garden or a vase. In Australia, peonies are only available in November, which makes the flowers even more coveted. Jill Holmes-Smith, owner of The Red Hill Peony Estate, talks to us about peonies and plantings, her work illustrating this beautiful flower and more.



Due to COVID-19 our Spring events program will be delivered online. With the Friends' Office currently closed it is preferred for all events to be booked online. Bookings are essential for all events. Click on the event you wish to attend. This will take you directly to the events page on the Friends' new website or visit rbgfriendsmelbourne.org



Lakes and Islands Talking ONLINE with Mali Wilson Thursday 22 October at 10 am Friends \$5 Non-members \$10 Bookings essential to receive the Zoom link.

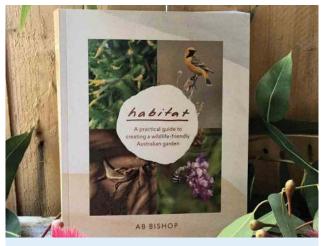
Before William Guilfoyle, Ferdinand Mueller saw the lagoon and the islands in the RBGV as a sanctuary for waterbirds. With the straightening of the Yarra in the late1800s, Guilfoyle redesigned the lagoon and wetlands, creating the Ornamental lake and the Central Lake. These are still waterbird sanctuaries. Guilfoyle was a creative, forward-thinking man, and one of his goals was to maintain the health of the lakes. He would have loved the current use of floating islands to achieve this aim. Join us to hear Mali Wilson talk about these lakes and islands and the stories behind them.



Gardens of Portugal Talking ONLINE with Cathy Trinca Tuesday 27 October at 2 pm Friends \$5 Non-members \$10 Bookings essential to receive Zoom link.

Last year in May, Cathy and her husband spent two weeks driving around Portugal staying in small hotels or pousadas. Starting in Lisbon they drove up the coast to Porto via a number of hilltop towns, followed the Douro River in to Pinhao, then took an inland route back down through the country to end up in Lisbon again. Some of the historic places visited over the two weeks included Sintra, Coimbra, Batalha, Evora and Obidos. As always Cathy took plenty of photos which she will share along with some history, garden visiting and touring.





Habitat Gardening Talking ONLINE with AB Bishop Horticulturist, writer and conservationist Wednesday 4 November at 4 pm Friends \$5 Non-members \$10 Bookings essential to receive the Zoom link.

In a world where suburban nature is declining and diversity is shrinking, AB Bishop will discuss why it's time to look at our garden with new eyes. She believes that our gardens should be a place for our own enjoyment and also provide a means of contributing to the health and sustainability of our local environment, the two not being mutually exclusive. AB will show what critters we need to encourage to our gardens and how to design, plant and maintain faunafriendly landscapes.



Shrine Gardens Talking ONLINE with Mary Ward Saturday 14 November at 10 am Friends \$5 Non-members \$10

Bookings essential to receive the Zoom link.

The Great War ended with the signing of an armistice on 11 November 1918, now known as Remembrance Day. On this day we commemorate the service and sacrifice of Australian men and women in all conflicts and peacekeeping. Join us as Mary takes us on a virtual photographic tour to explore the Shrine Reserve and look at the history and significance of the external memorials and some of the dedicated Trees of Remembrance found across the 13 hectares.



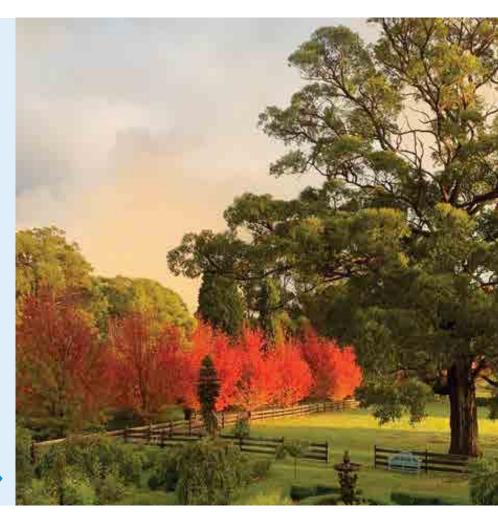
Red Hill Peony Estate

Self-drive Day Trip Thursday 12 November

Meet at the Estate at 10.30am for morning tea Friends **\$80** Non-Members **\$105** Bookings essential to receive map/ guide for the day.

Join Jill Holmes-Smith for a day filled with peonies at her beautiful Mornington Peninsula property that her family established back in 1886 as a timber milling business. A lot has changed in the 132 years since! Our day begins with a talk on peonies followed by an extensive garden tour of the peony paddock and other Estate gardens. A delicious High-Tea lunch is also included. "Farm-gate" produce of freshly-picked peony flowers, potted plants and peony produce will be on sale for those that find these perfumed herbaceous perennials irresistible.

> COVID restrictions permitting





A Boxful of Garden Helpers: Keeping Bees in the Suburbs Talking ONLINE with Caroline Durré

Monday 16 November at 2 pm

Friends **\$5** Non-members **\$10** Bookings essential to receive the Zoom link.

Caroline will help us explore the world of bees, their life-cycle and how we can work with them to achieve happy hives and Caroline will happy gardens. provide us with all the necessary background knowledge. Whether you approach it from the point of view of conservation, entomology, crop pollination or simply a love of honey, beekeeping is an engaging pursuit and a fascinating window on the natural world. Come bee part of our buzz!



Miniature Plant Manufacture and the Plant Craft Cottage

When I saw the advertisement for volunteers at the Plant Craft Cottage at the RBGV Melbourne Gardens. I jumped at the chance. The Gardens are my most favourite place in Melbourne. I had never been to the Plant Craft Cottage before and was enchanted by its beauty, nestled in its own lovely garden. I also did not know that the cottage is used for all things related to plant craft. There are workshops and there is a fabulous little shop with baskets, naturally dyed yarn, paintings, cards with dried flowers, scarves etc. All items are created by the local artists so each item is unique and makes a great present for someone. There are several groups of lovely volunteers and I have joined those who operate the shop and give out information about the history of the building. I tell you, there is no better way to spend a day in the Gardens!

My interest in the Botanical Gardens started because I wanted to make miniature plants and flowers. Gradually, my skills improved and I became part of the Victorian Association of Miniature Enthusiasts (VAME). I learned about scale and different production techniques. Eventually I started making my own examples and I would go to the Gardens to study the more exotic specimens (e.g. Nepenthes)

Many different materials can be used to make miniature plants. The leaves can be made from paper. masking tape or vellum. The stems and branches can be made of florist wire or sewing thread. Sometimes flowers are made out of cold porcelain, polymer clay or potato clay. Each flower petal and leaf has been individually handpainted and then glued onto very thin florist wire or sewing thread. As you can imagine, many hours of work go into making one plant. The scale I have used is 1:12. This means that for every 1 of the measurement in real life, it has been shrunk by 12 in miniature life.

When i was creating the miniature plants and did all the research on them, I became interested in botanical painting. So, I started the fabulous botanical



painting classes with the Friends and have developed admiration for this art and for the very talented artists we have here in Melbourne.

Then I saw the advertisement for the volunteers for the Plant Craft Cottage, and here we are.

Unfortunately, the cottage is closed during the pandemic but hopefully it will open again soon. Make sure to visit us on your next trip to the gardens.

Madeleine Bron

Above: Madeleine's miniature garden and potting bench. If you look closely there are *Nepenthes* on the floor and even a miniature scissors! Note the \$2 gold coin at the bottom of the image which shows the scale of the work.

Facing page: Top Left - Daffodils Top right - Arum Lilies Bottom left - Clivea Bottom right - Agapanthus. Note: Even the pots are miniature. Photos in this article by Madeleine Bron.

plant crafts 🟉



The Banks Royal Commission

Editor's note: This article is reproduced by the kind permission of authors Cheryl Backhouse and Boronia Halstead and the editorial folk of the Australian National Botanic Garden.

This is a story about the relationships between early collectors of banksias from two centuries ago, their patrons, and the context in which they worked, now glimpsed through some of the names of the plants in the new Banksia Garden (at the Australian National Botanic Garden in Canberra). It is set in a time of discovery and building empire, and the plants being found in the New World were the subject of great curiosity. The imposing figure of Joseph Banks weaves in and out of many of the lives of these early collectors, firing interest at home and directly or indirectly sponsoring their endeavours. With the patronage of King George III, Banks began to develop the Royal Botanic Gardens at Kew as the showcase for plants collected from the New World, with Banks becoming its unofficial director on his return from the Endeavour voyage.

Early taxonomic relationships

The frame for the relationships starts with the formal publication by Carolus Linnaeus the Younger in 1782 of the Banksia genus, lauding Joseph Banks. Linnaeus published four of the five species collected by Banks and Solander on the Endeavour voyage. The fifth species, *Banksia robur*, was published in 1800, by the Spanish botanist Antonio Jose Cavanilles (along with *B. marginata* and *B. oblongifolia*).

The first taxonomic arrangement of Banksia (covering 31 species) came another 28 years later, when the Scottish botanist, Robert Brown, published his *Prodromus Florae Novae Hollandiae et Insulae Van Diemen.* He also published the genus Dryandra (now merged into Banksia) at this time, listing 13 species. This name honoured the botanist Jonas Dryander, Brown's predecessor as Banks' librarian and curator.

In Robert Brown's Supplementum to the second edition of his *Prodromus*



in 1830, he described 11 additional Banksia species, nine of which had not been published previously. The characters in this story are immortalised in the names Robert Brown gave to some of these new species of banksias. They were the late 18 Century and early 19th Century collectors Daniel Solander, Archibald Menzies, George Caley, Peter Good, William Baxter and Robert Brown himself; the artist, Ferdinand Bauer and the botanist/librarian/ curator, Jonas Dryander. Visitors to the Banksia Garden will find plants that carry most of these names: B. solandri, B. menziesii, B. caleyi, B. baxteri, B. baueri, B. brownii and B. dryandroides. B. goodii was named after Peter Good, but it is not in the Banksia Garden.

When Joseph Banks returned to

England from the Endeavour voyage to the South Seas, he became something of a celebrity on the world's scientific stage. He and Daniel Solander had collected almost 1000 species of plants on the east coast of Australia, including those first five specimens of Banksia. Solander was meticulous in his documentation of the specimens from the voyage and became Banks' secretary and librarian on his return to London. He lived in Banks' Soho Square house, amid the specimens and books in his care, until his death in 1782. His documentation of plants and animals now comprises 51 manuscript volumes in the Library of the British Museum. Their collaboration and close friendship was commemorated in Brown's naming of B. solandri, based on a specimen collected by William Baxter in the vicinity of King



George Sound (near Albany). The plant is a large shrub-like species, with fawn coloured cylindrical flower heads and large, deeply serrated leaves. It is restricted to the Stirling Ranges in Western Australia. It has no lignotuber and relies on reseeding to regenerate after fire.

Banks and Britain's imperial botanic project

At this time, botanising was part of the imperial agenda to establish colonies and exploit botanical resources, sending and receiving plants and plant material to and from the expanding known world.

Botany itself was evolving from a focus on herbal pharmaceutical systematic practice to plant classification. Solander arrived in England from Sweden in 1763, sent by Linnaeus the Elder to promote his method of classification. He started working in the British Museum in its first decade, where he met Joseph Banks, converting Banks to the Linnaean system.

Banks was driving both the collection of new plants and their systematic curation. His role was often indirect, as a wealthy patron of science who used his extensive network of connections with King George III, the Admiralty, the scientific community in the British Museum, and as President of The Royal Society, to fund and promote scientific exploration.

Banks' 'floating gardens'

Banks took on responsibility for building up King George's private garden in Kew in 1787, with a mission to build 'acknowledged superiority ... over every other similar establishment in Europe'.¹ He became interested in acquiring not just seeds, but the finest specimens of living plants from around the world. The competition to have the 'best' collection is reflected in Banks instructions to one of the collectors, Archibald Menzies:

You are to consider every one of [the plants], as well as the Seeds of the Plants which you shall collect during the voyage, as wholly and entirely the property of His Majesty, and on no account whatever to part with any of them, or any cuttings, slips, or parts of any of them for any purpose whatever but for his Majesty's use ²

Banks worked with the Admiralty to change the design of ships so that they could be 'floating gardens' with 'plant cabins'. This ambitious project required vessels to carry highly skilled gardeners and collectors with a trained eye, who could distinguish plants with novelty from those already acquired. Vessel commanders were required to ensure that plants were kept alive at sea, often for many months, through extreme changes of climate.

Plants were thus able to be moved to and from London, the Cape, Timor, Van Diemen's Land, Tahiti and the West Indies. Plants grown at Kew Gardens for sending to New South Wales included grape vines, apples, pears, hops, plums, carob, mulberries, walnuts, nectarines, peaches, willows and olives, and seeds of herbs, conifers, oaks and many other plants.³

Collection voyages

One of the earliest voyages to test the viability of 'plant cabins' on long sea voyages, at Banks' urging, was the 1791 to 1795 voyage of HMS Discovery, under the command of George Vancouver. Archibald Menzies was the ship's surgeon and naturalist, recommended by Banks for the voyage, and charged with caring for the plants he was required to collect for Kew. Here are more of Banks' exacting instructions to Menzies for the care of plants collected:

When you meet with curious or valuable Plants which you do not think likely to be propagated from seeds in His Majesty's Garden, you are to dig up proper Specimens of them, plant them in the Glass Frame provided for that purpose, and use your utmost endeavours to preserve them alive till you return. ... As soon



Banksia caleyii from the Legacy of Banks & Solander Exhibition, by the ANBC Botanical Art Groups, 2020. Painted by Leonie Paynter.

Desmond, R. 1995, Kew: the history of the Royal Botanic Gardens, p 92. Banks letter to Archibald Menzies, 22 February 1791. http://www.asbs.org.au/newsletter/pdf/18-dec-177.pdf Vallance p 112. 1. 2.

³

as you shall have provided yourself with living plants, and planted them in the Glass frame before mentioned, you are at all times, when the Ship shall be watered, to acquaint the Commanding Officer what quantity of water you judge necessary for their support and preservation, by the week or month, in order that he may be enabled to make a competent provision of that article for their future maintenance and nourishment.⁴

The *Discovery* spent 17 days at King George Sound in September 1791. Here, Menzies became the first recorded European to find banksias in southwest WA. He took banksia seeds and plants back to Banks and other collectors, including the seed of *B. grandis, B. illicifolia, B. coccinea* and *B. praemorsa.*⁵ Menzies was also the first European to collect specimens of dryandras.

In 1830 Robert Brown named *B. menziesii* in honour of Menzies. Neither Brown nor Menzies ever saw the plant growing.⁶ The common name for this plant is Firewood Banksia because it burns well. It is a shrub or tree, up to 10 m tall, with spectacular, large, acornshaped flower heads, in shades from red, through pink to yellow. The plant can re-sprout from a lignotuber after fire, as well as regenerate from seed.

George Caley came on the Australian plant collection scene in 1800, sponsored by Banks. He collected thousands of specimens of plants, enriching the collections in Banks' herbarium and Robert Brown's own collection, as well as providing seed and plants for the gardens at Kew. Brown used Caley's material to describe 14 species of Proteaceae. Caley's specimen of B. spinulosa var collina collected at Newcastle was declared the neotype for the taxon by Alex George, Robert Brown named B. caleyi in his honour in 1830. It has the common names of Caley's Banksia or Red Lantern Banksia. It is one of the pendulous banksias, with drooping reddish flower heads on a shrub up to 2 m in height, with serrated leaves.

It is killed by fire. The species is found south and east of the Stirling Ranges in southwest WA.

Robert Brown was part of the team of 'men of science' hand-picked by Banks for Matthew Flinder's Investigator voyage. Supporting the mission was Ferdinand Bauer as natural history artist, William Westall as landscape artist, and Peter Good as the gardener. Before departure Brown acquainted himself with existing Australian specimens in Banks' herbarium. He was also familiar with the specimens brought back by his friend, Archibald Menzies.



The voyage embarked in July 1801. En route, Brown spent two weeks making botanical expeditions at the biodiversity hotspot around the Cape of Good Hope where he would have seen members of the Proteaceae family. The next port of call was King George Sound, part of another global hotspot, where Brown collected some five hundred species, including 17 specimens of banksias, dryandras and the Albany pitcher plant. At Lucky Bay east of Esperance, Brown collected specimens of B. nutans, B. repens, B. puchella, and B. speciosa.7 The new banksia plants were given space in the garden on the quarterdeck.⁸ Soon after arriving in Port Jackson, Brown wrote to Banks, advising that he had so far collected 20 species of banksia, of which four were new.⁹ Almost two years later, Brown informed Banks that the region was 'by far the richest in new and remarkable plants that we have yet seen'.¹⁰

In Sydney, Brown based himself at Parramatta, and he and Peter Good accompanied George Caley on some collecting expeditions over the three months they spent there, before Brown and Good departed on the Investigator to circumnavigate New Holland in an anticlockwise direction. Brown collected three species of banksias on Fraser Island and one at Sandy Cape, possibly *B. aemula*.¹¹ Peter Good contracted dysentery on the last leg of the voyage and died in Sydney Cove when the vessel returned.

Brown sent his collection of live plants back to England on the Porpoise, but they were lost when the vessel was wrecked on a reef a week after departure. Brown and Bauer botanised in Australia for another two years before returning to England in October 1805 with the remainder of their collections, including 3,600 specimens of plants and 2,073 drawings by Bauer. The collections and drawings formed the wellspring for Brown's future publication of the *Prodomus*.

Brown's prodigious contribution to botany and the taxonomy of Australian plants, including banksias, is remembered in the name of B. brownii, as well as the genus Brunonia. William Baxter suggested to Brown that he should formally name B. brownii after himself as Baxter had already been using this name for the species. Banksia brownii has the common name of Feathered-leaved Banksia. It usually has reddish flower spikes, held on an erect shrub up to 6 m high. It is found in ranges near Albany in WA but is critically endangered and very susceptible to Phytophthora cinnamomi infection. It is a reseeding banksia and is killed by fire. Overly frequent fires could threaten remaining populations.

^{4.} Banks letter to Archibald Menzies, 22 February 1791.

Groves, E. 2013, Archibald Menzies's visit to King George Sound, Western Australia, September–October 1791, Archives of natural history 40:1, (139–148)
 https://en.wikipedia.org/wiki/Banksia_menziesii

^{7.} Vallance p 112.

^{8.} Brown's journal entry, 28 December 1801, cited in Vallance et al, p 103.

Peter Good distinguished himself as a collector in his own right and alongside Robert Brown on the voyage of the Investigator, keeping a diary and making detailed notes about growing conditions to accompany specimens collected in Australia, destined for Kew Gardens. Good's collections of seeds and plants from this voyage were combined with Brown's collection after Good's death. Banksia goodii was named in his honour by Robert Brown in 1830. The plant was first collected by William Baxter at King George Sound in 1829. Banksia goodii is a creeping shrub with yellow flower heads - one of the smallest banksias. It is rare and endangered, and has a very restricted range of less than 25 kms in fragmented populations, between Albany and the Porongurups in southwest WA.

Ferdinand Bauer was the botanical artist on the Investigator voyage and worked closely with Brown in producing detailed plant studies, and collecting plants. He used a microscope to produce remarkably accurate drawings. He made 1540 drawings of Australian plants on the voyage. He drew specimens in pencil, then used an elaborate colour coding system, so that he could complete illustrations accurately at a later time. The code had 1000 different shades, including 200 greens and a similar number of browns and yellows. He was a perfectionist, and continued working on his sketches and etchings of plants collected in New Holland for many years after his return to England.

Bauer and his brother Franz are commemorated in the plant genus Bauera, the family Baueraceae, and in B. baueri. The first specimen of this plant was collected by William Baxter at King Georges Sound, and described by Robert Brown. Its common names are Possum Banksia or Woolly Banksia, as it has large possum-like flower heads, held low to the ground on a many-branched shrub. It is killed by fire and regenerates from seed. It grows on sandy soils in shrubland in southwest WA.

William Baxter was an English plant collector employed by plant nurseries in the 1820s to collect plants in Australia. On four trips, he visited the southwest coast, around King George Sound and Esperance, Mornington

Peninsula and Kangaroo Island (1823, 1825 and 1828-9), where he collected banksia and dryandra seeds and plants. Among them were the first specimens of B. gardneri and also B. dryandroides, collected at King George Sound in 1823.12 In 1824, he collected B. media between Cape Arid and Lucky Bay, then B. caleyi, B. baxteri, B. goodii, B. brownii, and B. baueri and B. solandri in travels around Albany in 1829. Brown cited a specimen of B. spinulosa var cunninghamii collected by Baxter at Mornington Peninsular in his 1830 Supplementum. Specimens of some of the plants he collected are held at Kew Gardens today.

Baxter collected the type specimen of B. baxteri which was named in his honour by Brown in 1830. Banksia baxteri's common name is the Birdsnest Banksia. It has prominent ovoid lemon yellow flower heads, and distinctive leaves with triangularshaped lobes on a shrub up to 4 m high. It grows between Albany and the Stirling Ranges. It is killed by fire and holds its seeds in follicles until they open with fire.

Conclusion

Visitors to the Banksia Garden might imagine how it felt to be one of the first Europeans to find extraordinary banksia plants in the wild. The ANBG horticultural team knows how difficult it can be to grow many of these plants away from their natural environment today, but how much more difficult would it have been to keep them alive on a long sea voyage to another hemisphere, or propagate and attempt to grow them in a European setting?

This short account explores just a few of the fascinating human threads linking many of the plants in the new Banksia Garden - men commissioned to find seeds, plants and herbarium specimens for the Royal Botanic Gardens at Kew via Joseph Banks. There is a contemporary twist tying up some of these connections: some of the B. solandri and B. brownii plants in the new Banksia Garden are grafted onto root stock of the eastern states species first collected by Banks and Solander, completing a circle in both botanical and historical time.







11. Vallance p 234. 12. George, A. 2012, The Banksia album: Two Hundred Years of Botanical Art, National Library of Australia

^{9.} Cited in Mabberley, p 94 10. Brown to Banks letter, 6 August 1803





Classes

Term 4, 2020 will start in the week beginning **Monday 5 October** and will continue for 8 weeks. **Participants must be a member to be enrolled in art classes.**

Classes will be presented online due to the ongoing restrictions for Melbourne due to COVID-19. Please keep up-to-date with current information about art classes via our weekly eNews.

Prices Member \$250 Non-member \$320

The Art of Botanical Illustration (TABI) 2020, A Virtual Exhibition

19 September to 31 December

The Friends of The Royal Botanic Gardens Melbourne are holding their fifteenth biennial exhibition, 'The Art of Botanical Illustration' from 19 September until 31 December 2020. The exhibition will be available online via the Friends of the Botanic Gardens website.

It has been a steep learning curve, but we are all excited at the prospect of holding TABI 2020 online.

The exhibition will feature beautiful artworks from local, interstate, and overseas artists who specialise in botanical illustration. We are also taking the opportunity to include a wider range of media and techniques than in former years, including three- dimensional artworks.

As usual the artworks will be selected for their artistic merit and scientific accuracy by a panel of experts including a botanist, an artist, and the head librarian at the Royal Botanic Gardens Melbourne. The Celia Rosser Award will once again be awarded to an artist whose work exhibits both the highest degree of scientific accuracy and artistic excellence.

The first TABI exhibition was held in 1992. Since then it has become a premier event in the Australian botanical art calendar. In previous years many of the artworks have been purchased by art enthusiasts. In addition, works from the exhibition are often purchased for inclusion in the State Botanical Collection at the National Herbarium of Victoria.

The Friends of the Royal Botanic Gardens, Melbourne regularly hold Botanic Art Classes at Domain House, which is adjacent to The Royal Botanic Gardens, Melbourne. These classes cater for beginners and accomplished artists and run 7 days a week for 4 x 8-week terms. In addition, during the term breaks we regularly hold beginners and specialist workshops.

However, with the emergence of COVID-19 and associated social distancing rules we were forced to reconsider how we run the art program. Understanding the students' keen

interest in continuing art classes whilst in isolation the Friends and tutors rapidly adapted and upskilled to provide students with online classes. This initiative has been very well received by the Friends' Botanical Art Community.

During Term 2 we ran eleven online classes with a participation rate of 97%. While many of our existing students participated, the online forum also attracted more country, interstate, and international students to participate in the Friends Art Program. We now have students from Dubai, Singapore, Indonesia, and Taiwan participating regularly. The students have given very positive feedback on their online learning experience and have advised they are keen to continue with art classes online. Consequently, we are delighted to offer further online classes for Term 4, pending the status with COVID-19 restrictions.

Last term these popular classes were held by our talented, internationally recognised, and experienced art tutors Dianne Emery, Mali Moir and Jessie Ford. Sadly, we farewelled Jessie, at least for the immediate future, as she has decided to travel. We have therefore engaged two additional tutors and are delighted to welcome John Pastoriza Pinol and David Reynolds to teach the Friends Art Program. Both are globally recognised and award-winning artists and very experienced tutors in botanical illustration and natural history. John has been a popular tutor for the Friends Botanical Illustration workshops in previous years.

Our capacity to offer workshops during the term breaks is under review. However, additional online workshops are not being planned for the immediate future.

³ Sue Foran Botanical Illustrator Convener

scholarship report

Safeguarding the New Zealand Collection

by Kate Roud, Horticulturist, RBGV

In our 'new normal' of lockdowns and social distancing it seems a lifetime ago that I was on a whirlwind trip around Aotearoa/New Zealand, meeting new people and plants, hiking (or tramping!) through stunning landscapes and cramming in as much knowledge as possible to bring back to the New Zealand Collection.

First stop was Christchurch Botanic Gardens (https://www.ccc.govt.nz/ parks-and-gardens/christchurchbotanic-gardens), where I met with Luke Martin, horticulturist and curator, and enjoyed a wonderful tour of his Native Plant Collection. Luke was very generous with his incredible plant knowledge and the collection is beautifully presented with great interpretation. I loved the Icon Plant Trail, where juvenile and adult plants grow side-by-side, showing off one of the quirks of New Zealand flora, namely heteroblasty - the significant and abrupt change in form and function that occurs over the lifespan of certain plants, such as Pseudopanax ferox. Guillaume Jacob, Curator of Palms, joined us and introduced me to the Director, Wolfgang Bopp, and we discussed the Climate Change Alliance and opportunities for future collaboration. Other highlights included:

- Riccarton Bush (remnant bush in the city)
- The Rene Orchiston Harakeke (Phormium tenax – New Zealand Flax) Collection at Manaaki Whenua/Landcare research
- Presenting to the Friends of Christchurch Botanic Gardens.

The core of my trip was the fiveday New Zealand Plant Conservation Network Conference at Te Papa Museum in Wellington where I delivered my presentation, "Some Don't Like It Hot" - Safeguarding the New Zealand Collection at RBGV Melbourne. I spoke about its historical significance, the challenges of preparing it for current and future climate change scenarios and the



various tools and processes that have been developed to help us. I concluded with an invitation to use our NZ Collection as a research tool and 'time machine' into the future to see how their flora responds to climate change. The presentation was well-received, and I am currently in discussion with Luke at Christchurch regarding future seed exchanges. Other highlights were:

- A plant identification workshop and tour of the native plant collection at Ōtari -Wilton's Bush Native Botanic Garden hosted by Finn Michalak, Curator. https:// www.owbt.nz/
- A field trip to the Te Papa Herbarium including a selection of 100 years of NZ indigenous

floral art and plant specimens collected by Banks and Solander -. https://collections.tepapa.govt.nz

Next, I flew to Gisborne on the east coast of the North Island, to visit Graeme Atkins, a biodiversity ranger with the Department of Conservation for 25 years, who gave a stunning presentation at the conference about his work in the remote Raukūmara Conservation Park. Deer, possums, rats, and other introduced pests have had a catastrophic effect on the understory, removing many berry plants on which the native birds depend and killing off the majestic Podocarpus totara. Graeme is leading a community effort with his iwi (tribe/people), the Department of Conservation and the NZ government



scholarship report



to save the forest. I recommend this article and video to learn more: https://www.nzherald.co.nz/nz/news/article. cfm?c id=1&objectid=12175055. I was thrilled to hear that the lobbying has been successful and the \$NZ 34 million Raukūmara Pae Maunga Restoration Project was launched on August 11, 2020.

Thanks to Graeme's generosity we will soon be enjoying *Clianthus puniceus albus in* the Melbourne Gardens' Collection, and it was a treat to be shown around his garden and see the rare plants he has found and saved, many of which have been used at the next stop on my trip.

October 2019 saw the 250th anniversary of the Endeavour landing on the East Coast of New Zealand and the 1769 garden at the Waikereru Sanctuary in Gisborne features many of the local plants that were familiar to Māori and fascinating to Banks and Solander when

Left: Christchurch Botanic Garden's display board for *Prumnopitys taxifolia*. Below: *Metrosideros colensoi*.



scholarship report

they first stepped ashore. Curator, Malcolm Rutherford, showed me around the garden and the wider eco-sanctuary, explaining the design concept and revealing gems like *Tupeia antarctica*, a mistletoe named after Cook's Tahitian navigator. You can discover more about this great project here: https://www.waikereru. org/1769-garden

My final stop was the New Zealand Indigenous Flora Seed Bank at Massey University in Palmerston North, hosted by Seed Bank Officers, Cristina Winkworth and Georgina Aubia. Extra funding had been received from the Department of Conservation after the Myrtle Rust outbreak and they explained how seed is collected, cleaned, and stored to safeguard the future of Pohutukawa (Metrosideros excelsa) and many other plants. I also visited the laboratory at AsureQuality, an approved seed-testing facility, where I left some seeds donated by Dunedin Botanic Garden. These were tested for quality and phytosanitary certificates were issued, ensuring that the RBGV complied with all relevant guarantine protocols, and I was able to bring them home on a later trip. Establishing these seed-



importing pathways has been an important part of my curatorial work and it is great to see it finally paying dividends.

Thank you so much to the Friends and RBGV staff for supporting this trip and to the people in Aotearoa who made it so memorable with their time, expertise, and hospitality. It will be some time before I am able to return so I will continue to care for our own corner of Aotearoa/NZ and, in the meantime, 'Kia Kaha' - Stay Strong Melbourne.



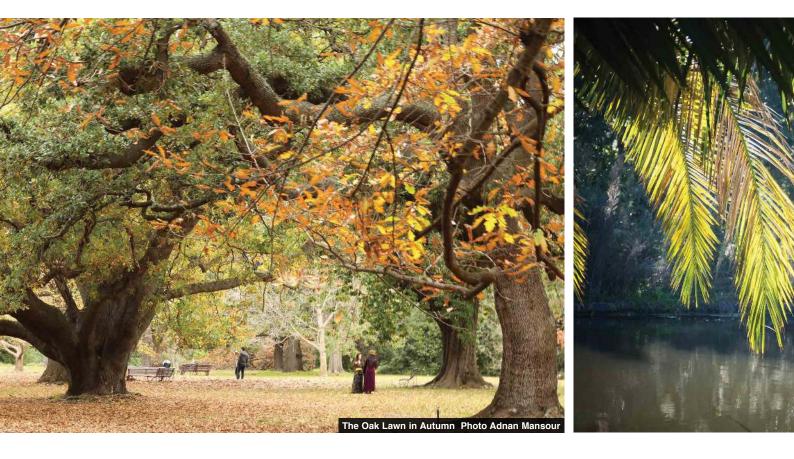
PONGA Cyathea dealbata SILVER TREE FERN

10m. The silver frond of the ponga is our national emblem. The silver occurs only on the frond stalk and underside of the adult frond, not on juvenile plants. Maori used the upturned fronds to mark tracks used at night. Found throughout New Zealand in lowland to mountain forest.





COVID-19 and its accompanying weirdness notwithstanding, the members of the Photo Group continue to show their photographic ab this. These are only a few of the Group's pictures and choosing this cross-section of our activities has been very difficult, but a pleasur







ilities and interests. From landscape to macro photography, thence to birds, conifers and post production, these images demonstrate e as well. David Forbes Convener



Calendar

September

1	The Acacia Project – Pam McDiarmid	p10
5	Companion Planting – Craig Castree	p10
9	Curious Carnivores – Alastair Robinson	p10
16	The Garden at Tea Trees – Pamela Carder	p11
19	TABI 2020 opening	p11
22	New Members' Welcome – Mary Ward	p11
23	Discovering our 2020 TABI – Susan Foran	p22
30	Plants I Can't Live Without - Lisa Ellis	p12
October		
5	Term 4 Classes begin	p22
8	Chelsea Physic Garden – Lynsey Poore	p12
14	Perfect Peonies – Jillian Holmes-Smith	p13
22	Our Gardens' Lakes and Islands – Mali Wilson	p13
27	Portugal Gardens – Cathy Trinca	p14
November		
4	Habitat Gardening – AB Bishop	p14
12	Self-drive Red Hill Peony Estate	p14
14	Shrine Gardens – Mary Ward	p15
16	Keeping Bees – Caroline Durré	p15



Bread tree - Encephalartos altensteinii Photo Jane Bennett

2020 AGM Notice

Annual General Meeting

The Melbourne Friends' Annual General Meeting will be held on 16 November at 6pm. Depending on the status of COVID-19 restrictions at the time, the meeting will be held either via Zoom or in Mueller Hall, National Herbarium. The formal notice to be issued in October will provide more details on the nature of proceedings. Nomination forms for Council can be obtained by contacting the Friends' office either by email or phone. The positions of President, Vice-President, Treasurer and three Council Members are due for election. Existing Council members are eligible for re-election. Council Members are elected for two years. Nomination forms are to be lodged with the Secretary at Gate Lodge by 5pm on Friday 16 October 2020.

Adnan Mansour Secretary