

Newsletter

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

No 58, Autumn 2004

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Dear Friends

What a wonderful time to live in Christchurch and to enjoy the Christchurch Botanic Gardens and all the surrounding amenities. A survey being carried out for the Christchurch City Council gives us very positive feedback.

Guiding group

This group has raised almost \$1000 mainly from overseas visitors. Their daily 1.30 pm walks give a wonderful overview of the Gardens along with history, geography and information about trees and plants. Most visitors are overwhelmed by the trees, the colours and the walk in general. We are trialling 10 am walks during the weekends of February leaving from the Museum entrance.

Education

We congratulate Lynne Rowe who, with her background in education, and her desire to enthuse children about the Gardens, has developed leaflets that are designed like detective hunts for families to enjoy in the Gardens. It is rewarding for Lynne to see families enjoying these programmes. We plan to have a new detective hunt each season and a special one during KidsFest. If anyone has ideas or knows of sponsorship opportunities please phone me 3517798.

Potting Group

Once again this group has filled our coffers through sales at the Information Centre. Some of these have been specific sales such as bulbs. Thank you to all those who contribute to this worthy activity, especially Jane McArthur and the bulb team for their recent efforts. We now have to find a worthwhile project (or projects) to enhance the Gardens and assist the curators and staff.

General

These groups plus a number of individuals, work behind the scenes to ensure our organisation succeeds in its aims in support of the Gardens and the Gardens' staff. We are often positioned as the "eyes and ears" of the Gardens and our separation from Council allows us to be independently vocal about major issues.

Why we are called Friends?

Our thoughts are with a number of Friends and their family members who have health problems at present. If you know of someone in this group please let us know so that others can help bear their pain and worry. Please remember that, to keep our organisation moving forward, we need committed Friends to share the friendship, challenge and love of our Gardens. It is a treasure at our doorstep.

Faye, President, Friends of the Christchurch Botanic Gardens.

"Nature in Art" Botanical Art Exhibition in the Botanic Gardens'
Information Centre

Tue 16 March to Sun 28 March 2004 open between 10.15am and 4.00pm.

A group exhibit by four Botanical artists, including two members of the Friends of the Botanic Gardens. Dianne Smith, Irene McBryde and Anne McEvedy have regularly attended the Melbourne Botanical Art School. Dorothy Poulson is a member of the Rangiora Art Society. The four artists were greatly inspired by Liz Sherras Clark, English artist, who visited Christchurch in February 2003. All works are to be for sale. See coming events sheet for special function Wed 17 March.

FCBG

PO Box 2553
Christchurch

Gardens' News

After a very dry spring and early summer, some relief to the dry conditions has occurred in the last few days. Irrigation of the Botanic Gardens is currently a time consuming and somewhat inefficient process in many of the sections. Beginning in February is the start of the irrigation project that will provide automated watering, meaning less time spent by staff running hoses and setting up sprinklers, and more efficient use of our water resources. Initially, flow and capacity testing will be undertaken to allow for a planned and programmed approach, with capital funding being available for installation over the next few years.

Maintaining and enhancing our infrastructure is an ongoing process with the completion of the work in Cuninghame House, and work progressing at present in Gilpin House for the display of our Orchid collection. In the near future the Peacock fountain will be inspected with the intention of a repaint next year, as some signs of minor corrosion have begun to appear.

Knowing what we have and what condition it is in will become a major focus during the year. This not only means infrastructure but the vast collection of plant material. Plant records have been placed on a database that still has to be verified, and an assessment of condition will be undertaken. This work will improve the quality of information available, and aid in the preparation of an Asset Management plan. This in turn will provide assistance in managing our collections and assets in a timely, and planned manner. a

Jeremy Hawker, Operations Manager, 30 January.

Recent Events

The Weird and Wonderful.

A walk with David Given, 25 November

What a treat to have the company of such a plant enthusiast as David. His extensive experience working with plants and huge knowledge of their characteristics and history had us enthralled. David led us through collections in the glasshouses and grounds to explain how plants adapt to the environment and the marvellous mechanisms and strategies they use for growth and survival. Examples from the carnivorous plants, cacti, orchids and tropical forest plants and the New Zealand rare and endangered plant collection were explained and embellished with many personal anecdotes.

David delighted upon a group of the rarest New Zealand species of *Pittosporum* – *Pittosporum dallii*, on the lawn near the Jimmy Cole rimu. These large shrubs have very dark green thick, more or less elliptic leaves, with serrated margins. Although they rarely flower in cultivation, some BG plants were still in flower. The white buds turn pale primrose and have an overpoweringly sweet perfume, which can draw David to a plant 'a mile away'. James Dall, a gold miner in the NW Nelson area, first discovered this rare New Zealand native in the 1890s. Plants of *Pittosporum dallii* were offered at our October

plant sale and snapped up when David extolled their virtues to customers.

Such a walk reinforces what a magnificent resource we have in our Botanic Gardens, which truly come alive when interpreted by an expert.

For more interpretive walks with the staff see our Coming Events insert

Christmas Party.

Our President Faye Fleming and her husband Neil hosted the Friends' Christmas party in their lovely garden early in December. Amongst the large group of members were a number of new faces as well as some foundation members. We enjoyed the music from the classical saxophone group from Burnside High School, Marjorie Morse cut the Christmas cake and many prizes were won from the multi-draw raffle. The final treat was a tour of the garden with Neil to enjoy his many many old roses each known by name.

We extend our special thanks to Faye and Neil and their family, for a superb venue and hospitality and to all who contributed Christmas fare and raffle prizes. Special thanks to Alison Fox, Noeline and Sam Hobson, Nanette Milburn, Jack Ewart and Ruby Coleman.

Plants claimed to be drinkable.

Walk with Lynne Rowe

About 20 people set off around the Gardens in mid November to look at plants said to be drinkable. Would they suit a suburban garden, would we want to drink them? Behind the Fern House a brief stop occurred by the cabbage tree, *Cordyline australis*. In the 1800's boiled young roots gave good sugar drinks and helped home brews. The rose garden rekindled memories of boiling rose hips for vitamin C. Walking down the Lime Walk, lime (Linden) flower tea, from *Tilia x vulgaris* and Ginkgo teas, were known.

Less familiar was Captain Cook's spruce beer recipe. When sailing into Dusky Sound in the 1700's, rimu, was thought to be vaguely like American spruce. The crew set to chopping down rimu and manuka branches to boil with 10 gallons of molasses until the bark began peeling off. The one-ton of liquid was put into empty ale casks for a week, and then drunk with enthusiasm. Our group did not seem keen to use this idea as a cheap way to solve Christmas drinks. Foiled perhaps, by lack of old whaling pots for boiling and spare wooden casks! However we enjoyed some refreshing commercial spruce beer.

A tea made from *Macropiper excelsum*, (Kawa kawa or pepper tree) leaves, refreshed some in the mid 1800's, though rats fed high doses of dried leaves died. *Hebe salicifolia* could be chemically interesting, with varied anecdotal claims about its uses.

Some of the *Coprosma* species had seeds which, when roasted, gave a coffee smell and a slight coffee tasting drink. Matai tree sap beer was said to satisfy early bush workers with its slightly bitter taste. It needed to be drunk immediately as it went flat in air.

A walk past some of the notable herb garden plants including *Camellia sinensis*, the tea camellia, brought the group back to the Information Centre to taste various commercial teas. Snipping and infusing plants from the walk seemed a bad idea, given the unknown concentration of the active ingredient and the unknown chemistry and effects of the other leaf particles.

Lynne Rowe.

Lavender and Exotic Vegetables .

Bus Trip Sat 22 November 2003

We received a warm welcome at **Lavender Downs**, Lawford Rd, West Melton. Both Virginia McNaughton and her husband Dennis Mathews have been involved with the New Zealand Lavender Growers' Association and Virginia is trustee of the National Collection of Lavender for the Herb Federation of New Zealand and the New Zealand Institute of Horticulture. Virginia spoke of the lavenders grown for essential oil, cut flowers, research and ornamental purposes and members enjoyed the garden and chance to buy plants and lavender products.

Nearby is the **Kitchen Garden** at Sedbergh West Melton, where Dianne Leighton has developed a ten-acre property using traditional organic and permaculture principles. Amongst the more than 1000 trees planted for shelter and crops, are quinces, sour cherries, medlars, hazelnuts, walnuts and chestnuts. Around sixty unusual and rarely grown vegetables and herbs have been planted outdoors and in an unheated tunnel house. The impressive cardoons act as shelter in the garden where Dianne works part time to supply restaurant customers with year round supplies.

Our thanks to Alison for arranging these visits.

Adrienne Moore

A Walk in the Gardens.

Saturday, 20 December 2003

Forests and Birds; can we have one without the other? Not really, when we consider the origin of the word "forest". It comes from the Latin meaning "outside" or "in the open" and that embraces many plant and animal species all evolving together in one particular area. The forest provides the birds with food, fruit, seeds, nectar and insects; a safe haven for nesting and breeding and shelter from the weather. In return, the birds control insect pests, spread seeds and assist with pollination. So using this broad definition, the Botanic Gardens is really a forest linked with other nearby vegetated areas that in turn provide corridors to the open country and the nearby hills.

Many species of birds, both native and introduced, visit and reside, at least seasonally, within the Gardens. The Native Pigeon, Kereru, always captures the attention of those lucky to see it roosting or even nesting. This large and beautiful

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bird enjoys, not only the fruits provided by native conifers and other native trees but has adapted well to the fruits and leaves of introduced plants. The pigeons rear some young in the Gardens, each year.

Other native species enjoying life in the Gardens are; the Bellbird, Korimako; the Paradise Duck, Putangitangi; the Fantail, Piwakawaka; Waxeyes, Tauhou; and the Grey Warbler, Riroriro. Among the water birds we find the Grey and Mallard ducks. Of considerable interest is the increasing numbers of what was, until recently, a fairly rare bird, the New Zealand Scaup, or Black Teal. This true diving duck is now commonly seen on the Avon River. Always talking points with visitors are the Little Shags, roosting near the Information Centre.

Many common introduced birds find a home here. Newly arrived, is a pair of German or Little Owls. Predators are a constant threat to bird life. Controlled by staff are; cats, possums, mustelids (weasels, stoats, ferrets) and rats. Although many may say that our Botanic Garden is an artificial environment, it can be said, that with help, The "Forest" and its Birds will continue to thrive as a living entity.

Neil O'Brien.

A "Bush Birds" Brochure, Published by the City Council, is available from the BG Information Centre.

The Future of the Friends of the Christchurch Botanic Gardens.

The Friends of the Gardens is a group of people interested in supporting the Management and Staff in their efforts to attain and maintain a standard of excellence, which has made the Christchurch Botanic Gardens famous around the world.

We have many volunteers who help in the Propagating area and the funds raised from the sale of these plants at our Sale Days have been most encouraging. Included here are the continuing sales from the Information Centre, which is a great help. There is also the busy band of helpers on our Sale Days. Members are helping as volunteer workers assisting the Staff in some of the continuing and more mundane areas of their work. This greatly appreciated and helps

cement the Friends' relationship with Staff.

The Guiding group has two regular activities - the Daily Guided walks and the monthly Friends' Guided Saturday walk. This is a very active group, which also has monthly meetings to improve their already extensive knowledge of the Gardens.

The Committee is a small group of enthusiastic members, who endeavor to provide an interesting programme for members to attend, produce a 3 monthly Newsletter, administer the funds acquired from subscriptions, donations and sales, and liaise with the Management of the Gardens. Unfortunately, this year, we have been affected by four resignations, two for health reasons, one from a member going to live overseas and the fourth as a result of Dr. David Given being appointed as Botanical Services Curator, making it impossible for him to continue in his position as Vice-President.

Our very capable President, Faye Fleming, is in the second year of her second term in this position. She is also Guide Co-ordinator and an active guide. Faye's work has been of the highest standard at a time of considerable change at the Gardens, as well as being instrumental in developing the Guiding Course (along with her husband, Neil), which provided the training for the Daily Guides. As Secretary, Jim Crook has conscientiously and ably carried out his duties for many years, and is always on hand to help with catering and money handling on sale days, etc. Adrienne Moore has been a member of the Committee almost continuously since the inception of the F.B.G., initially as Secretary/Treasurer. Her particular expertise for many years now has been as Programme Organiser. Latterly she has also been very involved with the production of the Newsletter, along with Maria Adamski, who is now a volunteer after some time as a Committee member.

Ruby Coleman has been Membership Secretary for some time and is also Catering Convener, Lynne Rowe's background in education has been put to good use in developing children's activities such as the Holiday Detective Hunt Sheet, David Moyle is our Projects' Convener, Dennis Preston, Past President and Janet Begg does Research and Civic Liaison. We have been fortunate in recently co-opting onto the Committee Matt Morris. Matt is presently completing his Ph.D. at the University of Canterbury, his thesis subject being "Home Gardening in Christchurch from the 1920's to the 1960's".

I am in my second year as Treasurer, a position I took over, to fill an approaching gap, as a temporary measure. I also organise the bus tours and garden visits for the Friends.

The Friends of the Christchurch Botanic Gardens Constitution states that we can have up to 13 Committee members. As you will notice we are understaffed at the moment. I know there are some very capable people out there in the Membership who could volunteer for a position on the Committee and bring new ideas and abilities to the Administration. Please give this some serious thought as we have some fascinating times approaching in the Gardens. **We do need help to spread the load.** Volunteers to take over ex-committee responsibilities would also be welcome.

If you would be interested in joining the Committee you may like to attend one of our forthcoming meetings to see how we work. Please ring Faye, 3517 798 or Ruby, 3558 811 to make arrangements.

Alison Fox

Rides in the Wheelbarrow.

Talk by David Barwick

David kindly gave an hour of his day last week to explain the changes he has made to the herbaceous border over the last six months. Mostly, these changes involved the shifting of plants from one half of the border to the other – hence the wheelbarrow rides of his talks' title – in an operation he described as 'refugee resettlement'.

His feelings that the border had begun to look tired, especially over the month or two after Christmas were confirmed by a chance discovery of rare colour pictures from the mid twentieth century which showed the border looking much more like what David had in mind.

At the same time, twelve months of observations had indicated to David that the current arrangement was not well suited to the site conditions. While the border had been divided into two distinct sections – cultivars on the east and species on the west – there were radically different soil conditions from one side to the other that such a simple division couldn't easily support. Particularly important were the 'different moisture

regimes', from 'practically flooding' on the western side to 'baking', especially past the larch as one continues east. In part these differences were to do with differing soil types from clay to sand and gravel, but also to do with the irrigation system.

As David said, once he had realised what was going on there was 'no point in lamenting it'. In fact, with characteristic optimism he saw it as an opportunity to rework the whole border. Many low growing cultivars had been smothered, and anyway David was keen to introduce cultivars into the other border 'to extend the range of colour along the entire border'.

He began moving plants who hate wet feet but which are drought tolerant to 'the dry east', and vice versa. *Scabiosa*, *Euphorbia* and catmints, and various drought-loving plants donated by the Friends in November, were among the new eastern relocations. Michaelmas daisies, on the other hand, hate the drought and will be shifted to 'the west end'. New plant materials have been appearing as well, filling up spaces with colour and interesting foliage; the geraniums have proved especially pleasing.

Also keep an eye out for new red hot poker, *Kniphofia*, in the border: with names like *K.* 'Green Icicle' and *K.* 'Green Icemaideen' - these aren't what you'd normally expect. Pale greens and apricots are the interesting new colours to look out for in these so-called hot poker. However, it is blues and oranges especially that David is building up, for example the cobalt blue *Salvia* 'Blue Ribbon' originating on the rocky Texan hillside. Yellows – particularly the *Coreopsis* and *Rudbeckias* – will be kept to a minimum, 'just a little dose'.

After walking the entire length of the overhauled border and answering numerous questions about specific plants, and a light drizzle thankfully starting to fall, we thanked David for his time, and his knowledgeable and amusing discussion, and left him to it.

Matt Morris

Tip from our President - Sweet Peas do well if planted on St Patrick's day 17 March

Articles

Global Gardeners.

Reproduced with permission from *The Botanics*, Issue 15, Winter 2003. Magazine of the National Botanic Gardens of Scotland in Association with its Members.

With the threat of extinction looming large for many of the world's plants, different approaches to conservation are under constant discussion. Many have asked whether cultivating threatened plants outside their natural habitat, or indeed thousands of miles away from their native distribution, has any part to play at all. Anna Levin investigates.

Once upon a time, doctors created physic gardens to grow medicinal plants. Then plant hunters set out across the world in search of botanical treasures and the gardens expanded to exhibit the amazing plants they brought back. Over hundreds of years, the collections grew and flourished, and so did the expertise and knowledge of all those who worked there.

Meanwhile, beyond the tranquillity of the gardens, the world was changing fast. Human populations exploded, societies industrialised and commercialised and people forgot that plants were the true source of wealth. Forests were burned and wild areas trampled, and poison seeped into the earth. More than a third of the world's plant species could soon be lost forever.

The people working in gardens had been engrossed in their magnificent collections and saw with horror what had become of the world. They realised that many of the wondrous habitats that the garden's plants had come from no longer existed, and that their collections and expertise were more precious than they'd ever imagined. As their gardens blossomed, while the world's wild plants were in dire straights, they had almost unwittingly created a botanical Noah's ark. And now at RBGE (Royal Botanic Garden Edinburgh) and other long standing botanic gardens, the question being faced is: how best to respond to the crisis facing the world's plants? Having realised that we have the living collections, scientific knowledge and horticultural skills to make a significant difference, how best to channel these resources, and, given the scale of the crisis,

what to prioritise?

In the language of conservation policy, these questions are often phrased in terms of '*in situ*' and '*ex situ*' conservation. *In situ* refers to the conservation of species within their natural habitat, while *ex situ* means preserving species – or components of biological diversity – outside their natural habitat, such as in zoos, gene banks or botanic gardens. Controversy about zoos and captive breeding of animals may have led to a bias against the concept of *ex situ* conservation, but with plants, *ex situ* collections can take many forms, including seed banks and tissue culture as well as living plants.

In recent years, the conservation of plants has been driven forward by the Global Strategy for Plant Conservation (GSPC), the first international initiative to set 16 specific targets – to be achieved by 2010. Targets 7 and 8 state that of the world's threatened plant species, 60% are to be conserved *in situ*, and 60% in accessible *ex situ* collections, with 10% of these included in restoration programmes. The GSPC has been described as an action mandate for botanic gardens. But actually implementing such initiatives is a complex task.

Conservation is not just a question of preserving species and habitats, but of the genetic diversity within those species. And while the need to understand biodiversity at a genetic level is increasingly recognised, we are also realising just how complicated that is, and how little we really understand.

"There are two decisions to be made in conservation," says RBGE's geneticist Dr Pete Hollingsworth, "*what* to conserve and *how* to conserve it – and neither are straight forward. "*The 'what'* concerns taxonomy – there can be uncertainty about how many separate species are in a given area or conservation collection as there can be subtle differences and hybridisation. '*How*' to conserve it is often a question of population biology – if a species is declining and you want to halt or reverse that trend, then the species has to reproduce or disperse successfully. This is the basis of any conservation, but it's amazing how little is known about the reproduction of many rare species."

While *ex situ* collections are very important for such research and as a reserve for future needs, Pete explains that genetic analysis is needed to establish what is included in these collections, especially if they are to form the basis of reintroduction into the wild. "Plants are very finely tuned to their environment, since they can't get up and move away they must adapt," he says. "Genetic variation is needed to evolve and the more genetic variation you have, the greater the chances of adapting to future environmental changes". It's not as simple as saying that *in situ* conservation alone is always the best – the natural world is being increasingly fragmented into isolated pockets, and often the gaps between these are too great for natural pollen and seed flow to replenish their genetic diversity. Sometimes it is necessary to bring plants in from outside. "And yet you can't necessarily just move plants around - adaptation is a subtle and complex process which we are only just beginning to understand. Bringing in plants to a genetically impoverished population might restore genetic variation and help the population to recover. But if the plants you bring in have adapted very precisely to different environmental conditions, then the next generation may not be adapted to either place and there is a danger of population crash." This is the great challenge and controversy of conservation biology-knowing when and how far to intervene. But the greatest danger is that this uncertainty can be an excuse to do nothing.

"Conservation is so often at a crisis, and sometimes you have just got to act," says Pete. "I also think we need to recognise that this is a science and that we need to be experimental. If there's a lack of genetic data, we have to just draw from the literature that does exist and make decisions on the best available evidence."

Martin Gardner is the Co-ordinator of the International Conifer Conservation Project, which integrates large scale *ex situ* work, with conservation in the natural environment. "There are strong critics of *ex situ* work and it's important to understand and address these issues," he says. "People complain about money being used to grow plants in botanic gardens when we should be putting the resources into protecting plants in the wild". But we need research programmes here to study biological reproduction and genetics, and to help those working on habitat degradation in the field.

"Critics also say that *ex situ* collections are never going to capture the genetic diversity found in the wild. Of course that's true in many cases we don't even know what that genetic diversity is-but what we're doing is better than nothing. When I go to the 'front line' as I call it, I see for myself how fast the forests are disappearing and the extent of the species loss, while maybe all we've done in one trip is to collect seed from three or four plants. Given the scale of destruction it's pitiful, but at least it's something".

"We need to do everything we can, and *ex situ* conservation is just one of many irons in the fire. But it isn't an 'either/or' question - an *ex situ* approach will never work unless it's linked in an integral way with *in situ* conservation. It has to be linked with conserving plants in the wild." This convergence of the two approaches was apparent at a recent meeting of the GSPC expert advisory group, which Regius Keeper Professor Stephen Blackmore, chaired in October. "They are not seen as separate any more but closely related activities," he says. "There was recognition that while conservation is focussed on trying to protect plants in their natural habitat, i.e. *in situ*, the mechanism by which that is often achieved is through *ex situ* collections- the seed banks, gene banks and living collections in botanic gardens."

"Botanic gardens are increasingly functioning as a global community and working together.

The GSPC aims to create a database of all plants in cultivation, so the world's botanic gardens can be viewed as a global collection. There are over 2000 botanic gardens. Together they hold 42 million specimens in herbaria, and collectively cultivate more than six million accessions of living plants-representing between a quarter and a third of all known plants." "Seeing people working strategically together and talking a common language-gave me real hope that we can meet the aims of the GSPC, that we can actually make it happen."

There are recent reports of rare New Zealand native orchids disappearing from National Parks and attempts made to smuggle them out of the country.

Orchidelirium is the name Victorians used for the flower madness that is the equivalent of gold fever for botanical collectors. Now orchid-lovers compare the addiction to that of a drug.

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Introducing Begonias.

Now that Greg Salton's outstanding collection of tuberous begonias are being exhibited in Townend House in the Gardens for all to admire, it seems appropriate to have a brief look at begonias in general.

One of the first people to collect begonias in the wild was Charles Plumier 1646-1706 – a Franciscan monk, writer and amateur botanist. Plumier was sent by Louis XIV to the West Indies on three voyages to collect plants in the 1690s. The Franciscan Father proved to be a keen naturalist and ardent collector. He discovered hundreds of new species which he described and illustrated two volumes on American plants. Plumier developed the habit of naming newly discovered genera after famous botanists and their patrons. *Fuchsia*, *Lobelia*, and *Gesneria* are examples of this. He coined the generic name *Begonia* for some of his discoveries in honour of Michel Begon, (1638-1710)

a patron of botany and at one time French Governor of Santo Domingo in the West Indies, also Governor of French Canada. Linnaeus later continued this practice of naming plants after people.

The first begonia to arrive in Britain was *Begonia nitida* from Jamaica, sent to Kew Gardens in 1777. This introduction must have made a great impact,

as from then on plant collectors sent *Begonia* seed and plants to Britain and Europe in ever increasing numbers. Plant hunters, acting on behalf of big nurseries or wealthy private individuals had by the year 1900 collected some 265 species of *Begonia* from many parts of the world. Yet in spite of immense interest shown in the naturally occurring species, little or no hybridization was carried out before 1860. It was the famous nursery of James

Veitch and Sons of Chelsea that in the late 1860s first started the hybridization of begonia species sent to them from South America by their plant hunters Pearce and Davis. n



B. x sedeni was the first commercial tuberous begonia hybrid. Raised in 1869 by John Seden, one parent was *B. boliviensis* (the other is not known for certain), and it proved an excellent parent—extremely unusual in an interspecific hybrid, most of which are sterile. • Male flower, • Female flower.

Illustration from Cassell Illustrated Monographs, *Begonias. The Care and Cultivation of Tuberous Varieties*. Brian Langdon. Cassell, London.1989.

Begonia is the type genus of the family Begoniaceae. This family also includes a few other genera – but with over 1000 described and named species, *Begonia* is by far the most important one. Begonia species are widespread throughout the moist tropics and subtropics of Mexico, Central and South America, the West Indies, Africa and Southeast Asia. They occur from sea level up to an altitude of 3000m and within this altitudinal range, occupy a large variety of habitats.

Begonias also show a high degree of endemism – very few species occupy large areas such as *Begonia evansiana* which reaches from Java to China and Japan. Most species are very restricted in their distribution – a whole species often being confined to a small piece of jungle, a mountain top or a single island, e.g. *Begonia socotrana* is only found on Socotra – a small island in the Indian

Ocean. In spite of much variation within the genus, begonias are readily distinguished from other herbaceous perennials by their more or less succulent stems, lopsided leaves and unique flowers. These are often large and conspicuous with sepals and petals the same colour and ranging from white, yellow, pink to scarlet. The sexes are separate but both occur on the same plant. The male flowers have 2 or 4 petal like segments arranged in opposite pairs and have many yellow stamens. The female flowers have 2-5 petal like segments and a prominent 3-winged inferior vary.

On the basis of their underground parts, begonias can be subdivided into 4 groups, depending on whether they form bulbs, tubers, rhizomes or possess a fibrous root system. e.g. *Begonia ococtrana* produces bulbs and bulbils. *B. boliviensis* and *B. pearcei* form tubers. *B. rex*, *B. manicata*, and *B. heracleifolia* produce rhizomes, while *B. semperflorens*, *B. luxurians*, *B. metallica* and *B. haageana* possess fibrous root systems.

The rich flower colours, striking foliage and free flowering habit have ensured begonias a place among our favourite garden flowers. The *Begonia semperflorens* cultivars and many tuberous begonias make excellent bedding plants. Others such as the *Begonia rex* cultivars, *B. haageana*, *B. manicata*, *B. fuchsoides* and many others are very decorative and make good conservatory and house plants.

Max Visch.

Tuberous Begonia.

The large, brightly coloured, flamboyant flowers of the tuberous begonia hybrids we see today are a far cry from their ancestors. Compared to their forebears when first discovered over 150 years ago, little resemblance can be seen.

According to the records of James Veitch, from the nursery Messrs James Veitch and Sons (who were an exceptionally influential nursery in the development of British gardens particularly throughout the 19th century), there were seven begonia species used in the early hybridising attempts. They were *Begonia cinnabarina*, introduced from Bolivia in 1847, followed by *B. boliviensis* and *B. pearcei* in 1864, also from Bolivia. In 1865 *B. veitchii* was imported from Peru and a year later *B. rosaeflora*. The latter species has since been reclassified and is now

thought to be a colour variant of *B. veitchii*. *Begonia rosaeflora* produces a rose-pink flower while *B. veitchii* yields an orange flower. *B. clarkei*, introduced in 1869, has subsequently been described as another form of *B. cinnabarina*. Last but not least is *B. davisii* which was imported in 1876 from Peru. All of these plants were found at high altitudes growing on the shady side of mountains. Other than the Central American species, the only other species of relative breeding importance is *B. dregei* which was introduced from South Africa in 1836. Although used sparingly by the early breeders, *B. dregei* was important in that it was one of the parents used to produce the first white hybrid *B. 'White Queen'*.

However the first actual hybrid ever to be bred was by John Seden, a foreman with Messrs James Veitch and Son. Appropriately named 'Sedeni' in his honour, it was first exhibited in 1869 at a Royal Horticultural Society show in England and received the Silver Flora Medal. There remains some mystery regarding the parentage of this hybrid. *Begonia boliviensis* is confirmed as one parent and the other parent is thought, by a few sources, to be *B. cinnabarina*.

From the late 1870's, the breeding of tuberous begonias advanced quite rapidly particularly in England, Belgium, France and Germany. The early hybrids eventually offered to commerce, were all single blooms, having 4 petals like their parents. Fortunately, plant breeders with a keen eye soon noticed some abnormalities with the occasional plant producing not the usual 4 petals but 5. These were immediately crossed together and over a period of time a few plants were created with perhaps 5 or 6 petals. Continual crossing and selection, produced plants with more and more petals until eventually in 1879, 30 years from the first importation, twelve double flowering hybrids were listed in commercial catalogues. Still a far cry from the quality of the doubles available today but they were considered superior to the singles at the time. The early doubles were small in size and had less petals compared with the hybrids we now know.

There are now thousands of hybrids available for purchase in all manner of shapes, sizes and colours. Some are hardier than others and more suited to outside conditions. These are generally the smaller growing cultivars like the "Memories" or "Non-stop" series. The larger flowering begonias are best grown with some protection from the

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adverse effects of the weather. This way, larger blooms can be attained. However with this comes additional maintenance, as the increased plant size requires staking to support the heavy blooms. The weight of the male flowers also means that each flower must be individually staked to display them to perfection. For display reasons, the smaller female flowers found on either side of the male, are removed by pinching them out. Because the females are single blooms, they are considered less desirable and detract from the larger double male.

The pendulous hybrids are ideal in hanging baskets and we can thank the natural drooping habit of the parent *B. boliviensis* for that! Public taste has always dictated fashion and because of this many forms have come and gone over the years. The single begonias were given a new lease of life with the introduction of the "Pin-up" series. There is even a winter flowering begonia *B. "Blush"* series, which given a warm environment, will flower all year. The winter flowering characteristic is derived from its parent *B. socotrana*, named for the Indian Ocean Island of Socotra.

My long-term prediction is that the next fashionable begonia will be the "fragrant" ones. They're already available through the nursery industry in small numbers and with time the scent is becoming stronger. Once the commercial nurseries increase breeding programmes the fragrance will hopefully become more highlighted. Watch this space!!

The Gardens has built up a collection of the original species as well as recreated a lot of the original primary hybrids that were the stepping-stones towards the modern hybrids.

Come and see the tuberous begonias on display in Townend House throughout February.

Greg Salton, Nursery and Conservatories Co-ordinator.

Moving House???? Donations of second hand plant and garden books will be welcome for our Sales Days. Also photographs of Friends' activities to add to our archives. Please contact Adrienne 3515 915

Propagating activities.

The Propagating area has seen some changes recently with more to come. The Perennials Division, the origin of plant selling by the Friends, is losing its leader Max Visch. After 12 or more years of dedicated work, Max has decided to move on. He will continue with his other work for the Gardens, and has agreed to act as consultant for the Propagators so we shall see him often, but the regular team leadership work must fall to another. So we are looking for a knowledgeable and enthusiastic person with an interest in perennials to take over this position. It must be a fun job or Max would not have stayed so long! We also need more volunteers for all aspects of our propagating work. Please Ph Helen 980 9358.

The Trees, Shrubs & Natives area is now framed and gravelled and a sprinkler installed. Plant pots are now set directly onto the gravel so that we don't need polystyrene boxes. However, the Perennials and Bulbs sections still use them but we do have enough for the time being. The summer cuttings process was slowed down this year by the breakdown of the mister in the Quarantine House. However, this has now been fixed; a new solenoid. We are getting good rooting percentages with the plants selected, both in the Quarantine House and the Tunnel House Pit learning as we go.

The Cacti & Succulents Tent became too hot last month and some of the plants were sunburnt. They were moved outside or into the Tunnel House. Unfortunately people looking for botanical highs knew the existence of our cacti. Someone climbed over the fence and took a tall spiny and quite innocuous cactus, broke it and left sections around the Gardens. One can only hope they got severely pricked as the spines have barbs.

The stock of Rock Plants is being reduced as Jane McArthur plans to confine her work to bulbs. The Friends will be offering some dry bulbs at the Families' Big Day sale on 15th February. Those left over will be potted up for next Spring. These are from the Botanic Gardens small bulb collection.

POTS: As usual we shall be glad of more washed pots, especially small ones. Tie them up in a plastic bag and leave them at the Information Centre or outside our Tunnel House.

Helen Constable.

IS YOUR GARDEN A THREAT?

Garden Escapes. Garden Plants Invading Canterbury. Reproduced from the Department of Conservation pamphlet with permission.

Today's garden flowers can be tomorrow's pest plants. Garden plants can easily escape and establish themselves in bush next door or hundreds of kilometres away, where they can overshadow and displace native plants. For example, passionfruit vines creep over walls, boxthorn berries are eaten by birds, and their seeds dispersed, old man's beard seeds are distributed by wind and periwinkle that has been dumped by gardeners sprawls over forest floors. Many pest plants will establish from discarded root fragments, cuttings or seed-heads. Once established, these pest plants can quickly replace native vegetation and are often further distributed by birds, animals, wind or water movement. Weed seeds may also be carried on clothes and footwear or in loads of gravel and dispersed to new locations where they can establish new infestations. Water weeds can be spread between bodies of water on fishing equipment, boats and trailers, or from dumping the contents of aquariums.

DID YOU KNOW?

About 75 percent of land pest plants and 50 percent of freshwater weeds are garden escapes. On average, eight garden plant species become naturalised in the wild each year in New Zealand. There are more exotic species wild in New Zealand than native plant species. In June 1999 there were 2108 known exotic species growing wild compared with 2088 native plant species. The number of exotic species growing wild continues to rise each year. Pest plants threaten the survival of more than 60 native plant species

and also threaten the long-term survival of some native animals. Some species are pest plants around the world, but others are only pest plants here. Some of the reasons why exotic species thrive so well in New Zealand include:

Their natural enemies (insects, fungi) may not be here.

The conditions and climate here may be just right.

Disturbance may have opened areas up for pest plant infestations.

WHY ARE PEST PLANTS A PROBLEM?

Native ecosystems are in danger throughout New Zealand from pest plants. Over 240 introduced plants have become pests. They can smother our indigenous forests and prevent their regeneration; they permanently modify habitats in wetlands, coastal habitats, lowland forest, shrubland and native grasslands.

WHAT YOU CAN DO

- Learn to recognise pest plants, look out for them and remove them.
- Dispose of pest plants wisely – take your garden waste to an approved landfill or transfer station, burn it or bury it – don't dump it.
- Report to the Department of Conservation or Environment Canterbury when you observe a plant that you have not seen before spreading out of control. You could prevent a serious plant pest problem.
- Find out which of your garden plants could escape into native bush. Buy garden plants that you know will not escape and become pests.

Published by DOC, September 2002, in conjunction with Environment Canterbury and Christchurch City Council Parks and Waterways.

Some local plants to watch for - from The New Zealand Pest Plant Manual.

Boneseed	(<i>Chrysanthemoides monilifera subsp. monilifera</i>) Bushy Shrub.
Chilean Rhubarb	(<i>Gunnera tinctoria</i>) Herb. NB <i>Gunnera manicata</i> is expected to soon be included as a pest plant as it is very similar to <i>G. tinctoria</i> and looking also to be a problem.
Wandering Jew	(<i>Tradescantia fluminensis</i>) Ground cover.
Purple Loosestrife	(<i>Lythrum salicaria</i>) Marginal aquatic
Old Man's Beard	(<i>Clematis vitalba</i>) Deciduous climber

Contact Environment Canterbury Phone 3653828, or <http://www.ecan.govt.nz> for advice on control methods.

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Fiftieth Anniversary of the Queen's Visit.

Matt Morris

On January 20, 1954, the Christchurch Botanic Gardens hosted what *The Press* reported as the 'biggest social event of all time in Christchurch, the garden party in honor of the visit of Her Majesty Queen Elizabeth and His Royal Highness the Duke of Edinburgh'. The Royal garden party, said the newspaper, 'will always be remembered by those privileged to attend in the presence of the Queen and Duke of Edinburgh.Among brilliant flower beds the Royal couple drove to the long archery lawn and there walked down the lane of guests. There were happy incidents all along the way, and formal presentations outside the Royal marquee. It was an elegantly-dressed assemblage, the climax of months of planning.'

This was indeed a major event for Christchurch, a tremendously successful part of a spectacularly popular national tour. Christchurch's Royal garden party was an opportunity to showcase important aspects of Christchurch's developing self-identity: as genteel, egalitarian, deeply devoted to the narrative of monarchy and, of course, a city with a love of gardens. Christchurch gentility was contrasted against Wellingtonian boorishness - at the Wellington garden party, guests had rushed the tea tables and trampled plants underfoot, so the newspaper reported, but not so in Christchurch. The *Press* also made a point of commenting on the non-exclusivity of the guest list. 'In this city of beautiful homes, it is a gracious custom to entertain in some of the larger private gardens. But the 3500 guests yesterday, most of them chosen by ballot from all sections of the community, met on the common ground of their public domain - the Botanic Gardens - which provided a magnificent setting.' Comment was also made on the fact that throughout the city people had gone to considerable effort to dress up their front gardens in honor of the beloved royal pair, in some cases even excelling - so the gardening columnist T. D. Lennie would have it - the public displays.

Perhaps most importantly, the Royal garden party in the Botanic Gardens enabled a retelling of the story that linked a sort of horticultural probity back to Kew Gardens - the heart of an Empire based on economic botany. The Bishop of Christchurch spoke about this at evensong in the Cathedral on the week of the Royal visit. Referring to Sir

Joseph Banks, who had travelled with Captain Cook, the Bishop noted 'that Banks had been for 50 years, director of the Royal Gardens at Kew. His name is commemorated on our peninsula but few realize that the site where the Royal garden party will be held derives much of its beauty from where so many of our horticulturalists have been trained.' The garden party was, therefore, more than a chance for people to meet the Queen; symbolically the occasion was in some ways a coming of age where various specifically Christchurch mythologies were woven together and celebrated.

An enormous amount of work was put into the horticultural arrangements for the occasion. The Director of Parks and Reserves, M.J. Barnett (trained at Kew), excelled as an organiser, holding daily meetings with key Parks and Reserves officers in the period leading up to the visit and putting out copious detailed memoranda. The *Press* was ebullient in its reporting. 'A spectacular blaze of colour confronted the Queen and the Duke of Edinburgh as they entered the Gardens at the gate by the curator's house. The long row of flowerbeds running parallel to Rolleston Avenue glowed with scarlet and white geraniums, silver centaurea, and blue lobelia - a display of many more than 5000 plants. The Avon river bank was also a mass of bright geraniums.'

The highlight, however, was the Queen's own horticultural effort. Cr. Mabel Howard, M.P (Chair of the Reserves Committee), and Barnett, had organised for a Goldsworth purple maple, from England, to be ready should the Queen agree to plant it. She duly did so, with a brand new chromium plated spade, in the south-west corner of the archery lawn. In doing so she was following a royal tradition; her father had planted a European beech in the Archery Lawn in 1927, and her uncle a kauri 'by the fountain at the entrance of the lawn' in 1920.

Sources:

Royalty in Christchurch and Royal Garden Party Site. (1954, January 21) *The Press*, P.8.
Brilliant Sunshine for third day of visit and Royal Garden Party. (1954, January 21) *The Press*, P.9.
Queen at Garden Party, and Brilliant Social Occasion. (1954, January 21) *The Press*, P.9.
Lennie's column. (1954, January 22) *The Press*, P.6.

NB The book "A Garden Century" shows the date for the Queen's visit in a photograph as 1953 instead of 1954.

Despite the significance of the Royal garden party to Christchurch's history, little, if anything, has been written about it. As part of my doctoral research into Christchurch's gardening history, I am interested in speaking with anyone who has memories of the Queen's 1954 visit. I am also interested in seeing any memorabilia or photographs from the visit. If anybody can help

me I would be extremely grateful if they would contact me by ph: home - 374 6929, Uni - 366 7001 ext. 8297, mobile - 021 038 6638, email: theyellowroom@xtra.co.nz or post C/o History Department, University of Canterbury, Private Bag 4800, Christchurch.

Matt Morris

Snippets

Thank you Peter.

The Friends' committee recently recorded their thanks to Committee Member **Peter Mahan**, whose health is frail just now. As one of our very early Friends, Peter has been a faithful, active and contributing member. He was one of the first group of hands on people in our propagating team, served on the Committee for a long time and enjoyed guiding walks for members, the public and Overseas Elder Hostel groups. A former teacher, Peter was always able to explain things well and bring out the wonder of the plant world when leading these walks. Over the years he has contributed many articles for the Friends' newsletters with a special interest in trees, and was Editor until recently. This was a huge job working without a computer and travelling to and from the printer to get things right.

Peter has also been active as a long-time member of the Alpine Society and was treasurer for many years, as well as supplying information for their newsletter. We hear he had a weakness for small bulbs. The Botanical Society has been another interest for many years.

His friendship and full contribution to the Friends of the Botanic Gardens is much valued. Thank you Peter.



Can you help supply swan plant seeds?

Please save any swan plant seeds for future use in our Children's programmes. Please bring to meetings or mail to FBG Children's Programme, P. O Box 2553 Christchurch

Charlotte Bangma, who has retired from the committee, temporarily we hope, was amongst the first group of Friends' volunteers in the Gardens and co-ordinator for this group. Her legal skills and other responsibilities as a committee member will be missed.

Congratulations to our Papanui member who turned 90 at the end of last year. Will she be our oldest member?

We will be delighted to have a good spread through the age groups amongst our members. Have you thought of giving a family membership as a gift.?

COMING SALES

- The Families' Big Day at the Botanic Gardens, 15 February 2004, 10.30am - 4.00pm around the big Palm Tree outside the Information Centre.
- Mon 8 March at Members' Bring & Buy Meeting in the Petanque Room.
- Plants are also sold daily outside the Information Centre.

Calling Volunteers.

Sometimes volunteer opportunities arrive at short notice. If you wish to be part of the volunteer team please contact Faye on 3517798

Autumn is known as Fall in North America. This is when the fruits of the earth return to the ground to start a new cycle of growth.

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Contact Numbers			Education Subcommittee		
President & Daily Guided			Co-ordinator	Lynne Rowe	358-8412
Walks Co-ordinator	Faye Fleming	351-7798	Ex Officio	David Given	941-7583
Vice President				Jeremy Hawker	941-7580
Immediate Past President	Dennis Preston	351-4131	Helpers		
Treasurer	Alison Fox	942-4989	Plant Sale	Helen Constable	980-9358
Membership Secretary	Ruby Coleman	355-8811	Newsletter mail out	Sally Jebson	352-6363
Minutes Secretary	Jim Crook	358-5845	Overseas Tour Groups		
Committee Members	Janet Begg	385-5114	Guide Coordinator	Chris O'Sullivan	332 8565
	Matt Morris	374 6929	Botanist	Bill Sykes	366-3844
Outings/trips	Alison Fox	942-4989	Walks	Max Visch	338-2273
Newsletter/Programme	Adrienne Moore	351-5915	Enquiries	Information Centre	941-7591
Projects Planner	David Moyle	358-8914	Computer	Sylvia Meek & Fay Jackson	

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

spare

Coming Events
Insert to Newsletter no. 58 February 2004

Friends' Phone Contacts:
Programme Adrienne Moore 351 5915

President Faye Fleming 351 7798
Membership Ruby Coleman 355 8811

Since the Guide Training Course in August, the Friends now offer two different Guided Walk Programmes. These are **Daily Walks** giving an overview of the Gardens and seasonal highlights
 1.30pm **Monday to Friday from the Museum** entrance to the Gardens and
 1.30pm **Saturday and Sunday from the BG Information Centre. \$5.**

Monthly Themed walks - generally the third Saturday, **departing at 2.00pm from the BG Information Centre. \$2** NB new departure time of 2.00pm operates from March - not 1.30pm as previously. Bring your visitors and friends to join these walks.

A small charge is made at some meetings/events to cover expenses – as indicated for each date. Please note new times and departure places as shown e.g. NB new arrangements for staff walk 24 Feb.

- Thu 12 Feb 7.00pm **Guided Walk - Seasonal highlights** with Friends' Guides
from Botanic Gardens' Information Centre

- 13-17 Feb Garden City Flowers & Romance Festival. Details in Local newspapers.
- Tue 17 Feb 'A Night of Music' by former McDougall Art Gallery in BG. 7.30-9.30pm Free. BYO seats.

- Sat 14 Feb 1.30pm **Guided walk - "Plants of the Plant Hunters"** with Friends' Guides.
from Botanic Gardens' Information Centre

- Sun 15 Feb 10.30am till 4.00pm **Families' Big Day at the Christchurch Botanic Gardens.**
See local papers for details.

- Sun 15 Feb **Friends' Plant Sale** from 10.30am near BG Information Centre

- Mon 16 Feb 7.00pm **Guided Walk - Seasonal highlights** with Friends' Guides
from Botanic Gardens' Information Centre

- Tue 24 Feb **10.15am Guided Walk – Tree Evaluation, a practical exercise in the field**
with Staff Member Angus Allan. Depart from outside BG Information Centre

- Mon 8 Mar **2.00pm Bring a Plant to discuss** and items for **Bring and Buy.**
Guest speaker, member Tony Cooper on South African Plants in New Zealand.
Petanque Rooms in BG Armagh St Carpark. Afternoon tea.

- Wed 17 Mar **4.30pm-5.30pm Nature in Art - Botanical Art Exhibition** by Dianne Smith, Irene
McBryde, Anne McEvedy & Dorothy Poulson. At BG Information Centre. All works for
sale. Come to meet the artists. Light refreshments. **RSVP** by 11 March to Adrienne 3515915

- Sat 20 Mar **2.00pm Guided Walk - Autumn Highlights** with Friends' Guides
from the BG Information Centre. \$2

- Tue 23 Mar **10.15am Guided Walk – Bonsais - with Staff member Shara Barclay.**
Depart from outside BG Information Centre
- Sat 3 Apr **1.30pm Halswell Quarry Park Visit**
Guided walk and talks by Ranger John Moore, on History of the Quarry and by John Taylor on the Sister City Gardens, departing at 1.30 pm from the Quarry Park Visitors' Centre. \$2. Visit on wet or fine. BYO refreshments. If there are sufficient numbers we can book a bus for \$5 per person. **For bookings and information please phone Alison 9424 989 after 10th and before 20th March**
- Sat 24 Apr **2.00pm Guided Walk – New Zealand Australian Plant links**
with Friends' Guides from the BG Information Centre.\$2
- Tue 27 Apr **10.15am Guided walk - Palms in the Gardens with Staff member Jeremy Hawker**
Depart from outside BG Information Centre
- Wed 19 May **7.30pm The Traditional uses of New Zealand Plants with Dr Murray Parsons.**
At Canterbury Horticultural Society, 57 Riccarton Ave \$3. Followed by supper.
- Dr Murray Parsons grew up in Martinborough, Wairarapa, and studied botany and zoology at Victoria University of Wellington and then phycology, or seaweed studies, at University of Adelaide, South Australia. From 1971 he was marine phycologist with Botany Division of DSIR at Lincoln and later was Keeper of CHR Herbarium, until he left Landcare Research in 1999. Of both Pakeha and Maori decent, he has been involved in various government committees to further Maori participation in science since 1990. He is now consults on phycological, ethnobotanical and bicultural issues.
- Sat 22 May **2.00pm Guided Walk - The Life of a Tree,** with Max Visch
from the BG Information Centre. \$2
- Tue 25 May **10.15am Guided Walk - Tour of the Conservatories with BG Staff Member Greg Salton**
Depart from outside BG Information Centre

Exhibitions at the Botanic Gardens' Information Centre

February - Garden City Flowers and Romance Festival -The Flower Fairy's Night Time Visit to Toadstool Town
March - Halswell Pottery followed, from 16-28 March, by **Nature in Art**, an Exhibition by Botanical Artists.

LOOKING AHEAD. Details in next newsletter. Enquiries 3515 915.

Each month Friends' Theme walks. Usually 3rd Saturday from BG Info Centre 2.00pm.

Staff walks 4th Tuesday now from outside BG Information Centre 10.15am

Please mark the following dates in your diary. Wed 16 June 7.30pm, Sun 11 July 2.00pm,

Sat 9 October - Spring bus day trip to include Alouette Nursery and garden near Ashburton.

Some plants of interest this season. Begonia, Clerodendrum, Plumbago, Eucryphia, Fuchsia, Roses, Dahlia, Cyclamen, Sedum, Monarda (Bergamot), Phlox, Nerine, Kniphofia

Guided walks of Christ's College are available Mon, Wed, Fri departing 10.00am from main College Gate, Rolleston Ave. \$5 Bookings Ph. 3668 705

If you are not already a member of the Friends and would like information about membership or our programmes Please contact Ruby Coleman Ph 355 8811 or Adrienne Moore 351 5915