

Featuring: Winter Seminars  
Registration Event Pix  
Guides and Glow Worms

## *COME TO THE AUTUMN CELEBRATION*

*On Thursday 12 May 2005 at 7.30 pm  
At the Treehouse*

*Featuring autumnal drinks and fare  
and a special welcome to our new members*

*Guest Speaker : David Sole  
Manager Botanic Gardens and  
Otari Wilton's Bush*

*David will talk about the current situation and outlook  
for the garden.*



*Friends enjoy their March event, celebrating Wellington's newest Historic Place*

## FROM THE PRESIDENT...

Dear Members,

I extend a special welcome to the new members of the Friends who have signed up following our recent approaches to families in the neighbourhood of the Garden. Your membership is warmly appreciated.

On Thursday 12 May there will be an opportunity for new and old members to meet together at our Autumn Celebration. This will be held in the Treehouse from 7.30 pm. Seasonal drinks and fare will be provided. The Manager of the Garden, David Sole, will be the guest speaker and will talk about the current situation and outlook for the Garden. I do hope we will have a good attendance for what should be an enjoyable and informative get together.

Our last gathering, in March, to mark the registration of the Garden under the Historic Places Act was a great success. Many members and our guests heard

Winsome Shepherd talk about the background to the registration, and speeches by Dr Bill Tramosch (CEO, Historic Places Trust) and the Mayor, Kerry Prendergast. The plaques that were presented will be mounted on the three main entrances to the Garden. Excellent articles appeared in the local media acknowledging the role of the Friends in the achievement of "Historic Area" status for the Garden.

The historic theme is being carried through in the two Winter Seminars being held in June and July. Full details are in this Newsletter. We hope many members will register to attend these unique opportunities to learn more about the native bush remnants and the conifers, and share views on the future management of these heritage features on the Garden.

Looking forward to meeting many of you on 12 May.

*Ted Woodfield*



*Historic Places Trust CEO Dr Bill Tramosch and Wellington's Mayor, Kerry Prendergast, at the presentation of the Historic Place plaques during the Friends March event. This and front page photo by Justine Hall, WCC.*

## BOTANIC BULLETIN

The wind and temperatures of autumn are finally upon us and as I look to the western hills today it appears that some long overdue rain is about to fall. The troops have had the sprinklers out this week in full force to catch the last of the summer growth.

There has been lots happening in the garden and the capital development programme also swings into top gear, with the signing of the contract for the Rose Garden – Bolton Street Memorial Park Walkway. The affected section of the Anderson Park fence has been removed and the demolition and construction work is about to start any day. Also planned is the construction of new steps from the Soundshell Lawn to William Bramley (the Main) Drive. We are about to call for tenders for this and hope to have the steps largely completed by the end of the financial year.

The last of the Tasmanian Blackwoods has been removed from the forest area at the top of Stable gully, reducing the threat of windfall damage and also to the resident dragonfly breeding colony beneath. Also removed recently was the *Acmena smithii* adjacent to the Main garden toilets. This has come about as part of the collection review and provides more area for bedding and allows more light into the 'floral room' area. The *Agapanthus orientalis* were removed from below the pohutukawa and replaced with smaller sterile forms in a slightly altered configuration. These are a considerable improvement.

Laura Wards is moving on with Spring Festival planning. Spring Festival, from 24 September to 9 October, coincides with the World of Wearable Arts so, with luck, we will have visitors from out of town able to attend Spring Festival Events as well! The event this year will be similar to last year, but with an increased profile for Native Week at Otari. Watch out for more to follow on this!

We have had a number of visitors to the Botanic Garden and Otari this year already and a few more in the pipeline. There has been a gardener from Kew and trainees

from a French School of Landscape Architecture who have come out to complete 'internships' as part of their studies. It is great to have these visitors and to have them recount their wonderful experiences in New Zealand gardens when they return home.

What's happening in the other Wellington Botanic Gardens? Otari has had the sale of the Education Board land confirmed, which means the pines adjacent to the Troup lawn can be removed and the steepest part of the Circular Walk reconfigured to make it more accessible. Truby King House is about to have its roof replaced, which will mean the Trust can move on with planning for the interior refurbishments. Bolton Street Memorial Park has seen work begun on releasing the grave sites and head stones from the most aggressive trees, which were causing substantial damage. The forest in the 'wilderness' area of the cemetery will remain, but will be carefully managed to keep the compromise between the wild and the tended which makes this park so unique.

The staff are beginning to implement some of the collection review recommendations. Some of these may not be apparent and are focused around documentation and planning, while others, such as the removal of the adventive vegetation from Pine Hill Path and the early stages of preparation of the upper part of Stone Bridge Gully, have begun. The willingness of the staff to take on the recommendations, and to discuss and implement them, has been fantastic and the reward, in the presentation of the garden, will soon start to become apparent.

The Friends' lecture programme for this year is looking very good. Please support it and encourage your acquaintances to attend! Looking forward to seeing you there.

David Sole  
Manager, Wellington Botanic Gardens

## Winter Seminars

*This year this very popular Friends series celebrates our city's newest Historic Place and the inhabitants that have had a major impact on the landscape and economy of New Zealand.*

### Sunday June 12: Back From The Brink 1840 – 2005



The importance and management of the Botanic Garden bush remnant – an illustrated seminar to mark the Botanic Garden's registration as an Historic Place.

The programme runs from 9.30am to 4.15pm and includes breaks for morning tea, lunch and afternoon tea.

Speakers and their topics are:

**Marion Minson** The pictorial record of Wellington's bush at the time of settlement

**Walter Cook** The photographic record

**Winsome Shepherd** The written record

**Maggy Wassilieff** The Town Belt

**Dr Geoff Park** A study of Wellington's bush remnants today

**Barbara Mitcalfe & Chris Horne** Buchanan's paper of 1875 compared with the 2002 study of the bush remnant

**Mike Oates & David Sole** Managing the B.G. bush remnants for the future

The final session of the day is a discussion panel/question and answer session featuring Maggy Wassilieff, Dr Geoff Park, David Sole, Dr John Dawson, Mike Oates, Walter Cook, Chris Horne and Barbara Mitcalfe.

Cost: a bargain at **\$20 plus \$8 for lunch. Students \$20 including lunch.**  
**Book at the Treehouse 499 1400**

It must be said that an impressive number of highly-qualified speakers have been gathered together for these seminars and we ought not to miss this once-in-a-lifetime opportunity to hear what they have to tell us. You will know who some of them are from their work at the Botanic Garden or as members of the Friends; thanks to Winsome Shepherd for the biographical details on others.

*Marion Minson* is the curator of drawings and prints at the Alexander Turnbull Library. She is a regular speaker on 'Early History by NZ Artists'.

*Walter Cook* works in the Alexander Turnbull Library photographic archives, was once a Botanic Garden apprentice and later co-authored, with Winsome Shepherd, the book on the History of the Garden (pub. 1988). He has been involved in writing background reports to the Town Belt management plan.

*Maggy Wassilieff* is a trained botanist and ecologist and a consultant on environmental projects, with special interest in native forests and reforestation. She has also been involved with the Town Belt management plan background reports.

*Barbara Mitcalfe* and *Chris Horne* are both active members and past-presidents of the Botanical Society and were commissioned by the Friends to carry out a study of the Botanic Garden bush remnants.

*Dr Geoff Park* is a botanist and ecologist who worked for DOC. A Stout Fellowship winner and well-known landscape writer, he is the author of the book 'Nga Uruora'. He worked on design exhibits at Te Papa for three years.

*Dr John Dawson* is a retired university botany lecturer and the author of several books on NZ flora. He is currently studying the indigenous flora of New Caledonia. He is an Otari-Wilton's Bush guide and advisor to the Friends.

## **Sunday July 10: Your House, Our Trees**

**The importance of the conifers in Wellington's Botanic Garden - recent DNA results and cloning of these trees; a special seminar marking the 2004 registration of the Garden as a Historic Place by the New Zealand Historic Places Trust.**



The programme runs from 9.30am to 4.15pm and includes breaks for morning tea, lunch and afternoon tea. Speakers and their topics are:

**Winsome Shepherd** and **Walter Cook** Conifer introductions to NZ in the 19<sup>th</sup> Century and the role played by the Wellington Botanic Garden and early scientific institutions. The photographic record: dating of early photographs.

**Kerryn Pollock** Her recent thesis and study of primary source resources confirms the NZ landscape change resulting from the conifer introductions beginning in the late 1860s.

### KEYNOTE SPEAKER

**Dr Jenny Aitkin** Introduction to work background in Forestry Research Institute; the genetic base used for present timber stocks; DNA analysis from some of the *Pinus radiata* in Wellington's Botanic Garden; implications for our Garden's trees and in other parts of the country. (*Biographical details not available by newsletter deadline*)

**David Sole** Where To Now?

The final session is a Q & A session panel featuring Mike Oates, Dr Jenny Aitkin, David Sole, Winsome Shepherd, Walter Cook and Kerryn Pollock.

**\$20 plus \$8 for lunch. Students \$20 including lunch.  
Book at the Treehouse 499 1400**

## GUIDES

Cruise ship season has ended for the year – 20 ships came to Wellington, carrying 20,489 passengers. The guides did 249 hours of guiding for the cruisers alone! And it's harder going due to fewer guides being available just now, mainly because several guides trained when they didn't have jobs and now they do, leaving them with less time for guide work. Something we don't always consider – the guides also spent 83 hours travelling to and from the Garden, more voluntary hours than usually show up in the statistics.

The American Horticultural Society had members on the Clipper Odyssey who must have enjoyed their tour of the Garden, because they've booked in for one when they return next year.

We have one new guide, Nicky Lee, who we congratulate on completing her training – finally, we can reveal, by being thrown in at the deep end! She did an excellent job of leading the walk featuring medicinal herbs (as part of Herbal Awareness week), coped admirably and was presented with her badge at the end of the walk.

March featured extra walks as part of the WCC's Stepping Out programme. WCC put out a brochure for this event, which gives the guiding team welcome extra publicity. Herb Awareness Week was moved to coincide with Stepping Out, a successful initiative. Several overseas people came on the walks and, interestingly, several home-schooled children and their mothers attended.

Stepping Out featured six walks that a total of 51 people (including guides) went on – 51 people who wouldn't have otherwise been out walking! The 'Trees As Herbs' and 'The Herb Garden' walks were so popular that they will each be run twice next year. The Sculpture Walk was not as well-attended, but still worthwhile. Another walk took in the native forest remnants. Sheena Bennett only got

halfway through her 'Plaques Walk', because there are considerably more plaques in the garden than anyone realised! And, of course, there are three more now that the Garden is a Historic Place.

The Botanic Gardens also ran their own part of the Stepping Out/Herb Awareness events. One highlight was Eljay, Amanda and Laura's tastings in the shop – apparently the herbal cheesecake was divine.

Of the Sunday walks, the most successful was February's "Insects, Birds and Plants"; Logan Paul led 18 members of the public and four guides on it.

Jenny Hickman led one called 'Barking Up The Wrong Tree' – garden trails and tree tales, focusing on bark with side-steps to figs, pine nuts, bunion nuts and other food items. Did you know that the sap from the North American paper birch, *Betula papyrifera*, can be used in beer-making? It's also known as the canoe birch – the bark is used to make extremely light canoes for portaging (these are the sort of fascinating things you find out if you take a guided walk).

BG staff have expressed interest in our walks, so some have been run just for them (obviously if you work there all week, you don't want to have to come back in on Sundays as well!). Very good numbers have attended and enjoyed topics such as the Main Garden History, 'Dinner In The Garden', Druids Hill and the Cork Oaks, and 'Birds, Plants and Insects'. Staff will do a walk called 'Food, Fire, Fibre and Pharmacy' (try saying that in a hurry!) on Maori uses of native plants this month.

As always, new guides are always very welcome – once trained, you can put in as little or as much time as you can manage. If you'd like to give it a try, ring Jenny Hickman on 383 6561.

## Paving The Way

As noted in Botanic Bulletin, the Manager has advised the Committee of two projects to improve access to and within the Garden. One is a new path between the Rose Garden and the entrance to the Bolton Street Memorial Park. The other is a flight of steps to link the Soundshell Lawn with the Main Garden.

The Committee agreed to support both proposals. It is considered that the new pathway will both enhance the entryway to the Garden from the Memorial Park and the neighbouring area, and provide enhanced safety for pedestrians in the face of increasing vehicle traffic. These desirable objectives can be achieved

without diminishing the use of Anderson Park for its existing range of sports interests.

The new steps are intended to reduce pressure on the existing entrances during events at the Soundshell, and improve the day to day pedestrian flow between the two levels. Better access will help to protect the plantings in this area.

The Committee did not consider that any of the heritage values of the Garden would be affected by these proposals. It is hoped that both projects will be completed this year.



*Ted Woodfield, Winsome Shepherd and David Sole, at the Founders' Gates, with the new Historic Place plaque. Photo Neil Price, WCC*

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## Neighbourhood Watch

The 'neighbours' have been watching the Garden for years, so recently the Friends took the initiative and invited them to join, via a leaflet drop. This enterprise has gained us a couple of dozen new

members. New and old (so to speak) members have a great opportunity to meet at the Autumn Celebration function on May 12. By the way, if one of the 'neighbours' knows P.W.Sealey please ask him or her to contact the Friends – we have a membership fee but no contact details.

## GLOW WORMS

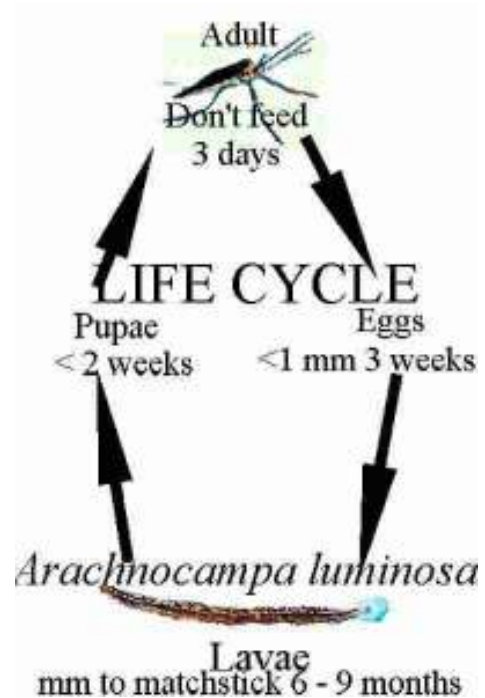
The first Glow Worm tours had to be cancelled due to a star attraction shortage.

At the end of last year there were good numbers and a good display. "When we set the dates, we presumed they would still be there in numbers, but before the first tour, I discovered the numbers had significantly reduced. There were insufficient to make tours feasible," BG guide Phil Tomlinson explained.

Glow Worms require good moist conditions. Their food lives in running water, hence their usual proximity to running water, streams etc. Also, to grow and survive, they require damp banks to live on. When the ground water seepage stops, the banks dry out, and numbers fall drastically and quickly. When moisture levels build up again, their recovery is usually quick. Obviously the dry period early this year was not to their liking.

So what are these magical creatures that seem like they've arrived directly from fairy dells?

Well, they aren't worms. They are fly larvae. The glow is bioluminescence, the result of a chemical reaction: Luciferin (a waste product) + luciferase (an enzyme) + ATP (an energy molecule) + oxygen = excited product + luciferase = light.



Glow worm adults live for only a short time – 1-2 days (female) or 3-5 days (male). They cannot eat. The adult, slightly larger than a mosquito, lays clusters of 30-40 eggs on damp banks and in crevices. The eggs hatch after about three weeks and the larvae light up as soon as they emerge. They grow from 3-5mm long to 30mm long over a period of 6 to 9 months. The larvae feed on small insects, midges, flies and even other glow-worms. There are five instars: the larvae moult four times.

They build interesting "homes" – they form a horizontal tube of silk and mucus, from which they suspend their silk 'fishing lines', which have globules of sticky mucus to catch the small gnats and flies that are attracted by the glowing lights. It is thought that the sticky drops also contain a paralyzing chemical, to stop trapped insects struggling and damaging the snare.

The larvae pupate for about 12 days – both pupa and adult can glow too. The pupa is transparent and about 12-15 mm long. The female can glow very brightly during the last 2-3 days before emerging, in order to attract males. A number of males are often seen sitting on the pupa, waiting for the female to emerge. Mating often occurs immediately she does. Once emerged, the adults fly about the habitat, but neither sex are strong fliers and the female, weighed down by eggs, can travel short distances only.

The brightness of the lights varies. When the insect is hungry it will glow more brightly; females in the pupa and female adults do too, to attract mates; occasionally two larvae will fight over space, glowing very brightly in an attempt to assert dominance.

Larvae are very territorial and will fight if they feel their space is being invaded. Often the loser will be the winner's dinner! This territorial behaviour results in the insects being quite evenly distributed within their colonies.

The scientific name of the NZ glow worm is *Arachnocampa luminosa* (glowing spider-bug), the spider reference being in regard to the web-like snares the larvae produce. Maori call them titiwai ('projected over water'), referring to their general habitat along streams. The name pura toke (one-eyed or blind worm) is also used.

Our glow worm is unique to New Zealand, although three similar species are found in Tasmania, New South Wales and Queensland.

European settlers were immediately fascinated by glow worms – the earliest published reports were of insects found in the Thames goldfields. In the 1880s George Vernon Hudson, of Karori, studied them. He first identified that they were the larvae of a two-winged fly which he called a "fungus gnat." To study them he had to wade up the bed of the Puketea Stream, at the bottom of a steep gully. Subsequent Garden development has cut paths into the hills, creating banks, many with the sort of overhanging areas that glow worms prefer. Consequently it is much easier viewing for us, as they can be easily seen from paths in the main areas of the Garden.

In conjunction with Albert Norris, George Hudson spent ten years unravelling the glow worm life history. A Post Office worker, he studied and wrote about insects in New Zealand for some 60 years.

**Glow Worm Tours** (which start and finish at the Founders' Entrance):

**Friday 6<sup>th</sup> May 8 pm**

**Friday 3<sup>rd</sup> June 7.30 pm**

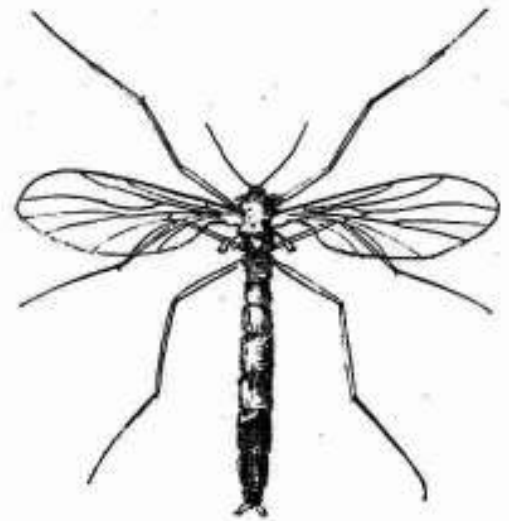
**Friday 8<sup>th</sup> July 7.30 pm**

**Friday 5<sup>th</sup> August 7.30**

**Friday 2<sup>nd</sup> September 8 pm**

**Friday 7<sup>th</sup> October 8.30 pm**

As these are dependent on glow worm numbers, book at the Treehouse (499 1400) to be sure the tour is on.



Thanks to Phil Tomlinson for the glow worm info. Phil has a lovely website called "Wellington Botanic Garden – A Private View" at [www.angelfire.com/or3/orchidsnz/wbg/wbgframe.html](http://www.angelfire.com/or3/orchidsnz/wbg/wbgframe.html)

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## CUTTINGS

Despite the odd supplier-hiccup, this year's Bulb Sale looks like it'll be a good little earner for the Friends. Good quality bulbs have been sent out the door almost as soon as they've come in. A last-minute supplier for daffodils was found and although daff bulbs should be in the ground now, bulb co-ordinator Angela Hill says it's not too late to order and plant tulips and crocuses. Ring her on 479 5580 if you've just found room for more spring bloomers!

members are asked to keep up the cutting-taking, seedling-growing and nursery care that will provide very desirable sale items come October. If you have plant material you'd like to contribute but don't have the space to nurture it, ring Richard Nanson on 477 4020, because the Botanic Garden have kindly given us some space in the nursery for this project. Richard says, "Produce as much as you can and let's make it a stupendous sales day."

Tulip Sunday's Plant Sale is another very important source of funds for us, so all

## Coming Events

**Thursday 12 May 7.30pm**  
**Friends Autumn Celebration**

**15 May GW**  
“Amazing Aussies” (rescheduled)- tour the fascinating Australian plants in the Garden, and discover their adaptations to the Australian climate and their traditional uses. Moderate walk: 1½ hours. *Meet at the Cable Car Entrance.*

**Sunday 12 June Friends Winter Seminar**  
“Back From The Brink 1840-2005”  
Book at the Treehouse 499 1400

**19 June GW**  
“Ancient Tree Trail” - Trees with ancestry dating back to the Jurassic, when dinosaurs wandered the Earth. Moderate walk: 1½ hours. *Meet at the Cable Car Entrance.*

**Sunday 10 July - Friends Winter Seminar**  
“Your House, Our Trees”  
Book at the Treehouse 499 1400

**17 July GW**  
“Our Winter Garden” - a look at the Victorian influence on glasshouses, with a tour of the Begonia House. Little walking involved: one hour. *Meet in the Foyer of the Begonia House.*

**21 August GW**  
“Dinner with the Trees” - a walk with a difference! Join us for a virtual meal in the

Main Garden, and you may be surprised to discover the many products, as well as timber, that trees provide, such as chocolate, salads, ink, sugar, chewing gum and food wrap. Moderate walk: 1½ hours. *Meet at the Duck Pond.*

**18 September GW**  
“Tulips, Bulbs and Blossoms” - a spring-time tour of the Garden, visiting the floral highlights, including the 25,000 flowering tulips. Moderate walk: 1½ hours.

**16 October GW**  
“History of the Main Garden & the Town Belt”  
A historical walk - hear the many interesting stories from the early days of Wellington and the Botanic Garden. Moderate walk: 1½ hours.

**20 November GW**  
“Giants in the Garden” - discover the ‘giant’ trees from around the world that have been growing here in the Botanic Garden for over 130 years, and hear their stories. Moderate walk: 1½ hours. *Meet at the Duck Pond.*

**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.**



There are often little surprises at Friends events. The Scots College pipe band welcomed guests at the Registration function in March and their music was much enjoyed by Garden visitors in the vicinity (and perhaps, with all those bagpipes, much further). Three members are seen here with Mayor Kerry Prendergast.

*Photo Justine Hall, WCC*