

# The Auckland Garden

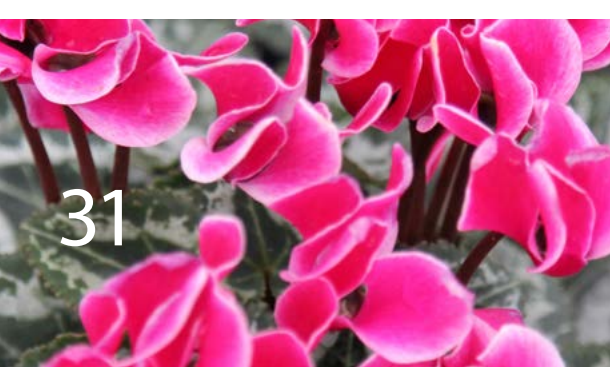
Newsletter of the Auckland Botanic Gardens and Friends

September 2023

The AGM Issue







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**Auckland  
Botanic Gardens**  
102 Hill Road,  
Manurewa,  
Auckland, 2105

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**Contributions to the  
newsletter are welcome**  
Material for the December 2023  
issue should be submitted by  
3 p.m. Friday 3 November 2023  
to the Editor  
ross.ferguson@  
plantandfood.co.nz

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### Images

Front cover: *Allium sphaerocephalon*  
Opposite page, clockwise from top left:  
*Streptocarpus*, Laurence Speedy at the  
Tree Crops conference and flowers at  
Zealandia Nurseries.

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# Front Cover: *Allium sphaerocephalon*

Jack Hobbs led a very successful trip to the United Kingdom earlier this year. He sent back some very enticing photographs of the gardens and plants the group saw. Particularly noteworthy were the displays of *Allium* species they saw at the Hampton Court Garden Festival. Jack's photograph of *Allium sphaerocephalon* (previously known as *A. sphaerocephalum*) is on the cover of this newsletter. This allium is commonly known as the "drumstick allium". It is native throughout Europe to the Caucasus, Iran and northern Africa.

It has egg-shaped flower heads on long slender stalks, up to 60-80 cm tall. The florets turn from green to a delightful

soft purple/maroon as they mature. Each flower head is therefore bicoloured as the florets change colour down the flower head.

It is easy to grow in well-drained soils in full sun. It is successful in the Botanic Gardens. Flowering is in late spring to early summer. It is excellent as a cut flower being long lasting, up to several weeks in the vase. Fortunately, the flowers have no scent but the bruised leaves have an onion aroma.

*Allium sphaerocephalon* has been awarded the Royal Horticultural Society's Award of Garden Merit.

Ross Ferguson

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Keith Hammett, President, Royal New Zealand Institute of Horticulture, congratulating Jack Hobbs on receiving the Horticultural Communicator Award, 2022.



# Friends of the Auckland Botanic Gardens 2023 Annual General Meeting Notice

The 40th Annual General Meeting of the Friends will be held on Saturday 28 October 2023 at 2.00 p.m. in the Friends and Volunteers Building at the Auckland Botanic Gardens, 102 Hill Road, Manurewa.

Please note the format and timing of the AGM: the meeting is in the afternoon followed by a talk and then drinks and nibbles.

For catering purposes, please RSVP to [friendsofabg@gmail.com](mailto:friendsofabg@gmail.com) or leave a message with the Friends Administrator 021 122 7418 by 20 October if you will be attending the AGM and the social event to follow.

All Friends are encouraged to attend the AGM and to nominate candidates for election to the Executive Committee. You may wish to stand yourself.

Nomination forms are enclosed with this newsletter or may be obtained from the Administrative Assistant (email: [friendsofabg@gmail.com](mailto:friendsofabg@gmail.com))

Please remember that only current financial members may nominate or vote.

## AGM programme

2.00 p.m.  
AGM, Friends and Volunteers Building.  
Please bring this issue of *The Auckland Garden* with you as it contains the agenda and reports.

3.00 p.m.  
Talk by Jeff Jones on his recent trip to the United States funded by a Buchanan award.

4.00 - 5.00 p.m.  
Drinks and nibbles.

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## Election of officers

The retiring 2022-2023 Executive Committee was as follows:

President	Viv Canham	Ross Ferguson
Vice President	Cleone Campbell	Dianne Glenn
Past President	Liz Powell	Barbara Harvey
Treasurer	Linda Christie	Heather Hine
Secretary	Laure Lamason	Ex officio
Committee	Deidre Barry	Jack Hobbs (Group Manager, Botanic Gardens)
		Administration
		Irene Horton



## The 2022-2023 Trustees were as follows:

Chair	Viv Canham	Two co-opted representatives:
Treasurer	Linda Christie	Gary Hadfield
Secretary	Irene Horton	Simon James
Two representatives from the Friends Executive Committee:		Auckland Council representatives:
	Dianne Glenn	Cr Christine Fletcher, Auckland Council and Angela Cunningham- Marino, Manurewa Local Board (Lead) Heather Andrew (Alternate)
	Liz Powell	

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# AGM agenda

1. President's introduction
2. Apologies
3. Minutes of the Annual General Meeting held on 29 October 2022
4. Matters arising
5. Presentation of President's Annual Report
6. Presentation of Annual Accounts
7. Motion of thanks to the Auditor
8. Appointment of Auditor
9. Presentation of Friends Birthday Gift to the Gardens
10. Friends Buchanan Award
11. Trustees Report
12. Election of Officers
13. Election of Trustees
14. Gardens Report
15. General Business

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# 2022 AGM minutes

From the 39th Annual General Meeting of the Friends of the Auckland Botanic Gardens Inc held in the Friends Building at the Auckland Botanic Gardens on Saturday, 29 October 2022 at 2.00 p.m.

1. President's welcome and introduction:  
President Liz Powell welcomed the 35 Friends and visitors present.
2. Apologies:  
Pat James, Holly Powley, Glenys Sibun, Vanessa Gibbs, Barbara Harvey and Holly Roche. Moved that the apologies be accepted - Liz Powell/Linda Christie - Carried.
3. Minutes of the 38th Annual General Meeting held on Saturday, 22 January 2022.

This meeting was postponed from the original date of 30 October 2021 owing to the COVID-19 lockdown.

These minutes were circulated with the agenda and other reports as part of the September 2022 issue of *The Auckland Garden*. Moved that the minutes as circulated be taken as read and accepted as a true and correct record- Liz Powell/ Ross Ferguson - Carried.

4. Matters arising:

There were no matters arising.

5. President's Annual Report:

This report has been circulated with the AGM material in the September 2022 issue of *The Auckland Garden*.

Liz Powell acknowledged leaders of the various activity and volunteer groups- Art Group: Lesley Alexander; Growing Friends: Bronwen Rowse; Wiri Rambler: Kate Moodie & John Yelavich; Library Management Group: Heather Hine for the Library Volunteer Roster; Photographic Competition: Dianne Glenn & team; Newsletter: Ross Ferguson and Kim Stretton.

She also thanked the committee, Linda Christie as Treasurer, Laure Lamason as Secretary, and Irene Horton as Administrator. She also thanked the Gardens staff for their work over the year.

Moved that the President's report be accepted - Liz Powell/Dianne Glenn - Carried.

6. Presentation of Annual Accounts

Linda Christie as the Friends Treasurer reviewed the content of the annual accounts, copies of which were circulated at the meeting. The finalised report will be on the Charities website.

Expenses and investments were unfortunately down because of COVID.

Final distribution of Edgeworth estate had been received.

Moved that the Annual accounts be received - Linda Christie/Heather Hine - Carried.

7. Motion of thanks to the Auditor, Anuksha Talpade of BVO - Liz Powell/Linda Christie - Carried.

8. Appointment of Auditor

Moved that Anuksha Talpade of BVO be reappointed as auditor, subject to her acceptance - Linda Christie/ Viv Canham - Carried

9. Presentation of the Friends' Birthday Gift to the Gardens

This year's Birthday Gift is a Mobility Scooter, to replace an aging machine. This was approved by the Friends Executive Committee at its August meeting.

10. Friends' Buchanan Award

Jeff Jones applied for the Buchanan Award to travel to Chanticleer and Longwood Gardens in the USA in June and July 2023. The choice of gardens was to support his upcoming management of the Gardens perennial collections. His application was accepted by the selection panel.

Because of the rising cost of travel, it was recommended that the Buchanan Award be increased to \$12,000.00 from its current \$10,000.00.

Moved that the annual Buchanan Award be increased to \$12,000.00 - Liz Powell/  
Cleone Campbell - Carried.

11. Trustees' report

The trustees' report was circulated with the agenda and was taken as read. Moved that the Trustees report be accepted - Liz Powell/Dianne Glenn - Carried.

12. Election of Officers and Executive Committee Members

The list of nominations was as follows:

President	Viv Canham
Past President	Liz Powell
Vice-President	Cleone Campbell
Treasurer	Linda Christie
Secretary	Laure Lamason
Committee	Deidre Barry
	Stella Cattle
	Ross Ferguson
	Barbara Harvey
	Heather Hine
	Dianne Glenn

Moved that the nominated Executive Committee members as listed be approved - Liz Powell/ Peter Canham - Carried.

Ex Officio	Jack Hobbs
Administrator	Irene Horton

Kate Moodie who is standing down from the Committee was thanked for her work and support over many years.

It was noted that there were vacancies on the committee. Nominations from the floor could not be taken, but members can be co-opted. Any members who could be interested should contact the President.



Viv Canham, the incoming President, said she was looking forward to her time as President and mentioned she had a few new ideas to try to get more members, including possibly introducing a monthly Friends Day with tea and interesting talks and visits, and monthly emails with new events. A bigger project would be to increase the size of the Friends Building to enable a larger rentable space.

She thanked Liz Powell for all her hard work over the years and presented her with a bouquet of flowers.

### 13. Election of trustees

There are three changes to the Trustees. Bill Burrill who is standing down and Graeme Hauer and Barbara Myron whose tenure ends at this AGM were thanked for their support during their time as Trustees.

Chair	Viv Canham
Treasurer	Linda Christie
Secretary	Irene Horton
Two representatives from the Executive Committee	
	Dianne Glenn
	Liz Powell
Two co-opted representatives	
	Garry Hadfield
	Simon James

The two Council representatives on the Trustees have not yet been confirmed following the recent elections. Appointment is expected soon.

Moved that the members as listed be confirmed as Trustees - Liz Powell/Ross Ferguson - Carried.

### 14. Election of life members

Lesley Alexander, Bronwen Rowse, Garry and Judi Hadfield were nominated as Life Members of the Friends.

Ross Ferguson read the citations for Lesley Alexander and Bronwen Rowse. Jack Hobbs presented the citation for Garry and Judi Hadfield. The citations will be published in the next issue of *The Auckland Garden*.

Moved that we accept Lesley Alexander, Bronwen Rowse, Garry and Judi Hadfield as Honorary Life Members - Liz Powell/Ross Ferguson - Carried.

Flowers and Life Membership badges were presented to Lesley Alexander and Bronwen Rowse. Garry and Judi Hadfield were unable to attend as they were travelling.

15. Gardens report - Jack Hobbs

The full report is contained in the September issue of *The Auckland Garden*.

Major event of the year was the taking over the Domain's Horticultural Services in April with the objective of integrating their team with the Gardens team.

It was sad to lose Bec Stanley and Julia Watson to other positions within Council but he welcomed Paul Swift and Barbara Wheeler.

Sadly, Graeme Platt, Terry Becher and Claire Jew (wife of Phil) had passed away during the year.

He thanked the Friends Executive Committee and volunteers for the huge contribution they make to the running of the gardens. Thanks especially to Liz Powell.

16. General business. There were no further items for General Business.

The meeting closed at 2.55 p.m.

Signed as a true and correct record

.....  
Date .....



# Trustees AGM Report, 2022/23

The Trustees did not have occasion to meet as a group during the 2022/23 year, necessary business being conducted via email.

There was one request for approval for spending above the Executive Committee's allowable limit. This was confirming \$50,000 for SitG.

The Trustees are kept informed of Friends

activities and decisions through Executive Committee minutes, financial reports and the quarterly newsletter.

We thank the Trustees, Linda Christie, Angela Cunningham-Marino, Christine Fletcher, Dianne Glenn, Garry Hadfield, Jack Hobbs, Simon James and Liz Powell for their ongoing interest and support and service to the Friends.

V. Canham, Chair

# President's Report for 2022/2023

My first year as President of the Friends has whizzed by. I really enjoy working with the Committee as they are a hardworking group of people who are passionate about the Gardens. They commit their time and energy to achieve the Friends' goals - furthering staff education, enhancing the Gardens and providing an interesting and worthwhile society for you, the members.

This year my target was to improve communication with Friends members and to arrange more events and entertainment for you.

To achieve this, I write the monthly "Just Between Friends" news-sheet with news of Gardens happenings. This is e-mailed out to members - if you aren't receiving it and you wish to do so, please forward your e-mail address to our Administrator Irene Horton - friendsofabg@gmail.com.

The news-sheet is a good forum to publish articles from staff. Barbara Wheeler tells us what is good to see in the Gardens in the current month and Paul Swift writes about activities in the Gardens and news on volunteers. The Growing Friends tell us about any especially good plants that they have for sale at that time and we've recently had lovely articles from Jeff Jones, reporting on his Buchanan Award tour of America. Jeff is the speaker at our up-coming AGM and I am looking forward to hearing his talk.

I also list in date order the events organised by both the Friends and by the Botanic Gardens so that we don't miss anything (an essential reminder as we get older and our brains don't keep up).

Vice President Cleone Campbell and Committee member Barbara Harvey

arrange our new monthly "Friends Days Out". We've enjoyed some great talks and visits and they have more good ideas in the pipeline. Barbara is managing our Spring Bus Trip - details of which are in this newsletter. Thank you Barbara.

This year we received further funds from the very generous Edgeworth bequest. Over the years the Friends has received several similar gifts. This, now quite considerable, fund is invested and the interest is used to further the staff's education and for events at the Gardens.

We rely on the income from the Growing Friends led by Bronwen Rowse and the Wiri Rambler led by Kate Moodie too. In the year ending June 2022 Growing Friends raised \$11,353, in the year ending June 2023 the figure was \$22,768. Wiri Rambler raised \$1,275 to June 2022 and \$8,982 to June 2023. The Wiri Rambler team has been badly hampered by Covid and the wet winter, hence their take is down on what it usually is. These are amazing figures! Sincere thanks to all those volunteers who work in the Growing Friends Group and the Wiri Rambler. Thanks too to the volunteers operating in other parts of the Gardens who generously give their time for the betterment of the ABG.

We celebrated our 40th Anniversary in February. A time to reflect on all the toil and energy put into the Gardens by Friends members over those years.

My heartfelt thanks to the present Committee for their support, good humour and good initiatives over this past year:

Liz Powell (Immediate Past President)

Cleone Campbell (Vice President)

Laure Lamason (Secretary)

Linda Christie (Treasurer)  
Deidre Barry  
Ross Ferguson  
Dianne Glenn  
Heather Hine  
Barbara Harvey  
Stella Cattle (resigned part way through the year)

The Committee would appreciate having a couple more enthusiastic people come along and join them. If you would like to be involved in the support of our Gardens, then please contact me - viv.canham@gmail.com or 021 570 149.

At present we meet in the Friends Building at 10.15 a.m. on the second Friday of the month, for a cuppa and a chat before getting down to business. Jack Hobbs attends and we hear his report. We also have reports from various areas of interest: Sculpture in the Gardens, membership, newsletters from other Garden's Friends Groups, the Library, Growing Friends, Wiri Rambler, Website, Health & Safety, Photographic Competition, Newsletter, the "Just Between Friends" news-sheet and "Friends Day Out". Plus the usual Financial Reports, Correspondence, General Business etc. Events are planned. Staff education funding approved. Projects formulated.

This takes us through to around 11.30 a.m. to 12 noon. We're a busy group, with considerable responsibilities but the work is spread around and isn't onerous.

If you would like to be part of this, please get cracking NOW and let me or our administrator Irene know. Our meeting days/times can be altered to suit the Committee.

Big thanks to the Gardens Staff for all their work making the Gardens the wonderful place that we enjoy so much. At our recent Soup Day, Pippa Lucas and Mark Fielder spoke about their trip to the NZ Gardens Trust Conference, funded by the Friends. The audience enjoyed hearing the ideas that they brought back which they would like to incorporate into our Gardens.

Thank you to Liz Powell for her ever-efficient organisation of the Soup Day. It is an event that is very popular with members. We nibble on canapes, sip steaming bowls of soup brewed up by Committee members and enjoy cheese and fruit to finish.

And thank you too to Ross Ferguson for the production of this Newsletter. It is an excellent publication which is much anticipated every three months.

It has been a bleak couple of years with Covid, floods and a winter of continual rain but let's look forward now to sun warming our bones and the beautiful Spring blossom lifting our spirits.

Regards to all,

Viv Canham

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# Auckland Botanic Gardens - Annual report 2022/2023

This annual report covers Botanic Gardens activities from 1 July 2022 until 30 June 2023.

## Visitation

Annual visitation to the Gardens was 934,178. Factors impacting this number were the postponement of Sculpture in the Gardens, and poor weather for much of summer and autumn.

Market research indicates 95% of visitors were Satisfied or Very Satisfied with their visit to the Gardens.

This compares to:

- 96% in 2021/22
- 99% in 2020/21
- 93% in 2019/20
- 94% in 2018/19

93% of respondents were Satisfied or Very Satisfied with the Facilities, and 91% with the information we provide.

Annual rainfall was 2351.35 mm, up 61% on the previous year and an increase of 136% since 2019-20. Although the Gardens and the Domain escaped serious storm damage, these events had a significant impact on our plant collections and operations.

Rainfall recorded at the Gardens in recent years:

2022-23	2351.35 mm
2021-22	1464.95 mm
2020-21	1173.12 mm
2019-20	994.05 mm

The Domain sports fields were flooded, and the Duck Pond overflowed. Sixteen incidents related to tree damage were logged including some trees that were felled, but otherwise damage was relatively minor.

On Tuesday 16 January around 11 a.m. the Gardens were evacuated on instruction from police responding to a serious assault.

## Friends & Volunteers

A function to celebrate 40 years since the Friends of Auckland Botanic Gardens were established was held on Thursday 23 March. Total Botanic Gardens volunteer hours were 5803, a 59% increase on 2021-22 (post Covid restrictions). 122 volunteers regularly work on site.

## Friends Horticultural Reference Library

An extensive collection of books collected by the late Graeme Platt was donated by Rosemary Platt, sorted by Ross Ferguson and appropriate volumes were accessioned into the library.

## Sculpture in the Gardens

Sculpture in the Gardens was deferred until 2024 owing to uncertainty around funding.

## Buchanan Award

Jeff Jones was the Buchanan Award recipient for 2022. He departed for the United States on Saturday 17 June and returned in mid-July.

Angela Anstis is the Buchanan Award recipient for 2023. It was also recommended that Joanna Mason be provided support towards undertaking the New Naturalism Tour in the United Kingdom from 25 August to 7 September 2023.

## Visitor Services

The Gardens were awarded Qualmark gold, indicating high quality provision of visitor services.



A new mobility scooter was funded by the Friends as their annual birthday gift.

New mobility scooters were donated by Bill Burrill and by an anonymous donor.

The ABG website has moved from an external provider to platform management under Auckland Council.

The website attracted 954,747 page views compared to 816,584 the previous year. Searches on the Plants for Auckland database section increased to 416,253 and the Garden Advice section was searched 30,500 times.

Facebook followers are now 16,087 with a reach of 1,015,274.

## Events

The visiting artist was Neal Palmer whose very successful exhibition ran over the summer months from 7 December.

Eye on Nature school days were successfully held from 13 to 16 March.

As part of the Auckland Matariki Festival we held a successful display of harakeke in the gallery from mid-June through to the end of July. This was supported by our weaving community and attracted considerable visitor interest.

## Plants and Gardens

The Gardens retained its NZ Gardens Trust (NZGT) 5 Star Rating following the assessment undertaken in November 2022. In June 2022 the American Camellia Society bestowed the Aubrey Harris Hybrid Award on *Camellia japonica* 'Dancing Blaze' bred by the late Neville Haydon. NZ Camellia Society members and Haydon family members congregated at the Gardens on Monday 16 January to recognise this prestigious award.

In the Gondwana Arboretum a probiotic approach is being taken to enhance plant health by inoculating trees with *Trichoderma* which increases the resistance of plants to soil-borne pathogens. Dr Jenny Aitkin sampled soil from around our stand of *Agathis robusta* and found these samples lacked *Trichoderma* populations, unlike the other stands of healthier trees she sampled. Trees in the arboretum were treated in early May with *Trichoderma* and other mixtures of beneficial organisms, and these treatments will be repeated in October. Some trees were treated with *Trichoderma* only, some with combinations of the different mixtures, and some not treated at all as a control so the effectiveness of the treatments can be ascertained as we monitor changes in health and vigour over several years.

15 king palms (*Archontophoenix alexandrae*) and 5 *Dypsis baronii* have been sourced from Northland nurseries to replace the Bangalow palms that we culled as they are now deemed pest plants.

A total of 21 palms from the former Oceanic Palms were planted in the Palm Garden in December. Most of the palms are new additions to the Palm collection and one is a very rare species we had lost.

## Assets & Renewals

The overflow carpark and walkway lighting project was completed in November with CCTV cameras also installed.

New planter boxes were installed in the Edible Garden in November. These have been constructed after consultation with Bee Lab to meet accessibility standards and allow all members of the community to carry out gardening at a height that meets their abilities.

The Edible Garden pathways were widened to allow for easy traverse of mobility scooters

and wheelchairs. A new concrete pathway was installed to link up the main Edible Garden entrance to the Kiwi Backyard.

A hemp wall was installed in the Unitec Education Centre.

Improvements in the nursery included new stainless-steel benches in the potting shed, two new seed screening machines, recladding of the large plastic tunnel house and new concrete pathways.

Extra drinking fountains have been installed and the retaining wall in the Trial Garden was renewed.

The plant accession tag embossing machine was replaced.

## Education

5923 school children participated in "Learning through Experience" programmes over the year.

## Conservation & research

We continued to take cuttings of rātā moehau (*Metrosideros bartlettii*) to supply plants to Ngāti Kuri as part of their restoration project for this taonga species that at last count has only 12 wild individuals remaining.

Our significant collection of *Pimelea eremitica* from Mangōnui Bluff was maintained and cuttings were provided to Te Roroa for return to the wild.

Cuttings were taken of *Clianthus puniceus* to increase our population of this species, now extinct in the wild, for future work with Ngāti Whātua o Kaipara.

*Veronica jovellanoides*, which exists in only one location in the wild, was propagated. A recent site visit after the summer floods found only two plants.

The Gardens are growing plants to supply research programmes such as kauri (*Agathis australis*) for Plant & Food Research work on kauri dieback and poroporo (*Solanum aviculare*) for Manaaki Whenua Landcare Research work on biocontrol for woolly nightshade.

Discussions are underway with both Auckland Council Environmental Services and the Department of Conservation on their threatened species projects and planning for future collaboration on conservation projects.

## Nursery

The nursery produced 60,000 native plants ready for revegetation plantings in Regional Parks.

## Staff development

In November 2022 Jodie McDonnell competed as the Amenity Sector finalist in the national final of the Young Horticulturist of the Year competition against the winners from the viticulture, landscaping, commercial horticulture, arboriculture and floristry sectors. She placed second in the Countdown Innovation Award.

The horticultural apprenticeship programme was reviewed and now encompasses level 3 and level 4 certificates. Five staff from the Gardens and Domain attended the NZ Gardens Trust conference in Wellington in late March.

Two staff attended the NZ Tree Crops Association conference in March.

Ella Rawcliffe attended a conference on the management of myrtle rust held in Sydney in June.

Pippa Lucas attended the Australian Landscape conference in Melbourne with funding received from the Young

Horticulturist of the Year competition.

## Staff

Jack Hobbs received the Award of Merit of the International Plant Propagators' Society New Zealand Region for meritorious service to the IPPS New Zealand Region and to New Zealand horticulture.

Emma Simpkins' final day was Friday 5 August 2022. Ella Rawcliffe commenced as Botanic Records & Conservation Specialist on Monday 12 September.

Tony Carson resigned from his horticulturist role and will finish at the Gardens on 16 December after more than 40 years of loyal service.

Megan Spittal was appointed as a horticultural apprentice in February to replace Andrew Curry.

Melanie Hawthorne from the Domain horticultural team has been appointed to fill the horticulturist vacancy at the Gardens.

Toni Giarcon commenced as the new Head of Regional Operations in October. Following a recent restructure Mark Bowater has been made redundant and Mace Ward has moved to a governance role.

## Domain

After undergoing significant renewals and seismic strengthening, the Winter Gardens Temperate House reopened on Friday 1 July 2022, and the Tropical House reopened on Wednesday 15 March with a ceremony attended by the Deputy Mayor and other officials.

The Domain Winter Gardens were awarded an Enduring Architecture award at the 2023 Auckland Architecture Awards. This award celebrates projects that have stood the test of time and is awarded by Te

Kāhui Whaihanga New Zealand Institute of Architects.

Work continues on the development of a Domain Plant Collections Guidelines document. The purpose of the Guidelines is to provide a clear framework for delivery of horticultural services. These include the management and future development of the Winter Gardens displays, plant collections and amenity plantings, nursery operations and the services that support them. Emma Oliver is coordinating the project. Barbara Wheeler is compiling the individual collection statements.

The Domain collective agreement was ratified in December and the staff now have pay parity with equivalent roles at the Gardens and are on salaries rather than wages.

A ceremonial planting of a pōhutukawa (*Metrosideros excelsa*) by the acting Prime Minister took place on Sunday 7 May to commemorate the coronation of King Charles.

Improvements to Domain assets included a new stainless steel bench top in the nursery, a new display stand for the Temperate House and new irrigation systems in the nursery to reduce staff time spent on this activity.

The Domain Facebook page has 6,100 followers.

## Domain staff

Melanie Hawthorne from the Domain Horticultural team moved to the Gardens Horticultural Team in May 2023.

Charlotte Vodanovich left the nursery team in October 2022 and was replaced by Tia Sugiara who started in May.

Jack Hobbs

# Wiri Rambler Report

This summer the wet and windy weather has prevented us operating on many weekends. Also a large number of our special bookings were cancelled. After our shutdown owing to Covid we started operating a system of tickets sold at the Visitor Centre for a certain time on the day. This system is operating well and has made our task easier not handling money or queues.

The team has been provided with warm green jackets, great for cold winter days.

We were sad when John Yelavich who

for ten years had weekly mechanically checked and cleaned the Rambler had to retire owing to health issues. Lester Notley has taken on this task. I would like to thank the Garden staff for all the support and help they give us. Also thanks to Deidre Barry who has joined our team as a backup administrator.

My special thanks to our team members who have all remained loyal and enthusiastic despite all our shutdowns. If you ask any of them why they volunteer on the Rambler expect the reply "because we so much enjoy it".

Kate Moodie

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## Library Report

It has been a busy year in the Library once we were able to open up to the public again after the Covid closures. We have completed a number of initiatives including installing some additional shelving and finalising some significant size book donations (many thanks to Ross Ferguson for sorting through the majority of these books). The Committee have a thorough selection, review and disposal process in place so that we can ensure we are taking books that add to the collection and those that are not of value to us are distributed to other groups who may be able to make better use of them.

Graham Robertson has diligently overseen the binding of Journals and ensuring that any missing issues are identified. We are also completing some work related to Rose Breeding and Nursery Catalogues and working alongside the Rose Society to fill in any gaps in our collection of their publications.

We had a gathering of volunteers where old and new members of the team were able to meet each other and we took the opportunity to review some health and safety processes with assistance from Renton. We just couldn't operate the Library without our wonderful volunteers (and of course Heather Hine who co-ordinates the roster) who give up their time to come in – thanks you all once again.

Aesthetically we have been able to re-hang and relocate some paintings (including a painting of Graeme Platt donated by his family) and we are in the process of adding new plaques.

We also welcomed some librarians from Avondale Library who were very impressed with the library and the resources we have here. Liz Powell was able to explain the history of the Library and the connection with the Friends. It was great to meet them

and some exciting potential projects/ collaboration may result from this visit which is great to see.

acquiring new books for the library and thanks to Carolyn Stringer we now have new Book Recommendation form for all new suggested titles.

The Committee have been active in

Paul Swift

### New titles include:

Book title	Author
The Soils of Aotearoa New Zealand	Alan E Hewitt <i>et al.</i>
Ten tomatoes that changed the world: a history	William Alexander
New Zealand gardens to visit	Rosemary Barraclough & Juliet Nicholas
Houseplants and design: a New Zealand guide	Liz Carlson
Botanical drawing using graphite and coloured pencils	Sue Vize
The science of compost: life and death in the garden	Julian Doberski
The botany of beer: an illustrated guide to more than 500 plants used in brewing	Giuseppe Caruso
Great gardens: 12 of New Zealand's best	NZ Life and Leisure
New Zealand fungi	Rebecca Bowater
Chasing plants, journeys with a botanist through rainforests, swamps and mountains	Chris Thorogood
No dig	Charles Dowding
The History of the world in 100 plants	Simon Barnes
Native plants of Aotearoa	Carlos Lehnebach <i>et al.</i>
Yates top 50 fragrant plants	Angie Thomas
Petal power: 12 plants with personality to grow for the garden and vase	Julia Atkinson-Dunn
The joy of gardening	Linda Hallinan
Gardening in NZ month by month	Dennis Greville
Above the treeline	Alan F Mark
The edible backyard	Kath Irvine
Nature in the city	Mike Wilcox <i>et al.</i>
Gordon Collier's 3 gardens	Gordon Collier
Entangled life	Merlin Sheldrake
Ranunculus (Beautiful buttercups for home and garden)	Naomi Slade
Fungi of Aotearoa	Liv Sisson



# Friends Art Group Report

As I look over the past year, I see our group going from strength to strength, new members joining and more experienced members generously sharing tips and techniques for using colour pencil, watercolour and more. Lots of laughter and chatting as well as some painting goes on in the Friends Building each month with friendships formed and strengthened each time we meet.

Our usual bi-monthly artist demonstrations from local artists were thoroughly enjoyed. Last August we enjoyed a delightful talk and slideshow about the artist Mary Delaney by Ross Ferguson, after which we had a go at making plant pictures with coloured paper in the style of Delaney which proved much harder than it looked. In October we tried our hands at colour pencil techniques with Wilma Blom who later in the year got us painting with gouache, an opaque watercolour on black paper. Unfortunately, the cyclone interrupted our first meeting of the year in January which meant that we missed out on Jenny Haslemeier demonstrating her colour pencil techniques for us. Hopefully next time she is over from Scotland, she can fit us in her schedule. February saw us drawing bigger and in a more abstract style than we were used to with Neal Palmer, this year's Artist in Residence, which was quite a challenge for those who liked drawing small plants. In April we made concertina style sketchbooks for nature journaling or taking on holiday.

Our annual exhibition, *Hidden Secrets* was a great success with a good number of paintings, cards and prints sold. I was

delighted to see a large range of different styles of work and mediums used; judging by comments from the public, they also enjoyed seeing all the different styles.

Liz Powell, Sandra Morris and I are still working on organising the Botanical Art Worldwide exhibition to be held in 2025. The theme this time is heritage and useful crops so we can expect a wide range of plants, not just native plants in the artworks submitted. We have a good number of our group expressing an interest in submitting work as well as many from around the country but would love more. If you have any artists or budding artists in your family or know someone who might be interested, please let them know. We are open for expressions of interest and information can be found on the Botanical Art Society of New Zealand website – [www.botanicalartnz.org](http://www.botanicalartnz.org)

We now have two venues for the exhibition to travel to - Wellington Botanic Gardens and the Ashburton Art Gallery - after leaving the gardens here. Ideally another in the South Island would be great but we still have time to find somewhere.

Talking of art exhibitions, I went to the UK for a family wedding and was lucky enough to see New Zealand botanical artist Sue Wickison's exhibition, *Plants of the Qur'an*. Sue has spent the last eight years working with botanist Dr Shahina Ghazanfar of the Royal Botanic Gardens Kew to produce a book depicting all of the plants mentioned in the *Holy Qur'an*. All thirty-five of her large watercolours were on show at the Shirley Sherwood Gallery in Kew Gardens – wow, they were absolutely

amazing! To see all her paintings and the background behind the whole project go to <https://www.quranicplants.com>.

At our meeting on 26 August, we had Auckland artist, Cathy Brickhill demonstrating and talking about her botanical 3D embroidery – I for one am intrigued as to how she creates her intricate designs with her sewing machine

as my ability with a sewing machine only extends to sewing straight-ish lines!

We welcome new members so if you would like to join us, get in touch with me, Lesley Alexander on 021 1617070 or email me – [lesley.alexander.smith@gmail.com](mailto:lesley.alexander.smith@gmail.com) and I can put you on our mailing list.

Lesley Alexander

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RNZIH planting in the Gondwana Arboretum, see page 22. Rosemary Platt, assisted by Jeff Jones and Andrew Maloy planting *Araucaria angustifolia*.



# Jack's update

In winter I was fortunate to escape the incessant rain and spend several weeks enjoying the gardens and weather of Singapore and the UK. Most time was spent in England with a lovely group of people visiting some truly outstanding gardens. Every garden was magnificent and I cannot cite a favourite, but everyone in our tour party agreed that being led around Alnwick Castle by Jane Percy, the Duchess of Northumberland, was a highlight. I did not expect such a down-to-earth woman who is so passionately devoted to ensuring her gardens are accessible to everyone, and that visitors feel it is “their garden, not hers”. She has vested the garden into a trust so that all revenue now goes into supporting the ongoing maintenance and funding the numerous changes she has driven over the past twenty years. She has faced severe criticism over this new direction, including several volunteers quitting when she introduced swing seats into the orchard. She weathered that storm and told us some of those same volunteers have now returned. Her experiences reminded me a little of the backlash we faced when we stopped spraying some twenty years ago, and how this is now a relatively accepted and almost mainstream practice.

I had been to many of the gardens before, but in the 10 years since my last visit one overwhelming change was evident. Although the aesthetic is still important, now it seems much greater importance is placed on gardens supporting biodiversity. They are habitat for bees, birds, bugs, bacteria and all the beneficials

that thrive in a healthy garden. It seemed that few plants are now recognized as weeds judging by the acceptance of thistles, ragwort, gorse, blackberry, and numerous other plants, such as *Buddleja*. That over here are so despised and eagerly eradicated. Our native flora is unique and relatively fragile so I am not suggesting we adopt this attitude altogether, but I do think there is much we can reflect on.

We were all captivated by the displays at Hampton Court Garden Festival. I was spellbound by the plant displays in the floral marquee, especially the saracénias, alliums and array of wonderful bulbs such as fritillarias. However, it was the *Agapanthus* display that occupied a prominent central location that really intrigued me. Included was information on the reproductive phases of *Agapanthus*, and instructions on how to ensure optimum performance. I was amused by the special *Agapanthus* fertiliser on sale with instructions for it be applied fortnightly from spring until autumn.

There is remarkable contrast in attitudes to *Agapanthus* between us and the UK where it is an esteemed as one of their best blue-flowered garden plants including one cultivar named ‘Black Jack’ being judged the Chelsea Flower Show “Plant of the Year” for 2023. Here it is widely viewed as a despicable weed, its tarnished reputation meaning its beauty is lost on most. But then it seems there is no such thing as a weed in the UK anymore, everything is embraced for its contribution to supporting biodiversity.

It has been a tough year for our Gardens team, and I am full of admiration for the way they have soldiered on without complaint and kept everything in such excellent condition. The same applies to the team at the Domain who have “weathered the storm” and produced such a wonderful experience for Aucklanders. On a wet winter's day what better place is there than our treasured Winter Gardens.

In early May the Friends visited the Winter Gardens and the Auckland Museum herbarium where we listened with great interest to their informative staff. The herbarium's old-world atmosphere was only embellished by the creaky floorboards.

The Pā Harakeke exhibition in the Visitor Centre gallery included some wonderful works created by our community of weavers. Congratulations to our team of Paul Swift, Angela Anstis, Denise Peck and Mich Newton who made it happen, and to our very talented weavers for making their works available. Paul Swift

writes more about this exhibition in this Newsletter.

In late July celebrations were held to mark the centenary of the Royal New Zealand Institute of Horticulture. Saturday was spent at the Domain where Tracey Hartley (architect, Salmond Reed) spoke about the recent restoration and seismic strengthening of the Winter Gardens. Historian Lucy McIntosh then gave a fascinating account of the history of the Domain from early Māori involvement, Chinese market gardening and the better known period from the New Zealand Exhibition of 1913/1914. The day concluded with a guided tour of the Domain nursery led by Nick Lloyd.

Sunday was spent at the Gardens with award presentations, a talk by me on how gardens including ours are responding to climate change, and finally we planted two trees in our Gondwana Arboretum to mark the centenary. One of the trees, an *Araucaria angustifolia*, was dedicated to the memory of the late Graeme Platt.

Jack Hobbs

RNZIH Domain field trip





# Pā Harakeke exhibition

On the 16 June a new exhibition celebrating the Harakeke Garden and its community of weavers opened in the Visitor Centre gallery. This exhibition was timed to coincide with Matariki and the new public holiday.

Angela Anstis, the Harakeke Curator, has been working hard over the last few years to develop our relationship with the various weavers who come to the Gardens to harvest plant material. We wanted to celebrate these links and demonstrate another way in which we help to connect people with plants.

It has been fantastic watching how the weaving community, under the guidance of Annie Ah Mu (a weaving tutor who has been working here at the Gardens for many years), have come together to share their art works and to also come in to the space to work at some tables here in the Visitor Centre so that public can see the weaving in action and talk with the weavers.

We are also able to reconnect with some of our extended Botanic Gardens whanau by being able to display Kerry Gillbanks's (former Harakeke Curator) wonderful woven cape that she gifted to the Gardens when she left and also to also display one of Neal Palmer's (2022/23 Artist in Residence) amazing harakeke-inspired paintings.

We had a special blessing from our colleague Malcolm Davis from the Council's Māori Outcomes team on the afternoon of 19 July when we were all

gathered to celebrate the exhibition, listen to some wonderful traditional instruments being played and share stories and plan for the future.

It has been wonderful seeing the exhibition come together from initial ideas with Mich Newton, Greg Meylan Shelley Small and Angela Anstis through to this wonderful attraction that has been so popular with our visitors.

Paul Swift

Rawinia Wright woven dress Hine Mihi Ata





# Congratulations

Two members of the Friends were honoured in the recent King's Birthday Honours. We congratulate Sandra Morris and Stella Cattle on their well-deserved recognition.

Sandra Morris was appointed Officer, New Zealand Order of Merit (ONZM) for her services as an illustrator and to education. Sandra started in illustration in the last year of her B.F.A., where one of her final projects was illustrating a children's fairy tale. She then worked on school journals. She completed an M.F.A. in 1990. Her first picture book, *One Lonely Kakapo*, won the Russell Clark award for illustration in 1992. Since then, she has illustrated a number of children's books and has also been involved in community education with adult students. Sandra started up Sandra Morris Illustration Agency promoting New Zealand illustrators locally and overseas and now represents 40 illustrators. She was one of the organisers of the Botanical Art Worldwide exhibition hung in the gallery of the Visitor Centre and painted the leucodendrons on the cover of the September 2022 issue of *The Auckland Garden*.

Stella Cattle was awarded the Queen's Service Medal (QSM) for services to the community and seniors. Stella worked for the Manukau City Council for nearly 40 years, eventually becoming Manager of Civic Events. Following her retirement, she has been involved with numerous local organisations including the Manurewa Local Board, the Citizens Advice Bureau, Manurewa RSA, the World War One Commemoration Committee, the Counties Manukau Age Concern and Auckland Age Concern. She served on the Wiri Licencing Board, was a Board member of the Consumer Council at Middlemore Hospital, the Secretary for the Acacia Cove Retirement Village Residents Association and a Board member of the Manukau Park Advisory Panel. She even found time to join the Executive Committee of the Friends and we were all impressed by her political nous and her common sense.

Ross Ferguson

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*Sarracenia x excellens* at Hampton Court (see page 21)



# Friends Spring Bus Trip

We'll go towards Gordonton to visit four different gardens in the Gordonton area. Firstly the grandeur of Moondance Manor Gardens, followed by Woodlands Estate where there is an opportunity to visit the Historic Places homestead.

Taitua Arboretum will be next followed by Wairere Nursery where we will be shown through their gardens and we can buy unusual plants not often available.

Bring your picnic lunch and drinks for the day, walking shoes, raincoat and money for plants. Friends are welcome to bring a friend.

Any queries phone: Cleone Campbell  
021 212 8579 or Barbara Harvey  
027 2865671 or 09 2638801

<b>When:</b>	Saturday 11 November Leave at 8.30 a.m.
<b>Where:</b>	Meet outside the Visitor Centre, Auckland Botanic Gardens
<b>Cost:</b>	\$55pp Includes entry fees
<b>Return:</b>	Return by 4.30 p.m.
<b>Bring:</b>	Lunch, drinks, raincoat and money for plants
<b>Book by:</b>	30 October
<b>Payment:</b>	Pay online to account 12-3011-0757619-000 before the 30th October. State "Bus Trip" and your name OR pay at the Visitor Centre. Please pay on-time to enable us to order our bus size.

## Jack's upcoming tours

Next year I am excited to be taking a tour of the wonderful gardens of Italy. We start in Venice arriving 16 May, and the following day visit Padua, the world's oldest botanic garden. Our travels will take us through Milan, Lakes Como and Maggiore, Florence and Rome. This tour has been carefully planned to ensure we have captured the very best gardens.

On 15 March I am taking a group to Melbourne for five days with the Melbourne International Flower and Garden Show the main attraction.

Also included are visits to Cloudehill and Heronswood gardens, and the Cranbourne Botanic Gardens and Dandenong Botanic Gardens. Only a few places are still available so you will need to be in quick.

If interested in either tour contact Pukekohe Travel on 0800 785386 or check out their website <https://www.pukekohetravel.co.nz>. I have also left a few brochures at our visitor centre reception.

Jack Hobbs

# *Streptocarpus nobilis* C.B. Clarke

When people think of *Streptocarpus* most think of the strappy-leaved hybrids commonly available as houseplants that come in a dazzling array of colours and patterns as well as being easy to grow once you have mastered some basics. Some people are also familiar with what is sometimes referred to (sensibly but incorrectly) as "*Streptocarpella*" which are stemmed (caulescent), branching plants with coin-sized, green, almost succulent leaves and blue flowers which appear to be identical to those of their strappy-leaved relatives despite the plants looking totally different. These plants thrive in hanging baskets and will flower almost continuously all year with minimum attention.

I have never been sure of the origin of the plants that are available in New Zealand, but I suspect they are of hybrid origin. There are several different clones (at least four) around, one having blue-purple flowers and another tending towards more purple. There is also a larger clone that might be 'Concorde Blue' which I originally obtained from Country Cottage Gardens in Te Puna some 25 years ago. It comes true from seed and when grown well is considerably larger in all respects than the other clones, albeit a little bit more reluctant to flowering in less-than-ideal conditions.

The species *Streptocarpus saxorum* is smaller with paler flowers and succulent leaves. It is distinctively different from the more readily available varieties with its oval, jellybean, succulent leaves. Often

plants labelled *S. saxorum* are mislabelled and are in reality the other cultivars mentioned above.

As a genus, *Streptocarpus* can be roughly separated into four groups:

- the strappy-leaved plants everyone is familiar with;
- "*Streptocarpella*" or caulescent plants which grow an above-ground stem to some degree and are not strap leaved. An example is *S. nobilis*;
- African violets (*Saintpaulia*) which research shows are nestled within the genus *Streptocarpus* and thus evolved from a common ancestor;
- unifoliate plants with single leaves and monocarpic habit.

Within these broad groups there are other divisions in form. The unifoliate plants are unique. As most dicotyledonous seeds sprout they pop up a shoot which has two cotyledons, or seed leaves. From the centre of these, the first true leaves grow which grow into the plant. In *Streptocarpus* this happens slightly differently. The two cotyledons emerge from the seed as per normal but rather than growing equally to full size, one remains tiny and the other grows larger. In the caulescent plants the stem emerges from the centre and grows like any other plant. In the strappy-leaved species, the cotyledon keeps growing and forms the first of these strappy leaves. In the unifoliate plants one cotyledon keeps on growing, and this is the extent of the plant for its entire life which is generally one or two years but in poor conditions as long as it takes to flower and seed.

*Streptocarpus nobilis* is one of the caulescent species as it grows an upright stem to about a meter high. It is therefore very different to what we commonly expect a *Streptocarpus* to look like. It is also unusual in that it is an annual. Even more unusual is that in poor conditions it can remain a unifoliate plant and set seed without growing a stem or even flowering in the regular sense. In good conditions it grows more like a regular plant than one most people would recognise as a *Streptocarpus*. It grows up to a meter tall and then stops. The lateral shoots grow and extend in a limited capacity (without really filling the plant out like say, a coleus, would do) and then when the daylength gets short enough flowering is triggered. Every bud on the lateral shoots develops into flowering buds, producing many more than you would think possible. For a short time, the plant is covered with a mix of deep purple bells and insignificant white tubes (these are cleistogamous flowers – non-opening and self-fertile). As the flowers drop the plant produces copious quantities of tiny seeds. Then it is all over. The plant yellows and dies in the same way the unifoliate plants do after flowering. *S. nobilis* is strictly monocarpic and the seed will sprout everywhere immediately after falling. In my observations it does not matter when the seeds are planted as the plants seem to finish up the same height and will wait, barely growing, until the triggers for flowering arrive. Plants which are sown closer to this time will grow as big as they can until the flowering trigger comes and then flower, even if the plant is still a unifoliate plant.

*Streptocarpus nobilis* is also interesting in that when discs of leaf tissue are excised from the leaves and placed into sterile culture before being exposed to the triggers for flowering then flowers (albeit cleistogamous ones – insignificant but still capable of forming seeds) are formed directly from the leaf tissue.

The excessive seeds formed might suggest that *S. nobilis* is somewhat weedy. In a glasshouse environment this can be the case, but the plants do not thrive outside so it's unlikely to establish as a weed in gardens. The roots are also rather weak and the plants easily removed if they are too numerous. The seeds seem to be spread by wind and don't get very far despite their dust-like nature. They seem to successfully move around attached to people as I have often had them pop up in newly repotted plants without any direct source other than the fact I had harvested seed from other plants earlier in the week. I have not succeeded in making any hybrids using *S. nobilis* and other caulescent *Streptocarpus* and I have not found any reports of either natural or artificial hybrids being found. There are reports of some clones with pale flowers rather than dark ones but I have never seen these or observed much variation in the plants I have grown.

Nick Lloyd

Recommended reading

Hilliard, O.M. and Burtt, B.L. (1971) *Streptocarpus, An African Plant Study*, University of Natal Press.

Möller, M. and Cronk, Q.C.B. (2001) Evolution of morphological novelty: a phylogenetic analysis of growth patterns in *Streptocarpus* (Gesneriaceae). *Evolution* 55(5): 918-929. – available as a PDF free online.

# A thorn amidst the roses

A thorn amidst the roses – improving invertebrate and endophyte diversity in rose gardens.

One year ago, I embarked on a Master's project to determine whether using pesticide sprays in rose gardens influenced the diversity and abundance of insects and endophytes. My thesis was submitted on the 17 July and includes some interesting findings which I hope will benefit rose growers.

Roses are thought to be difficult to grow without chemicals. Increasing health and environmental concerns have led to the development of more sustainable practices in horticulture, involving the cultivation of disease-resistant plants and reductions in agrichemical usage, for which the Botanic Gardens has been a leader for more than 20 years. As part of my study, I surveyed 10 rose gardens from around the Auckland region, including the Gardens. I collected invertebrates, cultured endophytes and sampled surface soils from three roses in each garden.

Insects were sampled using pitfall traps and leaf litter samples across two seasons (winter and summer). A total of 23 families of invertebrates was collected from gardens, with the most common being springtails and ants. Six species of beetles (Coleoptera) were collected, all being non-native species. Rose gardens with a higher plant diversity typically had a greater diversity of invertebrates, while those that maintained a monoculture of roses had an abundance of a few generalist

species, such as ants or amphipods. Sensitive species such as Coleoptera were found to be more abundant in rose gardens with high plant diversity and low spray intensity. Soil samples were found to contain levels of heavy metals (particularly lead and copper) elevated above natural background levels in all but two rose gardens (Auckland Botanic Gardens and Takapuna Rose Gardens). Two commonly used persistent pesticides (DDT and Dieldrin) were not detected in any of the soil samples.

Under the guidance of endophyte expert Dr. Jenny Aitken, I collected root samples from roses in four gardens, cultured these in a laboratory and then DNA-sequenced the isolated endophytes to determine their species. All fungal endophytes belonged to the genus *Trichoderma*, one of the most prevalent culturable species of fungal endophytes. All except one bacterial endophyte belonged to the genus *Pseudomonas*, another common endophyte genus, ubiquitous in plants. Their presence in roses suggests that the samples were taken from healthy and well-established rose plants. Additionally, their presence in some of the sprayed rose gardens suggests they are able to withstand at least some level of agrichemical spray and soil pollution and may also be able to offset the effects of harmful chemicals in these gardens. The application of endophytes to rose plants is likely to enhance plant growth and resistance to pests and diseases, potentially reducing the need for harmful chemical use.



I expected that invertebrate and endophyte diversity would be greatest in rose gardens that use no, or limited sprays. However, I found no statistically significant relationship between pesticide spray usage and invertebrate or endophyte diversity in rose gardens. This is likely to be due to a few reasons. Firstly, it is likely that rose gardens using agrichemicals host a few exotic generalist species that are tolerant of chemical application or have the capacity to recover following application. Furthermore, pesticide usage in all 10 gardens was found to be relatively low and pesticides used typically had a low toxicity and persistence in terrestrial environments. This is great news for the future of horticulture, but meant for the purposes of my study, I didn't see significant differences. Many rose gardens that were formerly intensively sprayed with chemicals are transitioning to less intensive methods of controlling pests and diseases on roses, such as growing disease-resistant cultivars. The Gardens is notably leading the charge, having been spray-free since 2000. Parnell Rose Gardens, a formal garden that had been traditionally maintained for at least 100 years, is not using insecticides on rose plants anymore, thanks to the Gardens advice and guidance. Finally, my ability to detect differences between rose gardens was hampered by the significant flooding that afflicted much of Auckland in January 2023. The low incidence of invertebrates collected in January is probably due to many travelling further into the soil or being washed away by floodwaters before sampling.

Planting a greater diversity of plants within rose gardens and limiting pesticide application is likely to enhance invertebrate and endophyte diversity



in rose gardens, thus improving the health of roses as well as providing other environmental benefits. This study would not have been possible without the support of the Friends and staff of the Auckland Botanic Gardens. I would also like to acknowledge my supervisors, Professor Jacqueline Beggs of the University of Auckland, and Emma Simpkins, former Botanical Records and Conservation Specialist at the Gardens for their patience, support and guidance throughout this project.

Samantha van Ryn

# Neville Haydon plants honoured

Exceptional plants help us to remember plant breeders after they are no longer with us. The late Neville Haydon, QSM, was an eminent plantsman and very successful camellia breeder. He was also a member of the Friends Executive and donated many camellia plants to the Gardens.

Two of Neville's exceptional camellias have recently been honoured.

*Camellia* 'Dancing Magic'. In the early 1990s, Neville crossed the seed parent *Camellia* 'Peggy Burton' using pollen from *C.* 'Black Magic'. Some of the resultant seed were sent to Georgia, USA. One of the plants raised was registered there as *C.* 'Dancing Flame'. This has a semi-double flower with rich plum petals, red filaments and yellow anthers. Last year 'Dancing Flame' was awarded the 2022 Aubrey Harris Hybrid Award of the American Camellia Society. The plaque presented is held by the Gardens.

*Camellia* 'Festival of Lights'. Neville had a longstanding aim of breeding camellias suitable for home gardens which are increasingly limited in size. One such camellia is 'Festival of Lights' - a columnar camellia with many miniature pastel pink flowers. The single flowers often have flashes of brighter red on some petals (see back cover). The Rhododendron, Camellia and Magnolia Group of the Royal Horticultural Society has donated 25 plants to the King to mark his coronation. Four of the plants were bred in New Zealand, Neville's 'Festival of Lights' and the magnolias 'Genie', 'Felix Jury' and 'Star Wars'.

The quality of the Botanic Gardens Camellia Garden that Neville was so instrumental in establishing was further confirmed on 18 August when Dr Stephen Utick presented a certificate recognising that it remains an International Camellia Garden of Excellence.

Ross Ferguson

## IPPS Conference 2023

I was honoured to open and attend the International Plant Propagator's Society (IPPS) conference held in Auckland in April. As always it attracted many of our finest horticultural experts, especially in the field of propagation.

I presented a paper on plant breeding at Auckland Botanic Gardens that outlined the development of the "Wiri" series of

hebes and mānuka, and also some of the more recent work we have been doing such as developing rust-resistant daylilies and petal blight-resistant camellias.

Dr Revel Drummond gave an excellent presentation on gene editing and the opportunities this groundbreaking technology can provide. He gave as an example 'Rainbow' papaya that are

effectively now vaccinated against the debilitating ring spot virus which has saved the papaya industry in Hawaii. Other examples include 'Arctic' apples that do not turn brown when cut and drought-resistant wheat. Genetically-modified golden rice has very high levels of  $\beta$ -carotene up to 23 times as much as the original golden rice. It is grown in areas with inadequate dietary vitamin A which can lead to serious eye conditions including blindness and can also increase child mortality.

Changing just one protein produced 'Sicilian Rouge' tomatoes that have five times the usual  $\gamma$ -aminobutyric acid (GABA) levels. Just one fruit is sufficient to lower blood pressure levels. There are also positive environmental outcomes from gene editing. Pines are being developed that do not produce pollen and this will eliminate the 'wilding' problem. CRISPR diagnostics can be used to efficiently check for plant diseases. There is resistance from some quarters to using this technology, but used in the right ethical way it offers huge potential benefits.

Terry Hatch explained how they grow very large cuttings of some native species such as puriri and pōhutukawa. To demonstrate he had a 2-metre long pōhutukawa cutting that already had aerial roots and suggested that it is an ideal way of establishing trees in revegetation plantings and on slips.

Terry also demonstrated hammer cuttings, also known as leaf bud cuttings. He showed how he has used this technique to propagate *Pennantia baylisiana* and pigeonwood (*Hedycarya arborea*). He also demonstrated how king ferns can be

propagated by cutting the "horseshoe".

Chris Barnaby outlined the new Plant Varietal Rights I (PVR) law that came into effect on 24 January 2023. Applications for PVR will now be considered by a new Māori committee who as kaitiaki will apply mātauranga Māori (Māori knowledge) to the decision-making process. This committee can refuse a PVR application.

The field trips included visits to some innovative nursery operations. I was most impressed with the scale and efficiency of Blooming Hill Flowers in Puni near Pukekohe which mainly grows gerberas and roses for cut flowers. Crops under trial include papaya where experimental seed-raised varieties are being tested. Also under trial is vanilla orchid being grown vertically up twine. The flowers must be hand pollinated to produce pods.

At Zealandia Nursery in Clevedon we were all blown away by the scale, innovation and efficiency of the operation with around 12 ha of plants being grown under cover. Zealandia is by far the largest grower of seedling flowers and vegetables in the country, and they are the predominant brand available in plant outlets.

Potting mix is made on site, as are all the pots and punnets from recycled plastic. Greenhouse heating is piped hot water heated by a biomass boiler burning wood chip in three different stages to maximize efficiency and minimize the release of left-over gases to the atmosphere.

They are self-sufficient in water, with rainwater collected from the glasshouse roofs transported via an underground viaduct to tanks and a large lake. Irrigation water is also collected for reuse after

being treated.

A process referred to as "Negative Difference" is applied to keep seedlings compact. This involves opening the greenhouse vents early in the morning to suddenly drop temperatures and shock plants to shorten their internodes. This prevents seedlings becoming stretched without resorting to chemicals. Fans

mounted on booms blow air onto plants and triggers them to become stronger.

So next time you purchase a punnet of seedlings or a nice potted cyclamen with the Zealandia label, think about the amazing technology and sustainable practices that have gone into its production.

Jack Hobbs

# Tree Crops conference 2023

Botanic Garden staff members Laurence Speedy and Justine Newnham and Friends member Kathrina Muller joined other Auckland Tree Crops members to travel to Otaki to attend this year's Tree Crops conference.

Tree croppers continue to trial and experiment with new trees, as well as with heirloom cultivars. The auction held at the Otaki conference illustrates this with the items up for bidding including many heirloom apple trees (e.g., Newton's apple tree), finger limes, American pawpaw *Asimina triloba*, oaks and trees with native mistletoe growing on them, as well as books, chainsaws and fertiliser.

## Research updates

On Friday morning, delegates shared information about research that is occurring in the branches. Trials can be formal and carefully set up or can be as informal as sharing seed or cuttings to see where a plant can be grown. Information from trials shared included:

'Harricado' Avocado is suitable for smaller

gardens, fruits early and there is evidence it can be grown from cuttings.

The NZ Citrus Census and Diversifying Citrus Rootstocks Project has the dual aim of:

- gathering information on all citrus in New Zealand so as to protect and preserve this diversity;
- importing seeds of citrus rootstocks not present in New Zealand to diversify the range available (currently *Trifoliata* and 'Flying Dragon' are the only two widely available).

Tissue-cultured bananas and banana research. Geoff Mansell mentioned a banana research project run by Dr Jane Mullaney from the Riddet Institute at Massey University. This project aims to characterise the bananas growing in New Zealand and identify, using DNA sequencing, which cultivars have "persisted" here.

Recently, Geoff has contributed towards this research material from existing Botanic Gardens cultivars 'Pisang Awak',

'Pacha Nadaan' and 'Ney Poovan'. In exchange, he has contributed cultivars 'Tonga', 'Ae ae', and 'Pome' to further expand Auckland Botanic Gardens' current banana collection.

Honeyberry and tasting. The Nelson Branch are maintaining and researching the honeyberry (*Lonicera caerulea*) to establish if it could be successful for home gardeners and commercial use. The fruit can be made into jams, preserves, wines, cordials, juice, flavouring, nutraceuticals, and pharmaceuticals. The fruit would be ready early in the season before other berries.

## Speakers

Increasing productivity of New Zealand orchards. Dr Adam Friend, Plant and Food Research, Motueka spoke about trials in which new pipfruit production systems (using dwarfing rootstocks and Planar Cordon training) are under development that can potentially achieve more than 150 tonnes fruit per hectare. For photograph of the system see <https://www.fruition.net.nz/2020/03/apple-growing-systems-running-hot>

Assessing land suitability for specific crops utilising climate, soil and topographic data. Dr Andrew Tait, National Institute for Water and Atmospheric Research (NIWA) spoke about the processes they use to assess land suitability for varying horticultural enterprises.

Biochar and soil carbon: potential in mitigating the effects of atmospheric carbon dioxide. Professor Jim Jones, Chemical and Bioprocess Engineering, Massey University spoke about biochar which when added to the soil significantly improves nutrient and water retention,

enhancing plant and crop growth and potential to sequester carbon. Biochar offers a means of turning environmentally controversial waste products such as pine slash into a high value soil amendment. His team are working on both stationary and mobile, low emission biochar systems. Mike King's "Finders Eaters" is based on foraging for food in the wild. He forages various product from the wild including pine and native species such as kawakawa, horopito leaf, mānuka and pōhutukawa stamens. One of the best ways to use these items is in icecreams.

An exploration of the development of Pinoli pinenuts. Andy Wiltshire, Pinoli Ltd, Marlborough. The dry, coastal, sandy soils of Marlborough which resemble those around the Mediterranean are well suited to growing the stonepine, *Pinus pinea*. It is less fire-sensitive than other pine species, and does not spread like wilding pines. Cones are removed by hooked poles or by shaking and since most of the land is on a slope the cones are allowed to roll down the hill for easy collection. Wiltshire, being an engineer, designed a large machine that can crack and shell the nuts.

The role of plant health surveillance in protecting New Zealand's tree crops. Nick Ward, Plant Health Surveillance, Biosecurity NZ spoke of protecting New Zealand's forestry, agriculture and horticulture. Early detection allows a better chance of eliminating a pest.

Oak – a tree for all reasons. Eric Cairns, is trialling oaks on his property in Upper Hutt as oaks are resilient to climatic extremes. They will coppice after fire or cutting, are good for timber and acorns, are edible and are rich in carbohydrates,

oils and protein.

## Property visits

Eric and Annette Cairn's oaks, honeyberries and other tree crops. The property is a tree-cropper's mature temperate food forest and arboretum, with lots of older trees, for timber or edible fruit, including some inoculated with edible fungi. Eric uses traditional wood craft methods and has a pole-lathe. Young seedlings are potted into square pots without a solid base to ensure air pruning of roots, then into larger pots with slits in the side to ensure the roots do not circle the pot.

Kivulini Organic and Permaculture Property is a nine-acre organic and permaculture property with many timber and fruit trees.

Coral Tree Organics Apple Cider Vinegar. Organic, locally-grown apples are selected, pressed and matured in oak, wine barrels to produce a natural, unpasteurised and full-flavoured apple cider vinegar. This contains what is called the "living mother" - a group of beneficial probiotics and enzymes arising from the natural maturation process and proven to benefit digestion and blood sugar regulation.

Waikawa blueberry and olive farm is on the Kapiti/Horowhenua border with naturally acid soil. It now runs a thriving pyo blueberry business and produces award winning olive oil blends. Birds are an issue as olives ripen - alarms mimicking the sound of a distressed bird are placed throughout the olive grove and frequently sound 5-6 weeks before harvest.

Common Property - "Original Growing Site for Commonsense Organics", In 1991

The first store was born in Wellington city, as an outlet for all the produce grown at the farm. It continues to supply a wide range of organic produce.

Amara Lodge, Te Horo is a bed and breakfast, with 17 acres of apple, pear, quince and avocado orchards and olives groves and a wide range of animals.

Lavender Creek farm has a diverse range of about 330 cultivars of lavender including heritage types of both French (*Lavandula stoechas*) and English lavender (*Lavandula angustifolia*). Their oils are constantly achieving national and international awards. A cutting machine was specially designed for efficient harvesting before the lavender is distilled for oil and hydrosol.

Cider. Carmen Gray and her husband set up their orchard with heritage cider apples because the land was too wet for grapes. They also make "Orchard fall", a drier cider blend of pears, quinces, apples, and feijoas that is becoming more popular.

## Conclusion

The amount of knowledge and experience in one room was astounding. All the people were very open to share their knowledge and experiences with other participants. We knew we were learning from the best speakers for passionate tree lovers. Topics all had some element of climate change adjustments, which is very important to talk about since the recent experience of cyclone Gabrielle.

Diversity is the best way to overcome extreme weather events.

Kathrina Muller,  
Justine Newnham and Laurence Speedy





Clockwise  
from top left:  
*Allium* (Hampton Court),  
*Streptocarpus nobilis*,  
*Sarracenia x excellens*  
(Hampton Court) and  
*Fritillaria* 'Orange Beauty'  
(Hampton Court)



*Camellia 'Festival of Lights'*



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