

Featuring: *The Rose Garden Team*
 The Scent of a Rose
 Cicadas in the Trees

Another New Year has sneaked in. We look from the past ~



*and the very successful Christmas arrangements sale we held at
the end of the year*

to the future ~

*You are invited to the first President's Drinks function
5.30pm, February 26
The Treehouse
Guest speaker David Sole*

*We also feature the hopes and plans of Friends' President Simon
Ewing-Jarvie and Botanic Gardens Manager David Sole.
Read on...*

PRESIDENTIAL POSTCARD

Welcome back to what I hope will be a safe and successful year for you all. The festive season certainly came and went like a whirlwind in our household!

The weather has been a talking point for everyone. On the Kapiti Coast, the summer drought has given way to the sound of lawnmowers in January for the first time in many years. Wellington is looking much greener and the gardens more splendid than this time twelve months ago.

In the last newsletter, I outlined the projects that the committee was considering. We will be making progress on several of these, in particular the Hector Memorial, in the near future. My personal aim for the remainder of my term as President is to work on aligning our project planning with that of the Council, as well as make progress on integration of the marketing efforts for the eco-tourism destinations of the Botanic Garden, Otari and Karori

Sanctuary. Some exciting new themes have been added into the programme for this year, such as digital plant photography coaching and competitions for kids (large and small!) and the President's Drinks series (the first of which is on 26 February).

At the first President's Drinks, you will be able to meet David Sole, the new manager of the Botanic Garden, and hear of his vision and goals for this splendid centrepiece of Wellington.

I would like to end by thanking all those who contributed to the beautiful display of Christmas art in the Treehouse in December, and in particular to the Wellington Floral Art Club for their ongoing support of the Friends.

Best of luck in 2004 and I look forward to seeing as many of you as possible on 26 February.

Simon Ewing-Jarvie

Mike Wilton 1953-2003

The Botanic Garden's Mike Wilton died suddenly last July, just a month shy of his 50th birthday.

Mike came to the Gardens ten years ago. Prior to that, armed with a science degree, he missed out on the research job he wanted, so went into business for himself, running a commercial nursery.

Mike loved plants, showing eclectic taste – he bred orchids and was a national judge, propagated carnivorous plants (many seen in the Begonia House) and bred begonias. He cross-pollinated begonias and grew on some wonderful varieties. His aim was to have short stems and big flowers, and he had recently begun working on yellow begonias. Yellow begonias that also have good form are hard to breed, so that was a task Mike set

for himself. The Gardens house many of his begonia 'progeny'.

Mike was well-respected in overseas horticultural circles; people from abroad would turn up at the Gardens to consult with him, but, as a colleague put it, "No one would have known because he was not one to brag."

Mike had many other interests – among them computers (he set up the first website about the Botanic Gardens), astronomy and volcanology.

Apparently, Mike's family were amazed at the huge circle of horticultural friends who turned up at his funeral, but that was Mike Wilton, an unassuming, quiet-living, well-educated, knowledgeable man of broad interests who will be much missed.



BOTANIC BULLETIN

As I write this I am two days back, from a scorching holiday in the Bay of Plenty, where the roads are paved with the flowers of the pohutukawa and lasiandra and where Queen palms, oaks and hibiscus grow beside the sea, to a wet and very cold Wellington.

However the rain is not unwanted and, ferreting in the soil, I see that it is still very dry beneath.

The Botanic Garden staff are settling well into the new structure and I think we are beginning to see positive results. There remains the frustration of having not found a new curator for the Rose Gardens and we continue to look for one.

Rewi Elliot leaves us at the end of January to continue with studies at Massey in Palmerston North. Rewi leaves a legacy of well-kept collections and thoughtful, constructive contributions to the operations of the Gardens. We wish him well. Jerry Lucero, who some of you will recognise from his previous life at the California Garden Centre, has been appointed as the new Collection Curator -Shubs.

There has been some damage in the gardens following the January storm – an oak, adjacent to the Glenmore Street entrance, has had to be removed; some of the Fraxinus have lost branches and a number of branches have fallen from the pines at Druid Hill and adjacent to Grass Way. Damage was also caused to the Nursery glasshouses during the strong Northerlies we had early in the month, with up to 40 panes needing replacement.

We have commenced early planning for this year's Spring Festival, so as to maximise the promotional opportunity for the Gardens and Otari and to link with the Karori Sanctuary, to provide new visitor experiences. We are looking at ways to promote the tulips in a way that doesn't leave us high and dry, or should I

say wet, by committing to a specific day. More on this as it evolves.

The end of March sees a meeting in the Gardens of the Council of Heads of Australasian Botanic Gardens. This is not only a great opportunity to show off the uniqueness of 'our place', but to share the collective knowledge and experiences the delegates bring with them. Even in the short time of my tenure, it has become apparent that we share the same issues, challenges and problems on both sides of the Tasman.

The long overdue collections review has commenced. This is being headed up by Leanne Killalea, with the individual collection curators, Rob Lucas as an external assessor and myself completing the team. After a ranging discussion prior to the review process, it was decided to take not only a 'snapshot' of the collections as they currently exist, but also a holistic view of the way the collections sit in the landscape and their appropriateness in the garden. Don't be alarmed – it won't result in the wholesale slaughter of collections in the garden, but will provide us with a tool with which we can better manage the collections and look at opportunities for introducing new collections.

The key foci for the first half of the year will remain the development of the management process for the tree framework, establishing the native forest areas, establishing a recovery and maintenance regime and finally the development of the interpretive material, which is so long overdue.

I am looking forward to this year and the chance to develop some momentum for these projects and to start taking the gardens into the future .

Best wishes for the New Year

David Sole
Manager, BG and Otari

Profile of a Gardener - Rachel Solomon and the Rose Garden team

The Lady Norwood Rose Garden team is in the throes of being reassembled. Meanwhile, the work goes on and Rachel Solomon is one of the people doing it, as acting Collection Curator – Modern and Heritage Roses.



*Rose gardeners
Rachel Solomon and Duane Novis*

The Lady Norwood garden houses the modern rose collection. One school of thought defines modern as post-World War 2, which ought to mean that the 'modern' rose Peace isn't one, being bred just before the war. That's but one example of the difficulties faced by Rachel and her team in choosing the garden's cultivars. Policy is currently being rewritten, but in general, the philosophy is to display available varieties, especially those that grow well in Wellington. They are always on the lookout for new roses and new types – Patio roses are now featured. Roses are sourced from the same places we get ours – nurseries like Tasman Bay, Matthews, de Boers, even, occasionally, garden centres.

Resilience to pests and diseases is important; if the rose is less susceptible to rust and black spot then less spray is needed, since the Botanic Gardens has a policy of using as few chemicals as possible. Of course, this is a public display garden, and some of the public expect to see unblemished rose bushes, so there's not much point in growing the rust-attractors. New varieties are trialled for a few years and the trial beds are not sprayed. Part of the trial is "to see what it catches. And if it bounces back," says Rachel. Paul Holmes is on trial here (there are those who will think that

appropriate) and Rachel says he's "not a bad rose".

Pests and diseases are managed using the Integrated Pest Management system – a large part of which is monitoring. Rachel says you observe and then decide what to do. They only use low-toxicity fungicides; Bravo or occasionally Saprol, and try different regimes to keep disease at bay. Mildew can be pruned off if noticed early. The team don't have time for fiddly cures – for instance, baking soda needs to be applied far too often (in fact Rachel believes it works better as a deterrent than as a cure).

Part of the job when you're working in the garden is to answer tourists' questions, the best one being "Do you get black spot and rust?" If they can't see it then the team must be getting it right.

Rare uncontrollable mite infestations are treated with spraying oil, but generally beneficial insects are used, although not always with success. "Every time I put The Mite Es [predator mites] out we had a southerly," says Rachel. "Froze the little buggers. I felt sorry for them, poor little Mite Es." Her advice to the home gardener on aphids is to use digital control (squish 'em) or squirt them with dishwater. The Botanic Garden has to keep buying in predators, because once they've exhausted their food supply they don't survive.

A hard question for the team is "Should you keep a rose once it's no longer available?" It is important to retain some history, however, and older and out-of-fashion roses are often moved to the outer circle. A walk around the perimeter reveals some blasts from the past. I remember when the orange Super Star was *the* rose to have. The vigorous Loving Memory is here – so many gardens have this rose as a memorial to a loved one – the name an example of

marketing genius. Blue Moon is there too; the first of the 'blue' roses and very scented and popular in its day (not with my grandmother, who thought roses should have proper rose colours). Standards are also kept here, so the public can see the growth form and how they are managed.

The roses are fed with liquid fish manure fortnightly to monthly. Nothing is applied to the soil at present – years of mushroom compost mulch have seriously affected the soil pH and locked up calcium and phosphorous. Correcting this is a long-term project and meanwhile liquid feeding is best for the plants. There are signs that the soil is improving. The beds are now mulched with fine pine bark, for looks and moisture-retention.

Roses do have a life-span, but at 50 years old “ the old fart of the garden is Buccaneer,” according to Rachel. None

of the modern roses have been there longer than that, because of the Great Herbicide Disaster of 1953, when, instead of insecticide, herbicide was sprayed on the beds!

Rachel has been a Council gardener on and off for about a decade and worked at the Rose Garden for two years. She says the work is satisfyingly hard. When I asked her about other interests she said she goes home too tired to do much, but enjoys craftwork like knitting and cross-stitch, and taking her young springer spaniel Cully for walks.

Gardens are seasonal and working in the rose garden keeps the variety going. Summer is feeding, watering, deadheading and disease monitoring and control. Autumn-winter is for pruning and planting. But the best time of all? “When they’ve all been pruned,” says Rachel.

VISIT THE TREEHOUSE LIBRARY

The Treehouse Library, of over two thousand interesting and valuable books, has until now only been accessible to Botanic Gardens and WWF staff members.

To enable members of the Friends to have the opportunity of reading and possibly borrowing these books, it is planned to open the library on an experimental basis from noon till 2pm on the 2nd and 4th Thursday and Saturday of each month, starting in February.

The success of the scheme will be evaluated at the beginning of April, when modifications may be made.

To extend the opening hours and to facilitate the smooth functioning of the roster, more volunteer assistants are required. To volunteer, or for further information contact Gwenda Sutton.

Tel: 04 473 0847
Fax: 04 473 0848
e-mail gwenda.s@ihug.co.nz

BULB SALE



This excellent Friends' fundraiser is on again soon. Angela Hill is coordinating the bulb sale and says that an exciting range of daffodils, tulips and crocuses will be available. A flyer with varieties and ordering info will be sent to members shortly. Meanwhile, for any questions (or a sneak preview) phone Angela on 479 5580, or email fergiehill@clear.net.nz

Scent of Roses

*At last year's Fathers' Day Spring Breakfast, **Bill Wieben** imparted some fascinating scented rose info. We've prevailed upon him to write it down for those of us who weren't there.*

The first interest I had in the scent of roses was watching people in the Lady Norwood Garden. I noticed that women would look at the roses and sometimes have a sniff, but men would almost always smell them. I had a curiosity about why roses had a perfume and soon I learned that old-fashioned roses were noted for their fragrance. So I moved to the Bolton Memorial Park to see what roses were there. It had a good collection of roses and a curator, Rodney Reid, who was and is a very keen rosarian. He pointed out several things about the old roses. They come in many different varieties. They have wonderful histories. They smell, with few exceptions.

I thought about doing a project on rose scent, but I needed to plan how it could be done. I looked in the library for books on rose perfume and there were none. So that allowed me to do the project with very little interference. In the rose catalogues it irritated me that the notes would sometimes state whether a rose had scent and sometimes not, even when I knew the rose was perfumed. The notes did not have a consistent description of the scent or how strong it was. So I devised a system for describing the various rose scents.

The first challenge was the strength of the scent. I used the Scovill method for the heat of chilli, which was 1 to 10; 1 for no smell and 10 for the strongest. Then the flavour of the perfume. The obvious one was rose but I discovered a problem - Slater's Crimson China smelled like berries - raspberries and sweet. Why? My neighbour asked me to smell a rose, Utersen, and it smelled like pineapple. So I went to the scientific description of roses and found they were related to apples, berries and other plants with scents similar to roses and geraniums. I was able to produce a list of smells related to roses, with a few outsiders, like vanilla, myrrh and cinnamon.

I started going to Bolton for cross-sniffing and comparisons, taking notes and using my classification sheets. I got some strange looks at times. I found that I could sniff five roses, then I would have to rest my nose to detect

the next roses properly. While I had time out I sometimes spotted a young woman up on the top working near the sexton's cottage. She must have thought there was a very strange person down below. I later met her and explained what I was doing and she was so happy that I was smelling the roses.

After I had written up my notes and produced a small booklet on the scents I had rated, it seems that several people had been working on the same thing but at a scientific level. Chemically, there are eight or nine substances that give roses distinctive fragrances. Along with the ones mentioned previously came the apricot, orange and banana. Geraniol is one of the alcohols active in the rose but also in the rose leaf geranium. There are at least four alcohol substance chemicals active in roses. If you look through a rose petal at a strong light, the perfume glands can be seen. When the sun or heat strikes the petals, it releases the perfume. There are some roses with so much chemical in their petals that they will release perfume at night. One of those is Frau Dagmar Hastrupp with its spicy Arabian nights fragrance. The thicker the petal the more likely a rose will have scent.

The rose breeders are now raising hybrid tea roses with scent, which was a lost art in the last few decades. Peter Beales, who was in New Zealand a couple of years ago, is a great supporter of perfumed roses. Many of the other rose breeders have followed his lead. David Austin has always used old fashioned roses in his hybridising and with one or two exceptions, all have great perfume.

The discovery of the variation of scent in roses is a continuing interest. So if you see someone in the Lady Norwood or Bolton Memorial Park smelling roses, go up and have a whiff too. It might surprise you. Smell is one of the major senses that really does wake up.

Bill Wieben

[Tell us your favourite scented rose, and we'll print a list in the next issue – Ed. (contact details on back page)].

Man In The Trees - Cicada

The insects with beautiful wings and shrill 'voices' are in full song right now. **Phil Tomlinson** looks at the strange life-cycle of this noise-maker.

Cicada (*Melampsalta cingulata*). There are a number of cicadas throughout the country, and found locally. The giant cicada is a handsome insect with a wingspan of about 75 mm (3 inches). The body is green with black markings and on the fore-part of the head there are three red eyes like jewels, set between the two larger compound eyes. This cicada has a loud chirping song that ends with a click caused by a flick of the wings. On a hot summer's day the air seems to crackle with the volume of sound produced by hundreds of these insects singing together.

Perhaps the strangest fact concerning cicadas is that only the males are capable of producing sound, and in this connection one cannot help admiring the daring of the obviously "hen-pecked" Greek poet, Xenarchus, who wrote:—

"Happy are cicadas' lives, for they have only voiceless wives."

The larvae burrow into the ground, where they extract juices from the roots of trees. When fully grown the larva becomes clothed in a horny armor and has rudimentary wings. On reaching maturity it leaves the ground, climbs a few feet up a tree trunk and finally, the perfect insect emerges, leaving the light brown horny case attached to the tree trunk.

Cicada song is synonymous with the warmer months of New Zealand.

There are a great many species, of all different colours, from red, green, yellow and brown. In some years, there can be large numbers emerging, and near forest edges their song can be deafening. They also congregate around street lights, where they will sing throughout the night. The sound-

producing organ, chamber, is located in the abdomen. Muscles flex the wall of this chamber to produce a sound in the same manner as a popping tin can. The sound is altered through elevation of the flaps on the undersurface of the abdomen. The song of the cicada is complex and very varied between species.

Cicada nymphs feed on the xylem of plant roots, and in the *Amphisalta* spp. the nymphs probably take between five to eight years to reach full development. Cicadas are found right throughout New Zealand, and those in alpine areas, like grasshoppers, have restricted distributions, thought to have arisen through the retreating snow line at the end of the last glacial period.

Usually the loudest cicadas come out at the beginning of February. Wellington has two species of cicada, which look and sound alike but appear at different times of the season.

The vagaries of Wellington's summer influence exactly when they appear. The big black ones come out before Christmas, but the second one doesn't come out till February. The latter species, *Amphisalta zelandica*, makes up for its tardiness by being louder and greater in numbers than *Amphisalta cingulata*, which is found only in the North Island. A fine groove on the front of the head distinguished one from the other. The song is different between the two but most people wouldn't pick it out. They both have these clicks that go along with the song. The first one that comes out goes a bit like yackety yackata while the second one has more of a "zzz" sound.

Feeling Great Stepping Out

Chris Horne and Barbara Mitcalfe are leading a WCC programme called "Stepping Out" and will conduct a walk through the five remarkable areas of native forest in the Botanic Garden. Friends of the Botanic Garden are especially invited to take this opportunity to accompany

the two researchers who produced a report on the bush for us last year. The walk will be on Saturday March 13. Bring lunch and a drink and meet at 9am at the Founders' Entrance, Glenmore Street.

Directions – Guides' Report

Jenny Hickman, Phil Tomlinson, Margaret Herbert, Betty Neumeyer and Margaret Barry-Gallen attended last year's international volunteer guides' conference, held in Perth late September to early October. The 'Conference for Volunteer Guides in Botanical Gardens' is held every second year and Jenny says she really enjoyed this one – it was great to meet up with other guides, particularly those she met two years ago.

Wanting to make the most of the opportunity, several people took escorted tours before and after the conference, looking at mountain flora, wildflowers, forests. The conference was held a little earlier in the year than usual, presumably to take advantage of the local wildflower season.

This summer the guides have been mainly based up at the Cable Car entrance, to take advantage of tourists who use the cable car and then don't know where to go.

From December to mid-January the guides hosted tourists from five cruise ship visits. The mighty Star Princess, which can accommodate 3,100 passengers, has been here four times already and the Clipper Odyssey berthed once.

Jenny says it's also good to have someone on duty in the shop, but "as long as you're identifiable as a guide, people will ask you questions", from queries about "the garden to Wellington to New Zealand to how to get back to the ship."



It's not all planting and pruning. When the new nursery water tank proved to be too big for the truck, staff literally put their shoulders to the wheel, and in a brilliant display of teamwork, manhandled the monster from the main gates to its new resting place.

Coming Events

February 15

GW

"Fabulous Fuchsias" Meet at the Duck Pond Along Glenmore Street in the Main Garden is an extensive collection of fuchsias and this walk will feature these fascinating plants. Not only will you see the many specimens, but also you will have the opportunity to learn more about their origins, culture etc. Come and see the smallest fuchsia in the world, and it's a native plant of New Zealand! Little walking involved

February 26 (Thu) 5.30pm

President's Drinks The Treehouse

March 13 9am

Stepping Out guided walk with Chris Horne and Barbara Mitcalfe. Bring lunch and a drink and meet at the Founders' Entrance, Glenmore Street.

March 21

GW

"Man in the Trees : New Zealand Native Plants" Meet at the bottom of the Treehouse lift. Our native plants will be covered on this walk that will venture into areas of the garden not often seen by many visitors. The bush remnants are an important link with the past and are historically significant as they are the first fully documented area of native bush in the country, first described in detail in the 1870's, and this record makes them unique. This walk provides an opportunity to see our botanical heritage and learn some of the fascinating facts about these plants and how they have been used by the Maori and early settlers. Moderate walking involved

April 7 (Wed) 7pm

Friends Celebrate Autumn mulled wine and apple strudel in the season of mists and mellow fruitfulness. **The Treehouse**

April 18

GW

"Sunday Dinner in the Garden" Meet at the Duck Pond. A walk with a difference. Come and join us for a virtual meal in the Main Garden. Everyone knows trees provide timber, shelter and firewood, but this walk will provide a fascinating introduction to many other products that come from trees - drinks, chocolate, salads, ink, sugar, chewing gum and food wrap, to mention just a few. You may well be surprised at what you will learn! Little walking involved.

May 16

GW

"Fire as a Fact of Life" Meet at the Duck Pond Fire in this country is regarded as a disaster in forests, but for many trees in many parts of the world it is not just a fact of life, but essential for the survival of many species in nature. Learn how plants have adapted to survive fire in many unique and unusual ways. Visit the tree that is not only 'fireproof' but even survived the ultimate fire, the atomic bomb blast. Little walking involved

June 20

GW

"The Main Garden and its History". Meet at the Duck Pond. The Wellington Botanic Garden played a very important role in the history, not only of the city, but of New Zealand as a whole. Learn the part played by the garden in early colonial development, and in the establishment of one of the industries now of major importance to our economy. Let the guide introduce other historic features and plants that makes it a significant heritage area. Little walking involved.

GW = Guided walks, held on the third Sunday of the month at 11am. Unless stated otherwise, the walks begin at the Founders' Entrance, Glenmore Street. If it is wet there will be a talk at the Treehouse Visitor Centre instead.

The Friends of Wellington's Botanic Gardens newsletters are published four times a year, at the beginning of February, May, August and November. Deadline for contributions (all of which are most welcome) is one month prior to publication (mostly ignored by contributors) but a few days late is okay.