

Newsletter

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

No 52, Spring 2002

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Coming Events

FCBG

PO Box 2553
Christchurch

AGM Roundup

A large group of members gathered for the recent AGM to look to the future with charged enthusiasm. Acknowledgements were given to volunteers for their contribution during the year and especially to the team of David Given, Cam Moore and Janet Begg for their dedication with presenting a proposal to the Council for the use of the Robert McDougall Art Gallery building. Although the Friends were not successful in securing the building for use by the Botanic Gardens, their perseverance has received recognition by the City Council of the inadequate staff facilities and buildings for the Botanic Gardens activities and lack of headquarters for the Friends. A recommendation by the CCC Robert McDougall Art Gallery Sub-committee was approved by the full Council on 22 August 02 for "an inter-unit project team to be established to develop a long-term vision and development strategy for the Botanic Gardens taking into account the issues raised in the submission from the Friends of the Botanic Gardens" So progress has been made.

It was moved that subscriptions would increase next year as proposed in the AGM mail out. One committee member resigned and five nominations were accepted onto the incoming committee. It was with regret that we saw Dennis Preston complete his term as President but welcome Faye Fleming as the new President and David Given as Vice President. This year's recipient of the Friends' Staff Development Award, Ryan Young, gave a brief summary of his project.

After dispensing with business, members stayed on to earn their cup of tea with Neil Fleming who fielded a pot-pourri of suggestions for the future and for fundraising. A show of hands voted for a mixture of weekday and weekend talks and times with later morning walks in the winter. Most people liked to see a botanical or general gardening focus to the talks and to have tours. A winter series of lectures with key-note speakers was strongly endorsed.

Spending of fundraising monies formed the final topic of the afternoon. After splitting into focus groups a number of ideas were presented. Priorities were identified from the list of ideas and these would be further discussed at future committee meetings. A huge thanks goes to those who participated and have helped provide direction for the Friends to grow in the coming year. Members were challenged to each join up a new Friend this year.

From the Botanic Gardens' Manager

Approaching the Botanic Gardens from the West Bridge one is immediately met with the Magnolias bursting into bud and flower. Almost over for this its best year of flowering is *Magnolia campbellii*. In full flower is *Magnolia campbellii* var *mollicomata* 'Lanarth' and soon to be joined by *Magnolia x soulangeana* 'Alba'

Behind the Alpine House *Viburnum x bodnantense* flowers and a visit inside the House will amaze you by the wide variety of flowers. The display includes alpine plants from South Africa, Europe as well as those of garden origin. On the fence immediately opposite you cannot help but notice *Clematis cirrhosa* with its small cream white flowers. Many of the Camellias' are in flower and behind the Nursery *Camellia reticulata* 'Spot Silk' is well worth a visit. It seems it's the season for pinks and around town many of the first cherry blossom are on show and this along with the first ducklings indicates that spring is already with us.

Our trees seem to age very quickly. Presently we are in the process of removing four *Fagus sylvatica* at the Riccarton Avenue entrance. These trees were planted in 1905, at 97 years old they have extreme decay and are considered a health and safety risk. A section of the first tree has been cut and will be on display showing how the decay progresses and how fungus invades older trees.

Araucaria araucana (*A. imbricata*) the monkey puzzle tree on the Cedar Lawn is displaying advanced attack from fungi, ganoderma, with sap seeping from the bark and the top branches already dead this tree will need to be removed.

There have been several capital works projects completed, these include the strengthening of the Bandsmen's Rotunda columns, new fences installed in the cottage garden and finally a start made to the Armagh Street footbridge. The first piles have been driven and the steel work is under way. A temporary bridge presently provides access across the Avon entering the Gardens behind the Information Centre.

Along the Rolleston Avenue frontage the original seats have been repaired, painted and installed permanently. The waterways team are organising repairs to the stonework on the riverbanks and all seats, rubbish bins and wooden bridges have been stained or repainted.

Perhaps the most significant donation for some time has been an original photographic print from an oil painting by Dr Leonard Cockayne and the donation of an old knapsack that belonged to Dr Lucy Moore, a prominent botanist at the former DSIR. These will be displayed at the Information Centre.

Craig Oliver.

Recent Events

Magnetic Observatory Workshop Museum.

Tuesday 7 May.

Sue Molloy entertained a small group in the Ranger's hut, to share some of the history of the site and the proposal for a Museum. The building was formerly the Magnetic Observatory workshop and amongst those attending were several former staff and staff family members who were able to add their memories to the story. The museum is expected to open once refurbishment has been completed.

Wisley Gardens

Friday 10 May

Richard Pender's talk and slide show on Wisley Gardens and the Royal Horticultural Society was brilliant.

Richard was formerly an apprentice in the Christchurch Botanic Gardens then worked and studied for 2 years at Wisley. There were 33 students in the group most of these being Diploma students. They had trips to visit gardens e.g. Monet's Garden and the Eden Project in Cornwall.

Now back in Christchurch Richard is studying Botany and Taxonomy for his B.Sc. at Canterbury University.

Wisley was given to the RHS by Sir Thomas Hanbury in 1904 and was then an estate of 60 acres. Today it covers 240 acres and is the Royal Horticultural Society's main garden, which attracts over 750,000 visitors a year. Eighty gardeners are employed including 33 students, along with 90 science and administration staff. Volunteers equate to about 20 gardeners.

There must be every type of garden possible at Wisley including wild, meadow, water, bog, rock and alpine, fruit, vegetables, herb gardens, glasshouses including the Alpine display house, and propagation plots. There are estate plantings including woody and floral ornamental areas, display gardens with bulbs, annuals and perennials, gardens with plant collections from around the world e.g. Australia and New Zealand, Japanese maple, rhododendron and subtropical gardens. Areas with changing displays such as plants in containers, pots and hypertufa tubs are used to encourage and educate visitors.

Richard showed a stunning slide collection including some of his favorite plants and alpines and supplied a list with all the botanical names, (such a treat-no more guessing how to spell those long names). Quite a number in the audience had visited Wisley and had been shown around by Richard while he worked there. His very professional presentation and enthusiasm for the plants, has encouraged more members to put Wisley on the 'must visit' list.

Joan Hamilton

Visions of Paradise.

Assoc Prof David Given and Cam Moore.

15 May 2002

David Given enthralled members with his recent slide presentation. A young lass Emily was encouraged by her friend to visit a very special Botanic Garden. David used Emily's letter to her friend, after her visit, to tell the story of this truly special Botanic Garden. David's travels have enabled him to visit over 300 Botanic gardens

around the world so his slides were drawn from these experiences. It was a most inspiring show.

The botanical garden described by Emily is only possible in our imaginations, but we do have visions for our Gardens that will greatly enhance what we have already. Cam Moore presented this vision, (prepared by David, Cam and other members of the Friends), which had earlier been submitted to the City Council at the hearings for the use of the McDougall Art Gallery Building.

With Christchurch being the Garden City of the World, we need to make our Botanic Garden the main attraction and as Friends, must take every step possible to achieve this.

Autumn Treasures Walk

Adrienne Moore

18 May

There is much more to autumn than colorful leaves. Many of the trees planted in the early years of the Botanic Gardens were deciduous Northern Hemisphere species. One can imagine settlers bringing nuts such as chestnuts, walnuts and hazels with them for their useful properties. These nut bearing trees are scattered throughout the Botanic Gardens and the nuts are a special autumn feature, but it was the prominent catkins on the hazels (*Corylus*) that prompted some research into this species.

The Hazels are native to the temperate regions of the Northern Hemisphere and in Britain even as far north as the Shetland Islands, where they are more like small shrubs. The genus has around ten species, several of which are found in the Botanic Gardens. These trees are named from the Greek 'Korys' meaning helmet and 'hazel' from old English meaning 'cap' referring to the nuts. They are often grown as a hedge or coppice shrub and need several plants to ensure a good crop of nuts.

The *Corylus avellana*, near the kiosk pond had lost most of the yellowy autumn leaves but the male catkins were already showing. These greeny/brown catkins lengthen and are a distinguishing feature well into the winter. The female flowers open later and are bud-like, with only the small red stigmas

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on show. Hazel pollen is spread by wind. The delicious nuts taste better if kept to mature and are attractive to people as well as squirrels, mice, and voles. Here in Christchurch they are often found near water and nuts appear to be damaged by water rats.

There are many legends associated with hazels in the Northern Hemisphere and since early times the trees have had spiritual significance. The Irish called it the tree of Knowledge. A branch was carried aboard ships to ensure a safe voyage. A nut carried in your pocket is said to cure lumbago and rheumatism and to the Scottish folk, a double nut on a stalk brought good luck. The Roman God Mercury carried a winged wand of hazel and a touch from this, enabled men to express their thoughts in words. The Romans saw the hazel as a fertility symbol and lit hazel torches on their wedding night. Gathering nuts or 'nutting' was a pleasant pastime and seen as an opportunity to go into the woods for 'courting'. A large crop of nuts meant a large crop of babies in spring.

The hazel rod became a symbol of communication and Commerce. 'Rods' are still used for divining water and a Y-shaped twig known as a dowsing rod, is held in the hands and when the rod twitches, it is time to dig.

Hazel wood splits easily and twists. It has been traditionally used for chairs, hurdles, fencing, barrel hoops, walking sticks, fishing rods, basket and whip handles. The wood was used for charcoal for gunpowder and firewood. Various methods and rotation cycles for coppicing are still used and the general life span of a hazel can be extended for very many years. The coppiced wood is used in several ways with the tops being sold for pea sticks, side shoots or 'spars' sold to thatchers for 'pins' and the brush used to cover the newly cut stools to save from browsing deer. (Gardens Illustrated, Dec 01/Jan02).

The long plant shoots were harvested over the centuries and woven into panels called 'wattles' and used as a basic structure for house walls then smeared with wet clay, dung, straw, and lime for insulation. Untreated wattles were used for hurdles to pen sheep. *C. avellana* 'Contorta' or Corkscrew hazel, is also known as Harry Lauder's walking

stick. Harry Lauder was a Scottish Comedian and singer. This botanical curiosity with its unusually twisted branches, was discovered in a hedgerow in Gloucestershire about 1863. (There is an small specimen on the lawn near Cuningham House).

Adrienne Moore.

Reference: Adolph, V. (2000). *Tales of the Trees*. Delta B.C.: Key Books.

Bio-diversity of Antarctica and the Sub-Antarctic Islands and the legacy of human explorations and impacts.

Assoc Prof David Given

9 June

This was the first lecture in our winter series, on Antarctica and the Southern Islands. A large crowd, including invited guests associated with the Antarctic, was taken on a voyage of discovery to the southern ocean. David's first visit south was with a Lands and Survey expedition in 1975/6 to study the biology of Campbell Island. Since then he has studied and explored the Sub-Antarctic Islands and the Antarctic continent on several occasions, including being guest lecturer on tourist ships visiting these areas.

His slides of both plants, birds and animals showed the natural treasures and the bird life was brought home in a very real way by the audience sitting under the huge specimen of an albatross hung from the ceiling of the Bird Hall. David told of the struggles and activities of courageous people who tried to settle, establish farms, work and study in these remote once pristine islands and of the scientists who are now recording the impact of this human intervention both there and on the Antarctic continent.

New Members' Morning tea and Behind the Scenes walk

15 June.

In spite of the inclement weather, an enthusiastic group of about 20 new members gathered in the Botanic Gardens' Information Centre on Saturday 15 June eager to hear about the Society and the Gardens. After morning tea, Kevin Garnett the Visitor Services Team Leader, led the group on a tour through the Townend House with its gloriously colourful display

of perfumed hybrid cyclamen, through the lush tropical plants in Cuninghame House and in to the extensive potting sheds in the yard. There we met Dean Pendrigh, Gardens' staff member for 15 years, tending plants. Kevin kept the group enthralled with his entertaining commentary and his jokes, while keeping an eye on everyone's bags! Oh but Kevin, we wouldn't dare to take anything.....

Janet Begg.

Botanical Curiosities Walk.

15 June

It was 4 degrees Celsius! Max talked to the trees – “These people would rather freeze to death than give up their botany” he murmured. Well, Max, these people loved your “Botanical curiosities” walk on Saturday 15 June as we tramped for two hours round the Christchurch Botanic Gardens in the rain and cold.

The dedicated followers enjoyed sharing your close acquaintance with many wonderful trees and shrubs in the grounds, and the cacti in Garrick House. So thanks Max from Harold, Neil, Adrienne and Janet.

Janet Begg

P.S. Max will repeat this walk in summer. Do not miss it next time around.

The Importance of Trees in the Urban Landscape

15th of August.

Max reminded his audience that in the 1850's there were no trees of any kind in the immediate landscape and only a bare six species of shrubs, described as unprepossessing, were present. The very large *Pinus radiata* growing in front of the Information Centre was an early planting, perhaps 120 years ago. There is Max said a larger one growing at Peel Forest. Settlers planted trees as shelter belts and as a reminder of home. Native trees were too slow growing. European trees such as oaks, beeches, limes, chestnuts and elms were faster growing, good for shade and beautiful in flower.

The area covered in the walk was mainly the central gardens south and west of the rose gardens.

Many species were looked at and commented upon. Silver birches of several kinds were seen, being fast growing they look appealing in their earlier years, but as they become more mature much of their appeal diminishes. The bark is no longer so attractive, the catkins break up and can be a nuisance. However two features of the younger birches are their graceful, pendent outer branches and hardiness to colder conditions. The paper bark maple, *Acer griseum*, was pointed out; with its peeling papery bark revealing the new orange bark beneath.

A number of camperdown elms were seen. This weeping elm is a form of the wych elm and has a wide growth of thin branches which descend to the ground. The enclosed area can be used to accommodate a party enjoying afternoon tea. One on the river bank near the Information Centre is notable for its thick dense intertwined spiral branches.

There are trees for every type of situation. We looked at the swamp cypresses at the Kiosk lake; Max said they will grow in water or wet or swampy ground or in any reasonable soil. The lime or linden trees on the Beswick or Lime Walk were inspected. Lime trees secrete a large amount of nectar when flowering as people have discovered after parking their cars in the car park at the Kiosk Bridge. However they are good for shade and beautiful in flower. Also on the Beswick Walk are several *Ginkgo biloba* trees which we looked at. The *Ginkgo* was living in the time of the Dinosaurs. The one we looked at was the female form which bears in season, yellow plum like fruit which have a most unpleasant odour. The nuts when cooked are edible and liked by the Chinese. Close by was a fastigiated form with erect branches.

Many other trees were observed and discussed, but near the end of the walk I was thrilled to see *Magnolia campbellii* covered in glorious pink flowers borne as early as July. This was a walk rich in information and enjoyable for all who attended. I heard one man say to Max, ‘I think I will do well if I remember one quarter of what I heard’ Max replied ‘You won't remember that much’.

Peter Mahan.

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Pruning Roses by Bede Nottingham.

A brave and enthusiastic group gathered on a very cold morning to learn about Rose pruning techniques from Bede. He reminded us that hard pruning could not kill a rose, but different roses need different techniques to produce the best floral display. His aim is to grow roses that perform well without the use of too many sprays. His spray regime is as follows:

Chemical	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
All roses									
• Winter Oil									
• Seaweed									
A grade Programme									
• Baking Soda									
• Super Sulphur									
B grade Programme									
• Baking Soda									
• Super Sulphur									
• Thiram									
• Proteck									
C&D grade Programme									
• Fungus Fighter									
• Thiram									
• Proteck									
• Saprol									
• Taratek									
	⇐	Buds move	⇒ ⇐			Flowering		⇒	⇐ Leaf

A grade are the most tolerant and best performing roses. **B group** are acceptable but succumb to disease in Dec/Jan
C and D group are due for eventual removal

Articles

English Trees

Tree planting on the Canterbury Plains and in the Christchurch area started with the arrival of the early settlers. The Deans brothers who in 1843 made their home at what is now called Riccarton Bush were the first to plant "English trees" such as

oaks, elms, ashes, lime trees, sycamores and fruit trees around their homestead. They also planted conifers and broad-leaved trees from other parts of the world. This tree planting continued and accelerated with the arrival in 1850 of the Church of England settlers. It was immediately obvious to the new arrivals that there was a great need to plant

trees for the benefit of crops, domestic animals and people.

When the first Europeans arrived in the 1840's the Canterbury Plains from the coast to the foothills were dominated by vast areas of tussock grassland exposed during summer to strong and dry nor-westerly winds. Moreover, apart from some low scrubland and a few patches of swamp forest dominated by kahikatea there was hardly a tree to be seen. The site for the future city of Christchurch must have been a rather bleak environment of swampland, meandering rivers and streams choked with flax bushes, raupo, sedges and other water weeds, scattered groups of sand dunes and extensive beds of sand and shingle.

Trees were urgently required for shelter, shade, fencing, to mark boundaries, construction, firewood and no doubt also to beautify their place of settlement. So the settlers set out to plant trees and the trees they planted were the trees from home, trees they were familiar with, and whose characteristics with regards to soil requirements, rates of growth, uses etc they knew.

And as Miss Herriott in her paper *A History of Hagley Park* August 1919 wrote – "It may be of interest to note that the oldest trees planted in Hagley Park and the Domain such as the sycamores, oaks and elms were imported from England as trees. They came out in big wooden cases, having been removed from the English nurseries during the resting season. On arrival after 6 months at sea – they were at once put in the Avon River to revive before planting. The stronger of them lived and grew when planted out, but many died."

But what do we mean when we talk of "English" trees? Obviously these must be trees native to the British Isles, but this is not necessarily so. Many trees introduced by the early settlers from England, although very much part of the English rural and suburban landscape then and now are not native to Britain at all but were introduced many centuries ago from other countries. So what are the "true" English trees?

During the last Pleistocene ice age, Great Britain

and northern Europe were submerged under a huge thickness of ice, hundreds of feet thick and part of the Scandinavian ice sheet. In Britain the ice sheet flowed down from the north and extended as far south as the London area. South of the ice sheet the land was bare of forests and large trees, though some tundra type of vegetation may have occurred. Britain at that time was connected to the mainland of Europe by a strip of land due to a lowering of sea level by as much as 100-200 feet.

Around 12,000 – 14,000 years ago the Ice Age drew to a close, the ice started to melt and sea level very slowly began to rise again. As the ice sheet receded the tree line across continental Europe migrated northwards again from the warmer southern regions.

Pollen analysis from earth core samples taken from bogs reveal the story of the reoccupation of Britain by trees. The earliest arrivals were silver birch, aspen and goat willow, still noted for their hardiness and colonising ability. These were followed by Scots pine and hazel. Then came oak, alder, lime and elm. As the climate became warmer other familiar species such as ash, beech, field maple, yew and holly arrived. One of the last species to make it was the hornbeam which even at present is common only in south eastern England and west to the Welsh border. Elsewhere it has been planted. Sea levels continued to rise and around 6000 years ago enough ice had melted to submerge the land connection between Britain and the continent of Europe thus preventing any further migration of tree species from the mainland. Britain split away from Europe with only 35 species of trees. These are the "true" English trees for they have been part of Britain for at least 5-6000 years and their introduction was not due to man's influence. On the other hand some of the best known and most common trees in Britain were introduced by landowners during the last 1000 years or so. Here follows a brief list with comments.

The **sycamore** or *Acer pseudoplatanus* is a species of maple native to the upland areas of central and southern Europe and now a well naturalised tree throughout much of Britain. It was introduced by landowners in the late 15th Century or perhaps even earlier by the Romans. The **Norway maple** or *Acer*

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platanoides is also a native of continental Europe and was introduced from Scandinavia in the 17th Century. Only the hedgerow or field maple *Acer campestre* is a native of Britain.

The native home of the **horse chestnut** or *Aesculus hippocastanum* is northern Greece and Albania. It was cultivated in Western Europe for at least 250 years before it was known where its natural home was. Britain received it from Turkey early in the 1600's where farmers had grown it for centuries.

The **sweet chestnut** or *Castanea sativa* is related to the oak and beech and is believed to have been introduced by the Romans for its edible nuts. The first evidence of its presence in Britain is charcoal fragments excavated from the sites of Roman forts and villas in Britain.

Two species of **lime trees**, *Tilia cordata* and *T. platyphyllos*, are native to the British Isles but neither of the two is particularly widespread. On the other hand an introduced hybrid of these two English species is much cultivated throughout the British Isles and is known as the **common lime**, *Tilia x europaea*. This hybrid was introduced from Germany or Holland in the 17th Century and immediately became fashionable and still is.

The so-called **London plane**, *Platanus x hispanica* is also a hybrid and its origin is somewhat obscure. It is believed to have originated in Spain or the south of France in around 1650 and was first planted in England around 1680. Its two parent species are believed to be the **oriental plane**, *Platanus orientalis*, native to Turkey and Greece and the **western plane** or **buttonwood**, *Platanus occidentalis*, of the USA. The **London plane**, *Platanus x hispanica* is the most commonly planted tree in London, being noted for its hybrid vigour, attractive trunk and foliage and its ability to put up with poor soils, highly polluted city air and severe and repeated pruning. It is a most tolerant tree species.

The very distinctive shape of the **Lombardy poplar**, *Populus nigra* var *Italica* has made it the most familiar or all poplars in Britain as well as in New Zealand, yet it is not indigenous to that

country. The Lombardy poplar is a mutant of the black poplar, *Populus nigra* of Europe. Its exact origin is not known for certain. It got its name from the Lombardy region in northern Italy where it became very popular as a shelter tree. It was introduced from Turin into England in 1758. It was brought to New Zealand around 1840. Almost all trees are males in New Zealand.

The **weeping willow**, *Salix babylonica* so much a feature of the Avon River in Christchurch is not native to Britain either, nor does it come from the Middle East as its specific name suggests, an error made by Linnaeus. It actually comes from China and was first introduced into Britain from Turkey in 1730.

The Romans are believed to be responsible for the introduction of the **Common** or **English walnut**, *Juglans regia* for remains of the nuts have been found around their villas in England.

These few examples should suffice to conclude that not all so called "English" trees originally came from the British Isles. But wherever in the world they originally came from they have been most welcome and over the last 150 years have utterly changed the Canterbury and Christchurch landscape.

Max Visch

Botanic Gardens in the 21st Century

A follow up report from the Gardens 2001 Congress held in Canberra April 2001 attended by Staff member Bede Nottingham

One of the ways the Friends have been able to assist the Staff in the Gardens has been the annual Staff Development award. Bede Nottingham used his award to travel to the Gardens 2001 Congress to keep up to date with what is happening in other places on matters Botanical. He also took part in the post conference field trip to visit Regional Gardens. Gardens 2001, an international congress attended by 240 delegates, addressed the issues facing Public Gardens in the 21st Century.

A brief report of his recent talk to the Friends about the conference was published earlier.

John Hicks from Parks Australia South, in his welcome to delegates spoke of the "greater awareness of the fragility of the environment and the importance of biodiversity. Public gardens can contribute considerably to conservation as well as showing the plants.... in beautiful settings. ...".

Chris Walton, a keynote speaker from UK, until recently was Head of the retailing arm of the Royal Botanic Gardens Kew called Kew Enterprises. She wrote the following abstract for the talk on "Are Public Gardens Effective in Catering to their Visitors?"

In Victorian times Kew Gardens and others like it became the "theme parks" of their day. People were drawn to see the amazing wonders of the world. Their only hope of seeing a banana tree or an exotic orchid lay in the confines of these gardens. Huge glasshouses were built to house these treasures and lectures given by famous explorers of the day-including Charles Darwin-who traveled the world's most dangerous seas to bring home their bounty.

Can we recapture this excitement? Are there any more wonders to be found? Is the growing interest in environmental issues and domestic gardening providing the platform for the new era of botanic gardens to thrust forward and capture the public's imagination?" P27 Handbook, Gardens 2001 Congress, Canberra 2001.

The recent discovery of the Dawn redwood *Metasequoia glyptostroboides* in China in the 1940's and the *Wollemia nobilis* in New South Wales Australia in the 1990's proves there are more wonders being found.

Conference sessions covered the following:

Managing in the 21st Century

What are the Challenges? What are the opportunities?

Volunteers and Friends: Achieving mutual benefits, shared goals and an integrated approach. Public Gardens in the 21st Century-where will the

\$ come from?

The worldwide web in the service of a small Botanic Garden

The Future of Public Gardens

*There are opportunities for partnerships with research, which can be made available to the public, such as new plant introduction, plant trials, correct plant names, individual plant and collection records.

Public Programmes

Botanic Garden or Pleasure Garden: Sharing public gardens' resources with the community.*

Public Gardens Education*-Beyond the curriculum

*Every Botanic garden has a unique identity and should build on this, be the best they can be and boldly market their special features. With so much competition in the entertainment business, Gardens must present plants with the 'wow' factor to inspire the visitor to come again and again.

*Education can be low key and passive with labeling and interpretation for those seeking information, and active, with events such as guided walks, talks, demonstrations and school programmes. Fun, relevant, and accessible activities inspire and delight the visitor and encourage further interest and exploration on return visits.

Horticulture

What the public sees - botanic gardens/landscapes: doesn't see - records and nurseries: wants to see - botanic gardens in the future.

*Gardens are used in many ways, including public space, passive recreation and tourism and education. The public expects botanic gardens to lead with a high quality of presentation and horticultural and botanical display.

Plant Sciences and Conservation

Herbaria- a critical resource in bio-diversity education.

Conservation biology

Partnerships, people and practical conservation outcomes. (Chaired by Friends' former President. Assoc. Prof. David Given)

Horticultural research.

*Global perspective on Plant conservation.

*Rare and endangered plants can be made accessible in Botanic gardens, even if strong metal

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cages are needed for their security. Specimens of the recently discovered tree *Wollemi nobilis*, a NSW relative of the kauris and monkey puzzles, (Araucariaceae) are on display in both the Australian National Botanic Garden in Canberra and Royal Botanic Garden Sydney, well protected and growing strongly. Species, cultivars and eco-systems can all be part of the conservation programmes. In the United States Bio-Parks are being established to preserve plant habitats.

Positive outcomes from the Congress include establishment of networks on a personal and wider level, publication of a newsletter "The Botanic Garden", New Zealand representation at the meeting of Council of Heads of Botanic Gardens in April 2002, and the website for the New Zealand network of Botanic Gardens at www.lists.ccc.govt.nz/archives/nzbgInteract-L.html

Surely our challenge as Friends of the Botanic Gardens in this hectic 21st century world, is to rekindle the wonder and amazement at the incredible plant life from our local environment and all around the world, which is so easily accessible here in our Christchurch Botanic Gardens. How fortunate we are.

Do come along to our walks and talks and events and become better informed to pass on this enjoyment to your family and friends.

(Any offers to help plan a day when we bring our families/friends for a 'Children's discovery day' next year. Please contact Adrienne on 3515915).

Some Succulent plants of the New World.

There are some 10,000 species of flowering plants included under the umbrella of succulent plants. They all have certain features in common – which catch the eye and evoke immediate reaction – either admiration or distaste – as do no other plants. The two large groups of succulents we will discuss in this article are the Cacti and the genus *Echeveria*.

The Cacti differ from other succulents in that they have areoles – small cushion like structures from which arise spines, flowers and fruits. The spines, like rose thorns, are the modified remains of

leaves. They do no damage to the plants if they are broken off.

Cacti are widely distributed in the Americas and their habitat ranges from Canada in the north to Texas, Arizona and down to Mexico. In South America they are common in Ecuador, Brazil, Bolivia, Chile and Argentina. Also we find that they do not all come from deserts. In fact quite a lot of cacti inhabit the alpine regions up to nearly eight thousand feet.

A small genus of cacti, the *Copiapoa* grow on the slopes of coastal mountains in the Atacama desert in Peru – where they rarely receive any rain in their habitat and survive on moisture from the fog that rolls in from the Pacific coast. They all produce yellow flowers. Bolivia is home to two large genera *Rebutia* and *Lobivia* – characterized by their small body size, which bear many – up to a hundred – large and colourful flowers. Where as some *rebutias* are mountain plants, species of the genus *Lobivia* grow on the lower slopes of mountains. They are larger than *rebutias* and have large red or yellow flowers. (*Lobivia* is an anagram of Bolivia).

Mexico is home to a large number of succulents belonging to the commonly grown genus of *Echeveria*. These are not cacti but belong to the plant family Crassulaceae. There are about 150 species of *Echeveria*. Most species form tight rosettes of fleshy, wax covered leaves and are used to decorate floral clocks in Christchurch. They are also used as low edging borders in our gardens. They are very hardy and these large cabbage like plants, in a lovely range of colours, are frequently grown in tubs, pots or in a border. The flowers range from yellow and orange to red.

Jim Dunn

Sub Reminder.

Thank you to all who have already renewed their subscriptions and offers of help for the coming 2002/3 year.

A gentle reminder to those still to pay, please do so by 30 November 02 to continue receiving the newsletter. Single sub is \$12 and Double/partner is \$18. Mail to P.O. Box 2553 with your renewal form.

Snippets

Volunteer News

The Propagating Teams are working steadily through the Winter months to create a stock of plants for the Bulb, Apines and Early Plants Sale on September 21st and the Great Sale Day on October 19th when perennials, annuals, trees, shrubs, native plants, succulents and drought tolerant items will be sold. We are also selling plants on an on-going basis outside the Information Centre and these are mostly Natives.

The sale stock consists at the moment of about 1000 Trees, Shrubs and Natives and 200 Succulents and Drought-Tolerants. About 1000 Perennials and Annuals are already potted up but will be greatly added to very soon as root stocks from the Gardens are made available for division. Max's Team are bracing themselves for the Spring rush of work. We should like to call for more volunteers at least during that period, but work space is limited. People who are keen to help could offer themselves as replacements in case of holiday absences or illness. Max's Team works on Thursday afternoons. The Trees, Shrubs and Natives Team could find employment for another one or two helpers, on a Tuesday morning between 10 am and 12 pm. We are very pleased with the success rate of our cuttings and these will need to be potted up soon.

Please phone Max Visch on 338 2273

We should be very grateful for recycled plant pots, especially Size 3 and the smaller range. Please wash them and leave them in a plastic bag at the Information Centre, or give them to a Propagator to deliver.

Please make a note of the Sale Dates and consider if you could help on the day. We shall need a great many helpers at the Great Plant Sale on October 19th so early volunteers will be very welcome. The Sale will be organized a little differently this year to avoid some of the overhead expenses.

We hope to contribute a plant table to the Exotic Plants Sale on November 9-10th. This will be held at the Woolston Bowling Club on Ferry Road in the Main Hall. We should be glad to hear from anyone interested to help.

Welcome back to Chris and Jerome O' Sullivan. Chris has taken over the Guides' Coordinator role from Sylvia Meek who will continue with Friends' administration work, assisted by Faye Fleming. Fay Jackson is typing up material for the Guides' Manual and newsletter articles. Sally Jebson and her team have been busy with 2 recent mail outs.

Friends' Guides and Gardens' staff involved with visitor services have attended a training session on Communication Skills with Neil Fleming.

Staff Development Award

This year the Staff Development Award was presented to Ryan Young. He will be attending the New Zealand Bonsai Convention New Plymouth on the 11th-13th October this year. The Convention includes workshop/tuition with Lindsay Bebb (Australia) Professional Bonsai Teacher/Bonsai Nursery Owner and currently President of the Australian Associated Bonsai Clubs.

From the 14th-28th October Ryan will be planting, carrying out nursery work and weed eradication at the Department of Conservation administered Mainland Island Trounson Kauri Park Northland.

Chinese Proverb

If you want to be happy for a week, take a wife,
If you want to be happy for a month, kill your pig,
If you want to be happy all your life, make a garden

CONSERVATION is

C care O of N nature S seashore E earth R rivers V
valleys A air T trees I insects O Our
N neighbourhood

12 FRIENDS OF THE CHRISTCHURCH BOTANIC GARDEN

Contact Numbers			Newsletter	Peter Mahan	354-1550
President	Faye Fleming	351-7798	Afternoon Programme	Adrienne Moore	351-5915
Vice President	David Given	351-6069		Dave Moyle	358-8914
Immediate Past President	Dennis Preston	351-4131		Ingrid Platt	358-5797
Treasurer	Colin Neal	359-8080		Lynne Rowe	358-8412
Membership Secretary	Ruby Coleman	355-8811	Ex Officio	Craig Oliver	
Minutes Secretary	Jim Crook	358-5845	Helpers		
Committee Members			Plant Sale	Helen Constable	332-1212
N. Assistant	Maria Adamski	325-2330	Newsletter mail out	Sally Jebson	352-6363
	Charlotte Bangma	337-6610	Guide Coordinator	Chris O'Sullivan	332 8565
	Janet Begg	385-5114	Botanist	Bill Sykes	366-3844
	Joan Bower	326-5312	Walks	Max Visch	338-2273
Outings/trips	Alison Fox	942 4989	Enquiries	Information Centre	364-7590

Friends of the Christchurch Botanic Gardens Inc
PO Box 2553
Christchurch
New Zealand

FRIENDS OF THE CHRISTCHURCH BOTANIC GARDENS
Insert

September 3rd	Tuesday 9 am Information Centre	Walk	<i>Water Garden and Pinetum</i> with Dean Pendrigh.
September 7th	Saturday 9 am Botanic Gardens' Cafe	Breakfast Cost \$12	Followed by opening of children's arbour at 10 am with invited guests, then a walk in the Gardens. RSVP see reminder notice.
September 21st	Saturday 10 am Meet by 9 am in BG car park by Petanque Rooms	Bus Tour Cost \$12	Daffodils at Elizabeth Wolff's, Thornbank at Rangiora and visit to Giller Trees. To book post form enclosed to Alison Fox with payment. No Saturday 1.30 pm walk in September.
September 22nd	Sunday 11 am to 3 pm Information Centre	Plant Sale	Bulbs, alpine plants and early perennials.
October 1st	Tuesday 9 am Information Centre	Walk	<i>South west storm</i> with Mark Davis and Malcolm Shirlaw.
October 16th	Wednesday 7.30 pm Petanque Rooms	Talk/ Slides	<i>Rhododendrons</i> with Brian Coker from the Rhododendron Society.
October 19th	Saturday 10 am to 1 pm Hall Lawn	Plant Sale	NB later date in October and start time 10 am.
October 19th	Saturday 1.30 pm Information Centre	Walk	<i>Historical features of the Botanic Gardens</i> in conjunction with Heritage week. Cost \$2
November 5th	Tuesday 9 am Information Centre	Walk	<i>Garden Display</i> with Louise Morgan
November 16th	Saturday 1.30 pm Information Centre	Walk	<i>Flowering Shrubs for the Home Garden.</i> Max and Friends' Guides. Cost \$2
November 20th	Wednesday 7.30 pm Petanque Club Rooms	Talk	<i>Roses, roses and more roses.</i> Speaker to be advised.
November 30th	Saturday 9 am - 5 pm Meet by 8.45 am in BG car park by Petanque Club Rooms	Bus Tour	Nancy Tichborne's garden and studio, Heaton Rutland's garden at Robinson's Bay. To book post enclosed form and payment to Alison Fox.
December 3rd	Tuesday 9 am Information Centre	Walk	<i>Herb Culture</i> with David Barwick
December 6th	Friday early evening	Xmas function	Details later.
December 21st	Saturday 1.30 pm Information Centre	Walk	<i>China's Contribution to our Garden Flora.</i> Max and Friends' Guides. Cost \$2

FRIENDS OF THE CHRISTCHURCH BOTANIC GARDENS

Sale of Small Bulbs and early Perennials

Sunday 22 September at 11 am outside the Information Centre

Some difficult to obtain small bulbs, which are well grown in pots, will be on sale from 11 am until 3 pm provided our stocks last till then. We have some interesting bulbs such as-

Five varieties of Babiana, small Tulips, lots of different Ornithogalum, two very choice Colchicum, several hard to obtain Oxalis and many more attractive bulbs to grace your rock garden or grow in bowls.

Spring Breakfast 9 am Saturday 7 September Botanic Gardens Café

This will be followed by the opening of the Arbour in the Children's playground by Councillor Carole Anderton.

At the time of publishing there are still places available for the breakfast, cost \$12. Please phone Adrienne 351 5915 before sending payment, if you wish to come. The final numbers are needed by Monday 2 September. For members wishing only to attend the official opening of the Arbour, this will be at 10 am, followed by a spring walk.

Timaru Festival of Roses 29 and 30 November and 1 December 2002

This inaugural Timaru Festival of Roses includes a Rose Show and Heritage Rose Display, walks, seminars and the opening of the newly designed rose Garden at the Timaru Botanic Garden, plus entertainment, displays and stalls etc.

Further details from Heather Coates, 88 Kent Street, Timaru

Raffle Results

Daphne Banks was the lucky member at the AGM who won Fantastic Flowers by Clay Perry.

Botanica's Trees and Shrubs was won by Bidy Pollard

Information Centre Displays

9 - 26 August	A Botanical photographic exhibition by Photographer, Sally Mason.
2 Sept - 9 Oct	Colour Makes the Season
14 Oct - 17 Nov	Heritage Display - Confessions of a Conservatory
2 Dec - 19 Jan	Botanic Garden Trees

A reminder, wheel chairs are available at the Information Centre, free of charge for use within the Botanic Gardens. Enquiries to Information Centre phone 364 7590

A Warm Welcome to the following New Members

P Bull, D Smith, R & M Murdoch, N Milburn, D Moyle, T Barry, J & J Groome, L Rowe, B Pollard, J & M Smart, P Gosden, N Brown, V Stout.