

# THE BOTANIC GARDENer

The magazine for botanic garden professionals

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COVER: The Candy Spider-orchid *Caladenia versicolor* is federally vulnerable EPBC Act 1999 and restricted to two populations in Western Victoria and to one plant in Central Victoria. See feature article for re-introduction work being undertaken.

Photo credit: Dr Noushka Reiter  
Botanist (Orchid Conservation)  
Royal Botanic Gardens Victoria

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The theme of the March 2016 issue is *Youthful Perspectives on Contemporary Challenges*. The deadline for contributions is Friday 29 January 2016. See P3 for more information. 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

## Let's keep that wonderful momentum going!

I hope those of you who attended the 7th BGANZ Congress in Wollongong had a wonderful time. I certainly did and, as newly elected President of BGANZ, I take this opportunity to thank Curator Paul Tracey and all those hard working 'Gong-ites' for their warm hospitality. The botanic gardens are truly amazing and the impressive local wonders show what a marvellous place Wollongong is.

Many good ideas and new goals were forthcoming at the congress. These need to be added to the existing positive agenda we share. The congress was alive with the desire to make our botanic gardens and collections the best they can be. We also looked at how to connect our values and stories with the many communities across our local, national and international stage.

While there may be customers we need to serve within the greater public and business communities we should not forget the internal customers within our wide eclectic band of botanic gardens. Our garden network stretches across Australia and New Zealand where many of the larger gardens have the capacity and have shown willingness to assist and mentor the smaller and less well-resourced botanic gardens.

At the congress we announced the new BGANZ Council for the next two years. Your BGANZ Council is keen to ensure we continue to support you by supplying appropriate tools and advisors. Make sure you are aware of the various ways in which you can assist us in those different areas of botanic garden management. The Botanic Gardens Education Network (BGEN), Record Officers and Collection Development Network (BRON), and Professional Development (PD) working groups welcome your comments and commitment. Please do not hesitate to get involved with their programs.

We also want your involvement and input into our strategic directions. You will be surprised at how this will not only open your mind but will offer great opportunities for you to hold positions where you can make a difference. You might also consider taking out an individual membership to show your support for your professional organisation.

Adelaide Botanic Garden has kindly agreed to host the next BGANZ Congress and it is good to think we will have the opportunity to meet again in 2017. I hope you have a good end of year celebration of your achievements this year and a prosperous time in all your gardens in 2016.

Happy botanic gardening to you all.

John

# Editorial insights

Janelle Hatherly, Managing Editor



Janelle Hatherly

Didn't we have a wonderful time, the week we went to Wollongong? Networking through professional associations is *invaluable*. BGANZ get-togethers provide opportunities to talk, be enlightened by the achievements of others and feel empowered to tackle the innumerable challenges associated with running cultural institutions. And, as Suzanne Sharrock says in her interview, linking with BGCI (and APGA) enables us to feel part of an international community and contribute to a global voice on plant conservation, horticultural excellence and education.

Most of this issue is about the 7th BGANZ Congress and can be regarded as conference proceedings, which is especially useful for those members who couldn't attend.

As an attendee, I took the opportunity to research and canvas opinions of what should be the three themes for THE BOTANIC GARDENER in 2016. What came over loud and clear (especially at the Next Generation Industry Ideas Cocktail Function) is that emerging professionals have needs and strong opinions, and a desire to contribute to shaping the future of our profession.

I hope THE BOTANIC GARDENER magazine contributes to professional networking by providing a unique channel where attitudes and ideas of our time can be documented and a shared vision of 'What is a contemporary botanic garden?' can be explored. I certainly learn something new every issue and enjoy getting to know all of the contributors.

Consequently the first theme for 2016 – the March issue – will be about youthful perspectives on the challenges facing our botanic gardens, cultural institutions, the natural environment and society in general. No, I'm not being ageist and contributions are welcome from everyone ... as long as the focus is on youth.

So please start thinking about making a contribution and feel free to make contact if you need assistance. If you have novel ideas to share, are prepared to own and justify your opinions (and follow the magazine's style guidelines) BGANZ wants to hear from you!



# Outstanding in the field

Janelle Hatherly interviews

**Suzanne Sharrock**, Botanic Gardens Conservation International's Director of Global Programs

Thanks for agreeing to be our feature interviewee this issue. I am particularly interested in your international perspective on the role of professional botanic gardens networks.

***Briefly, how did your career path lead you to working with botanic gardens? How long have you been at BGCI and what are you passionate about in your role?***



I have always been interested in plants, but also in development issues. On leaving school, I wanted to follow a career path which would allow me to contribute to 'feeding the world'. I studied agricultural botany and my first job was as a technician in a plant tissue culture lab. My dream however was to work overseas, particularly in developing countries and this became possible when I was accepted by Voluntary Service Overseas and was posted to work at an agricultural research station in Nepal. This led to further postings in Papua New Guinea and the Caribbean, where my work became increasingly focused on the conservation of plant genetic resources.

In 1995-96 I was lucky enough to get a position in the Secretariat for the International Technical Conference on Plant Genetic Resources for Food and Agriculture (PGRFA) and was involved in the preparation of the 1st Report on the State of the World's PGRFA. This was a great introduction to the world of international plant conservation policy and later allowed me to see the many parallels between the Global Strategy for Plant Conservation (GSPC) and the Global Plan of Action for PGRFA.

In 1996, I joined the International Plant Genetic Resources Institute (now Bioversity International) and spent the next seven years working on the conservation of Musa (banana and plantain family) genetic resources. This job involved working with regional networks across the tropical areas of the world and developing and implementing conservation strategies.

By 2003, I had been working overseas more-or-less continually for 20 years and I decided it was time to return home. Very fortuitously, this coincided with the start of BGCI's Investing in Nature program funded by HSBC and the adoption of the GSPC. BGCI was looking to expand and my

knowledge of international plant conservation policy and experience in working with networks fitted ideally with BGCI's needs. I therefore joined BGCI in 2003 and 12 years later – I am still here!

Before joining BGCI, I had very limited knowledge of the work of botanic gardens, and I still feel as though I am learning new things every day. I continue to be impressed by the diversity and quality of the work going on in botanic gardens and, as a passionate believer in the power of networking, I love the fact that the botanic garden network truly is a global network.



Trip to Bolivia as part of a Crop Wild Relatives project. Photo: BGCI

***BGCI has a great reputation for helping botanic gardens develop and share professional skills and expertise. How big is its membership now, and what influence do you think BGCI has globally?***

BGCI has around 500 botanic garden members, but through our conferences and other activities, we engage with many more than this. Results of membership surveys indicate that botanic gardens particularly value the global networking function of BGCI. Through BGCI, botanic gardens feel part of an international community and feel they have a global 'voice'.

With regard to influence on the botanic garden community, we like to think that through our conferences, workshops, publications etc., we have helped to improve the quality and quantity of conservation and education programs in botanic gardens. In recent years, we have focused on providing information to help botanic gardens prioritise their conservation efforts and encouraged gardens to work 'outside the garden walls' both in relation to conservation and education.

Two important new initiatives have been the Ecological Restoration Alliance, which has been well supported by Australian botanic gardens and the Communities in Nature program, which is having a great impact in the UK, helping botanic gardens to reach new audiences. I also think an important area of influence has been through our work with the Convention on Biological Diversity (CBD), where the work of botanic gardens in contributing to the implementation of the GSPC is now well recognised.



Making an intervention at CBD Conference of the Parties meeting.

***If you had to pick one, what would you give as the single most significant contribution (event or experience) BGCI has provided to the botanic garden community or to the environment?***

One area that particularly stands out is the role BGCI has played in the development, adoption and implementation of the GSPC. Although many other organisations also contributed to the development of the GSPC, it is notable that botanic gardens have particularly adopted this strategy and are playing a key role in its implementation.

The GSPC has provided an entry point for many botanic gardens into the international policy arena, and the targets provide a common framework for many of their activities. Although it is unlikely that the targets will be achieved at the global level by 2020, it is generally agreed that more progress has been made than would have been the case without the Strategy. I think the GSPC has had a tremendous effect on promoting plant conservation amongst botanic gardens. Of course there is always a lot more that can be done, but I am proud of the work BGCI has done on the GSPC.



A GSPC workshop in Paris organised by BGCI.

***Most of BGCI's membership (and BGANZ's) is by organisation. How do you think this impacts on individuals making a personal commitment to a professional society?***

Within BGCI we often talk about how we can improve our engagement with individuals within our member organisations. Much depends on how the organisations themselves operate. We know that with some of our members, contacts are limited to a single or few individuals, while in others there is a greater awareness of BGCI throughout the organisation.

Because we have a range of different programs in BGCI, we tend to engage more with the staff responsible for these programs – so we may have relationships with people working in seed conservation, ecological restoration or education for example, and these relationships will differ in their nature from the more 'institutional' relationship we may have the garden director.

We have been exploring the possibility of offering some sort of 'accreditation' to our members. If such an accreditation were cut across the different elements of the work of the botanic garden, this may help to engage a wider range of individuals and give greater relevance to BGCI membership.

***Networking opportunities are becoming easier with advances in social media and technology, do you think this strengthens or weakens the role of professional associations?***

I think advances in social media provide a great opportunity to reach out to a wider community – and for example in relation to the question above, should make it easier to reach individuals within organisations. While I am of the generation that was not brought up with social media, and it is not something I am entirely comfortable with, I am convinced that, used correctly, social media and communication technologies in general provide extremely powerful social engagement and networking tools.

However they are only tools and networks will not create themselves. It is the professional association that provides the focus, the hub of the network and social media should then be used to build on this. For example, social media can help to create communities of practice around certain issues within an association; it can enhance communication between members and new technologies can support a wide range of online and virtual learning opportunities. I think it is up to the professional associations to embrace and use social media – after all, associations are there to bring together and support like-minded people, and social media can surely only enhance this function.

***Most professional associations produce a journal/magazine at least a couple of times a year. What value do these now have when information is available 'everywhere'?***

I think it is particularly useful when such journals have a different but specific theme for each issue – as is the case for THE BOTANIC GARDENer. This then provides an opportunity to put together in one place a range of views, information and case studies around a topic. Even though information is available 'everywhere', it is nice to know that you can readily find the particular information that is relevant to your own area of interest compiled in one place. Even if the journal only exists in electronic format, it still exists as a published entity, which can be referenced and kept for use in the future. Many professional association journals are also not peer-reviewed and therefore provide an opportunity for publishing case studies and other information with less of a pure research focus.



Receiving a book marking the 200th anniversary of the Ljubljana Botanic Garden in Slovenia.

***What do you think is the best relationship to establish between the various professional associations? I'm thinking of BGCI, APGA, IABG, European Botanic Gardens Consortium, BGANZ and others.***

This is quite a difficult question to answer as BGCI has quite different relationships with the various professional associations you mention. Our closest relationship is probably with the European Botanic Gardens Consortium, which I think provides an interesting model. Here the Consortium is already a 'network of networks', with each Consortium member being the representative of a national network.

BGCI provides Secretariat and logistic support to the Consortium and this is made possible through a voluntary 'membership fee' paid by the Consortium members (or their networks) to BGCI. BGCI is seen very much as an 'honest broker', able to guide and support the work of the Consortium, but without being influenced by specific national interests. In return, the Consortium members promote BGCI's activities within their networks and help us to reach a wider audience.

This type of relationship might be seen as a 'rim and hub' network – with the European national networks being the network 'rim' and they are connected together through the 'hub' which is BGCI. This type of relationship between national, regional and global networks is something we are also exploring in the Asian region, where botanic garden networks are mostly at an earlier stage of development and require greater support.

However, I think BGCI has an entirely different relationship with APGA and BGANZ, which have developed as strong associations with high levels of local support. Here the relationship is more mutually supportive, with BGCI providing the international context for work being done nationally, while in return, BGANZ and APGA promote BGCI to their members, again helping to extend our reach.

I therefore don't think there is a 'one size fits all' model for how we should work together

– and this is quite okay. The important thing is that we do work together and that we share information, resources and experiences in the most efficient way. We were talking about social media and new technologies earlier – again we should use these tools creatively to ensure we communicate regularly and learn from each other.

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

In the run up to the Paris climate change conference, I am very concerned that we are not doing enough – either as individuals or as governments to prevent dangerous levels of global warming. However, I have recently started reading 'This Changes Everything' by Naomi Klein, who makes the point that although, or perhaps because, global warming is not about carbon, but about capitalism, climate change might provide an opportunity to rebuild local economies and create better and fairer societies. I hope that this book will help me to feel more positive about the future.

Otherwise, the thing that most enriches my life is my dog. We do a long walk together every day and although I live close to London, I am constantly finding new, unspoilt areas to walk in. A daily walk keeps me in tune with nature. I love the changing seasons and the way the landscape is constantly renewing itself. I am however, woefully aware that my plant identification skills are not what they should be – and so perhaps this is something I need to focus on for the future ...



Participants on a training course in South Africa organised by BGCI.

# Botanic news: from home and abroad

## BGANZ welcomes new members and a new Council

New institutional members are Norfolk Island Botanic Gardens, Gargarro Botanic Gardens and Whangarei Quarry Botanic Gardens. Welcome to them all and to John Bentley who has joined as an individual member. Click [here](#) for your new 2015-2017 BGANZ Council.

## BGANZ grant recipients, new awards and professional development opportunities

BGANZ supports members to attend its national conference held every two years. Successful applicants in 2015 were Brad Crème and Kirstie Paterson, Bendigo Botanic Gardens; James Brincat, Werribee Park, Victoria; Anne Duncan; Glenn Maskell, Dandenong Ranges Gardens; Annette Zealley, Geelong Botanic Gardens; Amanda Shade, Kings Park & Botanic Garden; Ian Coleman, Olive Pink Botanic Garden; Donna Thomas, Ballarat Botanical Gardens; John Zwar, Australian Arid Lands Botanic Gardens and Phill Parsons, Tasmania Arboretum.

At the recent congress in Wollongong, BGANZ announced three new awards it is offering.

1. **BGANZ Volunteer of the Year 2015.** The inaugural recipient of this new award is Janelle Hatherly in recognition for her work as Managing Editor of THE BOTANIC GARDENER.
2. **BGANZ Young Professional of the Year.** The first award (\$500 voucher to recipient for education development) will be presented at the 2017 BGANZ Congress.
3. **BGANZ Domestic/Overseas Study/Research.** This award will be presented at the 2017 BGANZ Congress. Candidates can apply (\$2,000 – must be matched by applicant) to undertake a project that provide benefit to the whole organisation.

Another professional development opportunity will enable selected members to spend a week on secondment with a larger or different botanic garden. Six botanic gardens (Australian National Botanic Gardens, Adelaide Botanic Garden, Australian Arid Lands Botanic Gardens, Darwin Botanic Gardens, Wollongong and Brisbane Botanic Gardens) have agreed to host a member in 2016. Secondments are available in all disciplines including management, horticulture, science and education. Further information will be available on the BGANZ website before 1 January 2016.

### Please support our sponsors

BGANZ welcomes a number of new sponsors for 2016.

Arboregreen Landscape Products  
[www.arboregreen.com.au](http://www.arboregreen.com.au)

Horticultural Training Pty Ltd  
[www.horticulturaltraining.com.au](http://www.horticulturaltraining.com.au)

Kings Park Botanic Garden and Parks Authority [www.bgpa.wa.gov.au](http://www.bgpa.wa.gov.au)

### Two new reports from BGCI

The Global Trees Campaign aims to avoid all tree extinctions in the wild. An important component of conservation action must be *ex situ* conservation: securing a species outside of its natural range, as a back-up measure in case remaining wild populations are lost. Our new report, highlights that 74% of the most threatened trees are absent from *ex situ* collections, lacking this vital conservation action that could save them from extinction. Click here for [BGCI Conservation Report](#).

A new report 'How Can Botanic Gardens Grow Their Social Role?' has just been published. The report is a review of the Communities in Nature program which was conducted by BGCI with the Calouste Gulbenkian Foundation. Click here for [BGCI Social inclusion report](#).

### International Garden Tourism Awards

The recipients of the 2016 International Garden Tourism Awards include The Royal Botanic Gardens, Cranbourne, Australia and Hangzhou Botanical Garden, China. See the full list of winners and read the press release [here](#).

### 'Famous' Singapore Botanic Gardens

Singapore Botanic Gardens was given UNESCO World Heritage List status this year. How many World Heritage-listed sites include an orchid named after Bindi Irwin? The *Dendrobium Bindi Irwin*, to give it its full name, takes pride of place in the VIP Orchid Garden at Singapore Botanic Gardens. Click [here](#).

### Southeast Asia Botanic Gardens Network

The Southeast Asia Botanic Gardens Networking Meeting was held in Bedugul, Bali in the first week in November at the Eka Karya Bedugul Botanical Garden. 'The regional botanical garden network must be developed to promote plant conservation at the international level', Dr. Iskandar Zulkarnain, the head of the Indonesian Institute of Sciences (LIPI) explained, as quoted by Antara. Click [here](#).

### UK's oldest tree is undergoing a 'sex change'

The Fortingall Yew, which is located in Perthshire, is thought to be between 3,000 and 9,000 years old and is considered to be one of the oldest living things in Europe. It had always been noted as 'male' in records, but is now sprouting berries – something only 'female' trees can do. Click [here](#).

# Pollinating great ideas

## Cranbourne Gardens Master Plan 2016-2025

**Chris Russell**, Director, Cranbourne Gardens, Royal Botanic Gardens Victoria

Royal Botanic Gardens Victoria (RBGV) is developing a Master Plan for Cranbourne Gardens to guide the development and management of the site over the next 10 years. This task provides us with an exciting opportunity to engage and strengthen relationships with our current stakeholders and visitors, and also to make new connections. We will be holding a small number of facilitated workshops with key stakeholders, as well as providing the opportunity for anyone with internet access to provide input in a few different ways.

Internet input will be through a moderated chat space, via a quick poll or by completing a more detailed structured survey. This approach aims to be inclusive and manageable by casting the net wide whilst collecting opinions in a manner that can be collated and summarised effectively.

We have utilised the services of an external provider to manage the project web portal, whilst ensuring the look and feel is consistent with our RBGV branding and visual identity. Once the ideas have been gathered they will be collated and considered and will inform the drafting of the Cranbourne Gardens Master Plan 2016-2025.

We would love to hear ideas from BGANZ members. Jump online before 15 January 2016. Click [here](#).



A colourful postcard distributed on site and through the region is helping engage our community in the Master Plan project.

## Botanic garden accreditation in Australasia – outcome of BGANZ workshop

**Mark Richardson and Janelle Hatherly**, botanical consultants

A workshop was held at the recent BGANZ Congress to discuss the concept of accreditation and whether it is something to be explored by the Australasian botanic gardens community. Setting best practice standards and benchmarking are currently high on the international agenda for cultural institutions.

### ***What is accreditation?***

Accreditation is a process in which the confirmation of agreed characteristics of an organisation's competency or credibility is recognised. Such confirmation is usually provided by a peer group best positioned to ascertain that the organisation in question meets the agreed standards. BGANZ and/or Council of Heads of Australian Botanic Gardens Incorporated (CHABG Inc.) could fulfil this role.

The possible benefits of accreditation for Australasian botanic gardens are to:

1. help botanic gardens, and particularly regional botanic gardens, target activities that best fit the purpose/definition of a botanic garden;
2. help highlight the importance of any botanic garden as a valuable collection (similar to a museum or art gallery) and not just as a public park;
3. provide a framework to promote a botanic garden's achievements, needs and practices to funding bodies, government and other supporters;
4. ensure that money acquired will be used to develop a garden for the reason it is there;
5. provide constructive and positive feedback throughout the accreditation process;
6. ensure that a change of management within any botanic garden (or above), does not alter the purpose of the botanic garden without good reason;
7. showcase a botanic garden's accredited status to tourism bodies and the wider community.

While many botanic gardens have achieved several of the above through their strategic and visionary plans, national standards for accreditation could assist *all* botanic gardens in Australasia.

The museum world has already embraced the accreditation process and, as living museums, a number of botanic gardens in the United States have become accredited through the American Alliance of Museums. The Botanic Gardens of South Australia are the only botanic gardens outside of the USA to have obtained this accreditation.

In 2008 Museums Australia, a national organisation for the museums sector, developed National Standards for Australian Museums and Galleries).

**[ Museums Australia ] National Standards**

**Version 1.4 now available**  
(Download .PDF, 837kb)

Collecting organisations of all kinds are invited to use the National Standards framework as a resource.

The **National Standards for Australian Museums and Galleries** have been produced collaboratively by the National Standards Taskforce, representing:

- ACT Museums and Galleries
- Arts Tasmania
- Collections Council of Australia Ltd
- History Trust of South Australia
- Museum and Gallery Services Queensland Ltd
- Museum and Art Gallery of the Northern Territory
- Museums & Galleries NSW
- Museums Australia (Victoria)
- Western Australian Museum

The Ian Potter Foundation has kindly supported this project by providing funds for the development, copy-editing and design of the National Standards document.

Please contact the relevant organisation in your state to find out about museum development programs and other activities related to museum standards.

**NATIONAL STANDARDS FOR AUSTRALIAN MUSEUMS AND GALLERIES**  
Version 1.4  
October 2014

Version 1.4, 2008 was produced collaboratively by: ACT Museums and Galleries, Arts Tasmania, Collections Council of Australia Ltd, History Trust of South Australia, Museum and Art Gallery of the Northern Territory, Museum and Gallery Services Queensland Ltd, Museums & Galleries NSW, Museums Australia (Victoria), Western Australian Museum

[http://www.museumsaustralia.org.au/site/whatwedo\\_nationalstandards.php](http://www.museumsaustralia.org.au/site/whatwedo_nationalstandards.php)

This has been revised and improved over the years and Version 1.4 lists nine guiding principles (each with standards, benchmarks, tips and resources) and looks at three important aspects:

- Part A: Managing the museum
- Part B: Involving people
- Part C: Developing a significant collection

This excellent document has successfully been used for an accreditation program in Victoria – called the Museum Accreditation Program (MAP). Aligned to the National Standards, MAP assists museums to achieve similar outcomes to those listed above. As can be seen at [http://www.mavic.asn.au/museum\\_accreditation\\_program](http://www.mavic.asn.au/museum_accreditation_program), much of the thinking that would be relevant to national standards for Australasian botanic gardens has already been done.

### *Feedback and suggestions from the workshop*

- If the botanic garden community is mission-driven, rather than market-driven, then the idea of developing standards would be worthwhile.
- A peer review process could be run through the BGANZ Council. However, as regional gardens with limited resources were potentially underrepresented at the workshop, it could be important to discuss accreditation more broadly with regional groups.
- Accreditation should not be seen as developing an elite group but rather as a process owned by the whole BGANZ membership. The establishment of any taskforce would need to take this into account.
- By providing standards for its members, BGANZ would provide a strong reason for membership. As such it could help lift the profile of BGANZ's brand across Australasia.
- Standards are not 'God given' and there is a need to look to those gardens that are effectively meeting an agreed Australasian definition of a botanic garden.
- A checklist of useful criteria is useful for all gardens, however, it is important that under resourced or small gardens aren't excluded or marginalised. Levels could be established within each criterion.
- With the development of national standards, more emphasis could be given to providing botanic gardens with a toolkit for improvements and upgrades to help leverage funding.

Some of the other important questions and comments that came from the workshop were:

- What are we trying to get out of accreditation?
- What is an A-grade botanic garden?
- Does BGANZ see accreditation as something possible – can we articulate it? Can we be a leader in this field?
- How will accreditation standards be measured?
- Who will audit a garden for accreditation purposes?
- The process (or journey) is as important as getting accreditation.
- Accreditation must not be to the detriment of future development of botanic gardens. Extreme bureaucracy should be avoided at all costs.
- Botanic gardens want to set themselves apart and getting the standards is important.

If the botanic garden community is mission-driven, rather than market-driven, then the idea of developing standards would be worthwhile.

The discussion also raised the significance of heritage characteristics in our gardens as part of the accreditation criteria. Another role that accreditation could play is to assist with disaster planning by highlighting any of the gaps in a garden's risk management program.

### **Where to from here?**

The botanic garden accreditation process should start by looking at current museum principles and practices rather than 'reinventing the wheel'. Suggestions for other organisations to look into were: Green Flag, Parks Forum and International Accreditation for Arboreta as well as the benchmarking work of the American Public Gardens Association.

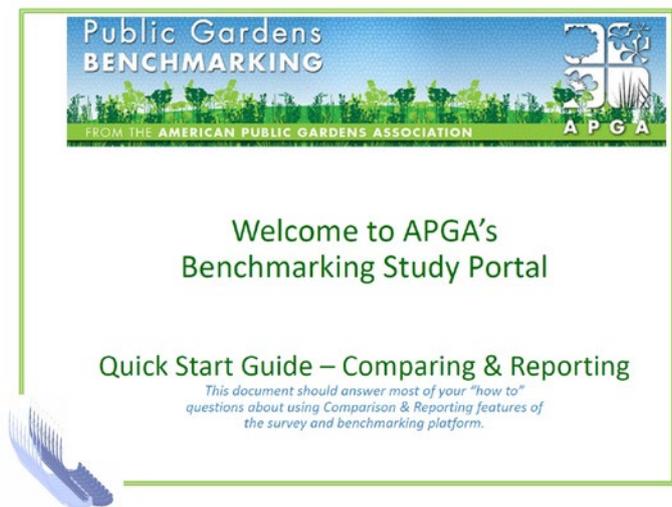
Based on this research and further consideration of the questions coming from the workshop, guidelines and standards for botanic gardens could be drafted. A taskforce could be set up to determine what would meet the different aspects within each criteria/ definition. A survey or questionnaire could be prepared and distributed to test standards across the sector.

If the accreditation process is holistically supported, the next step would be to agree on and publish Australasian botanic garden standards. To become accredited, museums spend 2–3 years developing procedures, policies and practices to meet recognised museum standards.

A national peer group should be agreed on to assess and determine whether an accreditation proposal meets the standards. Through BGANZ training, advice and information could be provided to assist gardens in meeting Australasian botanic garden standards.

### **Conclusion**

As the ANBG's website quite bluntly states, 'no agency gives legal accreditation to botanic gardens, anyone can call any garden a botanic gardens and no one can stop them'. To raise and maintain the 'credibility' of Australasian botanic gardens – as well as clearly set them apart from parks, the development of an Australasian botanic garden accreditation system, or at least botanic gardens standards, needs to be considered seriously.



## National Trusts of Australia's Register of Significant Trees

**Anna Foley**, Senior Advocate, Environmental Heritage National Trust of Australia (Victoria)

With our significant trees facing a disastrous triple-threat, connecting Australians to significant trees is more important now than it was even 10 years ago. Non-native species planted during European settlement over 150 years ago are rapidly senescing, particularly those northern European varieties that were never really suited to our long hot summers. Climate change has already started affecting trees in some regions of Australia; Melbourne's plane trees were so freaked out by a heatwave in 2014 that they dropped all their leaves in January. And on top of all this, significant trees are struggling to hold their own in urban spaces, as backyards dwindle in size or disappear completely.

To connect Australians with significant trees in their neighbourhood, the National Trusts across Australia have compiled data for over 2,000 significant trees around Australia over the last 30 years. These records represent over 25,000 trees and have been integrated into one national map for the first time. The map and individual data for each record can be found at The Register of Significant Trees [www.trusttrees.org.au](http://www.trusttrees.org.au). The National Trust believes making its national map of records fully available online to the public is a world-first.

Many significant trees classified by the National Trust are in botanic gardens, but they also grow between skyscrapers, in suburban backyards and parks, in the main streets of regional centres, around rural towns and hamlets, and in the bush and outback. Trees can be significant for a number of reasons, including: outstanding age or size; rarity; important genetic value; location in a historic garden or park; contribution to the landscape; commemorative plantings; trees with Indigenous cultural significance; or aesthetic significance, which sounds ambiguous but just means 'a really great looking tree'.



This is 'Herbig Family tree' *Eucalyptus camaldulensis* at Springton SA. Photo: National Trusts of Australia



This is Curtain Fig (*Ficus virens*) at Yungaburra . Photo: National Trusts of Australia

In practice, many trees will qualify as significant under several criteria. The Register includes a hierarchy of significance, so registered trees are assessed as being of national, state, regional or local significance. To assess the nominated trees, the National Trust compares them to other registered trees of the same species on the Register.

Being registered by the National Trust literally puts significant trees on the map. It doesn't provide legal protection, but it does invoke a moral obligation on the owner's part. The Register tips off the local Council about trees that deserve protection, and many trees now have legal overlays or planning controls that prevent their removal. The Register has become a tangible and effective way for the community to have its say in local planning and heritage decisions.

The National Trust relies on nominations from locals 'in the know' to populate our Register. The National Trust is trialling a new online nomination form, where locals can upload photos, measurements of the tree, and information about the tree's history. However, many of our nominators are not comfortable working online, so we still sometimes receive paper forms and photos developed from film. The Trust wants its Register of Significant Trees to be open to all tree lovers, both young and old, so it has been important to build in some flexibility to meet the needs of a broad cross-section of the community.



This is Moreton Bay Fig *Ficus macrophylla* at Werribee Park VIC. Photo: National Trusts of Australia

## POLLINATING GREAT IDEAS

Tree enthusiasts, frequently on the move like arborists and grey nomads, have praised the 'Around Me' feature, as they can load the website on their Smartphone or tablet and immediately click through to a local map of the significant trees nearest to them. Detailed information about each tree gives insights into its history. Members of the public frequently report back to the National Trust on the tree's condition, threats to the tree, photos, suggestions of better examples in the region – and an 'email a tree' feature will soon be available so everyone can send love letters to their favourites on the Register.



This is English Oak *Quercus robur* at Beechworth VIC. Photo: National Trusts of Australia

The National Trusts of Australia are community-based, non-government organisations, committed to promoting and conserving Australia's Indigenous, natural and historic heritage through advocacy for, and custodianship of, heritage places and objects. For more information about how your garden can share its significant trees via the National Trust's Register, please contact our National Coordinator at [trust.trees@nattrust.com.au](mailto:trust.trees@nattrust.com.au)



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## A new seed exchange collaboration

**Toby Golson**, Senior Horticulturalist, Australian National Botanic Gardens

The Australian National Botanic Gardens (ANBG) in Canberra has established both formal and informal partnerships with a number of regional botanic gardens over the last several years. We value highly the contribution of these existing partner gardens (such as Mackay and Tondoon Botanic Gardens in Queensland as well as Lismore Rainforest and Wollongong Botanic Gardens in NSW). By providing genetic material to mitigate the risk to listed threatened species they have enabled us to establish additional ex situ holdings in our living and seed bank collections in Canberra.

Following a productive discussion between ANBG's Living Collection Curator David Taylor and the newly appointed Curator of Brisbane Botanic Gardens (BBG) Dale Arvidsson, ANBG and BBG are now similarly sharing genetic material. The BBG Conservation Seed Bank has been in operation for 10 years and over that time has collected the genetic material (germplasm) of almost 1,000 taxa from all across Queensland.

One of the major drivers enabling this relationship is the role of the Australian Seed Bank Partnership which provides funding for many of the seed collecting projects that produce the genetic material for exchange. In addition, the Australian Seed Bank Online portal (see: <http://www.seedpartnership.org.au/initiatives/australianseedbank>) gives access to current holdings in each botanic garden, thereby allowing rapid and comprehensive assessments by the requesting institution.

Both botanic gardens are acutely aware of not wanting to impose unnecessary burdens and are keen to see partnerships operating in a low resource input fashion, while still following material transfer regulations. Most importantly, we hope that this initiative will result in better security for both the threatened and other species involved, as well as make a practical difference to their long term conservation.



Seed collectors Jason Halford on the left and Phil Boyle. Photo: Philip Cameron



Volunteers processing seed at BBG Conservation Seed Bank.

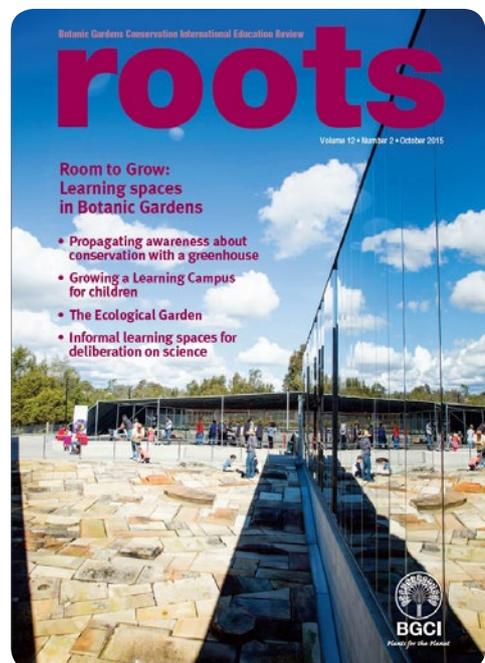
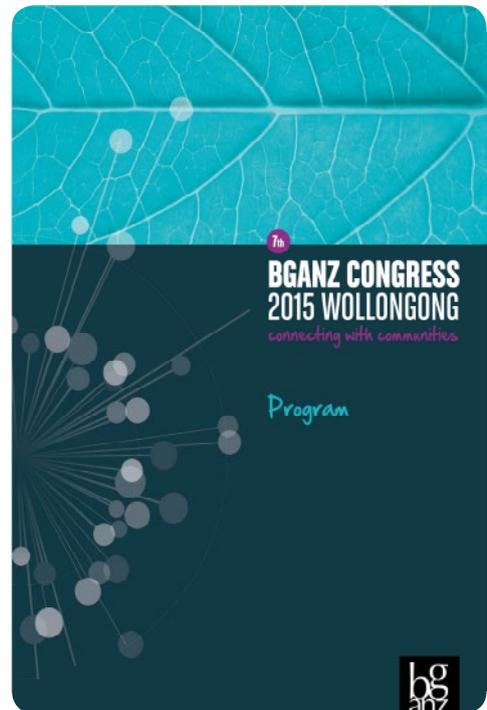
# Editorial note

The feature articles in this issue are based on conference presentations delivered at the recent BGANZ Congress in Wollongong. The dozen presentations featured broadly represent major conference themes and cover topics not previously addressed in issues of THE BOTANIC GARDENER. A random canvassing of delegates also influenced the selection with the greatest number asking for more information on Julia Watson's *Discovery stations – inspiration for school holiday programs*.

Members can also view the full 7th BGANZ Congress program (which has detailed abstracts for all papers) online at BGANZ's website by clicking [here](#).

In addition, here are some links to six other presentations.

- Keynote speakers Ben Peacock and Costa Georgiadis have strong web presences at <http://2020vision.com.au/> and <http://www.abc.net.au/gardening/> respectively.
- Keynote speakers Kim Ellis and Richard Benfield featured as guest interviewees in the Outstanding in the Field section of THE BOTANIC GARDENER issues 39 & 42 respectively. Visit BGANZ's website.
- Steve Forbes' keynote presentation is covered in 'Controlled patience – beauty & truth' in The Adelaide Review 7 October 2015. [Click here](#).
- Mary Bell's presentation on 'Contemporary education using digital technologies at the Australian Plant Bank' is featured in the latest BGCI's Roots magazine (12:2 Room to Grow: Learning Spaces in Botanic Gardens. Visit BGCI's website.



Cover Photo: Lichen garden at PlantBank ©The Royal Botanic Gardens and Domain Trust

# An orchid conservation partnership for South-eastern Australia

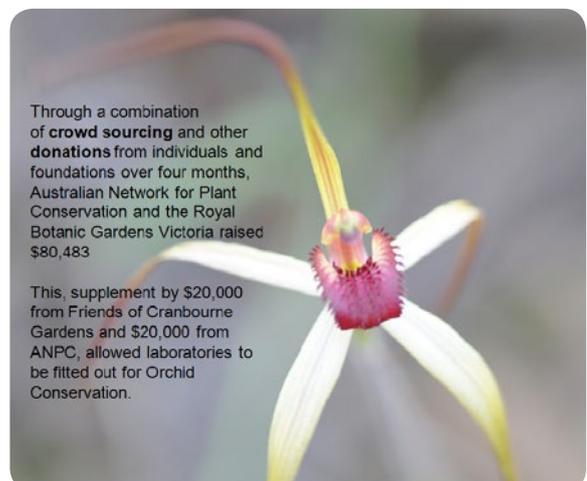
Noushka Reiter, Botanist (Orchid Conservation) and Tim Entwisle, Director and Chief Executive, Royal Botanic Gardens Victoria

Australia has around 1,300 species of native orchid, with three-quarters of these terrestrial (ground dwelling). The south-eastern corner of the continent is particularly rich in terrestrial orchids with many species under threat of extinction. To conserve these species and reduce their risk of extinction, many recovery plans include a re-introduction component. However until recent years it has been extremely difficult to propagate and successfully re-introduce most terrestrial orchid species.

Each terrestrial orchid species has its own complex relationship with the environment, including particular requirements for mycorrhizal fungi, pollinators and microhabitat. To restore populations under threat, a thorough understanding of a plant's ecology and biology are required, as well as the support of relevant land managers and community groups. The Royal Botanic Gardens Victoria is leading an innovative conservation partnership to collect, store, propagate and re-introduce threatened terrestrial orchids into their native habitat.

Partners currently include the Wimmera and Mallee Catchment Management Authorities, Parks Victoria, Trust for Nature, Amaryllis Environmental, Deakin University, RMIT University, Australian National University, Department of Environment Land Water and Planning, ALCOA/Portland Aluminium, New South Wales Office of Environment and Heritage, South Australia Department of Environment, Water and Natural Resources, Botanic Gardens of South Australia and a range of community groups.

The community groups and many volunteers are critical to the project, providing expertise and resources to compliment the support from government. The Australasian Native Orchid Society (Victorian Branch) in particular has assisted with almost every re-introduction to date and its members have been a major part of the program's success. The society also made a major contribution to a recent crowd-sourcing campaign to establish laboratory facilities in the Royal Botanic Gardens Victoria at Cranbourne Gardens.



Building on the successes of local orchid growers and enthusiasts, the Royal Botanic Gardens Victoria's Orchid Conservation Partnership now has the capacity to grow most orchid genera (*Prasophyllum* being a notable exception at this stage, but with experimentation we are continuing to overcome impediments even in this notoriously difficult genus). Successful re-introductions are now possible, although pollination, seed-set and recruitment are not always sufficient for self-maintenance of populations. Still, the techniques are now proven and re-introduction should now be considered a feasible method for supplementing or reinstating viable terrestrial orchid populations.

To date, over 40 state and federally listed species have been propagated with 32 re-introductions of 20 species being put back into their native habitat. These include the Red Cross Spider-orchid *Caladenia cruciformis* (pictured), Metallic Sun-orchid *Thelymitra epipactoides* and Yellow-lip Spider-orchid *Caladenia xanthochila* (pictured).

**To date, over 40 listed species  
have been propagated with 20  
put back in their native habitat.**

Successful re-introductions depend on a thorough understanding of the ecology of the species, in particular provision of the necessary mycorrhizal fungi and the presence of suitable pollinator(s). The site must be selected and prepared carefully, including habitat and niche matches, mitigation of threats such as pathogens, weeds and herbivores, and securing the land. Finally, all re-introductions must be monitored, with the re-introduction site and a comparable wild site tracked over many years to assess seed set and recruitment.



# Adding value to traineeships – the Kings Park experience

Amanda Shade, Curator Nursery, Botanic Gardens and Parks Authority

Since the 1960s, Kings Park and Botanic Garden (Kings Park), which is managed by the Botanic Gardens and Parks Authority (BGPA), has been employing horticultural trainees as a means of developing highly skilled people with a passion for and knowledge of the cultivation of Western Australian flora. In addition to training people for future employment, who may go on to practice their skills elsewhere, this program brings many benefits to the team at BGPA forming a dynamic part of the Authority's workforce across many activity areas.

The program has expanded and developed over recent times to incorporate a core of 11 trainees, eight in horticulture and one trainee in each of the specialised areas of arboriculture, turf management and conservation/landcare.

All trainees attend work for four days a week and study at a Registered Training Organisation (RTO) for one day a week.



The 2015 Kings Park trainee group celebrating the 50th anniversary of the Western Australian Botanic Garden. Photo: D Blumer

## Value Adding Initiatives

Over the past 7-8 years, improvements to the 'on-the-job' component of training and assessments have been introduced in Kings Park to complement the trainees' formal studies. Some of these are highlighted below.

### **Rotational roster**

All trainees are offered unique opportunities to develop a wide range of transferable skills and knowledge by working within diverse horticultural areas. These include the Western Australian Botanic Garden, Parkland, Nursery, Arboriculture, Bushland Management, the Western Australian Seed Technology Centre, Turf Management, Irrigation, BGPA Herbarium, Plant Development and Plant Science.



Arboriculture is always a favourite in the trainee program. Photo: D Blumer

## ***Plant identification***

Weekly plant identification sessions are held for all trainees. Each week 15 species are chosen and trainees are taken to see each plant in the field and given information on family, genus, species, common name and a fifth variable category that could include things like growth habit, flowering period, derivation of scientific name etc.

Trainees are given one week to learn this information before being tested – with categories tested related to the level of certificate they are undertaking.

These sessions also enhance important elements of taxonomic and botanical learning outcomes.



In-house plant identification session.  
Photo: D Blumer

## ***Workplace journal***

All trainees are required to maintain a workplace 'journal' or diary, documenting new skills and knowledge that they are acquiring. Trainees are

encouraged to add to these journals regularly and may be asked at any time by any staff member to show their work to them. These are also a useful tool for managers to ascertain that the information they are providing to trainees is being interpreted correctly. Many trainees submit their journals as evidence of workplace assessment for course units.



Trainee field trip to Paruna Sanctuary.

## ***Field trips***

Field trips are to areas within the horticulture industry such as Perth Garden Festival, Perth Zoo, Tree Farms, or bushland sanctuaries as well as field-collecting opportunities to far flung corners of the State with the BGPA Seed Collector. These are fantastic opportunities for trainees to learn about different types of horticultural activities and trainees are required to submit a report on each field trip they attend.

## ***Monthly meetings***

Trainees are rostered to organise agendas and minutes, and deliver short presentations on a horticultural topic of their choice at regular monthly meetings of trainees and their mentors.

This helps build their organisational, time management and public speaking skills. The meetings are also good opportunities to workshop ideas, share information and provide feedback.

***In-house training workshops***

Regular training opportunities and workshops are delivered by staff within specialist areas such as science, grafting workshops, pruning workshops and tree risk assessment add value to formal training. They also offer trainees insight into some of the current projects, management strategies and different challenges faced in running a state botanic garden.

***Work experience***

Towards the completion of their contracts, trainees are offered the opportunity to undertake up to four weeks work experience at other relevant companies/agencies. This often leads to a 'foot in the door' with potential future employers.

[ Trainees want on-the-job experience in plant ID, horticulture, project management, and staff supervision. ]

***Trainee projects***

Trainees are given the opportunity to conduct an individual project for which they assume total responsibility in terms of research, planning, budgeting, resource allocation, implementation, monitoring and record keeping. This activity is particularly effective for trainees studying at higher level certificates who are looking for on-the-job experience in things like project management, staff supervision, and project costing. It also delivers useful outcomes to the BGPA. Some of the more recent projects have seen the construction of a trial vertical garden, using Australian native plants, and a trial of Australian native species as bedding display plants.

***Mentor program***

Ongoing mentoring and support from selected qualified staff is offered, where each horticultural team has one or more experienced staff members who act as trainee mentors for designated areas. These staff help out in any way they can and build strong working relationships with the trainees.

***Encouraging creativity***

There are many ways in which trainees are encouraged to broaden their horizons and promote their creativity. These range from tailoring each individual's study plans and unit selection (working within set training packaging rules and capacity of the workplace to deliver) to offering different opportunities to develop not just horticultural skills, but life skills. This may occur by way of involvement with education programs, staged events and public interaction.

***Cultural development***

Developing a culture of pride and enjoyment in the workplace and in learning has enormously beneficial flow-on effects to the general workforce.

## Career Opportunities

Upon completion of their training, past BGPA trained horticulturists have taken up positions in local councils, private and public schools systems, landscaping companies, irrigation companies, arboricultural companies and production nurseries. Some have started their own businesses, others have travelled interstate or overseas to take up horticultural opportunities in various organisations and some have selected further study in areas like botany, landscape architecture or biological sciences.

Currently Kings Park has 12 permanent staff members that began their careers as trainees, including one who began 45 years ago as a trainee.

## Conclusion

The BGPA believes trainees are a valuable addition to the workplace for many reasons – their enthusiasm and desire for knowledge has a positive effect on those working around them; the fact they are exposed to so many different areas gives them a unique holistic insight into the operations of the agency; the diverse range of transferable skills and knowledge they develop are utilised to benefit each team they work with; and their enquiring minds encourage qualified staff to keep their own skills and knowledge current so as to enable them to continue to provide a professional, world class standard of workplace training.

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# New Zealand horticulture industry training qualifications

David Sole, Botanic Gardens Manager, Wellington, New Zealand

In January 2016 New Zealand will have a new qualifications framework which will be more focussed on removing duplication, clarifying qualifications and creating clearer career pathways. At the same time the Industry Training Organisations (ITOs) have been merged to form super training organisations and moved to a business model of governance rather than vocational governance by sector, as has been the case to date. This has resulted in a significant reduction in the number of horticultural qualifications and a large administrative organisation. The horticultural industry will have to remain vigilant to ensure that its voice is heard.

## The past

In 1996 there was a major shift from apprenticeships and cadetships to unit-based learning. The title 'apprentice' was discarded in favour of 'trainee' to reflect universal access to training. New units of learning were written, mostly by contractors, with guidance and input from industry representatives. The process was very pedantic and had many in the industry wondering if it was the unit or the learning that was the important part of the outcome. Many organisations ignored the label 'trainee' and continued with 'apprentice' which has now re-entered the training vernacular.

As part of that change ITOs were created. For horticulture, the ITO Board was populated with representatives from the vegetable and fruit growers, landscape, amenity, flower growers and arboriculture. Viticulture remained outside of this ITO. Governance was very much vocationally based and, to some extent, still sector protectionist.

**Standards and training were being 'dumbed down' and didn't reflect the level of skill required.**

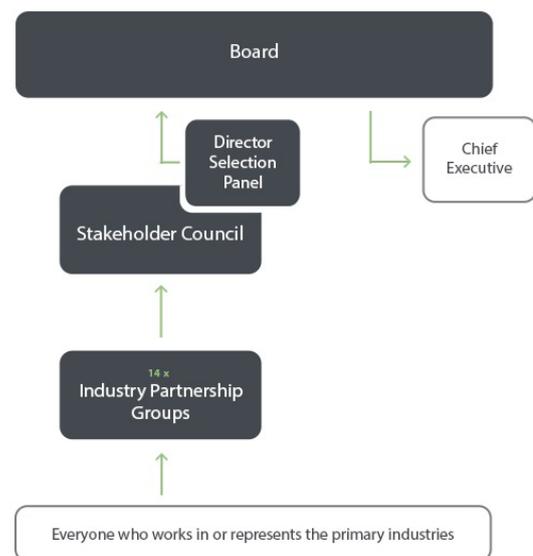
Moving forward to 2010 there was increasing disquiet among New Zealand BGANZ members (BGANZ-NZ) about the proliferation and quality of the New Zealand horticulture qualifications. There were far too many qualifications, the unit standards and training moderation were being 'dumbed down' and, increasingly, were not reflecting the level of skill required across the horticultural sectors. On behalf of BGANZ-NZ Barbara Wheeler of Dunedin Botanic Garden

surveyed training at Level 4 Certificate in Horticulture across nine botanic gardens and major parks. The result was that of all the Level 4 Certificates in Amenity Horticulture being delivered across this group there were only three units of learning in common and those three were 'Demonstrate knowledge of' units.

In 2103 the New Zealand government announced a Targeted Review of Industry Qualifications (TROQ). It too had identified issues with the qualifications. New Zealand had 3,500 tertiary or industry qualifications compared to Sweden's 1,500 – a country of similar size, population and comparable education system. There were around 130 registered horticultural qualifications; so many that employers could not reliably assess a person's skill level for a job in amenity horticulture from their qualification. The number of qualifications and no Level 5 New Zealand Certificate or Level 6 New Zealand Diploma also meant there were no obvious continuous career pathways for trainees.

In parallel to TROQ the government instructed that there was to be a reduction in the number of ITOs to reduce duplication, to encourage the development of seamless career pathways and to create and have a much more business-focussed approach to the management and delivery of training. From this emerged the Primary Industry Training Organisation (PrITO) encompassing agriculture, horticulture, equine and racing, food processing, seafood and sports turf groups. Of these, after dairying which had significant numbers of trainees at Level 2, amenity horticulture was the second largest industry group with around 1,000 trainees at the time of PrITO's establishment.

ITO governance is now through a series of layers (see diagram). The Board, appointed by a director selection panel, has a wider role to look at meeting future training needs, tracking industry trends and ensuring that the training services, units and qualifications delivered by training providers and employers are meeting industry's needs.



Primary Industry Training Organisation (PrITO) governance structure  
<http://primaryito.ac.nz/about/governance>

## The future

In January 2016 new qualifications begin for amenity horticulture. In addition to the Level 4 New Zealand Certificate in Horticultural Services there will be a Level 5 New Zealand Certificate in Horticulture Services, focussed on advanced technical skills and Level 6 New Zealand Diploma

in Business. While some of the sectors were able to have specific Level 6 diplomas (it could be argued that some of these are really Level 5 technical qualifications) amenity was not, as there was not significant enough variation from the New Zealand Diploma in Business. It is expected that horticultural trainees will take elective units related to horticulture within the diploma to ensure relevance. Perhaps the most significant TROQ outcome has been the reduction in the number of horticultural qualifications from 132 to 22.

The amenity horticulture sector was able to avoid a generic Level 4 Certificate in Horticulture which would have little validity. There remains some concern by training institutions that there is a group of people who may now be excluded from horticulture. We want people who want a horticultural career. We are not interested in horticulture being a 'soft option' for training. We must protect and value our industry as other vocational groups do theirs.

**[ We must protect and value our industry as other vocational groups do theirs. ]**

There still remain significant challenges. In a review of the last 64 news releases by the PrITO, only three were directly related to horticulture – the whole horticultural industry including production and processing is virtually invisible. We found recently that 80% of training units had been reviewed without any reference to industry. There remains the possibility of training providers developing private qualifications outside of the recognised framework which do not have the integrity that we need and expect.

But perhaps the biggest challenge has been the disappointing engagement of the amenity horticulture sector with the TROQ process. For amenity horticulture to retain its voice and maximise its influence we must use every opportunity to articulate our expectations for industry standards of practice. We must also push our trainees to pick up the Level 5 and Level 6 qualifications or the qualifications will be lost. Literacy remains a major barrier to industry training. All vocational industries need to push back on governments to reinforce that there can be no career paths without literacy in words and numbers.

We must support our IPG members (and Australian equivalents) – they are the conduit between industry and PrITO. There is no right to complain about training units or qualifications when we are not taking opportunities to exercise our influence.

It is the responsibility of industry leaders to use all training opportunities for staff development, provide clear career paths and ensure that we have the people we want and that it is an industry people aspire to work in. It's up to us and those who follow us to ensure that there is a sound horticultural industry which has integrity and can command trust.

# Working beyond the boundaries

James Brincat, Area Chief Ranger, Werribee Park

As both a horticulturist and Area Chief Ranger for Werribee Plains, I have the privilege of being in charge of one of Victoria's iconic heritage gardens – Werribee Park. The park is in the municipality of Wyndham, about 30 km west of Melbourne and, like many of the outer western suburbs of Melbourne, is rapidly developing. Where our parks and gardens were once bordered by native grasslands, our boundaries are now skirted by houses. Wyndham also has another interesting statistic: it has over 150 different ethnic communities from culturally and linguistically diverse (CALD) backgrounds.

In 2010, Parks Victoria identified the need to better connect with its local CALD communities and in 2012 we commenced a partnership program with AMES Australia, an NGO that currently provides Federal and State Governments with settlement services for newly arrived refugees. The community engagement program, known as Working Beyond the Boundaries, was established and is now successfully using our gardens to connect with 'invisible' refugee communities. It provides them with mental health benefits as well as pathways to employment. It generates over 3,500 volunteer hours a month, yet doesn't require buckets of resources and provides 90% of the hands-on labour in our gardens.

If you apply the Green to Gold calculator to this scenario, it is now generating – wait for it – tens of thousands of dollars a year in grants and vegetable and nursery produce sales.

**At any given time, there can be over 100 people a week involved in some aspect of the Working Beyond the Boundaries program at Werribee Park.**

Having these significant extra resources is making possible a number of additional projects that would otherwise never have seen the light of day.

The first stage of the Working Beyond the Boundaries program was the establishment of the kitchen garden in our historic farm precinct. Through our partnership with AMES Australia, we identified the need for a community garden in a disused part of the homestead garden, and AMES arranged a gardening day out with about 40 refugees from many backgrounds. On that day we soon saw that many of the Karen Community relished a day out working in the garden. The Karen are an ethnic

group from Burma and are one of the fastest growing refugee groups in Victoria, with many having farming backgrounds and a strong affinity with horticulture. The community garden project began a couple of months after that day and it rapidly became a Karen community hub for socialising and learning. It also provided the additional benefit of helping to address the loneliness and depression that are experienced by many refugees as a result of new surroundings and social isolation.

The project soon saw the revitalisation of the entire farm area, which was totally unexpected. As the Karen grew more confident, they joined ranks with our heritage orchard group and together they literally pumped life back into the old disused orchard, farm and vegetable gardens. From this work they then 'jumped the fence' into the formal gardens.



Here we witnessed a transformation of our garden beds, so rapid that in one season we saw the results equal to about 10 years work. To put this into perspective, in the last 20 years Werribee Park had lost about 75% of its garden collections. This was mainly due to drought and the build-up of salts from recycled water. In addition, the invasion by rabbits had pushed the state of the garden beds to a new low. All that was left in many of the beds were a few hardy shrubs, lots of Agapanthus and a network of rabbit burrows that I'm sure went all the way to China!

The Karen regard rabbits as chickens with four legs, and pretty soon they offered to bring in some ferrets. Many of us from the western and northern suburbs of Melbourne were brought up on wild rabbit, so the offer made perfect sense to me. After a great number of memos were exchanged, and we were able to convince the relevant department that it is okay to catch and eat rabbits in a garden, we added ferreting to our existing rabbit control program.



Two mornings a week before the gardens opened, men and women from the local Karen community brought in their ferrets and removed over 400 rabbits from our garden beds in the first six months. The Karen, along with others from the CALD community, then assisted our Friends groups in the task of digging up the Agapanthus, destroying the warrens and replanting the beds. The Sporting Shooter Association (SSAA) then assisted us with spotlighting in the garden and surrounds.

The Karen helped by collecting the shot rabbits and taking them home. The SSAA removed a further 1,000 rabbits in that year. If we had to bury them all, our garden would have looked like the surface of the moon. I'm so glad we took this approach as one of the Karen elders did warn us that throwing away dead rabbits in front of people that had experienced starvation, would have rapidly ended the relationship.

The success of Working Beyond the Boundaries program also led to the establishment of the Parks Victoria Internship program. The program is designed for members of the local community, under the age of 30, who aspire to a career in horticulture or conservation and land management. Participants are given the opportunity to work closely with park rangers under a 'buddy system' where they gain practical and workplace English skills. Parks Victoria and AMES Australia have partnered with the Brotherhood of St Laurence to facilitate the training. We have about three interns at any given time and it's a very valuable component of the program – for the gardens as well as the individual.

I cannot overstate the importance of providing a forum for improving workplace English. Imagine sitting an interview for a job that you are skilled in, but are unfamiliar with the names of processes or tools of the trade. Parks Victoria now funds an adult apprenticeship which is currently filled by a young Karen refugee by the name of Hsar. He is our conduit to the local youth and plays a pivotal role in influencing the behaviour of his peers. I can honestly say that having an internship program which targets young adults has helped us achieve a very healthy relationship with the young adults in our local community.



Another successful component of the program has been the revitalisation of our nursery and historic glasshouses. Here volunteers cleaned up and repaired the benching in our old glasshouses. They converted a tractor shed to a propagation and potting shed and got the area back in production. Propagation cuttings were sourced from local backyards as well as other botanic gardens. Volunteers grew plants from these which were then used to revitalise our collections.

The bonus was that we were also producing plants for sale, and the income from this went directly into purchasing much needed equipment. Onsite propagation is now 100% funded and resourced by volunteers. We calculated a saving of \$20,000 a year by allowing the volunteers to produce plants this way. Recently a local grower of rare plants donated over 100 semi-mature trees and shrubs for our gardens. He did this after hearing about our garden bed revitalisation program.



In closing I would have to say that the positive impact of the Working Beyond the Boundaries program on our gardens has been immense. Parts of our gardens which were overgrown, tired and in poor condition are now regularly maintained and our collections are once again thriving. This is all due to our strategic and planned program of community engagement. We have also allowed the program to evolve over time which has ensured that our garden remains relevant to its community.

To those considering doing something similar, I offer the following points of advice:

- The intent of any community program should be to develop opportunities for greater community involvement, which suits and benefits both the community and garden.
- Be mindful of managing your resources, and keep your community programs practical and operational.
- Community engagement programs are best run in partnerships with other agencies that have the relevant skills and expertise, and are better equipped to link your garden with a particular community. Partners are also able to connect a project with existing government programs that may lead to further funding.
- Know the difference between true partners and interested stakeholders. True partners will have a vested interest in the outcome and will produce synergy. Stakeholders generally have single interests and are managed in a different way.
- For any program that relies on volunteers, having a coordinator on ground level is an essential requirement. As there may be a high turnover with participants in the program there is likely to be a high administrative work load. A coordinator can lead the recruitment and assist with the on ground delivery of the program, inductions and OH&S.
- The program should not work in isolation from other Friends or volunteer groups. It will prove counteractive in the long term to run separate groups on the basis of one group being from a new and emerging community. The newer group should be slowly merged with the other established one. This takes time and careful thought and should not be rushed.
- AMES Australia gave Parks Victoria the following advice: 'If you want to be successful in working with new and emerging communities, you must be a risk taker'. It is all very well to have a dynamic on ground team delivering the program, but other departments need to be, to a certain degree, both innovative and dynamic in supporting your program.
- Each partner should declare what they need from the program. However, their aims must never lead to community exploitation or be seen to be exploitative. Maintaining trust and being trustworthy is vital for community engagement programs.
- Having individuals involved in key outcomes who are not skilled in those areas can bring inertia to a project, or even kill it. It is not effective to hand a project with social or health implications to someone skilled only in horticulture, conservation or land management. Such a person will be unable to drive the social component of the project. Pick the right person to drive the right priorities of the project.
- Different levels of investment are required across different programs and activities. Investing in a program at its inception will provide dividends as the human potential of those involved is realised. This is particularly important for migrant communities where relationships, trust and outcomes need to be nurtured and understood before success of the program is realised.
- A project should not be taxing on garden resources, and garden staff should not have to work any harder. We all have to work differently for a project to be successful; horticulturists sharing their horticultural skills, environmentalists sharing the benefits of conservation and traditional volunteers sharing their space.

# Planning the business of botanic gardens – how to make a black hole into a shining light

Anne Duncan and Mark Kelly, consultants

The reference to 'a black hole' in the title refers to the way many councils and government organisations that support botanic gardens perceive them to be black holes where investment and resources just disappear. This makes it difficult for garden managers to justify resources for new initiatives and developments. By using a business framework and a clear planning process, managers of botanic gardens, can turn this perception around and respond positively in competitive environments where resources are scarce and it is difficult to attract funding.

## Contemporary pressures

Some of the influences that have impacted on botanic gardens around the world include:

- Greater difficulty in accessing public funding, requiring more diversified sources of funding;
- An increasing need to justify the expenditure of public funds;
- Growing public interest in leisure gardening leading to increased visitation and pressure to provide horticultural direction and expertise;
- More pressure to generate revenue from operations; and
- Growing interest in ecosystem services including the conservation values of plants.

Like all other businesses in a highly competitive economy, there are significant pressures on botanic gardens to do more with less i.e. they must increase productivity, attract diverse resources, invest in growth and development, and demonstrate definitive returns from investment. To do this, gardens can learn from successful businesses and take a business planning approach.

## Gardens as businesses

Botanic gardens are businesses i.e. they use their resources and capabilities to provide value for customers and, in doing so, must provide a return on investment.

The main physical resource or primary asset is the place itself, including the plants and the landscape. This asset also provides a place for economic and social activity to generate financial and social capital. Plant knowledge and horticulture are also significant resources or assets. They provide many capabilities such as community facilitation, education and interpretation – often through association with organisations such as Friends groups.

An issue for garden managers is that the returns on investments are often difficult to articulate, such as the community experiencing social opportunities and other intangible benefits associated with using the facilities and services.

So the business question is: how can a botanic garden combine its site/landscape/plants and knowledge resources with the capabilities of its organisation to deliver things customers (the community and visitors) want, and do this in a way that provides return on investment?

## Lessons for gardens from business

Here are some fundamental ideas behind successful businesses that can help botanic gardens.

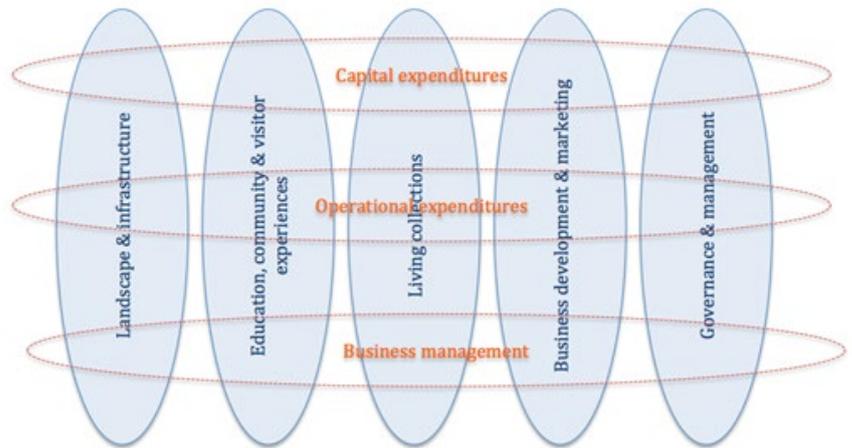
- **Value** – successful businesses identify a clear value proposition – doing or providing something that people want. Gardens need to identify their values, goals and a clear value proposition. This identifies a unique combination of resources and capabilities which solve a need/desire of customers and in so doing generate returns.
- **Investment** – successful businesses think of all business expenditures as investments to achieve outcomes – both operating costs and capital expenditure. Australasian botanic gardens typically rely on government funding, but once operational budgets are secured there is a tendency to think there is less imperative to demonstrate what is being delivered for that money. Any recipient of public funds needs to consider returns on all investments – both operational and capital expenditures. This means measurement of outcomes is critical.
- **Innovation** – is fundamentally about creating value. The most successful businesses and organisations are those that focus on creating new value, not just delivering existing outputs.

## A business framework for gardens

The figure below illustrates a business framework developed to provide structure for the scope of the business of botanic gardens in terms of five key business areas (or 'surfboards', to us!). That is:

- Landscape and infrastructure
- Living collections
- Education, community engagement and the visitor experience
- Business development and marketing
- Governance and management

Most garden assets, capabilities, issues and opportunities can be related to these five areas. Managing, addressing and taking advantage of these requires considering different types of expenditures or investments – capital, operational and organisational (or business management).



The second figure illustrates how this type of business framework can be ‘operationalised’ into a business planning process for botanic gardens and used as a tool to structure business issues, opportunities and investments.

## A planning process for garden businesses

The first step is to identify a clear strategic framework. A clear strategic framework (values, mission and vision) is very important and will provide a clear picture of what you want to achieve and what resources are required to achieve it. This is something often overlooked by small gardens, however it is almost more important for them than for big gardens. In any resource-constrained environment, a strategic framework helps prioritise decisions.

Key questions to consider in relation to the strategic framework are the amenity and knowledge values, regional context, the scale (gardens come in different sizes and serve different sized communities) and the timeframe.

Once this is achieved it is much easier to assess the garden’s issues and opportunities for each key business area as well as identify options for investment, using the business framework for gardens. Investment options can be prioritised this way before business/action plans (which can be 3-year rolling plans) are developed. And finally outcomes should be measured using visitor/community surveys and other evaluation tools.

In conclusion, botanic gardens are businesses like any other and need to have a professional approach to planning their business in order to be successful in competing for scarce resources and new investments. Clarity about strategic purpose is an essential underpinning to assist effective prioritisation of investment, large or small.



# Tree succession planning in heritage gardens – a case study

Justin Buckley, Manager of Horticulture, National Trust of Australia (Victoria)

What do you do when you receive a report telling you that 40% of the trees at your internationally significant garden have a useful life expectancy of 15 years or less? This was the reality faced by the National Heritage Register listed garden 'Rippon Lea', a National Trust owned-and-operated property in Melbourne, Victoria.

This 14 acre garden in inner Melbourne includes many specimens dating from the original 1868 garden, remnant Eucalyptus stumps, extensive surviving Fernery, an Oak Avenue and no fewer than 42 large mature Moreton Bay fig trees. Management of these is in the context of a garden receiving no government funding and facing ever-increasing commercial pressures to ensure its survival.

Rippon Lea makes an interesting case study as 20 years have elapsed since first attempts were made towards tree succession at the property. Although many replacement trees have been successfully established, assessing these efforts after 20 years it is clear not everything has worked. As always, understanding what didn't work is central to getting things right in the future.

Twenty years ago conservation policy surrounding landscapes was still in relative infancy and much of it had been adapted from architecture. This had limitations, for, as we know, landscapes change immensely in a century whereas a reasonably well-conserved building should change very little. This architectural parentage was reflected in policy that was quite rigid in nature. It must be added that policy was badly needed as lots of things were being lost from heritage gardens, and not always after a rigorous thought process.

In terms of tree replacement, this rigid policy was captured in the ideal that you would seek to 'replant with the same species, propagated from the original tree and replant as close to the location of the original tree as possible'. While a worthy aspiration, this often led to trees being planted far too close to an existing tree or on the south side of a 20 metre high neighbour. It is no surprise that this resulted in poor and unviable specimens 20 years on.

Attempts to propagate and grow-on trees in-house without the resource of a production nursery facility were also counterproductive. (The current program of tree replacement has been sponsored by Melbourne advanced tree nursery Metro Trees). One of the key lessons from our review is that policy at the expense of practical necessities is poor policy. It is fair to say any amount of policy is made redundant if you don't have healthy, thriving specimens in the ground in the decades to come.

Another clear issue to come out of our review was the need for more thorough research into the history of Rippon Lea's treescape. Trees can be deceptive as they age and we can't help but make a lot of assumptions about what is big and, in turn, old and therefore important (or otherwise). Garden historian Richard Aitken was commissioned to write an overview report which essentially collated all available information regarding trees at the site. Photographs, oral histories, period magazine articles etc. were the basis for this report.



The treescape of Rippon Lea c.1885 (Rippon Lea archive)

Rather than being a prescriptive document that says where and when to put what, it is more of a reference to draw on. In this way, the report allows decision making to also be informed by arboricultural assessments of tree condition as well as by the site knowledge of staff on the ground, who know better than anyone what challenges are faced in establishing stock in various areas of the grounds.

As a result, decision making is now far more flexible, with the overriding aim to have successful, viable specimens in the ground in another 20 years. At the same time, Richard's report allows decisions about tree planting to be made from a sound historical basis. Ultimately, it can be debated whether it is the 'right' or 'correct' decision to replace a certain tree, it is more important that it is clear why that decision is being made.

Finally, our research also highlighted a point worth reminding ourselves of. Those gardeners who developed the prized community assets we manage today faced and conquered many of the same challenges and often without resources we take for granted. In a world before air conditioning (and a dress code before shorts and t-shirts) they understood the value of trees to help cool a city in the Australian climate.

The gardeners in industrial England argued about what trees should be used to replace their 150 year old specimens – turned black by nearby factories! As we make decisions that shape our gardens for future 'custodians', we should look to lessons learnt by our predecessors.

# Realigning research to strategic outcomes – to ensure it stays relevant

Rebecca Stanley, Curator, Auckland Botanic Garden

'Delightful scientific shade, for knowledge as for pleasure made' was quoted at the opening of the Auckland Botanic Gardens (ABG) in 1982 and researching the best plants for Auckland gardens has always been at the heart of what we do. Thirty years on the model for research was in need of review.

A new Plant Collection Guidelines, Marketing Plan and Horticultural Assessment Program have emphasised our role as a public garden, set research outcomes for each collection and embraced sustainable gardening practices. Our research program has also been aligned to our strategic goals.

## The research executive model

Research is now governed by a research executive (or steering group) chaired by the curator. Membership includes the garden's manager, team leaders, records & conservation specialist and the partnerships & education position from the visitor services team. This group also guides making our research easily accessible in a digital world; is cognisant of community interests; seeks collaborative relationships with tertiary institutions and local funders; and broadens research into new areas such as sustainable garden practices with solutions to modern garden and environmental problems.

## Trials and evaluation

Since the opening of ABG in 1982, plant trials have formed the core of the research program. Our motto is 'Where ideas grow' and our aim is to inspire our visitors to select plants that are well suited to Auckland's environmental conditions.

This approach negates the use of toxic chemicals such as fungicides and insecticides. Plants such as New Zealand's native hebes are popular but are afflicted by fungal diseases e.g. septoria and downy mildew. This limits their popularity with home gardeners. Hebe cultivars (the 'Wiri' series) were bred to capture the beauty of showy hebes (e.g. *Hebe speciosa*) but also benefit from the resistance of some hebes to these diseases (e.g. *Hebe diosmifolia*).

Another strong element to the research program is plant evaluation. However we realised that this program was run independently from business planning; in some cases being led by external experts and not always with senior staff involved in decision making.

## Planning and data collection

The review recommended a Standard Operating Procedure (SOP) for trials to guide decision making and planning, particularly to ensure that every trial has a leader, that planning and data collection is tied to the aims of the trial and occurs at appropriate times (not too little and not too often) and that an end-date is specified. This reduces the risks of trials extending way beyond their useful life –finishing trials and removing the plants are critical steps in a dynamic trial program.



*Hebe 'Wiri Desire'*. Photo: Jack Hobbs

## Partnerships

The review also helped us realise the value of partnerships and collaborations. The Friends of Auckland Botanic Garden (Friends) wanted to support research and now they offer a contestable fund for research each year. In its first year this has supported stage one of a meadow trial. In addition a local environmental trust, the Manukau Beautification Charitable Trust (Trust), approached us about their research fund which this year has supported a local technical institute student running a compost trial at ABG. The Trust has no track record in supervising students and saw ABG as a safe pair of hands to manage their fund. Critical in this relationship is that the Friends help us administer external grants for research. A great spin-off for ABG is the requirement of the Trust for the student to achieve community outreach goals. This led to the student setting up a display in our visitors centre and running several workshops for the public. We hope to use this model for supporting student research again.

As part of the review we invited external botanical, ecological and environmental scientists to ABG and asked them what would make us an attractive place to do research. They told us

to be welcoming, have no overbearing permitting processes, provide opportunities to re-visit when funding has expired (to demonstrate their work to others), and to offer a 'shop window' for science. They also said they appreciated working with our staff and sharing knowledge on plants. By working here, they become our advocates and may generate future research and funding.

### In summary

The review showed our trial and evaluation program needed more rigour around planning while remaining the core role of our research. The rigour is now provided by the research executive and the SOP. The research executive can also oversee and manage staff workloads and ensure the trial beds are used efficiently. The review revealed that external researchers and students wanted to work at the Gardens and that external agencies liked to fund research associated with us.

**ABG's aim is to inspire visitors to select plants that are well suited to Auckland's environmental conditions.**

The process has also allowed us to more overtly state our research niche, what we might research and why, define the space where we can add value and which connects to our Council and ABG goals. Broadly those areas are trials and evaluation for plants in Auckland conditions, pest and disease resistance without chemicals, and plants that do not jump the garden fence.

This clarity enabled us to present our research to visitors in a visitor centre display which has been very popular. The next phase is to look at how we might present data to visitors in a more engaging way. Gone are the days where black and white photocopied sheets of text will do. Hopefully in the not-too-distant future we will also be able to involve visitors in our data collection. The advent of citizen science is one I think botanic gardens should embrace as they connect visitors with education, conservation and research.



Student Danielle Cipperly's soil amendment trial.  
Photo: Jack Hobbs

# Mycelia connections

Maree Elliott, Volunteer Curator Fungi Collection, Hunter Region  
Botanic Gardens

The Hunter Region Botanic Gardens (HRBG) at Heatherbrae in NSW is a small regional botanic garden covering 140 hectares with approximately 33 hectares as theme gardens and the rest as natural bushland. A non-profit company of volunteers manages the garden.

The herbarium is part of a multifunctional unit consisting of a library and archives. While on a trip to Melbourne in 2008, Harry Jones (Collection Manager till 2014), arranged to meet Dr Tom May to discuss the importance of fungi and the possibility of adding a fungi collection to the HRBG herbarium. Harry wanted to document, collect and deposit the fungi because little was known about what was growing within the gardens. The board approved the new Fungi Collection in January 2010 and collecting started a few months later after protocols and procedures were established.

## Night walks

In 2011, I realised that there was a glow-in-the-dark fungus called *Omphalotus nidiformis* and that it was common within the gardens. I took a sample home and later mentioned the results to Dr Jan Noble (Chairperson till 2013). She suggested that we should promote awareness and knowledge of fungi to the volunteers and the community through workshops and night walks.

With some advertising the first walk was trialed in 2011 and since then 93 people have been on the walk which is offered to the general public one night in May each year. A second walk is offered aspiring photographers. The night walks have been successful and continue whenever weather permits. In 2014 a group of professional photographers were also taken on a night walk on a separate night. Some people come back to the gardens to see what the fungus looks like in the daytime.

## Workshops

We also ran a few workshops on weekends but these were not as successful as the night walk during the week. Workshops usually start with a small presentation about fungi followed by a

walk (foray) around the gardens. After collecting a few specimens and looking at the macro features, field guides were used to establish identification if possible. People usually ask these three questions about fungi:

1. Can I eat it?
2. Is it hallucinogenic?
3. How do I get rid of it in my garden?

Answers:

1. Unless it has been identified by a mycologist I would not eat it. Several fungi are known to be toxic and may look similar to overseas species but people die each year from eating misidentified fungi.
2. I do not know, I have not tried it and would not recommend you do.
3. Most fungi are beneficial for your garden, even the smelly ones, and usually pose no threat to other plants. When the fungus runs out of nutrients like woodchips, it will disappear.

This information came from Fungimap website FAQ page. Click [here](#) for the link.

I realised there was a glow-in-the-dark fungus called *Omphalotus nidiformis* and that it was common within HRBG.



***Omphalotus nidiformis*** – in the daytime and at night.  
Photos: Errol Elliott



***Agaricus rotalis*** graphite drawing by Maree Elliott.

## Exhibitions

A volunteer photographic exhibition was organized at the HRBG in 2011. Now there is an open fungi section for aspiring photographers in the Annual Photographic exhibition held in September every year.

In 2012, to launch the Fungi Collection, a solo art exhibition showcasing fungi found within the gardens was organized with an opening. A second solo fungi art exhibition was held in 2013. These exhibitions were held in the Visitors Centre, the first point of call for visitors.

## Presentations

A fungi presentation was organised in 2011 for the volunteers who are the 'spotters' and photographers of fungi and now contribute to the collection of fungi. Presentations are also sought by the general public, libraries, gardening and environmental groups. These presentations take fungi awareness 'beyond the fence' of the gardens.

## Restricted herbarium tours

Natural History Illustration students from the University of Newcastle have visited the herbarium and used the living collection for illustrations. Individual science students have also visited the herbarium.

## Research

In 2010 the HRBG started contributing to Fungimap Inc. with information and photos. Fungimap Inc. has also helped us with identification of fungi. Separate collections have been sent to the Melbourne herbarium for inclusion into their collection. In 2014 following a request, *Amanita muscaria* was collected and sent to the Melbourne herbarium for an overseas researcher.

In conclusion: knowledge of fungi within the gardens and 'beyond the fence' has increased; the fungi collection within the herbarium has been established and linked to wider research programs; fungi at the HRBG have encouraged garden tourism and contributed economically in a small but significant way.



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# Discovery stations – inspiration for school holiday programs

Julia Watson, Senior Gardener, Education and Partnerships,  
Auckland Botanic Gardens

Education, conservation and research underpin our work and values at the Auckland Botanic Gardens (ABG). Formal education programs during school term time are highly effective tools for teaching students about plants and the environment. However the role of school holiday programs in education is an additional tool that we can use to reach children of all ages (and their caregivers) in a more informal style, while still attaining education outcomes.

Visitor numbers continue to increase at botanic gardens, while staff numbers remain static. This can put a strain on staff resources and on delivery of visitor engagement programs. As a solution to this increased pressure, we have been trialling discovery stations at ABG.

## What are discovery stations?

Discovery stations are easy to set up around the garden. They are designed to encourage nature play and interaction with plants and the environment while being light on resources (both staff resources and physical resources). They can consist of simple activities manned by one or two staff members (or volunteers) as well as unmanned activities. A combination of the two works best. Discovery stations are designed to turn your visitors' recreational visit into an experience.

Discovery stations are designed to turn your visitors' recreational visit into an experience.



They take the stress out of the activity for both visitors and staff alike. Visitors can literally stumble upon a discovery station, and have a truly meaningful experience without having to book in and commit to attending an activity. This makes them easily accessible to all visitors, because some visitors find formal bookable workshops and events a barrier to participation.

## Why are discovery stations a great solution?

With increased pressure on staff resources the school holidays sometimes seem to come along all too quickly and cause staff anxiety. More intricate school holiday program workshops, while they have their place, can sometimes take large amounts of effort to plan and implement. Discovery stations in contrast are so light and easy to create that they almost feel like no work at all. Staff and volunteers are energised by the simple effectiveness of the stations. They are simple enough for volunteers to run without relying on staff help, especially if you repeat parts of other programs that the volunteers may already be familiar with.

## Tips on running discovery stations

1. Keep it simple, do more with less. Two to three activities at most work well for discovery stations. For example, in our Potter Children's Garden we set up an area where children can 'create their own desert' in a pot (a manned station), another table where they created their own meadow seed packets and filled them with seeds to take home (a manned station) and gave them a treasure hunt sheet to explore our Potter Children's Garden (an unmanned station).

Over a two-hour period (with two staff and two volunteers helping) we planted 80 desert gardens and had fun with many more children and their parents. Keep it simple, pop it up and pack it down! For other detailed examples, join Botanic Gardens Education Network (BGEN) where we will be sharing these ideas in visual formats so you can make the ideas your own!



Two to three activities at most work well for discovery stations.



- Engage volunteers. We have a group of four volunteers who assist with our school holiday programs. Recruiting these volunteers has been an organic process, where we simply started the conversation with our regular garden volunteers and Friends, and slowly built up the team. As the word spread, we've had more enquiries from interested volunteers to join the team. This takes time, but retired school teachers and principals have a lot of knowledge to share, and are often keen to participate.

Young students who are studying to be teachers are also a great volunteer resource. Training up volunteers to feel confident takes time. Run your first few discovery stations with plenty of staff support, find out what each volunteer enjoys doing and do those activities (not everyone wants to dress up like a bee!), have regular meetings between school holidays with your volunteers, and then slowly let them take ownership of the activities. It's a journey that you take together and we hope to eventually offer discovery stations that are completely volunteer-run.



- Limit the use of resources (especially non-reusable resources). The more resources (e.g. craft resources) you use the more you have to organise and purchase. Focus on nature play and use the best resource you have – the garden! Get out some magnifying glasses and open up a worm bin. Pick some herbs and make herb pesto. Go on a bug hunt.

**Focus on nature play and use the best resource you have – the garden!**

Show children how to take cuttings and pot them up together. All of these activities use minimal non-reusable resources and therefore you can use the tools required over and over again.



- Be bold, make a splash! If your visitors don't know you're running a discovery station how can they enjoy it? We use 4m high flags – bold visual invitations – to encourage children to come along. We place them at our visitor centre and then again at the site of the discovery station. They are extremely easy to spot even from a distance.

## FEATURE ARTICLES

We run our discovery stations in high traffic areas (e.g. our visitor centre in winter, our children's garden and other high traffic areas of the garden in summer). Don't tuck yourself away. Even if they don't join in, the vibrancy of running a highly visible discovery station will add a wonderful festive feeling to the garden – it shows your visitors that you are a garden where fun things happen!

Stay flexible with where you run the discovery stations – have back up plans for really hot or wet days. In summer we make sure we hold the activities in cool shady areas to make it more comfortable. For example we ran a Palm Garden scavenger hunt which was shady and tropical, and had over 150 children take part in just two hours.

**Stay flexible with where you run the discovery stations – have back up plans for really hot or wet days.**

5. Run discovery stations aimed at adults. We've traditionally run discovery stations for children, but aiming them at adults is also a great option. Set up a table with some useful information and objects in a specific garden, and offer interesting insights, mini garden tours and gardening tips. If you've got a volunteer who has good knowledge of a particular plant collection they'd be the perfect person to run one of these discovery stations.

In summary, engaging our visitors and turning their visits into memorable experiences is an important goal. Finding effective and rewarding ways to do this, especially during busy school holidays, is vital at a time when resources are stretched. Discovery stations are an excellent way to engage with a wide range of visitors (children and adults alike) while not draining staff energy and resources. Give them a try and let me know how it goes. I'd love to hear about it and collaborate with you on ideas!



# New ways to tell old stories

Sophie Daniel, Team Leader, Community and Education Programs,  
Theresa Sargeant, Horticulturalist, Tropical Garden and  
Louisa Murray, Flora Botanist, Botanic Gardens and Centennial Parklands

## Setting the scene

Recently at the Royal Botanic Garden Sydney (RBGS), we have started to modernise signage using multi-disciplined teams to create innovative and engaging content, and a radically different signage system to present this content to garden visitors. Within the RBGS, the Tropical Garden is in a high-profile area and is therefore perfectly placed to showcase this new thematic interpretation.

It is in a high-traffic area adjacent to the popular Band Lawn and café/restaurant, easily accessible for visitors. Volunteer Guides regularly provide walks to visitors and are able to use the new interpretation as part of their general walking tours as well as their researched themed walks.

Botanic garden scientists use the plant information from the species planted in the bed. The garden also features in holiday programs and school lessons, and seasonally as part of our Aboriginal heritage tour.



The team (from left): Louisa Murray, Theresa Sargeant, Sophie Daniel and David Laughlin.

## How it all began

In 2013, Theresa Sargeant was awarded a Friends and Foundation Scholarship to attend a course on the taxonomy of tropical plants at Kew Botanic Gardens, London. A central concept of the course was that many plant families could be easily identified through simple 'spot' characteristics. On her return, Theresa wanted to share this knowledge with visitors through new signage in the Tropical Garden. This would also fulfill one of the requirements of the scholarship: that the skills and information gained benefits the botanic garden and its users.

Prior to this signage project, the Tropical Garden signage comprised:

- One very old and uninviting text-heavy layback sign featuring didactic 'worthy' text about bromeliads.

- Plant labels on approximately 20% of the plants, with patchy information sometimes only giving the scientific name and the accession number – unintelligible to most visitors.
- Garden bed markers with the bed number – also meaningless to visitors.

## Getting started

We formed a small, focused working group representing three core branches of the RBGS – science, horticulture and education. Our first step was to create a comprehensive interpretative plan. This outlined our objectives, thematic structure, audiences and communication style, the ‘look and feel’ as well as the scope of the project in terms of deliverables i.e. the number of signs, timeline and budget. This plan was very helpful in keeping us on track as we progressed through the project.

The objectives of the new interpretation were to:

- *fill a vacuum*; to create signage and interpretation where there was little or none,
- *offer an invitation*; to draw visitors into the garden to walk along the paths,
- *provide an identity*; to create and celebrate a unique identity for the Tropical Garden,
- *use intrigue and surprise*; to engage visitors through story ‘vignettes’ that highlight cultural and social links to plants,
- *teach taxonomy by stealth*; to introduce visitors to the simple concepts of taxonomy, empowering them to make sense of the plants in the garden and feel more connected and comfortable in the garden,
- *deliver a ‘lightbulb’ moment*; to reach visitors on an emotional level – be it surprise, admiration or amusement – changing the way they feel about plants,
- *generate ongoing engagement*; to encourage visitors to engage on a deeper level with plants, the botanic garden and the wider environment.

## A new approach

We decided to organise the Tropical Garden’s interpretation in a museum-style information hierarchy. This was a new way of framing the ‘garden as exhibition’ for visitors – a discrete, defined space with plants as objects within a themed display.

The interpretation works on five levels within this framework:

- *Welcome signs* are large thematic panels that invite visitors into the Tropical Garden. Visitors are also presented with the key theme for the garden: ‘Like us, plants have families, and members of



those families share physical characteristics'. Importantly, this level of signage immediately overturns people's preconceived ideas about the tropics – setting up an expectation for surprise and intrigue that is then carried through subsequent levels of signage.

- *Family signs* focus on seven 'star' plant families commonly encountered in the tropics. Each family sign outlines simple 'spot' characteristics for easy identification, teaching visitors taxonomy by stealth! The signs also highlight cultural and social links as well as scientific and horticultural information through short, conversational stories.
- *The communication sign* informs visitors of work currently going on in the botanic garden. The horticulturalist on duty writes on the sign to communicate current projects and recommend viewing highlights. The horticulturalist is able to convey to the public 'our best horticultural practice' in the gardens using this sign, and attractions such as short-flowering and spectacular species can be identified for visitors' viewing pleasure!
- *New plant labels* were produced to carry the new 'look and feel' through all levels of communication in the botanic garden. These are brightly coloured and all plants from the seven star families are easily identified via a unique family icon.
- *Garden bed markers* were repurposed as a series of small entry signs. These identify the boundaries of the Tropical Garden and act as a visual cue to invite visitors to enter the bed via the mulched pathways.



## Anatomy of a sign

Although each of the seven family signs is uniquely configured to maintain visual interest, they all have a framework of common components:

### Title

We used common names to identify the families (such as Pineapple instead of Bromeliad) to make the signs more user-friendly. The scientific name is featured as a subtitle.

### Text

The family signs feature three stories of around forty words each. The stories can be read in isolation or as part of the larger narrative. They are written in an informal, friendly tone that encourages visitors to explore further. In our quest to empower visitors through sharing knowledge,

we've incorporated definitions of botanical terminology into stories wherever possible. Broadly, the stories can be defined as:

Story 1 – Taxonomy by stealth! Spot the family member.

Story 2 – Awe and admiration: Plant adaptations and ecology.

Story 3 – Surprise and delight: Plants, culture and science.

Finally, each sign has a short family roll-call; a listing of three diverse family members and a pithy, memorable fact about each.

## **Images**

We used a dynamic mix of images as attention-grabbers and to visually reinforce the stories' messages:

- A 'hero' plant image highlights the family's spot characteristic,
- Illustrations and super-cute images of pop-culture toys enliven and support the text,
- A botanical illustration subliminally embeds the sign into the botanic garden's historical and scientific roots.

## **Design**

One of the objectives for the new signage was to give the Tropical Garden an identity. The design is emblematic of a truly tropical personality – vibrant, multi-coloured, bold and outgoing – what we like to think of as a shameless hussy! This dictated not only colours but the graphic style and image selection.

We used a limited palette of just five vibrant colours throughout, to unite the suite of signs and help define the physical space of the Tropical Garden. The graphic style is clean and sharp, with a visually appealing pop-culture twist. They are printed on glass, which gave us options for layering effects. The use of solid colour blocks behind text maximises readability, whilst translucent and transparent sections allow visitors to view the garden beds and plants through the signage.

## **The system**

The signs are a long-lasting and robust solution involving vertical glass panels and customized metal frames and supports. UV and anti-graffiti treatments maximise their lifespan. However the printed layers of text and images are removable so the signs can be updated, modified or even re-used elsewhere in the future.

We are very excited and proud of the new Tropical Garden signage. The process was a very enjoyable and fruitful creative collaboration between the science, horticulture and education staff. And as for the outcome, the initial feedback from visitors, volunteers and staff has been overwhelmingly positive. Over the coming months and years we plan to extend this model of interpretation development and production across our three botanic garden sites. By continuing to produce highly engaging interpretation, we can achieve our final objective – encouraging visitors to connect on a deeper level with plants, the botanic garden, and the wider environment.

# Connecting with the business community – your botanic garden is hot property!

Peter Byron, General Manager Australian National Botanic Gardens

As we know, botanic gardens are special places and highly valued throughout the community. Botanic gardens are also a valued resource for various sectors of the business community; they want to be associated with our products, our visitors and our image. Likewise, new business partnerships offer botanic gardens the opportunity to access new audiences, new visitor experiences and revenue sources.

The business sector is a very important part of the community and there are many opportunities where botanic gardens can form business partnerships that benefit both parties. Some examples of successful business partnerships within botanic gardens include:

- Commercial services for visitors – cafe, gift shop etc.
- Onsite business – leasing of office space
- Commercial events – festivals, concerts, markets, outdoor movies etc.
- Tour operators – behind-the-scenes tours, evening tours, international tourists
- Conference hire – meeting rooms, function rooms etc.
- Equipment hire – bike hire, wheelchair hire etc.
- Sponsorship – cash or in-kind supply of materials or services
- Accommodation – overnight stays for students, eco accommodation.

The business sector is a very important part of the community and there are many opportunities where botanic gardens can form business partnerships that benefit both parties.

## Why are you hot property?

Don't underestimate your value to the business sector – you are hot property. There are many reasons why the business sector is interested in a partnership with a botanic garden. Combined with high visitation levels and high satisfaction ratings, botanic gardens are valued places for education, recreation, conservation and research. What a terrific product for a business partner to be associated with!

Your future business partner is looking for the right fit with your garden. Some of the factors they will be considering are:

- Brand alignment – is your garden the right fit for their brand?
- Target marketing – do your visitors match the demographics the company wants to reach in their marketing?
- Image enhancement – are you a successful garden with high standards of presentation, effective management and strategic plans for the future?
- Employee interaction – are there opportunities for their staff to hold training sessions, team building days or volunteer in your garden?
- The bottom line – regardless of all other factors it must be a profitable business activity with the opportunity for growth.

### Are you ready to do business?

When establishing new commercial partnerships we need to ensure that the core values of a botanic garden are maintained or enhanced. Careful planning, research and professional advice together with effective processes for approaching the market, evaluating proposals using values-based criteria and best practice contract management are keys to success.

All botanic gardens have special values and we need to make sure that any new business activity is complementary to these values. Workshop with your staff, management and stakeholders on the type of business activities you ideally would like to see in your botanic gardens and establish up front what is not negotiable.

Do your research. Find out what has worked in similar botanic gardens, understand the market factors in your community, analyse your visitation trends and visitor needs. Consider what new experiences or services they are interested in. This will also help you sell the concept of a new business activity to your management and stakeholders. Effective stakeholder communication will be required throughout your process so they understand the benefits of your new business partnership.

You may need professional advice. A commercial rental valuation will provide you with the confidence to negotiate with commercial operators and also support your decision-making processes. If you want to lease a space to a business, a commercial agent will help promote your opportunity, screen interested parties and assist you with the evaluation of applicants. Your legal advisor will provide you with a robust commercial agreement. It is best to include a draft agreement with your expression of interest document so you are upfront with your intentions.

## Jindii Eco Spa – Case Study

In 2014, the Australian National Botanic Gardens undertook a consolidation of onsite office accommodation that allowed for a standalone building of 260 m<sup>2</sup> to become vacant. This provided an opportunity for a new onsite business. Our research provided us with the knowledge that visitors were interested in new experiences to compliment their visit. We sought advice from a commercial real estate agent and a valuer and developed a good understanding of local market conditions. We developed a Request for Proposals document that targeted service providers, in particular personal or health services, as we saw the opportunity for this type of business in our gardens.

The Request for Proposals document included our draft licence agreement, a proposed fee range and our values-based evaluation criteria that proponents needed to respond to in their submission.

We selected Jindii Eco Spa, an established business that had won an Australasian Spa Association *Best Urban Spa* award. Jindii Eco Spa has a strong alignment with the values of the Australian National Botanic Gardens. They use Australian native plant-based products in all their treatments, have links with Indigenous culture, provide a range of wellness products, have a minimal impact philosophy and attract a younger demographic to the gardens.

After extensive renovations were undertaken by Jindii, they opened in February 2015 and their business has been growing and they are linking with our cafe, events and promotional activities.

This has been a very good example of an effective reuse of existing assets to provide new services to our visitors, reach new audiences and provide education on the use of native plants together with positive financial outcomes for the gardens.



**WORKPLACE HAVEN**  
**FOR LEASE**

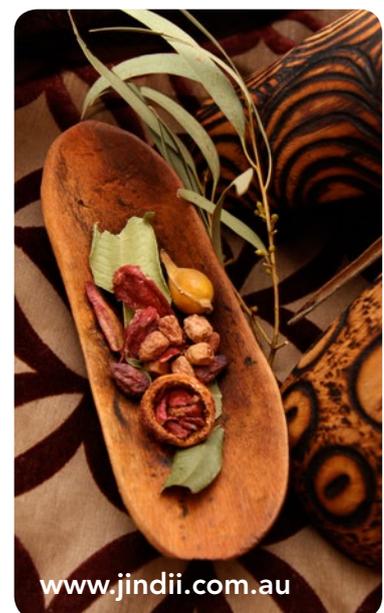
**ACT, Acton:** Franklin building, Australian National Botanical Gardens

- Stand alone building suitable as business opportunity or office accommodation
- 263sqm
- Exposure to Clunies Ross Street
- Access to public car parking
- Indoor/ outdoor working environment
- Two dedicated car parks
- Within peaceful landscaped setting
- Function/ conference facilities available
- Suitable for office accommodation, personal and health services

Helen Davies  
0418 478 092 / 6232 2733

Belinda Hedley  
0412 622 192 / 6232 2782

AUSTRALIAN NATIONAL BOTANICAL GARDENS  
Level 12, 14 Moore Street, City  
[www.cbre.com.au](http://www.cbre.com.au)



# Threatened plant species: *Amorphophallus titanum* research

Matt Coulter, Horticultural Curator Plant Propagation and  
Reg Baldock, Nursery Volunteer, Botanic Gardens of South Australia

One of the most exciting plant species is Titan Arum *Amorphophallus titanum* which can truly be regarded as a flagship species for botanic gardens. Wild populations suffer from increasing pressure on their natural habitat and botanic gardens can play an important role in the ex-situ conservation of the species.

*Amorphophallus titanum* is one of the most prominent plants in the plant kingdom. It has the largest unbranched inflorescence known and what looks like a single flower is in fact a group of flowers. It was discovered in Sumatra, Indonesia by the Italian botanist Odoardo Beccari in 1878.

Beccari sent seeds to the botanic gardens in Florence and Kew. It took 11 years before the first plant flowered at the Royal Botanic Gardens Kew. For the next 100 years flowering events of Titan Arum in botanic gardens were extremely rare with only 21 flowerings recorded worldwide, until 1989.

In 2006 the Botanic Gardens of South Australia (BGSA) received three seeds and all of these seeds were successfully germinated. Since 2006 these plants have been grown on in a glasshouse at BGSA's nursery located within the Mount Lofty Botanic Gardens. These plants are getting close to the age they need to be to flower (7-12 years) and we are waiting eagerly for this day. Until flowering occurs we continue to enjoy the vegetative stage of this plant which is interesting in its own right.

*Amorphophallus titanum* is a monocarpic species meaning the plants flower, set seeds and then die. Therefore, if we are able to achieve flowering, a plan needs to be in place to perpetuate the species for future displays at BGSA. The likelihood of receiving subsequent wild collected material is remote, as this species is listed as vulnerable in the wild on the Red List of Species and with the Convention of International Trade in Endangered Species (CITES).

***Amorphophallus titanum* plants flower, set seed and then die. Side corms can be removed to make extra plants.**

As an *Amorphophallus* plant grows, the original corm grows and a side corm can form which can be removed when the plant is dormant to make an extra plant. By this method BGSA has made seven plants from the original three.

Propagating plants from the original corm via division is a valid form of propagation but the number of plants that can be propagated is limited and this is a very slow form of propagation. Vegetative propagation of this species via leaf cuttings has been reported but very little information regarding the techniques and conditions used has been published.

In early 2013 nursery staff at BGSA decided to undertake some trials to evaluate if this technique was achievable. We successfully developed protocols to vegetatively propagate this species by two methods of leaf cuttings – horizontal and vertical. Leaves were harvested from mother stock pots held in the nursery and included material from each of the three original seeds. The cuttings were prepared by cutting leaves into 20-30cm segments.



Propagation material of *Amorphophallus titanum* sourced from mother stock pots, prepared into individual cuttings to be planted out.

The leaf material on the lower end of the cutting was removed and the leaf material on the top part retained, with the leaflets shortened to reduce water loss from the cutting by transpiration.

The bottom part of the cutting was dipped into rooting hormone solution – Indole Butyric Acid IBA 3,000ppm. Each cutting was planted into propagation media that consisted of 80% perlite and 20% coir peat. Once completed the cuttings were placed into fog chambers with 25°C bottom heat and a minimum of 70% humidity. Vertical cuttings were planted into a 150mm pot. For horizontal cuttings the leaf was laid down horizontally in the propagation media in a seedling tray.

After eight weeks, adventitious root formation started at the base where hormone application had occurred. The cuttings continued to grow and, on the side of the stem where roots formed, corms started to form with their own independent root system. Sometime later the original leaf died down and the corms went into dormancy. Following this, new shoots formed and grew from these corms. The new plants went on to go through their normal cycle of growing, dying down and a period of dormancy. Each year the leaf and the corm continued to grow. The first plantlets we propagated by leaf cuttings are now two years old.



Cuttings prepared of *Amorphophallus titanum* placed in the fog chambers.



A. Adventitious root formation on an *Amorphophallus titanum* cutting, eight weeks after propagation.

B. The leaf of the *Amorphophallus titanum* cutting has died down and corms with independent root systems have developed on the cutting.

C. The corm has gone through its dormancy phase and the new leaf has emerged from the corm to start its growth

The interesting observation that we have found is you get quite different leaves/plants from vertical and horizontal leaf cuttings. Vertical leaf cuttings have the ability to make multiple corms and leaves from the one cutting and, in many cases, we achieved 6-7 leaves per leaf cutting which gave 6-7 individual plants. Horizontal leaf cuttings usually produced just the one leaf and corm per cutting however a much stronger vertical shoot was achieved as there was less competition. On the other hand, if maximum amount of cuttings is needed then vertical cutting is a useful technique.

In the coming years we hope to refine the technique for propagating and growing this unique species. Through this technique we have produced 100 new plants from the seven old specimens that we have – and all this started with three seeds. This is an important process in ex situ conservation of this species. It will give us greater ability to display the characteristics of its exceptional growth habits and to display the flower to the public when the plants we have eventually flower.

[ In the coming years we hope to refine the technique for propagating and growing this unique species. ]

## BOOK REVIEW

# Going Potty by Indira Naidoo

Author of *The Edible Balcony* and *The Edible City* published by Penguin

'Have you gone completely mad?' 'Is this a mid-life crisis?' 'We can organise some counselling for you?'

These were some of the funnier reactions from my friends and family, when I told them that I was planning to grow vegetables on my tiny 13th floor apartment balcony in the heart of Sydney. Their concern was well-placed.

I wasn't a gardener. I'd never grown anything before – besides mould on the out-of-date veggies in my fridge. I already lived above a supermarket filled with vegetables, and who had ever heard of anyone putting a veggie patch on a 20 square metre balcony?

But I had done enough reading to know that with good sunlight (which I had) and a few basic elements such as pots, organic potting mix, some manure, compost and regular watering, a thriving balcony garden wasn't a total pipe-dream.

I drew up a plan of my balcony to determine how many fully-grown plants I had room for. I knew overcrowding plants in pots which were too small was often a mistake of the novice gardener. I wanted my garden to be aesthetic as well as functional. I decided to use large dark-grey painted fibre-glass pots which were sturdy but light and placed them on wheeled pot stands so I could relocate them more easily. I installed a vertical wall (<http://greenwallaustralia.com.au/>) and hanging baskets to maximise my growing space.

Potted veggies need watering more regularly than veggies in garden beds because they lose more moisture through evaporation. So I invested in a watering can and hose attached to my outdoor tap. I also made sure my plants got regular feeds with mixes of diluted fish emulsion and seaweed fertiliser, Munash mineral rock dust ([www.munash.com.au](http://www.munash.com.au)) and a little worm juice from my Hungry Bin balcony worm farm. ([www.wormlovers.com.au](http://www.wormlovers.com.au))

I sourced my seedlings from quality garden centres and mail-ordered organic heirloom seeds from Diggers ([www.diggers.com.au](http://www.diggers.com.au)) and The Italian Gardener ([www.theitaliangardener.com.au](http://www.theitaliangardener.com.au)).



To everyone's amazement (including my own) in my first year I managed to grow 70 kilograms of produce including, lemons, tomatoes, potatoes, zucchinis, eggplants, chillies, peppers, carrots, radishes, blueberries, and strawberries. Everything I grew tasted so deliciously fresh. I found organic replacements for pesticides and herbicides such as eco-oil sprays. I grew seasonally discovering for the first time the best time of year to eat strawberries or zucchinis or peppers. Of course there were some failures: my garlic crop failed to materialise from under its bushy leaves and my broccoli bolted in the unseasonal heat leaving no broccoli heads but a lovely spray of buttercup yellow flowers.

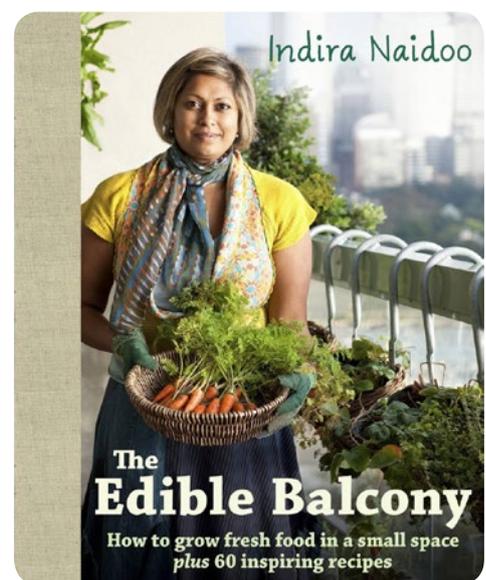
My cooking and eating habits changed. I began eating more fresh fruit and vegetables and cooking meals based on what was ready to harvest from my balcony. But other transformations took place that I was less prepared for.

Gardening no longer became a chore. It became a meditation. I became more relaxed. I slowed down and noticed small things such as the beautiful scents and fragrances from my plants. I was captivated by the colonies of insects and birdlife that began calling my balcony home as well. I could watch bees for hours collecting pollen from my edibles knowing how few flowers there were in the inner city to nourish them.

Gardening no longer became a chore. It became a meditation. I became more relaxed.

I started recording my growing adventures on my blog *Saucy Onion* ([www.saucyonion.blogspot.com](http://www.saucyonion.blogspot.com)) which led to my first book 'The Edible Balcony' published in 2011. 'The Edible Balcony', with 60 of my home-grown recipes, became a surprise runaway bestseller. It seems I'm not the only one out there yearning to reconnect with their food and how it is grown. And I've also shown that you're not limited by your space or your lack of expertise.

The success of my book has taken me around the country for talks and demonstrations at school kitchen gardens, retirement villages, sustainability conferences, gardening clubs, remote rural towns. I have been inspired by the extraordinary ways communities are embracing the 'grow-your-own' movement and applying it to their individual circumstances.



In my second follow up book 'The Edible City' I document some of these inspiring stories – from a church rooftop garden in the mean streets of Sydney's Kings Cross growing food for its homeless community, to the Melbourne restaurant with the country's first worm farm on its roof to a bush tucker garden reconnecting Indigenous kids with their heritage. Again I have included garden recipes for the home cook.

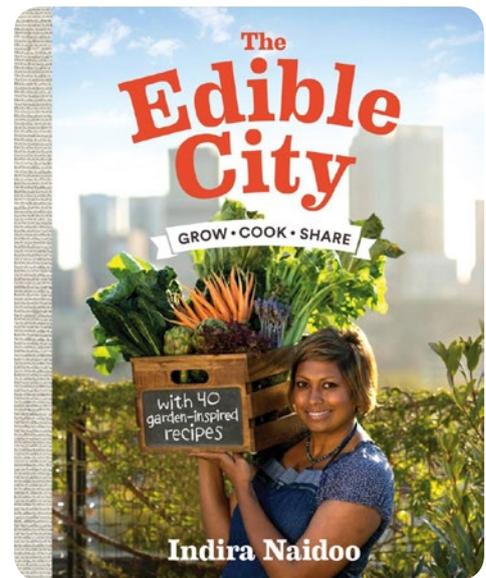
Growing your own food is not only a pleasurable activity but essential to ensure our continuing food security. Food security is the ability to have access to safe, affordable food. As our cities sprawl over our agricultural land and climate change effects weather patterns, we will need to find new spaces to grow our food. And our cities may be part of the solution.

There are thousands of acres of growing space on the roofs of city buildings, on terraces, and balconies – all receiving rain and free energy from the sun. Just imagine all that concrete, steel and corrugated iron replaced by groves of lemon trees, acres of tomatoes and rows of lettuces!

Australia's first roof top farm is closer to reality than many realise. There are already four commercially-run roof top farms in North America – in Brooklyn, New York ([www.rooftopfarms.org](http://www.rooftopfarms.org), [www.brooklyngrangefarm.com](http://www.brooklyngrangefarm.com), [www.gothamgreens.com](http://www.gothamgreens.com)) and one in Montreal, Canada ([www.lufa.com](http://www.lufa.com)). These farms are proving that with a little change in perspective about what a 'farm' is and where it can be located, wasted space can become incredible productive.

I urge Australian entrepreneurs out there to embrace and invest in these exciting new urban food growing technologies. To encourage more people to get into urban agriculture, I'll be taking a 14 day tour of the rooftop farms and city food gardens of Europe in June 2016 with Adventure World Travel ([www.adventureworld.com.au](http://www.adventureworld.com.au)).

But until then there's no time like the present to start converting your unused urban spaces into thriving veggie patches. No space is too small and no gardener is too inexperienced. If I can do it anyone can.



*The Edible Balcony* – by Indira Naidoo published by Penguin RRP \$39.99

*'The Edible City'* – by Indira Naidoo published by Penguin RRP \$45.00

## FEATURE GARDEN

# Wollongong Botanic Garden: conference highlights

Alison Morgan, Paul Tracey and Michael Connor, Wollongong Botanic Garden

Wollongong Botanic Garden (WBG) was fortunate to host the most recent national BGANZ Congress which was attended by 165 delegates representing 77 botanic gardens or related businesses. On either side of two full days of presentations at Novotel Wollongong Hotel Northbeach, the congress was structured to provide delegates with opportunities to explore the many garden collections on display in Wollongong.



Wollongong Botanic Garden hosted the evening welcome function on Sunday 25 October and Wollongong Lord Mayor Gordon Bradbery officially opened its newest garden collection, the Palmetum. The palm collection contains more than 800 rare, endangered and uncommon palm species from around the world. Palms from Madagascar, Hawaii and the Oceanic regions feature strongest with a smaller representation from Australia, South America, North America and China.



Many of these palms are endangered in their natural habitat due to a number of factors – from land clearing and soil erosion to introduced animal pests and weed species. This collection would not have been possible without the generous support from local philanthropist and palm collector Mr Colin Wilson, a member of the Palm and Cycad Society of Australia. Colin has a vision to ensure private collections of rare and endangered palms are moved to botanic gardens to ensure their long term survival.

Delegates were also treated to music and mini tours of the garden where they experienced the inimitable theatrical presence of Education Coordinator Michael Connor and student performers highlighting the history of plant explorers.



The third day of the congress was centred on garden tours with lunch outdoors and a number of workshops. There was plenty of audience participation and Michael Connor demonstrated WBG's new and exciting program 'Waltzing Matilda – Gum Tree Stories'. This indigenous legend about the origin of Eucalyptus and related gums has been designed to educate and appeal to locals, overseas students and tourists.



A number of Wollongong's volunteer-run gardens were also explored including Illawarra Rhododendron Garden in Mount Keira, the Illawarra Grevillea Park in Bulli plus the Mount Keira Scout Camp. Some delegates started the day with a bushwalking expedition through Mt Keira rainforest communities while others opted for the guided tour through Wollongong's Rainforest Collection and the historical Gleniffer Brae Manor House site which is located at the highest peak of WBG.

Exploration of Puckey's Nature Reserve, an annex of WBG was also encouraged for those who had time prior to the farewell dinner function. For the full pictorial overview of the congress check out the photo album on the 'BGANZ Inc' Facebook page.

# Calendar of conferences and events

## Australian Seed Bank Partnership National Seed Science Forum, Australian Botanic Garden Mount Annan, NSW 14–16 March 2016

The Forum will be hosted by the Australian Botanic Garden Mount Annan in collaboration with the Australian Network for Plant Conservation and the Australian Grains Genebank.

See <http://seedpartnership.org.au/seedscienceforum> for more information.

## 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 'Geelong – Regional Relevance: Botanic Environments and Their Survival in a Time of Global Warming' and FGBG would appreciate an early indication of attendance at [gardensconference@gmail.com](mailto:gardensconference@gmail.com). See conference flyer opposite for more information.

## 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](#).

## BGANZ AGM 2016 & NSW Regional Conference

This will be held in Sydney at a venue and date yet to be confirmed.



# 2016 Conference

## Geelong - Regional Relevance



**Botanic Environments  
and their Survival  
in a Time of Global  
Warming**



Presentations on topics including threatened complex eco systems, the roles of botanic gardens in their sustainability and the role that Friends can play.

**Friday 29 April:** Registration  
Welcome to Geelong at City Hall

**Saturday 30 April - Sunday 1 May:**  
AAFBG Biennial Conference, hosted by FGBG  
Keynote Speaker – John Arnott  
Geelong Conference Centre in Eastern Park  
On site accommodation

**Conference Dinner** at Deakin Waterfront Kitchen

**Day tours:**  
**Friday 29 April** - Bellarine Peninsula  
**Monday 2 May** - Great Ocean Road and the Otway Ranges  
**Tuesday 3 May** - Western Plains Region

**Registrations:** Conference details available from October 2015  
FGBG would appreciate an early indication of attendance [gardensconference@gmail.com](mailto:gardensconference@gmail.com)

[www.friendsbotanicgardens.org](http://www.friendsbotanicgardens.org)

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



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