Newsletter

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

No 84, Autumn/Winter 2011

President's Report

The February earthquake threw everything into the air - literally for a lot of buildings and figuratively for nearly everything else in Christchurch. It has driven home how puny we are against the extreme forces of nature.

I know of several members who have been seriously affected by this and the earlier quake and our thoughts and condolences go to them. I have offered our help to those I know about and would appreciate hearing of others who might need some help – for instance we have heaps of experts who can help rescue plants from threatened gardens.

Our Botanic Gardens have come through relatively unscathed. A few significant trees have been lost and that is regrettable but it also opens up new opportunities. Some sizable specimens fell or had to be felled in the area designated for the Gondwana Garden and that has resolved some potential conflict, as they were incompatible with the Gondwana story anyway. So it's an ill wind……

The rock garden's profile has changed to its great detriment and we can only commiserate with Richard Poole who has made a great job in rejuvenating the garden in the year that he has been in charge. It is another interesting example of the liquefaction phenomenon that has plagued so much of the city.

While the gardens staff have had to divert some efforts to fixing broken pipes and the like work has proceeded as normal – the spring bedding displays are well in place. The staff too has been fully involved in emergency work in the city along with all council employees.

The Guiding season came to an abrupt end on February 22. However we will be trialing free tours on Tuesdays, Thursdays and Saturdays for the rest of May with possible extension if they go well.

The new "Visitor Centre" is still officially on hold along with all other council capital expenditure projects. The demolition of the existing facilities was not so far advanced to render the place inoperable so our propagation area is still intact. However the "on hold" status does not mean that it will be postponed indefinitely and we will be promoting the concept that the city needs the uplifting environment that the Gardens provide. The new development will greatly enhance that.

Our guides are already planning for the 2013 Australasian Volunteer Botanic Gardens Guides Conference in Christchurch and four of our members will be going to the 2011 conference in Brisbane in September, with a little help from the Friends.

More immediately, the Friends of the Botanic Gardens have nominated Faye Fleming to the CERA Earthquake Recovery Community Forum with the proviso that if she did not get one of the 20 seats available we would liaise with other kindred organizations to get a joint representative on board.

So with the trauma of the February quake fading and the rebuilding process starting we are looking forward to getting back on track with the launch of the Trust and other projects.

Alan Morgan

INSIDE

FCBG
PO Box 2553
Christchurch

Gardens' News

From Curator John Clemens

Dear friends,

It is now three months since the earthquake of 22 February hit Christchurch with such tragic and devastating effect. Soon after, I wrote that "I rushed from this desk here in the Botanic Gardens, dropped, covered and hung on to the radiator on the wall as best I could while others, the buildings and the trees were dealt that terrible blow", little knowing what had happened elsewhere in the City.

I send my condolences and sympathy to those of the Friends – and their friends and acquaintances – who continue to suffer sadness and hardship as a result of these events. I and others of the Botanic Gardens staff were able to assist those in need soon after the earthquake, and many of us continue to undertake civil defence duties as required.

For the record, none of the staff working in the Christchurch Botanic Gardens, Mona Vale and Hagley Park was hurt during the earthquake.

In terms of structural problems, the Homestead and some other buildings at Mona Vale have been seriously damaged. In the Botanic Gardens, the base of the Peace Bell, the columns of the Bandsmen's Memorial Rotunda, and parts of Cuningham House have problems requiring further inspection and repair.

North Hagley Park was a major site of liquefaction with sand, silt and ground water brought to the surface and flowing across paths and grassed areas. More sand and silt engulfed parts of the Rock Garden. After a day of localised flooding, several lakes and ponds unexpectedly drained of their contents. These are now being surveyed and advice taken for their repair. Cracks and fissures to paths resulting from lateral spread were soon filled to allow visitors to use many parts of the grounds.

Several trees in the Botanic Gardens were knocked over or needed to be removed as soon as possible for public safety as a direct result of the 22 February earthquake. Trees removed were mainly in the northwest corner, including two oaks, a sweet chestnut, a maple (*Acer saccharinum*), two poplars and a lime. Elsewhere, we lost two pin oaks and a large eucalypt on or near the Rock Garden, two of the distinctive maritime pines (*Pinus pinaster*) trees on the Pine Mound, and two Turkey oaks near the Bandsmen's Memorial Rotunda. Numerous fallen and dangerous trees (mainly oaks) were also removed in North Hagley Park.

As you can imagine, many Council projects were delayed or put on hold while the National State of Emergency and all that that entailed prevailed.

Many individuals, businesses and properties have been more severely affected than the Botanic Gardens. Among these, the University of Canterbury, its members of staff and students have been teaching under the Big Top (and smaller tents and marquees) while other arrangements and repairs to damaged buildings are made. Our two 2010-2011 summer research students, Matt Wallace and Bronwyn Slack, have been in the thick of these upheavals. I have given a taste of their results later in the Newsletter. I hope we might have the opportunity to listen to them speak of their work once their continuing study circumstances have returned to some kind of normality.

We must look to the future. The vision for the Christchurch Botanic Gardens set down in the Master Plan is for us to be *foremost in celebrating and presenting plant diversity through collections and programmes, including promoting the relationships that people have with plants*. It is my job to develop, promote and drive this vision. With our combined efforts, we will be foremost. I look forward to celebrating this achievement as we and others work towards recovering, revitalising and recreating the Botanic Gardens in the Garden City.

Friends events

Free guided walks in Gardens in May

On Tuesdays, Thursdays and Saturdays during the month of May 2011 the Guides will be offering free guided walking tours of the Christchurch Botanic Gardens. The tours will commence at 1.30pm starting from the Gardens Information Centre.

Events in the Gardens

From Lynda Burns, Visitor Services Team Leader - 941 7585

Coming events include:

Edible Gardens for schools

A hands-on workshop for teachers and parents interested in developing or improving edible gardens in schools. 11 June, 12 noon - 4pm. $20 (includes an afternoon snack).
Bookings are essential - christchurchbotanicgardens@ccc.govt.nz or phone 941 7590.

Gnome Quest 2011 - a Kidsfest activity

Your quest is to find the gnomes hidden all over the Botanic Gardens who will lead you to their magical Gnome Grotto. Caregivers note: The Quest is outdoors but the Grotto is inside so this is suitable for all weather. Pick up the Quest Guide from the Botanic Gardens Information Centre near the children's playground; entrance off Armagh St carpark.
Sat 16 to Sat 30 July: 10:15am - 4:00pm.
Age Group: 6 to 10yrs, caregiver required. No charge, booking not required.

Gnome Grotto

Gnomes from around the world have descended on the Gardens looking for special plants from their home-lands. Come and find where they have built a grotto in the Gardens' glasshouses. Why not follow the Gnome Quest (see above) to find the grotto? The Quest is outdoors but the Grotto is inside so is suitable for all weather. Christchurch Botanic Gardens Conservatory Complex, Rolleston Ave, Christchurch. Sat 16 to Sat 30 July: 10:15am - 4:00pm. All ages, caregiver required, No charge and booking not required.

Articles

The Hawthorn Menace

What associations are conjured up in your mind by the word "hawthorn"? Hawthorn hedges and blossom perhaps, thorns possibly, or if you have an interest in folklore, some of the mystical beliefs which have adhered to it. I imagine these associations are generally benign. Ninety years ago your view might have been quite different, particularly if you were an orchardist. "The Hawthorn Menace" loomed over the land!

In the 1920's, newspapers carried headlines like "Fireblight Menace - Steps to Check It" - *Evening Post, 19 March, 1921*, "Fireblight Disease - Preventing Its Spread" - *Evening Post 15 June 1921*, "Serious Menace - Dealing With Fireblight - Half Measures Useless" - *Evening Post, 6 October, 1922*. The problem was not directly with hawthorn itself but with fireblight, for which hawthorn is a host.

Fireblight is a serious bacterial disease of apples and pears. It arrived in New Zealand in 1919 from America (the first epidemic had been reported in New York in 1780) and proved to winter-over in hawthorn hedges, then infecting the flowers. Insects were believed to spread it to fruit trees. For eighty-nine years, fireblight has been of considerable significance to trade with Australia: export of apples to Australia from NZ has been banned since 1921 for fear of apples carrying fireblight to Australia. Growers in NZ have long argued that this fear is unjustified with respect to the export of mature apples. Just last year, on 29 November, the World Trade Organisation ruled that the restrictions should be lifted. It is anticipated that apples from New Zealand will be available in Australia by 2012.

The arrival of fireblight caused considerable consternation among orchardists. There was no remedy that could attack the bacterium directly, and no matter what was done to the fruit trees, the host and possible source of infection - hawthorn - still remained. Hawthorn had been widely planted (although not to the same extent as gorse) by early European settlers as it provided excellent shelter for stock. In a pamphlet published in 1922 (based on

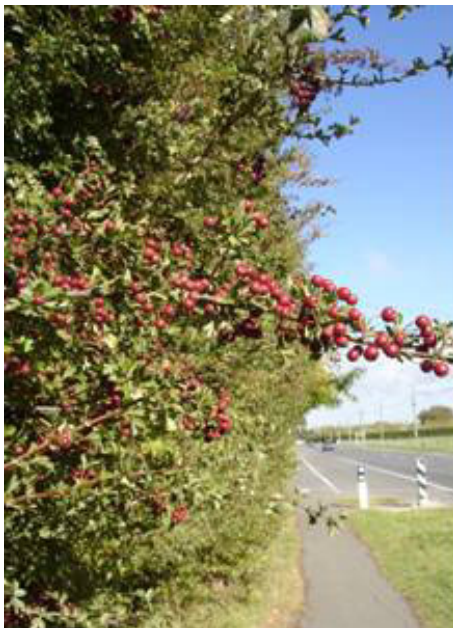
articles published in the *Nelson Evening Mail* on 31 December 1920, 4 and 5 January 1921) and entitled "The Hawthorn Hedge Menace", Dr. R. J. Tillyard, Entomologist and Chief of the Biological Department at the Cawthron Institute, Nelson, pointed out in no uncertain terms that although fireblight had not yet reached Nelson (where there were extensive apple and pear orchards) it might very well do so. He recommended that hawthorn hedges be clipped to a height of four to five feet to prevent flowering or that the hedges be singed with a "flame projector" or by igniting hedges after they had been lightly sprayed with kerosene or benzene. Removal of hedges was seen as the ideal mode of control, but it was recognised that removal was difficult in some instances and there was also resistance to removal from those farming stock in various parts of the country - and from hop-growers in Nelson.

On the 5th October, 1922 a bill was passed by the Legislative Council, bringing in the Fireblight Act. The Governor-General was now able to declare any specified region of New Zealand to be a commercial fruit growing district and make regulations prescribing the trimming or cutting down of all hawthorn growing within the area.

Hawthorn was long seen as a noxious weed. The Noxious Weeds Act 1978 (there were earlier versions) was replaced by the Biosecurity Act 1993 which made regional council and unitary authorities responsible for weeds. Hawthorn is listed in the Consolidated List of Environmental Weeds, 2008, drawn up by the Department of Conservation, and is regarded by the Christchurch City Council as a "surveillance plant pest" i.e. no control of existing plants is required but sale, propagation or distribution of these species is prohibited.

Hawthorn, *Crataegus monogyna* (this name supersedes *C. oxycantha*) is a member of the *Rosaceae*; hence its danger to apples, pears and plums (all members of the *Rosaceae* also) as a host to fireblight. If not constrained to be a hedge, it can grow to be a sizeable tree some 5-15 m tall. It is deciduous, the branches bear thorns, leaves are obovate and divided, and the generally white blossom leads to reddish fruit, or "haws". It is not nowadays regarded as a source of timber, but the wood is attractive (streaky white or pale pink), extremely hard and tough. The wood makes a very hot fire; charcoal from hawthorn is reputed to be able to melt pig-iron without a blast (extra air).

Hawthorn is commonly seen in and around Christchurch. It's quite noticeable in the autumn with its red leaves and haws. There are, for example, some large hawthorn hedges along the old Tai Tapu Road, Cashmere Road and Hendersons Road. There is a specimen labelled *Crataegus oxycantha* (should that be *C. monogyna*?) in the lawn adjoining the Rolleston Avenue boundary of the Botanic Gardens near the Cashel Street gate and Curator's House.



Hawthorn hedge with haws, Cashmere Road

Christchurch has a Hawthorne Street (off Papanui Road), originally named Hawthorn Road after a hawthorn hedge which grew along the front of a plant nursery belonging to Mr. John Greenaway (1831-1880). Mr. Greenaway was a keen member of the Christchurch Horticultural Society. He met a tragic death falling from a tram carriage on the Papanui line when attempting to show a rose to the Treasurer of the Society in another carriage. Horticultural zeal is not without its dangers - and nor was hawthorn, a central part of the farming knowledge of early pakeha settlers but problematic in the new world.

The pamphlet by Tillyard is archived in the New Zealand Section of the central branch of the Christchurch public library. The material from newspapers was obtained from the "Papers Past" section of the National Library website, and that about Mr. J. Greenaway is from the Addington Cemetery Tour guide by R. L. N. Greenaway, June 2007 (available on the Public Library website).

Alan Hart

Summer Research Projects

We were busy over the summer looking after the live collections in the Christchurch Botanic Gardens so that visitors could continue to enjoy the floral displays and the grounds. In addition to the displays and our educational and conservation programmes, we were involved in two summer research projects being undertaken by students from the University of Canterbury.

The two 10-week projects were jointly funded by the Friends of the Christchurch Botanic Gardens and the University. The students, Matthew Wallace and Bronwyn Slack, were supervised by Dr Trevor Partridge and myself from the Council, and Dr Pieter Pelser and Professor Dave Kelly from the School of Biological Sciences.

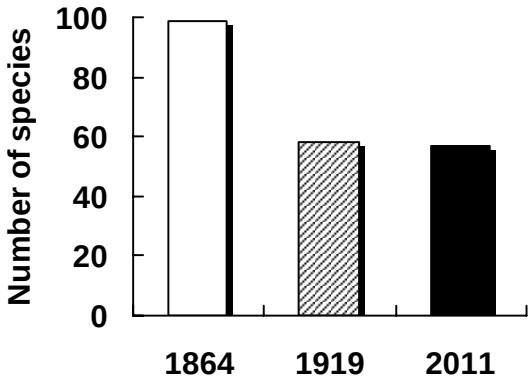
The students wrote reports and returned to their studies at the end of February. I have edited some of the results from their reports below.

This summer, the projects focused on the native plants either growing naturally in the Botanic Gardens and Hagley Park, or planted in the Cockayne Memorial Garden and nearby areas in the New Zealand section. Both projects involved a review of the past as well as the current situation. In the case of the naturally occurring plants, thorough searches were made of specimens held in the University of Canterbury Herbarium and the Allan Herbarium held at Landcare Research, Lincoln.

Published surveys date back to 1864 when John B. Armstrong, acting in a position equivalent to the Curator of the Botanic Gardens, made his list of local native species. The list was published much later (1919) by Canterbury College academic staff member Elizabeth Herriott. Herriott also published her own botanical notes along with those of Arnold Wall, Leonard Cockayne and others. Apart from a short intensive burst of action to document all local wildlife in the 2005 BioBlitz, there has been no survey of our local native plants for almost 100 years. It was time to have a thorough stock take.

Decline in species numbers arrested

When Armstrong made his list in 1864, the study area contained a mosaic of swamps, largely unaltered river bank areas, sand hills, gravel areas, and extensive grasslands and herbfields that had only just begun to be grazed by sheep. By the time Herriott published her work in 1919, the area had already undergone major modification and the number of native species had been almost halved. Being intensively managed today there appeared to be little room for native plants to grow wild in Hagley Park and the Botanic Gardens. However, we were surprised to find roughly the same number of native plant species in 2011 as Herriott had recorded back in 1919.



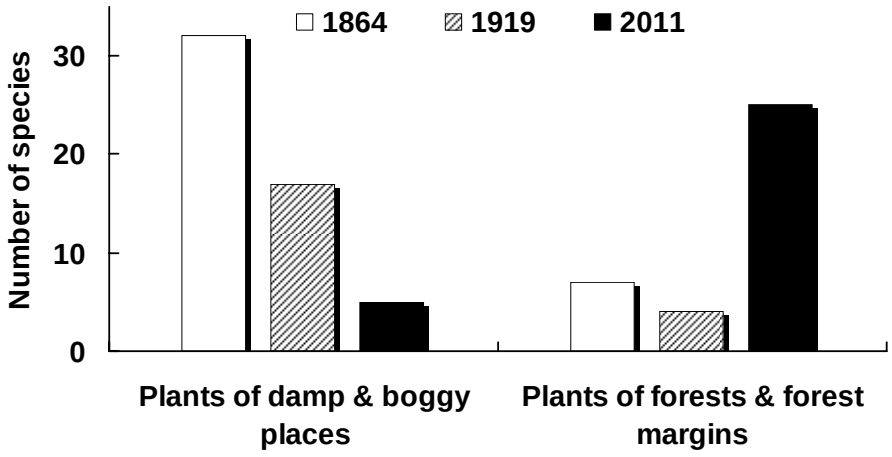
Ringing the changes

While the decline in numbers appears to have been arrested, there has been a consistent turnover of species in the native flora, with many plants turning up in only one of the surveys. Only Armstrong saw manuka (*Leptospermum scoparium*) as one of only a handful of woody species, a river buttercup (*Ranunculus amphitrichus*), and the soft water fern (*Blechnum minus*) growing wild; and only Herriott reported the speargrass, *Aciphylla colensoi*, and a spike rush, *Eleocharis acuta*. New species in the current survey included akeake (*Dodonaea viscosa*) and the grass, *Poa imbecilla*.

Twenty-seven species that were common to the Armstrong and Herriott surveys are no longer found today, including a distinctive native broom (*Carmichaelia australis*), silver tussock (*Poa cita*), the orchid, *Thelymitra longifolia*, and the climber, *Clematis marata*, which was once found growing on matagouri (*Discaria toumatou*).

Changes in habitat preference

The habitat preference of the species in the study area has also changed, reflecting the changes that have been made to the vegetation and its management over the years. For example, species usually found in damp and boggy places have declined steadily. Bucking this trend, there has been a large



increase in the number of forest and forest margin plants.

Long-term residents

Only eight native species were recorded in all three surveys of 1864, 1919 and 2011, including the large swamp tussocks of *Carex secta*, the shrubby toatoa (*Haloragis erecta*), the common onion orchid (*Microtis unifolia*), and a bluebell (*Wahlenbergia gracilis*).

Searches in the herbaria for plants typically found on the Canterbury Plains and collected in the study area helped to fill the gap between 1919 and the present survey. Species with an established and continuing presence included the cosmopolitan Jersey cudweed (*Pseudognaphalium luteoalbum*), the leafless orchid, *Gastrodia cunninghamii*, and the sward-forming bachelor's buttons (*Leptinella dioica*).

New arrivals and vagrants

A few species were found this summer that have not been recorded growing wild in previous years: localised patches of the easily overlooked grasses *Poa imbecilla* and *Microlaena stipoides,* and the tiny *Leptinella nana*, one of New Zealand's most threatened plants, which grows at the edges of some paths in the New Zealand section. There was also a single plant of the nettle, ongaonga (*Urtica ferox*), growing on a stream bank in South Hagley Park, which was probably a temporary vagrant. Other species, e.g. the New Zealand wind grass (*Anemanthele lessoniana*), were found that are reported to grow back each year in the same location, indicating either a substantial seedbank or a self-sustaining population.

Aquatics, ferns, and trees

Several aquatic species were discovered in the loop of the Avon River that had not been documented since Armstrong prepared his list in 1864, including water milfoil (*Myriophyllum triphyllum*) and blunt pondweed (*Potamogeton ochreatus*). However, like many of the dryland parts of the study area, the Avon River is dominated by exotic species, such as the waterweeds *Lagarosiphon major* and *Egeria densa,* species that have probably been introduced from aquaria.

The bracken fern (*Pteridium esculentum*) continues its long history of occupation, once on the Pine Mound and now in the old cultivar beds. Other ferns recorded in 2011 include the drought-resistant necklace fern (*Asplenium flabellifolium*) growing on the trunk of the large Phoenix palm near the Visitor Information Centre, and thousand-leaved fern (*Hypolepis millefolium*) in the River Border.

The number of native tree species found wilding within the study area in 2011 is substantially higher than at any time in the past 150 years. In 1864 there was not one. The majority of these species were found as masses of seedlings growing near the base of parent plants throughout the Native Section, although a third of these were also recorded in other areas of the Botanic Gardens and Hagley Park, well away from parent trees. The latter included rohutu (*Lophomyrtus obcordata*), mahoe (*Melicytus ramiflorus*), manatu (*Plagianthus regius*), pokaka (*Elaeocarpus hookerianus*), and kahikatea (*Dacrycarpus dacrydioides*). While many of these

species are only ever found as young seedlings (tending to be removed while young), they are an important part of understanding the role that plantings play in a wider ecological context.

Conclusions

These short research projects have given us a much better understanding of the native flora in the Botanic Gardens and the wider Hagley Park. They have also allowed the valuable resources of two local herbaria to be properly searched so that today's findings can be set in context. The successful establishment and persistence of so many native species was a surprise and has implications for the anticipated spread of these plants from plantings throughout the City. Some of the grasses might make contributions to low maintenance swards of the future.

The projects have also been highly successful for the students who gained some insight into local botanical history, plant identification, and herbarium curation. They enjoyed working with the staff, and the assistance in particular of Mark Davis, Dean Pendrigh, David Barwick, Jason Fletcher, and Sue Molloy was greatly appreciated. These projects were made possible thanks to the generosity of the Friends and the University of Canterbury, an important step towards renewing the research presence of the Botanic Gardens.

John Clemens, Curator

[1]Herriott EM (1919). A history of Hagley Park, Christchurch, with special reference to its botany. *Transactions of the New Zealand Institute 51*: 427-447.

Art in the Gardens: Te Puna Ora and the Maori rock carvings

Te Puna Ora - The Spring Of Life – is a single jet of water coming out of a rock feeding a small pond area. It is to be found in the Botanic Gardens west of Central Rose Garden and adjacent to the Water Garden

Te Puna Ora was commissioned in 1992 by the Christchurch City Council and was blessed by Tip Manihea. The late Tip Manihea was a highly respected kaumatua. He was Tuhoe from the North Island but was born in Christchurch and spent most of his life here.

Early Maori found an abundance of artesian water on the Canterbury plains. It was valued for its purity and sweetness by Maori and European settlers alike. Water is a gift of life from the earth mother, Papatuanuku, and the sky father, Rangi, and is essential for healthy growth and regeneration of all life. Water ceremonies are ancient in origin, worldwide. Springs in Britain and Europe became places of pilgrimage (Holy Wells) and were dedicated to Celtic goddesses of arts, crafts and fertility. Later, Christian saints were adopted. Today, in parts of the world, tributes of gold and silver coins are made at artesian springs.

Maori rock carving beside Te Puna Ora

Te Puna Ora flows from an aquifer 58-67m beneath the ground surface. Because the natural water pressure would produce a spout 4m high the flow has been regulated to conserve this precious, natural resource. It flows year round. (The other drinking fountains in the gardens are not fed directly from this artesian source.)

Near the fountain are two Maori rock carvings.

On the left as you face Te Puna Ora, is the 'Kaitiaki Kiwa' by Riki Manuel made especially for Te Puna Ora, and representing the healing energy in pure artesian water. Riki said that although the statue looks

like a *taniwha*, it is actually a water spirit.

Douglas Woods' statue is Celtic symbolism and Celtic and Maori art are similar. This statue is adapted from a stone engraved at Newgrange, Co. Meath, Ireland in 3000 BC. The spiral 'triskele' pattern symbolised the elements of the cosmos and the unity of all life. The statues are placed as an affirmation of water at its pure source in a meeting of ancient cultures.

Barbara Brailsford and Faye Fleming.

Plant hunters - Archibald Menzies 1754-1842

Archibald Menzies was born in Scotland. After working at the Edinburgh Botanic Gardens and qualifying in medicine and botany at Edinburgh University he joined the British Royal Navy as a surgeon/naturalist.

Archibald Menzies 1754- 1842

Following voyages to the West Indies and the east coast of North America his ability as a plant collector was noticed by Sir Joseph Banks who was then curator at Kew. Banks arranged for him to join an expedition to the northwest coast of America led by Captain Vancouver. The aim of the expedition was to chart the coast and to discover that elusive northerly passage for the English to reach the Spice Islands.

The expedition set out with two small ships, the *Discovery* and the *Chatham*, in 1791 and did not return to England till 1795, a journey of nearly five years. Imagine the difficulties of collecting living plant material and seed on such a long journey. Banks provided Menzies with a plant hutch that sat on the deck of the Endeavour much to Captain Vancouver's displeasure. It was 13ft long, 6ft wide; the base was like a coffin, the sides of glass alternating with wooden shutters, the top a wood grating. Inside was a bench holding clay pots, with room for a person to stand and tend the plants. Not an ideal environment to protect plants from salt spray, tropical sun, freezing temperatures and waves washing over the ship's deck.

As the purpose of the voyage was charting, Menzies could only venture ashore when the ship sheltered to collect provisions, water and make repairs. Another of Menzies' duties was to identify and collect varieties of spruce and hemlock suitable for brewing "spruce beer", a concoction liberally laced with rum and molasses which added sufficient ascorbic acid to the sailors' diet to prevent scurvy. To his credit not one sailor on the voyage suffered from the dreaded disease.

The occurrence of the species name *menziesii* marks the path of that voyage; *Banksia menziesii* from South Australia; *Nothofagus menziesii*, our New Zealand silver beech, from Dusky Sound; *Dicksonia menziesii* from Hawaii, *Pseudotsuga menziesii*, the Douglas fir from British Columbia, and *Arbutus menziesii* from Washington State. While on the northwest coast of North America, Menzies is credited with collecting over 250 new plant species in just four months.

But on the voyage home disaster struck for Menzies. Captain Vancouver decided to withdraw the services of the rating who had been helping tend the hutch. When Menzies protested, Captain Vancouver angrily confined him to his cabin, and as the little ship battled its way round Cape Horn and up the Atlantic Ocean, the uncovered hatch filled with sea water like a bath and all the living plants died. This emphasises the difficulty of introducing new plants for cultivation in the 18th century, and Menzies was left with his collection of dried herbarium specimens.

Unfortunately, the disagreement continued and on arrival in England, Banks took over the herbarium specimens, but Vancouver claimed Menzies diaries. It was over 30 years before the herbarium speci-

mens at Kew were studied and accurately classified under the direction of the curator Sir William Hooker, and Menzies' name honoured with a genus of plants, *Menziesia*, in the family *Ericaceae*, commonly called the false azaleas; these are shrubs with insignificant flowers which consequently have never achieved recognition as commercial garden plants.

Disasters and disappointments aside, Archibald Menzies will always be remembered for discovering one particular tree, *Araucaria araucana*. It happened like this. While anchored at Valparaiso the Spanish Viceroy invited the ships' officers to a banquet. A bowl of nuts were offered for dessert and Menzies slipped a handful into his pocket. These were the seeds of the monkey puzzle tree. Three seeds germinated and one was planted at Kew where it lived for nearly 100 years. The monkey puzzle became the fashionable tree to have in Victorian front gardens.

Jen Fisher

Look at that plant
Heptacodium jasminioides

In November 2003 I had a Dutch friend and keen gardener visiting us. It was he who first drew my attention to what must be one of the rarest plants in the Christchurch Botanic Gardens. The plant, a large shrub, had been labelled *Heptacodium jasminioides*. But as the shrub was growing towards the rear of the shrub border in the primula garden the label was not easily visible from the path and I had not seen it until then.

Richard Poole, the then curator of the primula garden and the heritage rose garden, had obtained the plant from Top Trees Nursery in Hawke's Bay in 1996. Two years later Richard planted it in the primula garden shrub border along Washburn Creek (or Addington Brook). It has since grown into a 5 metre tall shrub.

The genus *Heptacodium* was first described and named by an American dendrologist Alfred Rehder on the basis of herbarium material collected by the famous plant hunter Ernest Henry Wilson, who also collected the ghost tree *Davidia involucrata*. According to Wilson it was a rare plant. Rehder gave the new genus the name *Heptacodium* because he thought that each inflorescence or flower cluster consisted of a whorl of seven buds - but this was not the case. Remember he worked with herbarium material and the plant was not as yet in flower. By mistake he took the top of the inflorescence for another bud - hence 7 flowers, and *Heptacodium* became its name.

Heptacodium jasminioides in primula garden

Once a plant is given a scientific name it cannot, according to the Rules of Botanical Nomenclature, be altered again. Now that the species has been cultivated to the flowering stage, it is easy to see that in an inflorescence the flowers occur in several whorls of six flowers each.

It now appears that a plant of *Heptacodium* had already been collected in 1877 by William Hancock in the East Chinese province of Zhejiang. However this specimen was left unnamed and in the wrong family in the herbarium of the Royal Botanic Gardens for many years.

Even though the genus had been established scientifically, it was still many years before it was brought into cultivation. There was no living material or seeds available from which the species could be propagated. Even in China, the home of *Heptacodium*, the plant had only been collected a few

times and was extremely rare. It was also virtually unknown in dendrological literature until the year 1980 when a group of American botanists on a joint Chinese-American collecting trip were shown a well-fruiting specimen of *Heptacodium* in the Botanic Gardens of Hangzhou in the province of Zhejiang. The Chinese generously gave the visitors permission to collect seeds. One of the American botanists, Theodore R. Dudley of the National Arboretum, had made a special study of the *Caprifoliaceae*, the family to which the plant belongs, and was thrilled to see for the first time a life specimen of the species which until then he had only been able to study from herbarium material and literature.

It appeared that the plant was the only one the Chinese had ever located in the wild. Even now only a few plants have been located in the wild in China. The species is recorded in the Red-Data book of rare and endangered plants of China and Mongolia and is now fully protected in special reserves.

The propagation of the species from seed and cuttings in the Arnold and National Arboreta has been very successful and these institutions have been very generous with plant material to other Botanic Gardens and nurseries. So the species is now widely cultivated in Europe, the USA and New Zealand. Yet this most interesting plant is still not well-known to the gardening public as a whole.

There is only one species labelled *Heptacodium jasminioides* in the gardens, but which Rehder gave the name *Heptacodium miconioides* as its inflorescences resembled those of the tropical genus *Miconia* of the *Melastomataceae*.

Heptacodium miconioides is a deciduous shrub growing to a height of 6 metres. It has an interesting papery flaking bark. The leaves are opposite and show distinctive parallel venation. The flowers are white, slightly scented and are much visited by bees and butterflies. After flowering the small sepals much enlarge and turn a beautiful red colour so that it seems as if the plant is flowering again.

A most interesting addition to the Botanic Gardens.

Max Visch

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Events Co-ordinator	Leith McMurray	337-2008
Other Committee Members	Ruby Coleman	355-8811
	David Moyle	358-8914
	Diane Percy	385-6769
Ex Officio	John Clemens	

Helpers

Plant Sale	Helen Constable	980-9358
Membership database	Philippa Graham	348-5896
Newsletter Editor	Bill Whitmore	339-8356
Newsletter formatting	Maria Adamski	
Newsletter mail out	Philippa Graham	348-5896
Botanist	Bill Sykes	366-3844
Guide Co-ordinator	Pat Whitman	384-3475

Gardens enquiries Info Centre 941-6840 x 7590

Enquiries about membership should be made to Philippa Graham

Distribution of Newsletter

Because of the disruptions caused by the 22 February earthquake the Newsletter which would have been sent to you in early March did not eventuate. There will only be three, rather than the normal four, Newsletters this year.

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

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