



# FRIENDS of the National Arboretum Canberra Newsletter 25/September 2014

## Dear Friends

What a busy and exciting quarter we have just completed. It is so wonderful to be part part of the Arboretum as it is finding its feet, remaining so popular and making such progress.

Our book: *The Arboretum Book—forests of the National Arboretum Canberra*, has been very well received. Thanks to all the Friends and friends of Friends who braved very wild weather to attend the launch at the Village Centre on 24 June. Congratulations to Linda Muldoon (editor and main contributor), Roger Hnatiuk and Jennie Widdowson (fact-finders and proof-checkers) and to the many others who contributed text and/or photos.

This prestigious publication sets a high standard and we can all be justly proud. I hope you have all got a copy by now and it would really help our fund-raising efforts if you would buy another copy as a present for someone you know. All profits from the book will support projects at the Arboretum.

It is not often that I correspond with the House of Windsor, but we did receive a very nice response from Kensington Palace, letting us know that the Duke and Duchess of Cambridge were delighted to receive our book which I sent to them to mark their visit to the Arboretum on 24 April 2014 (when they planted an English oak). Photos of this event made it into the back of the book at the last minute, just in time for printing.

The new ACT Government Minister with responsibility for the Arboretum is Mr Shane Rattenbury MLA. Trish Keller OAM (Deputy Chair) and I met with him to provide information about the Friends, our activities and the valuable donations we give in cash and kind. He encouraged continuation of our activities program and offered to continue meeting with us. The Minister has extended the term of the Strategic Advisory Board (of which I am a member) to assist him in developing a forward strategy for the Arboretum.

Our new onsite office is being fitted out as I write. This is within the demountable building, located alongside the administration demountable. This will provide a much-needed base for Friends' administration, space for small meetings and secure storage. Many thanks to the Arboretum staff who are managing the fit-out project. We are currently planning to increase our collaboration with the Arboretum in the provision of administration services to members and visitors.

Whilst the gift shop at the Village Centre is undergoing a fit-out, Arboretum services, book sales and 2015 calendar sales will continue from a temporary concierge desk. Yes, our 2015 calendar will be available shortly and calendars are proving to be a successful fund-raiser for the Friends. The book is also available from our website and the 2015 calendar will be available from there soon. Go to [www.arboretumcanberra.org.au](http://www.arboretumcanberra.org.au).

Over the next quarter our agenda includes connecting Floriade celebrations and the Arboretum, moving into our new office, firming up plans for long walks in 2015 now that our long walks program is becoming so successful, launching our new website with modern membership management tools (work has already begun). In November, we will be providing our first overnight tour of South Coast arboreta, led by Max Bourke AM. We will also be striving to attract more new members and attaining new donation goals. Have you thought about donating a seat, making a general donation or leaving a bequest? Please get in touch with me if you would like to support the work of the Friends and the Arboretum in this way.

See you at the Arboretum!

**Jocelyn Plovits**  
Chair

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# Warm Trees 2014

BY JOCELYN PLOVITS

We launched WARM TREES on 25 July 2014. This date was chosen to coincide with the National Tree Day for Schools and the Tree Symposium held at the Arboretum on the same day. Warm Trees is the biggest collaborative installation in the ACT—and possibly the biggest in the world, given the broad spread of its colour across the many hectares of the Arboretum.

More than 250 knitters and 40 installers created this display. Knitters came from the Canberra region, from Tasmania, South Australia, Victoria, Queensland, New South Wales, and even from the UK. Last year's Warm Trees display attracted many knitters, but we had at least 100 more knitters this year. Jenny Cantlon and Sue Waterworth did a wonderful job of collaborating to bring this project to fruition.



*Above and below: if the Arboretum is about biodiversity, our knitters certainly appear to have picked up on that theme, with everyone delivering very diverse results.*

The age of contributors ranged from 5 years to 101 years and included people from nursing homes, including the Southern Cross and St Andrews; from schools, including Giralang, Hughes and Orana; sporting clubs, including



*Above: Amy and Scarlett May at the knitters' morning tea on 14 June.*

*Below: Senior members of our knitting community at the same event.*



*Above: Jocelyn reading out lucky door prize winners on 14 June.*

the Raiders and the Brumbies; groups, including Spinners and Craft Group (TAS); and families who dropped into the knitting sessions at the Arboretum. A special scarf was donated by Marie O'Sullivan—this was 35 m long and was used to simulate flames coming from the dragon in Forest 15.

This display has now accumulated more than 600 scarves and a myriad of squares, all made with love and care (with time and materials donated freely). Warm Trees would not be possible without this generous volunteer input.

This year the installation could be found in groves of



*The radiata pines on Dairy Farmers Hill (photo Harry Waterworth)*

trees in Forest 11 (Himalayan cedars), Forest 20 (Southern Tablelands Ecosystems Park), Forest 30 (Camden white gums), Forest 60 (radiata pines on Dairy Farmers Hill). The Village Centre and Pod Playground also wore warm decor, but the star of the show was the dragon in the dragon trees (Forest 15).

As I said at the launch on 25 July, we suspected the existence of this dragon for some time, given the spikes (from the spine, that we had seen protruding from some of the dragon houses). The dragon grew over multiple tree houses until she was over 50 m long. Now you could see her eyes, the start of her wings, her feisty tail and knitted works showing some of her scales. I asked people to knit 6 m scarves in red and yellow (many thanks to those who met the challenge). These enabled her to breathe fire across the landscape—and then there was just no stopping her!

We asked some of our youngest collaborators to help name the dragon and they chose Matilda—she would be with us for the whole month of August. Then she will go off to dragon school and we wish her well.



*Helen Dawes, Tabitha Plovits and Hayley Cockman working as installers in truly arctic conditions (photo Jenny Cantlon)*

*Below and below left: Some interesting fashion statements in the Himalayan cedars forest.*





Above: Colette Mackay with her grandson, Max Cassidy, fixing Matilda's fire (photo Helen Dawes), and below: the 35 m scarf that became another part of Matilda's fire.



I also want to thank the Arboretum and its staff for supporting this project and their enthusiasm for it. Without them, things like this could not happen.

Left: some of Matilda's many colourful 'scales'!



Left: Matilda's face and above: Matilda's tail. (photos by Linda Muldoon unless otherwise stated)

Below: Matilda, a dragon of many parts (photo Harry Waterworth).



# Secret gardens, hidden spaces

## THE UNTOLD STORIES OF THE ARBORETUM'S FORESTS

BY ROGER HNATIUK

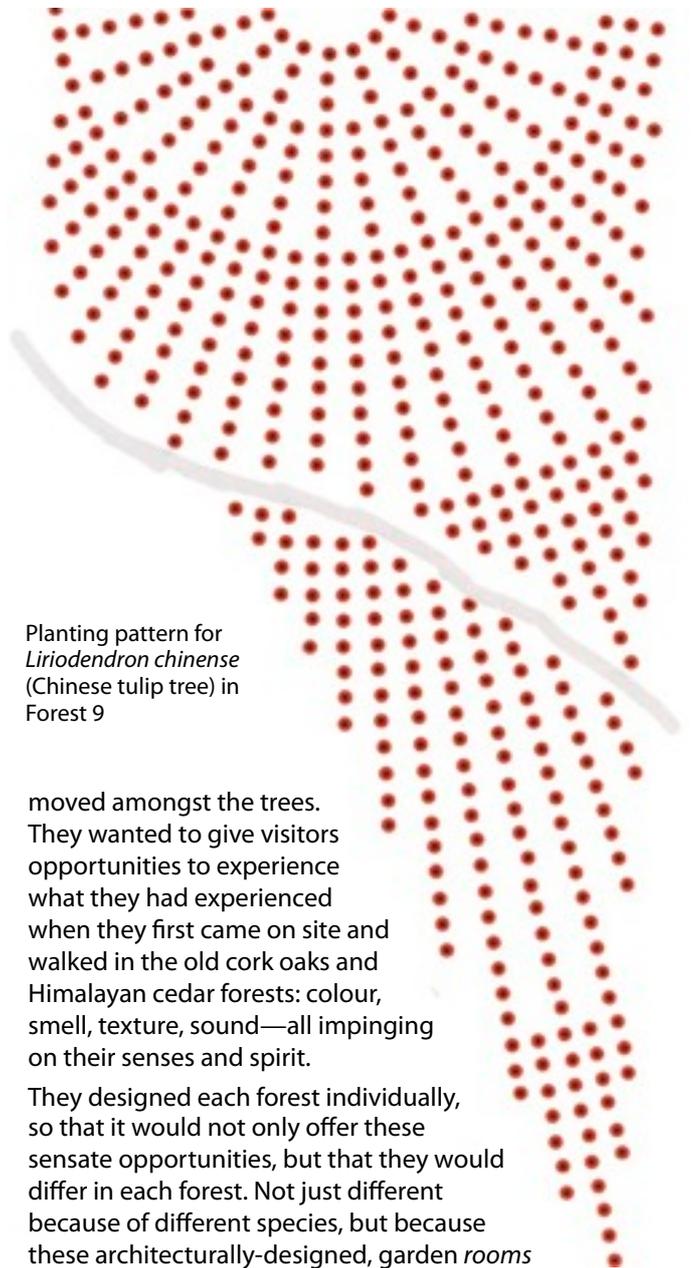
Back in 2005, a vision of great depth opened in the minds of Melbourne landscape architects, Taylor Cullity Lethlean, and Sydney architects, Tonkin Zulaikha Greer, when they created their concept, *100 Forests 100 Gardens*. This was to become the winning entry in the international design competition for an arboretum at the western end of Lake Burley Griffin. Back then, I don't think anyone could have anticipated just how quickly the arboretum project would become owned, loved and much visited by local, interstate and international guests.

Right from the start the project was executed with a keen eye for both detail and quality. Often the managers could be heard saying that they wanted and demanded quality over quantity, as this new arboretum in the national capital had to be of the highest standards if it was to succeed and persist.

Built into one element of that winning design were the layers of detail in which people could experience the *Forests*. When seen from afar, the bold but beautifully textured stripes of forest lay across and accentuate the undulating hills that border the western end of the lake. The patchwork of colour that changes with the seasons is like a kaleidoscope, slowly moving through 12 months of the year as well as the longer-term oscillations of El Niño–La Niña that change the landscape from brown to green. Then there are the magnificent views of the city and views of the not too distant Brindabellas. Looking up-close, the eye delights in the rich diversity of flower colour and shape, bark textures and colours, leaf colour and densities, and more. And there is also the unseen genetic diversity that underpins these visible manifestations of biological diversity that are at the centre of this *arboretum for the 21st century*.

Between these two extremes of the broad picture and the fine details, the designers considered the personal experiences visitors could have when they actually

Planting pattern for *Pinus pinea* (stone pine) in Forest 56



Planting pattern for *Liriodendron chinense* (Chinese tulip tree) in Forest 9

moved amongst the trees. They wanted to give visitors opportunities to experience what they had experienced when they first came on site and walked in the old cork oaks and Himalayan cedar forests: colour, smell, texture, sound—all impinging on their senses and spirit.

They designed each forest individually, so that it would not only offer these sensate opportunities, but that they would differ in each forest. Not just different because of different species, but because these architecturally-designed, garden *rooms* would be furnished in different ways.

To begin with, most of the forests have boundary zones from one to several trees deep, often with an entrance marked by a gap in the trees. They were designed to help enclose each forest so that a person in the middle zone would be surrounded by just one species (as the designers experienced when walking through the old forests). Inside the marginal walls of the rooms, the trees were laid out in richly differing patterns, with each one telling a different story. Some accentuated the contours of the site, making landscape a focal point for contemplation of either this site or the tree's native habitat. In others, some aspect of the biology of the tree was revealed like the flowers of the Morrisby's gum, or the structure of the inflorescence and fruit of walnuts, or perhaps the chemistry of the valuable resin from styrax. In others, metaphorical references were alluded to, such as snowflakes for snow gums, or the Forbidden City for an iconic species such as the ginkgo.

The designers built in opportunities for people to use the forests. They did this by varying the density of the trees—creating openings of various shapes and sizes.

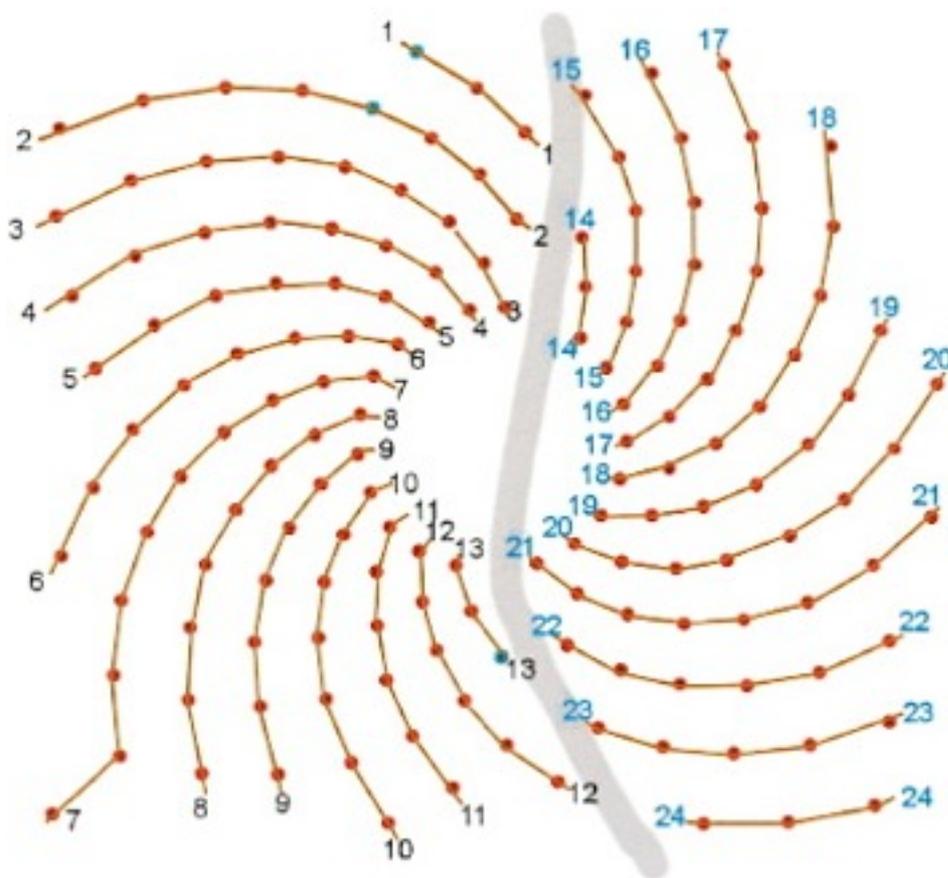
Sometimes a long curving avenue opens up, beckoning the walker further though the forest. At other times, trees crowd together in a throng. Eventually these denser patches will produce tall, slender trunks with few branches until high overhead, creating a sense not unlike that of a cathedral or temple with tall pillars and arching overhead spans. In other places, forests open out into woodlands or glades where trees will retain their lower branches, presenting majestic and fulsome crowns low to the ground, with much space around them for human activities. You need to visit the forests to truly appreciate these hidden spaces and secret gardens. They can already be seen in the young forests, but as time passes, they will mature with the trees and the experiences will change with them.

Acquiring each forest's story is still a work in progress. We look forward with great anticipation to the release of these core stories for the appreciation of all who visit. We hope, with the assistance of all the parties involved, to record the stories for all the forests.

The examples of some of the patterns presented here are an unintended consequence of several cycles of mapping the

forests that I have done for a number of projects supported by the Friends. The source materials have been various maps provided by the Arboretum, as well as a diversity of aerial photographs of the site, available off the web or from a dear friend with a drone.

Planting pattern for *Nyssa sylvatica* (black tupelo) in Forest 43



## ***ACTION buses to visit the Arboretum!***

From **1 September 2014** onwards, buses will depart from Platform 9 at the City Bus Station, then head to the National Zoo and Aquarium, and return via the National Arboretum Canberra where they will stop at the **Himalayan cedars**, the **Village Centre** and **Dairy Farmers Hill**.

### **Route 81 Weekdays**

leaves the City Bus Station at **10:20 am, 11:50 am, 1:20 pm, 2:50 pm and 4:20 pm** and returns from the Arboretum, via Black Mountain Tower and the Botanic Gardens at **10:41 am, 12:11 pm, 1:41 pm, 3:11 pm and 4:41 pm**.

### **Route 981 Saturdays/Sundays/Public Holidays**

leaves the City Bus Station at **10:19 am, 11:49 am, 1:19 pm, 2:49 pm and 4:19 pm** and returns via Black Mountain Tower and the Botanic Gardens at **10:41 am, 12:11 pm, 1:41 pm, 3:11 pm and 4:41 pm**.

The journey from the city takes about 20 minutes and the return journey takes about 30 minutes.



## Palmetum de Santa Cruz, Tenerife

BY LINDA MULDOON

Tenerife is the largest of the Canary Islands which are part of Spain, though located well south of mainland Europe, 210 km off the north-western coast of Africa. This Palmetum has some things in common with the National Arboretum Canberra. Both aspire to conserve rare, threatened or endangered species from around the world. Both have innovative professional design at the core of their development and both opened in 2013.

*Looking south, towards the Palmetum, July 2014.*



The two establishments are also very dissimilar, particularly regarding climate and altitude. In Santa Cruz, the average annual low temperature is 18.4°C, with 13°C being the lowest temperature ever recorded. The average annual high temperature is 24.6°C with August being the hottest month, reaching a maximum of 29°C. Average annual rainfall is only 225.7 mm which typically falls over 59 days, mostly in winter. The flattish area on top of the hill is about 42 m above sea level.

The Palmetum had an exceptionally challenging starting point. It occupies an unnatural hill that until 1983, was an ever-growing landfill site for urban garbage. The city eventually came to terms with the fact that this smelly

*The entry/exit to the Palmetum. Visitors can use spiral stairs or the lift, or turn right at ground level.*



*Sensitive plants are located in a sunken area and protected by various densities of shade cloth.*



*Looking northwards from the Palmetum, towards a recreation area with swimming pools, play areas and restaurants, a blackish fort that was built to defend the city in 1641, and the Auditorio de Tenerife (a concert hall which opened in 2003 with a design echoing Sydney's Opera House). The background shows the rugged mountains of Anaga which extend to the northern tip of the island.*





established, but the dead or dying trees led to diminished enthusiasm for the project.

Seeds were collected and palm species were studied during field trips to Cuba, the Dominican Republic, Peru, Florida and New Caledonia. Also, during these trips, palm handicrafts were purchased for a future ethnographical museum of palm objects. Gradually a network of contacts with other botanic gardens was established. Thousands of seeds were received and sown through exchange programs with institutions in New Caledonia, Hawaii, Brazil, Cuba, Florida, Australia, Indonesia and the Dominican Republic.

1997 and 1998 were years of intensive planting. The 2300 m<sup>2</sup> sunken shade house, called Octógono, was built to protect species that need a cooler, moister, windless environment, such as the rare palms with undivided leaves. As the name suggests, this structure has an octagonal footprint, but also stepped terraces, volcanic rocks and two waterfalls producing a complex network of streams.

By 1999, the reproduction greenhouse contained more than 700 plant species and a million tags. However, that year the funding ran out and the project limped along with only maintenance being carried out. By the year 2000, the Palmetum was left with little irrigation installed and plants were lost due to drought and neglect. There was some development for part of 2000 and 2002, but from late 2002 until the end of 2006, development ceased. Friends of the Palmetum struggled to keep the valuable collection alive, but the loss of species continued.

But time was passing and the environment had become better suited for growing palms and trees. Many of the species that had gone through the hard years started to grow much faster than before. As the years went by, it became apparent that plants grown from seed gave excellent results and in some cases surpassed those imported as adult specimens. In 2007, there was a new influx of money from the Canary Islands government and a new public organisation was formed to manage the Palmetum's future development.

Since then, progress has moved at an encouraging rate and in 2013 it was felt that the gardens and most of the

trees were sufficiently mature for the Palmetum to be open to the public.

The cultivated area is divided into 14 biogeographic regions: the Caribbean Islands, South America, New Caledonia, Hawaii, Melanesia, Australia/Lord Howe Island, Indochina, Mascarene Islands, Africa, Madagascar, Central America, New Guinea, Borneo/Philippines, and the Canary Islands. Each area has groups of palms that are native to their region but also many other species that naturally occur with those palms. There are many different *Ficus* species and a grove of *Araucaria columnaris* from New Caledonia.

The Palmetum is growing 72 of the palms included in the IUCN Red List of Threatened Species. Some of those palms have been raised from seed and are now mature enough to produce seed themselves, so helping to ensure survival of species.

The Ethnobotanical Museum is a semi-subterranean building that is constructed on the same site but not yet open to the public. This building will include lecture rooms and a herbarium.

The name 'Palmetum' led me to expect palm trees and I wasn't expecting such a variety of vegetation. I found the water features and landscaping to be just wonderful, but by this time I was aware that they are very good at water features in Tenerife and it's as though the lack of rainwater just spurs them on to attempt more ambitious and exciting projects. I spent several hours at this establishment 'going around the world', so felt the four Euros (\$A6) entry fee was money well spent.

*Other species flourishing in the 'New Caledonia' area.*



*Detail from trees at left (photos by author).*



*A grove of Araucaria columnaris from New Caledonia.*



# 2015 calendar arrives early September

We are now just days away from delivery of our 2015 calendar, so here is a preview. The layout has changed from previous years to give the users more room to write, while still including more than one photo of each subject and some related text.

ACT School Holidays, NSW School Holidays, and ACT Public Holidays are all clearly indicated.

Once again, the inside back cover lists all the scientific names and common names of forest species, but this year it also carries an Arboretum map.

Price is \$10.00 each, available from the concierge desk at the Village Centre or from our website:

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

(where postage charges will apply)

The photos shown here were all taken at the Arboretum but in other cases photos of mature trees are included to give everyone a chance to imagine how the forests will look one day.

The species featured here are:

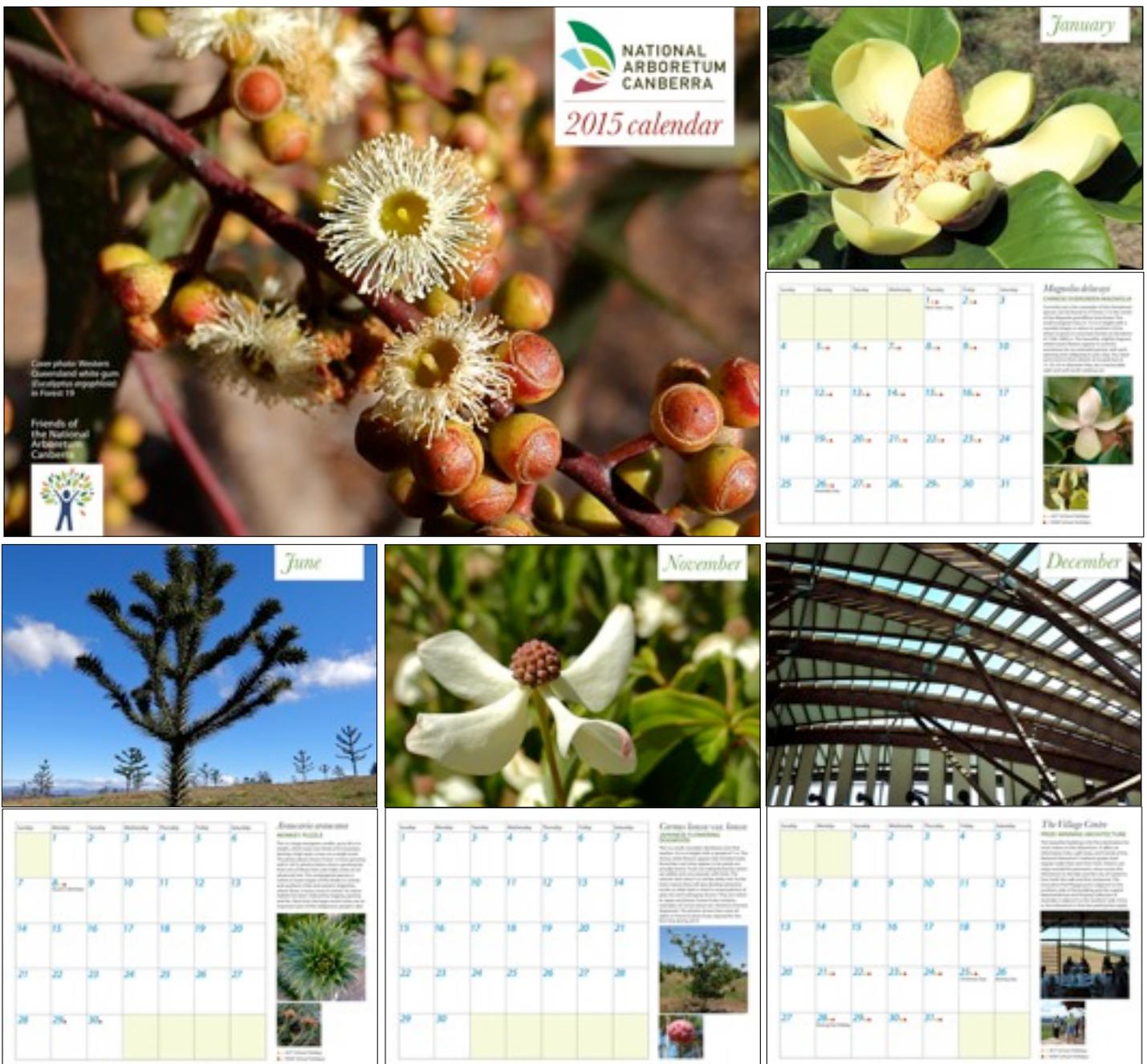
*Eucalyptus argophloia* (Western Queensland white gum flowers and buds) on the front cover;

*Magnolia delavayi* (Chinese evergreen magnolia) featured on January pages;

*Araucaria araucana* (monkey puzzles) on June pages; and *Cornus kousa* var. *kousa* (Japanese dogwood) on November pages.

The February pages feature *Eryngium ovinum* (blue devils) that were translocated from the Molonglo development to the Southern Tablelands Ecosystems Park (Forest 20), and December pages focus on the Village Centre.

**Purchase of this calendar supports the Arboretum**



## TREES IN FOCUS

# *Metasequoia glyptostroboides*

## DAWN REDWOOD

BY LINDA MULDOON

*This is one of our more successful forests, with many trees now above 3 m in height and very few losses. They will be getting new, bright-green, spring leaves by early October, so watch out for them in Forest 54.*

This is a long-lived, deciduous, conifer with the oldest specimen estimated to be about 600 years old. It is native to central China where it is found in moist places, along what are now cultivated river valleys and the bottoms of ravines. It is able to tolerate standing in water but cannot tolerate drought. The trees in Forest 54 were planted in in September 2009

Dawn redwood is now classified as an endangered species because its natural habitat is surrounded by cultivated fields. It is believed that the older protected trees that remain are relics of an earlier forest, and that there is little chance of new trees being able to develop in this changed environment.

It is a large, fast-growing tree that reaches a height of 35 m and spread of 10 m with a conical shape until mature when it develops a broad, rounded crown. The straight trunk becomes fluted and buttressed with age and can reach over 2 m in diameter. Bark is reddish-brown on young trees, developing greyish grooves with



Bark

*Dawn redwood growing next to a stream in Royal Botanic Gardens, Kew.*



*Dawn redwoods at the Arboretum in spring 2014.*

*New leaves in spring*



*Male cones (photo H.Zell)*



maturity. The bright-green, linear leaves are about 12 mm long and 1.6 mm wide on mature trees but leaves on young trees can be longer.

Male cones are light yellow-brown and hang in narrow clusters, up to 30 cm long. Seed cones are light-brown, up to 3 cm long, spherical to ovoid in shape and they hang on long stalks, maturing in late autumn. Light-brown seeds are about 5 mm long, with broad, thin wings.

This species was probably used for timber in the past but this is now prohibited. It is grown as an ornamental tree in parks, gardens and arboreta around the world.

*Right: dawn redwood in autumn, in Japan (photo Alpsdake)*



*Seed cone (photo Karrenw@aol.com)*



# FOREST TALK



## ARE WE GOING TO BE GRANDPARENTS?

Rob Ey was doing a stocktake in the Friends Forest when he noticed these little red pompoms on a few of the trees. These are developing female flowers, so we went to check whether there were any male flowers present, and sure enough, they are developing too. They first appear as yellowish swellings on the ends of branchlets (see photo, lower left). In this species, male and female flowers appear on different trees. Maybe we will see our first drooping sheoak cones in the not too distant future?



## WOLLEMI BABIES

Congratulations to Senior Horticulturalist Adam Burgess and team for germinating seeds collected from Wollemi cones grown at the Arboretum. May all such babies survive and grow into healthy adults!

## SCARLET ROBIN IN THE PERSIAN IRONWOODS

The bird shown at right is a new addition to our bird list. The Flame Robin, which is similar, was already on the list, but this species has black going beyond the throat and stronger white markings on the wing. It was fortunate that he was willing to pose long enough for a photo.



## SINGAPORE PRESIDENT PLANTS A TREE

On Sunday 15 June 2014, Ms Katy Gallagher MLA, ACT Chief Minister, joined His Excellency Dr Tony Tan Keng Yam, President of Singapore, and his wife Mrs Mary Tan, to plant an *Albizia julibrissin* (Persian silk tree) in the Arboretum's Central Valley. They were also joined by the Singapore Minister for Transport, Mr Lui Tuck Yew, the High Commissioner for Singapore, Mr Michael Teo, and the Australian High Commissioner to Singapore, Mr Phillip Green. Members of the Arboretum's Strategic Advisory Board also attended the ceremony. More advanced examples of this species can be found growing in Forest 6 where it was planted in August 2009.

## THE NEW ARBORETUM BOOK IS LAUNCHED

24 June 2014 was an important date in the history of the Friends. Ms Katy Gallagher MLA, ACT Chief Minister (centre) launched *THE ARBORETUM BOOK: Forests of the National Arboretum Canberra* in the Village Centre. Jocelyn Plovits, Chair of the Friends is at left and Linda Muldoon, editor and the book's main contributor, is at right. Many Friends and friends of Friends attended the ceremony. A team of Friends helped with catering and others helped with book sales. Brisk sales on the night proved the need for this book.



## MEMBERSHIP APPLICATION FORM

Please complete this form **OR** go to [www.arboretumcanberra.org.au](http://www.arboretumcanberra.org.au) where you can join online and make a secure payment.

Yes, I/we wish to join the Friends of the National Arboretum Canberra Inc.

1. Title ..... First name .....

Last name .....

2. Title ..... First name .....

Last name .....

Postal address .....

Postcode .....

Email address .....

I agree to receiving notices via email YES/NO .....

Telephone (h) ..... (w).....

**Please remember to notify us about changes to your contact details**

Date .....

Please circle your relevant membership category/parking voucher request:

Single	1 year \$35	3 years \$95	5 years \$155
Household	1 year \$40	3 years \$110	5 years \$180
Concession	1 year \$20	3 years \$55	5 years \$90
Association or club	1 year \$60	3 years \$160	5 years \$270
Corporate Friend	1 year \$2000	3 years \$5400	5 years \$9000

Friends' annual parking voucher \$25 Reg. No. ....

Total payment ..... Please circle your method of payment

**Cash Cheque Direct deposit**

(cheques must be made payable to the Friends of the National Arboretum Canberra Inc.)

Direct deposit details are:

WESTPAC, Petrie Plaza, Canberra, ACT  
Account—Friends of the National Arboretum Canberra Inc.  
BSB No. **032719** Account No. **375379**

(if making a direct deposit, please record your name so that your membership can be verified)

**Please note that all renewals are due in December**

## Friends of the National Arboretum Canberra Inc.

### Contact

You can contact us via email at [friends@arboretumcanberra.org.au](mailto:friends@arboretumcanberra.org.au) or visit our website at [www.arboretumcanberra.org.au](http://www.arboretumcanberra.org.au) or by phone on 0406 376 711 during business hours.

### Office bearers

Jocelyn Plovits (Chair)  
Trish Keller OAM (Deputy Chair)  
Colette Mackay (Secretary)  
Richard Bear (Treasurer)  
Spero Cassidy (Web Manager)

### Council members

Max Bourke AM  
Linda Muldoon (Publications Editor)  
Tony Lawson (STEP Representative)  
Bek Hyland (Social Media)  
Kathryn Cole (Guides Co-ordinator)

The Council (all of the above) meet on the second Tuesday of each month.

### Life members

Max Bourke AM  
Roger Hnatiuk  
Sherry McArdle-English  
Linda Muldoon

**Honorary member:** Jon Stanhope AO

**Newsletter:** The newsletter is published quarterly. Contact Linda Muldoon (the editor) by email on [lindaon@grapevine.com.au](mailto:lindaon@grapevine.com.au) if you would like to contribute an article, news, or photos.

*The Friends thank the ACT Government, ActewAGL, Yarralumla Nursery, Murrays Coaches, Supabarn, PriceWaterhouseCoopers and Ginger Catering for their support.*

Post membership applications to:

**The Secretary**  
**Friends of the National Arboretum**  
**Canberra Inc.**  
PO Box 48, Campbell, ACT 2612

