

# Newsletter

For Friends of the Christchurch Botanic Gardens Inc  
To Promote, Protect & Preserve

No 108, Winter 2017

## President's Report

A hearty welcome to all new members who have joined the Friends this year.

The last months have been rather busy with three talks and the Horticultural Society's Autumn Show. John Clemens (Curator) spoke to us about rambling and the Botanic Gardens and took us for a wander "Up the Garden's paths", Dr Matt Morris, from Edible Canterbury and Krystina Hill, an expert in heritage fruit trees, gave an interesting illustrated talk in March, and Heidi Connolly, of the Botanic Gardens, spoke of her experiences at the Canterbury University's Cass Field Station (sponsored by the Friends). It was very pleasing to note that these talks were very well attended. A big thank you to Mary Carnegie and Janet Begg for organizing these speakers and to all who helped with the afternoon teas and organization.

I would also like to thank the propagating teams for their great effort preparing and selling plants at the Autumn Show. Also Graeme Martin and Guillaume Jacobs (garden curator) for helping put together our educational display, and the Guides who gave up their time to conduct very interesting walks on both the Saturday and Sunday, in spite of the weather. The Friends stand attracted keen interest and we made \$760.00 selling plants.



Friend's display stand at the Horticultural Societies Autumn Show



Cornus alba 'Sibirica' Tatarian dogwood

The Memorandum of Understanding between the Friends and the City Council is currently with the Council's legal team and will hopefully be signed off in the near future by Karleen Edwards, Chief Executive and myself.

It was lovely to see so many families in the autumnal gardens last Sunday with many children and adults playing in the fallen leaves. As I was taking a very informative walk with John Clemens (Curator) to learn more about the proposed spatial plan, I couldn't help admiring the intensity of the autumn leaves. In particular, three *Cornus alba* 'Sibirica' (Tatarian dogwood) by the lake behind the old Visitor Centre, are putting on a lovely show. The bright red stems of these shrubs, after their colourful autumn leaves have fallen, would make a lovely addition to gardens of any size. You can order these striking *Cornus* from the "Growing Friends" by contacting Don Bell of the propagating team - [db.na.bell@xtra.co.nz](mailto:db.na.bell@xtra.co.nz). The plants can be collected at the AGM on 16 July at a cost to Friends of \$4.00 (this is a 10% discount).

Finally please diary 4.00pm Sunday 16 July for our 2017 AGM. The meeting will include an interesting speaker and afternoon tea. The Committee has purchased an excellent PA system so there should not be any more hearing problems.

Take care and keep warm over the next few months.

Jeanette Christensen

## Garden News

### Friend's sponsored scholarship course at Cass Field Station

The friends of the Christchurch Botanic Gardens create opportunities for employees of the Christchurch Botanic Gardens to do things they might not otherwise be able to do. As an interested trainee horticulturist from Christchurch Botanic Gardens I was lucky enough to go to the University of Canterbury's practical field botany course at Cass so I would like to say "Thank you".

Assignments for this course included "Plant photography", "Portable reference book", "Plant family presentation" and "Collection and preparing and mounting herbarium specimens". There was also a final exam covering taxonomic keys, plant identification and ecological and systematic concepts relevant to understanding patterns of botanical diversity in the Southern Alps. The facilities at the research station are very good with a full laboratory on the premises and an herbarium complete with specimens collected from the area since the early 1900s.

The main focus of the course is plant identification *in situ*, covering habitat, climate, elevation, leaf arrangement, colour, shape and margins, fruit/cones, and stem shape. Our fieldwork covered a wide range of environments.

Visiting the saddle behind the research station, which backs onto the Waimakariri River was our first opportunity to get specimens for our herbarium sheets and reference book. On our excursion to Red Hill, we started off in a dry riverbed and walked up through different habitats and elevations noticing the difference in vegetation as we passed into a new zone. The walk reached scree which is a very specialised environment for some interesting flora.

Canterbury University is lucky enough to have its very own bog, which is a lovely flattish area, quite mucky in the centre, and a habitat to many lovely little moisture-loving plants, including three species of the carnivorous *Drosera*.

We had a beautiful day for our trip to the braided riverbed, home to species of *Raoulia*, *Epilobium* and *Helichrysum*, among other discoveries.

Our last and most memorable trip, was to Temple Basin. Beginning in the carpark we saw plants we had not yet seen on the trip including four species of *Olearia* and *Phormium cookianum*. We had an amazing hike up through the paths, spotting beautiful little plants like *Euphrasia* and observed many examples from our list of plants.



*Euphrasia*

Plant families were a major part of our learning process. We were given a specific plant family to research and provided with some pre-course reading on 50 plant families. We studied morphological characters, New Zealand genera and examples of species found in the Southern Alps. We took specimens to be dried and mounted for six official herbarium specimen sheets to be held with the University reference collection.

The course included compiling a personal reference collection using on-line and written taxonomic keys. We identified our collected plants and included information on location, elevation and diagnostic characters. Throughout the course we took photos of plants we discovered which was an extremely enjoyable aspect of the trip. The pressure was on throughout to learn, key, identify, remember and research as much as we could on the montane and alpine flora of the stunning Cass region.



Mountain scenery at Cass

Scree plants are a unique flora and a mostly unrelated group of plants which, through evolutionary convergence, have fleshy green leaves often with red pigmentation that break off readily at ground level, long underground rhizomes and short flower stalks. These adaptations mean they hold their own in the ever moving and changing environment. Three examples were *Lignocarpa carnosula*, Apiaceae family, *Stellaria roughii*, Carophyllaceae family and *Ranunculus hastii*, Ranunculaceae family.

A most striking and unusual feature of New Zealand flora are divaricate shrubs, small leaved shrubs which branch frequently at wide angles often with interlacing

branches, giving them a high stem to leaf mass ratio. Again, it is a case of evolutionary convergence with many different plant families showing examples of this; *Coprosma spp.*, Rubiaceae family, *Aristotelia fruticosa*, Elaeocarpaceae family and *Olearia bullata*, Asteraceae family, to name a few.

I was challenged by this course, which added to my knowledge gained from working in the alpine house and rock garden at the Christchurch Botanic Gardens. I had an exhilarating sense of achievement after passing the course and submitting 15 edited plant identification photos to Naturewatch using Google earth and GPS coordinates. I highly recommend joining the websites Naturewatch and New Zealand Plant Conservation Network.



*Raoulia*

Thank you Friends of the Christchurch Botanic Gardens for your sponsorship. The skills I have learnt transfer well to all things botanical and I feel a lot more confident as a horticulturist in training.

Heidi Connolly  
Trainee Horticulturist Christchurch Botanic Gardens

## Events in the Gardens

Up to this time events organised by the Gardens staff have been listed in this part of the Newsletter, and then, repeated again in the separate attached "Coming Events" page along with those events organised by the Friends. To avoid duplication and possible confusion, starting from now, all events will be listed only on the "Coming Events" page.

# Articles

## Kilmacurragh Botanic Gardens

In early 2011 our city was only one month away from its most devastating earthquake, a destruction that seriously eroded Christchurch's patronage of its Garden City. Such a cultural change could not be foreseen as the sizeable crowd of Christchurch's gardening public gathered at Mona Vale to hear a lecture and power point program by Seamus O'Brien, Ireland's leading authority on plants from the temperate regions of China. Plantsman, plant-hunter, lecturer and author, Seamus manages Kilmacurragh Botanic Gardens, formerly an 18th century country estate now belonging to the National Botanic Gardens Glasnevin in Dublin.



Seamus O'Brien

The history of the garden site goes back to a monastery established 1,300 years ago. By the mid-1600s, the Anglo-Irish Acton family had settled on the same spot. Their gardens were vast, the formal layout of enormous vistas echoed in Versailles a few decades later.

Two hundred years on, in the 1840s, brother and sister Thomas and Janet Acton summoned the up-and-coming young garden designer William Robinson to refashion Kilmacurragh in his newly acclaimed naturalistic style. It was the Victorian period of great botanical and geographical explorations, with numerous plant species from around the world being introduced to the west for the first time.

The rhododendron, for example, inspired passionate interest throughout the next century; Kilmacurragh was particularly famous for its conifer and rhododendron collections, as it is today. Janet Acton became renowned for her success with early species arriving from the Eastern Himalaya, Yunnan and Sichuan in China. Seed was collected from expeditions led by Sir Joseph Dalton Hooker, who sent seeds in 1849 from Sikkim, North India, to his father Sir William Hooker, Director of Kew Gardens. These were foundation rhododendrons, *R. arboreum*, *R. falconeri*, *R. griffithianum*, some of the species from which so many new hybrids were developed as the century wore on.



Rhododendrons at Kilmacurragh

Many plants came to Ireland's botanic gardens via the Royal Gardens at Kew, which had established botanical outposts throughout the Empire. From Sikkim via Calcutta Botanic Gardens, a seedling of *Magnolia campbellii* eventually arrived at Kilmacurragh. It took 21 years to bloom and still produces some 5000 blossoms each spring.

By the 1880s, Kilmacurragh was the finest garden in Ireland. William Robinson's crocus meadow bloomed from 15 million corms; some of the great China plant Hunters - Frank Kingdon Ward, Joseph Rock, E H Wilson - were commissioned to send their special finds.

The garden flourished until the First World War. Thomas Acton had died in 1908, then both his sons and all eleven gardeners died in that horrific carnage. At Kilmacurragh cordylines and ginkgos lived on in their rows, as did *Rhododendron arboreum* and Irish yews, but essentially the garden died until 1996 when

the Dublin National Botanic Gardens Glasnevin bought the old property and its arboretum. Soil and climate conditions at Kilmacurragh are just right for the many exotic specimens immigrating from plant hunting expeditions, to Nepal, Tibet, Chile and China in particular - home to plants that thrive in acidic soils.

China has been a particular focus for Seamus O'Brien. His expeditions have taken him to south eastern Tibet, Dali, and Lijian in Yunnan – Yunnan being home-away-from-home for the Scottish George Forrest and American Joseph Rock, two famous plant-hunters living there in the early 1900s. More recently, Seamus's China focus was fixed upon the brilliant and prolific collections of fellow Irishman Augustine Henry, who lived 19 years in China from 1891-1900, collecting 158,000 specimens in all.

Unlike Wilson, Forrest and Kingdon Ward, Henry was not a full-time collector but worked for the Chinese Imperial Customs Service at Yichang, gateway to the great Yangtze Gorges. His agile mind quickly grew bored with tennis, boating and shooting parties with the colonial fraternity, and his growing friendship with botanist Henry Hance at Canton inspired him to write to Kew asking how to identify botanical specimens. He wanted to learn more about Chinese medicinal plants, also plants that might profit the British economy, like the tea plants smuggled to India by Robert Fortune some decades earlier.

One of Seamus O'Brien's projects, a hundred years on, has been researching plants in those areas where Henry lived and collected. A large portion of Henry's botanical discoveries were pressed plants for Kew's herbarium, but he did send seed for different species of lobelia, rhus, banksia rose, corydalis, allium, salvia, rhododendron, abutilon and camellia, to name a fraction.

Henry was hoping that before he left China a full-time collector would be able to re-work his fields and send viable seeds that would enhance not only botanical collections but private gardens as well. That person was Ernest H Wilson known as "Chinese Wilson". Wilson had first collected from China for Veitch's Nursery in England. Later in his career he directed the Arnold Arboretum in Boston and brought exciting new China plants into that collection. Wilson, so famous himself, considered that "no one in any age has contributed more to the knowledge of Chinese plants than this scholarly Irish man".

Today Seamus O'Brien and his team follow in the footsteps of Augustine Henry, researching the stations where he was posted, re-discovering the dove tree and Chinese gooseberries (*Actinidia*) in Hubei near Yichang, searching for horticultural treasures around Shanghai and over the straits to Taiwan, where Henry had taken his frail wife in the hope of strengthening her health. They continue to collect seeds from the steep valleys of Yunnan around Mengzi and nearby Simao, where Henry's most notable collecting took place.

Following his lecture in Christchurch. Seamus O'Brien was taken to Arthur's Pass, Peel Forest and Hugh Wilson's Hinewai for a look at New Zealand's mountain and forest flora. He planned to update Glasnevin's collection of New Zealand plants, native conifers specifically, for the ever-expanding Kilmacurragh arboretum.

Diana Madgin

## Bark in the Botanic Gardens

As autumn comes to an end and the leaves fall, instead of avoiding the Botanic Gardens, perhaps we need to focus our attention on that overlooked feature of the established trees in the Gardens – the bark. Many trees have really beautiful or interesting bark, which can be used to aid in the identification of the trees.

### Bark Composition and Function:

Bark makes up 10-20% of the tissue of woody plants<sup>1</sup> and contains many interesting chemicals including tannins and lignin. The main purpose of bark is protection of the trunk, from attack by insects, fungi, etc, as well as browsing animals. In some species, notably the redwoods and the Australian eucalypts, the thick bark around the trunk also protects against fire.

### Uses of Bark in History:

*Betula utilis* bark was used by Tibetan monks for writing sacred texts.

Birch bark canoes were used by Canadian tribes for centuries.

Bark was also used to produce fire.

### Modern Day Uses of Bark:

Commercial products obtained from bark include quinine (*Cinchona spp*), cinnamon (*Cinnamomum*

<sup>1</sup> Bark. (2017, March 27). In *Wikipedia, The Free Encyclopedia*. Retrieved 07:58, April 2, 2017, from

<https://en.wikipedia.org/w/index.php?title=Bark&oldid=772431153>

verum) and of course cork (*Quercus suber*). Aspirin (acetyl salicylic acid) is obtained from the bark of willow trees (*Salix spp*) and tannins used in the tanning industry come from many trees, especially *Quercus robur*.

**Use of Bark in Plant Identification:**

Different plants vary in the way in which they shed their bark – in strips, ribbons or chunks and the pattern of bark shedding and renewal can be very helpful in identification, especially in Australian native eucalypts.

One of the largest eucalypts in the gardens is the very attractive *Eucalyptus delegatensis* or woolly butt, which sheds its bark in long ribbons. Common names of eucalypts reflect the importance of bark in the appearance & identification of the species. Other examples are *Eucalyptus macromyncha* (red stringy-bark), *Eucalyptus maculata* (*Corymbia maculata*) or spotted bark, which sheds its bark in hexagonal flakes and *Eucalyptus fastigata* or brown barrel (another species which retains a thicker “barrel” or layer of bark around the lower trunk).

Amongst the conifers there are enormous variations in types of bark. Have a longer look at the groups of maritime pines (*Pinus pinaster*) on the remnant sand dunes - and of course all the various conifers in the Pinetum.



*Stewartia pseudocamellia*

Plants in the Gardens with interesting bark: (by no means complete)

- Acer davidii* – snake bark maple
- Acer griseum* – paper-bark maple
- Betula pendula* – silver birch
- Betula utilis* var *jacquemontii* ‘Silver Shadow’ has striking silver-white bark. You can find this beautiful

tree along with several other white-trunked birches near Te Puna Ora.

*Quercus suber* – our specimen has never been harvested for cork, but in its natural habitat the bark could be removed every 9-12 years without harming the tree. The bark is deeply ridged.

*Sequoiadendron giganteum* – the giant redwood – thick spongy bark, which is deep red when newly exposed.

*Sequoia sempervirens* – coastal redwood  
*Stewartia pseudocamellia*

**NZ Natives:**

One of my favourite natives for beautiful peeling orange bark, especially when wet, is the kotukutuku or *Fuchsia excorticata*. This tree grows beside streams and is often multi-branched. There is a large specimen overhanging the path in the Icon Garden.

*Agathis australis* – many nodules remain from where side branches have been shed, giving the trunk a curious knobbly appearance. You can compare this with the related Araucariaceae – bunya bunya, Wollemi pine & Norfolk Island pine.

*Dacrycarpus dacrydioides* – kahikatea

*Podocarpus totara* – brown, stringy bark

*Prumnopitys taxifolia* (syn *Podocarpus spicatus*), matai or black pine loses its bark in small circular disc-shaped flakes giving the trunk a “hammered” appearance.

Not visible from the outside, but distinctly beautiful is the bark of the ribbonwood genus (*Plagianthus regius*). The inner bark peels off in ribbon-like strips, in a similar way to that of *Hoheria populnea* (lacebark).



*Fuchsia excorticata*

This winter, bring out your warmest boots and head to the gardens for a winter look at our magnificent trees and pay special attention to the bark.

Vicki Steven

## Sir Joseph Banks – “the go to man for the colonies”.

*By Bindy Barclay. Bindy, a Christchurch local, has a keen interest in Banks. In 2016, she was fortunate to stay with friends in Horncastle and visited the Sir Joseph Banks Centre. She became its first New Zealand member and was introduced to all as living on Banks' Peninsula. Attending the Banks sessions of Gravity Fields at Harlaxton Manor, Lincolnshire, and helping to promote the society there was a highlight.*

New Zealanders tend to know Sir Joseph Banks simply as “Cook’s botanist”, attributing the empirical motivations and outcomes of Cook’s Endeavour and subsequent voyages to Captain and King. Yet when, at age 25, he cast off with a team of illustrators and scribes, Banks had already been an elected member of the Royal Society for two years. His certificate of nomination described him as “a person well versed in Natural History, especially Botany”. Where most young men of his age and means were heading off on classical grand tours of Europe, Banks chose to embark on exploration of the Southern Seas. With characteristic thoroughness and attention to detail, Banks and his team returned with twice the number of botanic species then known and introduced 110 new genera. Socially Banks had collected different ways of living, having participated in indigenous material life and rituals. With his friend and colleague Linnaean cataloguer Daniel Solander, and his guest the Ra’iatean Omai, Banks was feted by a society that was ravenous, scientifically, philosophically and artistically, for ‘new’. Collecting and inventing were key fascinations. It was Banks’ ‘hatching of schemes’ and ‘canny’<sup>2</sup> networking that brought him to the centre of things.

In 1952 H.C Cameron observed that Banks achievements should have brought him enduring fame but in fact he was little known<sup>3</sup>. In 2017, as we approach the 250<sup>th</sup> anniversary of Cook’s Endeavour voyage (1768-1771) understandings of Banks influence still remains patchy. Banks has variously been described as the “Father of Australia” for his support of the colonisation there and his recommendation of Botany Bay as a penal colony, as one of Lincolnshire’s most famous sons, as a dedicated servant of science and, for his 42 years

presiding over the Royal Society, one of the greatest figures in Georgian England. He has also been described as a schemer, intent on self-promotion and aggrandisement and as someone who got his ‘increasingly fat fingers’ into a plethora of pies being cooked up to preserve the nation.<sup>4</sup> These were times of contest and while Banks remained assertively politically neutral there is little doubt that his friendship with King George III and long hours spent together developing the Royal Gardens at Kew, were part of the story of the agricultural and horticultural foundations of empire.



*Image of Banks in the Sir Joseph Banks Tribute Garden*

Banks was a consummate collector and patron of other people’s research and science, perhaps more so than a botanist.<sup>5</sup> A son of Yorkshire, Derby and Lincolnshire, Banks inherited from his land-owning father at a young age. He assertively followed his avid curiosity for all things natural and did so with an acutely ordered mind. Neither a rule-breaker nor a rule-maker, Banks simply went about connecting and enabling those who were similarly passionate and fascinated in the burgeoning sciences of the late 18<sup>th</sup> C. His accompaniment of Cook was a logical marriage of his own fascination and the wealth he was able to contribute to the pursuits of discovery, Banks providing a greater share of the cost of the voyage than George III.

For whatever motive, there can be little argument that Banks was ‘all over’ the curiosities and industry of the

<sup>2</sup> Endersby, Jim, How botanical gardens helped to establish the British Empire  
Financial Times, July 26, 2014.

<sup>3</sup> Desmond, Ray, Kew: A History: The History of the Royal Botanic Gardens. Harvill Press, 1995. p. xii.

<sup>4</sup> Endersby.

<sup>5</sup> Desmond, p.89

period, was the “go to man” for support across a plethora of innovation from Herschel’s telescope to the introduction of merino to Australia. Becoming president of the Royal Society in 1778, he, with his equally curious and prodigiously scientifically minded sister Sophia, established at his own home an “Academy of Natural History”. Here he welcomed anyone interested in natural history to peruse his extensive and superbly catalogued collections, including but hardly limited to, the specimens from the Endeavour voyage. His methods of curation informed those still utilized by museums today. Banks also sponsored and managed many interests in his home counties including his copper interests in Derbyshire, promoting new sheep breeds and the woollen industries of Lincolnshire, draining swamps, building canals and sponsoring pharmaceutical innovation.

But Banks enduring passion and “favourite pursuit” remained botany. Self-described as a “kind of superintendent” of the Royal Gardens at Kew, together with his standing in such Societies as the Linnaean and the Royal Horticultural, Banks became the enabler of experimental botanic collection and propagation. As the eighteenth century drew to a close the main contest for Banks was the one that would ensure Kew was the unquestionably the preeminent scientifically defined and commercially influential botanic institution, and most importantly the largest and most comprehensive, collection in the world. For this reason Banks gave up his own collecting and focused on the selection of networks of collectors whom he closely schooled and supervised to gather on his behalf. Many European centres had established gardens, Kew’s most significant competitor being the garden of an equally zealous collector Empress Maria Theresa at her palace Schönbrunn in Vienna. By jealously guarding his own sources and applying rigorous scientific method Banks and his increasingly skilled team of gardeners, triumphed at Kew.

Key to the success of this botanic enterprise was the circulation of specimens and seed around the globe. The establishment of way stations, tasked to keep plants alive before transportation as exotic curiosities back to Europe were the first botanic gardens. These little hubs were under resourced, struggled in hazardous climes and often survived or failed according to the efforts of individuals. Britain actually trailed its rivals in the establishment of botanic gardens in the Southern Seas and for a time, the

French were ahead.<sup>6</sup> While Banks was in constant communication with his envoys, success or failure was a haphazard affair influenced as much by gift and good will as much as institutional organization.

Banks ensured means flowed to the networked botanic outposts of empire, often from his own finances, or by means of his influence on those who fostered them. Letters sailed with specimens detailing the exotic finds and proposing how they might be transplanted and used. Exchange was sometimes between colonies as Banks and his associates stuck in ideas of where a plant, and so its cultivators might prosper. It was this back and forth across the empire that crafted gardens blended of “native” and “exotic” into economically viable “hot houses” for development.



Banks the “go to man” for the colonies as coined by Richard Barley, Director of Horticulture, Learning and Operations at Kew Gardens, described him at a special afternoon of Banks presentations held as part of the Gravity Fields Festival, 2016. A panel discussion brought together scholars and researchers from the fields of physics, botany, literature and business including Professor Rob Iliffe, a world expert on Newton award winning playwright Louise Page, who has written one play about Joseph Banks and is researching his voyages to Iceland, Newfoundland and Australia (with Captain Cook), Dr Harry Cliff, Cambridge physicist and expert on Robert Brown, Banks’ librarian and Paul Scott, Chair of the Sir Joseph Banks Society.

*The Banks theme is continued in the next Newsletter. Bindy will give information about the Sir Joseph Banks Society and list various Banks related happenings this year.*

<sup>6</sup> McAleer, John, ‘Of infinite advantage’: Botanic gardens and

Britain’s route to the East, 1790–1820. Conference paper. Unpublished conference paper.

## The Botanic Gardens – not just a collection of plants

What is a botanic garden? Botanic Gardens Conservation International (BCGI) lists the criteria that may be met in part or whole by any institution that is considered to be a botanic garden:

- A reasonable degree of permanence.
- An underlying scientific basis for the collections.
- Proper documentation of the collections, including wild origin.
- Monitoring of the plants in the collections.
- Adequate labelling of the plants.
- Open to the public.
- Communication of information to other gardens, institutions and the public.
- Exchange of seed or other materials with other Botanic Gardens, arboreta or research institutions.
- Undertaking of scientific or technical research on plants and the collections.
- Maintenance of research programs in plant taxonomy in associated herbaria.

A botanic garden might include all of these criteria and so be very worthy on account of its scientific and educational value. If, however, no account has been taken of aesthetic features, the result might be rather uninteresting and boring for a great proportion of the general public. The great botanic gardens of the world have a fine collection of plants set off by aesthetically pleasing features.

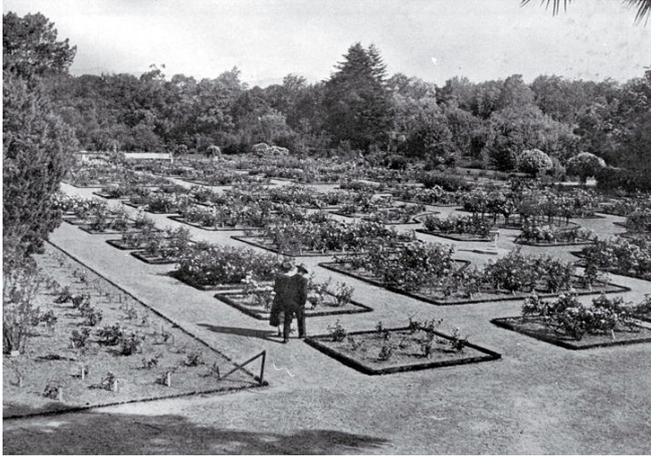
In 1969, in their book *Great Botanical Gardens of the World*, Edward Hyams and William MacQuitty considered that the Christchurch Botanic Gardens merited inclusion in their list of 43 great botanical gardens. They were not entirely full of praise: they said - "The parsimony of the Municipality responsible for the Botanic Gardens in Christchurch has deprived the Garden of any scientific importance it might, and probably would, otherwise have had." Against this, they stated that "the Christchurch Garden is still horticulturally one of the prettiest in the world". As well as the wide range of plants (chosen for their horticultural attributes rather than as botanical specimens) and their rate and healthiness of growth, elements that contributed to its quality included "the pleasant fall of land", the river Avon vistas and excellent landscaping. The rose garden was "one of the prettiest ... we have seen in any Botanic Garden".

The present-day attraction of the Gardens owes much to the work of the Armstrongs, father and son, over the period of 16 years starting in 1866. As Government Gardeners of the Domain they worked to lay out and plant the 75 acres of the Botanic Gardens, and of the larger Hagley Park beyond the Gardens boundaries. This was the first great epoch of the Gardens. As well as their great expertise with plants and planting they must have had a good eye for design and landscaping. Much of the structure of the Gardens' pleasant pathways of today go back to the efforts of the Armstrongs.

At different times some attractive buildings have been built in the Gardens. An iconic example is Cuninghame House, the largest and oldest of the Botanic Gardens display houses and housing the tropical plants. It was built in 1923 and opened on 9 August 1924, funded by a bequest made to the Botanic Gardens by Mr C.A.C. Cuninghame, a Christchurch law clerk, on his death in 1915.

Conservatories, or winter gardens, were necessary structures for botanic gardens worldwide for the housing of botanic specimens from warmer climates. In functional terms a large industrial-type glass house would have provided the appropriate environment for tropical plants. Instead, fortunately for Christchurch, one of the leading architectural Christchurch firms of the time, Collins and Harman, came up with an elegant building along the lines of a classic English orangery in a Neo-Classical style. The architects modelled the design on the Reid Winter Gardens at Springburn Park in Glasgow.

When first completed the formal south entrance of Cuninghame House opened onto the rose garden. This was not the rose garden of today but the original garden which James Young, curator of the Gardens from 1908 to 1933, started developing in 1909. It was based on the garden of the Duchess of Sutherland in Hertfordshire, England. Rectangular in shape, it was huge and extended out over most of the central lawn and in the 1930s was considered to be the largest rose garden in Australasia.



*The rose garden 1924*



*Old photo of Cuningham House – from original rose garden*

Young's successor as Curator, James MacPherson, redesigned the rose garden in 1936, creating the smaller circular form defined by clipped yew hedges that we know today. Looking back Christchurch has a history of opposing changes to the status quo and one wonders whether there were feelings of outrage over MacPherson's audacity in making such a radical change to the rose garden they had come to love? Changes can however lead to improvement. Hyams and MacQuitty thought that MacPherson's change resulted in "one of the prettiest Rose Gardens we have seen in any Botanic Garden. There would certainly be an uproar if there was any suggestion to drastically change the present rose garden.

The symmetry of the new rose garden is sympathetic to the symmetry of the adjoining Cuningham House. And because the north/south path through the rose garden is aligned with the north/south axis of Cuningham House and leads to its main entrance,

one gets a wonderful vista standing to the south of the rose garden and looking north towards the Cuningham House and its elegant entrance. Each enhances the other.



*Cuningham House today from the central rose garden*

There are other examples in the Gardens where the landscaping providing a vista towards an attractive building. The view from the Gardens' Museum entrance along the broad walkway toward the Curator's House is often admired and almost demands to be photographed.

The Gardens Spatial Plan notes that some attractive features in the Gardens are not so well set off:

The Peacock Fountain is much admired but would be further enhanced if the Museum entrance was moved further south down Rolleston Avenue so that visitors entering through it would have the fountain right in front of them. This would also create a pleasant vista from the Arts Centre looking through the archway accessing the north-western courtyard – one would view the fountain framed by the archway and the shifted Gardens entrance.

The Robert McDougall Art Gallery building with its attractive classical façade is presently unfortunately tucked away to one side of a main pathway. The Spatial Plan suggests a new path leading towards and focussing on the Gallery façade – such a path would create a wonderful new vista.

Those who have been alarmed by the Spatial Plan and have fears that the present beauty of the Gardens being lessened will find if they read it carefully that the intention is to enhance and not needlessly destroy.

*Thanks to Anne, Brian, Linda and Sue from the Information Centre for help finding the old photos.*

Bill Whitmore

## **Weather notes for Christchurch and Canterbury. Autumn 2017 - March to May.**

It looks like May will turn out to be one of the coldest six Mays on my record with a mean temperature by the 26th of the month of 8.6 C (av. 9.4 C); this is mainly because of day, rather than night, temperatures especially when compared to last year when all-time record highs occurred. Last year eleven days exceeded 20 C; this year none occurred at this site. But despite it all the tree dahlia did flower by mid-month, more or less on time, indicating that frost was not a major problem this autumn until late in the month; on the 22nd my first air frost occurred at -1.4 C.

These first frosts of winter are strange events as once again the grass minimum thermometer recorded -2.0 C, yet the grass itself was still in the water phase but the bird bath close by did have a skein of ice across the top? My tamarillo, another interesting climatic indicator, has the best fruit in my experience; they are just turning colour but harvesting will still be touch-and-go for this season. On Sunday evening of the 21<sup>st</sup>, in anticipation of a cold night, the tree was covered with sheets of the Press newspaper and the sun umbrella served as additional frost shade. It works up to about a minus 2 or 3 air frost.

The autumn season as a whole was very close to average temperature-wise with mean maxima below average at 15.9 C (av. 17.0 C) but mean minima above average at 8.1 C (av. 7.4 C) so the mean of 12.0 C was just below the average of 12.2 C.

Rainfall however was another matter with the March to May total being 303 mm (av. 173.2 mm). It is interesting to note that as recently as 2014 the March to May total was 484.8 mm resulting in the major flooding in the City. In both these years the rains started in March and finished in May. This May at this site only 47.2 mm had fallen by the 26th well below the average of 70.3 mm. The airport appears to be just about on average with 45.6 mm (av. 44 mm). It appears times they are changing?

Despite the high rainfalls of autumn the sun on the whole kept shining with April being the dullest month. May to date is running very close to normal. No wonder the grass is still growing, the figs and feijoas are rolling off the trees and the first spring flowers bursting into bloom. Once again the wintersweet is in bloom with a full cover of leaves which does rather defeat the purpose of growing it?

Now what will winter bring I wonder?

Bob Crowder

### **Friends AGM**

Mark your diary now!

The AGM for the Friends of the Christchurch Botanic Gardens will be held at 4pm on Sunday 16 July at the old Visitor Centre. Guest speakers: Kristina MacDonald (Conservation and Sustainable Development Christchurch Botanic Gardens) and Juanita Miln (researcher) will speak about: "Returning native mistletoe to Christchurch".

## Contact Numbers

### *Committee*

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Immediate Past President	Alan Morgan	384 9976
Treasurer	Tracy Shui	384 4106
Secretary	Charles Etherington	355 7981
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### *Other Contacts*

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### **Friends' website**

Have you visited the Friends' website? The address is <http://www.friendschchbotanicgardens.org.nz/>

### **Distribution of Newsletter**

We distribute the Newsletter by email to those members who have given us their email addresses and who have not requested otherwise. If you would prefer to receive the Newsletter by mail, rather than electronically, please contact Penny Martin – phone 332 6866 or email [graememartin1@xtra.co.nz](mailto:graememartin1@xtra.co.nz)

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