Newsletter

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

No 48, Spring 2001

INSIDE

FCBG
PO Box 2553
Christchurch

CALL FOR VOLUNTEERS - The Plant Sales

Now don't be like that! It isn't until October and we shall have a lovely sunny day this year, I promise. And anyway we shall have a double-banger with the Bulb Sale in September and then the general Plant Sale in October .

So if you would like to help either at the Bulb Sale on 15th September or the main Plant Sale on 6th October, please leave your name at the Information Centre. We also need some help in September with the advertising. Are you a good net-worker? Do you belong to a number of gardening groups? We'd love to hear from you.

One thing everyone can do is mark the dates on your calendar and make up a party of friends to come along on the days. We want every gardener in Christchurch to know about this Great Event in our Year and to come along and buy our little goodies! Then we shall have money to put into our special projects.

Helen Constable

Plant Sale is Saturday 6th October, 9:00am to 1:00pm on Hall Lawn. Turn right over Kiosk Bridge and follow river a short distance.

Recent Events

A Walk in the Forest

Not quite! But on a mild afternoon in winter, a most informative, educational and entertaining hour or two was spent with Adrianne and Jean including additional comments from Max. This walk, primarily to learn about the history of the Kauri family, the Araucariaceae, only touched lightly on the subject.

Of the species of the genus *Agathis* found in Australia and in the Pacific only one, *Agathis australis* is found in New Zealand where it is endemic. It is the largest in volume of any native tree, reaching 52 metres in the case of Tane Mahuta with a girth of 17.2 metres, found in the Waipoua Forest. Kauris grow in an attractive pyramid shape with short blunt mid-green leaves turning coppery brown in colder weather, they prefer milder climates.

In the Botanic Gardens are specimens at all stages of growth. On the Western Lawn several young trees are thriving, they are very slow growing in their initial years. There is a lovely older tree on the Archery Lawn planted in 1920. The New Zealand Kauri is famous for its timber. Over the centuries the forests have been decimated with the result that the large trees which once abounded are few and far between. The fossilized trunks make wonderful furniture and the gum known as New Zealand amber (copal) makes attractive jewellery and ornaments.

Also in the Botanic Gardens are members of the genus Araucaria, from South America.

There are two specimens of the Monkey Puzzle, *Araucaria arauca na*, from Chile, at least two Bunya Pines, *Araucaria bidwillii*, (see article on Bunya in this issue) and an Australian Hoop Pine, *Araucaria cunninghamii*, which grows in the subtropical areas of south-east Queensland and attains a height of 30 to 45m (100 to 150ft). The specimen in the gardens is at the south end of the Australian border.

Another member, the Norfolk Island Pine, *Araucaria heterophylla* grows along the Sumner waterfront. This tree is notable for its exceptional symmetry.

There are other members of this ancient family, those mentioned being more familiar. The trees in the Gardens are very well labelled, mostly adjacent to paths and to an interested observer well worth the time to view them.

Daphne McLachlan

Japan's Contribution to our Garden Flora.

A walk on July 21st with Max Visch

Before departing the Information Centre, Max spoke about Japan. It is about 25% larger than New Zealand and comprises four main islands: Hokkaido in the north then Honshu, Shikoku and Kyushu.

Christchurch is at latitude 43.5° south. Japan extends from about 45.5° north latitude to about 31°. This means Japan has a harsh winter in the north and is sub tropical in the south.

The Japanese flora comprises some 4000 species compared with New Zealand's 2000 species.

How Japanese Plants Arrived in Europe.

For a period of 100 years in the sixteenth and seventeenth centuries the Japanese welcomed Western trade. The Dutch were one of several trading nations to visit Japan. They were however like the Portuguese and Spanish confined to a 32-acre artificial Island called Deshima in Nagasaki harbour. It was surrounded by a high fence and linked to the mainland by a narrow closely guarded footbridge.

Exclusive orders in the 17th Century banned Portuguese ships and Spanish also from visiting any ports. Shogun hereditary, military rulers who controlled the Japanese feudal system were responsible for the ban.

A Portuguese vessel, which entered Nagasaki Bay on a diplomatic mission, was burned and 57 of the envoys and crew, who refused to renounce their Christian faith, were executed. The remaining 13 were sent back to Macao, with a report of the events.

Three medical men, with an interest in botany were at times on Deshima Island. Kaempfer, a German who served as a medical officer for the Dutch East India Company, was the first westerner to paint Japanese plants. His exquisite, accurate watercolours of *Camellia,* tree peony, tiger lily, azalea, *Hydrangea* and *Clematis* were used as illustrations for his book in 1712.

Nearly a century later Carl Thunberg, who was Swedish, spent 16 months in Japan and collected around 1000 species of plants. He named a number of Lilies. His work 'Flora Japonica' was published in 1784.

Von Siebold, an ophthalmic surgeon, was allowed to collect plants around Nagasaki. Upon his return after six years he disembarked at Antwerp as war broke out between Holland and Belgium in 1829. His shipment of plants intended for Leiden in Holland was captured by the Belgians and ended up in Ghent and so today we know many cultivars of azaleas as Ghent, not Leiden azaleas.

Robert Fortune, a 19th century botanist who trained at Edinburgh Botanical Garden was best known for his travels to China. His last voyage in 1860 – 62 included a visit to Japan. Though there was still a restriction limiting travel to 24 miles, in any direction he collected a mass of plants, which were sent

back to Kew in Wardian cases. One of his discoveries, found in a garden, was the male form of *Aucuba japonica.* Those previously introduced to Europe were female and never produced an autumn display of red berries. He also brought to England the larger shaggy flowered hybrid chrysanthemums, which caused a sensation, when exhibited at the National Chrysanthemum Society's show.

Plants seen on this walk:

- Japanese Plum Yew, *Cephalotaxus,* on right of Information Centre behind seat. Needles are longer than those of a true yew, 2.5 – 5 cm.
- *Aucuba japonica*, against Kiosk.
- *Chaenomeles japonica,* Japanese quince, small shrub, 1m tall, scarlet, crimson or orange red flowers in autumn.
- *Ginkgo,* or maidenhair tree. Discovered by Kaempfer in Japan but not native to Japan.
- Japanese Maples, west end of Archery Lawn. Many outstanding cultivars; 'Burgundy Lace', 'Osakazuki', 'Aureum', 'Chishio'. These and many, many more are *Acer palmatum* hybrids. They require some shelter from winds.
- *Hydrangea macrophylla.* In pinks, red and blue. Not in flower.
- Lily-of-the-valley bush, *Pieris.* Colourful new growth in spring.
- *Viburnum japonica.* Male plants have larger, whiter and more fragrant flowers.
- Star magnolia, *Magnolia stellata.* One of the first to bloom. An ideal home garden shrub.
- *Magnolia sieboldii.* Large 7-10cm flowers with central bunch of crimson stamens.
- *Podocarpus macrophyllus.* Needles 6 inches long.
- Japanese oak, *Quercus acutissima.* Evergreen.
- *Prunus subhirtella* var. *autumnalis.* Small tree with some double flowers appearing intermittently through winter in mild spells. Final display in spring.
- Japanese apricot, *Prunus mume.* East of rose bed and flowering.
- *Cypress pisifera.* Near the south bridge
- *Tsugi cryptomeria.* Beside small toilet near the Cherry Mound. Straight trunk used for temples.
- *Deutzia scabra.* South border Archery Lawn. Erect growing. Meaning of *scabra* is rough.
- Japanese Larch, *Larix kaempferi.* A good specimen is on the southeast edge of the Archery Lawn close to the Pine Mound.

I have included most of the Japanese plants we saw on the walk. It was a most rewarding afternoon and right up to Max's usual standard. Thanks Max for your notes.

If you would like to grow a lovely little Japanese plant, which may be difficult to locate, try *Adonis amurensis.* I have had mine since the eighties. It is flowering now and is very hardy. The beautiful deep golden flowers, which are large never, fail to make their appearance in late July. It is low growing and worth possessing.

Peter Mahan.

"Botanical Art through the Ages".

24 June 2001, 2.00 pm at the Canterbury Horticultural Society.

Jo Ewing drew an audience of 75 for her illustrated talk. Jo, who has sketched all her life, trained in industrial design, then worked as a landscape designer. After an intensive course in botanical illustration in England in 1987, Jo began working in watercolours.

She now lives and works at Purau, where her studio is open by appointment. We learned of the development of botanical art through history and how plant illustration has been influenced by the developments in botany and the discovery and introduction of new plant species.

From as early as the 6th century herbals were illustrated with watercolour drawings to help identify medicinal plants and by the 16th century, some artists were using woodcuts. By around the 17th century, botanical artists became involved in recording

the rare and beautiful decorative plants being grown by wealthy gardeners and collectors. These paintings were then collected for their own merit as works of art. Jo showed examples of botanical works by artists such as Durer, Ehret, Redoubté and Marianne North.

Mona Vale Visit

On 2 March 2001, 50 Friends of the Botanic Gardens converged on Mona Vale gardens for a conducted tour. Brian Mitchelmore, who with Nigel Croton is responsible for the upkeep of the garden between the Avon and the railway on Fendalton Road, began with a history of the property. First taken up by the Dean's, during whose ownership the Avon millrace loop to the Fleming Mill was constructed, it passed to the Waymouths who built the house in 1899+ and, named it "Karewa". The first planting was in Victorian style with the emphasis on English trees and rhododendrons. The next owner, Annie Townend, added 9 acres to the estate, connecting it to Fendalton Road where she built the gatehouse for her father. She named the property Mona Vale after her mother's home in Tasmania and developed it in Edwardian style.

She built the brick wall to screen off the railway, constructed the Bathhouse and purchased the Fernery from the international Exhibition in Hagley Park in 1906-7. Extensive plantings included the Chusan Palms along the main Drive. The stables were some distance away so Day Stables were created for visitors across the Avon; the original bridge has been reproduced since 1967.

After Annie Townend's death in 1914 the property had a succession of owners until 1939 when Tracy Gough took over. During his stewardship the Edwardian character of the place was preserved and a good deal of planting carried on. In 1962 the estate was sold to the Church of Jesus Christ of the Latter Day Saints who built a chapel on the land cut off by the mill stream and announced plans to demolish the homestead and subdivide. Mona Vale was saved by a Civic Trust appeal in 1967; the people of Christchurch responded generously so that the City of Christchurch and Riccarton Borough Council were able to buy the estate as a Garden City asset. A great deal of restoration of buildings and bridges has been done since then and further plantings enhance the seasonal colour. The magnificent circular Rose Garden is maintained in part by the practical efforts of the Horticultural Society Rose Circle and the Fuchsia beds, by the Fuchsia Circle. The gardens are now the responsibility of the City Parks Unit, in consultation with Nigel Scadden.

Since this visit the Trees, Shrubs and Natives Propagating Team has visited the garden and been given seedlings and cuttings to grow for the October Sale. We should like to express our gratitude for the guided tour and the plants.

Helen Constable.

Kevin Garnett on Fertilizers and Sprays.

3 May 2001 in Botanic Gardens Information Centre.

Kevin's recent lively talk sorted out our queries on what fertilizers and sprays to use and how to apply them. He also discussed several plants on display with obvious signs of problems. Yellowing leaves in *Daphne* and *Rhododendron* showed a nitrogen and iron deficiency. Once the soil temperature falls below 10°C, the plant cannot absorb nitrogen, so it is best applied between August and April. Urea is the quickest acting fertilizer to correct nitrogen deficiency but must be well watered in. Blood and bone has 9% available nitrogen but it is released more slowly.

To avoid using many sprays, Kevin recommends planting 'good doers', e.g. the Flower Carpet roses. Correct timing for sprays and careful use, including protective clothing, is essential. Gas flames are useful for weeds in driveways and edges. Hosing can discourage thrips. Kevin distributed papers on major plant nutrients, how to correct deficiencies, fertilizer "recipes", information on weed control and spray programmes.

Copies of these papers are available. Contact Adrianne Ph 3515 915.

Plants for Dry Places.

In late autumn Neil O'Brien took a group of about

30 people to look at plants that grow well in dry areas. Many of these have become adapted over a long period of time to live in areas of low rainfall.

The first plants looked at were by the Information Centre and they were *Leucadendron,* which are noted for the colourful terminal leaves, which are correctly termed 'bracts'. These popular garden shrubs range in colour from creams and yellows to orange, pink and deep red. They are sought after for cut flowers and have a long vase life. Neil said it was a good idea to put one in a suitably large pot, select two leaders and plait them together. Good drainage is essential but Leucadendrons, like other members of the protea family, should not be given fertilisers or lime, which caused alkalinity. They do in fact thrive on neglect.
Beside the entrance to the Bonsai Display were the lavenders, *lavendula.* These perennials, which are well-loved hardy shrubs, comprise about 28 species and they enjoy full sun and a minimum of fertilizer and moisture. Pruning after flowering will keep them neat and compact. This is a recent collection and they flower in spring and autumn.

Moving over to the Yucca collection at the southern end near the river, although they come from the desert regions of North America and South America they are hardy to cold and will tolerate frosts. There long sword shaped leaves, sometimes sharply pointed, make bold clumps and their creamy white flowers make them popular garden plants.

We retraced our steps to view some of Australia's dry desert flora. The kangaroo Paws (there are nine species) grow well in the gardens. Noted for their unique flowers, which resemble the form of a paw, they like good drainage. *Anigozanthes flavida* is the hardiest and most vigorous with sulphur green or red flowers. They were growing near the northern path that leads off past the Western end of the long Herbaceous Border and were still showing colour.

Other dry loving Australian plants seen were, grevilleas, several species of outstanding horticultural value and still flowering. *Correa*, Australian Fuchsia, which will grow in poor rocky conditions and several bottlebrushes were ween still showing red colour. There are many species; some have red, green or yellow flowers. Most *Callistemon* are resistant to wind and like sandy or poor soils.

One *Banksia* was seen with many brush like cylindrical flower-spikes; this one had orange flowers. They were named after Joseph Banks, botanist on Cook's first voyage. There are at least thirty species suitable for gardens. Most come from West Australia others grow in the east. As with other members of the protea family they prefer dryer acid soils.

The last plants viewed were the Manuka's, recently planted near the Administration Buildings. These Manuka's are cultivars of the New Zealand species, *Leptospermum.* Some were still flowering, many-named cultivars are colourful and range from pinks to reds with double or single larger flowers, which are profuse.
This was an interesting walk with a knowledgeable guide. Thank you Neil.

Peter Mahan.

Weather Station

On Tuesday 5 June 2001 a group of Friends visited the Christchurch Botanic Gardens Weather Station.

In 1856 Christchurch was one of the first Centres to have a weather station set up in the grounds of the Provincial Chambers situated on the block bordering Durham Street, Armagh Street, Oxford Terrace and Gloucester Street. The Weather Station was moved to the Christchurch Botanic Gardens in 1881.

In 1839 Charles Heaphy came to New Zealand with the NZ Company exploring and painting much of N.Z. Upon his return to England a short book was published (which to some extent was a marketing exercise). Heaphy claimed NZ had 5 months of summer and only 2 months of winter. His general description drew fire from settlers attracted to NZ. They wrote home complaining of the changeable weather and incessant wind. These complaints led to the colonial administration of the day establishing weather stations around the country to collect and publish weather statistics in order to prove the weather was not as grim as made out by the settlers.

Today Botanic Gardens staff take the weather readings on behalf of the Meteorological Service. The observations are recorded into an observation book prior to the data being recorded onto a hand-held computer and passed through to the Meteorological Service in Wellington. Comprehensive readings are taken at 9.00 am each and every day of the year. The readings taken are the highest and lowest recorded temperatures of the previous 24 hours, grass/frost reading, rainfall (if any and how much collected in a rain gauge), ground temperature at 30 cm and 1 metre below ground, evaporation reading (taken with the aid of a water tank recording how much moisture is lost which gives the Gardens Staff an idea of how much water is required when irrigating. At 4.00 pm a reading is taken of the highest recorded temperature reached since the 9.00 am readings. The temperature readings used on the TV's weather are a combination (average) of the recordings taken at the Christchurch Airport and the Botanic Gardens.

The weather means many different things to many different people - at it's most a violent killer but also a life giver in the food that sustains us, and what is nicer than a spectacular sunset that nourishes the soul. The position of NZ on the earth gives us most of our weather from a westerly quarter. We have a cool temperate climate (as opposed to a warm temperate, Southern California, Mediterranean etc) not suffering the extremes of weather as experienced by some parts of the world. It would pay us next time we bemoan the state of our weather to remember that between 1960 and 1966 the average annual temperature was 34.4 deg C in Ethiopia. In January 1916 in Browning Montana USA in one day the temperature fell from 7 deg C to -49 deg C. Our own Milford Sound receives 22 feet or 6.71 metres of rainfall per year. Mount Waialeale in Hawaii averages 350 rainy days a year.

The longest drought occurred in the Atacama Desert in Chile, it lasted 400 years, rain finely fell in 1971. Lightning can be 32 km long, 5 times hotter than the sun but only 1.3 cm wide. If you count the seconds between lightning and thunder and divide by 3 this gives you the number of kilometres to the storm.

At the end of the day there is not a lot we can do about the weather. We have to make the best of whatever it throws at us. 'Make hay whilst the sun shines' is probably quite sound advice.

Brian Appleton, Botanic Garden Staff

Articles

Early memories of the Botanic Gardens

With the help of his diaries, John Taylor looks back. Part II.

On Monday December 1941, some No. 13 Scheme workers were given the job of digging air raid shelters in the Gardens. To meet the possible needs of the potting shed staff a shelter was dug deep into the bank close to the river just outside the Privet hedge. The roof of the shelter was suitably camouflaged with big turves of grass.

My first recollections of the potting shed were that it was large but stark. It was a place to get to know the other members often staff, a place to work and a place for a lot of the outside staff to congregate on wet days. Not that they wee able to do very much other than perhaps wash clay pots with a scrubbing brush or rub the pots with cut portions of a sugar bay. Hot water to go into the half barrels, which were the washtubs, was derived from kerosene tins of water warmed up on a potbelly stove at one end of the shed. To keep the shed partially warm during winter 'slack' coal was brought up from the boiler house. In my diary I noted that there was a 4-degree frost on April 4th, 1941 and on April 7th the Germans began the invasion of Yugoslavia and Greece!

The potting shed floor at this time was simply a compacted bed of clay. Although it was tidied up at the end of each day it was only swept once a week on Friday afternoons. Over the years sweeping the clay with a stiff bristle broom was developing hollow areas where foot and steel-wheeled wheelbarrow movement was busiest and these depressions were not easy to rectify. At the potting benches there were wooden duckboards, which gave you a stable height to work from. The Domain's Board had it in the budget for the floor to be concreted but

cement was rationed and the potting shed floor didn't qualify as strategically important. Mostly we wore boots at work and my diary noted that I had hobnails put in mine for the sum of one shilling and sixpence.

A prank, which I got up to, acting on a dare that I couldn't do it, was to climb to the top of one of the *Sequoiadendron giganteum* trees down by the United Tennis Courts. I was to break out the centre growing point and send it down as proof of the dare. This I did to my shame and to this day the tree is shorter than the others, having developed a head with three branches.

In my diary of Sunday January 4th, 1942 I noted that I worked all day 'on duty', damping down paths in the glass houses, watering, opening and closing ventilators and turning over glass and newspapers on the seed boxes. The payment for the entire day was seven shillings and six pence. It was less than a shilling (10 cents) an hour but of course in those days you could get into the flicks (picture theatre) for half a shilling or six pence.

I also noted that Singapore surrendered to the Japanese on February 16th and Darwin in Australia was bombed on February 19th and 20th. Twenty-two Allied ships were sunk during the week ended March 31.

The Bunya Pine

There is a specimen in the Christchurch Botanic Gardens in the Australian section at the west end of the Herbaceous Border. Being a young tree it does not have large seed cones.

The short article which follows and the illustration is taken from James Woodford's recent book 'The Wollemi Pine', a recently discovered tree in one of the many deep gorges of a National Park not too far from Sydney. The Wollemi Pine has been placed in the same family as the Kauri, Bunya, Monkey Puzzle, Hoop Pine and Norfolk Island Pine.

The bunya pine seed-cones can reach bomb-like proportions of forty centimetres in diameter and can weigh in excess of eleven kilograms, it is the living Australian monkey-puzzle with the most ancient lineage. Unlike the rest of the pine, the seed-cone does not possess fierce prickles and is like a pineapple to hold. Its stronghold is the Bunya Mountains of southeast Queensland, near the town of Dalby. During the Jurassic – an epoch which stretches back from 144 million years ago to nearly 210 million years ago – it was far more widespread, extending even into the northern hemisphere. There can be no doubt that this tree would have dispatched countless dinosaurs and other creatures, with a soft thud. Its football-sized cones shower down over the landscape in summer, falling to the ground with a sound identical to the arrival of a bomb that fails to explode. When they land they often hit so hard that the only way to retrieve them is to excavate them with a shovel from their craters. The bunya pine is a brutally tough organism, with awesome defences and an ability to out-compete almost any other tree in its preferred habitat. Bunyas were widely planted in Australian parks yet in many cases proved to be health hazard and were removed. In 1999 and 2000 the ranger at Cumberland State Forest in suburban Sydney, Prue Bartlett, was forced to close her forest for a month at a time because of the danger falling cones posed to walkers.

James Woodford.

Pots of Bulbs for Sale

The bulb sale will be held on 15 September from 10 am - 2 pm. This is the same day as the outing to Linclon so it will be a busy day—bulbs in the morning, *Magnolia* in the afternoon. The bulbs are growing well in pots and they include such treasures as *Ornithogalum pyramidalus, Puschkinia scilloides, Gagea* sp., several *Galanthus, Erythronium* and lots more. The sale will be outside the Information Centre. Phone Jane, 384 2170 if you have any queries.

Contact Numbers

President	Dennis Preston	351-4131
Immediate Past President		
Treasurer	Colin Neal	359-8080
Membership Secretary	Ruby Coleman	355-8811
Minutes Secretary	Jim Crook	358-5845
Committee Members	Tony & Janette Burnett	384-1381
	Amelia Childs	382-2451
	David Given	351-6069
	Joan Bower	326-5312
Newsletter	Peter Mahan	354-1550
N. Assistant	Maria Adamski	325-2330
Outings/trips	Alison Fox	385-4933
Ex Officio	Janet Begg	385-5114
	Craig Oliver	366-1701
	Kevin Garnett	366-1701
Helpers		
Plant Sale	Helen Constable Gcon@xtra.co.nz	332-1212
Newsletter mail out	Sally Jebson	352-6363
Guide Coordinator	Sylvia Meek	326-6167
Botanist	Bill Sykes	366-3844
Walks	Max Visch	338-2273
Enquiries		
Afternoon Programme	Information Centre	366-1701
	Adrianne Moore	351-5915

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