



# *Fronds*

*Friends of the Australian National Botanic Gardens  
Number 74 August 2013*

Inside:  
Red Centre  
Garden  
landscapes



*Friends of the*  
Australian National  
Botanic Gardens

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Email or post material to the *Fronde* 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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Cover: *Senna notabilis* is one of over 130 plants on the Gardens' planting list for the Red Centre Garden. It is also known as the Cockroach Bush. Photo by Murray Fagg.

## Posting the Gardens



The Gardens was one of five botanic gardens featured in a special Australia Post stamp edition, along with Hobart, Cranbourne, Mount Tomah and Darwin. According to Australia Post's media release nearly half of all Australians aged 15 and over visit a botanic garden at least once a year. The stamps were designed by Jennifer Scalzo of the Australia Post Design Studio based on photographs by leading photographer Simon Griffiths.

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# Keeping up with the Guides

Glenys Bishop, Guides Convenor

*The volunteer guides lead free guided walks every day of the year at 11 am and 2 pm. They also provide booked walks for groups as required. Special themed walks are offered to coincide with the seasons or other events in Canberra.*

By now many of you will have seen the 'Turner at the Tate' exhibition at the National Gallery. But have you been on a Turned On walk at the Gardens? These walks, offered weekly throughout the exhibition, have been developed by a small group of guides led by Linda Beveridge. Each walk uses some of the characteristics and subjects of Turner's paintings, such as his landscapes, his sky scapes, his contrasts of light and colour with shade and darkness, ships, travel and exploration and memorials, to introduce features of the Gardens. See 'What's On' for further details.



How would Turner have interpreted this view of rain and cloud from the ANBG? Photo by Sheila Cudmore.

The guides are now preparing wattle themed walks for the first week of September and spring flower walks to coincide with Floriade. See What's on for details, pages 18 and 19.



Acacia longifolia. Photo by HM Rawson

The guides have also been making a big effort to prepare for the opening of the Red Centre Garden. Jane Keogh and Maureen Connolly, with input from many guides and Gardens staff, have produced an information handbook for the guides. Guides have all participated in several professional development sessions, including briefings on the plants and plantings in the new Garden. Watch out for the roving guides in this area during the Bush Capital Weekend in November. They will be able to share lots of interesting stories about its plants and features as you wander through.



Guides visiting the Red Centre in the rain for an information session with David Taylor. Photo by Margaret Clarke.

At the beginning of July, 21 new guides began their training. Jane Keogh and Guides Convenor, Glenys Bishop assisted Gardens staff in conducting information sessions for potential guides and in interviewing applicants. The concept of developing a theme for each guided walk will be emphasised in this course as it was in the last two courses in 2010 and 2008. Another feature of the training is learning to drive and conduct a Flora Explorer tour. So why not join in one of the guided walks or a Flora Explorer tour soon!



Trainee guides working on basic botany, plant morphology and use of microscopes. Photo by Stephen Galliford.

# Termites: Australia's ecosystem engineers

*Michael Lenz*



Anyone travelling through inland and northern Australia always notices the many earthen mounds of various shapes and sizes dominating the landscape. Many are free-standing; others are erected at the base of trees or around tree stumps.

The architects and builders of these mounds are blind termites. They operate out of sight, hence they are a mystery to most of us. When we hear 'termites' we tend to think of pests, feasting on the timber in our homes. However, there is so much more to termites—they fulfil important roles in the natural environment.

Termites are fascinating insects dwelling in the warmer regions of the world, including most parts of Australia. They are closely related to cockroaches. In fact, based on the latest taxonomy, termites are no longer an insect order in their own right, but they form an Infraorder within the Order Blattaria (roaches and termites). Termites are often called 'white ants' and their mounds 'ant hills'. However, this is really a misnomer as they are only very distantly related to ants. They differ in morphology, development pattern, and ecology. Ants (with the exception of leaf-cutter ants) are predators of insects and other invertebrates. Termites feast on dead plant material. Most free-standing mounds are inhabited by grass-feeding species, but there are also many other grass-feeders nesting under-ground.

Termites are social insects living in colonies which can number from several hundred to many hundred thousands of individuals. The termite biomass in savannas (if you were to weigh all the termites in a given area) below-ground can equal or exceed the biomass of grazing animals above-ground! A termite colony is comprised of different castes (similar to ant, wasp and bee colonies), each different in physical appearance and with special tasks: king and queen (the adult termites) produce the brood; soldiers guard the nest. The bulk of individuals are workers, responsible for building the nest, searching for food and all other 'household' tasks. Nymphs, present at

certain times of the year, develop into winged adults and leave the nest ('swarm', often just before or after rain), find a partner, drop their wings and seek a sheltered place to found a new colony.

With a diet of wood, grass, or plant litter, termites are key recyclers. They harbour a multitude of microorganisms in their gut, helping to break down the cellulose. It is estimated that in tropical dry forests they consume 40-100 per cent of the dead wood, and in savannas up to 20 per cent of the grass. The plant matter is converted into large amounts of faecal pellets, ie natural fertiliser. Termites mix and move considerable volumes of soil from different layers while tunnelling below ground or building galleries above-ground to reach food and to build their mound nests. Nutrient-enriched soil from the mounds is washed off by rain and is added to the top soil. These activities make termites key players in the formation and mineralisation of tropical soils.

The tunnelling activity and the openings (foraging holes) of termites as they venture out to harvest grass are critical for aerating the soil and allowing water to infiltrate the ground. They have an equivalent role to earthworms in temperate and cooler climes.

Recent studies in the drier parts of the Western Australian wheat belt have shown that the activity of harvester termites and ants can increase the wheat yield by 36 per cent. Similarly, encouraging termite activity in overgrazed areas with caked soil in the African Sahel quickly led to their regeneration, simply because water infiltrated the ground through termite foraging holes.

An abundance of termites provides a rich source of nutrients for many other animals, such as ants, lizards, birds, and mammals, including the Numbat from Western Australia and many more examples from other warmer regions of the world. The mounds, tree nests and hollowed out logs provide shelter and breeding sites for many birds,



mammals and other animals. Some Monitor Lizards in temperate Australia incubate their eggs in termite nests, utilising the high constant temperature of the nest for the development of their young.

Last, but not least, the unique Australian sound, the didgeridoo, is made possible by termites. These instruments are tree branches hollowed out by wood-feeding termites. After cleaning and minor modifications, our Indigenous people have turned these into world-renowned musical instruments.

Next time you travel to inland or northern Australia, look at termite mounds and their inhabitants with astonishment and thanks for these little creatures..



**Captions.** Previous page: Mound of *Drepanotermes rubriceps*, a grass-feeding species, wide-spread in central and northern Australia. The genus *Drepanotermes* is endemic to Australia.

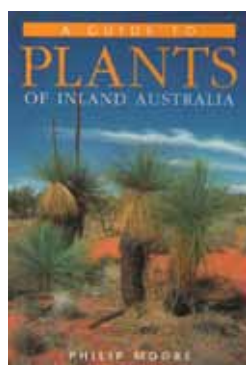
Above left: *Drepanotermes rubriceps*, nest opened, showing stored grass pieces (chaff).

Above right: King, queen and two workers of *D. perniger*.

Dr Michael Lenz, is an Honorary Research Fellow at CSIRO Ecosystem Sciences in Canberra, and a termite expert. He is also a member of the Canberra Ornithologists Group and has been involved in organising and conducting surveys of waterbirds on Lake Burley Griffin, Lake George and Lake Bathurst for many years.

*The Friends Public Fund has agreed to donate \$10,000 to the ANBG for the construction of a life-sized termite nest showing a graphic representation of the internal structure of a termite mound, to tell the story of the ecological role termites play in the Red Centre.*

## From the Bookshop with Tom Butt, Shop Manager



*Guide to Plants of Inland Australia*

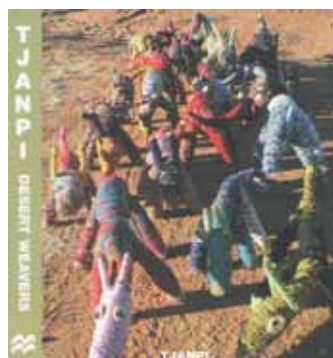
Philip Moore

\$49.95

Paperback, 504 pages

Full colour photographs

The ideal companion for inland travellers who are curious about the many and varied plants they encounter. A handy reference for amateur and professional botanists, this book features over 900 inland plants. Each entry comprises a detailed description, at least one colour photograph and a distribution map, all designed to help you identify the plants you see. Armed with this book, your experience and understanding of the landscape will deepen. Even armchair travellers will find this guide a fascinating read!



*Tjanpi Desert Weavers*

compiled by Penny Watson

\$79.95 Paperback

Mini book – also available (pictured) - \$35.00

Tjanpi Desert Weavers is a social enterprise supporting more than 400 women of the Central and Western Desert region who make baskets and sculptures from grass weaving. (Tjanpi means grass.) The large edition is a coffee table book that chronicles the history of the desert weavers, in which they talk about the products they make, and their motivations to make them. This weaving has become a vital source of income for many hundreds of Indigenous women from central Australia.

# A sandstone success

When you're visiting the new Red Centre Garden, why not stroll a little further down the hill to reconnect with the Sydney Region Gully? A lot has changed and flourished there since the Gardens undertook major earthworks to remodel the entrances as 'sandstone country'. (See 'New Works Set in Stone at the Sydney Basin' *Fronde* 69, December 2011.)

The Gardens' David Taylor and Dan Marges led a Friends' Thursday Talk group through the reconstruction work of the Sydney Gully entrances in May to show some of the iconic species now flourishing in their new crushed sandstone growing medium. Those otherwise challenging plants like *Boronia*, *Telopea*, *Actinotus* and *Dampiera* are now thriving in this more natural growing medium and should turn on some spectacular floral displays this season.



Dan Marges (tall floppy hat) and David Taylor (far right) talking about the plantings at bottom entrance to the Sydney Gully. Photo by Jean Gueue.



Waratahs and Flannel Flowers are features of the rebuilt entrances to the Sydney Region Gully. The Flannel Flowers (*Actinotus helianthi*) now readily self seed and like to find a spot where they can 'bake'. The NSW floral emblem, Waratah (*Telopea speciosissima*), was collected from near Mittagong. This species will be used more extensively in the main part of the Gully as the current planting of cultivar Warratahs age and need replacing. Photo by Anne Rawson.



Left: *Epacris purpurascens* var. *purpurascens* is listed as 'vulnerable' in its Sydney basin habitat. It now happily flowers for months at a time in the Gardens. Photo by M. Fagg. Right: *Scaevola ramosissima* likes to scramble among other shrubs but will rarely be noticed unless in flower from November to February. Photo M. Fagg.



## ANNUAL GENERAL MEETING

The 25<sup>th</sup> Annual General Meeting of the Friends of ANBG will be held on Thursday 10 October 2013 at 5.30pm in the Crosbie Morrison Room at the Gardens. Light refreshments will be served from 5pm in the Crosbie Morrison area.

The AGM will be followed by a short talk by Dr Andrew Young, Director of the Centre for Australian National Biodiversity Research on the role of the Centre and its linkages to the Gardens in relation to research into native flora.

### The Agenda for the AGM is

1. Opening and Welcome
2. Apologies
3. Acceptance of minutes of 24<sup>th</sup> AGM held on 25 September 2012
4. President's report – David Coutts
5. Treasurer's Report – Marion Jones
6. Report by Executive Director of ANBG – Dr Judy West
7. Election of Office Bearers and Council members (for 2 years)
  - Vice President
  - Treasurer
  - Council member (1)
8. Appointment of Auditor
9. Award of life membership
10. Any other business

Nominations for election to Council should be lodged with the Secretary by 3 October 2013, together with a brief summary outlining relevant interests and experience of the nominee.

Nomination forms are available in the Friends lounge, on the Friends website ([www.friendsanbg.org.au](http://www.friendsanbg.org.au)), by ringing the Friends on 62509548 (leave a message) or by email request to [info@friendsanbg.org.au](mailto:info@friendsanbg.org.au). Nominees must be financial members of the Friends.

# A Silver-Gilt Medal in London!

*Nilavan Adams, Botanical Art Group*



The exhibition venue and Nilavan with two of her paintings on hanging day.  
Photos by Ron Adams.



For many years the Royal Horticultural Society (RHS) has organised an annual Botanical Art show in early April in the Lindley Hall, Westminster, London. This year 27 individuals and one group from the South West Society of Botanical Artists participated in the show. Artists were from 10 countries; three were from Australia and I was privileged to be one of those. The exhibition ran over four days from Wednesday 10 to Saturday 13 April. Wednesday and Thursday were assigned for staging (hanging), judging and previewing; Friday and Saturday were open for the public at £8 a ticket.

No fee applied to exhibitors but the artists were responsible for everything else, ie hanging, minding, selling and removing of the exhibits. Each of the artists was allocated up to three 1.3 m x 2 m screens as previously arranged with the RHS. To promote Australian flora, I decided to do six *Callistemon* (Bottlebrush) species.

Painting *Callistemon* was challenging: a 'busy' botanical design of the flower spike together with my experiment on new painting techniques, its short vase life, and the high ambient temperature when the flowers were in full bloom. Some days the temperature reached 40°C. I could comfortably paint only between 5.30 and 10.00 am. Thanks to Ranger Dan for the feeding formula that helped lengthen the cuttings life for four to six weeks!

There are four categories of the award: gold, silver-gilt, silver and bronze. I was awarded a Silver-Gilt Medal. The fun started on Friday when the exhibition opened to the

public! It was a pleasant surprise to find that my paintings generated various angles of enquiry by many of those attending. There were three categories of enquiry: a) the painting techniques; b) the reminiscences of Canberran expats; and c) queries from growers of either dead or dying *Callistemon*. Having been educated by Ranger Dan, I sometimes put on a gardener's hat.

During the public viewing days, I absorbed the warm and friendly atmosphere with excitement from greeting members of the public, meeting Australian friends, and exchanging tips and tricks with the fellow artists. Towards the end, I realised that that excitement would soon be over. Sadness crept in as I knew that I would miss those with whom I established friendships or shared life stories. Regardless of my sore throat and exhaustion, I thoroughly enjoyed this wonderful experience that I will never forget. I encourage my artist friends to consider having a go at it. Don't forget! You can do this as a group.

I wish to acknowledge assistance and support from ANBG staff (Rangers Dan and Bruce and Librarian Catherine Jordan); my friends David Cox and Heloisa Mariath; and my husband Ron. Thank you.

# Propagating from seed

Growing Friends

Our autumn sale proved successful with the majority of plants sold and raising close to \$4000. There will be another healthy batch ready for sale and planting out at our sale on **9 November**.

At our meeting in June, we went all out on propagating from seed, ably led by Ros Cornish. She explains below some interesting methods that we tried.

Feel welcome to join our monthly meeting held on the first Saturday of each month at 9.00 am (9.30 am in winter) in the Joseph Banks Building. Or come to a working bee on the third Tuesday of each month.

Yvonne Robinson

## Seed Propagation Notes

For our June propagation session, we sowed a variety of seeds, some of which required pre-treatment to aid germination. Two Tasmanian species, *Eucalyptus risdonii* and *Gaultheria hispida*, required cold stratification (a few weeks at fridge temperature), while the seeds with hard coatings (wattles and peas) required near boiling water poured onto them. On another group of seeds we used Seed Starter Granules, a proprietary product put out by Australian Wildflower Seeds—it is vermiculite soaked in smoky water and is suitable for those seeds which need certain smoke chemicals to allow them to germinate.



*Gaultheria hispida* Photo by Murray Fagg

One of the peas we hope to grow from seed is *Swainsona formosa*, Sturt's Desert Pea. We haven't tried to grow this before, perhaps because it is a little tricky. The seedlings are prone to rotting if they get too wet and they also don't like being transplanted. To try and overcome this we have sown some in peat pots and once they emerge, we will put the whole peat pot into a larger pot. We have also sown some seed directly into large pots of a sandy mix. We are

keeping them all on our seed bed which has bottom heat and our dedicated waterers are carefully managing the water they get.



*Burchardia umbellata* Photo by Murray Fagg

Another species we haven't grown before is *Xanthorrhoea preissii*, a large grass tree from Western Australia. We will all be long gone before the seeds grow into large trunked specimens but they are a nice feature plant when young.

We are trying some species which grow locally as they are always popular at our sales: *Burchardia umbellata*—Milkmaids, a tufty grassland species with sprays of white flowers in spring; *Dichondra repens*—Kidney Plant a dense groundcover which can replace grass in low traffic areas; *Leptospermum myrtifolium*—Myrtle Tea Tree, a medium, greyish shrub with white flowers; *Stylidium graminifolium*—Trigger Plant, a tufty herb with pink flower spikes, suitable for rockeries and containers; and *Wahlenbergia multicaulis*—Tadgell's Buebell, a multi-stemmed plant with terminal, pale-blue, bell-shaped flowers, suitable for rockeries and containers.

Ros Cornish

## Spring plant sales

### Friends plant sale

Saturday November 9 at 8.30 am  
Crosbie Morrison car park

### ANPS Plant sale

Saturday 19 October 8.30 am to 2.00 pm  
ANBG southern carparks

Australian plant market days at Yarralumla Nursery  
Saturdays 7 September, 5 October, 2 November

# A planting experiment starts

## Coping with Canberra

It's the question most people ask: 'How will the desert plants cope with Canberra winters?' Designer of the Garden, Kaiya Browning, admits there's going to be 'a bit of trial and error' for some of the untried species, but this is part of making new discoveries. She has been encouraged though by the response of most plants to date. Many were hardened off outside over last winter and she is relieved to see plants like the palms and native tobacco doing well.

Other plants have been more affected by the cold and frost and may need to be treated as annuals in their Canberra garden. Some, like Sturt's Desert Rose (*Gossypium sturtianum*) in particularly exposed areas, are behaving as deciduous plants over winter. Others, like Sturt's Desert Pea (*Swainsona formosa*), can be burnt by frost but are capable of regenerating in spring.



*Swainsona formosa* on the Rocky Escarpment in the summer. Photo by Anne Rawson.

To cope with Canberra's much higher winter rainfall, an elaborate drainage system diverts rainwater from Black Mountain. Water will only flow along the miniature river bed in a one-in-20 year rain event. Even so, there will be opportunities for a small group of arid aquatic plants to spring to life in the small depressions deliberately left in the river bed when rain fills the hollows.

## Choosing the Plants

Choosing the plantings for the Red Centre Garden is a complex business. While there are hundreds of interesting and dramatic species to choose from, most have never been trialled in Canberra before. Curator of the Living Collection, David Taylor, suspects it may take around fifteen years to settle on some species that can be grown with confidence and consistency on the site. He likens the challenge to starting out on the first planting stages of the Rainforest.



*Isotropis cuneifolia* subsp. *cuneifolia*, one of the 130+ plants on the Gardens' Red Centre Plant List. Photo by M.Crisp.

While it would be tempting to plant a huge diversity of plants for maximum interest (as well as just to see what works), too many plants would detract from the bold landscape elements. As David recently explained to a group of Guides, plantings that are intended to provide strong landscape elements in the Garden, need to be the most durable. For example, while the iconic red centre Desert Oaks (*Allocasuarina decaisneana*) are a highly desirable feature, their special growing features (involving exceedingly long tap roots) suggests they may not establish quickly on this site. They will therefore be interplanted with the Mt Connor Wattle (*Acacia ammobia*) which is expected to perform reliably and be able to provide the required landscape effect if the Desert Oaks are slow to reach their potential size.

It is highly likely the Red Centre garden will mimic the 'boom or bust' cycles of the true red centre. The vagaries of the Canberra climate will no doubt influence both periods of plenty and other times when plants will struggle to reach their peak.



Spinifex planted in a ring. Photo by Margaret Clarke.

## The Concept

The Red Centre Garden is representative of lands within approx. 500 km radius of Alice Springs. This is a land of boom or bust. Summer temperatures soar to over 40°C, while they can drop to well below 0°C overnight in winter. The average annual rainfall in Alice Springs is 286 mm. However, it is highly erratic. Ten years with practically no rain can be followed by heavy floods causing the rivers to flow and the deserts to bloom. Perennial plants grow slowly, sending their roots deep down in search of water. The seeds of ephemerals lie dormant for decades, waiting for a rain event, when they germinate, grow, flower, set seed and die in a matter of months.

## Five Landscape Elements

### Rocky Escarpment



The Rocky Escarpment with its red Jasperite rocks (sourced from Stanthorpe in Queensland) is representative of the quartzite cliffs that surround the permanent waterholes and line the gorges of the desert riverbeds in the true red centre. Those cliffs were formed 300 – 350 million years ago and have been eroded and folded to form the gorges that we admire now. The narrow gorges, with limited sunlight in places, are moister than the desert plains and support some eucalypts as well as some rare and relict species in the gullies. Here plantings of the Red Cabbage Palm (*Livistona mariae*), including one eight metre specimen translocated from a construction site in Queensland, are evocative of the palms growing in the gorges and valleys of the Finke Gorge National Park, and serve as a reminder of central Australia's tropical past.

### Rocky Outcrop

The Rocky Outcrop emulates the outcrops that appear across arid country in various landscapes such as the

## The Red Centre

*Over three years in development, the \$2 million project aims to highlight the significance of the Red Centre as the ph*



environs of Kata Tjuta. It is here that a wide variety of plants appear including spinifex interspersed with other grasses, daisies, native tobacco, emu bushes and ghost gums. They survive on the small amounts of moisture held briefly among the rocks and stones.

The rocks in the Rocky Outcrop have been nicknamed 'Crace Pudding' as ten truckloads of this rock came from the emerging Canberra suburb of Crace. It is probably a breccia that has been broken up.

### Desert River

The rivers of the Red Centre are usually dry, except for a few permanent waterholes, protected by high cliffs. They are often referred to as 'rivers of sand'. However,



# Red Centre Garden

*A new Red Centre Garden will open in October. The elements and public artworks it will showcase the physical and spiritual heart of Australia.*

underground water can be accessed by bigger trees, such as *Eucalyptus camaldulensis* (River Red Gum), which thrive along the edges of the watercourses. Tropical cyclones off the coast of north-west Western Australia bring floods to the Red Centre, briefly filling the dry riverbeds. Mass germination of *E. camaldulensis* follows these infrequent floods, resulting in thickets of saplings. *E. camaldulensis* will be grown at the lower (Sydney Region) end of the RCG, and will be replanted regularly to simulate a major flood event.

Recycled sandstone (quarry waste) has been used for the river bed, grading and distributing various sized gravels and rocks to capture the essence of an inland river bed

## Desert Plain



The largest area of the RCG is representative of the most common landscape in the Red Centre. There are several different ecosystems within the plains of the Red Centre: sand dunes, Acacia shrublands and Chenopod shrublands.

These areas lack the shade provided in the gorges and the higher water table along the watercourses. Perennial plants here have very deep taproots to access underground water and a system of shallow lateral roots to harvest the water from occasional rain. They grow very slowly and have many adaptations to cope with the harsh environment. Acacia, spinifex, chenopods and grasses are the most common perennial plants.

This is the land of ephemerals, which grow rapidly after rain, flowering and producing masses of seed, which lie dormant until the next rain event.

There are two types of soils that make up the soil profile in the Red Centre Garden. The top 200 – 300 mm layer of vibrant red sand was sourced from a quarry in Cranbourne, Victoria. Below lies a 600 mm deep layer of a 1/3 soil/loam to 2/3 sand mix to provide good drainage and more stable growing conditions for arid plants.

## Chenopod Shrublands



Photo by Margaret Clarke

Chenopod shrublands occur in the southern part of the Red Centre, on the way to Uluru. This environment is rich in nutrients, but with no surface water. The vegetation cover is sparse but succulent. Chenopod species (saltbush and bluebush) are salt tolerant and usually grow on sandy clays overtopped with gravel surfaces.

A mix of soil/sand is used in the Chenopod section in the central, flat part of the Red Centre Garden to provide a good growing medium. It is topped with a brown/red gravel from Griffith to enhance its appearance.

Most photos on these pages taken by Anne Rawson on a cold, wet, Winter's day.

*This article is an edited extract from The Red Centre Garden Handbook compiled and edited by Jane Keogh and Maureen Connolly as a reference book for the Guides. Our thanks to all the guides who contributed and for allowing us to use this resource.*

*The Friends have provided funding for the pavement of Indigenous artwork (see April Fronds) and the Friends' Public Fund has funded the Termite Mound sculpture.*

# Garden Shorts

## Executive Director's Report

At the end of the 2012-13 financial year I want to reflect on some of the significant achievements that have been delivered, many due to the support of the Friends.

We completed the financial year within budget! and managed to secure additional funding through grants and partnerships to undertake a range of successful conservation programs.

Some of our highlights include:

- Welcomed a total of 425,316 visitors during 2012-13
- The Red Centre Garden construction works were undertaken throughout the year and final plant out will be completed in August 2013. Special thanks to the Friends for funding the Red Centre pavement artwork that was based on a painting by Indigenous artist Teresa Purla McKeenan.
- Over the summer season the ANBG's National Seed Bank made 109 collections from 61 ACT grassland species. The Seedy Volunteer group made a major contribution completing 16 field trips.
- Funded by the Millennium Seed Bank, Kew, two collecting trips to Norfolk Island were undertaken and 80 collections were made from 45 species of flowering plants, including 19 threatened species, and 24 species of ferns, including six threatened species.
- The ANBG began a research program to investigate ecological drivers of seed germination and establishment for plants of Australian alpine and sub-alpine bogs and

ferns. Following several field trips, 118 collections were made, 51 from NSW and 67 from the ACT.

- A Seed Production Area project was funded through a Caring for Country grant involving a partnership between the ANBG, CANBR and Greening Australia. Several kilograms of native grassland seed was produced for restoration of endangered grassland communities.
- The ANBG supported the ACT Government's Centenary Program with a series of Centenary events, including Centenary Summer Concerts and Centenary Chats (public talks) with the Friends; 'Flix in the Stix' and 'Sunset Cinema' movies on Eucalypt Lawn; a photographic exhibition of seven international capital city botanic gardens; and supported the visit by UK artist Jyll Bradley in her developing the 'City of Trees' multi-disciplinary project.

In recent months, we have been carefully planning the application of our resources for the 2013-14 financial year. While budget pressures are unavoidable across the public sector, our resources are being carefully managed to ensure the impact on the operation of the Gardens is minimised and our core functions are sufficiently resourced.

Judy West



In celebration of Canberra's Centenary year, the Gardens has launched our own Facebook campaign *100 things to do at the Australian National Botanic Gardens*, reflecting on the diverse and

unique experiences we have to offer. From enjoying the beauty and diversity of plants from all over Australia, to picnicking with friends, taking guided walks or spying on water dragons. New ideas are posted each week on the Gardens' Facebook page as inspiration to Canberrans and interstate visitors. Visit Facebook *100 things to do at the Australian National Botanic Gardens* to see what's listed or to post your own ideas!

## Rare *Hakea* released



Photo by Murray Fagg

After 22 years of work on propagating *Hakea pulvinifera*, a rare shrub known from only one location in New South Wales, Gardens' Nursery Manager Joe McAuliffe and a team of experts from the Gardens and the NSW Office of Environment and Heritage have translocated 110 cultivated plants to varied sites nearby to see how they will perform. 'This slow growing species of *Hakea* does not produce seed and proved difficult to propagate, making it a long and tedious process to build enough numbers for a translocation,' Joe said. 'The plant has not been known to produce fruit or seed in the wild, but for the first time known to science, a fruit was produced in the Gardens Nursery.' Joe had only been able to strike one cutting from the wild population because the majority of plants are so old, potentially hundreds of years old, and nearing the ends of their lives. The plantings will ensure that the species will survive even in the event of a catastrophic event at their native site.

## The need for seed



*Leucochrysum albicans*. Photo by Murray Fagg.

The Gardens pioneering Seed Production Area (SPA) project is generating great outcomes for regional restoration, seed production and threatened species conservation. The Caring for Country Project, a partnership with Greening Australia – Capital Region and the Centre for Australian National Biodiversity Research, created SPAs for threatened and key grassland plant species to use in the restoration of the two natural temperate grasslands in the ACT region. With still a year left to go for seed harvesting, there has already been a bountiful harvest of over two kg of seed harvested from one of the iconic local grassland species *Leucochrysum albicans*. Plants grown for the project of the very rare Ginniderra peppergrass, *Lepidium ginninderense*, will be planted into the landscape for a restoration planting and as an insurance policy backing up the only two known remaining natural populations. 'We have harvested all we need from the production stock plants for seed banking and future restoration and rehabilitation from 400 plus stock plants,' David Taylor, Gardens Curator of Living Collections said. 'The stock plants have done their job in producing seed and will also be planted back into the landscape.'

## Award winning librarian

Catherine Jordan, Gardens' Librarian, was announced as the ACT's favourite for 2013. On Library Lovers Day, 14 February, the Australian Library and Information Association asked Australians to nominate librarians and library workers. Two hundred and



'Librarian of the Century' in her library.

twelve librarians were nominated from across Australia! Catherine was nominated over ten times; all of her nominators highlighted her extensive knowledge of her specialist library collection and the amazing service she provides for everyone who enters the ANBG library. Catherine has worked at ANBG since 1990. She helps a wide range of people, including students, staff and volunteers, access the Gardens' extensive collection of botanical and horticultural literature and its archive of historical materials. After an online vote Catherine was chosen as the winner from the ACT for its centenary year, with Gardens staff thus dubbing her their 'Librarian of the Century'.

Sabrina Sonntag July 2013

## The Gardens on ABC

In May the Gardens were featured on the ABC in a segment on 7.30 ACT called 'Botanic Bus Tour'. Andy Rawlinson, one of our volunteer guides, took viewers on a Flora Explorer tour and also described how he used to use the old car dump on the site for spare parts for his old FJ Holden. To watch this segment, enter the link: <http://www.abc.net.au/news/2013-05-03/botanic-bus-tour/4669088>.

Gardening Australia also ran a Canberra Centenary Special in May which included a visit to the Gardens to find out how plants from all around the country are being grown in Canberra's challenging climate. To watch this episode go to: <http://www.abc.net.au/gardening/video/download.htm> and scroll down to Episode 10 and download the MP4

Barbara Podger

## Friends' tour

### Brindabella recovery: a decade after the 2003 bushfires

Saturday 19 October  
9.00 am to 5.00 pm

A one-day driving tour, guided by Rosemary Purdie, to the Brindabella Mountains to see how plants have recovered after the fires. We'll stop en route at the lower Cotter catchment, Picadilly Circus, Bulls Head and Mount Franklin to look at communities of Alpine Ash, Snow Gum forest and woodland.

We will car-pool for the day, meeting at the ANBG car park at 9.00 am. The drive is about 75 km each way, half of that on bitumen, the rest on reasonable unsealed roads.

This event is for Friends, but you may invite one guest. Numbers are limited. Booking: [bookings@friendsanbg.org.au](mailto:bookings@friendsanbg.org.au). Please include:

- your name and phone number (mobile and home phone)
- names of those accompanying you, whether you would prefer to drive your own car or travel with someone else
- if you are driving, number of passengers you could take.

If you cannot email, or if you have questions, phone Alan Munns on 0411 289 650.



where  
friends  
meet to eat

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(on production of membership card or name tag)*

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in the Gardens (Call 02 6162 6707)

[www.hellenicpremiumcatering.com.au](http://www.hellenicpremiumcatering.com.au)  
[enquiries@hellenicpremiumcatering.com.au](mailto:enquiries@hellenicpremiumcatering.com.au)

# Friends Briefs

## Changes at the Visitor Centre

As mentioned by the Executive Director of the Gardens in her report in 'Gardens Shorts', the ANBG has been experiencing budget pressures which have meant re-focusing resources on core functions. One of the impacts of budget pressures has been the decision to no longer staff the Gardens Visitor Centre on week days. A new welcome desk and 'self service' stand of brochures and information will be provided for visitors.

Gardens' management has asked the Friends Council to approach members to seek volunteers to work as Visitor Information Volunteers in the VC on week days, from 10 am to 3 pm.

Council considered the Gardens' proposal at its July meeting. Concern was expressed that this represents another cut in the resources for the ANBG which will impact on the public and on our volunteers.

In the past the Friends have had a policy of not taking on functions that were previously undertaken by paid staff because of concerns that this would impact on future funding for those functions, and also that this could affect the relationship between paid staff and volunteers.

On the other hand, Council considered that it was important that information and assistance for visitors to the Gardens continue to be provided in a professional and welcoming manner. It was therefore agreed that Council would seek expressions of interest from members in volunteering in the Visitor Centre.

*Barbara Podger, Vice President*

## New volunteer opportunity

A new opportunity exists for volunteers to engage with visitors to the Gardens through becoming a Visitor Information Volunteer. These volunteers will enrich the visitor experience through provision of information about the Gardens. They will meet and greet visitors to the Visitor Centre, and provide maps, pamphlets and advice on Garden highlights and activities in the Gardens.

The Visitor Information Volunteer program is another avenue for Friends members to contribute to the growing success of the Gardens. It will allow the Gardens to maintain a high quality visitor experience at the Visitor Centre, at the same time enabling the Gardens to put more resources into areas where volunteering opportunities are limited.

We are seeking people with good communication and customer services skills, an interest in stimulating and sharing knowledge of Australian plants and the Gardens, and willingness to assist others and interact with the public. It is envisaged that Visitor Centre Volunteers will be located in the Visitor Centre and rostered for two and half hour shifts (10.00am -12.30pm and 12.30 – 3.00pm) Monday to Friday but some flexibility in these hours may be possible. Volunteers will receive on-going training and support.

Want to know more? Come to a Volunteer Information Session, Gardens Theatre, 10.30 am Tuesday 20 August. Contact : Jennifer Salkeld on 62509559 email: [jennifer.salkeld@environment.gov.au](mailto:jennifer.salkeld@environment.gov.au)

## Eucalypt Discovery Walk

This self-guided tour of about one hour, covering 1.8 km and a selection of 21 Eucalypts was launched by Murray Fagg on 17 May at a mid-morning event hosted by Dr Judy West, Executive Director of the ANBG. About fifty people attended on a bracing late autumn morning; it was fitting to hold



Murray Fagg unveiling one of the signs on the Eucalypt Discovery Walk. Photo by Stewart Hogben.

this in the Ducrou Pavillion looking out onto some of the subjects of the event, the Eucalypts on the lawn.

Murray spoke of the importance of interpretation, particularly that which can link the object to people in a variety of ways. He formally launched the walk by unveiling the sign for *Eucalyptus benthamii* (Camden White Gum), which recognises Dr George Bentham, principal author of the seven-volume *Flora Australiensis*, published 1863-64. This was the first comprehensive reference work on Australian plants and his classifications of *Eucalyptus* and *Acacia* are still valuable references.

The idea for the walk came from Murray; it was funded largely by a grant from the Dahl Trust ([www.dahltrust.org.au](http://www.dahltrust.org.au)) with additional support from the Public Fund of the Friends. This latter support was acknowledged at the launch by Dr Beth Heyde, Secretary of the Public Fund. Beth took the opportunity to highlight the work of the Fund and the range of projects which it has funded.

The walk was developed by a small team comprising ANBG staff and ANBG Friends and was highlighted in *Fronde* no.73. The brochure which details the route and the specimen trees is available from the Visitor Centre and can also be downloaded from the Friends web site ([www.friendsanbg.org.au](http://www.friendsanbg.org.au)) or the ANBG web site: [www.anbg.gov.au/gardens](http://www.anbg.gov.au/gardens).

## ANBG Stocktake 17



Paul Carmen with volunteers Beth Heyde and Maree Kerr in the *Homoranthus* at the front of the VC. Photo Cheryl Backhouse.

The ANBG Plant Records team, usually only Paul Carmen and Maria Mulvaney, has been joined by eight enthusiastic volunteers (mostly Friends) to carry out the stocktake of the Gardens 'in ground' plant collections. Paul Carmen said 'This is a huge task. There are around 75 000 plants involved and all have tags that must be checked and the database records updated. We expect the stocktake to take around two years. We would welcome any fit and able-bodied people with an interest in Australian plants to help us'. Anyone interested can contact Paul: ph 6250 9472 or email Paul.Carmen@environment.gov.au.

## Murray Fagg's books

Following his retirement as manager of the Botanical Information Group, Murray Fagg culled his personal reference book collection and very generously donated about 100 books to the Friends to raise funds for the Gardens. A sale of these books was held on 13 April in conjunction with the Growing Friends plant sale.

This sale has raised approximately \$1200 for the Friends. This will be invested in projects at the Gardens supported by the Friends. There are a small number of books remaining and a list is on the Friends website. If anyone is interested in these books please contact us at [info@friendsanbg.org.au](mailto:info@friendsanbg.org.au) with an offer.

The Friends wish to thank Murray for his generous support, not only in relation to the books but over many years, and continuing in his retirement. The contribution of Mike Johnson to organise the sale is also greatly appreciated.

## Broadcast emails

The Friends are very keen to improve communication with our members, especially in relation to events and opportunities which come up at short notice.

As an additional benefit of membership, we propose to send broadcast emails to members about such matters. These will be sent out relatively frequently but not excessively, perhaps about one per month, unless there is an unexpected piece of news that just can't wait.

To ensure these emails reach as many members as possible it is highly desirable that members give their email address when renewing their membership. At the moment only about 60 per cent of members have supplied email addresses.

So please supply your email address when renewing your membership in November. If you want to be added to the email list in the meantime email us at [membership@friendsanbg.org.au](mailto:membership@friendsanbg.org.au).

Email addresses will not be supplied to any other party and any member can opt out of receiving these emails if they wish by emailing such a request to the above address.

## Plant Science Group

The new Plant Science Group is now up and running, and had its first meeting on 28 June, attended by 22 people. At this meeting, suggested activities were discussed as well as ideas as to how the group might operate.

Briefings were provided by staff on the review being undertaken of the Botanical Resource Centre; current Seedbank projects and potential opportunities for involvement; the current plant stocktake and opportunities for volunteers to help fill gaps in the ANBG's image collection.

The technical talks on the first Monday morning of each month, initially instigated to train BRC facilitators, will continue and become the basis of the monthly meeting of the Group. It is

hoped to establish a small committee to run Group activities.

For those interested in joining the Group or coming along to a meeting, please let us know by emailing [info@friendsanbg.org.au](mailto:info@friendsanbg.org.au) so that we can keep you updated.

## Membership fees

In line with rises in costs over the last few years, the price of membership of the Friends will increase slightly this year.

Through judicious management we have been able to continue our support of the Gardens without any membership fee increases since 2007. However, we have now reluctantly decided that to continue that level of support we need to increase our membership fees.

The individual one year rate will rise from \$45 to \$50, and other rates will increase proportionally. Of course, if you have already subscribed for a multiple year subscription, the price increase will not affect you until your next payment is due.

Renewal notices will be sent in mid October, and we hope you will continue to support and enjoy membership of the Friends and our unique Gardens.

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## Three Parallel Rivers of Yunnan

23 November to 13 December 2013

*The vast gorges of the Mekong and Salween rivers are truly awesome. Salween Gorge is regarded as one of the most remote, pristine and biodiverse landscapes on the planet. Experience the way of life of the colourful minority peoples; sample the delicious cuisine; visit Dali, ancient, walled city on the Silk Road. In Kunming, a modern city of five million, compare the Han culture of today with Heshun or Shaxi towns, little changed over thousand years.*



If you're interested contact: Ben Wallace  
phone: 02 6238 0935 email: [benwallace@bigpond.com](mailto:benwallace@bigpond.com)

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# Wonderful weeds!

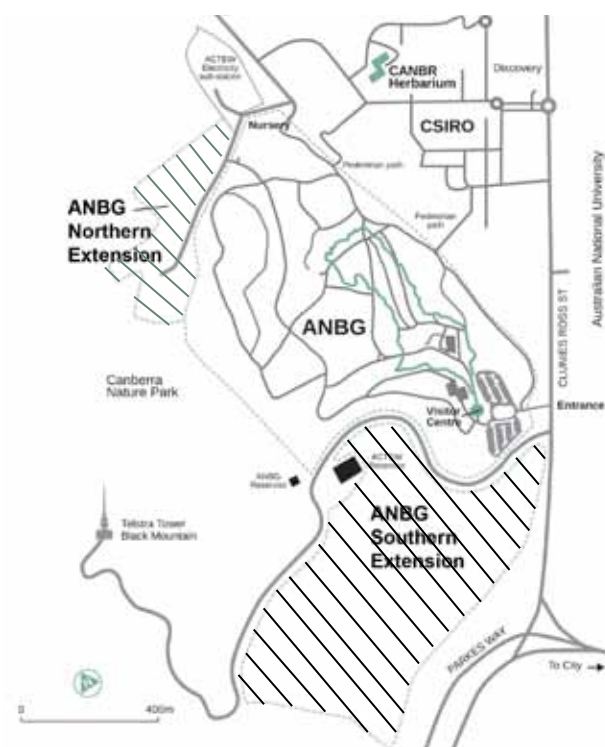
Linda Beveridge

There's more to the ANBG than the 35 hectares of cultivated gardens we love to walk through. As shown in the map opposite, the ANBG's 85 hectare site includes two large undeveloped tracts abutting Black Mountain and subject to the same threats from invasive weeds. Linda Beveridge describes recent efforts by the Friends of Black Mountain with Friends of the ANBG to remove woody weeds from these areas. See *What's on* for details of future weeding parties.

The Friends of Black Mountain (FoBM) and Friends of ANBG enjoyed a successful weeding party and delicious morning tea on the first Saturday of June, even though our time was shorter than usual because of the rain.

While we generally weed on Black Mountain, ANBG management had welcomed our offer to weed on the Gardens' side of the fence where there are no or very few plantings. That day we weeded in some of the northern sections of the Gardens and in the neighbouring Northern Extension, or Annex. In the Gardens' extensions the many woody weeds provide a pool from which seed can be spread to the adjacent Black Mountain Nature Reserve.

The ANBG Weed Control policy, *ACT Weed Strategy 2009-2019*, and a detailed survey of trees and shrubs on Black Mountain, done by Dr Rosemary Purdie, are the basis for the weeding. The survey has included the ANBG Annex, and the GPS-ing and mapping of weed species assists the weeding parties to re-locate and remove them.



*Acacia baileyana* and *Billardiera heterophylla* are two of the priority weeds. Photos by Murray Fagg.

## Bush Capital Celebration

Saturday 2 & Sunday 3 November 10 am – 4 pm

See why our 'Bush Capital' and the ANBG are national treasures. A two day centenary celebration full of stimulating events, talks, displays, performances and presentations under the themes of 'Bush Traditions, Stories, People, Food and Music'. Activities will be located around the Eucalypt Lawn and new Red Centre Garden with a focus on Australian Indigenous culture and their connections to country and land. Visitors will experience the Red Centre Garden and Friends' sponsored Indigenous Pavement artwork. There will be Red Centre guided tours during the weekend.



## Gum Tree Hop

Saturday 2 November 6 – 9 pm

A Centenary family feast of music and dancing under the stars. This outdoor concert will showcase local bush and rockabilly bands who know how to get mums, dads, kids and grandmas up on their feet. Bring a picnic basket and blanket or enjoy the BBQ dinner and cold bar beverages available for sale on the night. Grab your friends and 'rellies' and let's get dancing. Tickets on sale online from 1 September [www.anbg.gov.au/gardens/whatson](http://www.anbg.gov.au/gardens/whatson)

# What's on at the Gardens

August – December

Details of events are correct at the time of printing. For changes and updates please check the Friends' website at [www.friendsanbg.org.au](http://www.friendsanbg.org.au) or on the Gardens' site at: [www.anbg.gov.au](http://www.anbg.gov.au) or in the local press.

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 Theatre.

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.

## AUGUST



### CENTENARY CHAT

at 12.30 pm

THURSDAY 1 AUGUST  
DR JUDY WEST

'The Science Behind Your Gardens'  
Dr Judy West will ask 'how does the living national cultural institution in the Bush Capital – the ANBG – use science to achieve its mission for all Australians?'



### Bush Magic Story Time

Enjoy stories and  
craft activities in  
the Gardens

**Friday 2 August 10.00-11.00 am**  
**then first Friday of every month,**  
\$5 per child. Suitable for pre-schoolers  
Follow the signs from the cafe bridge.

**Every Saturday in August 11 am**  
**Turned on Walks**

### Meet at Visitor Centre

Have you seen the 'Turner from the Tate' exhibition at the National Gallery? Relive the experience by being 'Turned On' to the colour, light and atmosphere of nature in the Gardens on one of our free guided Turner themed walks.

## afterDARK



Lushpup Images

### Ranger guided tours of the Gardens

Delight in a fascinating night tour of the Gardens escorted by our specially trained Rangers. \$20 adults, \$15 concession Bookings essential [www.anbg.gov.au/gardens/whatson](http://www.anbg.gov.au/gardens/whatson)

**Saturday, 3 August, 6.30 pm**  
**Saturday, 7 September, 7.30 pm**  
**Saturday, 5 October, 7.30 pm**  
**Saturday, 2 November, 8.00 pm**



### CENTENARY CHAT

at 12.30 pm

THURSDAY 8 AUGUST  
DR PENNY OLSEN

'Flocks of Colour now and then: a portfolio of parrots in Canberra 1913-2013' Dr Penny Olsen will describe the images in the National Library of Australia's collection, particularly a portfolio of parrots that have occurred in Canberra 1913 – 2013; these include our fauna emblem the Gang Gang.

## Science Week 10 to 18 August

### Gardens' inter-active science trail, every day, all day

A hands-on self guided trail investigating the science behind the plants. Free. Start by picking up brochure from the Visitor Centre.

### Saturday 17 August and Sunday 18 August 1-3 pm

Public Program – 'How do plants become separate species?' Families get hands on and discover the tricks plants use to spread their progeny. Not suitable for children under five years. Free. Bookings essential on: [www.anbg.gov.au/gardens/whatson](http://www.anbg.gov.au/gardens/whatson)

### Monday 12 August and Friday 16 August 9:30 to 11 am

Schools Program – 'How do plants become separate species?' Students also discover the tricks plants use to spread their progeny. Free. Bookings essential [www.anbg.gov.au/gardens/whatson](http://www.anbg.gov.au/gardens/whatson)

### Saturday 17 August and Sunday 18 August 11 am-3 pm

Botanical Resource Centre & Education Centre Open Days. An interactive 'open house' weekend of activities at the BRC and Education Centre. Free. Follow the signs from the café bridge.

## Cultivated Chats

at Floresco in the Gardens

Tuesdays August 13 & 27

September 10 & 24

October 8 & 22

November 12 & 26

December 10

10.00 – 11.30 am

\$9.50 per person Enjoy talks on the Gardens and Australian plants whilst enjoying Devonshire Tea

### Thursday 15 August 12.30 pm Steve Speer 'ClimateWatch Trail in the Gardens: Recording the Life Cycle of Plants'

Stephen Speer will discuss ANBG's recording the life cycle of plants for the national ClimateWatch program.



## CENTENARY CHATS at 12.30 pm

THURSDAY 22 AUGUST

BERNARD FENNESSY  
MEMORIAL LECTURE  
by DR LYN HINDS

CSIRO scientist Dr Lyn Hinds will discuss the management of overabundant vertebrates.

THURSDAY 29 AUGUST  
ERIC MARTIN AM



'Haig Park in  
Turner'

Eric Martin,  
President of the  
National Trust of  
Australia (ACT),  
will speak about  
Haig Park as a

significant landscape feature in  
Canberra with a design of parallel  
plantings that is unique in Australia.

### Third Saturday of each month

10 am – 12 noon

### 101 Gardening Workshops

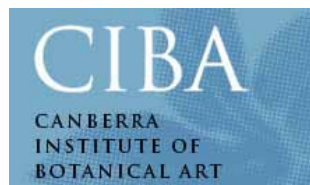
24 August - 'The Patriotic Canberra Garden': Exploring the advent of the 1970s native garden through to its maturity today. Presenter: Don Beer, Hosted by the Australian Garden History Society with Friends of ANBG. \$15 AGHS members, \$20 non-members

28 September - 'Pest or Friend': Insects versus native plants in the garden. Roger Farrow, ANPS. \$30 includes morning tea

26 October - Topic to be confirmed

23 November - The Three P's: Propagation, proliferation and procreation of Australian natives. John Carter, ANPS \$30 includes morning tea. Bookings essential at:

[www.anbg.gov.au/gardens/whatson](http://www.anbg.gov.au/gardens/whatson)



### Botanic Art in The Gardens Presented by the Canberra Institute of Botanical Art

Develop your skills in botanical art with themed workshops

24 & 25 August: Grevilleas and Hakeas (Tanya Hoolihan); 21 & 22 September: Banksias (Leonie Norton); 26 & 27 October: Pears larger than life (Stephanie Goss); 23 & 24 November: New techniques with Drafting Film (Dolores Malloni). Charges apply. Bookings essential. Go to [www.botanicart.com.au](http://www.botanicart.com.au).



*Acacia boormanii*. Photo by Anne Rawson

## EXHIBITIONS

in the Visitor Centre Gallery  
9.30 am to 4.30 pm

### Song Line of the Wiradjuri Scar Tree Exhibition until Sunday 25 August

Duncan Smith, a Wiradjuri man from central western NSW and a well-known professional artist of traditional and contemporary art, explores traditional patterns from Scar Trees and transposes them onto canvas.

### Uncovering the Red Centre

Wednesday 28 August to  
Sunday 10 November



As a precursor to the official opening of the new Red Centre Garden, the 'Uncovering the Red Centre' exhibition explores the natural and cultural features of the iconic region of Central Australia.

### Friends School Photography Competition

Friday 15 November to  
Sunday 12 January

Theme - 'Renewal of the Australian  
Landscape'

## SEPTEMBER

### Sunday 1 to Sat 7 Sept at 11 am Daily Wattle Walks Meet at Visitor Centre

Celebrate the wonderful diversity of wattles and learn some lesser-known facts about them on a free guided walk.

## What's on

**Thursday 5 September 12.30 pm**  
**Peta Alderman, Office of**  
**Australian War Graves,**  
**'Honouring the War Dead'**



Peta Alderman will describe the role of horticulture in commemoration and the work of the Commonwealth War Graves Commission in Australia and PNG as we approach the Centenary of ANZAC.

**Saturday 7 September,**  
**5 October, 2 November,**  
**7 December, 8.45 am-12 noon**

### **Black Mountain weeding party**

Remove woody weeds in ANBG and on Black Mtn. Meet at cnr Clunies Ross St and Black Mountain Drive. Come for some or part of the time. Bring hat, sunscreen, water, gloves and stout shoes. RSVP Linda 6262 5551, Carol 6251 0239 or friends@blackmountain@gmail.com

### **Saturday 7 September** **National Threatened Species Day**

Join in family activities relating to conservation of threatened species. Free

**Thursday 12 September 12.30 pm**  
**Dr Suzette Searle 'Who's a Scientist?'**

Suzette Searle from the ANU Centre for Public Awareness of Science describes Australia's scientists and citizen scientists.

**Saturday 14 September to**  
**Sunday 13 October 11 am**  
**Daily Spring Flower Walk**  
**Meet at Visitor Centre**

To complement your visit to Floriade, take a walk among the shapes and colours of our native spring flowers.

**Thursday 19 September 12.30 pm**  
**Inaugural Alison McKenzie**  
**Memorial Lecture. Martin**  
**Butterfield 'Canberra's Gardens**  
**and Birds'**

Martin Butterfield, sometime Coordinator of the COG Garden Bird Survey, will talk about the birds found in Canberra gardens and the Gardens.



## *Breakfast with the Birds*

### **September:**

**Saturday 21, Sunday 22**  
**Saturday 28, Sunday 29**

### **October:**

**Saturday 5, Sunday 6**  
**Saturday 12, Sunday 13**

### **Meet at Visitor Centre at 7.45 am**

The ever-popular program is celebrating its 10th season. An excellent opportunity for early morning access to the Gardens to view birdlife with a knowledgeable guide, followed by breakfast in Floresco Café. Bring binoculars if you have them. Walk will only be cancelled in extreme weather conditions. Please note: this walk is not suitable for children under five years.

BOOKING: [www.friendsanbg.org.au](http://www.friendsanbg.org.au)  
on Home Page under 'Coming up'.

ENQUIRIES: [birds@friendsanbg.org.au](mailto:birds@friendsanbg.org.au)  
COST: \$32.00 for Friends and  
\$35.00 for others

**Thursday 26 September 12.30 pm**  
**Dr Roger Farrow 'From the**  
**Plenty to the Olgas: A Botanic**  
**Trip across the Red Centre'**

Roger will speak about last year's ANPS trip across the Red Centre, discussing habitat and landscape of a selection of the species observed.

### **September School Holiday** **Programs**

Join in range of school holiday activities in the Gardens. Cost applies.

## **OCTOBER**

**Thursday 3 October 12.30 pm**  
**Allen Mawer 'Canberra Tales: An**  
**Informal History'**

Historian Allen Mawer will talk about the history of Acton, 'Canberra's time capsule' which he has captured in his 2012 book *Canberra Tales*.

**Thursday 10 October 12.30 pm**  
**Dr Joe Miller 'Wattle Gold'**

Recent research into the evolution of the Australian icon, Acacia, the great diversity of its traits and its relationship to other families of flowering plants. Joe will also discuss future research.

**Thursday 10 October 5.30 pm**  
**Friends AGM**  
**Crosbie Morrison Building**

See notice on page 6.

**Saturday 12 October 9.30 am**  
**(sharp) to 12 noon (or later)**  
**42nd Annual Black Mountain**  
**Wildflower Ramble**

Belconnen Way entry, just before Caswell Drive. Look for the balloons.

Join us for the Burbidge/Chippendale celebration of spring flowering with the 42nd Black Mountain wildflower ramble. Discover the diversity of tiny orchids, bush peas, wattles and billy buttons with experienced guides on easy bush tracks. All welcome, especially those new to plant identification. BYO morning tea, hat, sunblock, water and stout shoes. **Booking essential:** [friends@blackmountain@gmail.com](mailto:friends@blackmountain@gmail.com) so we have enough guides. Contact: Jean Geue 62511601.

**Sunday 13 October 10 am & 1 pm**  
**Orchid walks on Black Mountain**

Meet at car park on Caswell Drive (head south towards Glenloch Interchange)

Join Tony Wood to discover native terrestrial orchids, and to learn something about them. Some off-track walking so wear sturdy shoes. Bring a hand lens if you have one. Numbers are limited to 15 for each walk so early booking is essential. Ring Tony on 6254 1795 to book. The afternoon walk is a repeat of the morning walk.

**Thursday 17 October 12.30 pm**  
**Mrs Marlena Jeffery Vice-Patron of the Friends 'A Maze of Memories'**

Marlena spent twelve years supporting husband, Michael, in his roles as Governor of WA and then as Governor-General of Australia. She is looking forward to sharing some of her memories of these years with you.

**Saturday 19 October 9 am-5 pm**  
Brindabella recovery. tour See p.13.

**ANPS PLANT SALE**

**Saturday 19 October 8.30 am**  
see page 8 for details

**Thursday 24 October 12.30 pm**  
TBA Check [www.friendsanbg.org.au](http://www.friendsanbg.org.au)

**Thursday 31 October 12.30 pm**  
**Helen Wilson 'Scaring the Rabbits Away'**

During the Depression Canberra was struggling to emerge as the national capital. Helen will tell stories of families' experiences and how the community confronted the effects of the climate and clay soils in places where sheep had grazed for a century.

**NOVEMBER**

*Bush Capital Celebration*

**Weekend 2 & 3 November**

and on Saturday night

*'Gum Tree Hop'*

See page 16 for details

**Thursday 7 November 12.30 pm**  
**Dr Tariq Ezaz 'Gender determination in water dragons and other lizards'**

Dr Ezaz will present findings from research on the biological determination of sex in Australian lizards.

**FRIENDS PLANT SALE**

**Saturday 9 November 8.30 to 11 am**  
see page 8 for details

**Thursday 14 November 12.30 pm**  
**Carlos Segara Bustos 'Evolution of plant defences'**

Carlos, ANU PhD student, will discuss his research on the evolution of plant defences against herbivores in Mexico and insect attacks on an Australian melaleuca.

**Thursday 21 November 12.30 pm**  
**Michael Brice 'Keeping "tree" in the urban streetscape'**

The ACT Government's Michael Brice will consider some challenges of managing Canberra's urban forest for almost 30 years and what the future holds.

**Thursday 28 November 12.30 pm**  
**Karl van Dyke 'Gardens of Ancient Rome'**

Karl, Director of Macquarie University's Museum of Ancient Culture, will talk about the gardens of ancient Rome.

**Friends' Benefits**

*As a Friend you are entitled to:*

Three issues of *Fronde* a year  
Free parking pass  
Botanical Bookshop – a discount on most items  
Discount at Floresco cafe

*You also get:*

Advance details of lectures  
Advance bookings for some events  
Discounts on some events  
ANBG library membership – borrow books, serials, videos, DVDs plus use of computers and interactive CD ROMs  
Function facilities – special rates for functions at ANBG

*And opportunities to:*

Join Botanical Art Groups, Growing Friends Photographic Group  
Assist with Gardens research projects  
Become a Guide  
Relax in the Friends Lounge – in the Ellis Rowan Building, open to members 9.30 am to 4.30 pm. Relax with tea/coffee and lots of interesting reading.

*The Botanical Bookshop*

[www.botanicalbookshop.com.au](http://www.botanicalbookshop.com.au)

**always welcomes Friends!**

**A 10% discount is offered:**

- on purchases over \$10
- on production of your membership card
- to the person whose name is on this card