

Newsletter

December 2012

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***Today's Carter Observatory
Carrying on a proud tradition***

President's Patch

It is always reassuring to receive positive feedback from visitors to Wellington, as well as from Wellingtonians, about the Botanic Garden. In my experience, comments about our Garden are without exception favourable and I think deservedly so. I have made it a point when travelling around New Zealand and also when off-shore to visit Botanic Gardens. It seems to me that our Garden, with its wide variety of topography and flora, including as it does native bush and well-groomed flower beds, is on a par with anything to be found elsewhere. It is not the biggest, it is not the oldest and it is not resourced as well as some other Gardens, but it does reflect Wellington - a city built on hills, a compact and well integrated city and a city which was well endowed by its founding fathers. We have a treasure in our midst and it is the mandate of the Friends to lend support to maintaining and improving this treasure.

Elsewhere in this Newsletter, David Sole mentions the Management Plan for the Garden. This is an important document, setting out the parameters for the management and development of the Garden over the next ten years. The Plan will be opened to public consultation but before a draft is released for general discussion the Friends will have an opportunity to provide input into the overall framework and ambition of the Plan. Details of this process will be advised to members in the New Year, but essentially what will happen is that our views will be sought as to what should go into the plan and what the main priorities and

policies should be. This will be an opportunity to get in on the ground floor and those among us who have views on the overall direction of the development and management of the Garden will, I hope, participate in this exercise.

Another "watch this space" item to flag is a members' event in mid to late February (precise date not yet fixed). Your committee is planning an event in the refurbished Treehouse, the finishing touches to which are now being applied. Again we will communicate direct with members about the timing and content of this event.

I alluded in the September Newsletter to the main activities your committee will be seeking to advance during the coming year. We have on our books a number of projects, among them the upgrading of the downhill path markers, the conservation of the remnants of the old boundary fence and a children's play area near the Picnic cafe. All remain on the agenda. A focus will also be placed on utilising the funds entrusted to us by the Wellington Rose Society which are to be directed primarily towards the Lady Norwood Rose Garden. Your Committee is working on all these projects and I hope to be able to report on progress in these and other areas in the near future.

Finally, may I wish all members and their families a very happy festive season and to say that I trust 2013 may bring good fortune to you all.

Frank Wilson

Botanic Bulletin

Great excitement in the camp recently as Karl Noldan, temporary Team Leader/Curator at the Main Garden, came third in this year's national finals of the Young Horticulturist of the Year awards. I think that, as I maybe have said previously, it is a great reflection on the Garden that we have had staff in the national finals for three of the eight years the competition has been running. Karl's three minute speech about the leadership role of botanic gardens was particularly thought-provoking.

sure that many visitors to the city did come and view the roses anyway as it was such a lovely day. Low turn-outs are always discouraging for staff and those who volunteer to assist. Fairy Trina did very good business though, with plenty of children attending her sessions. All that aside, the roses are looking spectacular and the waft of rose scent while sitting having a cup of coffee outside the café one day was simply glorious.

The Begonia House is now fully up and running again and looking very smart. The opportunity to catch up with a few small maintenance jobs was also taken up and the scheduled replacement of the boilers will happen in January/February 2013.

Rose Festival proved to be a very quiet affair this year after being overwhelmed by the Hobbit media mania! However, I am



We are particularly thrilled with the way this project ran and the outcome. We have commissioned a design for the replacement of the buckled, broken and sunken paving on the Begonia House Terrace and expect to have this completed within the next few weeks. Tenders will be called in the New Year and we expect work to begin in May 2013. This will nicely round off the work programme in the Rose Garden/Begonia House area.

Tim Harkness briefly returned to us after 12 months secondment to the Ranger, but has advised that he is leaving to take up an opportunity in the private sector. Tim began with us as an apprentice and progressed to Gardener, Curator, and then Team Leader. It's great to see Tim is staying in the industry and we all wish him the very best for his future role. We are recruiting now to replace Tim.

Unfortunately we have lost another tree to the wind. A Greek Fir, *Abies cephalonica*, across from the lower yard was dislodged in strong winds and took on a precarious lean which meant that a rapid removal was required. The remaining barrel of the tree is being removed this week and will be assessed to see if there is any recoverable time in it. This week timber from the *Picconia* and oak from the main garden is being sent off

for milling for possible use for furniture in the garden.

The Treehouse carpet was laid last week bringing an end to the renewal phase of the work. It has made a remarkable difference to the appearance of the Treehouse and has reinforced the benefits of the decision to open the public space up. This week an exhibition of Fractal Photography by Shane Perry has been installed. Apart from the obvious quality of the works it looks absolutely superb on the large curved wall. Try and make some time to come and have a look!

It has been another busy year from which we have emerged as part of what is now the Parks, Sport and Recreation business unit – a format which will no doubt be familiar to those of you who have been Wellington residents for many years!

My thanks to the Friends, Hosts, Guides and volunteer gardeners for your support for the garden over the last year - you all bring something special to the garden for which we are very grateful. On behalf of the staff I wish you and your families all the best for the Festive Season and the New Year.

*David Sole, on behalf of the
Botanic Garden Team*

Review of the Combined Management Plan 2002

A review of the **Combined Management Plan 2002** for Anderson Park, Bolton Street Memorial Park and Wellington Botanic Garden has got under way with staff consultation in the first week of December.

Management plans, while ostensibly rolling documents, have a ten-year lifecycle which expired for the current plan in 2012. There are a number of reasons, beyond simply responding to legislative requirements, for reviewing a plan. These may include changed operating circumstances, completion of the initiatives and/or a change of purpose.

Since the issue of the 2002 plan, we have completed some major achievements, including the Landscape Development Plan, the Main Entrance more clearly delineating the entrance to the Botanic Garden, the Rose Garden/Bolton Street walkway, replacement of the nursery,

continuing restoration of the Overseer's (Constable's) house, the Collections Review and the Tree Management plan. We commissioned the concepts for a Children's Garden and have tested the waters for paid parking. As we look to the future it will be important that we reflect on what has been achieved and what will be the future direction of the garden.

This time around we are proposing to develop a 'Cluster Management Plan' which includes the existing Gardens and Bolton Street, but will also include Truby King Park and Otari-Wilton's Bush. Much of the information and policies is common among the gardens so a cluster approach will provide consistency and reduce duplication.

A consultation workshop with the staff was held in the first week in December, and then in February we will be meeting with key stakeholders such as the Friends of

Wellington Botanic Garden, Friends of Bolton Street Memorial Park and local iwi. I strongly urge you to have a good think about the garden and its role and individually and collectively gather your thoughts for the consultation process.

A copy of the 2002 Management Plan can be obtained from the Treehouse or you can view it on line at www.wellington.govt.nz/plans/policies/botanicgarden/.

Please contact either the Treehouse or the Garden Manager, David Sole if you have any questions or wish to have a hard copy of the 2002 Management Plan.

Treehouse:
Tel: 499 1400

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Tel: 499 1901

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And now for something different....Go catch a cheetah!

Recently several of our guides had an interesting experience at Wellington Zoo – saying hello to a cheetah.



fur, so soft and magnificently marked. On my turn, the attention was aptly rewarded by a loud rumble, with the whole body vibrating. I knew cats purred, but in this he excelled himself.

A great visit - if you get the opportunity it's well worth doing.

Story and Photos: Phil Tomlinson

This year with nearly 100 cruise ships carrying 220,000 visitors, we have combined with the Wellington City Ambassadors to meet and greet visitors to the Garden. To ensure all hosts are familiar with the Zoo they invited a number of them to have a look around its main attractions, which included a close up encounter with their two cheetahs.

Three guides, Sheena Bennett, Cathy Brown and Phil Tomlinson joined with a wider group on this most enjoyable visit. With their two keepers the two animals were brought into an enclosure to a table. For some time they did not want to lie down, but once they received their expected treat, they did so.



The zoo staff gave an interesting review of these animals, and we were invited to pet them. Obviously they enjoyed it. What beautiful

New Zealand Young Horticulturalist of the Year Awards

Earlier this year the Botanic Garden's Curator of shrub collections and Team Leader of the main garden depot, Karl Noldan, won the Amenity sector [ie public and home gardens (non-profit)] final of the Young Horticulturalist of the Year. Sponsored by the NZ Recreation Association, this event was hosted by the Botanic Garden.



Karl assesses seedlings

In November Karl competed in the Young Horticulturalist of the Year final in Auckland – competing against the other horticulture sectors – Landscaping, Floristry, Viticulture, Fruit & Vegetable growing and Nursery Production.

As a competitor Karl had to:

- design an innovative product for his sector. He designed and produced a 'bucket mule', a tri-stand for lifting buckets above the plants when weeding floral beds and tight rockery spots, effecting efficiency gains and preventing manual handling injuries.
- be interviewed by a panel of three on various topics.

- analyse financial data on two different options for an avocado grower and submit a written recommendation on the most lucrative choice.
- participate in a day of practical horticultural questions and demonstrations, including quick-fire 'horti-sports' fun.
- give a speech at the awards dinner on future young leadership in horticulture.

Following this rigorous process, Karl achieved third in a tightly fought competition. He particularly excelled in the speech and practical demonstrations.



Horti-sports – Build a Scarecrow!

Congratulations Karl!

*Story: Trish Knight,
Wellington City Council*

*Photos: Young Horticulturalist
Of the Year 2012*

Observatories in the Botanic Garden

This is an abridged version of Phil Tomlinson's excellent and broad-ranging article on the Friends' web-site. The full text and photographs can be found at:

<http://friendswbg.org.nz/observatories.html>

Many of you will have noticed Observatory Path that runs from just below the Seddon Memorial in the Bolton Street Memorial Park. But how many of you have wondered why this path bears this name? After all, the immediate area through which it runs doesn't seem to be an obvious place for any type of observatory. And it is certainly quite a way removed from the area at the top of the Garden that today houses the Carter Observatory and some of its predecessors.

The Observatory Reserve

To answer the question as to why this path is today called Observatory Path, we need first to take a look at the relationship between the Garden as a whole and the land on which today's – and, yes, yesterday's – observatories were constructed. The Wellington City Council took over the management of the Botanic Garden in 1891 under the authority of the Botanic Garden Vesting Act. Of the original Garden area, 2.4ha was designated as an observatory reserve with the boundaries determined by Sir James Hector, the first director of the Garden. The Garden remained responsible for the use and upkeep of this piece of land. Of the identified reserve area, 1.8ha was taken for a battery reserve as part of the preparations for a possible Russian invasion that never materialised. This area, taken under the authority of the Public Works Act, has remained Crown Land ever since.

The legal position of these two largely overlapping areas remained unclear and was finally resolved only in 1962 when an amended Observatory Reserve of 2.2ha was finally proclaimed. An interesting historical footnote, is that by virtue of the Crown's ownership of the battery reserve land the Government on at least two occasions declined to agree to development proposals (once for a road linking Upland and Salamanca Roads, and once for a car-park) that would have significantly changed (for the worse) the upper Botanic Garden.

The need for accurate time-keeping

The first two observatories in Wellington were established for time-keeping purposes. Until well into the 19th century there was little need for accurate time-keeping (other than for maritime navigation), and each locality established its own time based on the solar meridian at the location. Even for a relatively linear north/south lying country like New Zealand, this resulted in clocks in the colony varying by as much as 50 minutes. However, the development of coastal and international shipping, and in particular, the development of a railway system and the introduction of the telegraph, showed the necessity of having a standard time throughout the country. Accordingly, in 1868, on the recommendation of Sir James Hector, a standard time of 11.5 hours ahead of Greenwich Mean Time was introduced. This was changed to 12 hours ahead of GMT in 1941.

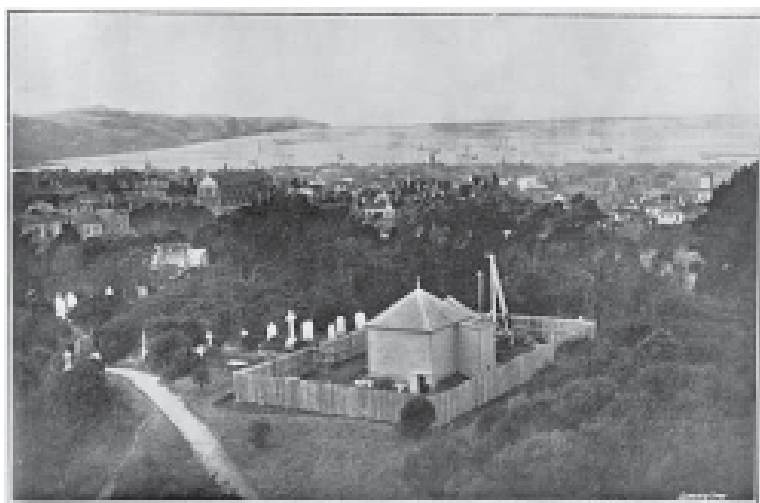
Traditionally, the only way a mariner could establish longitude was by way of very accurate clocks, observations of sun and stars, and the use of appropriate tables. The chronometers used required periodic accurate recalibration, and this was achieved by special observatories using astronomical observations to determine the correct local time. The first two observatories in Wellington were thus established for time-keeping, although they also undertook meteorological and climatological observations and measurements.

The First Observatories

Wellington's first observatory was established in 1863 on what was then the waterfront, on Customhouse Quay, around the site of the Intercontinental Hotel. It wasn't long, however, before the construction of a "new" telegraph office blocked the view from the waterfront observatory of the essential meridian mark on Tinakori Hill, requiring a new site to be found. Hector, in his role as Government Advisor and as the first director of the Botanic Garden, found a site in the Garden where the Seddon Memorial now

stands for the construction of a new observatory in 1869, on what became known as Observatory Knob. It was the access to this observatory that provides the genesis of what is now "Observatory Path" that runs through the Bolton Street Memorial Park. Problems occurred with this observatory over time as tree growth quickly obscured views, and there was also city encroachment. When Richard John Seddon suddenly died, a national memorial was suggested. As no more burials were then possible in the Bolton Street Cemetery and a site close to Parliament was considered appropriate, the block of land in the Garden occupied by the observatory was selected and the buildings removed in 1906. The observatory was subsequently transferred to a higher, more suitable, location.

The new observatory was built at the top of the Botanic Garden, partly so that the lights of the growing city wouldn't interfere with the work of the astronomers who depended on sun and planet sightings to make their time observations. Telescopes allowed the time to be determined to an accuracy of a quarter of a second. Astronomical determination of time continued until the 1950s, by which time more accurate methods became available. In 1962 quartz-crystal clocks formally replaced the astronomical regulator pendulums that had been used since New Zealand first started keeping standard time. Through the 1970s and early 1980s the quartz clocks continued to be maintained at the observatory, but the clocks were now calibrated to three caesium clocks monitored by the DSIR's Measurement Standards Laboratory in Lower Hutt (now Industrial Research Ltd). Responsibility for maintaining New Zealand's standard time was formally transferred to IRL in 1992. Thus ended nearly a century and a quarter of official time-



The Colonial Observatory

The Second Observatory

Built in 1907, this was first called the Hector Observatory. It was renamed the Dominion Observatory in 1925 in belated recognition of the then current status of New Zealand in the British Empire, and was again renamed in 1941 as the Seismological Observatory. The main part of the structure is built over the magazine of the 1896 battery. A new wing was added to the west side of the building in 1926 to house four offices. Like its predecessor, it was primarily used for time-keeping, meteorology and climatology, not astronomical observation, although amateur astronomers were able to use its telescopes.



The Dominion Observatory

keeping in the Botanic Garden.

In 1916 the observatory also began to house the government's fledgling Seismological Service. There are still measuring instruments near the building, although the Institute of Geological and Nuclear Studies took over the work after its establishment in 1995. The Dominion Observatory building is maintained by the Department of Conservation, but is not open to the public.

As noted above, even though professional astronomers were not employed for many years, but many enthusiastic amateurs were able to use the telescopes. Among these was George Vernon Hudson, who not only put together a comprehensive insect collection that became the founding collection of the then Dominion Museum (Te Papa), he was also the original advocate of "Daylight Saving Time" with an initial paper in 1895. While this was not well received, he persevered with a further paper three years later. It was not, however, until 1927 that daylight saving was first introduced in New Zealand. Today, of course, we enjoy extended evenings from mid-spring through to mid-autumn.

The Third Observatory

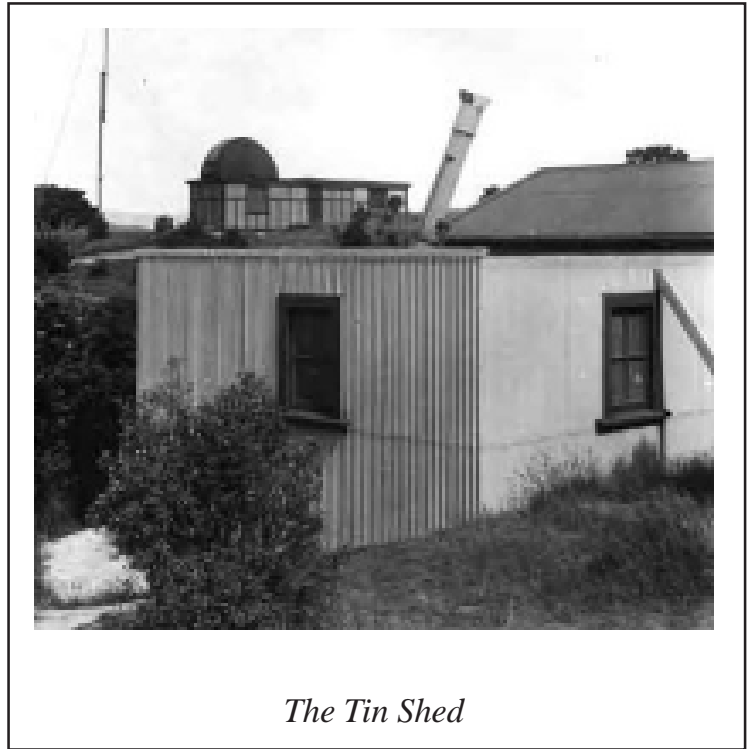
As the Hector Observatory was only a time-keeping station, the members of the Wellington Philosophical Society Astronomy Section felt that there was a need for a public observatory. The society hosted many fund-raising nights and also obtained £100 from the New Zealand Government. The observatory was built in 1912. It was initially known as the King Edward Observatory as the King had died relatively recently (in 1910), but this was later shortened to the King Observatory. This was the first public observatory in Wellington, and during the 1920s and 1930s, public viewing nights were held. During the 1940s the observatory was unofficially renamed the Thomas King Observatory after Thomas King who in 1887 took up a full-time position as Transit Observer at the Colonial and later Hector Observatory. On his death, his estate donated his telescope (a 5-inch Grubb refractor) to the observatory. The observatory was used for research into variable stars, Comets, planets and sunspots. After World War II, its use declined and the telescope was removed in 1992 after the observatory had been vandalised. Subsequently, the observatory and telescope have been repaired and restored.



The King Observatory

The Fourth Observatory

Established in 1924 by the Wellington City Corporation, this observatory was located to the side of the current Carter Observatory. Made of galvanised iron and with a roll-off roof it gained the nickname of "The Tin Shed". It hosted public observation sessions and was used for some research. It housed a 23cm (9 ¾ inch) telescope built by Thomas Cooke in 1867 which was acquired from the Marist Seminary in Meeanee, Napier, for the princely sum of £2,000 (around \$178,000 in today's terms). This was restored in 2001 by Gordon Hudson. Now in the Carter Observatory, it is observatory's largest telescope. The Tin Shed was used until the Carter Observatory opened in 1941.

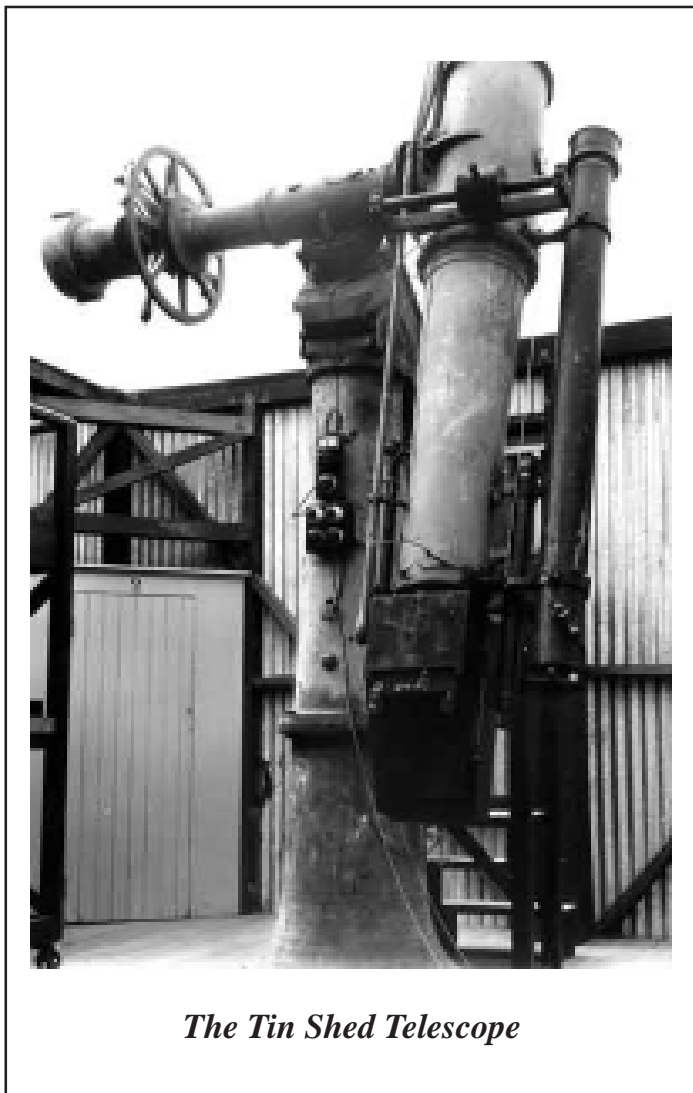


The Tin Shed

The Fifth Observatory

This, the fifth, last and newest observatory, is the Carter Observatory. Its name honours Charles Rooking Carter (1822-1896), a Wellington businessman, politician and Wairarapa farmer who also gave his name to Carterton. He had expressed deep concern about the scarcity of scientists in New Zealand – particularly about the lack of seismologists in this earthquake-prone country. In his 1896 will he left £2,240 for the establishment of an astronomical observatory in Wellington for public use and benefit. After many delays, the Carter Observatory project was finally moved forward when it was adopted as a New Zealand 1940 Centennial project with the enthusiastic backing of the Royal Society of New Zealand and the Wellington City Council.

The site chosen for the Carter Observatory was not in the defined Observatory Reserve, and land had to be made available from the Botanic Garden for the building. Once delays resulting from World War II had been overcome, the Carter Observatory was finally opened on 20 December 1941.



The Tin Shed Telescope

The Carter Observatory has undergone several major innovations since its establishment. The first was in the 1960s when the Ruth Crisp Bequest made possible the construction of a two-storey building and office wing, and also provided a third telescope. In 1977 the Carter Observatory became the official national observatory of New Zealand. In 1991, the Golden Bay Planetarium was incorporated to become its visitor centre, foyer area and theatre, and the Observatory's priorities shifted from being primarily scientific research to public education.

In February 2005 a review concluded that the Mt John Observatory was more suited for the title "National Observatory" because it was widely accepted as the premier New Zealand observatory in terms of national and international research. The Wellington City Council has maintained the observatory since 2007, and in 2009 the Government transferred formal responsibility to the Council and it officially lost the title of "National Observatory". Some \$2.2 million has been spent by the Wellington City Council in recent years on refurbishing and upgrading the observatory as a high quality tourist attraction and education venue.

The Carter Observatory has three major telescopes. The first was that originally housed in the Thomas King Observatory, and was used until very recently for public viewing. The second was the Thomas Cooke Refractor acquired from the Marist Society, and the third, the Ruth Crisp telescope, is used for public viewing.

The Carter Observatory has been the national repository for astronomical heritage items as neither the National Archives nor Te Papa collect in this field. It had an active acquisition policy in seeking items with significant heritage and research data, and was said to have one of the best astronomical libraries in the Southern Hemisphere. Much of this material is now in storage, but it would be most unfortunate if at least some were not to be restored to public display.

There is more to this area of the Garden than just the observatories, but as the above seeks briefly to illustrate, it is an area that has significance not only for the Garden and Wellington, but indeed for all of New Zealand. Having hosted five observatories over more than 140 years, it represents an important part of the Garden's heritage.



The Carter Observatory today

Fractal Flowers

A photographic exhibition by Shane Perry

The newly refurbished Treehouse interior now allows the Botanic Garden to mount exhibitions. And, no time has been wasted in seeking to exploit this new opportunity, with the first one already installed.

Photographer Shane Perry has been visiting the Botanic Garden for several years. His photographs of orchids and other flowers have been graphically accentuated, revealing fractal patterns – fine patterns normally invisible to the human eye.

A fractal is a miniature geometric pattern in nature that repeats infinitely. The most well-known fractal pattern in nature is the snowflake. Fractals can be reduced and continuously repeated or magnified to accentuate tiny hidden patterns.

For a different view of the natural world, come and see *Fractal Flowers* – The Treehouse until 8 February 2013; open 9.00am – 4.00pm Monday-Friday (closed 25 December – 2 January, 21 January and 6 February).



Nature's Elegance

Garden Visits for Members?

Is there interest among members in visits to gardens in the Wellington area and beyond? A guided tour of public or private gardens in the Wellington region might have appeal to members. If the answer is 'yes', we will need a "champion" to promote and organise a trip. This is no easy task given the need to fix a time and place, to arrange transport and to ensure good weather. Is there anyone among our membership who would like to take on this challenge – perhaps someone who has a burning desire to share a garden experience?

Could any potential volunteers please contact a member of the Committee.

Coming Events

Running until 8 February 2013

Fractal Flowers

A photographic exhibition by Shane Perry. The Treehouse, open 9am-4pm Monday-Friday, closed 25 Dec-2 Jan, 21 Jan & 6 Feb.

Sunday, 16 December, 7pm

Kaleidoscope of European Carols

Enjoy carols and dance with a European flavour and join in singing English carols by candlelight in the Botanic Garden's Soundshell. Free entry.

Sunday, 20 January 2013, 11am

Fragrance, flavour and physic

A walk through the Herb Garden looking at the fragrant, medicinal, culinary and domestic uses of herbs. Meet at the Rose Garden fountain for this easy 75-minute walk with one uphill section. Cost: \$4.

Monday, 28 January, 11am

Trees for fragrance, flavour and physic

We look at some of the trees that have fragrant, medicinal, culinary and domestic uses. Meet at the Duck Pond for this easy 75-minute walk with one uphill section. Cost: \$4.

Sunday, 17 February, 11am

Plants of the ancient Egyptians

The Egyptians, both in ancient times and today, have always adored flowers. The ancient Egyptians had an extensive knowledge of the

healing properties of plants. If you had to be ill in ancient times, probably the best place to be would have been Egypt. They also relied on plants for writing materials and clothing. Meet at the Duck Pond for this easy 80-minute walk with one uphill section. Cost: \$4.

Monday, 25 February, 11am

Insects, birds and plants

Insects and birds, and their relationship with both native and introduced plants. Meet at the Founders' Entrance, Glenmore Street for this moderate 90-minute walk. Cost: \$4.

Sunday, 17 March 11 am

Cutting your cloth according to the plant

Hear about clothes from around the world and the plants from which they were made. Meet at the Founders' Entrance, Glenmore Street for this moderate 90-minute walk. Cost: \$4.

Monday 25 March 11am

Off the beaten track

An exploration of some of the smaller and less-frequented paths in the Botanic Garden. Meet at the Founders' Entrance, Glenmore Street for this energetic 90-minute walk. Cost: \$4.

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