

Newsletter

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

No 78, Spring 2009

President's Report

About two hours ago I was elected President of the FOBG and this is my first duty. Thank you Bill for holding back publication and to outgoing President Don for generously giving me this opportunity.

As I don't yet have a past to report on, this is a great opportunity to look to the future.

Firstly, consider what we have: the committee. Between us committee members have over 300 years of full time professional involvement in some related vocation – parks, horticulture, botany, landscaping, teaching and more. Five of us worked in the Gardens over 50 years ago, nostalgically known as the "Metcalf years" - doesn't that age us!

It is worth remembering too that as an organization the sole purpose for our being is for the benefit of the Gardens. We are mostly all City Council rate-payers which gives us a double reason to remember that one of our objectives is 'to advocate for the Botanic Gardens'

We are in for an exciting few years as we move towards the 150th anniversary of the Gardens in 2013. The 'Botanic Gardens Centre' (its current title) detailed design is underway with construction completion due in 2012.

But most importantly we have a new curator, Dr John Clemens. Yes, we have been waiting for 3½ years since David Given's untimely death but I'm sure John will be well worth the wait. He is on a steep learning curve catching up on the past and figuring where to go in the future. I'm sure I speak for all 'Friends' when I wish him a very warm welcome and best wishes for the challenges ahead. I have assured him of our full support and a close working relationship.

The FOBG and the Gardens staff have been doing preliminary planning for a workshop similar to last year's Gondwana workshop which will set out to consider all aspects of the role of the Botanic Gardens in connection with our native flora. When the curator's appointment became certain the workshop was put on hold in the meantime. We'll keep you posted.

At the AGM we approved the formation of a Charitable Trust which will be used to seek funding for helping selected developments when appropriate. Watch this space.

The propagation teams are already in action and the guiding season starts next month. The old adage 'you get out of it what you put in' certainly applies to the 'Friends' so if you would like to be more involved get in touch with one of the committee.

Thank you all for your confidence in electing me President. I am looking forward for an exciting and fruitful two years.

Alan Morgan – 23 August 2009

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FCBG
PO Box 2553
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Gardens' News

Jeremy Hawker reports –

Within the Gardens there are many trees some with plaques identifying that they were planted by people of note. Having been at many of these plantings, people of note are often certainly present, but for the most part play very little in the planting or care of the specimens their names are associated with. It is the many horticulturalists and arborists who have dug the tree pits, propagated and cared for the plants, completed the planting, staked the tree, pruned and watered, and their work is the result we see in front of us today.

Recently I demonstrated the relationship to our garden staff how even picking up litter adds to the value and vision of the Gardens. I am often reminded of a gentleman in Dunedin who cared for one of their many parks who was asked if it was demeaning to pick up litter within the park, to which he replied certainly not, he was not the one creating the mess. The Duchess of Northumberland on her visit here for the Festival of Flowers commented that she would not hire any staff who were not prepared to pick up litter; this she was telling me as she reached for some wind-blown litter flying past.

So this is a thank you to all the staff past and present who:

- tended the trees, planted the plants, watered, mowed and picked up litter without recognition, nameless and certainly without plaques.
- listened to the wearisome comparison from people whose memories fail or are certainly selective, as things were always better in the past, and
- continue to present a collection of plants, and a place of recreation and enjoyment for the majority of residents and visitors to the City.

As the Operations Manager Team Manager I certainly am appreciative of our current staff and all who have contributed to the Gardens throughout its history, and can you single out staff past and present, who cared for the trees? I certainly can't tell you their names but I enjoy the pleasure of that majestic tree not because it was planted, perhaps with the ceremonial spade briefly casting a token cupful of earth into a pre-prepared hole, but because there have been a succession of staff who kept it alive, tending and passing it on to the next generation to care for and enjoy.

Our resident satisfaction survey conducted recently indicated that there was a large and significant proportion of the population who ranked the Botanic Gardens as the best Council site and the second best service behind the taste of the city's water. We have recently undertaken a visitor survey with the University of South Australia and again the gardens was rated highly with our visitors and residents who value the collections and spaces provided, rating this part of Christchurch extremely highly.

Thank you to our Friends who support the staff, the vision, and our collections, and to the continued development and refurbishment of our collections and infrastructure, so we collectively can pass on to those who follow both the staff and the next group of Friends, a garden of quality, history and dynamisms, to be appreciated by the future residents and visitors and a place to create memories that will last a lifetime.

A message from Lynda Burns, the new Visitor Services Team Leader at the Gardens.

Introducing the Visitor Services Team - Kia ora tatou.

Many of the Friends have been regular visitors to the Botanic Gardens Information Centre and we welcome your ongoing support. As the new team leader of the staff in the centre and Brian Appleton, the ranger, I'd like to give the Friends a peek at our plans for the next year.

In summer, we will be installing a permanent exhibition of Garden Highlights. Photographs of plant collections at their seasonal peak will be displayed alongside a map of the Gardens. We will be refreshing the display every month to keep up with the constant changes in the Gardens. In the New Year we will be installing another permanent exhibition of the history of the Christchurch Botanic Gardens. One of the features will be Roger Murdoch's wonderful model of the Curator's House that was on display at the Ellerslie Flower Show.

The monthly Staff walks are to be replaced with a seasonal behind-the-scenes tour of the Gardens with the Ranger and Collection Curators. This, and the seasonal demonstrations organised by the Friends, will form the core of a seasonal week of activities.

Other activities may involve a lecture, family activities and articles in community newspapers. The first week will be Autumn 2010.

Staff tours for Friends and the Friends guides will still be available on request. Contact Lynda Burns lynda.burns@ccc.govt.nz to enquire.

The next few months will be spent planning for the above, installation of new directional signs in the Gardens and developing a permanent children's trail.

Exciting developments for the Gardens

Curator appointed.

In the last Newsletter the hope was expressed that we would have a new Curator before the end of this year. This had happened rather sooner than that. Dr John Clemens is the new Curator and is already on the job. We welcome Dr Clemens and look forward to working with him to develop and promote the Gardens.

During the 3½ years period when the Gardens had no Curator Jeremy Hawker helped to fill the gap as well as meeting his own commitments as the Gardens Operations Team Manager. He took over the responsibility for liaising with the Friends; for example he attended meetings of the Friends' Committee, meetings of the Friends' Guides, various Friends' AGMs, and contributed regularly to this Newsletter, reporting on Gardens activities and developments. The Friends are most grateful for Jeremy's efforts on their behalf and look forward to continuing the warm relationship he has created.

Botanic Gardens proposed new visitor centre.

On the 6 July Mayor Bob Parker launched the concept design for the proposed new visitor centre and staff facilities in the Botanic Gardens. Construction of the new centre is likely to begin in late 2010.

A panel of assessors, which included elected members, Council staff and independent architects, unanimously chose a concept design produced by Patterson Associates Ltd. This followed a design competition where six designers from the 32 teams who had expressed interest were invited to submit concept plans. Transport and Greenspace Manager Alan Beuzenberg says the chosen design stood apart from other submissions because of its simplicity as an architectural form and for the clarity of the site planning.

The proposed building is compact and relatively narrow so it opens up significant new space in the Gardens. This new open area will be able to be used for markets, performances, sculpture exhibitions and picnics.

As well as the public spaces such as the café and a multi-function seminar/education room, the centre houses nursery facilities with greenhouses, potting areas, a herbarium, a library/archive area, staff spaces and equipment and maintenance storage areas.

If you would like to see more you can visit the Civic Offices in Tuam Street. The drawings are on display in the reception area outside the Council Chambers.



Articles

Garden City in the Desert

In 1997 Christchurch won the *International Nations in Bloom* competition, a prestigious international garden city prize that put us in the global spotlight. In the same year, Al Ain, a remote desert city in the United Arab Emirates, won second place in the Small Cities category of the same competition. Remember? Not likely. Twelve years down the track, who in Christchurch remembers our enormous pride in winning that award? Not so many. Even fewer checked out Al Ain, me included. It didn't even ring bells when my sister went there to teach nine years ago.

When my Bill and I did our big OE, flying Emirates meant an August weekend in Dubai on the way to Europe and an early October visit to Al Ain on the way home. Dubai was unimaginably hot, mid to high 40s in late August, and in July it was reported some days soared into the 50s.

It was cooler when we disembarked there at midnight in early October, about 39 degrees, my sister said. We drove for one and a half hours south to Al Ain through the star-canopied desert on a six-lane highway bordered by an almost unbroken ribbon of trees; I could see the irrigation pipes etched in the sand. The moonlight shone on the trees, and at every gap the lone and rolling sands stretched far away.

As we neared Al Ain, about 3am, we could see small groups of men gathered in the sand hills, their white dishdashas lit up by car lights or small campfires. These were the local Emirati, young men who didn't need to rise and shine in the morning because they are the landlords and the workforce is almost entirely migrant labour. It was still Ramadan, a most trying month for the faithful, and in this publicly segregated Muslim society it's nice, my sister remarked, to take some food and soft drinks and socialise, rather like a large open-air midnight picnic.

In the morning, the bright sun and heat combined to challenge our eyes and our wardrobe: covered but cool is the maxim. In the twelve years, since it won the *Nations in Bloom* award, this city has grown from a population of 50,000 to more than 400,000 today. It's widely spread around five major oases. Broad intersecting streets are green with avenues of shade trees underplanted with tough toitoi-like

grasses and native ground cover. Major roundabouts and intersections are landscaped with trees, rocks, water and flowers - petunias, impatiens, zinnias, cannas.

Liam Farrell is a landscape architect originally from Hokitika. He had his own business until six years ago, at which time a position was advertised in Al Ain and the Kiwi manager there encouraged him to move from the lush rain-drenched landscape of the West Coast to the dramatically contrasting desert. "Underground springs and aquifers are the chief water supply in the desert," Liam said. "I knew about them from Canterbury, but that was all I knew."

He joined a landscape team of eight people working for Shankland Cox Ltd, an architecture/landscape company that has contracted to the Al Ain municipal government for 27 years. In fact, they were the original planners of this new city, which only three decades ago was Bedouin campsites and oases farmers.

Liam worked on parks and garden projects for the city, presenting new ideas and plans to the municipality for green spaces, streetscapes, public parks and inner-city green areas. The team came up with strategies for developing new areas and re-developing existing landscapes.

The biggest problem is water. "Basically, rain is non-existent," Liam says. "We have rain about six times a year, and then it's only for 2-3 hours, at the most half a day." Wastewater is recycled, and within the city every tree, avenue, lawn, flowerbed or ground cover is criss-crossed with underground irrigation hose. There are deep aquifers under the mountain range in adjacent Oman, whose border runs right up against Al Ain, but within the city oases are fed by natural springs that have supported continuous human habitation for 2000 years.

In other settlements, oases grow a multitude of food crops including bananas, mangoes, seasonal herbs, sugarcane, pomegranates, but Al Ain is distinctive for its thick groves of date palms owned by the same local families for centuries. Within these great palm plantations, mud-brick walls mark the boundaries, and each property has its own mosque. Water, however, is shared co-operatively using an ancient shallow canal system known as falaj, by which the palms are regularly flooded.

The date palm *Phoenix dactylifera*, is native to the region, but as an oasis plant, it requires water each day, 150 litres per tree in the summer, 75 litres in January and February, the winter months. Native plants are sourced as much as possible for soft-scape design in the city, like the leguminous ghaf, *Prosopis cineraria*, which is protected by royal decree. It's a handsome desert tree with a long taproot that grows naturally without irrigation but thrives with it. The native gravel plain tree, *Ziziphus spina-cristi*, and *Acacia arabica* both survive in the desert, but as street trees, they flourish with irrigation.

Tall native fountain grasses, *Pennisetum setaceum* and *P. setaceum* 'rubrum', are used in attractive block plantings along median strips and street borders, in hotel landscaping and in public parks. Exotic flora used in both private and public landscaping include the mango, olive, pomegranate and frangipani; the neem tree (*Azadiracta indica*) and three fig species (*Ficus nitida*, *F. religiosa*, *F. altissima*) are the main street trees. "With constant water and heat, everything grows like crazy," Liam said. "Some trees suffer heat stroke in the summer but come back in the winter months."

Trees require an average of 100 litres of water a day in high summer, 75 litres in winter. Lawn grass, *Paspallum saltine*, that can tolerate up to 8,000ppm of salt, greens the main street verges but requires a mighty 12 litres of water per square meter each day most of the year round. "The trend now," Liam said, "is to use more native ground covers that require much less water and lower maintenance, such as *Sesuvium portulacastrum*, *Lantana camara* and *Atriplex spp.*"

Reading this, one might imagine that the desert has disappeared from view. Far from it: everywhere in the city there is heat, and sand piled against buildings, over roads, filling the air in any puff of wind. Increasingly, however, there are shady parks to picnic or camp in, like the enormous Green Mubazzarah on the outskirts of town. Viewed from Jabel Hafeet, the arid and majestic rock mountain beside it, this vast enclosed acreage of picnic blocks—one tree in a square of green ground cover per family group—is juxtaposed against the endless desert, "The Empty Quarter", stretching into the sunset. There's a thousand miles of sand before you reach the next city.

Diana Madgin (January 2007)

Look at that tree - monkey puzzle (*Araucaria araucana*)

New Zealanders who have an interest in gardens would probably have no trouble identifying monkey puzzle trees. They are very distinctive in appearance and we are used to seeing them in older gardens and parks. Many overseas visitors, however, don't seem to have this familiarity with the species. I am surprised when guiding people from other countries in the Christchurch Botanic Gardens at how many of them notice the monkey puzzle growing between the Armstrong and the Archery Lawns, are intrigued by it and ask what it is.

The monkey puzzle comes from the Andean regions of central Chile and west central Argentina, typically above 1000 m, in regions with heavy winter snowfall. It is the national tree of Chile and its botanical name comes from the Arauca Indians who live in the province of Arauca in the Chilean Andes. It is regarded as sacred to some members of the local Mapuche tribe. A group of Arauca Indians, the Pehuenches (from "pehuen" = *Araucaria* and "che" = people in Mapudungun) owe their name to their diet based on harvesting *Araucaria* seeds. Pehuén is the common name for the tree in South America.

The first European sighting of these trees was by Spanish explorers sent to the area by the Spanish government to look for trees suitable for ship building. The monkey puzzles' long straight trunks meant that they were well suited for ship building and the forests were extensively milled. Now, because of the species current rarity and vulnerable status its wood is rarely used.

It is an evergreen coniferous tree growing to 40 m tall and 2 m trunk diameter. Juvenile trees grow into a broadly pyramidal or conical habit. When monkey puzzle trees grow in their natural habitat winter snow collects on the older low branches and breaks them off, leaving the tree with a crown of branches at the top and a smooth trunk below. The bark of a tree is a dull grey which becomes wrinkled with age and then resembles an elephant's leg and the base of the tree is like an elephant's foot. In cultivation the lower branches are less likely to fall off, making the tree much bushier than in nature. The branches are very open – so open in fact you can actually look through the tree.

The tree has the ability to coppice, or make new growth from its cut stump. This ability is rare in conifers.

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The leaves are thick, tough and scale-like, triangular, 3–4 cm long, 1–3 cm broad at the base, and with sharp edges and tip. They persist for 10–15 years or more covering most of the tree like armour except for the older branches.

The strange look of monkey puzzle trees has given rise to differing descriptions, such as:

“It is a wild, ‘scary’ evergreen with open splaying and spiralling branches. In my eyes, the monkey puzzle tree looks like a cross between a cactus and evergreen tree. I have often also thought of it as a bunch of pipe-cleaners wrapped together.”

“It is a popular garden tree, planted for its unusual effect of the thick, ‘reptilian’ branches with a very symmetrical appearance.”

“Monkey puzzle tree makes an attractive, novelty specimen.”

Monkey puzzle was introduced to England by Archibald Menzies in 1795. Menzies was a plant collector and naval surgeon on Captain George Vancouver's circumnavigation of the globe. Menzies was served the seeds of the conifer as a dessert while dining with the governor of Chile and later sowed them in a frame on the ship's quarter deck. Five healthy plants made it back to Great Britain and were the first plants to be planted. One of these trees went to Kew Gardens where it was carefully looked after, and lived for almost 100 years before it died in 1892.

The species did not become common in Britain until William Lobb sent home a good supply of seed in 1844. It was much grown in England (and New Zealand) in Victorian times when it became fashionable to plant it not only in parks and large estates but also in the small plots in front of suburban houses for which it was totally unsuitable.

In Britain prior to 1850, it had been known as ‘Joseph Bank's pine’, ‘Chilean pine’ or ‘Chile pine’; this was somewhat confusing as it is not a pine. The popular English name of monkey-puzzle originated during its early cultivation in Britain in about 1850, when the species was still very rare in gardens and not widely known. The proud owner of a young specimen at Pencarrow garden near Bodmin in Cornwall was showing it to a group of friends, and one made the remark “It would puzzle a monkey to climb that.” As the species had no existing popular name, first “monkey puzzler”, then “monkey puzzle”, stuck. In France it is known as “désespoir des singes” or “monkeys' despair”.

The spiky leaves of the monkey puzzle never evolved to stop monkeys - monkeys are actually not found in the species' native range. The species is of great age, estimated to be over 60 million years old, and is sometimes described as a living fossil. Some scientists believe that the spiky leaves are the reason that the tree has survived since the age of the dinosaurs, and that they evolved in this way to stop grazing dinosaurs eating the tree before it could grow out of their reach.

Monkey puzzle is usually dioecious, with the male and female cones on separate trees, though occasional individuals bear cones of both sexes. The fe-

Events in the Gardens

On now, and until the end of October.

A photographic display in the Information Centre entitled “**Up close and personal - take a closer look...beauty is everywhere**”. Many beautiful flowers are overlooked due to their size and form. Through the use of photography, those that view the display will be introduced to flowers they wouldn't normally notice.

Entry is free and available for viewing during opening hours: 9.00am - 4.00pm Mon - Fri and 10.15am - 4.00pm Sat – Sun.

Practical Demonstrations for Gardeners

See the Coming Events Programme for details of the next practical demonstration.



male cones are huge – the size of a football – and take 2 to 3 years to mature. They are covered in spines which eventually disintegrate on the tree to release the seeds.

The seeds are edible, similar to large pine nuts, and are extensively harvested in Chile. I am told they taste better roasted. Harvesting of the nuts has put survival of the trees at risk in some parts of South America. The tree has some potential to be a food crop in other areas in the future, thriving in climates with cool oceanic summers where other nut crops do not grow well. However the tree does not yield seeds until it is around 30–40 years old, which rather discourages investment in planting orchards.

Other species of *Araucaria* include *A. heterophylla* or Norfolk Island pine and *A. bidwillii* or the bunya-bunya from Eastern Australia.

Bill Whitmore (Prepared from a number of sources including notes by Max Visch.)

Art in the Gardens The Wrestlers - by Llew Summers.

Located on the banks of the Avon in the daffodil area this was purchased by the Christchurch City Council in 1990. It was cast in terrazzo (a mixture of cement and marble chip). The art work shows two powerful bodies wrapped around each other, performing a wrestling manoeuvre. Llew Summers has the skill to produce figures on a monumental scale and his sculptures have caused controversy and outrage. Aside from the size of Summers' public sculptures the familiar controversy that was raised over this work appeared to have centred on the nudity of the athletes. Llew Summers renamed it *The Wrestlers* and objections died away.

His work is an intuitive and expressive celebration of the nude in the traditions of sculpture. What was important to him was to get a balance between the physical and the spiritual in life. As Summers stated: "We're given a soul and we're given a body. Sculpture provides a nice balance between works that can be made deep and meaningful but they require your physical body to produce them. Rather than just being clever, or smart, the work must have soul."

Llew Summers was born in Christchurch in 1974, educated at Linwood High School and held his first exhibition in 1971. Since then he has held nearly 50 solo exhibitions. He uses wood, bronze, concrete, clay, marble and Oamaru stone for his works. Many works are in corporate and public places including Cashmere High School, Lincoln University, Linwood College, Christchurch Cathedral College and the College of Education. One finds his public works out of Christchurch, for example in Kaitaia, Upper Hutt and Timaru.

Since 1999 his work has taken on a spiritual dimension comprising icons, shrines and in 2005 the *Stations of the Cross* in the Cathedral of the Blessed Sacrament, Christchurch.

Faye Fleming and Barbara Brailsford.



Friends Events

Annual General Meeting: Sunday 23 August 2009

The nineteenth annual general meeting of the Friends of the Christchurch Botanic Gardens was held in the Canterbury Horticultural Centre. Forty-five members attended the meeting, which was of some significance as it was the first opportunity for the general membership to meet the new curator of the Gardens, Dr. John Clemens.

The election of officers proceeded smoothly. Your new committee is:

President	Alan Morgan
Vice President	Charles Graham
Past President	Don Bell
Treasurer	Gwenda Murfitt
Membership Secretary	Ruby Coleman
Minute Secretary	Alan Hart
Other Committee Members	David Moyle Diane Percy Des Riach
Ex Officio	John Clemens

After presentation of his annual report, the outgoing president, Don Bell, made three significant awards. One was made to Jim Crook to recognize his very long service (15 years) as secretary to the Friends. The contribution made by Sylvia Meek in maintaining information about the Friends on a computer database was recognized by a certificate presented to her, and a special award from Volunteering Canterbury was presented to Max Visch for his long-standing contribution to the Botanic Garden guides.

A motion, put forward by Alan Morgan, to establish the Christchurch Botanic Gardens Charitable Trust was passed. In broad terms, the function of the trust will be to accept and manage funds for projects that will benefit the gardens. Alan Morgan pointed out that these projects will be of "an icing on the cake" nature i.e. funds held by the Trust will not contribute towards the every-day management and operation of the gardens by the City Council.

After completion of formal business, Dr. John Clemens introduced himself to the group. He is em-

ployed by the City Council and his job description is extensive. In essence, it is to have a strategic and visionary role in maintaining the botanical assets of the city. The Botanic Gardens are the core of these but his responsibilities include plant collections, reserves, etc that lie outside the Gardens. A further important responsibility is to develop relationships with other horticultural and botanical institutions - universities, industry, research institutes, museums - both nationally and internationally.

Over the time that the Botanic Gardens has been without a Curator, many curatorial functions have been carried out by the Garden's Operations Manager, Jeremy Hawker, who has also kept the Friends informed about activities in the gardens on a regular basis. His vital contributions in this regard were noted by the out-going president, Don Bell.

Mr. Hawker then presented an illustrated account of progress with the new Botanic Gardens Centre. A design of the new Centre has been accepted and discussions are now taking place to ensure that the design is fully functional and meets the requirements of staff, visitors (and Friends). A completion date of 2013, if not 2012, is the aim.

Alan Morgan has organised a workshop to consider the future of the indigenous plant collections in the Gardens, especially those in the Leonard Cockayne garden. He spoke about the philosophy behind the workshop. It will be held in the near future and will attempt to set out some aims for future development of the indigenous collections. The principal aim is to have them become an informative showcase for the native flora, perhaps with particular emphasis on the flora of Canterbury.

The meeting ended with afternoon tea, notable for a long-running raffle, made so by a generous supply of potted plants.

Alan Hart

Mailing out of Newsletter and notices to Friends

The last Newsletter noted that Jean Norton, who for many years has taken the responsibility for mailing out the Newsletters and various notices to Friends, was to give up that duty. Joy Minnery has volunteered to take over the job. We are most grateful to Jean for her work over many years and we extend a warm welcome to Joy.

Editor's note

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

The Friends 2008/2009 library donation enabled the following books to be purchased for the Gardens library

The Unknown Gertrude Jekyll, Martin Wood (ed.).
Composting, Tim Marshall.
The Cultivation of New Zealand Native Grasses - Revised, Lawrie Metcalf.
Propagation of New Zealand Native Plants, Revised, Lawrie Metcalf.
Know Your New Zealand Native Trees, Lawrie Metcalf.
Growing Vegetables Year-Round, Dennis Greville.
Palmers Vegetable Gardening, (Prof) T.W. Walker.
A Botanist's Notebook, Eric Godley.
The Plantfinder's Guide to Daisies, John Sutton.
The Gardens of William Morris, Jill, Duchess of Hamilton, Penny Hart & John Simmons.
Lost Crafts – Rediscovering Traditional Skills, Una Mc Govern.
Going Bush – New Zealanders and Nature in 20th Century, Kirstie Ross.
Native Plant Communities of the Canterbury Plains, DOC.
Plant Heritage New Zealand, Tony Foster.
RHS Encyclopaedia of Plants & Flowers, Christopher Brickell (ed.).
New Zealand's Wilderness Heritage, Les Molloy & Craig Potton.
Wetlands of New Zealand – a Bitter-Sweet Story, Janet Hart.
Jekka's Complete Herb Book, Jekka McVicar.
Environmental Histories of New Zealand, Ed. Eric Pawson & Tom Brooking.
Waimakariri- an Illustrated History, Robert Logan.
RHS Encyclopaedia of Planting Combinations, Tony Lord & Andrew Lawson.
The Elements of Organic Gardening, HRH The Prince of Wales.
Influential Gardeners – 20th Century Garden Style, Andrew Wilson.

Sue Molloy, Botanical Resources Coordinator

12 FRIENDS OF THE CHRISTCHURCH BOTANIC GARDENS

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