

Newsletter

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

No 85, Spring 2011

President's Report

I have been the President of the Friends for only a few days now, and my immediate thoughts are to strive to do as well as Alan Morgan did in his two year term. I urge you to read the report of the AGM (to be found later in this Newsletter) which summarises our achievements over the last year. My report will focus on the future endeavours of the Friends

Some of the projects already in motion will be seen through to completion over the next year or two. I expect the Trust to be registered within a few months and a project to be identified for the initial fundraising. We are in close communication with John Clemens regarding various ideas, and he will take an active role on the Trust. I will be in a better position to report on the selected projects in the next Newsletter.

The scholarships that the Friends funded in partnership with the University of Canterbury were a huge success and a step forward in the role of the Friends in encouraging scientific research and data collection within the Botanic Gardens. You will gain a glimpse of the results of these summer scholarships in the upcoming issues of our Newsletter. Members of the Committee have expressed that similar scholarships be funded in the future. I am very supportive of this.

Our proposed web site is in the very early stages. Murray Dawson has kindly offered to help us out with the design. The staff of the Botanic Gardens is keen to help us make the site as professional as possible, and in doing so has offered us the use of their huge collection of digital photographs to select images from. A small working committee will be working on this, and as the site develops, I foresee volunteers adding data to the site. A history of the Gardens will be an ongoing project.

From my knowledge, the Friends have never hosted an international conference before, so the hosting of the Australasian Volunteer Guides in Botanic Gardens Biennial Conference in September 2013 will be a big event for us. We offered to host this event at this time as part of the 150th anniversary of the Christchurch Botanic Gardens. We have often had representatives attending the conferences, so it will be good to have it in Christchurch.

The Friends will become financially involved with various projects that would not otherwise be funded by the Council, or to enhance a project beyond the normal level of funding.

None of this can be done without your support.

Charles Graham

Gardens' News

From the Botanic Gardens Team

We are coming up to a year since the beginning of our recent earthquake events on 4 September 2010. Although, reading the historical reports, we realise that Christchurch has been rocked by several large earthquakes in preceding centuries, events of the last 12 months have certainly come as a shock. Friends - thank you for your continuing support through your numerous and diverse activities in the Botanic Gardens, reports in the media, behind the scenes work, and in personal discussions. For this Newsletter, we have a number of contributions from the Management Team, including a detailed report from Grounds Team Coordinator Bede Nottingham.

It has been a busy year, but after many delays and distractions from natural disasters, the closer working relationship between the Botanic Gardens and the University of Canterbury School of Biological Sciences was formalised on 5th July with the signing of a memorandum of understanding between the two parties. Although the ceremony at the University was quickly concluded, it marked the start of a commitment to assist each other in scholarly and educational work over the coming years, an important step to enhance our research function.

The signing was followed by a tour for Botanic Gardens curatorial staff of the University teaching and research greenhouses: mistletoes, alpine plants, a *Hebe* collection, grass competition pot trials, and curious botanical specimens. There was also a short research meeting featuring presentations by summer students, and Biological Sciences and Council staff. The presentations were made necessarily to a small audience this time because of recent earthquakes and resulting health and safety restrictions. However, it was the first of what we intend to be a series of Botanic Gardens research and education meetings, which we hope will be well attended by the Friends in the years to come.

It has been a productive year for research with papers on flowering in kaka beak, kowhai and eucalypts appearing in academic journals, summer projects on the native plants of the Botanic Gardens, and the prospect of more work this

coming summer on pollinators, freshwater wildlife and bluebells! Copies of the 2010-2011 summer project reports and other papers can be viewed at the upcoming AGM of the Friends.

John Clemens, Curator



Professor Dave Kelly shows David Barwick, Dean Pendrigh and others mistletoes at the University greenhouses

The Christchurch Botanic Gardens requires its staff to maintain the collections, keep them safe for visitors, and provide services. Earthquakes and aftershocks put all levels of service under strain. The series of quakes has had an impact on all residents and workers in the city and it is with a sense of pride that the garden staff have responded to their work place, residents and citizens needs.

Several staff dealt with their own and their families' housing issues, which like many in the city will be ongoing.

So what happens in the gardens after ongoing shaking? After each shake staff are accounted for to ensure that they are all safe? Then we set about checking the safety of our visitors, followed by an inspection of critical buildings and then the whole gardens and surrounding park for any hazards.

Each of the quakes has been responded to in a similar manner: a full ground inspection is undertaken, and hazards isolated. But you may be

unaware that some staff turned up every day to assist. Others undertook Civil Defence duties including urban search and rescue team members, intelligence duty manager, communications, radio duties, and logistics staff.

The things you soon find out in an emergency are things you wished you knew. No power meant no toilets, as the Gardens sewer system is a series of storage tanks pumped out of the gardens, the public toilets were closed. Some staff spent time into the night directing lost and homeless visitors to the hastily converted Ellerslie flower show site emergency shelter before venturing home to survey their own properties.

The need to make sure that facilities were available for both staff and visitors, saw two staff trained and undertaking level one inspections of buildings. This meant that any visually identified issues were immediately drawn to the attention of engineers for detailed inspection .

For staff a portaloo was acquired from a close work site (the river-bank site adjacent to the Curator’s House). Electricity was out so the generator was able to provide hot water for washing, a cuppa and charging cell phones. The phone system in the Gardens is connected to our computers which

meant finding an old analogue phone to call out on.

The Gardens water is provided by the well and pump house. No electricity meant no water for staff or plants. The supply of staff water was provided by those staff living out of town bringing in supplies daily. Supplying water for the glasshouse plants was somewhat more convoluted; the generator was taken off hot water duty, placed on a ute with a water tank and pump, and we used the water still in the lake, pumping into the tank and then watering the glasshouses by watering can to keep the crops going.

Water leaks that sprang up with the damage to irrigation lines were dug up ready for repair once the parts were available. Tree damage that occurred following February’s aftershock was isolated.

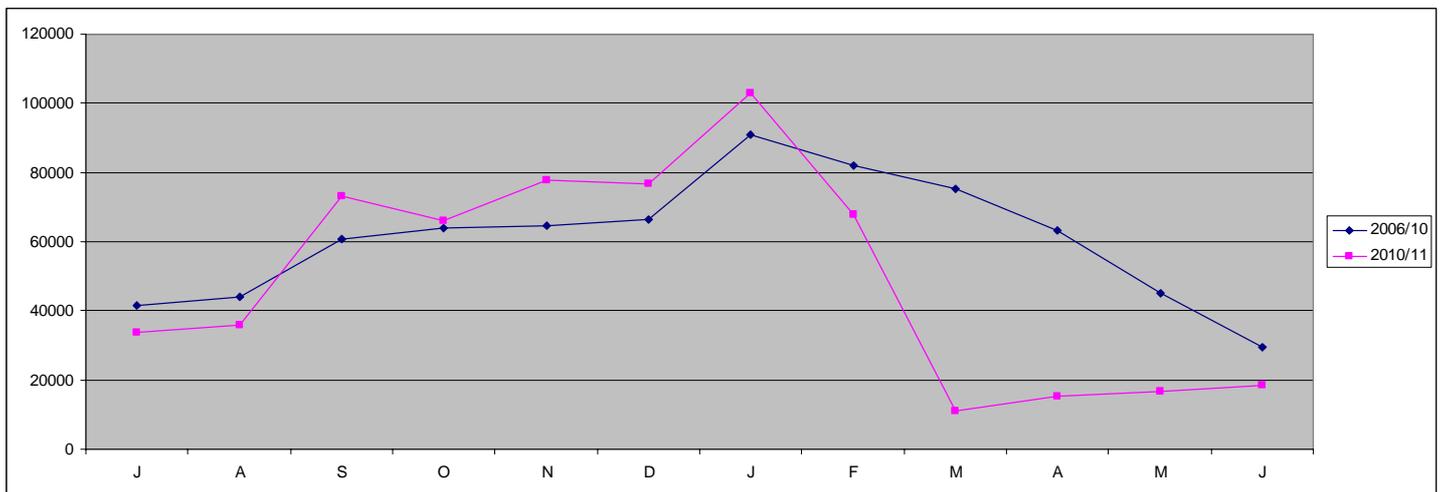
The ongoing issues for the Gardens are; the Bandsmen’s Memorial which has damage to all columns, the Herbert memorial which has no structural damage but the columns have moved, and Cuninghame House with an issue around the balcony. All other damage is minor: repairs have been carried out or are underway to allow the Gardens to be up and running for residents and visitors once again.

Jeremy Hawker, Operations Manager

Where has everyone gone?

As you can see from the graph below the number of visitors to the Botanic Gardens has dropped dramatically since the February quake. The blue line represents the average number of visitors per month between July 2006 and June 2010. The average yearly total of visitors for this period has been 1.4 million, with the 2010–11 period ending up as 1.1 million.

After the September quake, numbers were high because people perceived the gardens as a safe place to visit. This perception changed after February when we were seen as being part of the closed CBD.



The Gnomes have it!

Visitor numbers for this year's KidsFest have been outstanding. The Fernery was the site for the display of Garden Gnomes. The display was originally planned to be in the conservatory complex but had to be moved as these facilities had to be closed to the public since February.

A total of 7,300 visitors passed through the Fernery during the 16 days of the festival. This compares to a total visitation to the Fernery of only 10,000 people for the previous 12 months. Sundays were the most popular day with an average of just over 500 visitors. Numbers would have been even higher if two days had not been lost to the snow storm.

Volunteers

Last year we had a total of 772 hours of work completed by 12 volunteers on the grounds. This included four people from overseas.

We also offered non-paid work experience to students interested in Horticulture. A total of 581 hours was completed on the grounds this year, with students coming from High Schools (6), the BHU Unit at Lincoln University (3), Christchurch Academy (3), CPIT (1) and Lincoln University (1).

Another six overseas students received paid work to help them complete their practical workplace experience; they came from Ireland, France, England and Canada. Three City Care apprentices completed work experience as part of their apprentice training. And finally we had seven Community Service workers complete 374 hours of work on the grounds.

Tree damage from earthquakes and snow

Very little above ground damage was caused by the September 2010 earthquake. We were like everyone else that thought - it was bad but we had been lucky because it could have been worse.

However, we were less lucky in February. We have had to remove 21 trees within the BG grounds. The trees removed were *Betula* (4), *Quercus* (7), *Castanea* (1), *Pinus* (4), *Tilia* (1), *Populus* (2), *Acer*

(1) and *Eucalyptus* (1).

All of the trees were removed because of damage to the root plates. The only tree to topple over was a very large *Quercus* on the Playground lawn, unfortunately taking three more trees with it. From inspections to the root plate of this tree, it appears to have suffered damage to the roots in September. We suspect it may take over 24 months before it becomes fully clear how much damage has been done to the root plates of other trees that appear healthy at the present time.

The snow storm in August caused more damage to the tree crowns than all of the earthquakes. Around 100 trees have lost limbs. The Native Bush area has lost a number of canopy trees along with a large amount of damage to the sub-canopy shrubs and ground covers. This work may take up to a month to clear.

Hopefully Mother Nature has finished with us for the time being!

Bede Nottingham, Grounds Team Coordinator

Events in the Gardens

The Kids Trail in the July holidays was designed as a treasure hunt around Botanic Gardens for gnomes who were all linked to specific trees. Each gnome told you a little about its tree before leading you on to the next location. It was a good way of getting families around the Gardens and helping them to appreciate the diversity of trees we have in the collection.

The next trail will focus on pollination and include a sniff trail, nectar painting and close-up ID of floral anatomy - see below.

Edible gardens in schools workshop

Designed for teachers, board members and parents with an interest in developing new, or improving the success of existing, school edible garden projects. Enrol now for a limited place, \$20.00 through the Botanic Gardens Information Centre 941 7590 or christchurchbotanicgardens@ccc.govt.nz Saturday 10 September 1.00 – 4.00pm.

Christchurch Garden City Trust presents Burst into Spring!

Fine music from the Garden City Big Band, local high schools and Japanese performing artists on the Murray Aynsley Lawn. A free event near to the Daffodil Woodland.

Sunday 11 September (postponement date Sunday 18 September) 11.00am to 4.00pm.

A guided walk. A walking tour “**The Woodland in the Gardens - more than a place for daffodils**” through the Gardens with Friends of the Gardens guide Alan Hart. \$2.00. Meet outside the Information Centre.

Saturday 17 September 2.00pm.

Flower Power discovery trail

Let Bella the Bee show you the magic of flowers within the Gardens. Suitable for 4 – 10 year olds. Pick up the trail booklet from the Information Centre. 10 – 4pm daily, Saturday 8 to Monday 24 October

Designing a potager garden.

A practical demonstration with staff member Louise Young. Meet outside the Information Centre Saturday 15 October 2.00pm.

Lynda Burns

Events

Re-visioning the Garden City - a forum organized by Diana Madgin, held at the Canterbury Horticultural Society Hall at 7.30pm on 25 May 2011.

Diana saw the forum as “an opportunity for the City’s gardeners to gather together and listen to interesting ideas to take home and ponder. That way,” she said, “we are better equipped to be involved in the planning of the city.” A large number of people attended the event.

Abstracts from the speakers follow:

How Christchurch became the “Garden City”

Diana Madgin, garden writer, garden guide

In pre-European days, Maori were gathering food in the area at Otautahi (where the Avon loop is now), at Papanui, at Putaringamotu (Riccarton) and they cultivated gardens further north at Tuahiwi.

The sealers and flax traders arriving in the 1820s and 1830s provided seeds for Ngai Tahu gardens to provision their ships. By January 1851, only a month after the first four ships arrived, the gardeners of Tuahiwi were selling peas, cabbage, corn, pumpkin and other vegetables to the new arrivals.

Garden-making was important from the earliest days of settler colonisation in Christchurch. Growing vegetables, fruit trees and shelter belts was critically important; gardeners needed to produce

enough vegetables and fruit all year round for the whole of the household, including servants.

“Cabbage” Wilson’s plant nursery at Otautahi was the first in Christchurch. Only two months after the arrival of the First Four Ships, in February 1851, a Botanical Society was established. It sought permission to use part of Wilson’s nursery to plant seeds and cuttings brought by settlers, in order to keep the plants alive after their long ocean voyage.

Right from the start of settlement, professional gardeners voiced strong interest in having garden shows to display their best fruit and vegetables. These men were very familiar with the competition tradition in Britain and were behind the formation of the Christchurch Horticultural Society in December 1861. The first show, held in two tents in Cathedral Square, was the beginning of a horticultural tradition, which in the 20th century led to affiliated garden clubs throughout the city and province.

By the late 1870s city fathers were expressing concern about the dirt and ugly, unkempt look of Christchurch streets. The city was planned, of course, to leave unsanitary England behind. Samuel Hurst-Seagar, a prominent city architect, progressive town-planner and conservationist, was influenced by the American City Beautiful movement and even more by Ebenezer Howard’s English Garden City philosophy, which espoused enlightened urban design and clean cities with good amenities for all levels of society. Hurst-Seagar, along with other prominent citi-

zens, was elected to the Christchurch Beautifying Association's executive at its inaugural meeting in 1897.

The Beautifying Association was to become the driving force for promotion of the title, "Christchurch, the Garden City". The general public had little interest in native flora at that time; they held to their love of the Old Country and to the belief that flowers had a refining effect on character. The Association took a broad view, however, including its objective to save the last remaining patches of native bush close to the city. It also moved to beautify the city's reserves beginning with the Avon River at its centre.

Mayor Charles Louisson was the first president of the Beautifying Association, and that connection with city government began the Association's long history of participation in city affairs. Leonard Cockayne, the Association's first secretary, introduced the concept of garden competitions. He felt they could demonstrate to residents the importance of local native species, which was his special passion. He was supported by both Harry Ell, of Summit Road fame, and Samuel Barker, a keen amateur botanist who established a garden of native species on the north bank of the Avon River between Madras and Manchester Streets.

The title "Garden City" was coined originally by Sir John Gorst, a special commissioner from England at the 1906 International Exhibition. He was a keen disciple of Ebenezer Howard's Garden City philosophy, and at the Exhibition he remarked that Christchurch was a garden. In 1914, Mayor Henry Holland addressed the Beautifying Association, urging them to work until there was no doubt that Christchurch was a garden city.

It didn't happen immediately. By the 1920-30s there was increasing concern about the deterioration of the nation's health. Sir Truby King was influential in maintaining that fresh air and sunlight were the vital keys. As a way of addressing these health concerns, in the 1930s modern city planning adopted the suburb, considered the ideal environment for the nuclear family. State housing allocated large sections for garden and play, and boys learned vegetable gardening at school in the expectation that they would become the providers for their families. Businesses and factories were encouraged to improve their landscapes for the health and wellbeing of their workers and to enhance the district.

The Beautifying Association set up competitions for the best street frontages, not just for private homes, but for whole streets, factories, hotels and hospitals. The Horticultural Society complemented this by setting up different classes for the best all-round gardens. It wanted to see excellence in gardening skills, including, importantly, food for the family in fruit and vegetable gardens. The suburban style espoused neat paths, velvet lawns and bright, colourful beds of flowers.

By the 1960s, aircraft pilots bringing tourists to Christchurch, announced their arrival at the Garden City, and the name was here for good. The Garden City, with its prize-winning gardens filled with bright annuals, was a tourist attraction, especially for Japanese tour parties.

Since then, competition gardening has receded, and vegetable gardens and allotments have taken off. School kids are learning about sustainability. Garden tours now include a wide range of outstanding gardens in many styles.

Christchurch and the Shape of Water: A Tale of Two Botanic Gardens

Dr John Clemens, Curator of the Christchurch Botanic Gardens

Christchurch the Garden City was born of a natural "garden", made possible by an enlightened garden city plan, and brought to life by energetic people who delighted in growing exotic plants from all over the world as well as conserving the indigenous vegetation and plants. The Garden City has been strongly shaped by water: the braided rivers, the shifting coastline, a less than ideal building platform, and the peaceful, meandering Avon. Within its loop of the Avon, the Christchurch Botanic Garden has sheltered and displayed both the exotic and the indigenous for almost 150 years – "two botanic gardens" – and both complement each other in maintaining the Garden City's identity.

We already have natural areas in regional parks as well as collections of exotic plants in public gardens and parks. Some of these can be better linked and developed for residents and visitors, and could be enhanced with satellite collections of plants that might be grown more successfully than in the parent Christchurch Botanic Gardens.

The Central City and suburbs are damaged. By acknowledging the intrinsic natural values of the Avon

(and other natural features) as well as by enhancing the exotic in the more urban open spaces of the City we can help heal that damage and ensure we have a stronger Garden City identity into the foreseeable future.

Natural play for all, play areas for children

Grant MacLeod, Christchurch City Council, NZ Recreation Association Executive Board

Play is a means of social development, helping children to interact with each other and explore their own physical capabilities. The City Council aids in this development by providing playground equipment and open space in neighbourhood and regional settings. Children are naturally inquisitive and need to explore in order to learn. Play involves not just the structured equipment, but the entire setting that it sits within. Children and adults will make use of areas outside the play equipment.

Creative minds are encouraged when given the chance to explore; we are now in an age when young people do not automatically see parks as a place to recreate actively. Where children used to go to explore, is now seen as potential areas for devious behaviour. Children themselves are often seen as potentially illegitimate users of open space. By providing quality recreational space, the Council and the Community stand a better chance of allowing children (and adults) to be constructive and entertained in positive situations.

Playgrounds offer the opportunity for children and guardians to bond and socialise with each other. Guardians can be seen as a mechanism for play, thus strengthening bonds and trust. A guardian's role in playgrounds is to play (as a part of the apparatus), demonstrate and in many cases provide trust (like a training wheel on a bicycle).

It is important therefore that playgrounds and settings developed for play encourage the adult to be comfortable. The use of gardens for play allows for this.

Grant's talk was accompanied by a slide show. The audience was intrigued by the examples he gave to show different ways of providing items of interest for children. He showed us a play area where the stumps of large of trees had been left. Both girls and boys were drawn to the stumps with Barbie dolls and marbles, ignoring the adjacent built fort. He showed a shallow ditch for wading and floating

boats, childhood memories for most of us.

The Growing Need for Community Parks and Gardens in the City

Peggy Kelly, Packe Street Community Park

Supporting wild places for city children

Come away, O human child!

To the waters and the wild

With a faery, hand in hand,

For the world's more full of weeping than you can understand. (W.B. Yeats)

Wildish places are good for us but public wilderness is an increasingly scarce resource in our cities, where land is generally allocated for a designated purpose or fenced off while not in use.

Until the quakes children's access to wilderness was becoming increasingly rare in our inner suburbs where the traditional back-yard is fast disappearing.

Children exercise imagination, leadership, co-operation, creativity and inventiveness when they play together in wilderness. These magical untamed places (which don't have to be very large) are put to ever-changing uses, but can sometimes make the authorities a bit nervous.

Communities need to support their local safe wilderness for it to work. Beyond maintaining them as "benign areas" adults should leave these spaces and places alone. Their use by the children should be respected. Our experience in Packe Street is that children generally move on from using such a place around age 9 - though older child-minding siblings may linger a bit longer.

Community gardens on Council reserve land can easily incorporate a safe wilderness. An intensifying city needs pocket parks, community gardens and affordable allotments in every neighbourhood – this was a growing need even before the quakes. To achieve this might mean, for example, that a local community is allowed to convert an unused corner of a large metropolitan sports field into a place that they can call their own – fill it with fruit trees, individual allotments or whatever meets their needs. There is no template for a community garden.

Making it Happen: Bring back the disbanded Parks and Recreation Sub-Committee.

When a group of Packe Street residents set out in 1996 to secure land for a pocket-park, land that the

children had already discovered as a wonderful overgrown wilderness, the grown-ups found that there was, in those days, a transparent procedure to follow:

1. Locals gained support from the Residents Association.
2. Locals and Residents Association gained the support of the Community Board.
3. Locals and Community Board gained the support of the Parks and Recreation Committee.
4. Parks and Recreation Committee put the proposal to Council at a meeting open to the public.

Thus, should the process be thwarted at any stage (as it almost was for Packe St Park by opposition from a particular party) residents could see where and hear why the stumbling block has occurred and work to overcome it. This rigour and transparency allowed an innovative proposal, backed by local commitment, through the system.

The Adopt-a-Park scheme formalises the relationship between Council and Community. We need a reinvigorated Adopt-a-Park with communities and Council working together to create more interesting and varied neighbourhood gardens than the Council could ever achieve on its own. Fifteen years on, it still works for the Packe St Park/Community Garden.

Christchurch, Garden City of the World; Dream or Reality?

Neiel Drain, Former Director Parks and Recreation, Christchurch City Council, Former President Canterbury Horticultural Society

In 1997, Christchurch entered a newly established international competition, "Nations in Bloom", developed by the International Federation of Park and Recreation Administration (IFPRA). The aim of the competition was to recognise and encourage excellence in the management of the urban landscape by municipalities. These were the criteria by which each municipality would be judged: landscape enhancement, heritage management, environmentally sensitive practices, community involvement and planning for the future.

An initial submission some months prior to the event saw Christchurch accepted as a finalist. From a total of 21 finalists, Christchurch was named overall winner in the premier (large city) category, thereby claiming the title, "Best Garden City in the World" for 1997.

Since the establishment of this award the concept of "garden cities" or "greening of cities" has become increasingly fashionable, driven in large part by serious environmental, social and health problems coupled with concerns to maximise business and tourism opportunities.

As a consequence, it is important to identify what we mean by the term "garden city". One modern definition is "an integrated city-wide approach to the care, planting and management of all vegetation in a city to secure multiple environmental, economic, social and health benefits for the urban dweller". With this in mind, there is opportunity now to develop and articulate a new vision of Christchurch as a garden city based on these values and drawing on local resources, knowledge and experience. Neiel offered the following for consideration:

1. Supplementing the many reports and proposals to advance Christchurch's re-building, we would need to develop a series of large-scale landscape plans portraying entire city/suburban areas. These would incorporate existing green space and prevent perceived deficiencies, together with a range of new development proposals. Plans could be displayed in city malls and libraries for public viewing and input, supported by photographs and the use of electronic media, with all being updated on a regular basis.
2. There is a need, apparent even before the events of February and September last, for a master plan for the central city/business area as a means to achieve more coordinated development, in particular the provision of a quality landscape imprint across the entire central area. Obviously, recent events have imposed huge change, but irrespective of what is done in the future, cognisance needs to be taken of the lack of green space including trees and other vegetation in the southern portion of the central city especially, and the impact of this on the city's garden image.
3. While Christchurch has long been noted for its extensive and diverse range of public parks and gardens, a matter of concern is the loss over the years of private open/green space arising from shrinking section sizes and higher density housing. This loss needs to be recognised and compensated for as part of future urban development. The provision of village-green type parks, in the heart of communities with opportunity for family/community activities including community gardens is seen as one way to compensate for shrinking private land areas.

4. Related to this is the increasing loss of opportunity for the establishment of substantial trees as part of the urban landscape. Apart from their proven environmental and health benefits, trees of sufficient scale and presence are essential to provide a sense of visual cohesiveness and identity at the local level, and for a city, town or region as a whole. It is vital there is provision within all urban development to accommodate this need.

5. The future of Christchurch as a garden city also lies to a large extent in recognising and supporting policies that protect sustain and where possible enhance the ecology of the city and region and the natural environment as a whole. This of course includes protecting the city's natural resources, in particular its water. Christchurch has always been known as a city of gardens: however, many of the traditional garden styles and practices which have stood us in good stead in the past also require considerable amounts of water to sustain them. A change in thinking with respect to appropriate garden styles and practices may not only be desirable but likely necessary in the future as a means to reducing water demand and thus protecting the needs of future generations.

It is recognised that all greening proposals must be considered in a total framework and that factors such as changing lifestyles, consumerism, an ageing population and advances in technology will influence decisions in the future. What is unlikely to change however is the need for a wholesome and attractive environment including adequate green open space with an abundance of trees and other vegetation sustainably managed. Recent weeks have seen an outpouring of ideas, knowledge, enthusiasm and the confidence that we can rebuild what we have lost; build it better - a green city, not only for ourselves but for those who come after us. Garden City of the World? Yes, we can do it! But let's be bolder this time; let's create, not only a garden city, but a city within a garden.

Filling Empty Spaces: Movable Scenes for an Earthquake City

Coralie Winn, Gap Filler

Gap Filler (along with another similar initiative, *Greening the Rubble*) started in response to the 4 September 2010 Canterbury earthquake, and revised and expanded in light of the more destructive 22 February 2011 quake. *Gap Filler* aims to tempo-

rarily activate vacant sites within Christchurch with creative projects, to make for a more interesting, dynamic and vibrant city.

Coralie spoke about some of the principles and philosophies behind this relatively new, grass roots initiative which she helped create and currently runs, as well as Gap Filler's aspirations for our city post-quake.

For some of us, the idea of making temporary use of vacant city sites was rather negative, envisaging tatty and unattractive results. Coralie won us over with some innovative possibilities that were visually appealing, such as providing places for meeting people, band performances, film displays, exhibitions of art, commercial opportunities, coffee stops, and plant displays.

The original concept for temporarily filling spaces came from abroad. For example, the July 2011 *Gardens Illustrated* advertises a "pop-up Urban Physic Garden in Southwark, South London, the latest example of finding a temporary community use for empty space awaiting development."

Re-Gardening our City – Renewing the World Model

Di Lucas, Landscape Architect, Lucas Associates

Christchurch is predominantly located on a coastal plain that has for aeons been a focus of natural and cultural change. The plain, built up from outwash deposits, involves inner dry plains and wet plains toward a fluctuating coastline. The lands originally supported a diversity of ecosystems including kahikatea forest on the wet plains.

Beginning perhaps 1000 years ago, Waitaha "gardened" the lands and waters of the coast and wet plains city area: Nga Putaringamotu o Nga Pakihi Whakatekateka o Waitaha (the Islands of People), on the great hunting plains of Waitaha. Ngai Tahu arrived in the early 1700s, and their sites are concentrated toward the coast, particularly around the estuary. Di presented a map showing the extent of streams and wetlands present and the vegetation cover to which the colonists arrived.

Arriving from industrial Britain, where a worsening social and physical environment culminated in a social reform movement, the city's designers brought with them the utilitarian principle, "the greatest happiness of the greatest number". As a result, for Christ-

church in 1850, public walks, parks, greenbelts and environmental reform were proposed around a grid layout. It was a dry land plan overlain on wet plains lands, and the layers of culture and nature beneath were ignored. However, internationally, the resultant Christchurch has been identified as the prototype of the garden city concept.

The British concept involved the public domain, and the horticultural activity of subsequent generations involved encouraging the public effort. It also created a substantial private garden city resource of both ornamental plantings for public and private enjoyment as well as food for home use.

In the last two decades effort has been made to recognise the natural underlayers, particularly the streams. Council has sought to create a network of parks and open spaces, connected by 'green corridors' along riverbanks, walkways, disused railways and edges of road reserves. Corridors allow for the movement of biota, also walking, cycling and water margin recreation.

With more dense housing and loss of the "quarter acre pavlova paradise", urban community gardens have emerged, along with community effort in nature restoration projects.

The city's renewal provides many opportunities to re-think "the greatest happiness of the greatest number" with deeper understanding of the layers of nature and culture beneath.

When the speakers had finished most of those present stayed behind to discuss among themselves, over refreshments, the thought-provoking ideas that had been raised. Judging from the lively discussions people found the evening to have been highly stimulating.

Edited by Diana Madgin and Bill Whitmore

A new era of research collaboration begins

Two recent events are important for the reputation of the Botanic Gardens and for our knowledge of the plants that grow there.

On the morning of July 5th a small crowd gathered in Okeover House, Canterbury University, for the signing of a Memorandum of Understanding between the University and the Botanic Gardens. The memorandum gives formal recognition to the inter-

nationally accepted view that botanic gardens should be institutions that hold "documented collections of living plants for the purpose of scientific research, conservation, display and education". Those present were the Deputy Vice-Chancellor, a university photographer, the head of the School of Biological Sciences, the Curator of the Gardens, The General Manager of Public Affairs for the City Council, staff from the Botanic Gardens and the School of Biological Sciences, and the President, Vice President and Secretary of the Friends of the Christchurch Botanic Gardens. So, quite an occasion. A feather in the cap for the Gardens, and the morning tea was good too.

After the Memorandum had been signed, guests were invited to take a tour of the glasshouses belonging to the School of Biological Sciences. The houses make up an extensive facility used for research and teaching, and contain a wide range of plants. They are tucked away in a corner of the campus towards Clyde Road. Several of the guests were intrigued to find some specimens of mistletoe on a native beech near the glasshouses. These parasites were a harbinger of a talk later on in the day on another parasite, *Rafflesia sp.*, of which more later.

In the afternoon, results of research in the Botanic Gardens, which had been done before the Memorandum was signed (earthquakes tend to put things out of order), were presented at the first Christchurch Botanic Gardens Research Colloquium, held at the School of Biological Sciences. The presentations were given by summer students whose work was financially supported by the Friends and the University. Their work has been summarised in the Autumn/Winter 2011 (No. 84) issue of the Friends' Newsletter.

In other talks, Dr. Trevor Partridge, City Council botanist, discussed the policy behind the planting of indigenous plants in the city. Indigenous plants are planted to redress the balance with exotic plants, to restore plant habitats, to maintain our cultural identity and to improve biodiversity. They are adapted to local climate, are often easier to maintain and less prone to diseases than some exotic plants. In general, indigenous species are planted in amenity areas and in areas which represent, or are, original habitats.

Dr. Pieter Pelser, School of Biological Sciences, took the audience to the Philippines to discuss a plant parasitic on a forest vine. The parasite is *Rafflesia spp* (and its host, *Tetrastigma spp*). *Rafflesia* is an

endoholoparasite living inside its host, and depending entirely on the host for sustenance. It has no leaves, stems or true roots, but its flower has a most vivid presence on the outside of the vine; it is colourful, fleshy, patterned and odiferous. Sadly, its existence, in the Philippines at least, is threatened by habitat destruction.

In contrast, the New Zealand mistletoe, seen on the beech tree near the glasshouses, lives on the surface and is a hemi-parasite (it has its own photosynthetic tissue but extracts water and nutrients from the host) but knowledge of one kind of parasitism illuminates the life history of another.

The final talk of the afternoon was given by Dr. Dave Kelly, also from the School of Biological Sciences. He talked about birds, and hoped that the Gardens would prove to be a venue for study of

these creatures. Birds have aesthetic value to humans, and their ecological role is, of course, also considerable. Dr. Kelly discussed two of their ecological functions in particular: seed dispersal and pollination. The role of large birds such as the kereru in dispersing large seeds is well known, but perhaps less appreciated is the role of smaller birds, such as tui, bellbirds and silvereyes, in dispersing smaller seeds. These small birds also play an important part in maintaining adequate rates of pollination of native plants, particularly those which are often assumed to be pollinated by insects.

This year, the audience had to be limited because of building works associated with earthquakes and renovations. Let's hope that at the next colloquium we will be experiencing fewer earthquakes and be able to have a bigger audience.

Alan Hart

Friends News

Annual General Meeting Sunday 21 August 2011

The twenty-first annual general meeting of the Friends of the Christchurch Botanic Gardens was held in the Canterbury Horticultural Centre. Twenty-seven members attended.

The report of retiring President Alan Morgan covered the following points:

- While earthquakes have shattered so much of Christchurch, the Botanic Gardens are comparatively unscathed. The City Council has decided, against all odds, to carry on with the new 'Visitors' Centre' reinforcing the recognition that the Gardens are a vital part of Christchurch's wellbeing and infrastructure as well as the top visitor attraction. It is important that the Friends build on that momentum and the Committee has a number of projects in train.

- While setting up the Botanic Gardens Trust has been delayed by the earthquakes the process is back on track. The Trust would be registered within the next few weeks and a public launch staged at an appropriate time. There is a need to define how the Trust money should be used. A possibility is "extras" relating to the new Visitor Centre

- The Committee has engaged Murray Dawson of Landcare to develop a web site separate from the Friends section of the Council website. This is instead of producing a previously proposed 'sesquicentennial book', a project likely to have been financially risky. The web site will be a repository for a complete history as well as anecdotes from past employees and associates. It will contain reference material for guides and the public as well as our newsletters and notices of events.

- A major involvement for the 150th anniversary of the Gardens will be to host the Biennial Conference of the Australasian Volunteer Guides in the Gardens in September 2013. As well a small group from the Committee and the guides are part of a wider planning committee from the Gardens staff and the Council events team. A number of events are planned throughout 2013 by that committee and the Friends could have involvement in some of them.

- The development of a Memorandum of Understanding between the University of Canterbury and Christchurch Botanic Gardens was completed last year. Because of earthquakes the signing of the Memorandum was delayed until in early July.

- Landscape architect Dr Jacky Bowring has been engaged to prepare plans for the 'Gondwana' garden, a major step forward in the development's progress. The Friends look forward to playing a tangible part in the development on this important educational facility, telling the story of the evolution of our flora and its relationship to that of our neighbours.

- Richard Poole, curator of the rock garden, had planned to attend the International Alpine garden Conference in Wales in June with his airfare to be paid by the Friends. Unfortunately, due to a family bereavement, Richard was unable to make the trip.

- The Committee agreed to sponsor the opening function of the Plant Conservation Network's conference held in Christchurch last spring.

- There will be a focus on addressing the problem of our aging and declining membership.

- The Friends are in a healthy financial position.

- Thanks were given to volunteer guides, propagation teams, Committee members and the management and staff of the Gardens.

The new Committee elected at the meeting is:

President , Charles Graham

Vice President, David Moyle

Immediate Past President and Secretary, Alan Morgan

Treasurer, Dot Noordijk

Other Committee Members, Don Bell, Alan Hart, Leith McMurray

Ex Officio, John Clemens

Presentations were made to Ruby Coleman and Alison Fox in recognition of their long and valuable service to the Friends.

Curator, Dr. John Clemens, spoke on the last year in the Gardens. Activities in the Gardens have of course been affected by the earthquakes and snowstorms in the Gardens. Rather remarkably damage from earthquakes was relatively minor; in fact, the Gardens sustained greater damage from the snowstorms than the earthquakes. A better piece of news is that the new Botanic Gardens Visitors Centre is going ahead and is scheduled for completion in 2013.

The meeting ended with afternoon tea and raffles.

Contact Numbers

Committee

President	Charles Graham	348-5896
Vice President	David Moyle	358-8914
Past President	Alan Morgan	384-9976
Treasurer	Dot Noordijk	386-0595
Minute Secretary	Alan Morgan	384-9976
Other Committee Members	Leith McMurray	337-2008
	Don Bell	343-5896
	Alan Hart	332-6120
Ex Officio	John Clemens	

Helpers

Plant Sale	Helen Constable	980-9358
Membership database	Philippa Graham	348-5896
Newsletter Editor	Bill Whitmore	339-8356
Newsletter formatting	Maria Adamski	
Newsletter mail out	Philippa Graham	348-5896
Botanist	Bill Sykes	366-3844
Guide Co-ordinator	Pat Whitman	384-3475

Garden Enquiries

Info Centre 941-6840 x 7590

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 Philippa Graham – phone 348 5896 or email philippa.graham@gmail.com

Christchurch Botanic Gardens Inc
 PO Box 2553
 Christchurch

OR friendsofthegardens@gmail.com