

# THE BOTANIC GARDENer

The magazine for botanic garden professionals

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**44**

MARCH  
2016



Theme: Youthful Perspectives  
on Contemporary Challenges

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To date these 53 organisations have registered their support. Go on, [register today](#).

## NEW ZEALAND

### North Island

- Auckland Botanic Gardens
- Eastwoodhill Arboretum
- Otari-Wilton's Bush
- Wellington Botanic Garden

### South Island

- Christchurch Botanic Gardens
- Dunedin Botanic Garden

## AUSTRALIA

### Northern Territory

- George Brown Darwin Botanic Gardens
- Olive Pink Botanic Garden

### Australian Capital Territory

- Australian National Botanic Gardens

### Tasmania

- Royal Tasmanian Botanical Gardens
- Emu Valley Rhododendron Garden

### Victoria

- Australian Botanic Gardens Shepparton
- Ballarat Botanical Gardens
- Bendigo Botanic Gardens
- Colac Botanic Gardens
- Maranoa Gardens
- Melton Botanic Gardens
- Royal Botanic Gardens Cranbourne
- Royal Botanic Gardens Melbourne
- Sale Botanic Gardens
- Williamstown Botanic Gardens
- Gisborne Botanic Gardens
- Kyneton Botanic Gardens
- Malmsbury Botanic Gardens

### Queensland

- Brisbane Botanic Gardens Mount Coot-tha
- Brisbane City Botanic Gardens
- Cairns Botanic Gardens
- Hervey Bay Botanical Gardens
- Mackay Regional Botanic Gardens
- Maroochy Regional Bushland Botanic Garden
- Mount Tamborine Botanic Gardens
- Tondoon Botanic Gardens
- Bundaberg Botanic Gardens
- Gold Coast Regional Botanic Gardens
- Anderson Park Botanic Gardens

### New South Wales

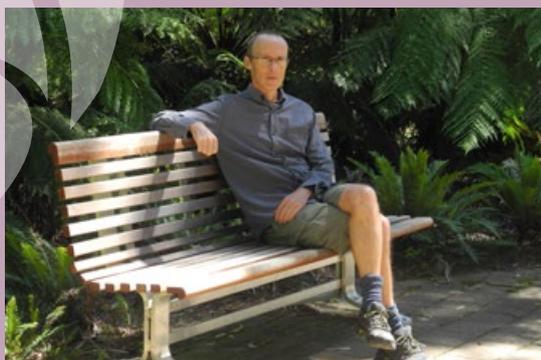
- Australian Botanic Garden Mount Annan
- Blue Mountains Botanic Garden Mount Tomah
- Booderee Botanic Gardens
- Burrendong Botanic Garden and Arboretum
- Dubbo Regional Botanic Garden
- Fangorn Private Garden Armidale
- Hunter Region Botanic Gardens
- North Coast Regional Botanic Garden
- Royal Botanic Garden Sydney
- Wollongong Botanic Garden
- Auburn Botanical Gardens
- Eurobodalla Regional Botanic Gardens

### South Australia

- Australian Arid Lands Botanic Garden
- Adelaide Botanic Garden
- Mount Lofty Botanic Garden
- Wittunga Botanic Garden
- Waite Arboretum

### Western Australia

- Kings Park and Botanic Garden



Eamonn Flanagan, BGANZ's Executive Officer and Project Manager for Open Day.

*I am delighted to see that BGANZ membership is already getting behind this inaugural event. The feedback to date has been outstanding, ensuring that the botanic garden community comes together, across two nations, to promote our key messages far and wide. The Open Day has the potential, along with the BGANZ Congress, to be of major benefit for showcasing and sharing our professional expertise.*

*Thanks for your support!*



# BOTANIC GARDEN

## AUSTRALIA AND NEW ZEALAND

### *Open Day 2016*

The inaugural Botanic Gardens Australia and New Zealand Open Day will be held on Sunday 29 May 2016. Botanic gardens, arboreta and private gardens, who are members of BGANZ, are invited to register for this event.

The key message for the event is:

**BOTANIC GARDENS CONSERVING PLANTS – OUR LIVES DEPEND ON IT.**

It tells people who we are and what we do. It provokes thought about what we do. Paul Tracey, BGANZ Council member and Curator Wollongong Botanic Garden, who was the original driver of the event said:

*It's going to be a great event, a national and international event, with every State and Territory in Australia represented, and both North and South Islands of New Zealand.*

*BGANZ wants everyone, all our members, volunteers, friends' groups, supporters and occasional visitors to show their support for botanic gardens and the vital work they do for plant conservation.*

*We have millions of visitors to our botanic gardens every year, across Australia and New Zealand, and we're going to use the Open Day to garner further support. It's critical we send important plant conservation messages and increase the education in the community.*

*Botanic gardens are vital to plant survival and the future of life on the planet. Our botanic gardens do incredibly significant work and BGANZ wants to help highlight their work.*

BGANZ will provide a significant marketing campaign to support the event, including joint media launches in Australia and New Zealand, and a large toolkit for members to use or adapt.

### *Our ambassadors*

Costa Georgiadis (Australia)



Jack Hobbs (New Zealand)



## Editorial Committee

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DISCLAIMER: Please note the views expressed in articles are not necessarily the views of BGANZ Council. We aim to encourage a broad range of articles.

Feedback and comments on the newsletter and articles are welcome. Please email: [secretariat@bganz.org.au](mailto:secretariat@bganz.org.au)

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COVER: The Variable Holly-leaf *Grevillea aquifolium* is one of the most visible and distinctive plants in and around the greater Grampians region in Victoria. It is commonly found in the Heathy Woodland areas on the WAMA site (our feature garden this issue), with many hundreds of seedlings appearing once rabbits were eradicated.

Photo credit: Neil Marriott

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Australian Association of Friends of Botanic Gardens Conference

Gene Conservation of Tree Species – Banking on the Future

American Public Garden Association

BGCI's 6th Global Botanic Gardens Congress

8th BGANZ Congress

The theme of the June 2016 issue is ***Seedbanking: Science and Partnerships***. The deadline for contributions is Friday 20 May 2016. Please contact the Secretariat ([secretariat@bganz.org.au](mailto:secretariat@bganz.org.au)) if you are intending to submit an article or have a contribution to other sections.

# President's view

John Sandham, BGANZ President



John Sandham

## It's you the members that make things happen.

It has been four months since the BGANZ Congress in Wollongong, one year has ended and another one has begun.

I hope you all have returned refreshed from the holiday season and are eager to take on the challenges of 2016, with a dedicated passion.

It is good to know that during this period your Council has been hard at work positively progressing BGANZ business. The already established working groups: Botanic Gardens Education Network (BGEN), Records Officers and collection development Network (BRON), and Professional Development (PD) have been joined by two new working groups:

- 'Diversity and Demographic' led by John Arnott
- 'Communications and Web Page' led by Brad Crème.

I have returned from a workshop in Canberra facilitated by *Threesides Marketing Canberra* for the progression of the BGANZ Open Day which will take place on Sunday 29 May. Raydeen Cuffe from Wellington, Bede Nottingham from Christchurch, Sharon Willoughby from Cranbourne, Peter Byron from Canberra, Paul Tracey and Alison Morgan from Wollongong attended along with our hard working Executive Officer Eamonn Flanagan. Without these members' participation, great things like the open day would not happen.

We plan to push plant conservation and the importance of botanic gardens in delivering this important event. Already we have 53 botanic gardens registered for BGANZ Open Day 2016 and hopefully many more gardens across our two great lands will come on board soon.

As I said last time BGANZ Council wants to serve its members by getting *you* involved. Consider contributing to networks in your areas of expertise or challenging yourself to learn a new discipline by helping deliver outcomes across our range of botanic garden agendas. Also, please tell us what you think our association should be doing that it currently isn't or give us any other feedback to help us help you.

Back in South Australia all focus is on putting together the Congress for 2017. Has anyone got any new areas of our multifaceted industry that they would like to see be part of this? Are there matters that still need clarification from Wollongong e.g. is accreditation for botanic gardens still the elephant in the room?

Lastly, remember BGANZ is *you* – our members (whether whole organisations, individual staff, Friends or volunteers). Your President, Executive Officer and Council are ready and waiting to give support and direction to your ideas. So let's get busy and make things happen!

# Editorial insights

Janelle Hatherly, Managing Editor



Janelle Hatherly

Welcome to the first edition of THE BOTANIC GARDENer for 2016. This issue is full of good ideas, personal reflections, great examples of best practice and gratuitous advice. In these rapidly changing times it's great to share our goals, aspirations, challenges and frustrations.

Once when I was bemoaning the apparent loss of corporate knowledge, a botanical colleague I hold in high regard said to me:

'Janelle, experience is a dim light that barely illuminates the path of the bearer.'

It took me a while to fully digest the significance of his words. But in time I came to realise that we all like to make our own way in the world and no matter what anyone tells us, we 'do our own thing'. Those who fully recognise and embrace their individuality make the greatest contribution.

The feature articles contain some good tips for meeting our professional challenges and here are mine:

To all emerging professionals, I encourage you to just get out there and make a difference! However, make sure that on the way you acquire sound deep knowledge and practical transferrable skills as well as develop values you want to uphold no matter where you work. Learning doesn't happen in vacuum. Exposure to good teachers and mentors and shared experiences with colleagues can accelerate your development.

For those members at the other end of the professional spectrum, Rebecca Stanley gives some good advice in her Feature Interview and my tip is that you don't underestimate your role as mentors. This quote by Ben Sweetland (courtesy of the internet) rings true for me:

'We cannot hold a torch to light another's path without brightening our own.'

To this end, if there's an emerging professional out there (in any discipline) who has a way with words, an interest in editing and is 'organised', I invite you to contact me for consideration as my sub-editor. This could work out well for both of us – I have many other commitments this year but also enjoy my role with BGANZ very much.

And finally, a plea to emerging professionals: What's going to happen to all the community-initiated botanic gardens, horticultural societies (and professional organisations?) when their creators reach the age when their passions cannot be matched with action? If you only read one article in this magazine please read Ray Brown's Illawarra Grevillea Park.

# Outstanding in the field

Janelle Hatherly interviews

Rebecca Stanley, Curator Auckland Botanic Gardens

Thanks for agreeing to be our feature interviewee this issue. I am particularly interested in your perspectives on the future of botanic gardens and the needs of emerging professionals.

***Where did your interest in plants begin and what has been your career path to date?***

I have been interested in plants as long as I can recall. My first horticultural project – I was six – was planting an acorn from an English oak that hung over our fence. That seedling moved house with us twice. I didn't initially plan a career in botany or horticulture. I went to university to study an arts degree in classical studies but met some biology students in first year and their lectures sounded more interesting.

The following year I started a double degree BSc in plant ecology/botany and a BA. My final year of the conjoint degree was a classics lecture on Latin where we discussed the Linnaean system of classification. So at that single moment doing two totally unrelated degrees made perfect sense!

By then I knew plants, and hopefully plant conservation, would be my career. My honours research was working on the ecology of a rare alpine forget-me-not. As a student I also worked part time at the herbarium of the Museum of New Zealand. My first 'real job' was at the Department of

Conservation as a threatened plant botanist. This was an adventurous time visiting islands (jumping on and off boats and helicopters) and included two visits to Raoul Island in the Kermadec group.

For the past ten years I have worked in local government as a biosecurity officer, parks botanist and policy advisor. I joined the botanic gardens in an education role in 2012, and moved to the curator role in 2013. Having studied both an arts degree and a science degree I thought, for a long time, that I was inevitably good at neither. I now realise that it's a strength and one that fits the public garden world probably better than any of my previous jobs.



This was an adventurous time visiting islands and included two visits to Raoul Island.

## ***What does your current job involve and what do you enjoy most about it?***

I am the curator at Auckland Botanic Gardens; I manage the field team of 20 people. What I enjoy most about my job is that I work in and with nature. Plants just really fascinate me – they are beautiful and there's a story, or many, about them all. There are also so many things we don't know about plants and plant communities (combinations) in gardens and in the wild. It's like a never ending source of interest for me.

I remember once, in my relatively sedentary policy, thinking – what season is it? Sure I might have known what the date was but I'd missed seeing nature respond and it was confusing. I also get a real sense of pride when I see visitors enjoying their visit. Working in a public garden means you are very connected to visitors and you can see (and you are told) what they like and don't like. It's instant feedback. I consider we are 'putting on a show every day' and I get a huge sense of satisfaction knowing the hard work everyone puts in to make that happen.

## ***What is your leadership and management style?***

I like to get my team involved in planning *how* we work and *what* we do. This way we can work together based on a shared understanding. We recently revised our plant collection guidelines and we did that collaboratively together, collection by collection.

**We all need to know why we are doing things and ensure the reason aligns to our purpose.**

It meant we all shared what we knew about the collections, got a chance to voice our ideas and debated the purpose. We all now 'have shares' in the guidelines. I am also keen that we don't just do things as we have always done them. Priorities change and if we take on new projects and don't review existing projects or tasks we'll get burned out.

We all need to know why we are doing things and ensure the reason aligns to our purpose. I think it's essential we are always looking for ways to improve, or try new things, to ensure we are doing things efficiently. In a public garden we get pulled in many directions.

I hope that I lead my team by finding a balance between horticultural standards, the role of botanic gardens (conservation, research and education) and visitor experience as well as ensuring their job satisfaction and career development. I also think it's important to be clear about the values you hold, what you expect, and to be consistent.



**With Emma Bodley and tree expert Mike Wilcox identifying and tagging podocarps.**

## ***What do you think are the greatest challenges and opportunities facing botanic gardens at this time and for the next decade or so?***

My knowledge of how other gardens work is limited to working at Auckland Botanic Gardens. I know botanic gardens have changed their purpose many times throughout history and I think we'll need to keep adapting to be relevant to the people who visit us and the people and organisations who fund us.

The role of a public gardener at this garden is now more wide-ranging than it has ever been. Our gardeners are faced with ensuring high horticultural standards, making appropriate plant selections and creating inspiring plant combinations. They must also be prepared to give advice to visitors, front workshops, be interviewed live or tweeted.

**Our gardeners are faced with ensuring high horticultural standards, making appropriate plant selections and creating inspiring plant combinations.**

The public gardeners we need are multi-skilled: plants people who understand the role of botanic gardens but who are also firmly customer oriented – and are able to juggle all aspects of their role throughout the year. The challenge is ensuring the horticultural displays and the visitor experience are balanced; both are needed for a successful modern botanic garden.

But I think we also need to be prepared for the unexpected. The pace of change and the way people access information, access nature and chose their visitor experiences are so dynamic that maybe we actually can't answer that question!

## ***What are your hopes and aspirations for the Auckland Botanic Gardens and what milestones would you like it to see achieved by 2032 – its 50th birthday?***

I have just visited Sydney's Royal Botanic Garden and saw a giant '200' made out of plants for their birthday celebrations this year – so that's going to be hard to beat. But in terms of what we do and how we do it, I'd like us to be aware of sustainability.



**Discussing Kairi dieback caused by Phytophthora with the public.**

While an Auckland water shortage is a rare thing we currently use tap water on the gardens. I also hope we have no plants 'jumping the garden fence' to become weeds. Auckland is already regarded as the 'weediest city in the world' in terms of numbers of environmental weeds. Most environmental weeds in New Zealand started off as garden plants and there is no doubt more are getting 'ready to jump'.

**[ Auckland is already regarded as the 'weediest city in the world' in terms of numbers of environmental weeds. ]**

Botanic gardens have one foot in the gardens world and one in the environmental world so I see us as perfectly placed to be advocating plants that don't pose any risks to natural ecosystems. I am not suggesting 'native only' gardens (though my own garden is, apart from the food plants) but I do think we need to respect the context of any garden to ensure natural ecosystems are protected.

### ***What are the needs of today's emerging professionals in the botanic garden world?***

People with very diverse backgrounds arrive at botanic garden jobs. For me, as a recent arrival in the gardens world, I am learning the public garden side of things on the job. I need to take every opportunity to see how other gardens work by visiting as many of them as I can as well as attending conferences and other networking events.

Previous staff in my role attended the Botanic Garden Management Diploma at Kew but this is not run anymore. I think there is an opportunity for a professional development program of this type for staff managing public gardens – especially in the Southern Hemisphere.

**[ I think there is an opportunity for a professional development program for staff managing public gardens – especially in the Southern Hemisphere. ]**

I would also really like to see other gardens' policies, procedures and plant collection guidelines – any other documents on how other garden operate – the kind of background material you never find online.

Younger staff here tell me they like the chance to go to meetings or conferences to hear new ideas and mix with a range of staff from managers to gardeners. It's also useful to be asked to step up into roles while your team leader or manager is away or even to attend a meeting they can't get to on their behalf. It lets you get some insight into other roles or potential career paths.

***How can those of us who have been in the industry a long time assist emerging professionals when the path we travelled years before is so different to the one they face today?***

Recognise potential when you see it. I think careers are not so much stepwise progressions upwards anymore. I've moved jobs based on finding variety and taking chances that let me keep learning. I know I'll always work with plants but potentially in different roles and places.

So I think it's important that if you see potential in someone you tell them that they are a good fit for the public garden industry and you help them see what types of roles are around. Supporting staff visits and accepting other gardens' staff as visitors is really important to help see the diversity of roles, gardens and issues.

The lack of turnover in management roles could be barrier to people wanting a career in public gardens. My perception is that people move round the world for professional garden jobs because locally there may only be vacancies every 15-20 years. I am not sure anyone can solve that – clearly gardens are great places to work!

***Do you think professional associations like BGANZ have a role in contemporary society? What would entice young people to contribute and be involved?***

I see collaboration as really important so finding and supporting ways to share information, skills and best practice between gardens is crucial and I see BGANZ having a critical role in this. When I started at the Auckland Gardens I became a member of an international group. As a New Zealand botanist studying New Zealand flora I felt very remote from the rest of the world, but the work undertaken in botanic gardens (though all different) is very similar.

**I see collaboration as really important so finding and supporting ways to share information, skills and best practice between gardens is crucial and I see BGANZ having a critical role in this.**

For me this group may or may not open doors for my career but it certainly increases my job satisfaction in meeting new people and sharing knowledge. We have BGANZ seminars days nationally twice a year and they are popular with everyone.



**Checking seed ripeness of a mistletoe for a botanic garden translocation trial.**

## ***What are you reading/watching/listening to at the moment that enriches your life?***

I am more likely to read cookbooks than fiction and I am lucky that my office is next to our library. So I have an extended bookshelf that contains books I don't have to store – my bookshelves at home are totally full!

Over the past year I have been reading books on the lawn and its alternatives. I was given *Hummelo* by Piet Oudolf and Noel Kingsbury which I enjoyed because I am fascinated by the intersection between naturalistic gardening and wild ecosystems. I think a lot about where gardens and nature start and stop, the connections between naturalistic gardening and restoration as both try to copy nature, but also how the ecological strategies of plants work in a garden.

I haven't had a TV for over a decade. I watch TV series online, usually when someone recommends them, and I usually end up watching the whole series in a week or weekend! I listen to music streaming services on the internet more than choosing music, and I also listen to podcasts.

My favourite podcasts change all the time as I discover new ones. I am always searching for botanical and gardening blogs and I have enjoyed *Talking Plants* on ABC this summer. For me, the fact I can listen to anyone anywhere in the world is really fun. Since the Wollongong conference I have been more active on Twitter which is a fun way to connect with plant people around the world.



**Leading a plant identification walk in the remnant forest at Auckland Botanic Gardens.**

# Botanic news: from home and abroad

## BGANZ welcomes new members and a new relationship

Our newest institutional member is Burrendong Botanic Garden and Arboretum NSW, and new individual members are Karen Hulston, Joanne King, A Carle, Brian Faulkner and Annie McGeachy. Welcome to these new members and thanks to all our members for their ongoing support.

BGANZ and American Public Gardens Association (APGA) are pleased to announce that a BGANZ member will receive a complimentary registration (valued at approx. \$1,000) to attend the annual APGA Conference. APGA 2016 Conference will be held 6-9 June in Miami, Florida. An APGA member will receive a similar opportunity to attend a BGANZ conference.

## Blog and podcasts

In case you missed it. CHABG Chair, BGANZ member and Royal Botanic Gardens Melbourne Director and Chief Executive Officer Tim Entwisle has a blog called [Talking Plants](#) and now an ABC Radio National show as well. You can catch Tim's podcast [here](#).

## Numbers up No.1

Major improvements and the dropping of the entrance fee have contributed greatly to record visitor numbers to the Australian Botanic Garden Mount Annan. This reinforces that Australia's largest botanic garden is becoming one of Sydney's most important public spaces.

More than 335,000 people visited the garden last year alone, with growth projected to continue to increase substantially as further residential and urban development occurs around its borders.

Images at <https://www.flickr.com/photos/botanic-gardens-sydney/albums/72157645251833031> and video interview with John Siemon, Curator Manager: <https://vimeo.com/151506754> (password ABG01)

## Numbers up No.2

The flowering of its first *Amorphophallus titanum* has thousands of visitors queuing to see it at Mount Lofty, South Australia Botanic Garden. The story got coverage across the world. The UK newspaper The Telegraph has more on the story and a [time lapse video here](#) on this rare corpse flower, which lasts only 36 hours and has an odour of a 'smelly bag of rotten fish'.

## Dunedin Botanic Garden retains its Six Star status

The New Zealand Gardens Trust has reapproved Dunedin Botanic Garden's Six Star status following a biennial assessment in November. Team Leader/Curator Alan Matchett says: 'The Six Star rating means that Dunedin Botanic Garden provides one of New Zealand's top garden experiences. Our gardens achieve and maintain the highest level of presentation, design and plant interest throughout the year.'

He adds: Dunedin Botanic Garden is one of only seven Six Star rated gardens in New Zealand and is the only public garden with this status.

## BGANZ member Brent Braddick discovers new plant species

The discovery of a new plant species in the Agnes Water area in Queensland could help to enhance the Gladstone's Tondoon Botanic Gardens' scientific reputation. Gardens Curator Brent Braddick first saw the *Mischocarpus* species three years ago, but the official plant count was only completed in early November. Click here for [more on the story](#).



  
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The graphic includes two photographs: the top one shows a stone staircase winding through a lush green rainforest, and the bottom one shows a large, spiky, yellowish plant specimen on a red dirt ground.

## Australia Day and ANPC awards

Professor David John Mabberley was made a Member (AM) in the General Division of the Order of Australia at the recent Australia Day honours. This is in recognition of his significant service to horticultural science, particularly to plant taxonomy and tropical botany, as an academic, researcher and author.

Annette McGeachy was awarded an OAM for service to conservation and the environment, particularly to botanic gardens.

Janet Thomson, a former President of Australian Association of Friends of Botanic Gardens (AAFBG), was awarded an OAM for service to Royal Botanic Gardens Melbourne.

In 1983 Australian Native Plant Society (ANPS) established its Australian Plants Award. This award is made in conjunction with its Biennial Conference and Seminar. Since 1987 it has presented two awards recognising both professionals and amateurs who have made an outstanding contribution to the knowledge of Australian plants.



**John Arnott.**

The 2015 recipients of the awards were John Arnott and Peter Olde respectively. See <http://anpsa.org.au/award.html> for the full list of recipients. John Arnott has made an outstanding contribution to the knowledge of Australian plants through his professional career particularly in horticultural aspects of zoos and botanic gardens. <http://www.rbg.vic.gov.au/news/australian-plants-award>

## From Southeast Asia Botanic Gardens Network

The city of Pattaya in Thailand is aiming to change its reputation (generally associated with the Vietnam War) and refocus itself as a family friendly tourist destination.

The Nong Nooch Botanic Garden is part of the new strategy. Within the garden are different manicured zones. For example, one section has been made to look like various other famous landmarks from around the world, such as the Stonehenge, Gardens of Versailles and Angkor Wat. Click here for [Source and more information](#).

## Rockhampton Botanic Gardens marks anniversary of Cyclone Marcia

Rockhampton Regional Council called on the community to gather together to mark the anniversary of Cyclone Marcia once again with a series of events.

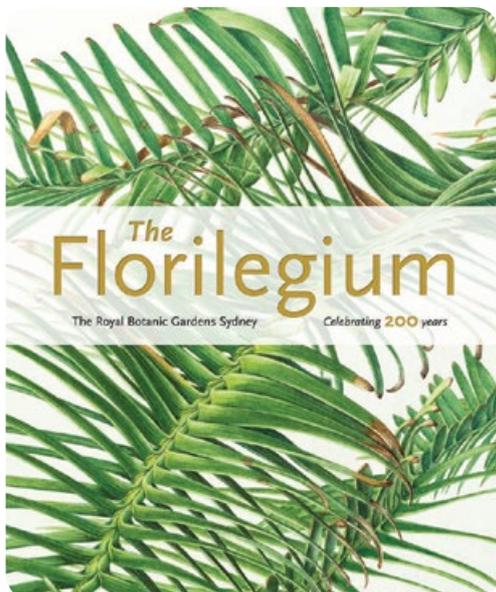
Mayor Strelow said: 'The 20th of February 2015 will be a day that will remain in our minds for a long time; the day Cyclone Marcia tried to get the better of us and lost! The havoc unleashed brought the region to its knees financially and emotionally, but community spirit prevailed and this is what we want to celebrate.

Our magnificent Rockhampton Botanic Gardens will host a day of free activities on Saturday 20 February, and we'd love the community to come along, walk through the gardens or simply take time to relax and reflect.' Click here for more on [the story](#).

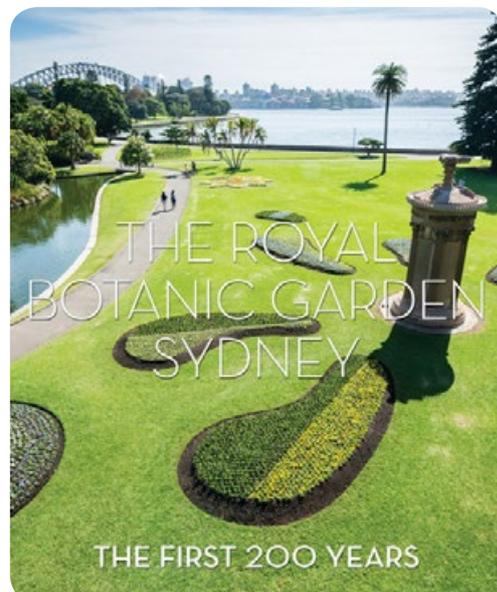
## Marking milestones of achievement

In 2016 the University of Melbourne's Burnley Campus celebrates 125 years of continuous horticultural education. To recognise this anniversary, a series of events is being held at Burnley throughout 2016. We invite you to participate and help celebrate this important milestone. See <http://ecosystemforest.unimelb.edu.au/burnley125years>.

In 2016 the Royal Botanic Garden Sydney turns 200 and a year-long party is planned (<https://www.rbgsyd.nsw.gov.au/200th-Birthday>). Look out for these two fascinating books produced to record and celebrate Australia's oldest botanic garden's history and achievements.



**The Florilegium.**



**The Royal Botanic Gardens the first 200 years.**

## Revamped Aboriginal plant use trail launched at Australian National Botanic Gardens

An Aboriginal plant use trail at the Australian National Botanic Gardens (ANBG) developed in the 1970s has been revamped and extended to show visitors the multiple ways native flora helped people survive for tens of thousands of years. Click here for [more on this story](#).



Ngunnawal elder Aunty Agnes Shea (left) and ANBG Friends public fund chair Barbara Podger officially launch the new trail.

Photo: 666 ABC Canberra, Louise Maher.



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# Pollinating great ideas

## Aboriginal scarred trees

**Dan Cole**, Project Ecologist and **Greg Siepen**, Ecological Consultant

The need to increase awareness of Aboriginal scarred trees, which are now mostly veteran trees existing in fragmented landscapes, was identified by the authors some time ago. In 2014 we developed a project to undertake a series of educational workshops to improve the management of these significant trees which are a living legacy of traditional Aboriginal cultural practice.

The project aims to build on current knowledge, link conservation to culture, and strengthen current and future connections throughout the community, industry and Indigenous land management.



The Bjarne K Dahl Trust has as one of its objectives to fund programs that focus on the protection and enhancement of eucalypts as a significant part of Australia's natural environment. As many scarred trees of Aboriginal cultural origin are eucalypts, this project aligned well with the Trust's grant criteria and we were successful in being funded to deliver workshops

in South East Queensland and Northern NSW in 2015. Over 120 people attended the first three workshops. Further workshops will be undertaken this year including one in Cairns on Friday 13 May.

The project is being delivered under the auspices of The Hut Environmental and Community Association (THECA). THECA's main focus is broad environmental education delivered to the community. The workshops are divided into two sessions, with presentations in the morning and a field trip in the afternoon to inspect scarred and veteran trees and explore ways of management.

The key people for program delivery have been the relevant Traditional Owners who covered the cultural significance of scarred trees; Jan Allen from the Veteran Tree Group Australia (VTGA) and Danny Draper from Urban Tree Management Australia (UTMA) who brought considerable expertise to this specialised field and delivered the technical aspects of the workshops. The expertise of the presenters encouraged a diversity of people to attend.



Inspecting a veteran Brush Box *Lophostemon confertus* during the scarred tree workshop at Environmental Arboretum, Griffith University, Qld.

Partnerships were also established with Councils, TAFE, universities and other organisations that added value to the project. The partnerships and in-kind support enabled efficient use of the Bjarne K Dahl Trust funds and created the opportunity for further workshops to be undertaken in targeted areas.

### ***Aboriginal scarring practices & significance***

Scarred trees are significant to Aboriginal culture as they were once a source of material for construction and craft and hold important intangible values (e.g. spiritual beliefs). Scarred trees now provide information to modern cultural groups on artifact manufacture. Surviving scarred trees have irreplaceable value as they provide remnant knowledge and links to traditional cultural practices.

The practice of stripping bark from trees has declined over the years and many Aboriginal scarred trees are now well over one hundred years old and are becoming quite rare as the host trees age, die or are removed.

Trees have been scarred, marked and carved by Aboriginal people by the deliberate removal of bark or wood. This was carried out for the following reasons:

- As markers for boundaries, areas of taboo (Gali) such as ceremonial grounds.
- To highlight pathways and provide direction.
- As part of other ceremonial purposes relating to totems, bora grounds and burial sites.
- To provide extraction holes for resources such as food (procuring grubs) and water, or to protect animals in a particular area.
- Bark stripping for fibre, rope and twine or removing bark sheets to create shelters, canoes and containers.
- To create toe holds for accessing possums, birds, koalas, goannas etc.

Surviving scarred trees have irreplaceable value as they provide remnant knowledge and links to traditional cultural practices.



**Ashley Moran, Traditional Owner, explains the attributes of an Aboriginal cultural scar on a veteran Swamp Box *Lophostemon suaveolens* at Wardell, NSW.**

### ***European scarred trees and other causes of scarring***

Scarred trees were also the result of settlers and explorers blazing trees to identify sites or survey the landscape. They also scarred them when breaking off parts for roofing material. There are several other causes of scarring such as trauma damage; storm and fire damage; damage by

animals; impact and abrasion damage and ring barking. Further information is available in the reference: *Aboriginal Scarred Trees in New South Wales – A Field Manual* by Andrew Long, Department of Environment and Conservation (NSW), 2005.

### **Objectives of the scarred tree workshops**

The workshops aim to increase awareness of the conservation and cultural heritage of Aboriginal scarred trees for their future management in the landscape. This requires helping people working in land management and related disciplines understand their significance and how to identify scarred trees. It is difficult to determine the difference between Aboriginal scarred trees and those of European origin or other causes.

The workshops help make correct identifications and informed decisions, leading to confirmation by Traditional Owners. The target audience has mostly been the ecology, environment, arboriculture, planning and related professions (e.g. state and local government staff and environmental consultants) as well as interested members of the community.

It is difficult to determine the difference between Aboriginal scarred trees and those of European origin or other causes.



Jan Allen from VTGA inspecting an Aboriginal scarred tree at Ruthven, NSW.

### **Protecting Scarred Trees**

Aboriginal scarred trees are vulnerable to removal and damage by clearing and other human activities such as agriculture and urban development. Individual trees are also at risk of succumbing to disease in old age. We need strategies to mitigate development impacts and other urban encroachment pressures and to increase conservation efforts to ensure scarred trees remain a viable part of our cultural heritage until their natural senescence.

When a potential tree is identified as having scars of Aboriginal cultural origin it should be recorded and the information sent to the relevant state department responsible for Aboriginal Cultural Heritage Management. This is then added to the state database and assessed by relevant officers who may arrange a visit to verify it.



An Aboriginal scarred Blue Gum *Eucalyptus tereticornis* being impacted by urban encroachment. Coochiemudlo Island, Qld.

A Management Plan may be developed so the tree can be protected onsite or removed if its future can't be guaranteed. Protection onsite may simply involve fencing. In other instances it may be removed and displayed in a museum or other facility. These decisions are made in consultation with the landowner, relevant government departments and appropriate bodies (e.g. Aboriginal community, historical organisation).

### ***Traditional owner engagement and cultural renewal***

As the workshops have been undertaken in different regions it has been important to understand and respect the Indigenous tribal boundaries of the Traditional Owners. These traditional boundaries have often been delineated by landscape features such as mountains, rivers, lakes and wetlands. There can be sensitivities with the extent of traditional boundaries and contemporary groups such as Aboriginal Land Councils.

For the workshops, Traditional Owners were approached to participate and present on their country as defined by the traditional boundaries. It is important with Indigenous-focused projects that time be taken to establish relationships. Patience and respect builds trust which leads to successful connections with Traditional Owners. In general long lead times are needed for coordinating all project partners.

**[ It is important with Indigenous-focused projects that time be taken to establish relationships. ]**

Numerous Aboriginal people still practice the techniques of cultural scarring for a range of purposes such as canoe building. Continuing tradition practices today by Traditional Owners provides learning and teaching opportunities to the younger generations. This keeps alive knowledge of how a resource can be exploited and not depleted. Teaching and learning Aboriginal culture maintains a vital connection to country.

### ***Long term objectives – connections to Indigenous ecological knowledge***

This project has encouraged other organizations to consider scarred and veteran tree management. This has included Local Councils establishing significant tree registers through to further training initiatives and applying for funds for similar projects. The success of the project is also reflected in requests for these workshops to be held in other areas of the nation including Sydney, Melbourne, Perth and surrounds.

Scarred trees are just one aspect of Aboriginal cultural heritage that needs to be respected and conserved as much can be learnt from Indigenous ecological knowledge. In conclusion, this project has connected many interested individuals and parties so hopefully, in time, there will be a profound change at both the community and industry level to deeply respect and conserve Indigenous cultural heritage and its landscape values.

Scarred trees are just one aspect of Aboriginal cultural heritage that needs to be respected and conserved as much can be learnt from Indigenous ecological knowledge.



Ashley Moran, Traditional Owner, alongside an Aboriginal scarred tree. Swamp Box *Lophostemon suaveolens* at Tucki Tucki, NSW.



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## Plant records

**Glenn Maskell**, Team Leader, National Rhododendron Garden

Maintaining plant records is very time intensive and costly for organisations and is often vulnerable to staff and technology changes. For botanic gardens to realise their full potential it is imperative that we keep records to manage collections, maintain history, provenance information and share this information and materials.

BGANZ's Records Officers Network (BRON) recognises that small to medium gardens have great potential to hold valuable botanic collections but that they are often hindered by lack of expertise, good tools and time to maintain plant records. BRON is endeavouring to help these gardens improve their systems.

For botanic gardens to realise their full potential it is imperative that we keep records to manage collections.

While there are quite a number of professional records managers in large gardens there is always more work than hours to do it in. A small group has worked on database options for smaller gardens starting with a questionnaire that gathered information on what individual gardens are doing and using for databases.

Overwhelmingly the questionnaire revealed a lack of resources and dissatisfaction with systems being used.

### ***Database options recommended***

BRON has researched databases. Unfortunately there is not one answer/solution but each garden will need to find the option that suits their circumstances best. The options BRON have looked at, in no particular order, are:

**BRAHMs** – A free, comprehensive, herbarium base with a living collections component. Developed by Oxford University but there are no BGANZ users that we know of as yet.

**Baubles** – Needs some reasonable computer 'know how' to set up. Herbarium-based with a living collections component, developed by Belize Botanic Garden and Freeware for the geek in you. It is able to run on different platforms and hoping to run on tablets etc. soon. You can do your own additions to the program, but there is very little support for end users.

**IrisBG** – A comprehensive, herbarium-based system with a living collections component, developed by Oslo University Botanic Gardens and used by many larger botanic gardens overseas. Medium cost for setup and ongoing running. Support for end user. There are no BGANZ users that we know of.

**BGbases** – Comprehensive, herbarium-based system with a living collections component, developed by Edinburgh Botanic Gardens and Arnold Arboretum. Used by many larger botanic gardens including some in New Zealand such as Dunedin Botanic Gardens. A fair cost for setup and ongoing maintenance depending on the level of complexity you want. Support for end user.

**Parks Victoria / BGANZ simple databases** – Simple, living collections based set up, developed by Parks Victoria (PV), made available through BGANZ, free, MS office based, has secure data and levels of security for different users. Little support for end user.

The PV/ BGANZ database is designed for smaller gardens, to be used by gardeners in managing plant collections. Parks Victoria has developed the database for its own use but has made the database available to BGANZ members in recognition of the contribution of botanic gardens to conservation and education.

### ***Where to from here for you?***

You can investigate the options by doing a Google search of the databases to see which one will suit your garden best. Once the BGANZ Council have endorsed the PV/BGANZ database it will be made available as a demo through the BGANZ website for you to try. If possible, talk to other gardens using the database.

The PV/ BGANZ database is designed for smaller gardens, to be used by gardeners in managing plant collections.

In the meantime try to make sure your records are as accurate as possible. Remember computers are essentially 'dumb' and are only as good as the information entered. Start working to get data entry into your systems of work as this will be the success or failure in the long term.

### ***BRON Vision from the Wollongong Congress***

At the BGANZ conference in Wollongong BRON held a workshop to determine what the group needs to work on beyond the database recommendations. About 30 people attended the workshop showing the interest that already exists in databases.

The key message from this workshop is for BRON to keep an eye on the development of databases as technology improves but the bigger picture is to improve collection management in *all* botanic gardens.

In a practical sense BRON will be connecting the records to collections policies, sourcing plants with provenance and participating in global conservation and providing advice on collections management.

BRON is a small group who are all busy, so if you can contribute we'd love your help. Get involved and support your BGANZ.

# The science section

Compiled by **Brett Summerell** Director,  
Science and Conservation, Botanic Gardens &  
Centennial Parklands



Brett Summerell

## First word

In this section of the magazine we highlight some of the academic research happening both in Australia and internationally of relevance to botanic gardens. Those of us who work in botanical and conservation research hope to make our science more accessible to the community at large and hope what follows will help you communicate this core function in your work too.

In this and subsequent issues we will also bring to your attention to some of the enormous amount of botanical information accessible at a click of a button. If you have science information for inclusion in future issues or see something that you think should be highlighted (or needs clarification) please drop me a line at [brett.summerell@rbgsyd.nsw.gov.au](mailto:brett.summerell@rbgsyd.nsw.gov.au)

## Herbarium records – are they any good for assessing the impact of climate change on plants?

Phenology is the study of natural cyclic and seasonal changes in relation to plant and animal life. Climate change is assumed to strongly influence the phenology of plants; e.g. do species flower earlier as the climate warms? Obviously the best way to observe such changes is in the field but until we get a functioning time machine (hurry up please!) it is difficult to get good retrospective data.

It has been hypothesised that herbarium specimens and records should be able to be used to document changes in phenological responses to changes in climate. However, it's difficult to calibrate the changes observed in collections with those that actually occurred in the field. This is necessary to state definitively that the herbarium collections are an accurate reflection of reality.

Work done by Charles David and collaborators at Harvard University compared flowering phenology determined from field observations (years 1852–1858, 1875, 1878–1908, 2003–2006, 2011–2013) and herbarium records (1852–2013) of 20 species from New England in the United States.

They showed that the earliest flowering date estimated from herbarium records faithfully reflected field observations of first flowering date and substantially increased the sampling range

across climatic conditions. Additionally although most species demonstrated a response to interannual (occurring between years) temperature variation, long-term temporal changes in phenological response were not detectable.

Their findings support the use of herbarium records for understanding plant responses to changes in temperature, and also importantly confirm a new use of herbarium collections: inferring primary phenological cueing

mechanisms of individual species (e.g. temperature, winter chilling and photoperiod). Data and observations for species are lacking from most investigations of phenological change, but are vital for understanding differential responses of individual species to ongoing climate change.

More information: *Herbarium records are reliable sources of phenological change driven by climate and provide novel insights into species' phenological cueing mechanisms.* Charles C. Davis, Charles G. Willis, Bryan Connolly, Courtland Kelly, and Aaron M. Ellison. *American Journal of Botany* 2015; 102:1599-1609 doi:10.3732/ajb.1500237

They showed that the earliest flowering date estimated from herbarium records faithfully reflected field observations.

## Evolving in urban environments – will plants do this (and how)?

We now appear to be in the Anthropocene Era (a proposed epoch that begins when human activities started to have a significant global impact on Earth's geology and ecosystems).

Thought is turning to how plants might evolve in urban environments and how this process might occur.

It may, or may not, be possible to see signs of this occurring depending on how we define the beginning of the Anthropocene era (starting with the industrial age in the early 1800s vs atomic age in the 1950s).

Marc Johnson and colleagues at the Department of Biology, University of Toronto Mississauga, Ontario have written an essay on this subject proposing a number of predictions on how urbanisation may influence plant evolution.

These include the obvious predictions that urban and non-urban populations will differ in genetic diversity and that selection pressures will be different. Interestingly they predict that neutral evolution due to genetic drift and population bottlenecks will be greater in urban populations.



Illustration by Stephanie Dalton-Cowan. [Click here](#) for *What is the Anthropocene?* article in *Smithsonian Magazine* January 2013.

And that evolutionary selection may be hindered or altered such that insect pollinated species will evolve greater self-pollination or clonal growth.

This is part of a greater concentration of research and study on urban biodiversity and ecology and recognition that they may play an important role in sustaining species now and into the future.

More information: *Plant evolution in the urban jungle* Marc T. J. Johnson, Ken A. Thompson and Hargurdeep S. Saini *American Journal of Botany* 2015; 102: 1951-1953., doi:.3732/ajb.1500386

### Competition and how plants adapt to climate change

There is a great deal of research underway trying to determine how plants will respond to climatic changes and what are the key parameters that will affect the response of plants to changes such as an elevation in temperature. Work by Jake M. Alexander and colleagues at the Institute of Integrative Biology, Zurich, Switzerland provides some of the first empirical evidence.

They suggest that accounting for novel competitors may be important in predicting species' responses to climate change. Their results suggest that species' range dynamics probably depend not only on their ability to track climate, but also the migration of their competitors, and the extent to which novel and current competitors exert differing competitive effects.

This highlights that the response of plants is likely to be extremely complex and not just dependant on how plants respond to environmental variables. Other competitor plant species and presumably the interaction between pests and disease organisms may have an impact as well.

More information: *Novel competitors shape species' responses to climate change.*

Jake M. Alexander, Jeffrey M. Diez and Jonathan M. Levine. *Nature* 2015 – 525; 515-518.  
doi:10.1038/nature14952\



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## Myrtle rust in Indonesia

Myrtle rust has now been recorded in Indonesia with symptoms observed on *Eucalyptus pellita* and *Melaleuca leucadendra* in north and south Sumatra. Morphology and a molecular barcoding and phylogenetic approach with markers from ribosomal DNA (rDNA) were used by Alistair McTaggart and colleagues at the University of Pretoria to identify the cause of rust on these hosts.

The morphology and genetic markers definitively identified the rust as *Puccinia psidii* and the microsatellite analysis showed that the isolates in Indonesia were genetically the same as those in Australia. It was not possible to determine how long the isolates were present in Indonesia but given the climate and the array of susceptible species it is of significant biodiversity and biosecurity concern.

[More information:](#) *Rust (Puccinia psidii) recorded in Indonesia poses a threat to forests and forestry in South-East Asia.* Alistair R. McTaggart, Jolanda Roux, Ginna M. Granados, Abdul Gafur, Marthin Tarrigan, P Santhakumar & Michael J. Wingfield *Australasian Plant Pathology*.

## Some apps to try out!

This issue highlights some applications (apps) to load on your smart device. These allow you to record biodiversity, record feral animal behaviour and access information useful to understanding nature. All of these apps are available in both Apple and Google formats.

**Questagame** is a mobile game that gets players outdoors to discover and help preserve life. It can be used in your botanic garden, backyard, neighbourhood, a park, anywhere at all and sets you out on quests in the natural environment. All the records end up in the Atlas of Living Australia and the identity of species is confirmed by experts in specific groups. Although it is still a little 'light on' for plant information it is great for children's education programs in botanic gardens.

[Questagame app](#)

**OzAtlas** is the mobile app for the Atlas of Living Australia and provides access on your phone to all that biodiversity data. I tried it out on a recent Bush Blitz and, as long as you have coverage, it is a great assist in helping out in identifications of species and providing a list of species found in a specific location within a five kilometre range.

[OzAtlas app](#)

## THE SCIENCE SECTION

**PDF Maps** is an app that allows you to use stored PDF's of maps on your device. You can interact with spatially referenced maps to view your location, record GPS tracks, add place marks and find places. It is excellent for when you are on fieldwork or just out walking.

[PDF Map app](#)

**ClimateWatch** is a program of climate observations coordinated by Earthwatch. A number of botanic gardens have ClimateWatch trails. The mobile app assists so that you can record your observations in real time while bushwalking, at the beach or in the local park. Again data can be accessed through the Atlas of Living Australia.

[ClimateWatch app](#)

**Feral Scan** has a number of apps to assist in recording the presence and activity of feral animals including cats, foxes etc. Directions and information about the apps are available [here](#).

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# The voice of two young pups

Sally Ingham, Education and Venues Officer and Daniel Carmody, Ranger,  
Australian National Botanic Gardens



## Sally's perspective

When I tell people that I work as the Education and Venues Officer in the Australian National Botanic Gardens (ANBG) it is inevitably met with statements of 'that must be a great job', 'you must love working there', and 'I would love a job like that'. The truth is that I do love my job. I am one of the fortunate people who has been able to follow my passion and end up in a job that I enjoy.

I haven't always known which field I wanted to work in, and it wasn't a direct path getting to this point in my career. However, I feel that the variety of jobs, experiences and studies I've enjoyed have made me better equipped for my career in the professional world of botanic gardens and specifically in science communication with a younger audience.

[ I haven't always known which field I wanted to work in,  
and it wasn't a direct path getting to this point in my career. ]

After I finished school, I took a gap year (or two) to work in childcare and travel. I then undertook study for a Diploma of Soft Tissue Therapy (with the aim of becoming a massage therapist), which is when I discovered my love for science. This new found passion for science, combined with a lifetime love of the outdoors and the environment, led me to study a Bachelor of Environmental Science.

I enjoyed science communication at university and found that I was quite passionate about bridging the gap between the science world and public knowledge, particularly for children and youth. I hadn't thought about working in a botanic garden until one day I heard a horticulturalist speak about her work in the ANBG. A spark had been ignited and I had my eyes set firmly on working in the ANBG!

My timing was great and I was taken in as the youngest volunteer guide in the ANBG where I enjoyed learning from the wealth of knowledge that makes up the passionate crew of Volunteer Guides. I then secured the position of Visitor Services Ranger, within the ANBG Visitor Centre, which gave me plenty of opportunity for on-the-job learning.

## FEATURE ARTICLES

Visitors often have some very curly questions which require research and collaboration with other staff members. I quickly got to know the ANBG staff, visitors, gardens, plants and local fauna and learnt about the importance of the visitor experience and visitor expectations. After a year working as a Visitor Services Ranger I was successful in my application to become the ANBG's Education and Venues Officer.

In the gardens we run education programs for students from preschool to tertiary level. Over 13,000 students a year come from all over Australia to engage with the gardens and experience a range of activities such as trekking 'Around Oz in an hour' and discovering plant adaptations in various ecosystems, getting their hands dirty planting seeds, learning about lichen, and spotlighting possums amongst our range of canopy trees at night.

There are so many things that I value about my job – other than having the entire gardens as my office of course! I love the creativity involved in planning and writing new education opportunities for students, and seeing young minds connect with nature. I love seeing the way our fantastic team of Education Rangers interact with students in an outdoor setting and hearing about all the exciting things that the students learned while they were elbow-deep in learning.

I have often been accused of being 'a big kid' and I love the opportunity to be passionate and excited about science, plants and animals while having a laugh with the students and watching them learn in a fun, hands-on environment. Older students often come in feeling like the day will be like any other school day and leave with a new energy around them. I feel like I can make a difference to the students' views on the environment and grow the inherent interest that children and youth have in the natural world. I feel this is contributing towards a more sustainable future.

I believe that working in a botanic gardens environment has given me the opportunity to participate in a number of experiences which have proven fundamental to my professional and personal development. From this one location and within the scope of one job, I have been able to engage with, learn about and partake in a variety of facets of a scientific institution and a botanic garden, including the National Seed Bank, the nursery, the Australian National Herbarium, the Centre for



I love the creativity involved in planning and writing new education opportunities.

Australian National Biodiversity Research, the Australian Biological Resources Study, Bush Blitz, horticulturalists, the visitor experience team and scientists. I have also learned about the corporate side of working as part of the wider Department of the Environment.

I have had the opportunity to participate in a variety of field trips, including a two week Bush Blitz trip to assist with a biological survey in Olkola Country, located in southern central Cape York, Queensland. This once-in-a-lifetime trip gave me the opportunity to learn from scientists from around Australia about their area of expertise as well as Olkola Elders about the area and traditional knowledge. I believe that on the job training and opportunities for professional development are key to maintaining an enthusiastic, dynamic and professional workplace.

As part of a national institution I have also been able to rub shoulders with educators from other institutions, which has given me some great ideas and a good view into how different topics are being tackled, different technology is being used and various challenges are being handled. I always aim to challenge myself and experience new things as I believe these opportunities have always proved incredibly important for my personal and professional growth. I believe it is vital for botanic gardens to continue to offer these opportunities to staff.



**Sally searching for snails with John Stanisic 'The Snail Whisperer' on a Bush Blitz expedition.**

**I believe that on the job training and opportunities for professional development are key to maintaining an enthusiastic, dynamic and professional workplace.**

There are a number of exciting challenges that I see botanic gardens facing in future, including the balance between use as a recreational and a scientific facility, as well as the use of various types of technology within an industry that has its roots firmly embedded in tradition and history. I enjoy being part of a team that is working to tackle both of these challenges. I'm finding that, especially in the visitor experience and education fields, there is a real opportunity to move forward and adopt the ever-increasing range of visitor experience apps and learning devices to enhance the botanic gardens experience. Balancing the adoption of a digital environment with the purpose and history of botanic gardens is a unique challenge. The ANBG receives a huge range of visitors, all

from different backgrounds and with differing expectations. There is a challenge in balancing these expectations and use of technology with more traditional methods of science communication. I am enthusiastic about being part of this swift and exciting change.

I am unsure where my career will lead in future. I am very interested in research-based roles, threatened species recovery as well as ecology; however I am also excited to continue along the environmental education path. Whatever I end up doing I believe I will continue to be involved in my passion of science communication in one way or another.

The unique and varied experiences and opportunities that I have been offered to date have given me an incredible scope of knowledge about my chosen field of environmental science. I feel that in future I will be able to progress my career, making informed decisions to move forward into areas that I already know I am passionate about and enjoy.

The great thing about working in the ANBG is that opportunities exist within the institution to move into a variety of areas. Working in the ANBG has given me some unique experiences early in my career and I am lucky enough to have been able to take the opportunities offered. I believe that I will continue to work in the botanic gardens setting and I'm excited to see where it takes me.



## Daniel's perspective

I feel very privileged to be in a position where I get to work in a field that I am passionate about. I have always been fascinated with Australian plants and wildlife and hence I love my job. It allows me to be immersed in Australia's beautiful diverse ecology. I think sometimes as humans we forget about the intimate connection we have with the earth.

We breathe its air, drink its water and eat the food that it yields. I believe this is why botanic gardens form such an important part of the social fabric of human existence in modern day society, why people feel the need to immerse themselves in an environment that not only enriches the soul, but connects us with something bigger than our own existence.

Being the Ranger  
I see the connection  
people make and the  
emotions they feel.

People visit botanic gardens for many different reasons. They visit for relaxation, exercise, gardening tips, tours, lunch, talking, research, botany, bird watching, insect watching, lizard watching, photography, dancing, walking, drinking, reading, learning, rolling, mushroom hunting, kissing, cuddling, marrying, celebrating and grieving. I have pretty much seen it all. Being the Ranger at the Australian National Botanic Gardens (ANBG), I see the connection people make and the emotions they feel.

I started working as the Ranger at ANBG in April 2009 and, as part of my learning and development, I've been fortunate enough to work in some other amazing and beautiful locations, including Christmas Island, semi-arid Western Australia and Namadgi National Park. The full-time ranger role is diverse and you must learn to become proficient and prioritise many different tasks, ranging from wildlife management, visitor engagement/experience, visitor statistics, operational management, emergency management, workplace health and safety, public relations and much more. It makes the ranger role challenging, but also very interesting and dynamic.



**Ranger Dan in Christmas Island assisting with revegetation work.**

Working as a ranger at the ANBG has allowed me to gain valuable knowledge about the amazing diversity of Australian native plants in its living collection and the horticultural expertise required to grow species from all over Australia in one location. I enjoy using this knowledge to explain to visitors the way we manipulate the rules of nature to create microclimates and habitats in which Australian plants and animals can thrive together – despite Canberra's challenging climate!

**I enjoy explaining to visitors the way we manipulate the rules of nature to create microclimates and habitats in which Australian plants and animals can thrive together.**

I believe the ANBG is an important Australian institution for safeguarding Australia's rich plant heritage. The gardens has decades of accumulated scientific knowledge. This knowledge plays a crucial role in the conservation of Australian native plants by providing expertise in growing rare and threatened species that can help to re-populate plants into the wild. I really like that the ANBG is invested in growing native plants that are vulnerable and that staff go to great lengths to grow and display these special native species. I think that makes the ANBG pretty special.

The ANBG is at a real turning point with its new master plan and future vision. We are looking at ways to build new infrastructure that integrates into the existing landscape, replace ageing infrastructure with facilities that are energy efficient, as well as improve irrigation technology and provide better visitor experiences and educational opportunities. While Australia's botanic gardens are facing many challenges, I remain positive that the ANBG is heading in the right direction.

With Canberra opening up to international flights and growing international and national tourism, I can see real potential for new visitor experiences, which include new walking trails, places to relax, viewing platforms, wildlife tours, interactive podcast tours, education self-guided adventure experiences and native gardening workshops.

I believe there is no limit to the creative potential of visitor experiences; we just need to secure the appropriate resources to assist us along the way. Moreover, I believe the resources we do have should focus on engaging visitors with experiences that support the values of the ANBG; increasing visitor numbers, without enhancing the learning experience, is not good enough. I really believe this is important because the experiences we provide should complement the vision and mission of the ANBG.

In more recent years there has been a real increase in the amount of events and visitor experiences the ANBG offers to visitors. I think botanic gardens both domestically and internationally have recognised that in order to remain relevant and in the spotlight in today's political sphere, you need to use engagement tools to stay on the radar; particularly when also trying to engage the private sector for funding. The increase in the amount of events and visitor experiences in the ANBG has increased my work load and this effects time available for working on other important operational matters.

Increasing visitor numbers, without enhancing the learning experience, is not good enough.

Consequently, we are recruiting an additional ranger and we will evaluate our event management systems to improve efficiencies; this will help us to maintain high work standards. As a ranger I have developed a wide range of skills to do my job well. To continue to do my job well I need to maintain my relevant wildlife handling qualifications, traffic management, first aid and procurement training. In addition I need to maintain my skills in visitor engagement, project management and continue to grow my knowledge in horticulture and ecology science.

While at ANBG, I have had opportunities to enhance my skills and expertise through practical training. I had an opportunity to work on Christmas Island, which is part of Park's Australia's commonwealth reserves. Learning about its unique ecology and how the island evolved was extraordinary – it blows your mind!

One of the main things I learnt from working on Christmas Island was new skills in plant propagation and ecological restoration. I experienced a steep learning curve and it really enhanced my knowledge. I also went out with scientists on a Bush Blitz field expedition to Credo Station in Western Australia. It built my knowledge of semi-arid environments and the adaptation mechanisms plants and animals use to survive. I was blown away by such diversity in the challenging environment.

The interaction with scientists was one of the best things; I really enjoyed gaining specialist knowledge from diverse scientists, especially the plant experts; having this type of access to scientific experts was pretty special.

**[ The interaction with scientists was one of the best things;  
I really enjoyed gaining specialist knowledge ]**

At this stage in my career I am definitely ready for new challenges. Ranger work is fiercely competitive and the next step in my career is to look at management positions as a chief ranger, wildlife conservation officer or move into ecological restoration work. I like my work and enjoy talking to visitors about Australia's unique ecology and biodiversity.

I hope there will be future transfer opportunities to other botanic gardens and Parks Australia's Commonwealth Reserves, or to work at a higher level within the Australian Government's Department of the Environment. I feel transfer opportunities should be given priority, as they share knowledge amongst staff from different organisations and offer fresh working challenges.

I'm currently training to assist with field collecting trips. Our seed bank managers have been training me in conservation seed collecting and the recording of field information. I hope to be able to lead some of the field trips with the ANBG's Seedy Volunteers.



**Ranger Dan in uniform.**

Fifty years from now, I would like the ANBG to be superbly resourced and be a place that still exhibits Australia's rich plant diversity and continues to promote, protect and preserve threatened native species. I would like to see the ANBG as a place of beauty, relaxation and offering a multitude of visitor experiences. I would like to see more types of walks and habitat for wildlife. I would like to see the ANBG be known as the best garden in Australia and inspire people with the greatest garden designs.

Finally, I would be interested to hear from other botanic gardens that have similar ranger roles both nationally and internationally. It would be good to share experiences with others who work across several disciplines in botanic gardens. Sharing knowledge and coordinating between like-minded professionals to improve work practices would be of great benefit to me as a professional in my field.

# Voice of an old dog

Alan Matchett, Team Leader/Curator, Dunedin Botanic Garden

## About me

I was born in Dunedin and have always lived and worked within a 45 minute radius of my work place. Despite this proximity I have travelled widely – overseas and within both North & South New Zealand including the Chatham Islands, Stewart Island and Great Barrier Island.

After a few academically wasted but socially rewarding years studying botany at Otago University I decided my career path needed a more practical approach – something that would provide me with a bit more discipline and would pay me at the same time. After spending a year in Dunedin City Council's Parks department I applied for an adult apprenticeship and joined the Dunedin Botanic Garden.

During my three-year apprenticeship which I managed to compress into 2 ½ yrs (I did a lot of overtime) I completed the statutory qualifying and Trades Certificate examinations and went on to complete the National Certificate of Horticulture with the Royal New Zealand Institute of Horticulture.

Career progression in those days was linear and I progressed through the ranks while gaining valuable plant knowledge, horticultural skills and management experience on the way. I looked after the Winter Gardens Display Glasshouses, specialty collections such as the Rhododendron Collection and was promoted to Upper Garden Foremen, before inheriting the management of rest of the Garden (same pay I might add).



**Career progression in those days was linear and I progressed through the ranks while gaining valuable plant knowledge, horticultural skills and management experience on the way.**

As still happens, significant changes in local government shifted my roles and responsibilities around during which time I inherited the Dunedin City's 19 Cemeteries and a Crematorium and then disengaged from them some ten years later which enabled me to concentrate on the botanic garden. In 2013 Dunedin Botanic Garden celebrated its 150th anniversary, hosted the 5th BGCI and 6th BGANZ Congresses and commenced a \$6.2 million propagation and nursery rebuild.

## My 'words of wisdom'

### *For emerging professionals*

In terms of addressing the subject matter for this issue the 'words of wisdom' I share are very much from a personal space and may be a little subjective with perhaps some bias. I suggest you take them with a grain of salt and add a dash of advice from others experienced in these matters.

Having spent a considerable number of years in this industry, one thing I do know for sure after all this time is that I am still only scratching the surface in understanding what botanic gardens are all about! That said, this is what I have learnt.

I have visited and engaged with staff at about 30 botanic gardens in different countries and it is obvious to me that no two gardens operate or are managed in the same way. Outwardly there may be similarities but otherwise there are many variations on a botanic garden theme. It seems the one common element across most of these organisations is the perceived lack of resources. That of course will never change as we strive to always do better than we did the year before ... often with the same or less resources.

**I have visited and engaged with staff at about 30 botanic gardens in different countries and it is obvious to me that no two gardens operate or are managed in the same way.**

Botanic gardens are dynamic entities that are forever changing. Long gone are the days when gardens were private and plant collections were locked away and protected, to be admired and used by few. Today's botanic gardens form a significant part of the recreational infrastructure of our cities and regions.

Despite what most of us in this profession would like to believe, botanic gardens to most people are not about the plants or some notion of conservation. That thought is for the naive amongst us, a bitter pill to swallow perhaps, but a reality – especially as the concept of 'all things plants' is probably one of the strongest drivers for our choice of employment.

However, to those who walk in off the street, many probably only want somewhere safe to visit, a seat in the shade, a playground, perhaps some grass to lie on, a cup of coffee or the toilet. The very notion of a garden being open to the public brings in a whole range of other considerations that need to be tended to more urgently than weeding the marigolds, filing plant records or mounting herbarium specimens.

That said, those of us who are seriously engaged in 'all things plants' feel that botanic gardens, arboreta and other public gardens are special places but not necessarily because of the public amenity aspects but often in spite of them!

It therefore requires considerable effort on all our parts to influence management and maintenance outcomes to ensure that a balance is struck between what is presented in the physical landscape and how visitors use a garden.

Sadly the 'voice' of plants, seeds, scientific specimens, records systems and staff with plant expertise doesn't seem to have the level of advocacy it deserves as we compete for market share.

Also, I recall an enthusiastic encounter in one garden I visited. I was scolded by a colleague in no uncertain terms: 'Alan – it's not about the plants; it's about the culture ... the culture, Alan!' I then listened attentively to why this was the case and submitted, being richer for the learning experience. My knowledge was further enriched when I attended an Asian Botanic Garden conference where I learnt more about culture in two hours of the three-day conference than my lifetime beforehand. Two valuable lessons I haven't forgotten.

['Alan – it's not about the plants; it's about the culture ... the culture, Alan!']



So it is a far more complex environment today than ever before for emerging professionals joining the ranks of botanic garden staff. The survival of many botanic gardens requires that they become self-sufficient and concentrate on generating funds. This makes it hard for individuals to spend time developing their own plant and cultural knowledge, skills and understanding to a point where they can give back so much more.

The New Zealand Gardens Trust (NZGT) has recently reapproved Dunedin Botanic Garden's Six Star status. This recognises the efforts of staff, our volunteers and the Gardens' wider support team in providing one of the country's top garden experiences. I was further humbled when I received an email titled 'More Than Six Stars!'

### ***For managers***

In conclusion, this 'old dog' passes on this advice (or maybe just a reality check) to those who hold positions of influence – whatever age you are – in our wonderful institutions:

- Set realistic and achievable goals for yourself and others around you.
- Acknowledge good performance – it doesn't take much. The power of using the words 'thank you' or 'you did a great job' is often underestimated. Equally important is discussing things that didn't go so well.
- Exercise discretion and be patient. No one will ever be as perfect as you.
- With regard to project planning – Think Big! Don't sell yourself short, aim for the A+ model every time. Leave yourself the option of scaling back.
- Don't work in a vacuum. You are part of a team, and being interested in what your colleagues and contractors are doing expands your knowledge too.
- Maintain an open mind and consider all ideas and suggestions. Some of the best come from outside the garden.
- Mix it with volunteers and members of the public, you may learn something.
- Grasp opportunities to expand your knowledge by attending conferences and establish relationships outside your immediate environment.
- Visit other botanic gardens wherever possible even if the family hate you for it. They'll appreciate it someday.

Most of all, enjoy the journey. We who work with nature and spend time with like minded people on 'all things plants' are the lucky ones!

**[ The power of using the words 'thank you' or 'you did a great job' is often underestimated. ]**

# Our best five tips

*Youthful Perspectives on Contemporary Challenges*, the theme for this issue, came out of discussions at the Next Generation Industry Ideas function at the last BGANZ Congress in Wollongong in October. Delegates mused on these issues:

- What do you think are the greatest challenges and opportunities botanic gardens will face in the next decade or so?
- What are the needs of our emerging professionals? What would you like BGANZ to provide to assist them?
- What are you and your organisation doing to addressing these contemporary challenges?

In January a bulletin was sent out to BGANZ members asking them to address these two questions.

**A. What are the five most important tips you'd like to pass on to someone in your profession about to join a botanic garden organisation?**

**B. What are the five most important things you're want to find in a botanic garden job related to your professional field?**

Here are the responses received from half-a-dozen experienced botanic garden(ers) and emerging professionals who have recently taken up positions in horticulture, education, science, communications, public events, corporate services etc.

## From Wayne Dymond Team Leader Nursery, Auckland Botanic Gardens (Auckland Council NZ)

*Hello. In reference to Question A I have listed my five tips below. I have worked as a horticulturist for Auckland Botanic Gardens for the past 36 years. Botanic gardens are the best place to work because they offer great variety and learning opportunities within the field of horticulture.*



1. Endeavour to look 'outside the square' as botanic gardens are changing rapidly with innovative ideas and much more public and group interaction.
2. Explore ways of addressing cultural diversity so as to attract a wider audience to your garden.
3. Become involved with relevant organisations such as BGANZ, IPPS, NGIA as horticulture as a profession is still quite a small world. Getting input from different mindsets can contribute greatly to any 20 year master plan for a botanic garden.
4. Explore ways in which to travel to other botanic gardens as each one has something to offer in so far as ideals and standards. This could be by short term internships.
5. Have an 'education hat' on when thinking of what you want the public to see and understand in your displays. Don't let a theme run too long and regularly change to new ideas.

## From Paul Scannell, Curator, Albury Botanic Gardens (Community and Recreation Albury City Council)

*Hi, I'm the old bloke on the left in the photo. As you can see I love my job and my opportunities. I consider myself a Garden Gnome with 51 years experience and a Jack of all trades. Here are my tips to both questions!*

1. Get to BGANZ conferences and network like crazy.
2. Ask as many questions as you like of professional staff by email, to give them a chance to reply when suitable.
3. Take your time when looking at introducing change to an organisation and do it inclusively when you think the time is right.
4. Looking at The Big Picture is essential.
5. Conservation and management planning are essential in the long term.

The five most important things I'd want to find in a botanic garden job related to horticulture are:

1. A beautiful garden
2. A great team
3. Supportive and creative leadership
4. A sustainable financial situation
5. Mentoring and opportunity to learn



## From Emma Bodley, Botanical Records & Conservation Officer, Auckland Botanic Gardens (Auckland Council NZ)



*Here are my answers to Question B:*

1. Diversity in role
2. Working in a team with strategic goals
3. Fun, inspiring place to work
4. Innovation encouraged
5. Interaction with visitors and the public



## From Fran Jackson, Longwood Graduate Program Fellow (Longwood Gardens USA), and former Manager Royal Botanic Garden Sydney

*Here are my top five tips for Question A plus a bonus picture of my new haircut!*

1. Botanic horticulture is a satisfying and fulfilling career; just don't expect to become financially wealthy.
2. Keep learning to grow your career. Find a way to attend every symposium and conference you can. Find specialist short courses and convince your employer to pay for them. Look overseas as well as in Australia. Claim the cost on your tax if no-one else will pay for it, but keep learning.
3. Seek out exchange opportunities. Work overseas and bring your new skills back to Australia. Connect with colleagues in other gardens in Australia and around the world. Subscribe to BGCI and BGANZ newsletters. Stay informed about issues across the world, not just within your own garden. And don't forget to talk to the scientists in your own institution!
4. Be a botanic horticulturist, not a gardener! Living collections curation skills matter in botanic gardens.
5. And most importantly, look after your back!

## From Clare Fraser, Information Services Officer Dunedin Botanic Garden (Dunedin City Council NZ)

*While my title is Information Services Officer, in practice the role includes visitor involvement and experience too. I'm the only staff member in this field in our botanic garden. Here are my tips for those involved with the public interface/education in botanic gardens.*



1. Creativity and curiosity – invent and initiate new developments to keep the visitor experience fresh.
2. Customer service – see the botanic garden from visitors' perspective and imagine their needs. Be their advocate.
3. Mediation – people have passion for botanic gardens. Gardeners may wish to represent horticulture thoroughly but interpreters need to tell stories briefly. Visitors and volunteers have expectations too.
4. Independence and adaptability – in a sole charge position, you're 'it'. Be able to turn your hand to all things visitor-related.
5. Prioritisation – there are no shortage of ideas and digital demands keep increasing. Know what to commit to and what to say 'no' to.

## And finally from Anon, who suggested that the five most important aspects of in any botanic garden job involve:



1. A high level of community engagement by all staff.
2. Presentation of outstanding plant collections that not only meet the guiding principles of botanic gardens – education, conservation, and research – but also engage with and inspire the visiting public.
3. Inspiring and contemporary interpretation ... and the opportunity to do this in one's own garden collections to present seasonally appropriate messages.
4. High level of public education regarding sustainability ... this means organic practices demonstrated and promoted (no excuses). Botanic gardens need to lead and demonstrate organic practices as best horticultural practice!
5. Part of work should be to train and inspire trainees, students and interested volunteers.

# The Illawarra Grevillea Park

Ray Brown, Voluntary Manager



**Bulli's Grevillea Park curator Ray Brown with some eucalyptus blooms in 2013. Photo: Photographer Ken Robertson and the Wollongong Advertiser Lake Times.**

The Illawarra Grevillea Park is a community organisation, started in 1987 and officially opened in 1993. The idea for it came about through a meeting I had with Peter Olde some 40 years ago. Peter had been involved with The Society of Growing Australian Plants (SGAP), as it was known then, and he had just taken over as the leader of the Grevillea Study Group which was an offshoot of SGAP Australia.

Around that time, I had been learning to propagate all sorts of cold climate plants and had started supplying rockery and alpine plants to the trade. I was working as a gardener at Tudor House, the prep school for Kings School Sydney, and because the wages were so low I went out landscaping on the weekends. This lasted for three years before I moved to Wollongong to start a full-time landscaping business. Increasingly I grew more and more plants and ended up becoming a specialist propagator to the trade.

I was working as a gardener at the prep school for Kings School Sydney, and because the wages were so low I went out landscaping on the weekends.

Because I loved working with large gardens I soon became involved doing garden construction with the Rhododendron Park in Wollongong. I also became interested in Vireya Rhododendrons which I soon started propagating and selling. And over the past 20 years I have specialised in grafting and growing weeping standard grevilleas, many for the first time.

I have released to the trade *Grevillea Bulli Beauty*, *Grevillea Bulli Princess* and *Westringia Coastal Creeper* which all produce a royalty back to the Park. Other plant varieties released included *Grevillea Orange Marmalade*, *Ceratopetalum Magenta Star*, *Ceratopetalum Red Christmas* and *Banksia Bush Candles*.

The genesis of the *Grevillea* Park involved getting out and collecting grevilleas and other Australian plants in the wild. Many of those collecting trips were with the *Grevillea* Study Group. I have personally seen and collected all but about ten species of grevillea in NSW, Victoria, Queensland, South Australia and the Northern Territory. And just recently I've worked out that I have looked at around 40 or so grevillea species in Western Australia.

All of these species have vouchers by Peter or me, and at one time or another I have propagated or grafted just about all of them. Of all the exciting times we have had out seeing and collecting plants in the wild, the greatest satisfaction has been derived from propagating and distributing plants thought to be extinct or so rare that they were only known by less than a dozen plants.

The greatest satisfaction has been derived from propagating and distributing plants thought to be extinct or so rare that they were only known by less than a dozen plants.

There is always going to be a problem with extremely rare plants. Are they the living dead or can we re-establish them in the wild in such numbers that future generations will be able to collect and grow them for years to come? Even though we are very lucky that Peter Olde has been and is still describing grevillea species, the biggest problem for the flora of Australia is the lack of botanists being trained to continue this kind of work.

Most universities and botanic gardens continue to reduce their numbers in this field.

For the Sydney basin alone there are many herbarium specimens that have just had their records re-written each time there is a revision and have not been properly looked at over the years. Five or six new sub-species of *Grevillea arenaria* have been found. These will be named shortly which will help protect many of the small sites where they grow.

It would help if more directors and staff of our botanic gardens spent some time out collecting in the bush, or just at the roadside, to truly appreciate just how stunning native plants are and what great variety there is out there. The situation is critical for a lot of plants on road side verges where local councils are grading or farmers are spraying further each time through their fences.

I am particularly concerned about what is happening on the road verges in Western Australia where one hell of a lot of their flora is just coping. With a white history of barely two hundred years, we know very little about how to grow our flora back in the bush, a botanic garden or home garden.

My natural progression after collecting and growing grevillea plants in pots was to get them into the ground. This 'ground' is now the Illawarra Grevillea Park which is on land leased by Wollongong City Council in 1997. Being a professional gardener I have ensured that the plants in the Grevillea Park have been presented well. This is essential if we want the public to visit and keep coming back and even pay to see them.

All the construction and upkeep of the park has, and is all done, by a handful of volunteers. The heavy construction was done by allowing contractors to bring in clean fill. In return they gave us several hours use of their excavators and other machinery. With the help of a large group of LEAP people we were able to get the park open to the public in 1993.

Seed funding (\$2,000 each) from Westpac and Commonwealth banks also helped get us started. Over the years, the Australian Plant Society has helped with grants for different projects which have been invaluable. The intensive infrastructure established so far is valued at over \$12 million. This includes 50,000 hours of volunteer labour plus donated plants, plus reinvested profits of \$430,235.

**The intensive infrastructure established so far at Grevillea Park is valued at over \$12 million. This includes 50,000 hours of volunteer labour plus donated plants, plus reinvested profits of \$430,235.**

The Illawarra Grevillea Park is regularly featured on national television, newspapers and radio and has been visited by over 2,000 people (with 15-20% of these being tourists) when the park has been opened on double weekends in autumn, winter and spring. Various growers bring plants onsite for sale and if we have bad weather on the first weekend there is a good chance for better weather on the second weekend.

For me, probably the most gut wrenching part of the Grevillea Park is that we will most probably lose most of the work that has been achieved so far (a large section of the front of the park), to a new road in the future. As the park is 40 acres we will be able to move some of the collections back up the hill ... but this will depend on how long I can keep up the enthusiasm.

**We will probably lose most of what we have achieved so far but can relocate some of the collections ... but this will depend on how long I can keep up the enthusiasm.**

The decision regarding a new road through the Grevillea Park was only found out by someone from the public telling us what was going on – even though Wollongong Council and the State Government and developers all knew about it many years before. It was the usual story of ‘why tell us, we’re only volunteers’.

Over the past couple of years, Paul Tracey Manager of the Wollongong Botanic Garden and I have been building a relationship on behalf of the Grevillea Park. This has resulted in Paul sending out young trainees to work with me. They get to see the work ethic of passionate people and listen to me ramble on.

Hopefully when they go away a little of my enthusiasm has rubbed off on them! I quite often say to these young ones that they just might learn something from us silly old blokes at the park while they are here.

**Hopefully a little of my knowledge and enthusiasm rubs off on the young ones.**

In my dealings with people in government-run organisations over the past 40 years, I have found that many of them haven’t wanted to get to know or understand that passionate volunteers and collectors are very capable and have so much specialised knowledge.

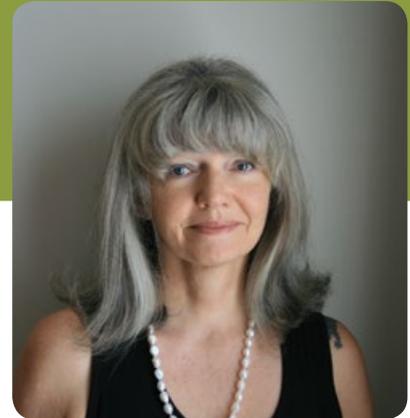
When I went to a couple of BGANZ events I was excited to see how they are in some respect desperately trying to move into the future as a united group to showcase this growing industry. I have never seen so many botanic garden people genuinely talking with each other. The next move will be a closer association between the botanic garden industry and the nursery industry.

For more information visit: [www.grevilleapark.org](http://www.grevilleapark.org)

## BOOK REVIEW

# Georgina Molloy: the mind that shines

Bernice Barry, Author

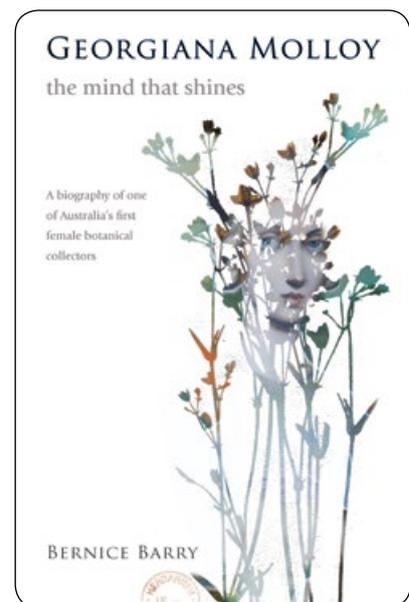


Georgiana Molloy was twenty-four when she arrived in Western Australia in 1830 soon after marrying Captain John Molloy, a British army officer and a hero of the Napoleonic wars. They were part of a small group of European settlers who established a new colony in the far southwest.

As a new immigrant she was an amateur collector who still preferred the plants she had left behind in Britain to the indigenous flora around her in Augusta; but before long the floral profusion of the West Australian bush began to captivate her. In 1837 Georgiana received a request from England, via a mutual friend, to send plants and seeds to Captain James Mangles, an influential British collector who supplied the most prestigious botanists and horticulturalists of the day.

As a new immigrant she was an amateur collector who still preferred the plants she had left behind but before long the floral profusion of the West Australian bush began to captivate her.

***Georgiana Molloy: the mind that shines*** by Bernice Barry is published by Picador Australia, RRP \$39.99.



Captain Mangles had been receiving collections from James Drummond (government naturalist at the Swan River Colony until 1832) but was becoming irritated by the increasingly poor quality of his work and the cost involved for unsatisfactory specimens. Enthusiasm was intense for plants from the new colony and Mangles needed a new source.

The enthusiasm this new, intensive task ignited was to transform Georgiana from a keen gardener into the meticulous botanical collector she became. She was only sending collections to Mangles for the last six years of her life but her specimens are studied by botanists today in

the herbarium of the Royal Botanic Gardens Kew, Cambridge University herbarium and the herbarium of the Botanic Garden and Botanical Museum Berlin-Dahlem.

Georgiana's childhood in the north of England was at first comfortable and privileged. She watched her father plan the extensive landscaping for his new country house and often helped him with planting. Later there were other gardens to interest her – at school in London and when staying with affluent friends in town and country.

Everything changed when her father died leaving such large debts that the family were suddenly reduced to a frugal lifestyle.

At fifteen, Georgiana could not have known that losing her home, learning to live without luxuries and developing a strong sense of independence would all stand her in good stead as a settler. Her personal values and opinions, strikingly ahead of their time, became the catalyst for another dramatic change when distressing family issues became unbearable for her. She was invited to stay with a family in Scotland and left home in 1828 never to return.

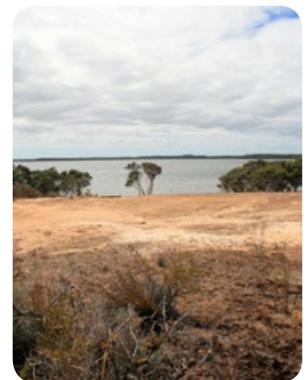
Hers was a life lived in gardens, at first the orderly extensions of symmetrical Georgian homes, intended to impress society and subdue nature then later the softer, less regimented planting designed to look natural. She observed the results of thoughtful planning about colour and shape, flowers and foliage, fragrance and time of flowering and learned first-hand the importance of the work done by skilled gardeners preparing, feeding and pruning.

But there was another important ingredient in Georgiana's experience that shaped her tastes and extended her thinking. Wherever she lived, beyond the spaces designed by men and women there was always another environment, a natural wilderness on the other side of the garden walls. Here she discovered other kinds of floral beauty, plants growing where they seeded naturally, species mingling because of the environment nurturing them – not a gardener's hands.

She walked for hours at a time on the windswept Cumbrian fells and coast near Carlisle, the lush riverbanks of middle England, the lochs and heather covered mountains of Dunbartonshire. These varied habitats showed her how different species together created unexpected effects that delighted her eye.



**View to the landscape beyond the garden at Crosby Lodge, Georgiana Molloy's childhood home.**



**(left) Loch shore and mountain landscape, Dunbartonshire, Scotland. (right) Flat Rock, Augusta, where Georgiana collected plants 1830-1839.**

In Augusta in Western Australia, the first priority was clearing trees to grow vegetables but Georgiana was impatient and had been dreaming of creating her own garden. It was laid out in squares with intersecting pathways, a small version of the formal gardens at Newbold Hall in Warwickshire. Before long, there was a colourful display and a vase of flowers on the table every day.

The first blooms were from seeds and bulbs she had brought with her or received as gifts, some chosen for their showy petals and strong fragrance, others for nostalgic memories of home but it was not long before the indigenous flora began to feature in her planning. Her letters reveal an innovative approach to garden design that combined a love of colour with the overwhelming practical constraints of the environment around the little cottage by the Blackwood River.

She noticed how the white clematis *Clematis pubescens* and native wisteria *Hardenbergia comptoniana* grew quickly and abundantly, and realised they were attractive fast-growing plants to cover her veranda. She used the local kennedia *Kennedia lateritia* (then called *Kennedia marryatae* and commonly known as the Augusta kennedia today) in the same way for its brick red flowers and ample leaves encouraging it to grow among other climbers deliberately to combine their effect.

She noticed how the white clematis *Clematis pubescens* and native wisteria *Hardenbergia comptoniana* grew quickly and abundantly.



***Kennedia lateritia* at the herbarium of the Royal Botanic Gardens Kew.**

Georgiana was unaware she was living in a unique hotspot of ecological biodiversity but she soon realised what a remarkable range of plants could be found within the limited scope of her explorations around the settlement. At first she did not know all the correct botanical names so she created two duplicate collections, each with the same numbering, keeping one for herself so she could communicate with Mangles about each specimen.

He sent her books on botany and she read to improve her knowledge about collecting, drying and preparing seeds and cuttings for their long journey to Britain. She learned much from trial and error yet the collections she packed in each hortus siccus ('dried garden') were consistently of superior quality to those of experienced male collectors, including Drummond.

When the family moved north to the Vasse (Busselton) in 1839, Georgiana discovered many new plants and familiar ones growing more abundantly. Her letters include descriptions of a large grove of the West Australian Christmas tree *Nuytsia floribunda* and another of woody pear *Xylomelum occidentale* growing so densely that the fragrance was overwhelming.

In spite of personal tragedy and serious illnesses associated with childbirth she found ways of managing the farm workload so she could devote as much time as possible to her plant work, especially during the seed-collecting season. When she was too ill to walk, she asked Aboriginal women and her own young daughters to go for her.

Georgiana knew that one of her greatest adversaries was time and on one occasion the hortus siccus she had packed for Mangles sat for a year before it could be shipped on its sea voyage. She became scrupulous in her selection, preparation and packing of seeds and found ways of safe-guarding them from insect infestation. Her skill was evident to the experts in England who received the collections.

When she was too ill to walk, she asked Aboriginal women and her own young daughters to go for her.

Botanists studied the dried specimens, the gardeners of the nobility nurtured the seeds in expensive greenhouses and growers used them to supply plants to the middle classes. Dr John Lindley, Professor of Botany at University College London was fascinated by the flora of Western Australia and in 1838 he was about to write his influential 'Sketch of the Vegetation of the Swan River Colony'. He asked Mangles to find perfect specimens for him and was delighted with what he received. He wrote:

'Your friend Mrs Molloy is really the most charming personage in all South Australia and you the most fortunate man to have such a correspondent.

That many of her plants are beautiful you can see for yourself and I am delighted to add that many of the best are quite new. I have marked many with a X.'

Joseph Paxton, head gardener of the Duke of Devonshire at Chatsworth House, said the collection was 'the best and contains more good things than I have before received from that interesting part of the world'. He described her 'important collection of seeds' as 'far superior to any we have received at Chatsworth', with many new and 'splendid things in the hortus siccus'. Many others were equally pleased including the Royal Horticultural Society, the Baumann brothers of Bollwiller in France and George Loddiges, known for the orchids he grew in large hothouses.

Georgiana was 37 when she died in 1843 soon after her seventh child was born. Bedridden and in her final fever she was still desperately longing to collect and send the seeds of *Nuytsia floribunda* and *Kingia australis*. For most of her 13 years in Western Australia she was nursing a baby, working on the farm and often taking over the workload of her husband the Government Resident when he was away yet she always found time for her botanical passion.

She was a woman and in the nineteenth century that meant any recognition was limited and informal. Her name appeared in several of the publications Mangles sent her, including three mentions in Lindley's 'Sketch' in the 'Notices of new plants' as 'a lady enthusiastically attached to the Botany of this remote region', collector of *Pultanaea brachytropis*, a 'pretty little greenhouse shrub from Port Augusta', *Euthales macrophylla*, 'a greenhouse perennial of the easiest culture' and *Eucalyptus calophylla*, 'a beautiful plant'.

Even though the same publication said her 'zeal in the pursuit of Botany has brought us acquainted with many of the plants of that little known part of the world' her name was not included in the acknowledgements. It was Mangles who received recognition for Georgiana's *Pentandria monogynia* in the 1841 'Floricultural Cabinet and Florists' Magazine' but she was referred to as 'a lady'.

The botanist George Bentham later acquired Georgiana's collection from Lindley and it was part of his own herbarium donated to Kew in 1854. He had never been to Australia but his seven volumes of 'Flora Australiensis' (1863-1878) catalogued more than 7,000 species including 89 taxa of Eucalyptus. It was extremely successful and became a classic reference source. Bentham included a note of thanks to Lindley and Drummond but not Georgiana Molloy. There were requests for plants to be named for her before and just after she died but formal recognition came late, in the form of the graceful pink *Boronia molloyae*.



***Nuytsia floribunda* Busselton WA.**



***Boronia molloyae*.**

Georgiana's achievements were not simply a matter of skill but also of creative artistry which came from a personal and emotive engagement with her surroundings. She positioned dried specimens perfectly to present their botanical form for study but also managed to display their features in a way that still reveals today the beauty she saw in them. Her writing is heavily weighted with descriptions of the environments around her, always expressed through colours, shapes and fragrance.

Georgiana's achievements were not simply a matter of skill but also of creative artistry which came from a personal and emotive engagement with her surroundings.

Georgiana's own words endure as a powerful legacy of her work and convey both simply and eloquently the way she felt about plants.

In a letter to James Mangles Georgina Molloy wrote this description of *Xylomelum occidentale*:

March 1840

*I beheld a tree of great beauty. The flowers are of the purest white and fall in long tresses from the stem. Some of its pendulous blossoms are three to five fingers in length and these wave in the breeze like snow wreaths. They are of such a downy white feathery appearance, and emit a most delicious perfume resembling the bitter almond; and like all human or rather mortal delicacies, how quick these lovely flowers fall from the stalk on being collected. I however was able to gather a good many, and on nearer view, found the buds much more beautiful than the full blown flower. I regret they have assumed a yellow hue, but they are lovely and elegant even in Death. The native name is 'Danja', and I rather think it will turn out to be a hakea.*

*In a letter from Georgiana Molloy to James Mangles JS Battye Library Perth WA ACC 479A.*



Portrait of Georgiana Molloy  
c.1829. With thanks to  
Mrs Dorothy M. Blasch.

## FEATURE GARDEN

# WAMA – a bold new vision in botanic gardens

Neil R Marriott, Site Development Team Leader

WAMA stands for the Wildlife Art Museum of Australia, and the WAMA Botanic Gardens is one component of an 'emerging' bold vision.

The WAMA project will celebrate the relationship between the arts, the natural sciences and preservation of our natural heritage. WAMA is a work in progress with no garden on the site as yet, but the Grampians area is rich in natural beauty. All going well with our funding initiatives, we envisage up to five years of development, and there will be milestones and open celebrations along the way.

WAMA will be a bold and unique botanic garden, natural history museum and gallery, conference centre, diverse Grampians bushland and wildlife rich wetlands all rolled into one. In short, it will become one of Australia's most popular tourist draw cards amidst the rugged Grampians Ranges. The WAMA Vision statement and Project Plan outline can be downloaded as a pdf from [here](#).

It will become one of Australia's most popular tourist draw cards amidst the rugged Grampians Ranges



WAMA map.

The art museum is at the centre of this wonderful project. There is no museum or gallery anywhere in Australia that focuses exclusively on wildlife art, and there are only a handful of galleries worldwide that are set in botanic gardens. WAMA will be a first for Australia!

WAMA will create a museum and art gallery specialising in wildlife art in all its forms, set in beautiful botanic gardens that will showcase the most spectacular Australian native plants, as well as featuring many rare and endangered species. The gardens will be designed to enthuse and enlighten the public and artists alike with the beauty and diversity of our Australian flora and its associated fauna.

**WAMA will create a museum and art gallery specialising in wildlife art in all its forms. Set in a botanic garden ... this will be a first for Australia!**

WAMA was gifted a superb property at the foot of the spectacular Grampians/Gariwerd Ranges in western Victoria. The site is on deep Grampians' outwash sands and gravels and is just outside Halls Gap – the cultural and tourist centre of the Grampians. This is an ideal location. It is already high in tourist numbers, hosts significant art groups and educational bodies, and it enjoys a temperate Mediterranean climate. Not only are there few frosts but it also has perfect soils and high-quality subterranean water which facilitate growing a huge range of Australian native plants. In addition it is in close proximity to supporter groups including an Australian Plant Society district and Landcare Groups.

The property (15 hectares at present) can be divided into three distinct areas, roughly equal in size:

- Cleared land for development of museum/gallery and botanic gardens.
- Grampians woodland area permanently protected with a Trust for Nature Conservation Covenant.
- Ephemeral wetland area also permanently protected with a Trust for Nature Conservation Covenant (for growing a large range of Australian aquatic plants and already attracting a good number of water-birds and other wildlife).

The covenanted Grampians bushland protects at least three distinct vegetation communities: heathy woodland, lateritic-rise woodland and riparian woodland. Each supports a distinct mix of Grampians' native plants including such iconic species as Flame Heath *Astroloma conostephioides*, Golden Heath *Styphelia adscendens*, Austral Grass-Trees *Xanthorrhoea australis*, Variable Holly-leaf *Grevillea Grevillea aquifolium* and many more.



**Rainbow over cleared land with woodland in distance.**

With a history of rabbit infestation and land degradation we have already had several working bees replanting local provenance species that would have occurred on the site. Astoundingly, following the fumigation of rabbits throughout the neighborhood, there was spectacular natural regeneration of seedlings, orchids and lilies.

**Astoundingly, following the fumigation of rabbits throughout the neighborhood, there was spectacular natural regeneration of seedlings, orchids and lilies.**

As the property naturally supports good populations of native ground orchids, an exciting potential prospect is the establishment of ex-situ colonies of local, critically endangered orchids being grown by the Threatened Species Network, now funded and staffed by Royal Botanic Gardens Cranbourne.

We are planning an elevated boardwalk through the bushland and around the wetlands, with interpretive signage along the walk to educate and enthrall visitors. This will enable tourists to be able to identify the diverse flowers they see on their walks around the nearby Grampians.

Another potential area of support will come through our association with Habitat 141, which aims to restore connectivity of remnant bushland areas from the coast to the outback by way of linking revegetation programs. With Greening Australia we also hope to re-establish areas of native grassland and grassy woodland on the property.



**View from WAMA woodland to Eagles Wings Grampians National Park.**

## The people

The WAMA board has been formed as the advocate, funding and governing organisation for WAMA, and has gained tax-deductible donation status. Much is already achieved, with the establishment of a Site Development Team, Education Team, Arts Team and Promotions Team. Each of these has many enthusiastic members and we are in the process of establishing our 'Friends of WAMA Botanic Gardens'. The board is working closely with Tourism Victoria, Grampians Tourism, Northern Grampians Shire Council, Rural Development Victoria and many more supportive organisations.

The Site Development Team is privileged to have close working relationships with Royal Botanic Gardens Victoria. Prof Tim Entwisle, Director and Chief Executive; John Arnott, Head of Horticulture at Cranbourne’s botanic gardens and Jill Burness, Head of Landscaping (also at Cranbourne) are all just as excited as we are by the potential of WAMA. The valuable input provided by these experts is wonderful support as we begin our mammoth journey!

We have formed our Collection’s Planning Team with renowned native plant experts Rodger and Gwen Elliot (as well as John Arnott and Jill Burness) and included other local and regional experts. This team will decide just what plant families, genera or species will be best suited to achieve aesthetics and inspiration in a healthy and sustainable landscape.

We realize that we are entering a time of significant climate change and this will be taken into consideration as we develop our collections – this is truly one of our greatest contemporary challenges! Our first collection planning day made it quite clear that a major focus for our WAMA Botanic Gardens will be rare and endangered plant species, including those found nowhere but in the nearby Grampians National Park. Our scientific collection will also support ex-situ conservation programs across the country while visitors will marvel at some of the rarest plants from across Australia.



Part of the WAMA team breakfasting onsite after 2015 World Wetland Day function.

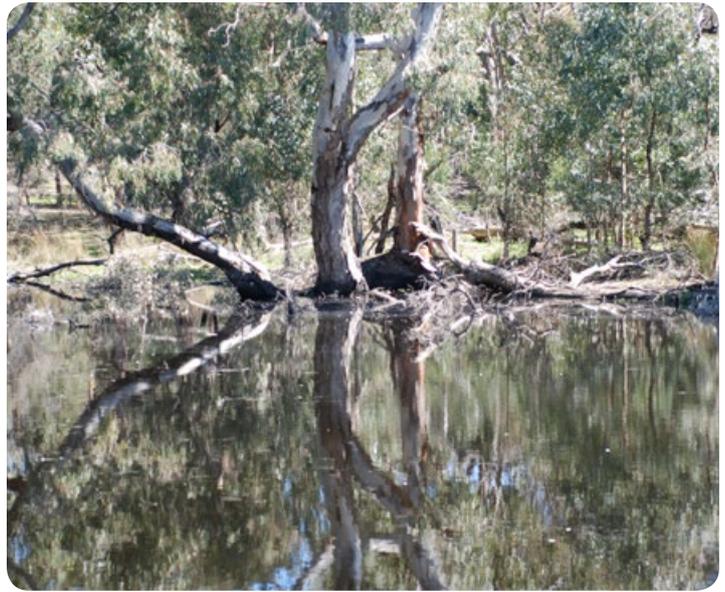
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## Australia’s iconic plants

Many great botanical artists derive strong inspiration from Australia’s wonderful eucalypts, while a great number of art works depict numerous members of the Proteaceae family, particularly banksias, waratahs and grevilleas. One aim is for the gardens to reflect the beauty of the WAMA art collection. Visitors will gain understanding of individual artist’s interpretation of our flora and fauna, enjoying a unique experience that combines the wildlife art genre with horticulture.

## FEATURE GARDEN

Our close association with the Australian Native Plants Association and its Study Groups has resulted in a commitment by these groups to actively support development of spectacular collections of these superb, iconic Australian plants. The deep sandy and gravelly soils on most of the site will enable us to grow these plants to perfection, and there will undoubtedly be opportunities in the future to supply seed to other botanic gardens and institutions around the country.



WAMA Riparian wetland and River Red Gums.

## Not just plants

As well as our focus on rare and endangered native plants, WAMA will also protect populations of the nationally endangered Southern Brown Bandicoot and Long-nosed Potoroo. Both of these species struggle to survive on their own in the Grampians, falling prey to feral foxes and cats despite the best efforts of the National Parks Authority. Fortunately we have members of our team who are committed to seeing the return of these species to the region.

They, along with the nearby Halls Gap Zoo which specializes in the breeding of rare and endangered animals, have facilitated the release of breeding pairs of these animals into the bushland areas of WAMA Botanic Gardens. This will happen shortly, because we have had donated to WAMA, a state of the art vermin-proof fence which will be erected early this year!

## Partnership with Melbourne University School of Design

In 2014 Honours' students from Melbourne University faculties of architecture and landscape architecture, headed by Professor Phillip Goad and Professor Ginny Lee, camped on the WAMA site. With guidance from two top Melbourne architecture and landscape architecture companies, they developed in tandem, potential designs for the buildings and gardens.

The outcomes from these field projects have provided WAMA with a large amount of superb and visionary folios which can be used to develop the final designs for the gardens and buildings.

## A garden for educating the young and not-so-young

Our education team has hosted several open days and school days on the site. Lucky children and the not-so-young have discovered the marvels of ants that store and protect native plant seeds in their tunnels, and learnt about tiny insects that protect themselves in galls on leaves.

How privileged we are to have experts in entomology, botany, fungi, birds, mammals and much more, happily volunteering their time to enthuse visitors about the wonders of our Australian bushland.

How privileged we are to have experts in entomology, botany, fungi, birds, mammals and much more.



WAMA Heathy Woodland with young emus.

Programs are being organised with the input from local school camps and local schools. The WAMA education team will be able to provide a component of the school curriculum relevant to art, science and nature both in the classroom and as practical experience on the WAMA site. Already, we have senior students from Melbourne schools offering to help with working bees, plant outs and the like.

'Seeding the Arts' is our WAMA catch phrase to engage community connection and collaboration through a hands-on creative program. We work alongside local artists and nature specialists; WAMA is developing workshops including raku pottery firing, botany and art sessions, and 'drawing to learn' workshops. We have artists in residence to talk to and inspire our visitors as well as fabulous works of art on display including superb native seeds and nuts transformations.

## Artist Support

WAMA has established wonderful support and ongoing commitment from many of Australia's best natural history artists. Examples include the famous Celia Rosser who has painted every species of our unique Australian banksias, the late William T Cooper, undoubtedly one of the greatest bird artists ever, and renowned artists such as Richard Weatherly, Peter Trusler, Pete Marshall, Ego Guiotto, Annemieke Mein and many more.

The Australian Geographic magazine featured WAMA in their last spring 2015 magazine, and in collaboration with WAMA produced their superb 2016 Australian Geographic Society Art Calendar. One thousand calendars were donated to WAMA for our fundraising effort.

In October, 2014, WAMA was officially launched at the Sofitel in Melbourne by Robert Purvis AM (President of WWF Australia) and Professor Sasha Grishin AM (former Adjunct Professor of Art History at the Australian National University).

The launch hosted WAMA's first prestigious art exhibition and coincided with the publication of a truly superb coffee table book *Inspiration Wild: an Artistic Celebration of Nature and Environment*. This delightful book is still one of our major fundraisers and features the brilliant art of some of our major artist supporters. Copies of both the calendar and the book are now available on our website.



WAMA Botanic Gardens main wetland looking towards Grampians.

## Youth Engagement Team

We have many young artists, conservationists and general supporters who are keen to establish a youth engagement team. This is the way of the future for WAMA with our younger supporters absolutely vital to this bold vision. We believe that our educational and environmental partnerships will ensure ongoing awareness and understanding of the importance and relevance of our natural world to the betterment of society.

**[ Seeding the Arts' is our WAMA catch phrase to engage community ]**  
**[ ... and younger supporters are vital to fulfil our bold vision. ]**

We believe our dreams will come to fruition and prosper for years and decades to come. It is a grand and exciting time to be involved with this wonderful new botanic garden arts precinct. I encourage all readers to check out our website – [www.wama.net.au](http://www.wama.net.au) and join us in celebrating an iconic project that will not only benefit today's generations but be an ongoing place where generations of Australians and international visitors can learn from and enjoy our unique Australian cultural and environmental heritage.

# Botanic gardens reports

## BGANZ Victoria Report

BGANZ Vic has developed an interesting and varied program of events for 2016. The first event for the year will be hosted by Parks Victoria at Werribee Park in March and will focus on managing volunteers. Themed *The Changing Face of Volunteering* we've attracted a wonderful range of speakers for the day starting with a keynote address by Sue Nolan CEO Volunteering Victoria. The program aims to explore volunteering from a range of perspectives – from the challenges of managing volunteers to gaining insights from individuals who actively volunteer their time in support of our regional botanic gardens.

Our second event for the year in June will continue the collaboration between Parks and Leisure Australia (PLA Vic/Tas) and BGANZ Vic to deliver high quality horticultural seminars and training. Hosted by the Burnley Campus of University of Melbourne, the theme for the day will be *Grow What Where: plants for specific purposes* exploring plant selection for a range of common, and a times difficult, situations.

We will be heading to the Grampians for our final major event for the year, the two-day BGANZ Vic Plants Forum. The theme for this year's forum is *Bringing your collections to life* which will examine the benefits and challenges of taking a multidisciplinary approach to managing, displaying and interpreting living collections.

**[ We will be heading to the Grampians for our final major event for the year, the two-day BGANZ Vic Plants Forum. ]**

Sharon Willoughby, chair of BGEN, will weave interpretation and storytelling alongside a range of curatorial/horticultural aspects of collections planning and management. The venue for the event is the Grampians retreat – at an old school camp. This promises to be a memorable event!

## BGANZ Victoria – Schedule of events and activities 2016

Date in 2016	Meeting Type	Host & Contact Person	Theme	Executive Meeting Coordinator	Notes / Updates
3 February Wednesday	<b>BGANZ Vic Executive 1</b>	RBGV Melbourne Gardens	<b>2015 Program - BGANZ Open Garden Event</b>	John Arnott	Confirmed
16 March Wednesday	<b>Network</b>	Werribee Park – James Brincat	<i>The Changing Face of Volunteering</i>	Annette Zealley	Confirmed
29 April – 3 May Friday – Tuesday	<b>Association of Friends Conference</b>	Friends of Geelong Botanic Garden <a href="http://friendsgbg.org.au/events-activities/2016-aafbg-conference">http://friendsgbg.org.au/events-activities/2016-aafbg-conference</a>	<b>Regional Relevance: Botanic Environments and Their Survival in a Time of Global Warming</b>	Friends GBG	Confirmed
10 May	<b>Events Committee</b>	Grampians Retreat – Dennis & Marie 0448 387 998	<b>Planning: Plants Forum program and logistics</b>	John Arnott	Confirmed
11 May Wednesday	<b>BGANZ Vic Executive 2</b>	Camperdown Botanic Garden	<b>Business Plan/ Action Plan</b>	Brad Creme	Confirmed
29 May Sunday	<b>BGANZ Botanic Garden Open Day Events</b>	BGANZ Council Working Group – Chair Peter.Byron@environment.gov.au		Annette Zealley/ Sharon Willoughby	
20 July Wednesday	<b>BGANZ PLA</b>	Melbourne University Burnley Campus	<b>Grow What Where: Plants for Specific Purposes</b>	Tim Rowe	Confirmed
8-9 September Thursday – Friday	<b>Plants Forum</b>	Grampians Retreat – Dennis & Marie 0448 387 998	<b>Bringing your Collections to Life</b>	John Arnott	Confirmed
23 November	<b>BGANZ Vic Executive 4</b>	Williamstown Botanic Gardens – Shelley Wood	<b>Program review &amp; 2017</b>	Shelley Wood	Confirmed

# Calendar of conferences and events

## Australian Association of Friends of Botanic Gardens Conference Geelong Botanic Gardens 29 April – 1 May 2016

This conference will be hosted by The Friends of Geelong Botanic Gardens (FGBG). It is themed *Botanic Environments and Their Survival in a Time of Global Warming* and FGBG would appreciate an indication of attendance at [gardensconference@gmail.com](mailto:gardensconference@gmail.com). See conference flyer [here](#).

## Gene Conservation of Tree Species – Banking on the Future, Chicago Illinois USA, 16-19 May 2016

BGCI is partnering with the USDA Forest Service to bring together a mix of land managers, conservation and restoration practitioners, researchers, and non-governmental organisations who share the goal of conserving tree species. For more information click [here](#).

## American Public Garden Association, 6-10 June 2016

Themed *Changing Perspectives: Planting for the Future*, this year's conference will be held in Miami, Florida, USA. Visit to see [a teaser video](#) created by the host gardens. One BGANZ member will receive a free registration.

## BGCI's 6th Global Botanic Gardens Congress 26-30 June, 2017

To be held in Geneva Switzerland. Information as it comes to hand on this and other international events as well as proceedings of past conferences can be found [here](#).

## 8th BGANZ Congress

To be hosted by Botanic Gardens of South Australia in Adelaide sometime Oct/Nov 2017. Dates to be confirmed.



[www.bganz.org.au](http://www.bganz.org.au)