

The Auckland Garden

Newsletter of the Auckland Botanic Gardens and Friends

March 2020



Contents

GARDENS NEWS

- 3 Jack's update
- 5 Philip Joseph Jew
- 9 Visitor Services updates
- 9 Wayne's World...no longer

FRIENDS & VOLUNTEERS

- 11 From the President
- 12 Volunteer update
- 13 Growing Friends report
- 13 Wiri Rambler
- 14 Friends autumn bus trip
- 15 Friends Art Group
- 16 Photographic competition

AN IN-DEPTH LOOK

- 19 Autumn seasonal activities
- 21 Plants from the past.Plants for the future
- 25 The wood rose and the bat
- 26 Seed storage
- 29 New York to Quebec

.....

Front cover image: Philip Jew Photo: Jack Hobbs

.....

© No part of the Newsletter may be reproduced, stored in a retrieval system or transmitted in a form or by any means electronic, mechanical, photocopying, recording, duplicating or otherwise without the prior written permission of the Editor and, where appropriate the owner of the copyright. The views expressed by contributors are not necessarily those of the Friends, Auckland Botanic Gardens or of the Auckland Botanic Gardens, Auckland Council. No responsibility is accepted for any damage or financial loss incurred by following any advice given in the Newsletter. **Contributions are welcome and material for the June 2020 issue should be submitted by 3 p.m. Friday 15 May 2020 to the Editor ross.ferguson@plantandfood.co.nz.**



The
Auckland Garden
is the quarterly
newsletter of the
Auckland Botanic
Gardens and Friends

Auckland
Botanic Gardens
102 Hill Road
Manurewa
Auckland 2105

Jack's update

The biggest recent news at the Gardens has been the resignation of our esteemed Nursery Manager, Wayne Dymond. It was quite a shock to learn that Wayne was departing our whānau after 40 years, the last 36 years serving as Manager of our highly productive nursery team. It is an understatement to say that Wayne has been the rock that has guided and steadied this team over the years, one that consistently churns out all the plants we need for our gardens as well as those used to revegetate Regional Parks. Under his stewardship around 2,500,000 plants have been produced for parks, a great contribution to the biodiversity and recreational quality of the parks, and a significant contribution to carbon sequestration. The nursery has grown about the same number of plants for the Gardens, so Wayne can fly many times around the world and still be on the right side of the carbon emissions ledger. Not that he is planning such international travel, rather intending to split his time between his beach house at Waihi and his house in Gisborne that he intends to restore.

We will all miss Wayne's quirky and often irreverent sense of humour, his happy demeanour, and the professionalism he has brought to his role. We hope he will not become a stranger, and there will always be a

warm welcome for both Wayne and Sue at the Gardens.

I am delighted to report that the Environmental Protection Agency (EPA) have finally approved our application lodged in September 2018 to introduce new *Agathis* species into the Gardens. This is a great result that has taken many years and much hard work, especially by Bec who began work on the application in 2015. That was followed by consultation with Iwi, many meetings and lots of patience. The granting of this application means the Gardens can begin a programme of sourcing new species, initially most likely from the Pacific Islands and Papua New Guinea. Some of these species are threatened in the wild so there are significant conservation imperatives, and new introductions will contribute further to what is already an impressive collection of ancient trees.

Canna 'Hampton' is a newly named cultivar with clear lemon flowers (RHS green/yellow1D) that was raised here at the Gardens some 30 years ago. It reaches about 1.1 metres tall with clean green foliage and has been displayed in our gardens as 'number 26' for many years. Inexplicitly it remained unnamed until Emma came up with Hampton, the small volcanic cone

with the quaint stone church in Otara. We will make some divisions available to the Growing Friends so by winter you will be able to obtain a plant for your own garden.

The purpose of the breeding programme was to develop virus-free cultivars. Seed was sown in 1989, and the resultant seedlings were planted out for evaluation. Names taken from the volcanic cones of Auckland were given to the following selections: 'Cecelia' (pink/green leaf, 50 cm), 'Richmond' (salmon/bronze, 1.4 m), 'Albert' (yellow green foliage, 1.5 m), 'Victoria' (rose/bronze, 1.8 m), 'Rangitoto' (red/bronze, 1.5 m), 'Eden' (yellow/green, 1.5 m) and 'Gabriel'. 'Gabriel' is my personal favourite, with masses of blooms of clear coral pink above compact 1 m plants with large green foliage (see photograph on the back cover).

The consensus is that this Sculpture in the Gardens has been one of the best for years. Visitors have been effusive in their praise, and it is apparent by the large numbers coming through that it has resonated with the wider community. Kim Stretton has done a great job as event manager, and the Gardens staff and numerous volunteers have provided wonderful support. The exhibition closes on 1 March so get here quickly if you want to see these amazing works.

After two years of disruption from major developments, the Gardens

are planning to "have a cup of tea" and turn our focus towards further enhancing our gardens and improving visitor experience generally. We look forward to your ongoing support and hope you visit us soon.

Jack Hobbs

Canna 'Hampton'



Philip Joseph Jew

17 February 1929 – 10 November 2019

On 10 November 2019 an icon of the parks community passed away. Phil Jew was one of the most influential figures in parks during a career that began as a horticultural apprentice at Auckland City Council in May 1946 and ended in 1994 when he retired as Manager Parks and Reserves for the Auckland Regional Authority (ARA). He continued his interest in regional parks and botanic gardens until passing away aged ninety.

Phil transferred to Duncan & Davies Nursery in New Plymouth in February 1949, returning to work for Auckland City Council in June 1950. After completing his apprenticeship Phil travelled in 1952 to Britain where he spent five years including time at Cambridge University and the Royal Botanic Gardens at Kew. When at Kew he won the Matilda Smith Memorial Prize, the Dummer Memorial Prize and the Hooker Prize. He completed an English National Diploma of Horticulture before returning home in September 1956 to assume the role of Officer in Charge of Horticulture for Auckland City Council. He also completed the Royal New Zealand Institute of Horticulture (RNZIH) National Diploma in 1956.

In March 1966 Phil was appointed Manager Parks and Reserves for the recently established Auckland Regional Authority and it was in this role that he made an indelible contribution to the establishment and development of Auckland's much-loved Regional Parks Network. The ARA was establishing a system of rural and coastal parks and had recently taken over management of the Centennial Memorial Park in the Waitakere Ranges, and they had opened the first Regional Park, Wenderholm. By the time of his retirement 11 Regional Parks had been opened with around 5 million annual visits. Today there are 27 Regional Parks attracting more than 7 million visitors per annum.

Phil set very high standards for Regional Parks, demanding high levels of presentation. He ensured that visits by politicians always coincided with high tides, that the toilets and other facilities were spotless. Farming was used to manage much of the parkland, and Phil ensured only the best livestock were in view when politicians visited. Such attention to detail earned the respect and confidence of politicians, and he was a master of converting them to his point of view.

Phil had a special interest in botanic gardens, and it was no secret that his

greatest ambition was to establish such an institution in Auckland. To achieve this he enlisted the support of horticultural institutions such as the Auckland Horticultural Council and the Royal New Zealand Institute of Horticulture Auckland District Council. Sue Davison recalls a working party from the Department of Scientific and Industrial Research (DSIR) setting off for a site at Manurewa to assess its suitability for a botanic garden. The working party of Ted Chamberlain, Jim Hunter and Joan Dingley reported back favourably on the Manurewa site.

Tom Pearce, father of Sandra Coney, was chairman of the ARA during the time Phil was managing Regional Parks and endeavouring to start a botanic garden. Sandra relates that Phil approached her father to recommend that the ARA fund a botanic garden at Manurewa. Despite Tom Pearce having absolutely no interest whatsoever in gardening, such was his confidence in Phil's judgement that he agreed to support his recommendation.

In May 1967 42 ha of farmland owned by the Nathan family was purchased in Manurewa for the purpose of developing a botanic garden. A further 22 ha was later added.

In 1986 Phil travelled overseas to study the changing role of botanic gardens. The two significant changes

he noted since his time at Kew were the increasing involvement of volunteers, and the establishment of support organisations such as trusts and foundations. The latter led to the formation of the Friends of Auckland Botanic Gardens (the Friends) in February 1983. Under his guidance the constitution, purpose and structure of the Friends were established, and this thorough early work has resulted in an organisation that has consistently added great value to the Gardens. Phil had a clear view of what was important in a botanic garden, encapsulated in his favourite quote from his time at Kew: "Delightful scientific shade, for knowledge as for pleasure made".

Auckland Regional Botanic Gardens, now Auckland Botanic Gardens, opened to the public in 1982. When Phil retired visitor numbers had reached 300,000 per annum, growing to 1.2 million today.

Phil was a member of the inaugural committee that established Eden Garden in 1964. This garden has since become a much-loved horticultural destination in the Auckland region. He also presented a popular gardening radio programme on 1YA from October 1966 until May 1971.

In 1983 Phil was made an Associate of Honour of the Royal New Zealand Institute of Horticulture. In 1990 he was awarded the Ian Galloway Memorial Cup in recognition of his

outstanding personal contribution to the wider parks industry. In the Queen's Birthday Honours of 1992 he was appointed MBE (Member of the Order of the British Empire) for services to horticulture and conservation. In 1993 he was elected a Life Member of the Friends of Auckland Botanic Gardens.

His legacy continues today in Regional Parks through the ranger

service he helped establish, the policies and volunteer programmes he developed, and, most importantly, in the superb network of parks that contribute so much to our social and environmental well-being.

Without Phil's drive and influence Auckland Botanic Gardens may never have begun, let alone become one of Auckland's most visited cultural institutions. He was undoubtedly a man of steadfast determination who had the vision, skills and powers of persuasion to achieve great things for the people of Auckland.

Jack Hobbs



.....

To commemorate Phil Jew's enormous contributions to the Gardens, the Friends are funding a memorial stone seat to be placed along the Pacific Pathway. This is with the agreement of the family.

The Friends are also planning another stone seat along the Pathway to commemorate Miss Joan Dingley, our most generous benefactor.

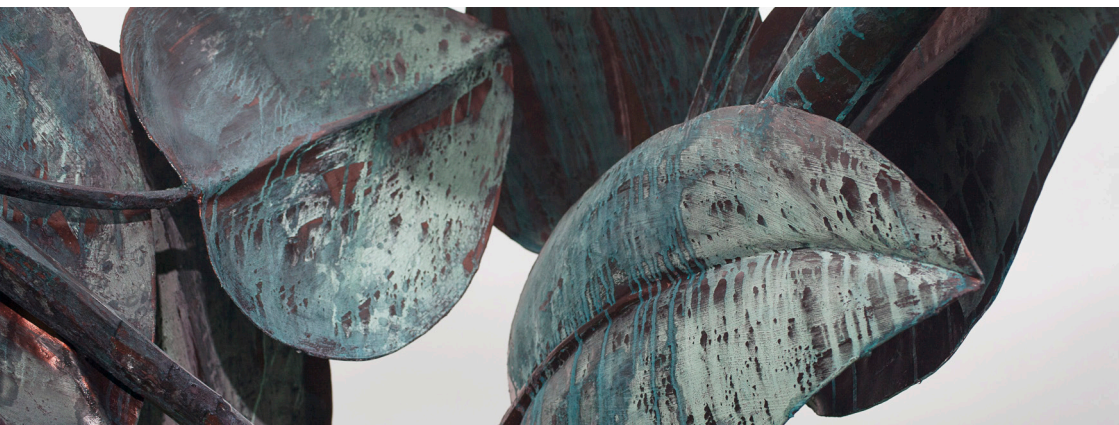
.....

Visitor Services updates

Summer has been a fabulous season with a very successful Sculpture in the Gardens attracting a wide range of visitors to the Gardens. This has meant a busy but festive start to the year. With the event season upon us, we have Eye on Nature coming up in March, and the Hospice Sunrise Walk in April. Our monthly gardening workshops for 2020 are about to start, with an introduction to living walls in March, a walk through our Gondwana Arboretum in April and a workshop on native plant design ideas in May. Keep an eye on the "What's On" section of our website for all the dates and details.

Chris Moore's *Entwined*

Julia Watson



Wayne's World...no longer

Yes, it is true I have resigned from my position as Nursery Team Leader after 40 years at the Auckland Botanic Gardens. I started my career at the Gardens on the 15 January 1980 as an apprentice, a role I held for four years. The training and written studies were very "full on", especially as I chose to do a National Diploma in Horticulture at the same time and I obtained that after five

years. I took a leaning to nursery work as I progressed, then found propagation was a particularly strong interest.

At the ripe old age of 22 years old I was thrown in the deep end when appointed Nursery Foreman managing staff who had taught me during my training years. I remember that day clearly as Brian Buchanan

called a brief meeting to announce my role and wished me luck. No training was given back then, rather it was growth by the school of hard knocks. It turned out that it was the challenge and personal development I needed. Without sounding “big headed”, I have always had the approach of seeking out individual strengths in people and fit them into tasks that suited them. I am a firm believer that if you are fair and respectful you receive it back.

Some of my many highlights that immediately jump to mind are:

Winning the Harry Ponninghaus Award which was offered to “upcoming qualified tradespeople” within the Auckland Regional Authority. I was selected as the upcoming trainee and sent full circle around Australia where I either visited or worked at all the major Botanic Gardens. The Director of Adelaide Botanic Garden, Noel Lothian, escorted me on a Western Australian flower tour with the emphasis on the many flowering plants that gave me a particular appreciation of the *Eucalyptus* genus.

Years later I was granted the Friends Buchanan Award and was accepted into a six-week internship at Longwood Gardens in America to specialize in my increasing interest in displays which I loved doing within the courtyards, Visitor Centre and Ellerslie Flower Shows where we won Gold. This became a real passion

of mine thanks to the Friends.

Just prior to that I met my future wife, Sue, who was a regular dog walker through the Gardens and later became a contractor within the nursery. Sue and I had our wedding reception at the Gardens and a well-respected horticulturist, Jean Veal, said it was my best display in the courtyard ever.

Years later I was again funded by the Friends Buchanan Award to work at Wisely Gardens in England as well as visiting many wonderful southern English gardens. To top it off I was at the Chelsea Flower Show on its 100th anniversary.

I enjoyed the experience of being among the first nurseries in New Zealand to work towards meeting the needs and requirements of the Nursery and Farm Management Scheme with an emphasis on biosecurity. This was obtained with credits from the International Plant Producers Society (previously NGIA). It also provided me with knowledge to assist with all our volunteer nurseries within the Regional Parks network.

Other highlights were helping train apprentices, many who have done well within the industry or appointed to roles at the Gardens.

I hold very special the fact that I have significant input into producing several million revegetation plants

within the Gardens and Regional Parks. I am very appreciative that my role has given me such a wide variety of interests, not just the pleasure of growing so many plants from seed and cuttings but being able to put my personal stamp on so many advancements within the Gardens.

I have especially valued my volunteers, all who have brought something to our nursery team besides their dedicated hard work. They have made my job so much easier. One, Judi Hadfield, has been there for me for 20 years and I cannot thank her enough. It has been a true pleasure working with Judi and all my other volunteers who I respect highly. You know who you are. Of my regular contractors, Sri Benham has stood the test of time, and not only has helped with her hard work but has contributed to making a calming influence on us all. Sri recently retired and already I have missed her.

Of course, a big thanks goes to my boss, Bec Stanley, who has had to put up with my many quirks.

I wish to thank Owen Newsome and Billie Elliot as we have made a wonderful team and achieved lots, and any leader will say you are only as good as your team. I also will miss our many frank and open conversations in relation to horticulture and life in general.

I would like it known that I have really enjoyed my career path, have no regrets and know that horticulture will always play a huge role in my life. I have been a person who has never aspired to be in the limelight but rather prefer to be seen as a sturdy spoke in the wheel who has left a mark on both the Botanic Gardens and the Regional Parks. I am leaving Auckland to live in both Gisborne and at Waihi Beach where I have projects and interests waiting. Please take this as a personal and heartfelt goodbye and I will no doubt be visiting from time to time. Thanks to you all.

Wayne Dymond



From the President

By the time you receive this issue of the newsletter, the 2019/20 Sculpture in the Gardens exhibition will be over and a huge number of regular and new visitors to the Gardens will have taken the opportunity to explore the Gardens and to enjoy the twenty outdoor works and the exciting array of works in the Visitor Centre foyer, corridor and gallery.

Those of you who have volunteered during the exhibition will be well aware of its success and I know, from having been on the "meet and greet" desk in the weekends, just how positively the exhibition has been received.

There are a large number of people to thank for that success - the artists, of course, whose talent and creativity are on display, the curators, Rachel de Lambert, Linda Tyler and Brett Graham who made the choice from around ninety submissions of the outdoor works for inclusion, Richard Mathieson for his curation of the indoor exhibition and his work in the arts community in support of the show, the Patrons and supporters who give their money and/or time and work, the Gardens staff for cheerfully managing the added workload this entails, the Organising Committee and Event Manager, Kim Stretton, for her exemplary management of the whole event,

to those who support the artists by purchasing works, the Wiri Rambler team who run additional "specials" during this time and of course, to all of you who give your time to volunteer in a variety of ways in support of the exhibition.

There has been overwhelming approval of the two awards that are known as I write this – the McConnell Award to Marte Szirmay for her work *Contained and Protected* and the Friends purchase

The popular *BeeHaven* by Jane Downes



of Chris Moore's *Entwined*. This will remain in the Gardens as part of the permanent collection. The People's Choice award will have been made at the closing event on March 1st – not known as I write - but judging by comments from visitors to the exhibition I have a very good idea of where that will go. Time will tell if I am right!

Further art activities for the year include an exhibition of botanical art by the Friends Painting Group in the Visitor Centre gallery in May, followed by an exhibition of small botanical works by members of the Botanical Art Society of New Zealand. This is a national group so some new names and works to enjoy.

We are hoping to organize some workshops along with the exhibitions so check the Gardens website for details.

There have been some changes for the Friends Committee this year. We have decided to trial meeting during the day, rather than at night. Meetings will be held in the Friends Building on the second Friday of each month, starting at 10.30 a.m. (third Friday in April to avoid Good Friday). At our January meeting we were pleased to welcome Anne Candy as the representative from the Manurewa Local Board. Anne is also their representative as a Trustee.

Members are, of course, able to attend meetings as observers or make submissions to the Committee and we are always keen to receive your ideas and input. If you have a submission, or would like to sit in on a meeting, please contact our Administrator, Irene Horton friendsofabg@gmail.com

Liz Powell

Volunteer update

Sculpture in the Gardens has been a key volunteer project this summer and I'd like to take this opportunity to say a very big thank you to all the volunteers who've made this event so successful. From meet and greet volunteers to sculpture cleaning, school holiday programme support, vote counting and more, we couldn't do it without you! We have such a wide range of volunteer roles on site and it's thanks to each one of our volunteers throughout the Gardens that we can offer visitors excellent experiences when they visit. I'd also like to welcome all the new volunteers who've joined us recently, we are all looking forward to working together in 2020.

Julia Watson

Growing Friends report

Our nursery is coping with the dry time, thanks to Gardens staff who take care in our absence. Sales through the summer have been astounding; I guess the extra visitors who come to see the sculptures are one of the reasons.

Our stock is looking pretty good, particularly our native section, where we have some "great buys" for farm and wetland planting.

The crew are working on having good plants available for our stall at Ayrlires in April, which is always a

great day out and the best value time to visit a special garden.

Bronwen Rowse

Growing Friends sales times:

.....
- Thursday
9.00 a.m. till noon
- First Sunday of the
month 10.00 a.m. till
2.00 p.m.

Wiri Rambler

This summer our small team of volunteers is having a busy time. As well as running on Sundays and some Saturdays we have had thirteen bookings for groups during the weekdays.

Most of our passengers are older people who due to their age and the very hot weather are unable to walk around the Gardens. They are very thankful saying how grateful they are and how much they have enjoyed being able to see areas that they would not otherwise see. This makes our time spent worthwhile

and enjoyable for us.

We also raise funds to support the Gardens. A number of our team have volunteered on the Rambler for many years and are still enjoying showing people our beautiful Gardens.

If you are a person who enjoys meeting people we would appreciate you joining us. You do not need to know about the Gardens or plants. For further information please contact me on (09) 2977234.

Kate Moodie

Friends autumn bus trip

Visiting two gardens on the banks of the Waikato River:

- Moondance Manor Gardens, a 3-acre garden at Tamahere.
- Hamilton Gardens, where you can explore the areas you prefer for the afternoon. New gardens have been opened recently in the enclosed gardens.

Friends members are welcome to bring a friend.

Any queries, phone Kate Moodie (09) 297 7234. Remember to phone to book your seat before paying!

Book tickets

Before sending payment you must book your seat with Kate!
Kate Moodie
(09) 297 7234.

Payment

There are three payment options:

- Post the enclosed slip with a cheque to Friends of the Auckland Botanic Gardens; 102 Hill Road, Manurewa 2015,
- Pay at the Botanic Gardens by cheque or eftpos, or
- Pay online 12-3011-0757619-00 indicating bus trip and your name.

When: Saturday, 28 March 8.45 a.m.
Returning 4.45 p.m.

Where: Meet outside the Visitor Centre, Auckland Botanic Gardens.

Bring: Bring your lunch and drinks as required for a picnic at the Hamilton Gardens; there are seats in most areas or, if you prefer, buy your lunch at the cafe. When booking, indicate if you want lunch at the café as numbers are needed for our table reservation.

Cost: \$40.00 per person which includes entry fee to Moondance Manor Gardens.

Friends Art Group

An exciting year ahead for the Friends Art Group

The Friends of the Gardens Art Group has started off very well this year, starting even before we had our first meeting at the end of January.

In early January members were invited to fill in a survey as Liz and I wanted to see what the general feeling was among the members - what worked and what we could do better. We wanted to hear why they came to the group, what they enjoyed and, just as importantly, didn't enjoy. Members were asked what they would like to do this coming year, which artists and which media did they want to see or learn more about. Should we change our programme of having artists demonstrate on alternate months?

We were delighted to get over 30 completed surveys, completely anonymous, allowing members to be totally honest when answering and we got some very interesting comments.

It appears the majority of the members were happy (phew!) and wanted us to continue as we were, to alternate artist demos with a general meeting working on what they bring along. Help for beginners and help with identifying plants were

asked for and we will be addressing these over the year.

After following up suggestions for artist demos, we have these artists already lined up for this year:

February – Val Cuthbert, printmaker will be showing us a wonderful form of printing with leaves and stencils onto fabric using a liquid transfer dye. We should all go home with a piece of printed material, big enough for the front of a small cushion. <https://www.valcuthbert.com/>

March – (Really our April meeting but that falls on ANZAC Day.) Jan Leonard, also a member of the group, will be showing us how we can incorporate calligraphy into our work. Traditionally botanical art and calligraphy went hand in hand, and I for one would love to know a way to write on my artwork to enhance rather than detract from my work.

June – Gillian Receveur will be coming all the way from Hawkes Bay to demonstrate her colour pencil technique. She doesn't have a website, but some of you may remember her from the Botanical Art Worldwide exhibition as she had two pieces of work on show. Gillian also ran a colour pencil for beginners workshop which was very well attended and enjoyed.

August –artist Jane Thorne will be demonstrating how she goes about painting insects. There are many botanical artists, for example Maria Sibylla Merian (1647-1717), who included insects in their work and artists today are now also adding insect pollinators and insects who have a symbiotic relationship with a particular plant in their work. <https://littleblackbugs.com>

I am also working with Bec Stanley to organise a session for members on plant ID and I will be sorting sessions for beginners at our non-demo months – so watch this space.

As usual we will be having an exhibition of our artwork – a bit different this year as we will be exhibiting in May rather than later in the year, to coincide with World Day of Botanical Art. We have put the call

out for all types of botanical artwork, for members to think outside the square. I am really looking forward to see what comes in other than the traditional watercolour, graphite and colour pencil.

On the subject of art exhibitions, a few of our members are also members of the Botanical Art Society of New Zealand (BASNZ) and will be involved in the society's annual exhibition coming to the Gardens in June. A double dose of botanical art for you to enjoy.

We have a really exciting year ahead and if you would like to know more about the art group, or BASNZ get in touch with Lesley at lesley.alexander.smith@gmail.com.

Lesley Alexander

Photographic competition

1 December 2019 to 20 September 2020.

This competition is open to all visitors to the Auckland Botanic Gardens. It is open to two age groups – Adults of 18 years and over, Child/Youth under 18 years. Entries are free with four categories but each entrant is allowed to enter two images in total. The categories are:

- A. Gardenscape. Capture your favourite season and/or favourite part of the Auckland Botanic Gardens.
- B. Creative Angles. There are plenty of features and elements in the Gardens, such as sculptures, fixtures or the flowers/plants themselves. Play with the light/shadow or using key elements of design that you can find through

creative angles.

- C. Friends of the flowers. Who would you consider as friends of flowers? This category focuses on individual flowers and plants and could include insects/butterflies, birds, people who nurture them or rely on them. We are keen to see your interpretation.
- D. Through the Eyes of a Child (Youth Category). This is an open category for all children and youth to show us what they see in the Gardens.

Image rules:

- JPEG file format
- File size no larger than 5 Mb.
- Image format should be taken with a 4:3 ratio.
- All images submitted will be printed in 8" height x 6" width (portrait) or 6" height x 8" width (landscape).

We are grateful for the assistance of the members of the Manukau Photographic Society. Chris Jaggs of the Society meets with the Friends and has offered his services and that of other members to assist with selection and judging of entries and to hold a workshop about six weeks prior to the close of entries to help contestants improve their images. That date will be made available (once confirmed) by emailing the Friends on friendsofabg@gmail.com or phoning the office answer-phone and leaving a message with name and contact details.

.....

In the December newsletter, the Friends of the Auckland Botanic Gardens announced a return of our Photographic Competition. Unfortunately, the website address was incorrect and it was difficult to find information and rules.

The correct web address is:

<http://www.aucklandbotanicgardens.co.nz/about-us/friends-of-the-auckland-botanic-gardens/friends-programmes>

There a link under the Sculpture in the Gardens photos.

The other web address is:

<http://www.aucklandbotanicgardens.co.nz/whats-on/events/2020-friends-photographic-competition>

Celebrating 350 years of plants and people

Friends of RBGE Conference
3 to 6 June 2020

Royal Botanic Garden Edinburgh
is 350 years old in 2020.

As part of the celebrations, the Friends of RBGE are holding an international conference, from **3 to 6 June 2020**, for Friends and Volunteers of botanic gardens.

Join us in the Edinburgh Garden for this opportunity to meet up with Friends and Volunteers from across the world.

For more information, see
www.rbge.org.uk/friends2020

Celebrating
350
1670 2020



Royal
Botanic Garden
Edinburgh



Autumn seasonal activities

Our field team are busy preparing beds for planting winter annuals, trees and shrubs, and for re-sowing lawns that have succumbed to the summer heat and dry. We are also harvesting the last of the summer fruits and vegetables.

Edibles

In the Edible Garden we are topping up the beds with fresh compost and adding a mixture of Pacific Biofert (available from our Visitor Centre) and blood and bone before we plant the winter vegetables. We add worm-castings directly to planting holes before planting vegetables. For winter edibles we are planting

Florence fennel, kale, shungiku, salsify, kohlrabi, broad beans, sugar beet, rainbow beets, a selection of pak choi, sugar snap pea, mesclun mix, nasturtiums, cos lettuces, coriander and *Viola* 'Edible Mix'.

Planting

Autumn is the ideal time to plant trees and shrubs once the soils are sufficiently moist. These plants quickly establish in the warm moist soils. There is still time to plant bulbs such as freesias, babianas and lachenalias for a spring display. Plant these bulbs in sunny places with free-draining soil, or into containers. Apply mulch to garden beds and

Tip:

Have a look at the different worm stations situated in the Edible Garden next time you visit.

Babiana flowers



around trees and shrubs to retain moisture and suppress weeds. An added value of mulch is that as it breaks down it enriches the soil and nourishes soil microorganisms, and it minimises soil compaction and assists aeration.

Pruning

This is an ideal time to trim hedges and topiaries as the hot weather dissipates, the cooling weather slowing regrowth and allowing new foliage to mature to resist winter

frosts. The trimmed hedges and topiaries will provide architectural presence in your garden when it is looking bare in winter.

Lawns

Once autumn arrives we will re-sow lawns sown last spring that have succumbed over summer. The warm days and cool nights are perfect for seed germination. It is important to not let the seeds dry out, so water regularly.

Mere Brewer

Lachenalia aloides



Plants from the past, Plants for the future

The Botanic Gardens Australia New Zealand (BGANZ) congress is held every two years, with every third congress being hosted in New Zealand. Last year the ninth congress was held in Wellington to support the celebrations of the 150th anniversary of Wellington Botanic Gardens established with an Act of Parliament in 1869.

The theme was “Plants from the past, Plants for the future”. International speakers included Robbie Blackhall Miles from Wales, Paul Smith from London and Alexandra Cooke from Hong Kong. In the report we highlight some interesting talks, a few workshops that were particularly relevant and one of the three field trips that were on offer as a snapshot of the week.

Robbie Blackhall-Miles owns and runs FossilPlants, a small private botanical collection in North Wales. The garden is a Botanic Gardens Conservation International (BGCI) accredited botanic garden, and at 115 m² is perhaps the smallest in the world. The garden’s focus is plant evolution featuring over 1000 plants from families that have their ancestry in prehistoric times, i.e., their lineage has survived previous extinction events. Robbie also runs a research nursery for conservation purposes. Robbie’s presentation

was entitled “Plant Blindness” and he was keen to point out even we need to “get over our own plant blindness”. He challenged us on biases in gardens towards vascular plants, often overlooking mosses, lichens and liverworts. In most cases the existing bryophytes in gardens are self-introduced and a survey of those to document them could be a way to address this bias. In 2017 a full bryophyte survey of FossilPlants found 34 different species of mosses and liverworts.

Nick Waipara (Plant & Food Research) gave a thought-provoking talk on biosecurity roles and challenges for botanic gardens. Nick outlined the role that manu whenua play now in biodiversity conservation as kaitiaki, as well as the past and present threats to biodiversity that exist and are entering the country. Nick is also part of the Te Tira Whakamataki (Māori Biosecurity Network), a group of Māori scientists, policy makers, politicians, kaitiaki, iwi leaders and whānau who ensure Māori have a voice and participation in New Zealand’s biosecurity system. It also provides technical biosecurity support and advocacy to Māori.

David Teulon (Better Border Biosecurity) used our own collaborative project of raising awareness of invasive alien species



BGANZ New Zealand Botanic Garden Managers from left: David Sole (Wellington), Jack Hobbs (Auckland) and Alan Matchett (Dunedin)

through biosecurity trails in botanic gardens. David presented the Biosecurity trail project the Gardens has been involved in with Better Border Biosecurity and Plant & Food Research. He talked about the value of the partnership and the ability to host a trail at a botanic garden that raises awareness of biosecurity threats and how public can help reduce risk. (If you haven't already checked out this trail, pick up a guide from the Visitor Centre.)

Paul Smith (The International Plant Sentinel Network) spoke about the increasing threat of invasive pests, pathogens and climate change. He spoke how early identification can help using plant sentinel networks, which the Gardens is a part of. Plants growing outside of their native range can be monitored for damage and will provide us with information that we can use before a pest or pathogen arrives in New Zealand. The BGCI provides resources to help with pest surveying and can share

results across the network of over 2500 botanic gardens around the world. (There's a great video about this on their website that was even filmed here at the Gardens).

"Care for the Rare" is an Australian project in Victoria that aims to deliver projects in relation to threatened and rare plants. Botanic gardens in Australia are regional (council land but run by volunteers), local (council), state and federal. The local and regional gardens tend to be stuck in amenity landscape service delivery mode, and conservation is a new thing for these gardens. This state funded project supports these smaller gardens to do conservation horticulture with plants that are easy to grow and source. A workshop was held to discuss how this model could be applied to other regions across Australia and New Zealand.

Ian Allan (Blue Mountains Botanic Gardens, Mount Tomah) presented a workshop on balancing tree

management risk. Ian has recently completed a policy for tree management at their garden and there were a lot of useful points to take away and apply to the Gardens. Mt Tomah has a team of arborists which is fantastic to see. Ian made a very interesting point about the importance of having arborists because we, of course, have people who are specialist in looking after shrubs and perennials, but most gardens don't have people to look after their trees. Arborists do more than remove trees, they undertake seed collection and research (e.g., at Mt Tomah the arborists were responsible for cross pollinating the Wollemi pines and then collecting their seed), they do risk assessments, maintain and prune, and they identify and control pests or diseases. It's a career that also undergoes regular training which is intensive and adaptive to new technologies.

One of the three fields trips was to the "East of Wellington". Kaitoke Regional Park in the Tararua Ranges was our first stop. We

Fernside

were greeted by a ranger who spoke about the 2,860 ha park. The forest contains the regional water catchment and is home to centuries-old rata, rimu, beech and some enormous *Metrosideros robusta*. We meandered through some of the bush tracks and looked at the areas that were used in filming scenes from the *Lord of the Rings* trilogy.

Located 50 minutes from Wellington over the Rimutaka Ranges and in the heart of the South Wairarapa is the private garden, Fernside. The garden is 20 acres of restored gardens with a large Georgian-style homestead which was built in 1924 after the original home burnt down in 1923. We drove up an impressive 2-km-long oak-lined driveway to reach the house and garden. Our guide on the field trip was Clare Shearman who was a former head gardener at Fernside. We had an hour to explore the garden which was not long enough! The house and gardens were in a sorry state by the time Rosie and Colin Bevan (current owners) purchased the



property. They have poured time and money into repairing the house and recreating the gorgeous gardens. There are three full-time gardeners who walked around the property with us while we were there. They had spent several weeks preparing the gardens for our visit. The gardens are English in style with large trees and stunning autumnal colours. In spring, there are brilliant displays of flowers and shrubs and there is plenty of bird life with many native species, peacocks and masses of chooks.

The final stop on our trip was to Ata Rangi (meaning dawn sky or new beginning) vineyard. In 1980 Clive Paton purchased 5 ha of stony, barren land at the edge of the small Martinborough village. His dream was to become a world-class winemaker. The valley is protected by mountains on three sides and the days are warm, the nights are cool, perfect for growing wine! The vineyard is proudly family owned and attained full organic status in 2014. Biodiversity is enhanced by mixed

native shelter belts and inter-row wildflower planting.

Clive is a respected conservationist and founder of the Aorangi Conservation Trust. He has planted over 70,000 trees in the past 15 years and was appointed an Officer of the New Zealand Order of Merit in 2012 for his contribution to conservation and viticulture in New Zealand.

Clive has also received the Loder Cup for his contributions to Project Crimson. Our group spent a very pleasant time tasting some of the delicious wine on offer and listening to Clive and his vineyard manager Gerry Rotman talking about this very special vineyard.

We want to thank the Friends for their support in sending so many staff along to this conference. It was an invaluable experience for all who attended, and we have already applied many of our learnings.

Micheline Newton, Bec Stanley,
Shaun Rice, Shelley Small and
Emma Bodley

Botanic Gardens staff at the conference



The wood rose and the bat

One of the highlights of the exhibition at the Botanic Gardens in 2018, part of Botanical Art Worldwide, was a large watercolour by Sue Wickison of two endangered New Zealand species. One was *Dactylanthus taylorii*. Its Māori name is pua o te reinga, “flower of the underworld”, because it is a fully parasitic higher plant which attaches itself to the roots of about 30 native plants. The host reacts by forming a woody structure, the so-called wood rose. The plant is defined as being chiropterophilous, in other words, bat pollinated. The bat responsible, the lesser short-tailed bat (*Myotis tuberculata*) is attracted by the sweet smell and copious nectar of the flowers. Unfortunately other more destructive animals such as possums are also attracted.

The good news is that the painting has been bought by the Auckland War Memorial Museum. (See Sue's

blog https://www.suewickison.com/blog/20191216_dactylanthus_aylorii.htm.) Sue has very generously sent us a numbered print, about two-thirds the size of the original. This has been framed and is now on display in the Library, a record of one of our most unusual native plants and of the very rare bat, one of our very few native land mammals. Her print is a very worthy addition to our collection.

Sue is a Scientific Illustrator now based in Wellington. She worked for Kew Gardens and has participated in many botanical art exhibitions, winning awards and a gold medal from the Royal Horticultural Society. For more details see <https://www.suewickison.com>.

Ross Ferguson

Detail showing the bat on the *Dactylanthus* flowers. ©Sue Wickison, reproduced with permission



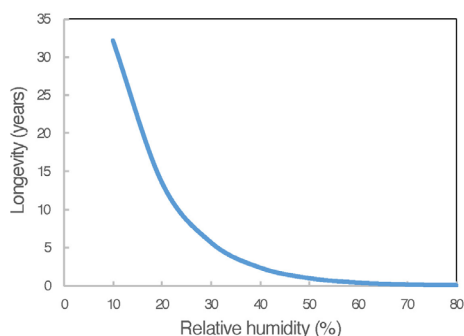
Seed storage

Seeds – store them dry for good germination

Many home gardeners are discouraged by the poor results that often accompany attempts to germinate seeds. We purchase seeds, beguiled by the colourful illustrations on the packet, or save seeds from our own or other gardeners' plants, but are frequently disappointed by very poor or even absence of germination. Some of us keep the packets of seed well past the "use by" date on the packet and are not surprised that the seeds frequently fail to germinate at all. In fact, these failures in germination failure most often are the result of improper seed storage by wholesalers, retailers, and at home. We seldom complain to the retailers, since we assume that the germination failure is our fault.

Seeds are amazing organs – little lifeboats for the embryo within, protecting it from physical and biochemical damage, and ready to supply the food and hormonal stimuli required to ensure germination and growth of the seedling when conditions are right. Although they appear extremely durable, seeds are not adapted to being held on the shelf in a paper packet for months, let alone years. Researchers have shown that in humid tropical or even

temperate climates like that of New Zealand, seeds of many species quickly lose viability (measured as % germination under standard conditions). This is mostly the effect of storage at high humidity. When humidities are low (below 25% RH) seeds maintain their ability to germinate for months, or even years, at room temperature. The magnitude of this effect is shown, for lettuce seed, in the graph below.



At relative humidities below 20%, lettuce seeds can last decades, but at relative humidities above 60%, longevity is less than a year. An even more dramatic and earlier effect of high humidity is seen in the vigour of the germinated seedlings.

The effect of humidity on the seed viability is illustrated compellingly by the results from an experiment with pepper seeds conducted by scientists in Thailand in collaboration

Before seed storage



All seeds germinate

After 6 months storage of seed



Seeds stored at high relative humidity (black arrows). Seeds stored at low relative humidity (grey arrows).

with Dr Kent Bradford, of the University of California, Davis. Freshly harvested seeds germinated freely, as seen in the tray on the left. The tray on the right was sown with rows of seeds that had either been stored for six months at low humidity (grey arrows) or had been held for six months at the typically high humidities in Thailand (black arrows). Clearly, seeds held in ambient conditions had lost most of their viability (few germinated). Even the few that did germinate are smaller than those stored at low RH, demonstrating the effect of improper storage not only on viability, but also on seedling vigour.

Pepper seeds held in Thailand under ambient, high RH conditions, or in low RH conditions. All seeds

germinated at the start of the experiment (left tray), but after 6 months in storage, only the seeds stored under low RH germinated satisfactorily. Photo from Johan Van Asbrouck, Rhino Research.

This simple experiment demonstrates the key role of low humidity storage in improving the home gardener's experience with seeds, whether purchased from the store, or saved from the garden.

Commercial seed producers and international agencies safeguarding seed stocks use sophisticated temperature and humidity-controlled environment rooms to store seeds. The Hvalbard repository in Norway, north of the Arctic Circle, is an extreme example. Dubbed the



The Hvalbard global seed storage ("Doomsday") vault

"Doomsday" vault, it depends on constant low temperature (-18°C) and low humidity conditions to store seeds of more than a million samples of the world's critical food species and their relatives.

For the home gardener, refrigeration is unnecessary. Simply holding the seeds at low humidity is all that is required to ensure satisfactory life and good viability of commercial and home-saved seeds.

The items needed to make your own low humidity seed "library" are available at low cost in the hardware store:

- a sufficiently large sealable Sistema-type container
- calcium chloride flakes (sold as "DampRid")
- a small glass or plastic jar that will fit in one corner of the container
- small paper envelopes to serve as seed packets.

Half-fill the jar with the flakes, put the jar and your seed packets in the "library", and seal the lid. The calcium

chloride will absorb excess moisture in the "library" air, and dry any seeds that are still moist, becoming liquid in the process. While undissolved flakes of calcium chloride remain in the jar, the RH in the seed store will be close to 35%, a humidity that will ensure that the seeds remain viable for several years. Once all the flakes are dissolved, discard the liquid, and replace the flakes. If you have a well-sealed container, this seldom will be required, perhaps once a year.

Seeds stored in this way, even for several years, will germinate rapidly, and grow more vigorously than those stored under normal ambient conditions.

Michael Reid

.....

The author, Michael Reid, lived in Auckland and worked with DSIR for some years until he moved to the University of California, Davis where he retired as Emeritus Professor and Extension Specialist in Plant Sciences. He is currently Leader for Innovation and Technology in the USAID Horticulture Innovation Laboratory. Michael now spends part of each year at a home he has himself built at Orere Point. He and his wife Nancy are members of the Friends.

New York to Quebec

In late September 2019 Sandra and I escorted a tour party on an intriguing journey from Manhattan to Quebec. We travelled with about 50 others on the only boat modified to pass through the numerous locks along the Erie and Oswego canals and through the Saint Lawrence River canals.

It was my first visit to New York, and it proved to be everything I expected. Highlights were Central Park, the High Line and the “Survivor Tree”, a callery pear (*Pyrus calleryana*) rescued after being seriously damaged when the World Trade Centre collapsed on September 11, 2001. It was replanted in 2010 as part of the National September 11 Memorial.

Central Park clearly has huge recreational and cultural importance to New Yorkers. It covers 843 acres (340 ha) and is maintained by the Central Park Conservancy rather than taxes. A special moment was visiting the small area now known as Strawberry Fields located near the Dakota Building where John Lennon was murdered.

The High Line is an abandoned 30-foot (9.1 m) elevated railway that runs for 2.33 km above Manhattan. It attracts 8 million visitors a year and when we walked it was swarming

with people, many of them tourists. It is well worth a visit for the panoramic views across Manhattan and to the Hudson River, and for the plantings that were apparently inspired by the plants that once were naturalized along the tracks.

Our river boat journey began early on Saturday 28 September with a visit to the Statue of Liberty before turning north up the Hudson River.

Our first excursion was to West Point, the famed military academy built in 1778 as an army post to defend the Hudson River. The academy opened in 1802 and today annually trains 4,000 cadets of whom more than a quarter are female.

Other visits included Springwood, the home of Franklin D. Roosevelt, and the towns of Albany and Troy that flourished with the advent of the Erie and Champlain Canals but have since declined. Troy was reputedly the richest town in the USA in the early 1800s due to trade but its fortunes have declined. It has 20 churches, apparently all with Tiffany windows.

At Saratoga we were told by our guide the Americans fought two great battles against the British in 1777, losing the first on 19 September and winning the second

on 7 October. This is regarded as the turning point in the American Revolution even though the war carried on for another six years.

This part of the journey was not particularly botanically interesting, with the trees along the Hudson River and Erie Canal showing only the first hints of autumn foliage colour. As we journeyed northwards the temperature gradually dropped and hues of mainly yellow began to appear in the deciduous trees, with a little red from maples such as the red maple (*Acer rubrum*).

Six days after embarking our boat arrived at Oswego on the shores of Lake Ontario. We then headed for the St Lawrence River, entering the Thousand Islands area that gave its name to the popular salad dressing. This 80-km section of the St Lawrence River has around 1,864 islands, many with dwellings built on them that are mostly summer retreats for the wealthy. It also features two notable castles: Singer Castle was built by the sowing machine magnate, and Boldt Castle was built in 1897 by the proprietor of the Waldorf Hotel in Manhattan. Both are worth a visit, especially the latter.

As we passed through the seven locks of the St Lawrence River the autumn foliage colour intensified noticeably, and once we arrived in Quebec City it was at peak. This was our favourite city with its quaint

old cobblestone streets, European architecture and strong French culture.

Our journey continued with visits to Montreal and finally Ottawa where the autumn foliage was particularly intense. Other highlights included the Museum of Civilization (the most visited museum in Canada) and the Notre-Dame Cathedral-Basilica (1895) designed in gothic style with high vaulted ceilings and made entirely from hand-sculpted wood.

Although this tour focused less on plants and gardens than usual, it was rich in culture and history with beautiful landscapes and many interesting excursions where we took in the local flora.

Jack Hobbs

.....

In July 2021 I will be escorting a tour I have designed of great British gardens that will take in the likes of Sissinghurst, Kew, Wisley, Highgrove and Edinburgh Botanic Gardens. We will also be taking in the Hampton Court Flower Show.

If interested, you can register now with Pukekohe Travel to receive updates.

.....



Trip highlights

- Top left:
- Plantings on Manhattan's
High Line
Top right and below:
- Autumn colour in
Ottawa





Canna 'Gabriel' Photo: Jack Hobbs



Auckland Botanic Gardens: botanic.gardens@aucklandcouncil.govt.nz

Friends: friendsofabg@gmail.com