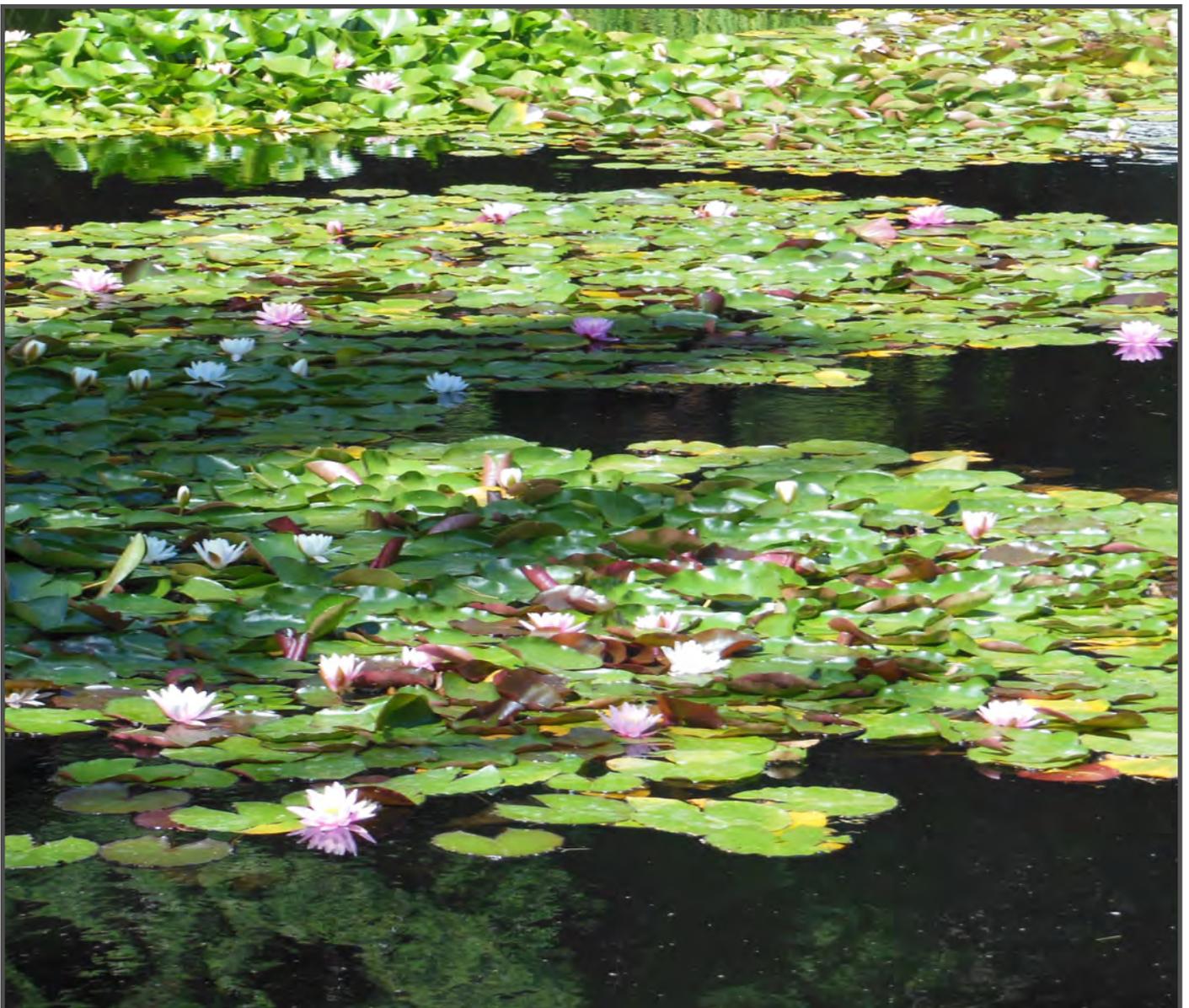


Fagus

Published Quarterly / February 2017

The Magazine of the Friends of the Royal
Tasmanian Botanical Gardens



In this issue: Director's report—President's report—Meet the new Marketing and Promotions Manager—Blooming Tasmania Update—APCC Report—Wonders of SW WA—The Majorelle Gardens—Favourite Garden Icon—Threatened Species



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Royal Tasmanian
Botanical Gardens

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Joan Booth; Gary Davies; Elizabeth Haworth; Mike Maskrey; Lorraine Perrins; Tory Ross; Jane Tenniswood;

Victoria Von Witt

Our Cover

Shades of Monet? Water lilies on the Lilly Pond

Photo by Mike Maskrey

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From the Editor's Desk

Welcome to the first *Fagus* for 2017. It is a publication bursting with features. On this point I must apologise at the outset for those of you who contributed articles that could not be squeezed into this issue. Some of them will appear in the May issue. In the meanwhile, there is a lot to be going on with.

Gary Davies, uses his report to look back over his first year in the position of Director and to review the positive changes that have come about during that time, as well as to look forward to plans and initiatives for the gardens in the coming months. One recent initiative was the appointment late last year of a new Marketing & Promotions Manager, Tory Ross, who is introduced to members on page 7. Our President, Joan Booth outlines in her report the recent activities of Friends in support of the gardens. Joan also looks forward to planning towards funding of projects for the Bicentennial, a topic that will form an important part of our first General Meeting for the year on Saturday March 4th.

Jane Tenniswood, Chair of Blooming Tasmania, provides us with an update on that organisation and its activities. Lorraine Perrins has written a report on the 2016 Australasian Plant Conservation Conference, a meeting that Lorraine was able to attend as a recipient of a grant awarded by the Friends.

Two members of Friends have contributed major articles to this issue of *Fagus*. Vicky Von Witt has written an article on the wonders of the south-west region of Western Australia, based on a twenty-four day tour undertaken last spring. It is a very detailed account with lots of beautiful photographs throughout. Elizabeth Haworth has provided us with an inside view of a wonderful garden located in Marrakech, Morocco, which she and her husband visited last year as a side trip to the UN Climate Change conference. Again the photographs are stunning.

The Favourite Garden Icon chosen for this issue is the Gazebo, one of the most popular structures in the garden yet one of the least acknowledged. I eagerly request readers to provide me with whatever information they can on this well-loved location. The Front Cover features the water lilies that grace the lily pond and have been spectacular over recent months.

The job of compositor for *Fagus* has been taken over by Kay Hayes. You will already know Kay as the Treasurer for Friends, the Committee representative for the Seed Bank and the person responsible for maintenance of the Friends Facebook page. Kay has taken over the job of compositor from Evan Sorrell.

Mike Maskrey

Director's Report

Thank you for the opportunity of reporting to you as the Friends of the RTBG. Your partnership with the gardens continues to be vitally important to the overall success. I am pleased to say that regular contact and meetings with Joan your president have ensured that the partnership continues to flourish.

It is hard to believe, but I have now been in this position for a year. In summary I have really enjoyed it and enjoyed working with our staff, friends and volunteers. Looking back a lot has been achieved overall during this period.

In the last two months, much of my focus has been on progressing key projects, promotions and marketing, financial management, analysis of our systems, firming up agreed upon structural changes, progressing performance management and finally ensuring we are ready for business for our busy season which has kicked off and is really ramping up.

The visitation for the six months of this financial year has amounted to 193,000 visitors. This equates to 3,000 more visits than the same period last year, thus overall visitation is marginally higher than last year, which was the highest visitation on record.

Gate donations have continued to increase over the past six months with total takings for this period amounting to \$37,000, which equates to \$7,000 more than for the same period last year.

Strategic Planning and Key Priorities

Visitor Infrastructure Project

The Board have identified this as an important key project and Board members met with the Premier and Minister Groom on 23 November to ascertain a clear way forward for the Visitor Infrastructure Project. Both the Premier and the Minister were supportive of the project and both parties were to look at funding options and meet again early in the New Year.

In the meantime a budget submission for 2017/18 has been progressed through the depart-

ment for a once off \$2.5 million to enable infrastructure to be put in place to both improve the visitor experience as well as enable a better commercial return for the Gardens.

Bicentenary Major Projects

Lily Pad Project

The Lily Pad Project is an RTBG Bicentenary (2018) Project.

The project will deliver the construction of three Lily Pad shaped viewing decks, a sandstone entry pad and associated landscape works. The three decks overlap and descend in height to near the water level.

The new decks will replace the current viewing platform which is nearing the end of its useful life.

The new decks will add appreciably to the visitor experience at one of Tasmania and the RTBG's most visited sites and will, in addition, create a wonderful venue for weddings and ceremonies.

The project is funded through an internal RTBG commitment, additional funding to reduce and support the RTBG commitment will be sought via philanthropic support and sponsorship (a prospectus has been developed for this purpose).

The Lily pad Project will be constructed and installed in June / July / August this year and is planned to be ready for use in September before being officially launched in the Bicentenary year.

The Sustainable Learning Centre

This project is for renovation works and additions to the POD building adjacent to the Community Garden and will include:

- Remodelling the interior to create a classroom sized meeting and function room co-located with a smaller meeting room and an attached kitchenette;
- additional toilets to service both the Sustainability Centre's guests and visitors to the Vegie patch;
- an external demonstration and workshop space;
- additional onsite storage, and

- works to make sure the building is fit for purpose including the installation of insulation where practical.

The new facility will provide space for future RTBG education based programs and provide smaller community scaled meeting spaces. The facilities will also have excellent potential as a venue for hire.

We are hoping to have the building works substantially completed by December 2017.

Front Gate Entry Experience

Marcus Ragus, the Manager, Interpretation, Learning and Community Engagement –has finalised a detailed project report with recommendations for Stage 1 of the Front Entrance project which focuses on the design and positioning of entry infrastructure with options for banner display infrastructure and for new interpretive, informational and directional infrastructure.

Finances and Finance One

A lot of emphasis over the past two months has been on getting the financial reporting to deliver the business needs of the Sections, together with my needs and the Boards needs for overall reporting.

Section Heads have put in a lot of effort in this area with a focus on training. All of the Section Heads have successfully undertaken a one day financial management course specifically for the Tasmanian Government's financial framework. Numerous meetings have been held with the Finance Branch of the Department and the RTBG Finance Committee to ensure we are on track and the financial reporting is in line with the business needs.

The status of the overall finances at the end of December indicates that we are fairly on track with expenditure and income.

Promotions and Marketing

In early October 2016, Tory Ross joined the team at the RTBG in the important role of Marketing & Promotions Manager. She has fitted in very well in the short time she has been with us. Thus far she has focussed on establishing networks and lots of planning to establish an approach to all

areas of the Section for the second half on the 2016/17 Financial year.

Vitally important links have been established with Destination Southern Tasmania and Tourism Tasmania and we are now members of Business Events Tasmania.

We have been busy in the events area with the key event *Your Habitat City of Hobart Carols by Candlelight* being successfully hosted on 18th of December and attended by over 8,000 people.

In October, the Gardens hosted the annual Teddy Bears Picnic organised by Playgroup Tasmania. A fine day saw almost 1,000 children and their teddy bears enjoy a range of community activities.

The Big Monkey Theatre Company also staged its 2016/17 production of *Alice in Wonderland* in the Gardens. The school season entertained over 6,000 school children and public season was also a success during the month of January.

Friends and Volunteers

It has been agreed that a facilitated planning session with key Friends Executive, Board members and key staff is to be held to strategically plan the way forward with Friends as volunteers and a group as a whole. This session is to be held in February.

Gardens and Infrastructure Works

Construction of the new Yatsushashi bridge in the Japanese Garden was completed in early December. Thanks to the combined efforts of Asset maintenance staff and Horticulture staff for delivering a wonderful finished product. The RTBG Board gave their seal of approval to the works during a short walk around the garden prior to the December Board meeting.

The recently installed Free Wi-Fi service, provided by the Department of State Growth and Telstra was brought on line recently. This service will provide 30 minutes free internet access per device, per day to visitors to the garden. Based on some preliminary testing, good reception is available within and around the Visitor Centre

and up to approximately 50 metres onto the main lawn and towards the floral Clock.

The changeover of annual beds from Spring to Summer planting took place in mid- November, carried out by the Northern team, with the assistance of the Estate team. This is a great opportunity to get members of the inmates program involved in work outside of their usual duties as well as providing invaluable assistance to our horticulture teams during busy times.

Purchase of New Buggy

On the 22nd November we took delivery of a new buggy purchased for \$14,000 with funds accumulated from the monies set aside to pay the Chair and kindly donated back to the RTBG Chairman's fund by Damian Bugg. The buggy is the latest heavy duty buggy able to carry six passengers and will be well used by those booking for organised tours.

The buggy has been aptly named *Bugg's Buggy*.



Gary Davies

Damian Bugg gives a lift to President of Friends, Joan Booth, Director of the RTBG, Gary Davies, and Board Member, Doug Davey.

President's Report

Welcome to 2017. Already the New Year seems to have donned its roller skates! Over the last year our members have had many opportunities to be involved as volunteers working within the Gardens. Thank you to all the dedicated and active volunteers for the wonderful contributions everyone has made and I'm sure will continue to make over the coming year.

The last couple of months have been a very busy time, with increased cruise ships and visitors to the Gardens. Thanks to Eileen Maskrey and her great work organising guides for the walking tours and also to the guides who give many hours of their time to make the tours such a memorable experience for our visitors. Thanks must also go to Chris Watts for his coordination of the Studio volunteers and the Explorer drivers; another service which enhances the experience of visitors to the Gardens. Richard Forcey filled in for Chris during

his absence over winter. Richard and Chris also took on the responsibility of organising the research into, and subsequent purchase of the new Gardens Explorer (refer to Director's Report).

Our final general Meeting for 2016 (Saturday 3rd December) was also our end of year social event. Friends gathered for a short meeting, followed by a morning tea. Many thanks to Rebecca Round for her assistance with providing morning tea not only at this event, but also at every General Meeting throughout the year. Marcus Ragus, our guest speaker, treated us to an interesting presentation about his recent trip to California, and shared some wonderful photographs of the flora and scenery.

The year ahead looks set to be a busy and challenging one.

- The first tours for a cruise ship visit began on 5th January and will continue into March and early April.

President's Report continued

- Members of our Executive and Committee, Members of the Board of Directors, The Director of RTBG and nominated staff will meet with an independent Facilitator to discuss and pursue the formation of a partnership agreement between Friends of RTBG and RTBG.
- **2018** will mark The Royal Tasmanian Botanical Gardens 200 year anniversary and planning for this is well under way. There are a number of major projects to be undertaken and a new calendar of events which includes a completely new celebration of Tasmania's spring Gardens in 2017. There will be lots more news to come over the next few months so please stay connected through the RTBG website and on the RTBG Facebook site for all the details.

Friends of RTBG will donate funds towards some of the Bicentennial projects and it is important that members consider the projects and where our money should be directed. We have a very healthy bank balance and can contribute a substantial sum. We will have a discussion about this at our next General Meeting (to be held on Saturday 4th March). If you want to have a say, or find out more information, come along and join the discussion at that meeting.



Marcus Ragus spoke at the December General Meeting

At our last General Meeting I briefly outlined the major projects proposed: The Main Gate and Entrance to Gardens, The remodelling of the Education Pod, Construction of new viewing platform at the Lily Pond, and Construction of a Rainforest Experience. We need to decide how we will support RTBG in the execution of these projects and whether we will give a lump sum to one in particular or smaller amounts to a number of them. If you cannot attend the meeting and wish to express an opinion, please email me. (joan493@bigpond.com)

Cheers
Joan



Alice at the Mad Hatter's Tea Party. Big Monkey production of Alice in Wonderland ran in the Gardens throughout January.

New Marketing and Promotions Manager for the Gardens

In early October 2016, Tory Ross joined the team at the Royal Tasmanian Botanical Gardens in the role of Marketing & Promotions Manager. Prior to this role, Tory has most recently worked with Tourism Tasmania in the Management Team and brings a range of marketing and partnership experience to this position.

This newly created position is responsible for managing the business enterprise areas of the Gardens, including events, venue hire, retail services and commercial partnership. Tory will be developing a marketing strategy which will lead to a focused calendar of activity through 2017 and into the Bicentenary in 2018.

Since commencing her role, Tory has aimed to increase the profile of the Gardens within the Tasmanian tourism sector and the Gardens are now members of Business Events Tasmania and Destination Southern Tasmania, with the Gardens represented on the Marketing sub-committee of this organisation. The Gardens are also leveraging the current summer advocacy campaign being led by Tourism Tasmania, through encouraging visitors to share their experiences on #Tassiestyle and through posting content of the Gardens and events through the campaign's social media channels.

The Gardens have also been host to a number of events over recent months including the popular *Your Habitat City of Hobart Carols by Candlelight* held on 18th of December and attended by over 8,000 people.

The Big Monkey Theatre Company also staged its 2016/17 production of *Alice in Wonderland* in the Gardens. The School season entertained over 6,000 school children and public season was also a success during the month of January.

In February, Directions Theatre Company will host another Shakespeare classic in the Gardens, with the 2017 production being *The Merry Wives of Windsor* directed by Tai Gardener. The season opens on Friday 10th February and will run until Sunday 5 March.



Tory is also currently scoping a calendar of events for the year including the celebration of Autumn in the Gardens, and working with Tasmania's signature event producers including Ten Days on The Island who will be staging the performance of *Derek and Frida* in The Conservatory from 28 March – 1st April as a key part of their 2017 Festival Program.

In addition, the use of venue and meeting spaces in the Gardens is also an area of focus which will include some promotional elements once the plan is finalised.

In the meantime, the venue continues to be popular for weddings and a set of loyal corporate partners.

Tory is based in the Administration building in the Gardens and would appreciate you saying 'hello' if you see her around!



Update on Blooming Tasmania

Blooming Tasmania is a not for profit, voluntary organisation founded in 2004 by the garden tourism industry. It is a state-wide body working closely with Tourism Tasmania, RTBG and other key partners to promote garden tourism.

BTA's major activity has been the publication of the annual Blooming Tasmania Guide which lists gardens open to visitors, accommodation in garden settings, events and businesses related to the Gardens sector. BTA publishes a periodic newsletter & organises plant specialist workshops, tours, walks and events. In partnership with Tourism Tasmania, Blooming Tasmania has had a stand at the Melbourne International Flower and Garden Show for the last 8 years. We now have over 70 members and run four networks across the State connecting many others to the organisation. The Blooming Tasmania website: www.bloomingtasmania.com.au is linked to Discover Tasmania Website.

At a recent international tourism conference held in Canada, Dr. Richard Benfield, author of *Garden Tourism*, estimated that annually there are 120 million garden tourists worldwide and "that if garden events, like Garden Festivals & Garden Shows were included along with commercially operated garden tours, the number would reach more than 300 million". It is therefore clearly the world's number one industry". The decision to initiate an annual two week Blooming Tasmania Flower & Garden Festival has led the organisation in new and exciting directions and ways to embrace the possibilities of expanding Tasmania's share of garden tourism. Supported by the State Government, through funding from Events Tasmania, our festival theme "Tasmania is My Garden" is giving us an opportunity to connect those across the State who have a passion for



promoting Tasmania, our gardens, our wilderness and in exploring new ways of visiting the past, enjoying the present and imagining the future.

The main event was in the Albert Hall & City Park in Launceston and we have already booked the Albert Hall for September 23rd & 24th 2017. Open garden events, State Trails of botanical exhibitions and workshop events will again be organised for the weekend before the Albert Hall event in the North West, around the Northern region the weekend of the Albert Hall event, and the weekend after, in the South. We will be expanding our State Trails of Open Gardens and Art Galleries and developing new Trails such as Birds in Gardens, Gardens under the Sea and Bush Tucker Trails.

We would welcome any input and ideas from the Friends of the Royal Tasmanian Botanical Gardens and love your involvement in the Festival and in Blooming Tasmania in the future.

Jane Tenniswood
Chair, Blooming Tasmania
PO Box 96, Triabunna 7190
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Launceston City Council's Display Garden in City Park. Blooming Tasmania Festival 2016.

Australasian Plant Conservation Conference Report



Lorraine Perrins attended this conference as a recipient of a 2016 Friends Grant

The Australasian Plant Conservation Conference (APCC) is a biennial conference organised by the Australian Network for Plant Conservation (ANPC). Regular readers of *Fagus* would remember that in 2014 the Royal Tasmanian Botanical Gardens hosted the APCC10, and the Friends played a major role in providing logistical support and tours for the visiting delegates. I was involved in the organising committee and gained many insights into the management of a national conference, however due to my close involvement, was unable to attend many of the presentations or utilise the opportunity to network with the visiting delegates. The ongoing financial constraints in Government agencies mean that the opportunities for horticultural staff to attend conferences are extremely rare, which is why I was delighted to receive a Friends grant to attend the APCC11.

The APCC11 was hosted by the Royal Botanic Gardens, Victoria and La Trobe University, and was held in the National Herbarium of Victoria. The overall theme was *New Approaches to Plant Conservation Challenges in the Modern World*, with subthemes addressing topics such as –

- ◆ Assisted colonization as a practical tool for climate change mitigation.
- ◆ Rethinking landscape restoration: seed production, provenance, conservation planning.
- ◆ Holistic conservation - the role of mutualisms in ensuring functional ecosystem recovery (pollinators, soils).
- ◆ Rescuing small populations from extinction.

Mr Gregory Andrews, Commonwealth Threatened Species Commissioner (*pictured right*) presented the keynote address announcing that the Kardashians represented one of the biggest threats to endangered species, stating that more people know about what this celebrity family ate for breakfast

than that Australia has the worst rate of extinctions in the world. The competition to gain attention (and therefore support) for our rare and threatened species was, he believed, a big issue, and something that he is trying to address, (many of you may already be aware of his very active Facebook and Twitter postings).

He stated that another problem was what he called the “Golum” effect, or rather that conservationists can be “too precious” about maintaining the status quo and keeping pure genetic lines intact, pointing out that with the uncertainties of a



changing climate, methodologies such as assisted colonisation and the augmentation of existing populations will have to be considered into the future. He noted that Botanic Gardens played a major role in the conserva-

tion of many threatened plants, particularly recognising the Australian Seed Bank Partnership as a critical component of this effort. There were many interesting presentations, and some of the poignant and thought-provoking topics, for me were –

- ◆ The recognition that we are living in the middle of an extinction debt, i.e. many future extinctions, particularly in regards to plants, will be due to past events. An example of this is that 75% of Western Australia’s flora is very long-lived e.g. 100yrs+, the recruitment of seed from some

species may be comprised in the future due to unfavourable climate conditions or impacts from pests and diseases, and it will take many years for the ultimate extinction of these species to be noticed as the parent plants will remain in the landscape for a long time. A Tasmanian example of this could be *Eucalyptus gunnii ssp divaricata* (Miena Cider Gum) which occurs in the Central Plateau. The mature trees of this species have been slowly deteriorating over a number of years to the point that many do not now set seed. Seedlings of this species are intensively browsed causing an overall decline in the population. This combined with the additional stresses of a changing climate and fragmentation will likely result in this species becoming extinct in the wild in the medium term. A critical practical tool to generate awareness of these changes was the use of photo monitoring to show clearly over time how areas change, as well as allowing controlled access to recently burnt or disease-impacted areas and interpreting the scene so people can gain a greater understanding of the changes afoot and how nature responds.

◆ There were discussions revolving around the issue of translocating species away from their natural populations, termed ‘assisted migration’, if these areas were not considered suitable habitat in the longer term. An example provided of this was the species *Ballantinia antipoda* (Southern Shepherds Purse), a small annual herb endemic to Victoria and Tasmania. The species has disappeared from almost all sites from which it was known, has been declared extinct in Tasmania. It currently exists only at a single location at Mount Alexander in central Victoria. The long-term suitability of the site where it is occurring is in question with plans to possibly reintroduce it to suitable areas in Tasmania as an option for its ongoing survival.

The overall lack of good data on the success of translocations was highlighted as a major issue and the Australian Network for Plant Conservation will be addressing this gap in the near future.

◆ It is generally accepted that by 2070 some biotas will disappear, and that much of the plant diversity we have today will only be conserved through cultivation or in seed banks. New novel ‘habitats’ will have to be considered if we are to maintain biodiversity in our urban areas. It was noted that green roofs in Germany are increasing at a rate of 1,100ha per annum, and provided good habitat for mobile species such as lizards and birds. Green roofs were considered to be ideal for some threatened plant species such as terrestrial orchids and annual herbs adapted to hot dry conditions and which rely on porous, low nutrient substrates.

◆ The health benefits of human interactions with nature have been well documented and there is considerable evidence that through our gardening practices, humans and ornamental plants have developed a *mutualism*, i.e. is the way two organisms of different species exist in a relationship in which each individual benefits from the activity of the other.

On my many walks around the RBG Melbourne, a number of things about this wonderful garden impressed me, these being:

◆ The excellent interpretation throughout, from the visitors map to individual collections, some samples of which are highlighted below -





◆ The interesting ‘plant combinations’ in garden beds, which was visually very rewarding, and anyone who has visited these gardens in recent years would be familiar with the work of Landscape Architect Andrew Laidlaw on the development of many parts of the gardens including the Ian Potter Foundation Children’s Garden, and Guilfoyle’s Volcano.

◆ The Aboriginal Australians connection to the site was very apparent. Maps available for visitors have a clear “Welcome to Country” from the local clan and daily tours are offered by Indigenous guides, including a traditional smoking ceremony welcome and insights into their use of plants for food, tools and medicines. There is also an area called the Long Island Garden which has been recreated to be a time capsule of the original vegetation that existed along the Yarra River 150 years ago, with a self-guided walk highlighting the important indigenous plants to the region.

I chose to join the conference field trip to the magnificent Royal Botanic Gardens Victoria, Cranbourne, looking at the “Role of Botanic Gardens in Applied Conservation”. This trip highlighted 3 main foci of plant conservation carried out at Cranbourne, these being –

- ◆ Threatened Orchid Conservation Research
- ◆ Climate Adaptation Research Plots
- ◆ Managing remnant vegetation for conservation of ground fauna

This trip, (along with a privately organised visit to the nursery facility at the RBG Melbourne), was where I was able to gain insights into some practical

Native Orchid Program PhD Student explaining some of the work involved with successfully growing native terrestrial orchids at the facility at the RBG Cranbourne.

applications. We were shown the native terrestrial orchid laboratory and growing area, where we were introduced to key staff and volunteers for the Threatened Orchid Conservation project. The RBG Melbourne has been involved in ex-situ terrestrial orchid propagation and growing since the early 1990s, and more recently this has evolved to include some very successful reintroductions back into the wild. As I am directly involved in growing on the Tasmanian terrestrial orchids for a similar program that Dr Magali Wright and Dr Nigel Swarts have been coordinating at the RTBG, it was extremely informative to see first-hand a program that has been running for a long period of time. Conservation work in Tasmania can have limited scope for networking and practicalities compared to projects on the mainland. National conferences are an excellent way to learn and engage with the many successes and failures across the country. We are already witnessing the impacts of a changing climate on many of Tasmania’s natural ecosystems and I envisage that the work of the RTBG in both its *ex-situ*, and also *in-situ*, plant conservation practices will increase into the future. How we manage this need effectively will largely be a result of partnerships and collaborations. The opportunity that the ANPC conferences provide to network with colleagues at similar institutions cannot be underestimated, and I would like to thank the Friends of the Royal Tasmanian Botanical Gardens for providing me the financial support to attend this conference.

Lorraine Perrins
Curator, Conservation Collections
and Subantarctic Flora



Wonders of South West Western Australia

In the south west corner of Western Australia are not only the famously huge variety of wildflowers and unique trees, but also sand pinnacles, stromatolites, granite tors; unique marsupials (including woylies, numbats and quokkas); exquisite wrens, bold and vividly coloured ringneck parrots and western rosellas; almost nutrient free soils, calcium carbonate sand dunes that fizz in acid; tall trees with climbing footholds, formerly used for fire lookouts, and a wobbly 30 metre high tree walk in a karri forest. There are three species of black cockatoos, all somewhat threatened. The more than 11,000 plant species are 50-80 percent endemic in the most species-rich families, which are *Fabaceae* (pea), *Myrtaceae* (Eucalypts and relatives), *Poaceae*, (grasses) and *Asteraceae* (daisies). These are a few of the wonders of south west WA.

Arriving at Norseman (named after a horse that kicked up a huge gold nugget) in cool late spring weather, then passing on to Kalgoorlie we stayed at Southern Cross, one of the first gold mining towns. A salt lake there had some water after rain. This whole gold-mining area has no fresh water. It is on the water pipeline devised by C.Y. O'Connor, who saved the goldfields area by engineering the water pipeline with a series of pumps to raise the water over the Darling escarpment. This is still used today. He was a brilliant engineer from Ireland.

He also had previously removed the bar to the harbour at Fremantle on the Swan river, despite opposition saying it would be a disaster. This enabled an effective harbour, also still in use today, and essential to the prosperity of the area. It is tragic that he was wrongly accused of corruption and committed suicide by drowning just before the water flowed through to the goldfields. The goldfields had previously had to rely on first horse and cart, and then a train line to deliver water; the gold was previously sifted out using a not so effective blown air method.

Twenty four days of tours and travel with knowledgeable local guides and lecturers started with a fascinating week's tour to the north of

Perth. The coach stopped in the Rita Erikson reserve with an auspicious find of a large white spider orchid just where we descended off the bus! The lady whom the reserve is named after was an expert on orchids and trigger plants and the reserve did not disappoint. For a Tasmanian, knowing only our single species, it was a wonder to find that WA has many different species of trigger plants in a variety of colours, mostly white and pink, and sometimes carpeting the ground.

There is also a large variety of orchids, at least 400 main species; we have 200 or so here in Tasmania. Sometimes these orchids were quite prolific so one could imagine there being enough to feed Aborigines from their storage 'roots'. The bright yellow donkey orchids (*right*) were particularly common in late September, where they could find space on the edges of the vast expanses of wheat fields.

The many granite outcrops, old worn down granite from many millions of years ago, were fun to walk over and explore for the beautiful climbing fringed lily, the many and fascinating, insect-eating *drosera* (sundew) plants (*below*), some with large pink or white flowers and some with minute ones, easily overlooked and others with flat leaves, trapping any ground walking insects that walk over them. have several

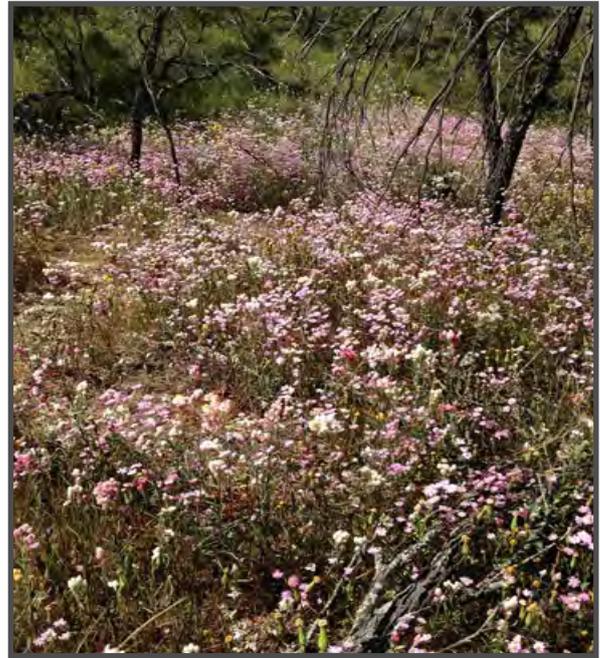


It was astonishing to learn that Australia has 90% of the world's drosera species. We have several here in Tasmania but 70% are in WA. Some climbed and some were very tiny. We were a bit late for their season in many cases and those with flat green leaves, quite large and eye catching, had turned to red, indicating they had been fertilised and their season was over. Only about two percent of their nutrition comes from the trapped insects.

We had one trip to the university's Alison Baird reserve where the professor told us how the plants in the sandy and extremely low nutrient soil had adapted. They secrete simple chemicals which allow them to absorb the very last few molecules of phosphorus compounds. Other plants get help from symbiotic fungi but they need a bit more natural nutrition in the soil. No one is allowed to use such areas as a toilet as the nutrients provided will upset the balance of the soil dramatically. The reason WA has such low nutrient soils and such genetic diversity in the flora is the age and stability of the rocks. WA has the oldest known rocks on earth and the zircon crystals found in the Kimberley are thought to be the very oldest on earth; this is determined by the decay of the radioactive materials included in the crystals. Much of the rock structure was formed pre-life. It is amazing to learn this, and that these pre-life rocks are found in very few places on the earth's surface. Geikie gorge in the Kimberley, much further north, was a surprise as the ancient rocks of the gorge look so different and are pre-life. The not so old ancient worn down granite outcrops north of Perth were a pleasure to walk over, but those in the southern area were much steeper and more challenging and I guess younger.

We got to see fields of everlasting daisies (*above right*) further north, yellow by Coalseam gorge and more white and pink mainly at wonderful Depot Hill, a bend in the Irwin River, used to bury supplies for prospectors and others, and later as a firing range. The proliferation of flowers and bushes there was a delight.

The northern coast has some little bays where huge native hibiscus flowers can be seen and small and elusive birds flit around the bushes. A brisk walk along the cliffs at Burns Beach, near Joondalup, in strong winds allowed us to see a 200m deep



strip of coastal vegetation surrounded by 'macmansions'. Perth stretches a very long way with a lot of very large houses on small plots eating into the unique natural vegetation, so these preserved areas of natural bushland are special and are constantly overseen by volunteers who remove weeds. There is protective fencing. Despite the cold and windy weather there were orchids, proteas and various wattles growing, and rather too many colourful South African invader weeds. We did see a white breasted robin briefly. Far below the cliffs the sea crashed on the rocks. It was a tough cold and windy day with some gleams of sunshine.



On the Southern tour we visited the Stirling Ranges (*above*), a place I was longing to revisit having seen it 25 years ago and been astonished by the variety and beauty of its flowers, bushes and trees.

This time I was shocked to learn and see that much of the protea population has been killed by phytophthora, possibly never to return. This has been introduced by people and in many places we treated our boots with methylated spirits to kill this fungus and reduce our transmission rate. Many of the remaining wilderness southern parks now have no roads, as this seems to be the only way to preserve this wonderful and fragile population of plants, much of which has been lost already from the impact of human activities. I remember being amazed to learn that the impact of 16 people visiting a pristine area of Tasmania had changed it forever. When you think of the introduction of foreign plant seeds and moulds it is not that surprising.

Another astonishing fact about WA is the impact of the widespread and bright orange, poison pea (*right*). The local animals, and probably the birds, are immune to the natural 1080 poison in this plant. This brings good news and bad news. The native animals are immune but the farm animals die if this plant is not cleared from the land they graze on. Hence also foxes are not a big problem as they are easily controlled with 1080 or the naturally growing poison pea. I guess it keeps rabbits, rats, cats and mice in control too.

We were introduced to some cute little marsupials in the Kanyana animal hospital (all privately funded) in the Perth Hills. This was a remarkable visit for a meeting with the tame tawny frogmouth, so humanised it cannot be released or it would starve, and the delightful woylie, bilbies and echidna (the latter with less fur and longer spines than here in Tasmania). The woylies collect nesting material in their prehensile tails!

There are a number of other local marsupials not found elsewhere. We failed to see even the quokkas, abundant and out in the day on Rottnest Island, in the wild. We searched for numbats in their native *dryandra* woodland. They are diurnal but solitary and we were not lucky enough to see any. *Dryandras* are a type of protea found only in WA and now grouped in with the banksias. They do look different, not having the cylindrical shape of the banksias. Sadly, we never got to see a tiny

honey possum, smaller than a mouse, nocturnal and a very important pollinator, a bit of a contrast to our large possums in Tassie. Our possums would die of the poison pea in WA, as would most native animals from eastern Australia.

It is extraordinary to be in a place with no sparrows, blackbirds or starlings. These are shot if seen. I suppose it gives the native birds more of a chance but there are swathes of farmland and settled areas where there is not much habitat for them, and carefully guarded natural woodland is the best place to see them. Here in Tasmania on Bruny Island for instance, the best chance to see our endemic native birds and plants is in the protected natural areas. The wrens in South West WA

are so beautiful they are never to be forgotten. The splendid wren, with its combination of all-over violet and blue and the red winged wren with its silvery blue and red, have the most exquisite males, which were showing off beautifully in their spring plumage. I was astonished to see birds even more beautiful than our fairy wrens! The ringneck parrots (*below*) are widespread, known

locally as twenty eights from their call, bold and also very splendid, as are the beautiful western rossellas, with stunning bright reds, blues and greens in their plumage. We saw the ringnecks in most

places and when we visited the pumping station museum (but modernised pumping still in use there) for the C.Y. O'Connor water pipeline at Mundaring Weir we were entertained by a bold and apparently friendly ringneck which posed and posed until he snatched and made off with an unguarded lunch time biscuit!

The Southern Tour was much colder, damper and very windy on the spectacular coast. The rainfall is very high in the south and the humidity is high. This allows the karri forests to thrive. The amazing, swaying Tree Top Walk through the karri trees is 30 metres or so above the ground and scarily memorable! A worker's death during its construction is commemorated.



The Nornalup inlet was a fascinating visit with a lively local guide filling us in on the history, including connections with the Bolshevik revolution in Russia, and wildlife information as we boated across to a walking area in the national park. It was fascinating to see the contrast in the water colour of the inlet where the tidal sea water meets the fresh water of the Walpole river. Thankfully this whole area has been preserved as an area free from roads, so the extraordinary vegetation and wildlife have a chance to survive. Previously, development was planned and a coastal residential and holiday area would have sealed its doom. There is an extraordinary orchid shaped a bit like a hammer, found here. An insect it would attract for pollination was suspected long before one was found! Another look for this unique plant is needed as we did not find one. Further to the east the Fitzgerald national park similarly has very few roads in a huge area. It is also a botanical and wild life hot spot. Maybe we will be able to visit there some time, carefully and with boots metho-sprayed to control for phytophthora.

We enjoyed a visit to the beautiful Kings Park Botanic Gardens in the pouring rain, and despite the cold and wet we were thrilled to see a wonderful display of native plants, beautifully cultivated and tended including the spectacular Sturt's desert pea! Yet another incredible plant.

I had to come back to the RTBG to see the surprising sessile banksias, now on display next to the kangaroo paws below the restaurant. In the wild the kangaroo paws are sporadic and very memorable to come across. They don't occur in large groups at all. There were plenty of very orange, yellow and red cats paws in the wild, especially on our northern tour.

However, for me the most memorable botanical part of the tour was the day we visited the Lesueur National Park and Hi Vallee Farm. Jolanda Keeble, our energetic and knowledgeable guide has written a detailed field guide to the farm, with many photographs. We have a copy of this, a great reminder of a memorable visit. The owners of the farm still farm there but have preserved 400 hectares of this special vegetation with 520 different plant species in 56 families. Each time you take a step you see something new in both the Lesueur

park and the farm! Extraordinary places. Don and Joy Williams who own the farm are very knowledgeable and provide guided tours. Highly recommended!

As you may guess I was quite overwhelmed with the variety and number of different plants we saw. I have just commented on some of the great things that have stuck in my mind. There were so many things of interest that I haven't even mentioned: the Lake Thetis stromatolites (*below*), lay-



ered mounds of primitive ancient organisms, cyanobacteria (blue-green algae), that persist in parts of SW WA's hypersaline lakes; without these we would not be here as they metabolise to form limestone, providing the atmosphere with oxygen, and before them the sky would not have been blue, and there would have been no protective ozone layer. They are not very wonderful to look at being circular, dull muddy looking lumpy rings in shallow water; strange but not beautiful! The beauty is in knowing how we have depended on them to make the world as we know it.

The oral history of the Aboriginal people near Rottneest island includes stories telling of times when the sea level was low enough for Rottneest to be connected to the mainland and accessible on foot; stories at least six to ten thousand years old. We have much to celebrate in Australia and the extraordinary achievements of the Aborigines surviving in the harsh environment for up to 60,000 years, combined with the achievements of the 230 years of western-cultured migrant population are not the least.

Victoria Von Witt

The Majorelle Gardens, Marrakech, Morocco

This garden, covering nearly a hectare, was created by the French painter, Jaques Majorelle (1886-1962), from the palm grove he bought north west of the Marrakech medina in 1922, about four years after settling in Marrakech. He commissioned the architects Poisson and Sinoir to build a villa in a style, both Moorish and art deco, inspired by Le Corbusier and no doubt influenced by his father, Louis, who was a famous art deco furniture designer.

Jaques loved botany as well as art and established a garden in the Islamic style to surround his villa. This was an impressionist garden of wonderful colours and shapes, varied and exotic plantings, and a haven for hundreds of birds. The plants were gathered from Marjorelle's travels all over the world and included cacti, yuccas, water lilies, jasmine, bougainvillea, palm trees, coconut palms, banana trees, bamboos, carob trees, agaves and cypress. The decoration included fountains, other water features such as lily ponds, ceramic jars and alleyways covered by pergolas. He created the intense ultramarine-cobalt blue colour in 1937, still known

as Marjorelle blue, which he used to paint the walls of his villa as well as many decorative pieces, now in a

range bright middle eastern colours. He opened his garden to the public a decade later, but due to a motor accident he disappeared from Marrakech and the garden fell into neglect.



In 1966, Yves Saint Laurent and his life-partner, Pierre Bergé, found the Marjorelle garden and bought it in 1980 when they restored it to become the beautiful garden Jaques Marjorelle had envisaged. They lived in the villa and transformed the art studio portion of it into a Berber museum where their collection is exhibited.

They installed automatic irrigation systems, adjusting the distribution of water according to the specific needs of each plant and added new plant species, increasing the total number from 135 to 300. A team of 20 gardeners have since maintained the garden, its ponds and fountains.

When Yves St Laurent died in 2008, his ashes were scattered in the villa's rose garden and a memorial, a simple but imposing Roman column (*right*) brought from Tangiers.

Pierre Bergé gifted the garden to Marrakech. It is a beautiful and spec-

tacular haven of peace on the outskirts of Marrakech, highly prized by the residents and a popular tourist attraction with close to a million visitors annually. My husband and I visited it while attending the UN Climate Change conference, COP22, last year along with many other delegates who can vouch for its beauty and serenity.

But a word of warning! Avoid the taxi mafia that stalks the garden and will try to rip you off, charging double at least, for your short trip back to town.



Elizabeth Haworth



Imported Cactus, Palms, and Water Lillies (a contrast to the Moroccan desert) from around the world fill the garden.

A Pavilion, the former artist studio of Jacques Majorelle, reminiscent of Arab-Andalusian architecture and colours.

A square fountain at the entrance, designed by the American artist Bill Willis with colourful zelliges (terracotta tile work) using Moroccan artisanal techniques.

Favourite Garden Icon



Number 4 – The Gazebo

When assisting as a volunteer in the studio and greeting visitors at the gates, what is the part of the garden that most people want to be directed to? That is not easy to answer as it depends on so many factors – time of day, season of the year, weather, and of course, who it is that is asking the question. The requests can also be divided into a number of categories. There are the ‘urgent’ questions such as “Where are the nearest toilets?” and “Where can I get a cup of coffee?”. There are the ‘must see’ requests that ask directions to such destinations as the Community Garden (still commonly referred to as ‘Pete’s Patch’ but increasingly as ‘Tino’s Patch’) the Japanese Garden, or the Sub-antarctic House. But in my experience the most frequently sought destination, especially at the weekends, is the Gazebo.

The Gazebo is the site most used for family picnics and children’s parties. It is the rallying point for interest groups and for reunions. It is a huge favourite with so many visitors. We all

know the Gazebo as an hexagonal wooden structure on the lower lawn area of the gardens, surrounded by beautiful trees. In fine weather it provides ample shade and with a sudden rain shower it acts as a ‘TARDIS’ in that it can shelter a whole host of visitors at the one time. It is solidly built upon a concrete floor and its ceiling has a most intricate and pleasing design. Its open sides mean that even when within the Gazebo, you still feel a part of the garden.

Now we come to the awkward part. This Favourite Icon is barely acknowledged by the RTBG. It is marked on the maps, but that is about all. I have searched the RTBG website in vain for information as to its origins and history. When was it built? Who built it? Does it commemorate any particular event? My enquiries have all drawn a blank. So, I am issuing all readers of *Fagus* a challenge. Please, please provide me with whatever information you can about this treasure, the most popular of all the garden’s meeting spots.

A view of the beautifully designed and constructed wooden ceiling of the Gazebo.



Pneumatopteris pennigera (Lime Fern)

About me: *Pneumatopteris pennigera* is an erect small fern occasionally growing up to 1m high. It occurs in Tasmania, Queensland, Victoria and New Zealand. *P. pennigera* has only a very small population in Tasmania.

Why I'm rare? *P. pennigera* occupies only about 2.5 ha. from its linear range of 165km. Tasmania's largest population was at copper creek with 2500 individuals in 2000 but now the population is extinct. The reason for the decline in populations around Tasmania is unknown, though drought, hydrological changes and a possible thrip infestation have been thought the prime causes.

What is the RTBG doing? We have collected spore which is now stored in the Tasmanian Seed Conservation Centre at the RTBG to be used for future research and conservation work. For more information go to www.rtbg.tas.gov.au/conservation

How you can help: Get involved-join your local land care group, Threatened Plants Tasmania volunteer group or join the RTBG seed bank volunteer group.

For more information: <http://www.tpt.org.au> or

James.wood@rtbg.tas.gov.au



More of the wonders of SW Western Australia

Clockwise from right: *Splendid Blue Wren*;
Fringed Lily; *White Spider Orchids*; *Southern Cross Flower*; *Donkey Orchids*.



Friends' News

General Meeting

The next General Meeting of Friends of the RTBG is to be held **on Saturday March 4th**, commencing at 10am. The meeting will be held in the Bankisia Room, where our speaker will be Chris Lang, horticulturalist for the Tasmanian Native section. One of the items of business for the meeting is to discuss Friends funding towards the gardens Bicentennial projects.

Membership

If you know of anyone wishing to join Friends of the RTBG, they can obtain an Application form by going to the RTBG website (gardens.rtbg.tas.gov.au). The link taking them to Friends of RTBG can be made from the drop down menu under 'Community'. Alternatively contact our Membership Officer, Aina Dambitis on 0429 190784.

Neutrog

The order form is with this issue. Twice yearly, Neutrog products are offered to members at a discounted rate. Neutrog provides this service as part of its marketing program.

Please return your orders Aina Dambitis by **10th March, 2017**.

Our Next Issue: MAY

