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FCBG

PO Box 237

Christchurch

President's Comment

I happened to be part of two council projects over the last month that took me to our main rivers, the Heathcote and Avon Rivers.

The first project was on the Lower Heathcote at the official opening of the "Towpath Walkway". I was one of a number of people dressed up in late 19th Century attire guiding over 200 people who had turned out for the opening. It was a great morning and everyone enjoyed the great views and interesting historical connections that the river had to offer. If any members are looking for a vigorous walk within the city limits they should try the Lower Heathcote "Towpath Walkway".

The second project involved looking at what could be done along the river bank behind the Curator's Cottage in the Botanic Gardens. The river bank here is on an outside bend of the Avon and there are excellent views upriver to the gardens and downstream to the hospital bridge. With plenty of boating activity on the water and a popular seating and walking area on the adjacent bank, the site has a lot going for it.

Opening up this section of the river bank will give better access to the river as well as providing views to the Curator's Cottage from the hospital side.

What the two projects reinforced for me was how fortunate Christchurch is to have not one but two wonderful rivers flowing through the city. Between the two of them they manage to cross a good number of our suburbs as well as the Central City. I don't believe there would be many people who do not have some attachment to one or both rivers. It is the rivers that enable us to fully experience all that Christchurch has to offer away from the busy and formal roading system.

Increasing birdlife, riverside vegetation and the presence of whitebaiters in the middle of the city are good indicators that the rivers are alive and in reasonable health. We must continue to protect and enhance our valuable waterways.

The success of this year's plant sale has once again shown that shifting to the Hall lawn was a good move for the stall operators. It is so less chaotic and more enjoyable and the increase in this year's revenue certainly shows it hasn't stopped people from parting with their dollars.

Finally a quick update on the shade and seating structure in the Young Persons' play area. Discussions with Botanic Gardens staff has resulted, mainly for safety reasons, in a delay in construction until after the busy holiday period.

Don't forget the Christmas Function this year at the museum with the Friends of the Canterbury Museum. The committee and I would like to wish you all a prosperous new year and now we can finally start the countdown to the new millennium.

Dennis Preston President

OVERDUE SUBS

If there is a red spot at the top of this page, your subscription is overdue. Please post your sub to the Treasurer, Friends of the Botanic Gardens, PO Box 237, Christchurch.

Botanic Gardens Jottings

At the time of writing, growth throughout the gardens is prolific, promoted by the good rains and mild conditions. Some spectacular displays have been evident throughout spring and the displays will continue with early summer flowering plants including roses, herbaceous perennials and many of the deciduous trees.

Botanic Gardens Guide Book

Launched at a function on 9 November 1999, this guide has been produced to satisfy the demand for local people, national and international visitors alike. Although we have had brochures and pamphlets on various sections of the gardens available for several years, there has been a need for a comprehensive guide book on the entire garden. Retailing at \$14.95, it is available to members of the Friends for \$10.00.

Information Centre

Throughout the year, displays, mostly of an educational nature are staged at the centre. Following the current display of work by the

Recent Events

Visit to Otahuna and Frensham Garden

21 October 1999

Ann Mackay, who owns Otahuna with her husband Mike, gave our group of 30 members a glimpse of the fascinating history of this large home in Rhodes Road, Taitapu. It was built in 1895 on a rise in open country by Sir Heaton and Lady Rhodes, on their 5000 acre farm. The garden was established slowly after Sir Heaton attended the closing down sale of a nursery and it took 2 winters for his gardeners to plant up the grounds.

Sir Heaton was President of the Canterbury Horticultural Society for 50 years. He imported daffodil bulbs from England, and exhibited the flowers at the local CHS shows. These bulbs were eventually naturalised and remain a famous attraction for visitors in spring. After a tour of the house, members enjoyed lunch in the grounds and walked in the gardens. Ann hopes a 'Friends of Otahuna' will be set up to help the family keep this historic place Halswell Pottery Group, in December "Good Bugs" will be the theme, incorporating companion planting.

Curator's House Garden

Since the last newsletter, work has been completed on the plan for the garden. I congratulate Dennis Preston and his team on a design which incorporates numerous features which will provide stimulation to home gardeners, particularly those with confined space.

Toward 2000

As this is the final newsletter for 1999, I wish t thank all members of the Friends for the various ways in which you have become involved in the life of the Botanic Gardens. As we go forward to 2000, I trust that you continue to enjoy this wonderful public asset and discover new areas of sharing together the world of plants.

Warwick Scadden Team Leader, Garden Parks

in good condition for many years yet. Those interested, please contact Ann on ph 329-6789.

Margaret Long is a very enthusiastic plants woman, who started her plantings at Frensham in Old Taitapu Road in 1992. The extensive garden includes an alpine plants area, potager, roses (with Blanc Double de Coubert, a special feature as a hedge), herbaceous borders and a woodland garden. The dogwoods were a special feature and other seldom seen plants were Enkianthus, interesting Loniceras (honeysuckles) Eucryphias and Rubus Tridel 'Benenden', a member of the Rosaceae family with white flowers with bold yellow stamens on arching branches. Many Clematis were in flower and the Trilliums brought gasps of delight. The plants for sale were hard for many of us to resist.

We appreciate the enthusiasm of Ann and Margaret (both members of the Friends) for sharing their homes and gardens with us. Our thanks also to Alison Fox for co-ordinating travel arrangements.

Adrianne Moore

Recent Events continued ...

A HISTORICAL WALK

9 October 1999

A group of us led by Adrianne set off from the Museum end of our Botanic Gardens for a tour to encompass some of the historical aspects. The Canterbury Association set aside 500 acres for a domain which was named for the estate of Lord Lyttelton – 'Hagley'. Now we have 75 acres as our Botanic Gardens plus North and South Hagley Parks and areas now belonging to Christ's College and the Public Hospital.

The area was just swampy scrub, some sandhills and shingle pits - flaxes etc no trees! It was bounded by colleston Avenue and of course by the River and it was fenced on the Rolleston Avenue side by a holly hedge planted later, but removed in 1963. We followed the wide path past the lovely bedding plant borders and the Peacock Fountain erected in memory of Mr Peacock and removed and resited several times, stored for years and now with modern technology restored for all to see. On past the statue of Moorhouse towards the Curator's House. Some interesting news about tulips now growing in abundance in this area. Tulips originally were from West Asia. They were very expensive way back in the 1630's and already the 'Futures' market held sway.

We viewed the lovely 'dogwood' planted to celebrate 'ie bi-centenary of the U.S.A. in 1976. The first gardener Enoch Barker, 1859-1867, received a salary of \$150 pa and his assistant \$94.10. The Curator's House was built in 1872. Curator Mr Armstrong and his son were in residence - the house was replaced in the 1920's funded by the sale of shingle from gravel pits which were later used in the construction of the water gardens. Now a new use has been found for this lovely house - it is to be a restaurant and the gardens used for home garden displays of varying kinds including vegetable growing. We strolled onward on the River Walk which looked beautiful with native planting on the banks and on past the Maritime Pines from France planted on one of the original sand hills. A glimpse of the Art Gallery built in 1931. On to the Archery Lawn put down in 1866 and now housing a modern water sculpture. Originally the lawn was used both for croquet and archery; then in 1953 for a Royal Garden party in honour of our new young Queen to which the writer was invited - through a public

ballot – a rare treat indeed for a 'Pom' on a working holiday.

Lots of notable trees then took our attention. A 1920 planting of a Kauri - Oaks abound including the first tree in the gardens; the Albert Edward Oak planted in 1863. The history of oaks is ancient. They have been used by people for centuries for building, especially ships 'of the line'. In World War II Holland especially roasted and ground acorns to make ersatz coffee. The first known planting of an oak in New Zealand was in 1824 in the Bay of Islands, and in 1843 in our Riccarton Bush. More trees to view and a potted history of Scottish plant hunter David Douglas (Douglas Fir!) - a one time student of Sir William Hooker, a great traveller and botanist who explored N.W. America - rounding South America up to the N.W. Coast, across to Hudson Bay and back to England. He named many trees and shrubs but met an untimely end at the age of 34 falling into a pit in Hawaii.

We traversed the bridge and through the daffodil lawns – planted in 1933 using bulbs donated by the local citizens and still a great feature of our gardens – on to the site of the Acclimatisation Society's fish ponds and a zoo which housed imported animals and birds which often escaped to depredate the gardens. Back again to more trees, a monkey puzzle (Chile pine), a beautiful copper beech – a yew, an ancient tree of extremely hard wood used to make longbows and very durable. A spear of yew reputed to be 2500 years old is still in existence.

The herbaceous border with its brick wall build by prison labour in 1871 - a glance at the herb garden started in 1980 with medicinal and cuisine herbs. We hurried on past the New Zealand garden/bush a memorial to Mr Leonard Cockayne a notable botanist – a glimpse of the pinetrum and so to the Information Centre to view the wonderful example of a Wardian Case made by a member of the Gardens staff – a history in itself.

We wanted more but time was up. Thank you Adrianne for such an interesting and well researched walk.

Ruby Coleman

Coming Events

		Annual event shared with 'Museum Friends' at museum. Main entrance, upstairs. Everyone bring a plate.		
December 7th Tuesday 9:00am Information Centre Walk Behind the scenes - Historic Colle Molloy.		Behind the scenes - Historic Collections. Led by Sue Molloy.		
December 18th	Saturday 1:30pm Information Centre	Walk	New Zealand Ferns and their Cultivation, led by Max Visch and Neil O'Brien.	
January 15th 2000	Saturday 1:30pm Information Centre	Walk	Plant Hunters and their plants, led by Adrianne Moore.	

The afternoon group of the 'Friends' will resume in March 2000.

Tuesday 9:00am Information Centre	Walk	Trees and Their Care with Dieter Steinegg, Arboriculturist, Botanic Gardens.		
Various 7:00pm Information Centre	3 Walks	ks Part of the Festival of Flowers week.		
Saturday 1:30pm Information Centre	Walk	Perennial Borders with Maria Adamski and Max Visch.		
Tuesday 9:00am Information Centre	Walk	Special Interest Areas with Kevin Garnett.		
Wednesday 7:30pm Information Centre	Talk	New Zealand's Past Climate – Lessons from Dead Wood with Dr Johnathon Palmer.		
Saturday 1:30pm	Walk	Conifers – Champions of the Plant Kingdom.		
	Information Centre Various 7:00pm Information Centre Saturday 1:30pm Information Centre Tuesday 9:00am Information Centre Wednesday 7:30pm Information Centre	Information CentreVarious 7:00pm Information Centre3 WalksSaturday 1:30pm Information CentreWalkTuesday 9:00am Information CentreWalkWednesday 7:30pm Information CentreTalk		

Botanic Gardens Information Centre – Summer Display List

December	Botanic Gardens book promotion Monarch Butterflies					
	Gardens Calendar - What to do and What to see in the Gardens					
January	Cicadas	Good Bugs – IPM				
	New Zealand Grasses	Promotion and sale – Averil Cave				
1	Gardens Calendar - What to do and What to see in the Gardens					
February	Lavender	Festival of Flowers - Ikebana International				
	Gardens Calendar - What to do and What to see in the Gardens					
March	Herbaceous Border – Central Rose Garden					
	Gardens Calendar - What to do and What to see in the Gardens					
April	Autumn Display – Fruits and Foliage	Forest Floor				
	Gardens Calendar - What to do and What to see in the Gardens					
May – July	Gardens Calendar - What to do and Wh	at to see in the Gardens				
	Planning and compiling next season's displays					

Bits & Pieces

OCTOBER PLANT SALES

The plant sales takings for 2^{nd} October were \$7,882. Last year's total was \$6,861. The committee wishes to thank the many members who worked hard and long to set up the plant stalls and potted up the plants over many months. This included the labelling and watering and general care so necessary to make the sale day such a success. To them all – a big thank you.

WINNER

Winner of the planted hypertufa pot at the Plant Sales 'n October was Daphne McLachlan.

EAT THE WEEDS

Pamela Phipps, a member of the Friends, shared her extensive knowledge and enthusiasm for a healthy diet using what are normally regarded as 'weeds'.

She brought many samples including Dandelion, Dock, Couch grass, Chickweed, Celandine, Melissa, Bugle, Feverfew, Elder and Marshmallow. Although there were chuckles over some of the uses for these 'weeds', the medicinal properties of these plants have been known for hundreds of years and used with proper knowledge, can be very valuable for healing and maintaining health.

Pam's recipe for Elderberry Champagne follows:

8-10 freshly opened flowers (picked early in the morning)
Do not wash!
2 Tbs cider vinegar
2 cups raw sugar
1 lemon cut up
1 gallon of water
Leave 24 hours – bottle and cork
Ready to drink in 3 days

Pam cautioned against collecting weeds in the countryside where they may have been sprayed. Beetroot – use grated raw – is recommended for its special healing properties, and even stinging nettle picked when young and cooked is beneficial. We learnt to look with more respect at plants often piled onto the compost heap instead of used for our health's sake. Thank you Pam.

THE CHRISTCHURCH AND DISTRICT DAHLIA CLUB INC.

The Christchurch and District Dahlia Club inc. is a newly formed specialist Dahlia Club. The club was formed in 1996 with the nucleus being members from the Chch Dahlia Circle of the CHS. The present club holds all its activities at the St. Mary, s Church Hall, Church Lane, Merivale. The club meets on the 2nd Tuesday of each month, except June and July when we go into recess. At each of our monthly meetings we have a speaker, on various subjects, the committee has arranged plus one of our members gives a short talk on Cultural Notes for the coming month. Demonstrations are also given on the propagation of the Dahlia be it by seed, cuttings or division. The club is affiliated to the NZ National Dahlia Society, also the UK National Dahlia Society whose publications are available to members through the club library which is available at each monthly meetings.

To celebrate the Millennium the committee of the club has offered a collection of NZ raised Hybrids to the Botanic Garden to be planted in the Dahlia collection. I am very pleased to be able to say our offer has been received with thanks and 20 NZ raised Dahlia tubers were given to Mr Bede Nottingham, who is in charge of the Rose and Dahlia collections as well as some other groups.

The Dahlia Club holds 4 evening shows, plus a one day Summer show. Visitors and friends are welcome to attend any of these shows.

To raise funds the Club holds a plant and tuber sale which is a chance to obtain some of the latest Dahlia cultivars from the USA and the UK as well as our own NZ varieties raised in New Zealand. Our club has strived since its formation to hold our Annual subscription to a very reasonable amount. The present subscription is Single \$7.00 and Double \$10.00 both rates reducible by \$2.00 if paid by September 30th. Our financial year is from August 1st to July 31st.

If you require any further information please contact Jim or Josie Hammond on 03 3857-040.

Adrianne Moore

Feature Articles

A LITTLE BIT OF HEAVEN

For a botanist, the flora of the South African Cape region is akin to a glimpse of heaven, for this is the part of the world where plants run riot and where even the most obscure of road margins and hillsides are veritable gardens of delight. The flora of the Cape is one of the most remarkable on earth with the greatest overall diversity of flowering plant species anywhere on earth. Moreover, it almost seems that the plants of the region are trying to out-compete each other in a riot of brilliant colours and bizarre shapes.

Last year I spent 12 days in the region, primarily to chair a meeting of the Species Survival Commission's global plant programme, but also to attend part of the Botanic Gardens Conservation International Congress. In addition, several of us travelled into the northwest of South Africa -Namaqualand. One of the advantages of chairing such a group is that you get first choice on meeting venues - South Africa was an unforgettable place to go to.

The Congress was at Kirstenbosch, which ranks as one of the world's major botanic gardens. Set at the base of spectacular Table Mountain the gardens are devoted solely to the South African flora, the network of gullies and small plateaus below the steep mountain slopes providing a wide range of micro-habitats suited to all plant groups of the country. Some of the outstanding features of Kirstenbosch - the entrance area with bold displays of Proteaceae, *Strelitzia*, and colourful Asteraceae; the sympathetic use of sculpture in the garden; slopes of Namaqualand daisies with stunning Table Mountain as a backdrop; and the new display and educational conservatories which replicate the major environments of Southern Africa.

The Gardens have a mission to the community which includes a gaily painted bus which brings children from the Cape Flats schools to learn about propagation and growing plants for their school grounds. And, who could forget the tearful parent who spoke at the final session of the Congress of how the work of the gardens was changing children as they came to appreciate beauty in their home community.

From Kirstenbosch some of us moved to the small coastal town of Hermanus to plan SSC's global plant

strategy. It was a privilege to work with a team of real "movers and shakers" in such a delightful environment including whales broaching close inshore. At Betty's Bay we feasted on wildflowers including Leucospermum reflexum, Leucospermum conocarpodendron and even the king protea (P. cynaroides), all in full flower. All too soon the formal meetings finished and a small group of us travelled across the ranges east of Cape Town to Clanwilliam and the Oliphants River vineyards, and on to the small town of Kamieskroon. The hospitable little hotel here has become something of a mecca. for photographers who come from round the world to attend the photographic workshops of Canadian photographer Freeman Patterson and local resident Colla Swart.

Alas, for us this was the worst season in 30 years for the fabled landscapes of Namaqualand daisies. So as compensation we concentrated on the higher altitude parts of the Kamiesberg with its ancient domes of granite and gullies of wildflowers. Surprisingly, few who visit Namagualand penetrate the Kamiesberg, instead concentrating on the spectacular daisy flora of the valley floors. We were fully compensated as we scrambled among the rock outcrops where Gladiolus and Babiana jostled with desert rose (Grielum), a wide array of daisies, mesembryanthemums, orchids, unusual small succulents and an array of scrambling shrubs, many divaricates very like our Canterbury hill shrubs. Perhaps the highlight for me, having had a number of trips to the Subantarctic Islands, was to come across a long gully yellow with the nodding heads of Bulbinella latifolia, taller but otherwise quite similar to its New Zealand cousins.

This is an ancient land, timeless and unchanging at one scale, yet constantly changing at another. It is a natural garden where one cannot rush - one has to linger and savour the variety and the changes which come with every turn. To enter such a garden is a privilege - to leave it is to be thankful that somewhere on earth there is a little bit of heaven.

David Given

Feature Articles continued ...

ARMILLARIA

Dear Friends, I hope this article finds you well, and the change of the weather might motivate you to come into the Gardens to enjoy some of our early signs of springtime.

I thought to keep you up to date on *Armillaria* root rot, which affects a number of trees and shrubs in the Gardens. A subject that drew a lot of attention by the media lately, *Armillaria novaezealandiae* or Bootlace Fungus is not very common on the Canterbury plains, however Hagley Park located in the heart of the City does appear to be under somewhat of an attack.

Cince a systematic search for the fungus in 1991 around 55 different species of trees and shrubs have been found with infection. Some of the infected plants show obvious signs of decline and die-back often associated with the disease in exotic plantations, most however undergo a gradual decline with sections of the crown progressively becoming unhealthy and dying back.

The protracted nature of the decline is well illustrated on the Pine Mound opposite the McDougall Art Gallery where historic photographs taken in the 1940's, show over 40 *Pinus pinester* whereas today there are only 15 remaining. The most recent to die was a 95-year-old tree in 1995, when removed it was heavily infected with *Armillaria* and a network of 'bootlaces' was found extending several meters out from the stump.

When the foundation for the Peacock Fountain was dug, the fungus was found 1.6 metres deep in the subsoil. In one case the fungus was found 6 metres high up in an old Horse Chestnut and numerous examples of sub-lethal infection can be found throughout the Gardens, anywhere where trees and shrubs are planted.

Cultural practices that go hand in hand with an intensively managed botanic Gardens have ensured conditions for the development of *Armillaria*. Tree removals often turn up old stumps and woody debris which have associated *Armillaria mycelium* and in the past chipping and mulching of infected material and not removing stumps were all practices which were ideal for allowing the fungus to persist and spread.

Despite some media reports to the contrary there is as yet no wonder cure for *Armillaria*. This disease can be managed and recognising this a strategy for the control of *Armillaria* has been developed and is constantly updated. The plan is a commonsense document based around integrated programmes of work. Trees growing in 'Park-like' environments suffer from detrimental influences on the soil. Poor drainage, no natural mulches or too much mulch, compaction and overfertilising are just a few of the factors which may place a tree under stress and predispose it to *Armillaria* attack.

Regular monitoring for the disease, removal of infected material and potential foodsources, this 'hands on' activity has greatly raised the Gardens Staff's levels of awareness of the problem. There is also a trial of a more direct 'control' such as inoculation of the *Trichoderma* fungus both to mulch and potting mix, with some injection into infected trees. This action is documented and more information on the management strategy is available.

So please contact me if you have any more questions on that subject. See you in the Gardens.

Dieter Steinegg – Botanic Gardens Staff

Paulownia Lawn Re-Development

The Paulownia Lawn has had a varied role over the years, being once a Pinetum "The Wilderness" and was a Magnetic Base Station for some time.

Currently the Lawn now encompasses a meteorological and gravity base station. The Trees are a checkered lot, with remnant conifers, the final few *Paulownia tomentosa* and various individual specimens. Soil conditions vary from fairly undisturbed silt loam with a medium sand sub-soil, to back fill of either clay, rubble, gravel, top soil or any mixture of the fore mentioned.

Much of the lawn area is infested with *Cynodon dactylon* (couch) which arrived in topsoil and has quickly spread, especially in the hotter summers. A three-year programme is planned to take all of this into consideration and to re-develop the most affected areas at the northern end.

The other areas that need addressing urgently include the soil horizon, and the control of *Cynodon dactylon*, this will cover most of the spring and summer months. All of the Paulownia are to be removed due to their overall condition, these will not be replaced.

Once a new lawn is established the area can be redeveloped with a yet to be decided tree collection.

Angus Allan – Botanic Gardens Staff

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8 FRIENDS OF THE CHRISTCHURCH BOTANIC GARDENS

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