

Friends of the Australian National Botanic Gardens Number 84 December 2016





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Email or post material to the Fronds Committee at the above addresses or, place in the Friends letterbox, located inside the Gardens' Visitor Centre, between 9.30 am and 4.30 pm, Monday to Sunday. Editorial messages: telephone (02) 6250 9548.

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Announcing the winning design for the Conservatory on the 17 October, the Minister for the Environment and Energy, the Hon. Josh Frydenberg MP, referred to the occasion as

"a celebration of philanthropy, a celebration of Australia's native vegetation, and a celebration of aesthetic beauty and design".

Minister Josh Frydenberg is seen here with CHROFI Lead Architect John Choi (centre) and Executive Director of ANBG Judy West, with a model of the future Ian Potter National Conservatory.

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COVER: Artist's impression of the future Ian Potter National Conservatory (article pp3-5)

## Canberra goes tropical: the Ian Potter National Conservatory

#### **Denis Warne**



Main Atrium, artist's impression

here are high aspirations for the Australian National Botanic Gatdens' (ANBG) Ian Potter National Conservatory. It is to be a national and international showcase, establishing the Gardens as the leading conservator of Australia's native tropical flora from areas such as Christmas Island, Kakadu and northern Queensland. It will provide the Gardens with a vastly expanded capacity to showcase and conserve Australia's tropical plants. Here, visitors will be able to discover and appreciate unique Australian tropical species that many would not otherwise have the opportunity to see. It is also expected to stimulate

education and pioneering research into Australia's distinctive tropical flora, and to contribute to the conservation of significant species, particularly those that are rare or threatened.

The Conservatory will also take its place as one of the iconic buildings of Canberra and is expected to be a major drawcard for the ANBG and Canberra, with the Gardens' annual visitation expected to jump by up to 100,000. A national design competition has been held with the winner, architectural company CHROFI, announced in October (see Garden Shorts). Detailed design development will proceed over the coming months with construction to start mid-2017 and completion in 2018.

The project's budget is \$6M, of which \$4.5M is contributed by the Commonwealth government and \$1.5M comes as a philanthropic donation from the Ian Potter Foundation.

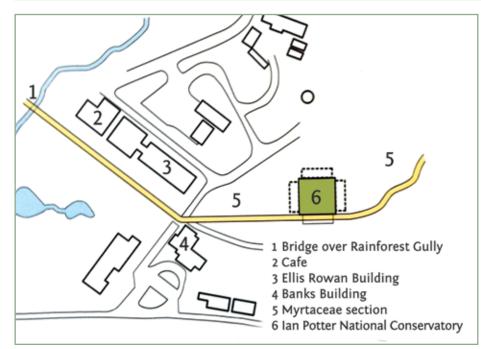
If you are expecting your typical Conservatory with masses of glass, you are in for a surprise. Canberra's cold, dry climate would present a major challenge to such a design for a tropical enclosure. Instead, you will encounter a structure over 15 meters in height, made of concrete walls clad in polycarbonate that provides a translucent 'shell' that will also feature special night lighting - a shimmering, 'hovering cube' set among the Gardens (front cover). Inside the Conservatory there will be three exhibit areas – the main atrium and, to the sides at a lower level, two side garden exhibits. There will also be a display/events area.

#### It is an innovative design meeting the climate and light needs of the plants while satisfying the ANBG's demands for environmental sustainability.

While the classical glass conservatory may be satisfactory for light, it is unlikely to be a sustainable option from the tropical climate management perspective. For this reason, the architects have stepped away from the glass-house model to focus on management of the Conservatory's internal climate using high environmental performance technology.



Layout concept: plan & vertical cross-section views



Where is it in the Gardens?

The main roof is double glazed with an insulated blind under. Like a giant Esky, the highly insulated, layered walls keep heat out in summer and heat inside throughout winter. In addition, infiltration gains and losses will be minimised through the use of airlocks and airtight doors. All spaces are day lit with direct sunlight entering via the

roof of the main atrium and via doubleglazed skylights over the side gardens and events area. Extensive computer modelling is being undertaken following the design competition to fine tune design to ensure adequate light profiles for the plants, including partial glazing of the walls, particularly the northern and western walls. Humidity



Conservatory Public entrance, artist's impression

control, is achieved firstly by recovering moisture from the exhaust air stream, then by ultrasonic humidifiers with space misting for the plants. Heating and cooling uses dual heat pumps, with rooftop solar heat collection and ground bores for heat storage. For water management, also critical in Canberra's dry climate, the Conservatory will capture rain water from its roofs and utilise this for drip irrigation and for water features.

Given these environmentally sensitive times, this Conservatory potentially establishes a new mindset for conservatory design worldwide.

#### What will visitors experience?

The Conservatory will be integrated into the Myrtaceae landscape situated along the Main Path, slightly rerouted, to the north of the existing café and Ellis Rowan Building. It will be at the northern end of the visitor hub being developed under the Gardens' 20 year Master Plan. While the Conservatory will be the first of the new buildings in the hub to be constructed, the hub will ultimately incorporate a new café, visitor centre, event and recreation facilities, providing an overall visitor centred experience.

Visitors will enter the Conservatory from a forecourt at the base of the cube. Ahead will be the main atrium stretching up some 15 metres to accommodate tall tropical trees set in lush tropical growth potentially encompassing all vegetation strata. Further ahead past the atrium and to the right of the atrium, but set at a lower level, will be the two feature garden rooms accessed via raised boardwalks surrounded by plants. To the left, also set at a lower level, will be the display/event facilities. For those who visit the Gardens by night for the increasingly popular after hours events, lighting from within the outer layer of the walls of the Conservatory will make it an attractive night-time feature.



Side garden room with board-walk, artist's impression

## However, it is the plants that are the main feature.

The article 'Glasshouse Makeover' (*Fronds* No 83, August 2016, pp8-9) told of the work already being under-

A likely plant for the new conservatory: the Australian Fan Palm, *Licula ramsayi*, from north eastern Queensland;

taken by nursery staff to ready the Gardens' existing tropical plant holdings for the Conservatory. The article expressed the hope that "the new building will allow the King Fern space

to fully unfurl its up to 8 metre long fronds (the largest produced by any fern in the world); the native bananas (Musa banksii) to shoot up to around 3 metres; and the Christmas Island Cycad (Cycas rumphii) to soar to a potential 6 metres." With the 15 metre tall atrium, the Gardens will have that and more. We already have the makings of an impressive exhibit, and there will be plenty of small plants too, particularly in the side garden exhibits, to represent the diversity of ecosystems. The ANBG have already secured 30% of the target species from existing holdings or from elsewhere. David Taylor, Curator Living Collections at the Gardens, speaks of both opportunities and challenges presented by the Conservatory. A range

of northern Australian ecosystems – rainforest, savannah, canyons, and more – will be candidates for display. With more than a hint of excitement, he indicated that, when the Conservatory opens, there will be plants seen in cultivation for the first time.

The Conservatory will also be a place to visit time and time again. Not only will the major exhibits within it develop but, with the ability to move plants in and out, there will be opportunities for feature displays and for seasonal extravaganzas – weird and wonderful Australian orchids, for example. Behind the scenes, acquisition and cultivation activities will be both expanding scientific knowledge critical for conservation, and fostering scientific and conservation partnerships.

Managing the impact of the Conservatory on the existing living collections is one of the challenges.

Plants that will be directly affected by the building itself have already been propagated for re-locating to other parts of the ANBG. Key land-scapes in the vicinity, such as the aged Myrtaceae landscape down to the melaleuca swamp will be retained. The Conservatory will be integrated into the area by interposing plantings relevant to the Conservatory but also of relevance to the surrounds and capable of being grown outside.

In his speech announcing the winning design for the Conservatory the Minister for the Environment and Energy, the Hon. Josh Frydenberg MP, referred to the occasion as "a celebration of philanthropy, a celebration of Australia's native vegetation, and a celebration of aesthetic beauty and design". It was certainly all those things. The Conservatory is something to look forward to – a botanical step forward for the Gardens, an amazing new

forward to – a botanical step forward for the Gardens, an amazing new experience for our visitors, new challenges for Gardens' staff and guides, new inspirations for our photographic group, ... and so the list goes on.

## Friends AGM: achievements & future challenges

The following are edited summaries of reports presented to the Friends of ANBG 28th AGM which was held on the 19 October 2016. Full reports are on the Friends website www.friendsanbg.org.au

#### Summary of President's Report, 2015-2016

Introducing her second annual report at the Friends' AGM President, **Lesley Jackman** noted that much had been accomplished in a very active and successful year, to ...help the Gardens grow and she discussed these achievements in the context of the Friends Strategic Plan.

**Public promotion and engagement.** There were over 3,000 attendances at the Thursday Talks which raised over \$5,000. The Summer Concerts were also very successful with over 6,600 attending; this was helped by sponsorship from Maliganis Edwards Johnson and Icon Water. The Friends also helped out at another sell-out Luminous Botanicus.

A close & constructive partnership with the Gardens. This year we had a new intake of Guides with their training run jointly by the Gardens and the Friends. There are now 70 Guides who make a considerable contribution to promoting the Gardens.

We have also assumed responsibility for the production of *In Flower this Week* now re-badged as *Flowers, Fruit and Foliage* and provide support for the annual intake of botanic interns at the Centre for Australian National Biodiversity Research.

The Friends (including the Public Fund) and the Gardens are currently developing the Treehouse Gazebo project to create a unique, 'gazebo among the trees'. Four artists have been chosen to prepare designs and the Gardens and Friends are currently selecting the final design.

**Raising funds for the Gardens**. The Friends are planning a fund-raising campaign for the Public Fund which will feature the winning Treehouse Gazebo design.

The Friends supported the purchase of two artworks from the Botanical Art Groups' exhibition, representation by two Seed Bank volunteers at the National Science Seed Forum, the Roger Good Alpine Development Fund and the ANBG library.

The School's Photographic Competition was reviewed and changes made with the aim to attract more entrants.

The Public Fund of the Friends supported the Aboriginal Plant Use Trail which was launched in January 2016 and will support two Gardens projects: conservation of high altitude climate change-threatened tropical rainforest flora and digitisation of lichen type specimens held at the Centre for Australian National Biodiversity Research (CANBR) cryptogam herbarium.

A strong identity: being lively, stimulating, rewarding & dedicated Friends. The Membership and Web teams are central to our engagement with members and Lesley thanked them for their hard work. She noted that there are 1,567 memberships comprising 2,143 individuals.



Kath Holzapffel & Lesley Jackman (Friends President) (p17)

Lesley also noted the range of services and benefits which enable the Friends to keep up to date with Friends and Gardens activities, including the website, *Fronds* magazine and the broadcast emails. She reminded Friends of discounts available to members at the cafe, bookshop and Ecospa; the special parking arrangements for Friends who volunteer; and many opportunities offered by Friends special interest groups.

**How we manage ourselves.** Lesley highlighted a number of achievements including the new Constitution and a new strategic plan to 2020. Our accounts are now on MYOB. The Council will soon implement confidentiality declarations and has developed a sponsorship policy.

Lesley emphasised the benefits of meeting other Friends' groups at the Australian Association of Friends of the Botanic Gardens (AAFBG) conference.

**Looking ahead.** Lesley noted the challenges for the future include assessment of future IT needs for membership, fundraising and volunteer management. There is also a need to attract volunteers for social events and activities.

The Australasian Guides Conference 2017 to be held at the ANBG in 12 months time is requiring much work and planning but will be an opportunity to showcase our Gardens to a broader group of Guides.

In conclusion Lesley thanked everyone from the Gardens for making the Friends feel so welcome. She thanked all who support the Friends by joining, and those who find time to volunteer in the many activities. She thanked those who are leaving Council for their valuable contributions and welcomed their successors.

#### SUMMER SOUNDS: VOLUNTEERS NEEDED!

Volunteers will be needed from the Friends to help collect donations at the gate, drive the Flora vehicle, and help out at the Information Tent. Keep an eye on Friends broadcast emails in December and January; information will be available on the Friends website from mid December.

#### **Executive Director's Report to Friends AGM**

It is now 46 years since the Gardens was officially opened and the delivery of the Master Plan 2015 – 2035 will provide a bright future for us moving into the next 50 years. One of the first projects to deliver from the Master Plan is the Ian Potter National Conservatory. It marks the start of the Master Plan's redesign of the core precinct within the Gardens, creating a new hub to attract national and international tourists to the Gardens in greater numbers. I am delighted that the Ian Potter Foundation shared our vision and partnered with us to enable the project to commence so early after announcing the Master Plan. A design by acclaimed Sydney architects CHROFI has been selected for the Conservatory, with their winning 'hovering cube' design.

A Bushland Nature Walk in the 'Bushland Precinct', also part of the Master Plan, will be a new nature-based experience for visitors when completed by the end of this year.

Staff are also busy with redevelopments in other areas of the Gardens, including planning for a Banksia Garden to celebrate our 50th anniversary in 2020, Pomaderris Garden redevelopment to support an Environment Trust research project and establishing a Northern Tablelands and Ranges section with material from the Oxley Wild Rivers Bush Blitz and other collections. Further increase of our external partnerships, particularly around conservation activities, has stimulated development of a Research and Conservation Garden (in Section 189) to grow genotype populations of threatened species.

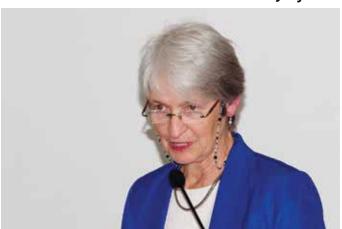
The Living Collections team has completed the upgrade of the Monocot section, and development of the Gardens' Living Collection Policy and Tree Management Strategy. We have had a major focus on tree surgery over the past 12 months. Refurbishment of grass and new succession plantings of trees on the Eucalypt Lawn will keep that area resilient into the future.

In addition to the evolution of the Gardens landscapes, we are continually enhancing the visitor experience with new ways of engaging people within the Gardens. A few of these include the launch of the *Native Bee Hotel* in partnership with Bush Blitz, the launch of the *Aboriginal Plant Use Trail* with support by the Friends Public Fund, and the prehistoric garden trail, together with the National Dinosaur Museum, which attracted an additional 18,000 visitors over 16 days in winter. A new children's trail, *Who Did That* will be launched in December. Attendance continues to grow at evening events and programs such as AfterDARK seasonal programs, the Enlighten festival, Sunset Cinema and evening school programs.

The National Seed Bank staff and volunteers made 628 collections of 84 species from across Australia this year, including seeds from Threatened Ecological Communities, Commonwealth reserves and alpine communities. Research continues in areas of seed dormancy, persistence and longevity,

and germination trials. Staff have also been conducting training and developing training manuals for staff in Commonwealth parks.

**Judy West** 



Judy West, Executive Director of ANBG

# Summary of the Treasurer's Report for the year ended 30 June 2016

At the outset, the Treasurer. **Helen Elliot**, thanked the previous Treasurer, Marion Jones and her two assistants, Kim Liston and Lisa Wilmot, for leaving the accounting records in good order.

Once again, there has been a steady increase in income from the many regular events such as Thursday Talks, Breakfast with the Birds, Summer Concerts and the Growing Friends plant sales. Volunteers work tirelessly to make the events both successful and enjoyable, and it is pleasing that their efforts are well rewarded with strong income being generated for the Friends. The Art Exhibition and Botanical Art Workshops were again well patronised, as were the Booked Walks and Enlighten Luminous Botanicus.

Expenditure was less than last year, primarily due to lower Garden Support as Council was mindful of the substantial amount projected for the public art project, the Treehouse Gazebo. However, even with this expense, Council still intends to contribute to other, but smaller projects to assist the Gardens.

Accumulated funds, Friends of the ANBG, at 30 June 2016 were \$450,245.

This year it was resolved to change Auditors and Council would like to thank GLR Accountants for their past work. Whilst Council were entirely comfortable with GLR's professional services it was deemed good governance that the Auditor should be changed from time to time.

The AGM was followed by a talk on the new Ian Potter National Conservatory, to be built at the Gardens, by Peter Byron (ANBG General Manager) on behalf of project consultant Annabelle Pegrum.

## Friendly Chatter

#### Friends Botanical Art Groups



# Art in the Gardens with Friends: 18 March – 17 April, 2017

The Friends Botanic Art groups have commenced preparation for their annual exhibition to be held in March and April next year. This will be the tenth anniversary of the display of botanic art at the Gardens. Focusing exclusively on Australian native flora, the exhibition has grown increasingly popular both with artists and the public. While there are other botanical art exhibitions held in Australia, few limit their exhibition to natives. We are so fortunate to have access to the wonderful variety of native plants in the Gardens representing flora from many regions across the continent.

The exhibition began with a small display of works hung in the Banks Building in 2007 and later moved to the Visitor Centre Gallery which will again be the venue in 2017. Each year the Friends have purchased art works from the exhibition to add to the collection held at the ANBG. The exhibition itself is a fundraiser for the Friends.

Botanical art has become increasingly popular as the community has come to appreciate their environment. It is an art form that is easily understood and valued. Membership of the botanical art groups has grown to over 110 members with three groups meeting during each month. Friends members are welcome to join the botanic art groups. It is not necessary to have taken classes in botanic art. Although most botanical artists choose to work with high quality paints and paper, many still start a painting with just a pencil and paper. If you have ever admired a botanical painting and thought you would like to try, why not come along?

**Gardens Guides** 

The addition of 16 new Guides brings the total number of Guides to 72 all of whom are available to lead the regular 11 am and 2 pm walks. With the warmer weather, there are more visitors on walks and it is delightful to show off the Gardens. There has also been an increase in the number of booked walks during spring with groups from interstate and overseas as well as Canberra. Some of the new Guides are in training to become Flora guides as well and with this boost in numbers we will be able to offer extra Flora tours during the summer school holidays. The additional tours offered during Floriade were well patronised with many sold out.

Guides presented a touch table at the Canberra Theatre during the season of *Snugglepot and Cuddlepie* and it was a delight to interact with many young children and their teachers and parents. Showing and explaining the seed pods, leaves and flowers which inspired May Gibbs was a lot of fun and on the Saturday we were assisted by a Friend and her young son who took on the role with aplomb.

Christianna Cobbald

#### **Growing Friends**

To encourage people to plant daisy feature gardens at home, Growing Friends featured a selection of Asteraceae (native daisies) in the spring sale held in November. Included were two



Rhodanthe chlorocephala at Mt Annan

species of *Rhodanthe – anthemoides* (perennial) and *chloro-cephala* (annual). The next sale is in autumn, an optimum time to plant, giving some warmth to establish plants before the cold winter sets in.

During our recent propagation trials it became obvious that the lack of success with some cuttings was because of the age of the material available within the Gardens. As an alternative, the ANBG kindly offered us the bed beside the Friends igloo to grow our own cutting material of selected species. A new automatic watering system has been installed and advice regarding fertiliser frequency and type has been provided by Phil Hurle. We hope to build up the collection this way initially with future plantings in the ground. This mother plant collection bed is progressing and plants are establishing well in concrete pipes similar to those used outside the Visitors Centre and special displays around the ANBG. Feel welcome to join our monthly meeting on the first Saturday of each month at 9.00 am during spring and summer and 9.30 in autumn and winter in the Joseph Banks Building. We also have a working bee on the third Tuesday of each month.

**Kate Ramsey** 

**Yvonne Robinson** 

#### **Plant Science Group**

In mid-June, 24 Plant Science Group members had a most enjoyable day visiting the Australian PlantBank at the Australian Garden at Mount Annan. This \$19.8M building houses a seedbank and laboratories, and its particular emphasis is on the conservation of NSW flora. We were given a special guided tour of the facility and then later a guided tour by bus around the Gardens before returning to Canberra.

Several members have volunteered to help Dr Rosemary Purdie, an active member of the Group, in the implementation of a field research project. This aims to ensure the long-term survival of two Fan Grevillea populations (*Grevillea ramosissima*) on ANBG land – one near the eastern boundary fence (eastern population), the other in the Bushland Precinct (southern population). This will be achieved through improving habitat conditions in the eastern population by removing naturalised woody weeds and by recording information on the size and phenology of both populations initially over two years. If appropriate, an ex situ seed store of the species will be established. The project will be managed jointly with ANBG staff. Fan Grevillea is rare in the ACT, and the ANBG's southern population is considered the species' stronghold in the Territory.

Monthly talks continue on the first Monday of each month and have covered: 'Domestication and breeding of *Eucalytptus benthamii* (Camden White Gum) and *E. dorrigoensis* (Dorrigo White Gum)' by Dr Nigel England; 'Why Paleobotany?' by Dr Elizabeth Truswell; and 'Evolutionary ecology of plants: Understanding the evolution of plant mating systems' by Dr Francisco Encinas-Viso. For further information email: plantscience@friendsanbg.org.

au or see the Friends website under Activities

**Anne Campbell** 

#### Friends Photographic Group



Corymbia 'Summer Beauty'

## **Refocus**, our annual exhibition is currently showing at the Visitor Centre and runs until 11 December.

This is our third exhibition and includes framed and unframed photographs, cards and bookmarks which are all for sale. A percentage of proceeds will go to the Friends.

The Group has had a very busy year including various interesting and informative speakers, workshops and excursions. Early morning walks, with breakfast in the café, have also become regular events and are very popular.

We have initiated new projects to broaden the scope of the group. Photographic documentation has begun on significant building development in the Gardens and a second project was initiated to photograph changes to various identified sites within the Gardens over a number of years. This is an exciting project and requires a long-term commitment by the Group. Usually at least one of our members can be seen at events photographing and helping to record the stories of our Gardens.

Plans are underway for an exciting year ahead. The first meeting for 2017 will be held on the last Friday of February in the ANBG Theatrette. Details of the program are updated regularly on the Friends' website. The Group always welcomes potential speakers and new members. Contact us at: <a href="mailto:photo@friendsanbg.org.au">photo@friendsanbg.org.au</a>

Brenda Runnegar



Plant Science Group visit to the Australian Plantbank at Mt Annan

## Australian glasshouses, old & new

#### Inspire | Replenish | Connect

Did you know that the Australian National Botanic Gardens is home to its very own gardens sanctuary spa? Come and say 'hi' and be welcomed by the team at Jindii EcoSpa – we'd love to show you around. Create your own journey to wellbeing. Our spa rituals are uniquely designed to provide a deep connection to both nature and self, providing a haven for some well-deserved time-out, and to simply "Be". A great space to meet new friends and have fun; join one of our yoga or pilates classes. Students of all levels, including absolute beginners, are welcome.

With Christmas just around the corner, why not gather a few friends or loved ones together to share time before Christmas? Infusing locally sourced botanical ingredients, our gardens sanctuary provides a nurturing oasis to escape, and perfectly complimented by a guilt-free Australian native inspired food and drinks menu. Our special festival celebration packages are available for groups of 5 - 25 guests.

For bookings and enquiries: +61 257 8777 <a href="https://www.jindii.com.au"><u>www.jindii.com.au</u></a>



**Pathway to Peace** This ANBG landscape won Zoe Azzopardi, Karabah High School, 1st place, Monochrome section, Schools' Photographic Competition.

#### **Anne Rawson**

**▼**he newest is the Calyx in The Royal Botanic Gardens, Sydney which opened in June this year. It is a circular addition to the Arc glasshouse and replaces the Pyramid, which was knocked down after being closed for two years, in which time it became overgrown with weeds and rampant tropical plants. The Calyx's unique feature is a green wall, 51 m long and six metres high. The plants in the wall are in pots, watered from behind, and every morning a team of horticulturists inspect, trim and remove old and diseased leaves. It would take three days to take out all plants and replace them with new ones.

The oldest is Palm House in Adelaide Botanic Garden, designed by Gustav Runge, built in Bremen in 1871, then transported to Adelaide and erected in 1875. Built of glass and steel it is said to be an absolute masterpiece of 19th century prefabrication. It was restored in 1988 and now contains a collection of strange plants from Madagascar.

Palm House in the Royal Botanic Garden, Sydney is the oldest in New South Wales; it was probably designed by Colonial Architect James Barnett, and opened in 1876. It is now a venue for exhibitions and weddings.

In between these dates glasshouses were built in a number of gardens, particularly in Victoria, for example in Bendigo, St. Kilda and Geelong. In Melbourne the Tropical Glasshouse was built in two stages, the west half in early 1900s, the east half in the 1960s. It contains a Titan Arum, *Amorphophallus* 

titanium, which has the largest unbranched inflorescence in the world. It's yellow, it stinks and it shoots up to 2.61m high, hitting the roof of the glasshouse. Hundreds of visitors queue to see it, and smell it.



Titan Arum, Amorphophallus titanium

In Adelaide there is a modern (1988) tall, thin glasshouse containing tropical plants, and a small round one built specially for the Amazon Waterlily (Victoria amazonica). This lily blooms for only 48 hours. It is white as it opens in the evening when it attracts its beetle pollinators. It then closes and reopens the following evening to release the beetles; it has turned purple to indicate it has been pollinated. It then sinks beneath the water.

The second newest glasshouse is not in a capital city, but in Cairns, the Watkins Monro Martin Conservatory in Flecker Botanic Garden.



Palm House, Adelaide

## The Flecker Botanic Garden, Cairns

#### **Roger Farrow**

**▼**he Flecker Botanic Garden in Cairns is a small gem of a garden focussing on tropical rainforest plants from around the world. There were originally two conservatories: one for orchids (The George Watkin Orchid House) and one for ferns and their allies (the Watkins Martin Fernery). Both structures were ageing and needed replacing and in 2013 plans for a new conservatory were drawn up to house their plant collections. One may ask why a conservatory is needed for tropical plants being grown in a tropical area. However the Cairns environment has a marked dry season and many plants being grown require protection from weather extremes, as well as from herbivores and pilfering. The new conservatory, named the Watkins Monro Martin Conservatory, opened in late 2015 and was funded by Cairns Council, the Friends of the Gardens and major donors.





A male cruiser butterfly, Vindula arsinoe, on an arum

The design is based on the iconic symbol of the Wet Tropics, the endemic fan palm, *Licuala ramsayii*, and the roof consists of a series of radiating struts representing the split leaves of the palm. The central supporting post is angled like a trunk to add to the feature. At ground level a meandering path leads the visitor around the exhibits and a series of alcoves provide close access to all the plants on display. At the centre is a water-lily pool.

The main alcove has a hexagonal seat inset with a fan palm leaf that replicates the structure of the roof. An underplanting of aroids and dwarf palms occupy the background.

The display focusses on nine plant groups, namely, bromeliads, tassel ferns (Selaginaceae), dwarf palms, pitcher plants, aroids, cycads, medinellas, begonias and orchids many of which are growing in hanging baskets that line the pathway. These provide a close-up

view of features like the pitchers on the carnivorous plants. Reinforcing mesh provides a false roof from which the baskets are suspended.

Great care has been taken to select plants that will not outgrow the height of the structure, a problem that often occurs in tropical displays with an inappropriate choice of plants.

A special feature of the plant collection is the Titan Arum *Amorphophallus titanum*, several of which are being grown in pots on the path edge under a dedicated watering and nutrient system. At the time of my visit in August the arums were in full leaf, like miniature trees, and would be a great draw card in summer when the giant, stinking flowers are produced, albeit briefly.

Another feature is the many species of tropical butterfly that can be seen fluttering around



and feeding from flowers and sugar solution stations. The butterflies are regularly supplied by a breeder although it is hoped that some will breed on the food plants established in the conservatory. Shown below on an arum is a male cruiser, *Vindula arsinoe* whose larvae feed on passion vines, *Passiflora* spp. The butterflies are a great attraction for families with children.

This conservatory has an outstanding and unique design, showing off its plants in the best way possible and is already a major attraction to both residents and visitors to Cairns.



Fronds 84 December 2016

### From the Red Heart: a natural and artistic collaboration

### **Cathy Robertson**

he ANBG Visitor Centre Gallery recently hosted a remarkable exhibition of works by ceramic artist, Cathy Franzi and painter and botanical illustrator Sharon Field.

Their work was inspired by their appreciation of Australia's unique desert plants and landscape. Beginning with the Red Centre Garden's visual display of plants unique to Central Australia's iconic and dominant plant communities, they undertook rigorous research into the Red Centre Garden's repository of plant and seed specimens conserved in the National Seed Bank, Australian National Herbarium and the ANBG library.

Sharon Field describes their collaboration as a shared visual language and passion for Australian plants.

"In developing our respective artworks for our exhibition, Cathy Franzi and I worked closely with the National Seed Bank. This involved examining each packet of seeds collected for the Red Centre Garden, particularly those by Dr Rosemary Purdie who has spent a considerable amount of time in the desert. Under the microscope each seed revealed its form and shape, and we had to make hard decisions about its aesthetic potential as an artwork. This was the starting point for the Maireana works in the exhibition. The team at the Seed Bank were very supportive and assisted with prioritising imaging of our chosen seeds. Individual front, back and side views proved fascinating as well as photographs of multiple seeds, showing the range of colour, form and texture within one species."

ANDREW SIKORSKI-ART ATELIER.

Sharon Fields. A promise of good times [Maireana tomentose seeds]. Water colour on paper.

The unique quality of Sharon's technique is described by Roy Forward (Lecturer in Art, ANU and former Curator, National Gallery of Australia):

"... there are no pencil marks. There are no brush marks. There are not even signs of the washiness of watercolour, or of graphite or pigment overstepping a border, let alone of erasure or changes of mind. This is scary."

Cathy Franzi's ceramic works investigate the ways in which the representation of Australian flora on the ceramic vessel can express current botanical and environmental knowledge.

"A plant's character is expressed in ceramic vessel form through techniques on the wheel, with colour through glazes, and its morphology through mark making into the porcelain surface. I reference botanical drawing by making tiny incisions into the clay surface with fine blades, filling them with ceramic ink and then polishing the surface layer after firing."

The work below is a box made from mountain ash and containing lidded seed pots. Delicate drawings represent the blooms of the plants and the pastel glazes in the interiors represent their colours.

Cathy Franzi's work is grounded in the cultural values attributed to plant species, the interconnection of plants within ecosystems and how botanical and environmental knowledge might be expressed in visual language.

"We were drawn in by the qualities of the felty-leaf bluebush (*Maireana tomentosa*) one of many plant species



Cathy Franzi. Seedbox for Six Maireana, 2016. Porcelain, Mountain Ash (Ray Franzi), 7.2h x 27w x 18.5cm.

endemic to the rangelands. This plant is found on floodplains, saline and sodic soils and mulga woodland. Having a relatively short lifespan, it can increase rapidly under optimal conditions. It is highly palatable and, therefore, a valued forage plant. We learned that it is a marking plant for the seasonal condition of the vegetation because healthy bluebush pastures that are in good condition will contain felty-leaf bluebush as a small component of the palatable plant biomass. Where pasture has been previously degraded through grazing overuse, an increase in felty-leaf bluebush in exposed positions is an indication that pasture condition is improving."

Sharon Field's and Cathy Franzi's work is powerful and remarkable: they show the beauty and fragility of desert plants and their ecosystems and give new meaning to the phrase 'Still Life'.



Detail of artworks featuring Sturt's Desert Rose *Gossypium sturtianum as* interpreted by Sharon Field (above) & Cathy Franzi (below)





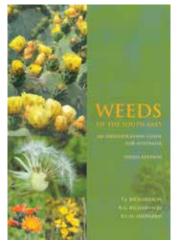
## Weeds of the South East - An Identification Guide for Australia

2016, Third Edition

F.J. Richardson, R.G. Richardson and R.C.H Shepherd

Paperback, 522 pages, Colour Photographs \$79.95

The latest edition of this indispensable field guide has been fully updated and revised to recognise recent taxonomic changes and includes additional species and photographs. Written in easy to understand language and packed full of colour photographs, this book is an essential tool for not only those with an interest in



identifying pest plants and preserving our native flora, but for land and bush care organisations, rangers, horticulturalists and agriculturalists.

# Name Those Grasses - Identifying Grasses, Sedges, and Rushes

2015

Ian Clarke

Paperback, 536 pages, Black and white illustrations with some colour photographs

\$48

Clear text accompanied by detailed illustrations and colour photographs make this new book an excellent resource for identifying grasses. Useful sections explaining and describing the language used for identification, the structure of grasses



and also the process for identification sit alongside the main body of the book, dedicated to identifying 206 species of grasses. Already a very popular buy here in the Botanical Bookshop, *Name Those Grasses* is perfect for those with an interest in this large and important plant family, as well as those involved in agriculture and crop production.

## Friends Briefs

#### Breakfast with the Birds

Well, we had a marvellous time with this year's season of Breakfast with the Birds. It was lovely being in the Gardens early in the morning despite the threatening weather some weekends.

The Tawny Frogmouths had abandoned their nest after a huge limb fell from the tree but otherwise the birds were co-operative, sharing nesting activities and feeding their young for our enjoyment. The magpies had added plant name tags to their already blue tape decorated nests in the apartment tree outside the Crosby Morrison building. There were many honeyeaters breakfasting on the nectar in the grevilleas along the main path and the Spotted Pardalote was once more in the tunnel allowing us to see his jewellike colours up close. A discordant note was struck by a Goshawk making life hard for the Wood Ducks and their ducklings on the café lawn although it was interesting to see the way the parents protected the young against predation. An adult male Satin Bowerbird was hanging around the café area as well as a juvenile male who displayed from

time to time in the shrubs near the pond. All action at the ANBG in spring and many participants were bowled over by the flowers as well.

Jonette McDonnell

# Donations to the Friends Public Fund

The Friends Public Fund was set up in 2004 to raise funds for environmental projects within the Gardens, and to offer a way for the Friends to receive tax deductible donations. Since the inception of the Fund, \$225,000 in donations has been received.

The Treasurer reported at the AGM that the Friends Public Fund currently has \$77,700 in accumulated funds.

Last financial year the Fund provided \$10,600 to provide interpretive signs for the Aboriginal Plant Use Trail, officially opened in January 2016.

Current commitments from the Fund include \$5,000 towards a collecting trip to be undertaken in 2017. ANBG staff will travel to far north Queensland to collect cuttings and/or seed of up to 125

tropical rainforest species currently unrepresented in the Gardens' collection, to assist in their long term conservation.

The Fund has also agreed to provide \$10,000 towards the digitisation of the lichen type specimens held at the Centre for Australian National Biodiversity Research (CANBR) Cryptogam Herbarium at the ANBG. This project will be a partnership between the CANBR and the Friends.

In addition, the Fund has agreed to commit \$30,000 of current funds to support the Friends Public Art Project, a proposed sculptural treehouse/gazebo to be built in the Melaleuca Swamp. This project has seen some delays but it is hoped that it will go ahead next year at which time the Friends will be seeking donations towards this exciting and imaginative project.

The Friends would like to thank all those who have donated over the last year. Donors of \$200 or more have included: Ms J Adler, Mrs S Bachelard, W and M Bush, Mr C Hauff, Kath Holtzapffel, Dr Rana Munns, Annabel Wheeler, and five donors who wish to remain anonymous and who collectively contributed over \$5,000.

The Public Fund committee welcomed new members during the year: Louise Maher, Alan Henderson and Helen Elliot (Treasurer), joining Sue Serjeantson (Secretary), Marion Jones, Geoffrey Hay and Barbara Podger (Chair) on the Committee. Our thanks to retiring members, Beth Heyde (Secretary) and David Headon, for their contributions to the Public Fund.

We welcome donations to the Public Fund to be used for projects in the Gardens. Donations are tax deductible.

> Barbara Podger Chair, Public Fund



Spotted Pardalote at nest burrow which can be seen top right in this photo; Breakfast with the Birds 2016

#### Native Bees in the Gardens?

The Gardens are home to many native bees that play an important role in pollination of the Gardens' native flora. However, little is known about which native bees choose to live or visit here, or which plants they prefer. With a little help from the Friends, I am hoping to improve our knowledge of these hard working bees.

I have a long-term amateur interest in bees, firstly, keeping honey bees in my younger days and, for some years now, keeping native stingless bees on the NSW coast and in Qld. These bees are social and can live in small artificial hives, but unfortunately not in Canberra. I have therefore extended my interest to native solitary bees of which there are many locally, living in hollows in the ground or in trees and shrubs. Exactly how many is not known, but nationally there are about 1700 species of native bees.

I have undertaken to identify at least some of the native bees living in the Gardens and have obtained an ANBG research permit to allow me to identify and map native bees. This is a long-term project, which could use some help from Friends of the ANBG. What I need mostly is some extra pairs of eyes - spotting native bees is not always easy - we are often distracted by the noisy honey bees, but if you are a little patient, you will sometimes see other bees, often smaller, visiting the same flowers. On some flowers, the native bees will be the main species. If any Friends become aware of native bee activity in the Gardens, I would appreciate being contacted by email or mobile. If you are able to identify the plant and its location, that would be ideal, and if you have a camera handy, you might even send me a photo.

Hopefully in the future we will have a better understanding of the native bees in the Gardens to share with all of its visitors.

Peter Abbott peterabbott@iinet.net.au 0421 227 315



Nesting Place
This photo of
the ANBG native
bee hotel won
Caitlin Johnstone,
Canberra High
School, 5th place
in the Colour
Section of the
Schools
Photographic
Competition

#### Thursday Talks Program

The Thursday Talks Program for 2017 will kick off on 2 February with a talk by Tim Fischer AC. Tim Fischer, former Deputy Prime Minister and Ambassador to the Holy See, is currently the Vice-Chair, Global Crop Diversity Trust (GCDT) for the Svalbard Seed Vault, Norway. He will inspire us with a talk entitled Collecting Vital Seeds: from the Gallipoli Oaks collected by John Monash to the Crop Trust and Svalbard Vault today, collecting seeds matters more than ever!

Tim will talk to his best-selling book Maestro John Monash: Australia's greatest Citizen General which will be available for sale and for signing.

Born in 1946, Tim was educated at Xavier College in Melbourne, conscripted into the Australian Army in 1966 and served in The Vietnam War. He entered Politics in 1971, became Deputy Prime Minister in 1996, Ambassador to the Holy See in 2008 and is now a successful author. He was elected Vice-Chairman of the GCDT in 2012.

Talks over the following months will touch on: camels, cuckoos, butterflies, orchids, lizards, and of course will feature a number of fascinating and enthusiastic speakers. Write them in your diary now!

**Sue Serjeantson** 



Tim Fischer in the Svalbard Global Seed Vault. Thursday Talks on 2 February 2017 <a href="https://www.youtube.com/watch?v=bHS0wc0xBHg">www.youtube.com/watch?v=bHS0wc0xBHg</a>

### **Gardens Shorts**

#### A New National Icon For The Gardens

Earlier this year, the Gardens conducted a national design competition for the Ian Potter National Conservatory that attracted a large field of Australia's best architects. From five finalists, acclaimed Sydney architects CHROFI were selected for their innovative, bold and environmentally-conscious design. CHROFI lead architect, John Choi says that the Conservatory is conceived as an entirely new type of conservatory - a gallery for plants for the 21st century. Rather than the traditional uniform glass envelope, a series of rooms will offer a variety of immersive spaces to give visitors multiple ways to interact with and experience the living exhibit. Concurrently, with a more strategic approach to glazing, the design will deliver world-leading environmental performance.

CHROFI, McGregor Coxall and Atelier Ten were the standout design team with their "hovering cube" concept framed by a void in the sky and transparent and translucent layered skins. The impressive resume from the design team includes the design of the TKTS Booth in Times Square New York, the NGA Australian Garden, and the Calyx at the Royal Botanic Garden Sydney to name just a few.

The Calendar is \$12.00, less Friends 10% of course.

It is a great souvenir of the Gardens with 13 wonderful images taken throughout the year in the Gardens, by local photographer Kira Dowling.

We are now well advanced not only on the design, but in determining the mix of tropical plants for the Conservatory. Our expert horticulturalists are currently growing around 30 per cent of the plants in our nursery glasshouses ready for relocation into the Conservatory once it is constructed. Other larger plants are being sourced from our networks of national parks, botanic gardens and specialist growers all with known provenance.

#### **Renovation And Conservation**

The Gardens is redesigning the Rhamnaceae (Buckthorn) section of the Gardens to showcase plants from the genus Pomaderris and reflect our growing focus on conservation.

Pomaderris is a group of cream-yellow flowering shrubs growing mainly in the eastern states of Australia where they occur in a wide range of habitats such as woodlands, heaths and open forests. These species play an important part in the ecosystem, attracting pollinators like butterflies and jewel beetles. A large number are listed as threatened and are at risk of extinction. Five of the rarest Pomaderris are the focus of a NSW Environmental Trust science conservation partnership between the

Gardens and a diverse range of specialists and institutions.

The new garden design will create greater visual impact drawing visitors to explore and discover the Gardens' role in, and the importance of, plant conservation, in particular of these rare and unique plants.

The display garden will complement the partnership's conservation seed collections and research into germination and cultivation of the plants for returning to the wild.

#### CBRfree WiFi

Visitors to the Gardens can enjoy wider internet access thanks to a partnership between Parks Australia and the ACT Government's CBRfree Wi-Fi network.

People can now fire up their mobile devices amongst the trees on the Eucalypt Lawn or post, tweet and email from the Red Centre Garden – another tick on the Gardens' Master Plan to do list. Students, tourists and locals visiting the Gardens can share their experience in real time with just the click of a button.

It is another milestone for the Gardens in working towards implementing our 20-year Master Plan. A key focus of the Plan is to enhance the range of visitor experiences, and thanks to the CBRfree WiFi initiative and our ACT Government partners we are certainly on track.

#### **Bushland Nature Walk**

The construction of the new Bushland Nature Walk in the Gardens Bushland Precinct is almost complete.

In September the materials for the bridges and the viewing platform were flown in by helicopter.

The walk includes a natural surface, steps, mounds, rock walls, seating nooks, bridges, low platforms and a



View from Bushland Nature Walk lookout

large viewing platform overlooking Lake Burley Griffin and some iconic Canberra landmarks. A number of plants along the walk will be labelled. Interpretative signage will be installed once the construction works are completed.

Photo shows materials for bridges & viewing platform for the new Bushland Nature walk being flown in by helicopter; September 2016

#### Sunset Cinema

Sunset Cinema returns to bring the magic of the outdoor cinema experience to the Gardens. With a total of 22 screenings this year, the film program is brimming with even more new releases, thrillers, adventure, family flicks, and the list goes on! Titles include Bridget Jones's Baby, Inferno, The Secret Life of Pets, Sully, Café Society, Bad Moms and Dirty Dancing to name a few.

So whether it's Girls Night, Date Night or Family Night there really is something for everyone.

Sabrina Sonntag



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this card
no discount on redemption of
gift voucher



#### Friends Life Membership

Kath Holtzapffel (holding flowers), pictured here with her twin sister Mary McMahon who attended the AGM for the awarding of Friends Life Membership to Kath.

Kath is a long time active member of the Friends. With her husband John, she joined the Growing Friends at its inception, and developed skill in propagation, management and nurturing of plants from our Gardens, generously sharing these skills with others and taking a leadership role with the group. Kath has been a Guide for 17 years, sharing knowledge gained from her wide ranging research with other Guides. She volunteers to guide tour groups, garden clubs, international and diplomatic groups, government departments, and has mentored trainee Guides and botanical interns. Kath is always quick to volunteer to assist with other Friends activities. Kath is a true asset to the Friends of the ANBG and more widely has promoted an interest in and love of Australian native plants. Congratulations! A well-deserved

award Kath.

Fleur Kelleher



DAKBARA FODG

Details of events are correct at the time of printing. For changes and updates please check the Friends' website at <a href="www.friendsanbg.org.au">www.friendsanbg.org.au</a> or the Gardens' site at: <a href="www.anbg.gov.au">www.anbg.gov.au</a>

The Friends of the ANBG thank the many speakers who volunteer their time and talents to further the knowledge of all who attend the events in the Gardens. The Friends use the 'gold' coin donations received at each activity to support Gardens' programs and development. The Friends thank all those who have donated. Please note: unless otherwise indicated, talks are in the ANBG Theatrette.

Summaries or PowerPoint presentations of Thursday talks are available to Friends from the ANBG library. A donation to the Friends for the use of this material will be gratefully accepted.

#### Bush Magic Story Time for Preschoolers

## First Friday of every month at 10.00am. \$5 per child

Come along and enjoy the Gardens with some specially themed stories and crafts.

December — Bush Christmas February — Waterhole Stories March — Dinosaurs

#### Sunset Cinema

Until 17 December from 6.30 pm every Wed, Thurs, Fri and Sat night Enjoy latest releases, children's and classic films in the beautiful garden surrounds. Bring a picnic or purchase your dinner at the event. www.sunsetcinema.com.au/canberra

# Eucalypt dye workshops with Sally Blake

Wed 30 Nov or Sun 4 December 9 am - 1 pm; Cost \$49 per person; suitable for 15 years plus.

Local textile artist, Sally Blake, will demonstrate techniques for extracting plant dye from eucalypt leaf and bark growing at the ANBG. Choose your project, either a personalised scarf or cushion cover, for a unique Christmas gift. Workshop limited to 15 participants.

Bookings via the ANBG website in 'What's On'.

This project has been assisted by the Australian government through the Australian Council for the Arts, its arts funding & advisory body.

#### Weeding Black Mountain

Removing Woody Weeds from Black Mountain & ANBG Annexes. Check Friends website for meeting place for each weeding work party. Please email your name and phone number to <a href="mailto:friendsofblackmountain@gmail.com">friendsofblackmountain@gmail.com</a> or phone Linda (0437 298 711) or Libby (02 6296 1936) so there is enough delicious morning tea.

Saturdays 8.30 - 11.30am

3 December, and in 2017, 7 January, 4 February, 4 March, 1 April

#### International Volunteer day – Volunteer Recognition ceremony

#### Monday 5 December 10.30 am

Join us for morning tea to recognise & celebrate the contribution of volunteering in the Gardens.

# Exhibitions

Visitor Centre Gallery Open Daily 9.30 am - 4.30 pm FREE

REFOCUS: 25 Nov - 11 DEC

Friends Photographic Group annual exhibition & sale

BUILD UP, BREAK DOWN: 14 DEC - 4 FEB

Three Canberra glass artists, Sui Jackson, Debra Jurss & Christine Atkins present their work inspired by nature & express a dialogue about water, land & plants

CRUST: 8 FEB - 12 MAR

Natalie Maras' work explores lichens, mosses and fungi in colourful and ornate detail with her wall-mounted works in polymer clay and freestanding sculptures.

BOTANIC ART GROUP: 18 MAR - 17 APRIL

Paintings and drawings of Australian native plants by members of the Friends Botanic Art Groups.

#### **Summer Sounds Concerts**

supported by Icon Water



Concerts will be held over two weekends in 2017: 5.30 pm - 7.30 pm \$5 adults, \$2 conc. Child 12 yrs & under free

#### 28 and 29 January 4 and 5 February

Great concert atmosphere with big band, jazz & blues, kid's rock & popular music.

A variety of food vendors will offer tasty meals + drinks.

#### **Snakes Alive!**

Mon 16 - Sun 22 January; adults \$6, children \$3 & conc \$5.

#### 10am - 4 pm daily

Live displays & feeding demonstrations of snakes, lizards, frogs, turtles & crocodiles.

#### Luminous Botanicus III Special Enlighten event

Fri 3 - Sun 13 March; Cost applies

Illuminated sights, uplifting sounds & unique experiences amongst our iconic Australian landscapes.

#### National Eucalypt Day

#### Thursday 23 March

Celebrate National Eucalypt Day with opportunities to learn more & appreciate our iconic tree. Check the Gardens' website for further details.

#### Feast! AfterDARK

#### Starting January & continuing through to autumn; cost applies

An exquisite evening of fine wine, delicious food, and cultural experiences amongst our iconic Australian landscapes.

#### Thursday Talks 2017: February to April 2017

Lunchtime talks are held at 12.30pm every Thursday from February to November in the Gardens' Theatrette. Talks last for 1 hour. Admission is by gold coin donation. There is no need to book.

The 2017 Thursday Talks will be launched by Tim Fischer AC with sales and a book-signing of Tim's classic work: "Maestro John Monash - our greatest Citizen General".

Queries relating to Thursday Talks to: Sue.Serjeantson@bigpond.com

#### **FEBRUARY**

#### Thursday 2 February 12.30pm

Tim Fischer AC 'From the Gallipoli Oaks collected by John Monash to the Crop Trust and Svalbard Vault: collecting seeds matters more than ever.

Tim Fischer, Vice-Chair of the Global Crop Trust, will link the acorns of Gallipoli, sent by Monash to his wife, with the philosophy of seedbanking today.

#### Thursday 9 February 12.30pm Dr Rosemary Purdie 'Walking the **Blooming Simpson'**

Rosemary, a botanist with a keen interest in arid environments, will talk about her 2016 camel-supported plant-collecting trip in the central Simpson Desert.

#### Thursday 16 February 12.30pm

Dr Illiana Medina 'One flew over the cuckoo's nest: the amazing arms race between brood parasites and hosts.'

Illiana, a post-doctoral researcher at ANU, will explore the co-evolution of complex defences in avian brood parasites and their hosts.

#### Thursday 23 February 12.30pm Dr Suzi Bond 'Taking a closer look:

the fascinating lives of our local butterflies.'

Suzi, who works on biodiversity at the ABS, will introduce us to the wonderful variety of butterflies in the ACT & to the first ACT fieldguide.

#### MARCH

#### Thursday 2 March 12.30pm Dr Penny Olsen 'Louisa Atkinson: A voice from the country.'

Penny, Research School of Biology, ANU, will celebrate the life of Louisa Atkinson (1834-1872), Australia's first woman natural history journalist and a significant plant collector.

#### Thursday 9 March 12.30pm Dr Mark Clements 'Australian Orchids'

Mark, Centre for Australian National Biodiversity Research, will describe some of the 1300 species of Australian native orchids that he has collected and curated.

#### Thursday 16 March 12.30pm Deirdre Slattery 'Kosciuszko, Alpine and Namadgi National Parks.'

Deirdre will celebrate National Parks Week by talking to her book on alpine national parks, a fascinating guide to the natural and human history of the regions.

#### Thursday 23 March 12.30pm Russell Barrett 'The Kimberlevs: wet and dry season expeditions in search of new plant species.'

Russell, an experienced taxonomist and photographer, will reflect on the place of the Kimberleys in the unfolding story of Australia's unique flora.

continued next page

#### Thursday 30 March 12.30pm Dr Francisco Encinas Viso 'Venezuela, an extraordinary natural province.'

Francisco will talk to the stunningly diverse biodiversity of Venezuela.

#### APRIL

#### Thursday 6 April 12.30pm Matthew Higgins 'Adventures with Rosie.'

Matthew, a professional historian, presents Rosenberg's Monitor in an ACT context, focusing on an important project on Mt Ainslie.

# Thursday 13 April 12.30pm Dr Adrienne Nicotra 'Iconic Alpine Landscapes: past, present and future.'

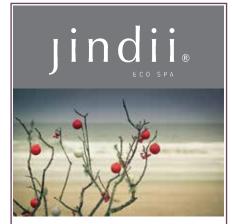
Adrienne, a long-term collaborator with ANBG on Alpine plant research, will consider the impact of global climate change on our iconic alpine landscapes.

# Thursday 20 April 12.30pm Dr Roslyn Russell 'Partners in the 'Business of Nature': John and Elizabeth Gould.'

Roslyn, an historian and museum consultant, will explore the personal and professional relationship between husband and wife that set John Gould on the path to scientific acclaim.

#### Thursday 27 April 12.30pm Genevieve Jacobs 'Japanese Gardens: an exercise in beauty, restraint and imperfection.'

Genevieve began presenting at ABC 666 ten years ago, on weekend gardening and arts. She delights in Japan's national aesthetic that sees beautiful gardens as works of art.



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Garden Landscape. The ANBG landscape below won Rushan Tucker, Dickson College, 1st place in the Colour section, Schools' Photographic Competition 2016



#### FRIENDS BENEFITS

As a Friend you are entitled to:
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#### You also get:

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Discounts on some events
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DVDs plus use of computers and
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Function facilities – special rates
for functions at ANBG

And opportunities to:

Join Botanical Art Groups
Growing Friends
Photographic Group
Plant Science Group
Assist with Gardens' research
projects
Become a Guide
Relax in the Friends Lounge
in the Ellis Rowan Building,
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4.30 pm. Relax with tea/coffee



and lots of interesting reading.

where friends meet to eat
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