



FRIENDS of the National Arboretum Canberra Newsletter 33 / September 2016

Dear Friends one and all

Our lobbying for a Volunteer Co-ordinator ended successfully recently when Lauren Brown was appointed Community Engagement Officer. We congratulate Lauren on her appointment. She began her duties in late August and we look forward to working with her as she begins the huge task of meeting with the Friends in preparation for the handover of various roles such as co-ordinating Guides and working bees.

The Arboretum Foundation was launched by the ACT Chief Minister, Andrew Barr MLA, on 6 September. As Chair of the Friends, I have been appointed as one of ten of the Directors of this new body. You can read more about the Foundation and the other Directors on *Page 5* and on the Arboretum website.

Our Patron, John Mackay AM, is Inaugural Chair of the Arboretum Foundation and will present an overview of the new body at the Friends' next **General Meeting on 11 October, 6:00 pm in the Terrace Room**. All Foundation Directors have been invited so you will have an opportunity to meet them over a glass and some nibbles. Please come along and support this activity.

Congratulations to the devoted team at STEP (Southern Tablelands Ecosystems Park) for their success in the recent 'Keep Australia Beautiful Awards'. STEP won the award for Environmental Education as well as being Highly Commended in the Environmental Sustainability section and David Shorthouse won the separate Individual ACTION Award, for his work at STEP and also for his many years of work at Mulligans Flat.

Ongoing Learning Sessions for Guides, organised by Sandy Linsley, are proving to be very popular. Dr Suzette Searle and Jennie Widdowson presented an excellent session on wattles at the end of August. The October session will be addressed by Mark Richardson, Botanical Consultant, and will be open to all members.

The Friends' Council have drafted a letter to all ACT election candidates, asking whether they have visited the Arboretum yet and seeking to gauge their support, if elected. I will keep you posted regarding their replies.

The 2017 Arboretum Calendar is now available at the Curatorium gift shop. Thanks to Linda Muldoon for producing this very lovely calendar (*see page 13*). Most of the photos are by Linda but two are by Jack Mohr who won first prize in the High School/College Student category in our 2014/15 'Celebrating summer at the Arboretum' photo competition.

Floriade is now underway in Commonwealth Park with more than one million blooms spread across four hectares. To complement Floriade, our Guides will be offering a themed walk every day: 'STEP in spring, spring in STEP', 'Wollemi Wander' or 'Favourite Forest Forays'.

Thanks to Max Bourke AM for drawing our attention to this quote from a July edition of *The New Yorker*:

'As a doctoral student at the University of Michigan, a decade ago, Berman conducted a study in which he sent volunteers on a 50-minute walk through either an arboretum or city streets, then gave his subjects a cognitive assessment. Those who had taken the nature walk performed about 20 per cent better than their counterparts on tests of memory and attention. They also tended to be in a better mood, although that didn't affect their scores. "What we're finding is that you don't have to like the interaction with nature to get the benefits", Berman said. Some of the walks took place in June, whereas others took place in January; most people didn't particularly enjoy trudging through the harsh Michigan winter, but their scores jumped just as much as in the summer trials. Not surprisingly, those whose directed attention is most depleted seem to get the biggest benefits: an end-of-workday nature romp probably packs a greater restorative punch than one first thing in the morning, and the boost is five times bigger in people who have been diagnosed with clinical depression.'

See you soon—at the Arboretum!

Trish Keller OAM
Chair

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A walk through wattles for Wattle Day

BY ANNA HOWE

More than 60 Friends, STEP volunteers and Arboretum visitors joined a 'Wattle Walk' to Forest 20, the Southern Tablelands Ecosystems Park (STEP), Canberra's regional botanic garden, on the last weekend of August—an advance celebration of Wattle Day on 1 September. The walk was led by Dr Suzette Searle, an expert on all things *Acacia*, who was ably assisted by a number of STEP volunteers who guided us through the pathways of this very special forest.



Dr Suzette Searle (left) with some of the people who attended the walk.
PHOTO: ALMA QUICK

The taxonomy debate

Suzette explained that *Acacias* are now not only part of the Australian Coat of Arms, but the vast majority of species now classified as *Acacia* are native to Australia. There has been a long taxonomic debate in botanical circles which ended in 2005 when the name *Acacia* was reserved for the genus we have in Australia. Different names have been given to their various genus relatives overseas, notably the African-American species. This

decision was upheld at the 2011 International Botanical Congress in Melbourne.

Our claim to the species is well-justified as there are nearly 1000 *Acacia* species in Australia which represents more than 90 per cent of the species in the former global genus, and *Acacias* are also the most common species within Australia.

Australian emblem

Suzette told us that the first known use of wattle as an emblem dates back to Tasmania in 1838, when the wearing of silver wattle sprigs was encouraged at the anniversary celebrations of the 17th century European discovery of the island. In 1889, the Wattle Blossom League was formed in South Australia, and around 1910, other states took up the idea to recognise wattle as our floral emblem. While holding a variety of events to mark this recognition and despite Federation, the states celebrated wattle day on different dates. 1 September became the nation's official Wattle Day in 1992.

Green and gold were increasingly recognised as Australia's colours, especially in sport, and in 1984 they became Australia's official colours. *Acacia pycnantha* (golden wattle) was officially gazetted as Australia's floral emblem in 1988.

History of the names

The names '*Acacia*' and 'wattle' have long histories. The original description of the genus was by Linnaeus, using material from Africa. Unlike the Australian wattles, many of the African species are very thorny and *Acacia* comes from the Greek word for 'thorns'. The word 'wattle' is probably derived from the widespread building technique of 'wattle and daub' which in turn uses the old English word 'watul', referring to a woven lattice framework for walls. The flexible branches of most wattles proved to be well-suited for this method during the 18th and 19th centuries. Many of the overseas species were described with the common name 'mimosa', derived from the family name Mimosaceae. Suzette observed that our claims on the *Acacias* are very recent compared to Indigenous Australians' uses of them, notably grinding the seed for food and medicinal use of the tannin-rich bark.

Acacia dealbata (silver wattle), one of the species with true leaves rather than phyllodes



Acacia genistifolia (early wattle) with small spiky phyllodes and cream flowers



Acacia acinacea (gold dust wattle) with small elliptical phyllodes and brilliant gold flowers



Wattles in Forest 20

Through Suzette's trained eye, a close look at just a few of the 24 *Acacia* species showed us how much they varied. Much of this diversity is captured in the species' names, many of which are a mix of descriptions of leaf shape/colour, flower colour, properties of the bark or timber, the geographical areas where the species is most common or the surnames of people associated with the species, as seen in the following list.

Acacia acinacea — gold dust wattle
Acacia boormanii — Snowy River wattle
Acacia buxifolia — box-leaf wattle
Acacia cultriformis — knife-leaf wattle
Acacia dawsonii — poverty wattle
Acacia dealbata — silver wattle
Acacia decurrens — early black wattle
Acacia deanii — Dean's wattle
Acacia falciformis — broad leaf hickory
Acacia genistifolia — early wattle
Acacia gunnii — ploughshare wattle
Acacia implexa — hickory wattle
Acacia mearnsii — green wattle
Acacia melanoxylon — blackwood
Acacia obliquinervia — mountain hickory
Acacia paradoxa — kangaroo thorn
Acacia parramattensis — Sydney green wattle
Acacia penninervis — mountain hickory
Acacia pravissima — Ovens wattle
Acacia pycnantha — golden wattle
Acacia rubida — red-stemmed wattle
Acacia sicutiformis — dagger wattle
Acacia ulicifolia — juniper wattle
Acacia verniciflua — varnish wattle

Although many wattles flower in early spring, others flower at different times of the year. Suzette gave us a short field lesson in how to distinguish *Acacias* from other species when flowers are absent. The green and yellow framed hand lenses that came from Suzette's backpack enabled us to observe details very clearly, and we learnt that wattles with gum-like leaves can easily be distinguished by smelling a few crushed leaves.

FLOWERS

The fluffy ball-like 'flowers' are made up of many tiny true flowers, up to 100 in some species. We could see these in the buds of several species that had not yet opened. Some of the ball-like 'flowers' appear singly along a stem, but most form large clusters (panicles or racemes) and in some species the tiny flowers form rods rather than balls. On the STEP site, wattle flowers vary in colour from pale cream, to acid yellow, to gold.

LEAVES OR PHYLLODES

All *Acacia* seedlings have bipinnate leaves and some such as silver wattle retain these into maturity. However, as they grow, many species develop phyllodes. These are petioles (leaf stalks) that have evolved to perform the same function as a leaf. The size and shape of phyllodes varies enormously. Some are thin sharp

spikes, some are leathery and strap-like, and others are soft and linear, moving with the wind.

GLANDS

With the help of a hand lens, we were able to observe distinctive small swellings or glands at the base of each leaf or phyllode.

PODS AND SEEDS

Wattles are legumes, and as they begin to mature they produce seed pods that hang on the tree/shrub before ripening and turning brown. Seeds spill out as the pods split open. Even if there are no pods on the wattle, fallen pods can often be found on the ground underneath. The hard seeds are ground for commercial 'wattle seed' (but be aware that seeds of some wattle species are poisonous).

The wattles in STEP will flower over many months and, as all are labelled, you can learn a great deal by spending an hour or two walking among them. And don't worry about hay fever. Although wattles are much maligned for causing this, Suzette assured us that the pollen is not wind-borne.

Wattles elsewhere in the Arboretum

The trees along the wire fence at the northern edge of the Arboretum are *Acacia melanoxylon* (blackwood). Forest 13 contains *Acacia caerulescens* (Buchan blue). The prostrate form of *Acacia baileyana* (Cootamundra wattle) is featured in the rockery garden next to Pod Playground. This cultivar does not bear seeds so cannot become a weed like the trees of this species. A number of well-grown *Acacia cognata* (bower wattle) can be found in the Discovery Garden.



Our sincere thanks go to Dr Suzette Searle (left) and Lainie Shorthouse, STEP Co-ordinator (right), for taking the time to share their extensive knowledge with all the visitors who enjoyed the Wattle Walks this year. Thanks also to Jennie Widdowson for compiling the list of *Acacias* in STEP and for plotting the map that enabled us to find them all. Suzette and Jennie both spoke at the Guides Continuing Learning Session on 31 August, so a number of well-informed Guides have built on the Wattle Walks and will lead our first themed Arboretum walks: 'STEP into spring, spring in STEP' during Floriade.

National Arboretum Canberra Foundation: Directors announced

BY LINDA MULDOON

ACT Chief Minister, Andrew Barr MLA, introduced nine of the ten newly appointed Directors of the National Arboretum Canberra Limited Board at a ceremony held in the Margaret Whitlam Pavilion on 6 September.

The not-for-profit Arboretum Foundation has been formed to promote and coordinate philanthropic contributions to the Arboretum's development by tapping into community goodwill and support for the Arboretum, raising funds for infrastructure projects, research programs and education programs that fall outside of the ACT Government's funding capabilities.

The ACT Government will continue to fund core infrastructure at the Arboretum, however the Foundation will complement current fundraising efforts, including the valuable efforts of the Friends.

John Mackay AM will be the inaugural Chair, having been actively associated with the Arboretum since its inception. John previously chaired the original Board of Governors and the subsequent Strategic Advisory Board. He is also Patron of the Friends.

Rowena Abbey, also known by her maiden name as Rowena Sylvester, is the Mayor of Yass Valley Council and has extensive experience as a Company Director. Rowena has a wide range of business experience and strong links to the Capital Region.

Thomas Barrington-Smith, a commercial solicitor, has previously worked with charitable organisations including World Vision and is a former member of various ANU boards.

Assoc. Professor Cris Brack of the Fenner School of Environment and Society, ANU, is one of the Arboretum's longest-standing supporters. Cris is a member of two of the Arboretum's advisory committees and oversees exciting forest research at the Arboretum.

David Earle, a chartered accountant, is an experienced current and past board member of many organisations, including the Tidbinbilla Nature Reserve strategic advisory board, Canberra Southern Cross Club and Ronald McDonald House.

Brand Hoff AM served ten years on the Canberra Business Council and three years as Chairman. Brand and his wife Peta have demonstrated their commitment to the Arboretum with a generous donation which will be used in the construction of a Children's Garden.

Trish Keller OAM has a background in education including school principal roles—and, of course, Trish is Chair of the Friends.

Gweneth Leigh, landscape architect, holds a masters degree in landscape architecture from Harvard University. Gweneth has worked at various arboreta in the US and for the National Capital Authority in the ACT.

Lucy Stackpool is a sixth-generation Canberra who works on the board of an IT company. Lucy and her husband Makis Marmaridis are Arboretum Foundation members. Lucy brings a multi-generational perspective to the Arboretum's future.

James Willson is the managing director of the local strategic creative company 'Cre8tive'. James brings an in-depth understanding of sponsorships and business relationships.

ACT Chief Minister, Andrew Barr MLA (third left), with nine of the ten Directors. Assoc. Professor Cris Brack was unable to attend.



The COLA becomes the Terrace Room

BY LINDA MULDOON

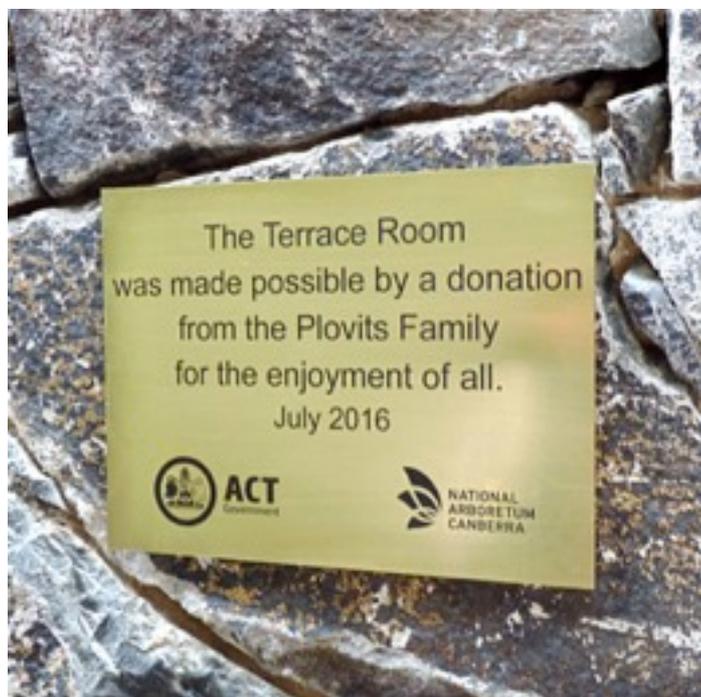
When the matter of raising funds for enclosing the COLA (the Covered Outdoor Learning Area near the bonsai pavilion) was first discussed at a Friends' Council meeting at Jocelyn's house, way back when Jocelyn Plovits was still Chair, it's true to say that the Council was not overly enthusiastic about this venture, but Jocelyn went ahead and made a personal donation anyway—and when the pressure was on to go ahead and enclose this space (to make it usable year-round) the Plovits family made a second generous donation—and they made it all happen.

The result is that the COLA has become the Terrace Room and it was formally opened by the ACT Chief Minister, Andrew Barr MLA, on 22 July with a sizable crowd of Friends in attendance.

As the weeks since then have passed, we have appreciated that the Friends are a major beneficiary of this development. It is a good size for the Friends' gatherings and you can expect to see us using it more and more, in preference to the Green Room or the Margaret Whitlam Pavilion (which are both in high demand for other uses).

Thank you Jocelyn. We are all enjoying it—this is a big step forward, with space being at such a premium at the Arboretum. It may be that in future months work will commence to improve the Terrace Room's acoustics.

The ACT Chief Minister addressing the crowd at the formal opening.



Braving the elements on Third Sunday Walks

On 17 July, Jenny Cantlon led Friends on a walk to explore the Warm Trees installations. The first stop was on the North Deck, to look across to the maple leaf in the sugar maples, but that morning all we could see was dense white fog! As we moved closer, the maple leaf emerged from the fog in pastel colours. This was magical—surely this was a film set, wasn't it? Then we climbed up to the Himalayan cedars for a tree-hugging session. We learnt a lot about knitting and crochet and particularly about Jenny's unbridled enthusiasm for 'yarn bombing' and her ongoing energy for the Warm Trees project. Planning is already underway for Warm Trees 2017. We finished the walk in the bonsai pavilion, discovering miniature scarves and other temporary additions of fluffy colour.



Above: A tiny scarf adorns a Japanese maple bonsai exhibit





Helen Hemphill (in the light blue jacket) with some of the Friends who joined (and braved) her walk.

Sunday, 21 August was another cold day but 12 Friends gathered in the Village Centre to join Helen Hemphill's walk which focused on the medicinal and herbal uses of the Arboretum tree species.

Helen is well-qualified to talk on this subject as she is a retired pharmacist. We learned that out there in our forests we have the potential to cure just about every ailment known to man (and woman)—or so it was believed once upon a time. And if your problem was in your gut you would have had trouble choosing from the vast array of remedies on offer!

As the morning progressed, the weather got colder, windier and damper—and in the photo below you can see some of the walk participants near the Himalayan cedars, leaning against a rock for protection!






PHOTO COMPETITION

Capturing Springtime at the Arboretum

School children and college students are invited to capture images of the National Arboretum Canberra which feature:

- new leaves emerging on trees after winter;
- springtime blossoms; or
- wildlife (birds, nests, reptiles, insects, spiders, fungi, plants, etc.).

We are encouraging young photographers to take an interest in all the flora and fauna on offer, whilst creating exciting and innovative images (from close-up or afar), recording something of this particular time and place.

The best photos will be displayed at the Village Centre and may appear on the websites of the Arboretum and the Friends of the Arboretum, and/or be used in promotional material (with credits).

For guidelines, prizes and entry forms go to:
www.arboretumcanberra.org.au

ENTRIES CLOSE 1 DECEMBER 2016



ANU research at the Arboretum

BY LINDA MULDOON

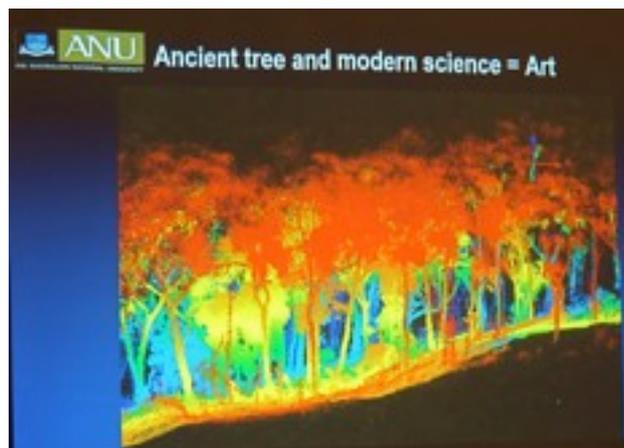
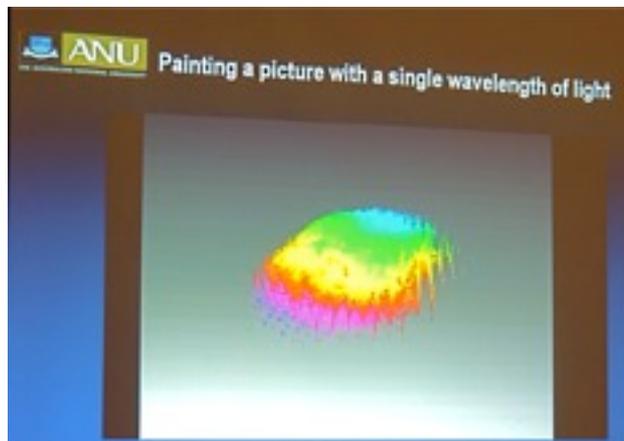
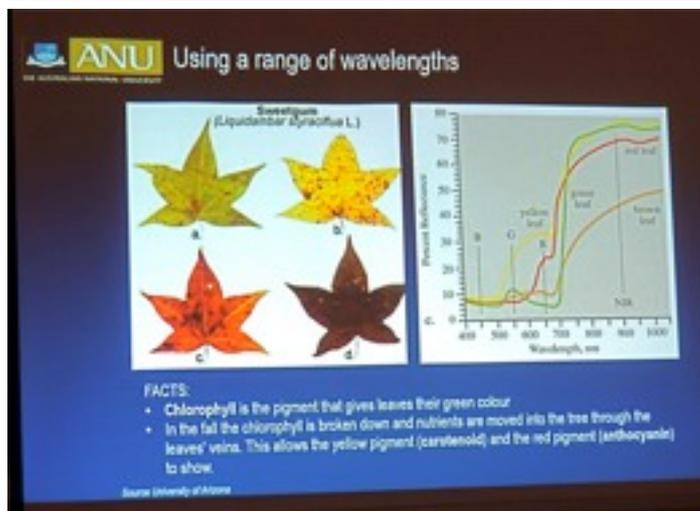
Following the exciting presentation Assoc. Professor Cris Brack* delivered during Tree Week (on how the ANU is keeping watch over the whole Arboretum), we asked him to talk on the same subject for the Friends' Seasonal Talk at the Margaret Whitlam Pavilion on 12 September.

Cris emphasised that because the Arboretum is a recreational and educational research resource, it is internationally recognised for its role in conservation of the world's trees—and it can inspire people to act.

Way above us, remote sensing is being undertaken in various ways. The ANU has their own drone that flies over the Arboretum at intervals, recording digital photographic images. They also use data collected by Landsat 5 and Landsat 7, ALOS, SPOT4 and 5, IKONOS, Quickbird, MODIS and Line Scanner, using a range of wave lengths.

Colour, which is only a small part of the energy coming from the sun, is better detected by special sensors than by the human eye. They can detect heat (infra-red) as well as chlorophyll, which gives leaves their green colour, but is itself a waste product for the plants.

These images recorded 1 metre of growth between the green image (2014) and the red image (2015).



Landsat photography is recording images over the years, enabling vegetation changes to be observed—'greening' during the growing season and 'browning' during the non-growing season. One day these observations could help save a species that would otherwise be lost.

At the Arboretum, ground-based sensing equipment is recording temperature and humidity. Sensors inserted into the trunks of trees can track how the trunk moves in response to rainfall and different events. The weight of the tree canopy can be tracked by measuring the changes in pressure it exerts on the trunk and this can help track the health of the tree.

Where to from here?

ANU research has the capacity to work at centimetre spatial scales. They can record and repeat measurements, produce modelling, visualisations and presentations. They can progress to precision management at centimetre and minute scales.

Research was always to be an important aspect of the National Arboretum Canberra. Progress on this front is rapid, exciting and something Canberrans can be proud of—and we are being seen on a world stage.

* Associate Professor Cris Brack is from the Fenner School of Environment and Society, Australian National University

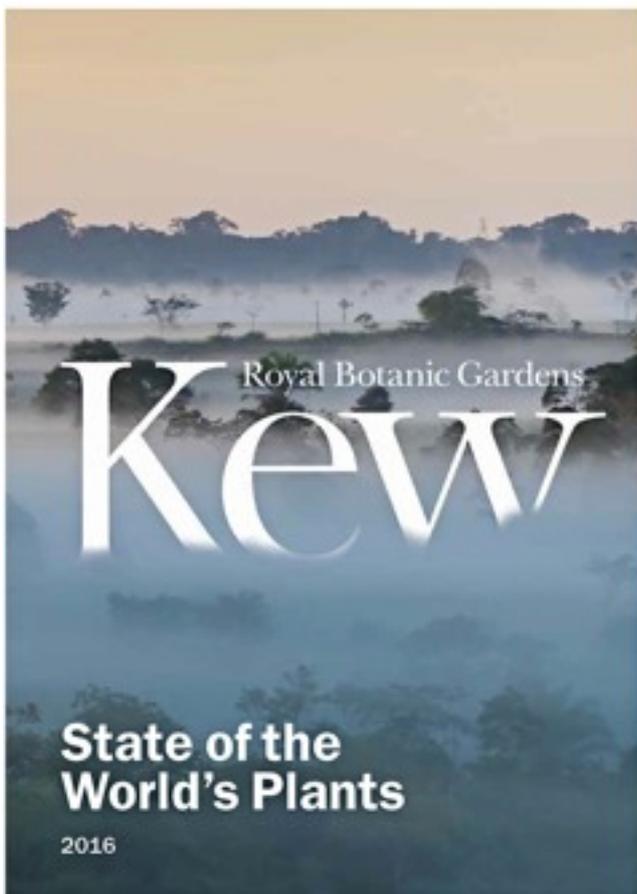


State of the World's Plants online from Kew

BY MAX BOURKE

All of the plant 'nuts', especially those who love trees, should read the new **online only** publication out of the Royal Botanic Gardens Kew, called *Kew State of the World's Plants*. You can download the pdf at <https://stateoftheworldsplants.com/>

One of the core reasons we have the National Arboretum Canberra is for it to act as a refuge for endangered species, and boy, there's a lot of work to do!



Professor Kathy Willis, Director of Science, and Steve Bachmann of Kew Gardens have led a huge team of researchers around the world who have reviewed thousands of papers, research reports, databases and datasets to try to bring together, for the first time, a concise assessment of the state of plants on our planet. They plan to do this annually.

In a sense this has been one of the fundamental roles of Kew Gardens since the days of Banks and George III.

They paint a very scary picture. Even at the most crude level, 21 per cent of the world's plants are currently threatened with extinction, according to the IUCN Red List Criteria. Based on the best estimates of science, some 391,000 species of plants are currently known to science (and a good section of the Report explains what this is based upon).

Since the 1990s, Australia has consistently been among the top three countries reporting discovery of new species, along with Brazil and China.

The Report highlights some of the most recent (2015) 'discoveries' such as an enormous tree from the rain forests of Cameroon called *Gilbertiodendron maximum* and an astonishing sundew from Brazil called *Drosera magnifica*—which grows up to 1.5m tall, compared to our *Drosera* species, which are a few centimetres tall.

There is also a good measure of 'useful plants', 31,128 species, where useful includes those of benefit to 'humans, animals or the wider environment'. Those still in the category 'medicinal' are considered the most useful—a warning to destroyers of plant ecosystems!

A good section on crops and their wild relatives notes major gaps in gene banks in the fields of bananas (our largest fruit crop). Aubergines and sorghum are species with serious vulnerability to disease and climate change.

The impacts of climate change, invasive species and disease are all well-covered—and worrying if you care about the future of plants or the planet.

Of relevance to Friends of the National Arboretum Canberra, is a specific study—a global assessment of all trees. This is supposed to be completed by the end of 2016. See <https://www.bgci.org/plant-conservation/globalresearch/>

If, like me, you are seriously interested in the state of knowledge around plants, this is a must read. The role of the National Arboretum Canberra becomes even clearer.

Dates to remember

Tuesday, 11 October Friends' General Meeting and talk in the Terrace Room

Sunday, 16 October Friends' Third Sunday Walk

Saturday, 19 November Voices in the Forest concert in the Amphitheatre

Sunday, 20 November Friends' Third Sunday Walk

Saturday, 3 December Friends' End-of-Year Event in a forest somewhere (TBA)

Monday 12 December Presentation of Photo Competition Awards in the Terrace Room

Sunday, 18 December Friends' Third Sunday Walk

Parrotia persica

PERSIAN IRONWOOD

BY LINDA MULDOON

This species occupies Forest 14 at the junction of Forest Drive and Himalayan Cedar Road and it spans both sides of Forest Drive, so in years to come Persian ironwoods will form part of a grand approach to the Village Centre. They are planted in long equally-spaced rows which follow the curve around Forest Drive.

The first of the trees in this forest were planted in September 2008 and further plantings followed in autumn 2010 and 2013. They are progressing well, with few losses, and can be expected to live around 80 years.

Although it is not regarded as a threatened species, *Parrotia persica* is one of only two widely-separated species in the genus. The other is *Parrotia subaequalis*, considered to be a sibling species and commonly called Chinese ironwood, originates from eastern China. *Parrotia persica* is native to northern Iran (formerly Persia) where it is found growing in moist deciduous forests on low-lying plains and mountain foothills, at up to 900 m elevation. The *Parrotia* genus is closely related to the witch-hazel genus.

Parrotia is a genus within the Hamamelidaceae family and it gets its name from Freidrich W Parrot (1729–

1814), a German naturalist who collected specimens of the tree on Mount Ararat, while searching for Noah's Ark. Persian ironbark or Persian witch hazel are common names for the species.

GENERAL DESCRIPTION

It is a small to medium-sized deciduous tree which grows to 15 m tall with a spread of 10 m, often with multiple trunks. Its attractive, patchy, pinkish-grey bark sheds in large flat flakes. When leaves first emerge in spring they are corrugated and some have purple edges, but they become smooth, deep-green, 6-15 cm long and 4-10 cm wide with wavy margins. Autumn colour can be stunning for Persian ironwood in some climates but so far only a few of the Arboretum trees have demonstrated this. Leaves can turn a magnificent blend of pinks, purples, reds and golds.

The flowers are remarkable because they are produced on bare branches in July. Clusters of deep-red stamens, about 4 mm wide, appear from brown woolly bracts but

Late winter flowers



Immature seed capsule



Trees in Forest 14 flowered prolifically during early winter in 2016





Left: New leaves are corrugated and some have purple margins.
Right: Mature leaves are smooth and deep-green, with wavy margins.

there are no petals. As spring approaches, the stamens grow longer and their colour fades to deep-pink. The fruit is a two-part capsule, with each part yielding one shiny brown seed.

USES

Parrotia persica is an important species in protecting slopes in very steep locations that are subject to landslides. Its autumn colour and patterned bark make it popular for landscaping. The name 'ironwood' comes from the dense and almost indestructible nature of the tree's timber. Herbalists have used this species in the treatment of various fevers and respiratory infections. It is also used in food colouring and flavouring.

Below: A large Persian Ironwood tree growing in Parc de Mariemont, Belgium.

Wikimedia photo by Jean-Pol GRANDMONT

CULTIVATION

Several cultivars have been selected for garden planting:

Horizontalis is a semi-weeping form with a wide-spreading horizontal branching pattern;

Pendula (Kew form) is compact weeping form that is quite graceful;

Select has purple margins on young leaves; and

Vanessa is an upright form with a columnar habit.

Also, variegated leaves have been noted on a few of the trees in Forest 14, so that may be another possibility.



Left: Seeds are brown and shiny.
Below left: Autumn colour can be spectacular. This tree was photographed near Forest 13.
Below: The flaky bark is attractive.



FOREST TALK



TOROMIROS FLOWERING FOR THE FIRST TIME!

How exciting is this? Three of our toromiro (*Sophora toromiro*) trees have buds and flowers are opening. This is the species that is extinct on Easter Island, its native habitat. Our early attempts to grow them were thwarted by hungry caterpillars that totally defoliated them and then the young trees would die. Working bees of Friends 'dealt with' the caterpillars and—look at the result!



PRETTY IN PINK

This beautiful bunch of new shoots was seen in August in Forest 85: Morrisby's gum. The pruning of a trunk had prompted epicormic growth, reminiscent of gum trees when they are recovering after fire.



WHAT A PHOTO!

Yvonne Kilgour took this great photo on the Third Sunday Walk as we walked through the Persian ironwoods on 17 July. The subject is a furry caterpillar having a bad-hair-day as it clung onto a bud in the dense fog. Well-spotted Yvonne!

CALLERY PEARS IN FULL BLOOM

Drivers on the freeway are getting a treat while the callery pears (*Pyrus calleryana* 'Chanticleer') are doing their best to conceal every branch and twig with blossoms.



Jim Payne and Tralie Kimlin of the Tree Monitoring sub-group working among the blossoms on 25 September.



THE 2017 ARBORETUM CALENDAR HAS ARRIVED!

The 2017 calendar is now available and we think it is our best yet.

It is available at the Curatoreum gift shop for \$9.00 (with Friends' discount) or \$10 for non-members. It will also be available online via our website in October. You will have a good opportunity to purchase copies at the Friends' General Meeting on 11 October or the Photo Competition Awards event on 12 December. Bring cash and you will be able to purchase calendars for \$9 each or **three for \$25**.

Why we produce a calendar

This our fifth calendar and so far they have all been profitable. But take a look inside and you will find they offer more than just a pretty face. They contain information on 12 of the Arboretum forests. You will find an Arboretum map and the names of all the forest species in the back pages. They contain information about the Arboretum and the Friends. They inform calendar users of public holiday dates, ACT and NSW school holiday dates, and daylight saving change dates. Many get posted overseas each year, so they become ambassadors for the Arboretum and the Friends. And they make very economical Christmas gifts.



MEMBERSHIP APPLICATION FORM

Please complete this form, **OR** go to 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

L Last name

2. Title First name

Last name

Postal address

.....

..... Postcode

Email address

I agree to receiving notices by email YES/NO

Telephone (h) (w)

Please remember to tell 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 Friends of the National Arboretum Canberra Inc.)

Post membership applications to:

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

Direct deposit details are:

WESTPAC, Petrie Plaza, Canberra, ACT

Account—Friends of the National Arboretum Canberra Inc.

BSB No. 032719 Account No. 375379

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

Friends of the National Arboretum Canberra Inc.

Contact

You can contact us via email at friends@arboretumcanberra.org.au or visit our website at www.arboretumcanberra.org.au or by phone during business hours on 0406 376 711

Office bearers

Trish Keller OAM (Chair) Je
 Del Da Costa (Secretary)
 Richard Bear (Treasurer)
 Colette Mackay (Donations and Sponsorship Manager)

Council members

Rob Ey
 Anna Howe
 Cherie McLean (Social Media Manager)
 Linda Muldoon (Publications Editor)
 Lainie Shorthouse (STEP Representative)
 Mike Woolley (NBPCA Representative)

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

Life members

Max and Margie Bourke
 Roger Hnatiuk
 Sherry McArdle-English
 Linda Muldoon
 Jocelyn Plovits

Honorary member

Jon Stanhope AO

Patron

John Mackay AM

Newsletter

The newsletter is published quarterly. Please contact Linda Muldoon, the editor, by email on lindaon@grapevine.com.au if you would like to contribute an article, news or photos. Decisions regarding what content is published are determined by the Chair.

The Friends thank the ACT Government, ActewAGL, CanberraNet, Ginger Catering and Elect Printing for their support

