

Newsletter

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

No 72, Autumn 2008

President's Report

The year has started off well with our first Committee meeting being held on 28th January. It was good to hear at this meeting from our Treasurer, Lesley Godkin, that the Council, following a computer upgrading exercise, had given the Friends a computer, together with a new flat screen monitor, to replace our old equipment. Further, at the suggestion of the Council's IT specialist, a successful application was made to Microsoft for a free-of-charge software up-grade. This gift of software has a value of over \$2,000. The new computer equipment together with the Microsoft software will greatly assist our Treasurer, Secretary, Newsletter Editor and Membership Co-ordinator to do their work for the 'Friends' much more efficiently. We are most grateful to both the Council and Microsoft for their generosity.

The end of February will be a busy time for all those in the city who are involved helping to prepare and attending to the various events and activities for the wonderful annual Floral Festival. The Friends' well trained and dedicated Botanic Garden guides will also be involved during the Festival week in providing evening walks at 7pm around the Gardens from the 22nd February to the 29th February.

The year ahead should be an interesting one as the Friends consider various ways and means of how we can make a greater contribution to the promotion and development of the Botanic Gardens. Our Secretary, Jim Crook, mentions in this Newsletter that the Committee is at present exploring the possibility of setting up a separate Trust to be responsible for future fund raising for specific projects as outlined in the management plans for the Gardens. Once this Trust proposal has been examined and discussed further by the Committee, members will be fully informed of the details of the Trust draft.

Don Bell

Editor's note

We continue to distribute the Newsletter by email to those members who have given us their email addresses. If you would prefer to receive the Newsletter by mail, rather than electronically, please contact Bill Whitmore – phone 339 8356 or billpauline@ihug.co.nz

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Gardens' News

Jeremy Hawker reports –

As part of the Festival of Flowers the Christchurch Botanic Gardens has put in place a Poison Garden which aims to be an interactive and informative way to introduce visitors to another aspect of the plant kingdom's characteristics. It is interesting to note that the plants themselves are used often to provide medical assistance to us if used in an informed and controlled manner. The BGCI (Botanic Gardens Conservation International) has recently published "Plants for Life: Medicinal Plants under Threat". This contains the findings of a year-long investigation into the state of medicinal plants around the world. The information will be used to help define priorities for both *in situ* and *ex situ* conservation programmes and to facilitate best practice and priority activities for implementation.

Report Summary

Multiple Factors Contribute to Threats.

As well as outlining the key trade, livelihood and conservation issues surrounding medicinal plants, the report illustrates the many ways in which botanic gardens can and do contribute to protecting the plants that heal us.

Botanic Gardens' Expanding Role

What came across very clearly was the expansion of the role of botanic gardens; from traditional *ex situ* conservation to more and more involvement with community work and partnering with other bodies to contribute towards really successful *in situ* medicinal plant conservation work.

Today, the relevance of botanic gardens to medicinal plant conservation is as strong as it was hundreds of years ago, when the very first botanic gardens were developed specifically for medicinal plant cultivation and research. From visionary education initiatives to cutting-edge genetic technology research; the report draws together the inspirational myriad involvement of botanic gardens in medicinal plant conservation and recommends focus areas for future work.

The use and application of medicinal plants has long been a function of Botanic Gardens and currently within the Herb garden at the

Christchurch Botanic Gardens, identification of plants indicate which may be useful for healing properties.

Begonia Delight

Townend House at the Botanic Gardens has opened its doors to unveil a stunning new Begonia display that proves that big really is beautiful.



With the festive season now well and truly behind us, the Poinsettias have been replaced by a wonderful collection of large Begonias, including cultivars such as 'Saturn', 'Crown Prince', 'Averil', 'Midas' and many garden hybrids. The blanket of colours that hits as you walk through the doors is undeniably beautiful, from orange, to red, to pink, to white to yellow to hybrids of both deep and pale shades.

Begonias are native to Africa, South East Asia and the Americas. These were introduced in the late 1800's but are not often seen today. Intense hybridisation of several tuberous species over the last century have resulted in modern large-flowered hybrids boasting a spectacular variety of

colour and form.

Frances Austin, Conservatory Collection Curator at the Botanic Gardens, helped craft the stunning display. "We always love putting these displays together and this one is so beautiful. Many overseas tourists come back year after to year just to see this display. You get such a lovely contrast with the Begonias – a real mix of vibrant with delicate colours. There's something for everyone."

While many people grow Begonias as house plants, Greg Salton, Nursery & Conservatory Team Coordinator at the Botanic Gardens says it's important to pay close attention to the growing conditions in the home. "A shade house is the ideal place to grow Begonias. Despite popular belief, they are not really an ideal house plant if not looked after properly. Often the leaves will go pale in the home and they end up looking lethargic. If you do keep them in the home, try to place them somewhere where they will receive good morning and afternoon sun, with cool temperatures and plenty of moisture".

One of the biggest myths about Begonias is that they have a scent, when in fact only 2-3 types actually smell. Chrissie Thomson, who also helped put together the display at Townend House, says "Often people come in the Conservatory and comment on the lovely smell but what they actually smell is the jasmine outside".

There are a number of key pointers to growing your Begonias as big and beautiful as in Townend House:

- Bark-based potting mix, containing a slow releasing fertilizer.
- Keep at a temperature of 18-21 degrees.
- Keep damp but not wet.
- Ensure sufficient ventilation and a good supply of light.
- As the flower blooms, groups of 3 flowers will appear between leaves and the stem.
- Remove the outer two (female) and allow the central (male) to flower and develop.
- Support the flower heads by staking if necessary.

Townend House at the Botanic Gardens is open daily from 10.15am – 4pm. The Begonia display will feature until the end of March. No admission fee

Poisonous Plants

The Christchurch Botanic Gardens, in association with the Festival of Flowers, will shortly present "Poisonous Plants" – an interactive Murder Mystery Trail, that's not only zany and full of fun, it's also educational and best of all... ..its free! Adults and children of all ages are invited to take part in solving a great 'murder mystery' by exploring 40 different poisonous plants including foxgloves, hemlock and ivy – from within a specially built cemetery.

Sheena Baines, of the Events Development Team at the Christchurch City Council says "Poisonous Plants is the Botanic Gardens contribution to the Festival of Flowers and as such the Christchurch City Council Events team is delighted to support the Gardens display of Poisonous Plants".

The 'detectives' make their way around the mystery trail, discovering stations where they can press a button to hear pre-recorded police reports on four different poisonings that have occurred and another one that gives witness statements. This information then needs to be teamed up with facts displayed around the trail about each plant, its poisonous nature, its symptoms, and first aid information, to solve the Murder/Poisoning.

To take part, budding detectives just need to turn up at the 'cemetery' which is situated behind the Rose Garden to the south west of Cunningham House at the Botanic Gardens, where they will be given a map and left to make their way through the trail of terror!

"Poisonous Plants" runs from 22 February to 28 March, from 9am - 5pm every day, so there's plenty of time to head on down and make the most of this spine-tingling event.

Potatoes in the Botanic Gardens

A display of New Zealand potato cultivars features in the Christchurch Botanic Gardens this summer in recognition of the United Nations declaration of 2008 as the International Year of the Potato. The display, close to the children's playground, is the initiative of Crop & Food Research, which has joined with the Christchurch City Council and the Potato Product Group of Horticulture New Zealand to reveal the science behind the vegetable.

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The display of 16 different cultivars was planted by staff from the Botanic Gardens in November. It is an opportunity for people to see a range of potato plants including those that produce tubers for the fresh market, crisping and chipping.

Darfield potato grower Graeme Hewitt has paid tribute to the Botanic Garden staff for their efforts: "Susan Sanders and her team have done a great job with these potatoes. I know it's Susan's first effort with potatoes so I'm impressed. And it is good to see the 'science behind the potato' being promoted with the signage that is in place. A lot of people do not appreciate that different potato types have different uses and this display is one way of illustrating that." Mr Hewitt says there are some important messages coming through as part of the International Year of the Potato, including the United Nations' aim to increase awareness of the potato's role in improving food security and poverty alleviation in developing nations.

Dr Carolyn Lister, who leads nutrition projects at Crop & Food Research, says there is good reason why some people refer to the potato as a 'nutritional jewel box'. "They are rich in carbohydrates, making them a good source of energy, and they have vitamin C, other antioxidants, potassium and are high in protein. Also, potatoes are low in sodium, sugar and fat, and when not cooked in oil or fat they are not fattening."

Dr Lister says Crop & Food Research is unique in the world in the diversity of its involvement with potatoes, with local scientists involved in deciphering the DNA code of potatoes, developing improved crop management systems, breeding potatoes with elite characteristics, supporting production of Taewa or Maori potatoes, gaining a better understanding of the nutritional benefits of potatoes and developing healthy convenient potato-based products.

Discovery Trails – Imagination let loose in Gardens

Ever wondered where your love of nature and gardening started. For most of us it began to develop in our back yards or in the local park. Or if you were lucky enough to grow up in Christchurch you may have connected with nature in the Botanic Gardens.

Hundreds of 5 to 12 year olds are continuing with this custom by taking part in the free discovery trails put on by the Botanic Gardens each school holiday break. The "Bookworm Ramble" discovery trail held in September 2007 introduced children to enchanted parts of the Gardens, such as the Water and New Zealand gardens. Along the trail participants discovered an imaginary world brought to life by popular story book characters. They got to cross the bridge to Terabithia and looked for words left behind in Charlotte's webs.

An impressive 687 children took part in this trail, 261 more participants than for the trail held the same time the year before. Once again the Gardens continue to stimulate the children of Christchurch's imaginations, providing them with experiences that they will remember well into adulthood.

Patterns and Puzzles Discovery Trail

The Information Centre will be running a "Patterns and Puzzles" Discovery Trail over the April school holidays. The trail is suitable for children aged 5-12 years old. Although the trail is self-guided adult supervision is required. The theme this time is maths and nature, and activities will involve finding shapes, taking measurements and reading co-ordinates. The trail will run from the 19th of April to the 4th of May. Trail sheets can be picked up from the Information Centre between the hours of 10.15am and 4.00pm. Follow the trail if you dare!

Peace Bell

A very recent feature of the Gardens, the Christchurch Peace Bell and the pavilion in which it is housed, has been attracting much favorable interest from visitors. As well the pavilion has been collecting awards for its design. In 2007 it won the New Zealand Institute of Architects' Canterbury branch Resene Local Award for Architecture, the Resene Colour Award, the New Zealand Concrete Society's Landscape Award and the silver award in the Designers Institute of New Zealand at the BeST Design Awards in Auckland.

The pavilion, designed by the Christchurch City Council's Capital Programme Group for the New Zealand Peace Bell Association, was a modernist interpretation of the traditional Japanese pagoda,

according to designer Crispin Shurr. It was unveiled in 2006 after two years of planning and fundraising.

The bell is anchored under a central opening showing it in the best natural light. Underneath the bell is a piece of greenstone gifted by Ngai Tahu. Pumice and cantilevering makes the massive roof appear light, as if it is suspended in mid-air. The effect is further enhanced by stainless steel supporting columns that reflect their surroundings and appear almost invisible from a distance.

Crispin Shurr comments "The precarious balance of the whole, the massive weight of the slab on a tangled, disorganized array of individual threads, reminds us that in this peak oil, nuclear age, modern civilization still remains precariously balanced, and that future world peace is still something worthy of contemplation"

The bell, made from smelted coins and medals donated by 103 countries, was gifted to the city by the World Peace Bell Association of Japan in 2005.

Here is a selection of comments taken from the Botanic Gardens Visitor Book:

- *I'm pretty sure fairies live here. Beautiful and tranquil sanctuary. Essex, UK*
- *Best I've ever seen. Michigan, USA*
- *From age 9 – 81 we have had a great time with the aid of the mobility scooter.*
- *Almost the garden of Eden! Australia*
- *I have spent four days enjoying every inch. Thank you so much. UK*
- *We are proud of the gardens. Christchurch*

Profile: Bede Nottingham

Bede Nottingham has certainly earned his status as a valued member of the Botanic Gardens team, working as a Grounds Team Coordinator. Starting at the Gardens over thirteen years ago, Bede started off as a Collection Curator and moved in to his current role, five years ago.

Born and bred in Christchurch, Bede remembers wandering around the gardens as a youngster, unbeknown to him that it would be where he would be spending the majority of his working career!

His passion for horticulture developed over twenty years ago when he was travelling around Europe. Starting in Germany and moving south through France, Italy, and Greece, Bede turned to fruit picking to help fund his travels and soon discovered it was becoming a hobby rather than just a job. He later left the sunshine of South Europe and headed to the rolling hills of Scotland to visit family, where he found himself working on a golf course in Aberdeen, only to heighten his interest in the great outdoors.

On his return to New Zealand, Bede began working for the Council, helping out in the parks and reserves and six years later, he began what would be a long career at the Botanic Gardens in



Christchurch. Bede earned his trade's certificate in Horticulture, gaining his National Diploma with honours and is now a well qualified Grounds Team Coordinator.

His day to day activities involve coordinating the collection curators in the Botanic Gardens. Over time, his role has also taken onboard a degree of asset management, working as a team to maintain trees planted in Mona Vale and Hagley Park. This requires monitoring tree development through database management and close observation in the parks.

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“What I enjoy most about the job is the variety involved. Every day is different; different jobs, different plants, different people. Also seasonal changes in the gardens means we have different priorities at different times of the year, adding again to the variety of the role from month to month”.

The variety is also apparent in the contrast of office and outdoor work, giving Bede a flavour of both.

He also coordinates requirements for events at the Botanic Gardens, such as the flower festivals and the ‘Year of the Potato’ (2008), ensuring all requirements are met for each event. “It’s my job to make sure things run smoothly ‘behind the scenes”

It’s clear Bede is not only highly qualified for his position of Grounds Team Coordinator but also genuinely enjoys the different experiences he encounters as part of his varied role at the Christchurch Botanic Gardens.

Articles

Pollen and Allergies in Canterbury

Recent discussions on the dangers of pollen from plants causing allergies have drawn attention to trees and shrubs in the Christchurch area that are either all male (ie are dioecious) or have both prominent male organs (usually catkins) as well as female ones (ie. are monoecious). This discourse included the assertion that such plants should be radically reduced or eliminated and substituted by female or sterile trees. This viewpoint was highlighted in November 2007 when Thomas Ogren, an American horticulturalist, visited Christchurch under the auspices of the Christchurch City Council. Ogren was adamant that we should eliminate woody plants that are wind-dispersed and therefore produce abundant pollen, stating that this was the policy of some cities in the western United States. Although his ideas as expressed in his public lecture and as reported afterwards were extreme they were not much challenged in the media and so my comments below are mainly an attempt to bring some balance to the subject of pollen allergies and to suggest that we should not make plants the scapegoat.

Firstly, regardless of the merits of such an action as removing such pollen-producing plants it has not been pointed out by anyone else to my knowledge that if this were implemented here or elsewhere in the region it would result in radical changes that would make the appearance of the Garden City very different. Thus for example some of our iconic views such as the lines of Lombardy poplars (*Populus nigra* ‘Italica’) along parts of the Avon River would disappear because every Lombardy poplar in New Zealand and

across the world is a male clone and produces abundant pollen in the dark red catkins every spring. Furthermore the only other poplar that I know of with a similar columnar habit (the ‘Pyramidalis’ form of white poplar (*Populus alba*)) is also male. Turning to the related willows, this genus along with the poplars is also dioecious. Again, most of the tree willows in New Zealand belong to a single male clone of the crack willow (*Salix fragilis*). Also, the more shrubby pussy willows (*Salix x reichardtii*) usually grown are male because their catkins are more attractive than female ones; indeed the greater beauty of male flowers applies to some other plants that have sexes on different plants although admittedly sometimes it is the female that is more attractive.

The planting of female trees in the vicinity of male poplar and willow trees has been advocated to reduce the impact of pollen on people but even if such females were available this strategy would have a miniscule effect because the female stigmas could only capture a tiny proportion of the pollen produced.

It has also been suggested that male trees with the same desirable appearance but with sterile flowers could be bred but this is not a practical option on any sizeable scale for the foreseeable future.

There are other implications associated with this anti-pollen campaign. Silver birches (*Betula* species) are in the firing line although human societies in the Northern Hemisphere have developed in proximity to birch forests for thousands of years. In the same family are the alders (*Alnus* species) and several of us have been advocating the planting of various species of Mediterranean alder, as opposed to the common European alder (*A. glutinosa*), for the Christ-

church area because they are attractive in form and are more drought-resistant. Like the birches their male catkins produce abundant pollen and have been reported as being the cause of allergies. These like some other common catkin-bearing trees – such as oaks (*Quercus* species), walnuts (*Juglans* species), hazelnuts (*Corylus* species) and eating or sweet chestnuts (*Castanea* species) are monoecious with only the male flowers in catkins. All of them are wind-pollinated and so have to produce plenty of pollen, and they have all been implicated in studies of pollen allergies although not to the same degree as birches and alders. Species of maples (*Acer* species) are amongst our favourite ornamental trees and although they do not produce proper catkins the pollen of at least some of them has been reported as being strongly implicated in causing allergies.

Turning to the conifers there are our beautiful cedars (*Cedrus* species), cypresses (*Cupressus* and *Chamaecyparis* species) and firs and spruces (*Abies* and *Picea* species), all producing copious pollen in spring. The finger of blame in respect to pollen allergy has even been laid against a common cultivated male totara (*Podocarpus totara*) so there is scant hope for the somewhat similar although unrelated male yew trees (*Taxus baccata*) around because yew is well-known to have poisonous properties generally. But the most notorious conifer here in respect to producing pollen is radiata pine (*Pinus radiata*) of course and the gutters of many Christchurch streets are yellow in early spring from pollen that has been blown from plantations to the north east of the City and by the nor westers from various sources further away, again mainly in this season. Pine pollen has been said by some people to be innocuous whereas others say that it can cause allergic reactions.

Ogren has castigated other types of plants for causing danger from their pollen; the main ones are members of the olive (*Oleaceae*), spurge (*Euphorbiaceae*) and sunflower (*Asteraceae* or *Compositae*) families, although they do not usually have separate male catkins and wind-dispersed pollen, their flowers being perfect or hermaphrodite. Thus if one considers the effect on Christchurch gardens if only double-flowered members of the sunflower family were grown, as has been recommended, the resulting depletion would certainly be significant. On the other hand a ban on planting members of the spurge family would mainly affect warmer parts of the country because

they are not usually very common in cultivation in the Christchurch area. That said, they have increased in popularity in recent years and several *Euphorbia* species flower quite prolifically. Thus I now grow several species in this genus.

The painting of the family *Oleaceae* as one of the villains of the piece is also surprising to many of us and to the many olive (*Olea europaea*) growers here and around the Mediterranean and elsewhere I suspect. However, privets (*Ligustrum* species) are in this family and their flowers are well-known to upset some people, although it is often said that the perfume is the cause of trouble rather than their pollen. But ash trees (*Fraxinus* species) are also in the olive family and are therefore presumably implicated. English and claret ashes are very popular in the Christchurch area and being wind-dispersed they produce plenty of pollen although I have never heard of any health problems being attributed to them.

Apart from the mainly woody plants that people such as Ogren campaign against grasses (*Poaceae* or *Gramineae*) with their wind-blown pollen are well-known allergens that cause hay fever for some people and again grass pollen can blow around for considerable distances and thus make it impossible to prevent exposure to completely. Also it is extremely difficult to differentiate between the effects of pollen from various species of plants unless exhaustive elimination tests have been carried out. Taking a wider view of the whole allergy issue is the need to look carefully at our environment and modern life styles. Relevant is a recent report stating that a high proportion of New Zealand houses have mould and damp problems, to which one can add dust mites and the various chemicals used to protect against unwanted insects. Then there is the general atmosphere outside with its various chemical pollutants that we breathe in as we go about our daily business. Arising from the above of course is the possible impairment of our immune systems. These factors must surely be taken into consideration when assessing danger from pollen and other allergens although of course such evaluations are complicated and difficult. It is not surprising that they do not seem to have been properly evaluated by medical science. In connection with this it is revealing that it seems that today more people suffer from allergies generally than was formally the case. Thus Ogren stated that at least in some parts of the United States up to a third of the population now suffers from pollen

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allergies whereas it appears that half a century or so ago only a very small percentage suffered in this way. Accepting this data as valid means that we surely have to look at the way we live as well as what pollen we come into contact with.

Finally, I do sympathise with people who suffer from allergies, whether involving plants or not (I am allergic to any part of some members of the Rhus family (*Anacardiaceae*) myself), but I firmly believe that to direct attention only to a single aspect of the problem is narrow-minded and misguided.

Bill Sykes
Friend of the Botanic Gardens, Botanist

The Potato Lover

It's the Year of the Potato, a vegetable that excites memories for many of us. If I were denied tea and potatoes, I swear I would go into a massive withdrawal. Potatoes I adore - plain, flavoured, steamed, boiled, baked, fried, mashed, roasted, au gratin, hot or cold. I even ate them raw when I was a nipper.

I called on my Irish friend Peggy recently. She was having her dinner: black pudding, cabbage and, of course, nice plain spuddies. That's the thing about a staple food: the meal's not right without it. Black pudding on its own? Too rich. A plate of boiled cabbage? Yuck. A bowl of steamed Desirées? Delicious.

When I first went to China with my husband, who was born there and who can eat boiled rice by the bucket, he assured me that rice gruel for breakfast would be very similar to the porridge I so enjoy. Not so. I was homesick at each mouthful. It's a funny thing about staples: they're all bland, they're all starchy, but it's the blandness we know from the highchair that tingles our tastebuds for ever and ever. Well, for ever for me, but there are many sophisticated persons who could have occupied my neighbouring highchair, so to speak, who are just as happy with pasta - happier even - or rice, or bread, or noodles or corn mash. Not me.

I wonder if it's being a Southlander that makes me so loyal to potatoes. Not just loyal, either: fierce, really, and arrogant and loud-mouthed. We grow such beauties, you see, and in such abundance. Recently I met a greengrocer here in Christchurch, where I am a Cantabrian some of the time, who

swears Nelson Piper's potatoes are the best in New Zealand. And Caldwell's at Brydone.

The mention of Brydone brought tears to my eyes: I ran in the Brydone Domain sports when I was four and won a race. My mother, giggling helplessly in the egg-and-spoon, dropped the egg, and my dad, twenty-eight and newly settled on our rehab farm, won the dash.

That was the farm where we first grew potatoes. In the fifties we grew the poor cropping but beautifully flavoured King Edwards. Later we grew Red Kings, and more recently, Desirée. Large paddock potato patches, an acre for the main crop. Planted well into the spring to rule out the possibility of late frosts and harvested in summer with the whole family helping. We dragged buckets and large hemp sacks (no longer, alas - how I love the smell of hemp sacking!) and picnicked on tomato sandwiches with lots of butter, lots of salt and pepper, and a billy of tea.

I was a little scrubber when my daddy invented the potato game of "guess which is the biggie". He would walk down the rows of potatoes, fork in hand (those special potato forks with about six blunt prongs), and we'd all troop along with him and guess, from the thickness of the lead stalk, which shore would have the biggest potatoes.

Even better was "bandicooting", tickling and scratching under the plant to extract the little "newies" to see if they were big enough to dig for the sweetest treat of all, the first boiled and minted new potatoes with lashings of butter. Cholesterol, thank god, had not yet been invented.

These games were favourites with visiting children, who took oodles home, of course, and it was a favourite with us, his own children, because he loved potatoes with a passion. He was eloquent about them, and he planned for them. Along with the main crop that fed the family year round, there were the specials that were cosseted for Christmas Day and others planted on New Year's Day to be harvested for Easter, a real challenge given Southland's climate. When my brother was to be married in March, Pa was more anxious about the new potatoes being ready for the day than about the wedding itself - by far!

So there it is, a very personal investment in not being ignorant about our venerable plant, *Solanum tuberosum*, which I hoped my daughters had inher-

ited. I asked them which varieties they knew. "Well," said one, "Nadine and Desirée and Royal Gala?" 'Tis true, most people know more about the apples they love than the spuds they eat daily. There are over fifty varieties on sale in New Zealand at present, but the marketing is not as dynamic or informative as it should be. My local vegetable specialist, a potato lover himself, takes pride in stocking a large variety, all well-labelled: the Dutch golden potatoes - Agria, Fiana, Draga and Concorde; then there are his favourite Robinta and my 87-year-old father-in-law's "nice and floury" Ilam Hardy; there are also Red Rascals, Rocket, Rua, and those tasteless Nadines, to name but a few.

Woefully, however, we seldom see a wide variety of potatoes with good labelling. Spuds is spuds like rice is rice.

I remember when I was ten at Te Tipua primary school listening to a friend describe her birthday dinner to a group of cronies. "We had a roast", she said. "Roast what?" I asked, seeking information critical to my appreciation. "Roast meat, silly", she said. Well, that's how most of us are about potatoes.

Last week our brand new supermarket had specials aplenty. Potatoes were cheap but none identified, neither on the packet nor on the sign. "What are these?" I asked the vegetable assistant. "And these? And these?" "Well", said he, adjusting his new uniform and smiling importantly, "I dunno, but they're a darned good buy."

Diana Madgin

Poisonous plants - Rhubarb

Rhubarb. Some of us love it – some of us don't. Nevertheless rhubarb, cooked in various ways, commonly appears at our tables. And in recent years it has moved from being a rather ordinary dish to a rather trendy one. Because rhubarb is such a commonly used food source you may have been surprised to see it growing among the other poisonous plants in the Poisonous Garden during the Flower Festival.

Rhubarb (*Rheum rhabarbarum* and other species) belongs to the Polygonaceae or buckwheat family

– a family that includes also spinach and sorrel.

Rhubarb is found growing wild in the mountains of the west and north-western provinces of China and Tibet and is in cultivation in much of Europe and USA.

The ancient Greeks thought it was the stuff of barbarians, from whence its name. In the Middle Ages its leaves and roots were used as poisons. It was initially cultivated for its medicinal qualities and it was not until the 18th century that rhubarb was grown for culinary purposes in Britain and America. Rhubarb is rich in vitamin C and dietary fibre.

Oxalates are contained in all parts of rhubarb plants, especially in the green leaves. There is some evidence that anthraquinone glycosides are also present. Rhubarb poisoning is possibly a result of both compounds. You will be pleased to know that the stalks, the part we cook in the kitchen, contain low levels of oxalates, so this does not cause problems.

The toxicity mechanism by which oxalic acid works is somewhat different from organic poisons and is more analogous to heavy metal poisoning. Rhubarb leaves contain around 0.5% oxalic acid, so one would need to eat a large serving of leaves (approximately 5 kg) to receive a toxic dose of oxalic acid. Note however that it would only require a fraction of that to cause sickness.

Oxalic acid poisoning affects many parts of the body. Symptoms include: weakness, burning in the mouth, death from cardiovascular collapse, difficulty breathing, burning in the throat, abdominal pain, nausea, vomiting, diarrhea, convulsions and coma.

During World War I rhubarb was recommended as a substitute for other vegetables that the war made unavailable. Apparently there were cases of acute poisoning and even some deaths. Perhaps these occurred because people who had not encountered the plant before cooked the leaves in the mistaken belief that they were a substitute green vegetable.

Some animals, including goats and pigs, have also been poisoned by ingesting the leaves.

Bill Whitmore

Friends' Groups

Possible trust deed for Society.

Members were advised in the previous Newsletter that the Charities Commission had approved registration of the Friends of the Christchurch Botanic Gardens Incorporated as a "Charitable Entity" under the provisions of the Charities Act 2005. This registration confirms that any donations (over \$5) are deductible to the donor for taxation purposes.

Consequent upon that decision the Committee is now considering the possibility of the Friends setting up a Trust Deed to assist in large donor fund raising activities including solicitation of bequests to help with implementation of major projects in the Botanic Gardens. The legal implications of introducing a Trust Deed are now being examined and if the Committee decides on the desirability of this course of action approval to establish a Trust Deed will be sought from the members.

Bus trips arranged for members of the friends.

1. The Committee is concerned that recent bus trips arranged for members of the Friends have not received much support and there have been difficulties because some people have booked (but not paid) and then did not turn up to participate. Unfortunately that has meant some trips have been run at a loss with consequent waste of the Society's hard earned funds.

2. Your Committee is keen to continue offering trips to local gardens and places of interest for the benefit of members. However, to avoid incurring

financial losses members of other organisations will be invited to take up vacancies if support from Society members is not forthcoming within a reasonable period after trips are advertised. Additionally, the following conditions will be applied:

- Seats will be allocated on a "First in with payment" basis.
- Unless there are unusual circumstances refunds of fares will not be made.
- A surcharge of \$5 will apply to any persons who is not a member.

3. Your Committee trusts that members will understand and will support these arrangements – preferably by personal participation in bus trips to areas of interest.

Propagating group

Helen Constable from the propagating group reports that it has been a successful year financially. Sales from the trolley outside the Information Office were brisk in Spring and Summer and it is hoped will continue similarly into Autumn.

The group has grown swan plants for monarch butterflies this season for the first time. And in response to a suggestion from Adrienne Moore, they have germinated about 200 seedling oaks from the Edward Albert Oak.

Helen would welcome volunteers to help in the propagating teams – those interested can ring 980 9358. Donation of washed pots in all sizes (but only green or black in colour please) will be gladly accepted.

Coming Events

Kate Hillier, Exhibition Manager for the Ellerslie Flower Show has written to the Friends as below:

"With the Ellerslie International Flower Show relocating to the Garden City of Christchurch in March 2009 the huge public interest created by this has

prompted this Ellerslie Experience – 'Earth Sharing Life' educational exhibition garden. It will be erected in a stand-alone, blacked out marquee in a very prominent area of Hagley Park close to the visitor information kiosk and museum. This will give the people of Christchurch and visitors to the city a chance to see the garden and come away with their own agenda on how we can all do our

part to improve our planet.

This exhibition garden was one of the many show features at the November 2007 Ellerslie International Flower Show in Manukau City. It was incorporated within the Starlight Marquee which was a totally blacked out marquee show-casing developments in garden lighting. Not only did the garden win a Gold medal as an exhibition garden, it also won the very popular 'People's Choice' award. In addition to these awards they also came away with the EIFS Gold medal for lighting and yet another Gold from IESNZ (Illuminating Engineering Society of NZ).

The garden has a strong sustainability theme and highlights the damage that we have done to our ecosystem and how we can start to put it to rights. It explores man's link with his landscape and encourages visitors to nurture their environment and preserve the planet for generations to come.

I wish to have a number of volunteers to help whilst the garden is open to the public. The gar-

den will be open from 9am until 6pm for 7 days from 11th March. We will need 2 or 3 volunteers at a time and I would suggest the day needs to be split in half ie 9am – 1pm, then 1pm until 6pm.

If any of your members were able to help I would be very grateful – please feel free to forward this email. If people could then respond to me directly I will organise a timetable.

Many thanks for your help with this project.”

Those wishing to help with this project are invited to contact Kate directly:

kate@ellerslieflowershow.co.nz
Mobile: 021 75 33 55
Tel: 09 817 9422
Fax: 09 817 6264

*Alternatively they may contact Charles Graham from the Friends' Committee:
or pipncharles@paradise.net.nz
Tel: 348 5896*

Snippets

Neil O'Brien (Friend of the Botanic Gardens and Garden guide) recently came across two slim volumes of poems by Morris Marshall. In one of them, "Over the Razorback, a Collection of New Zealand Poems", was this poem about the Gardens. He called it "Botanical Gardens". Neil comments that some people may remember Morris who was a teacher of English and, Neil thinks, History at Hagley High School. He was also a keen fly fisherman. Some of his old pupils may still be about.

Botanical gardens ... Christchurch

Once in the not-so-very-long-ago
Rank rushes grew and swamp birds, red and black,
Wandered in watery wastes beyond a native track;
Sickly flowers of sedges laid pale petals
Down where toi-tois cast their shade;
On these foundations gardens have been made.
When men moved in the landscape changed
And where the swamp-hen and the bittern ranged
Are lawns and buildings, shrubberies,
And floral plots beside great trees.
No longer, boom of bittern, swamp-hen's strident cry
Awake the echoes where the passers-by
Come to admire, walk in the scented air,
Gaze at the brilliant blossoms shining there.
Here is toil, and dedication high
Resplendent, underneath an arch of sky.

Morris Marshall

12 FRIENDS OF THE CHRISTCHURCH BOTANIC GARDENS

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