Dear Friends

When I was elected as Chair five years ago, I put together a list of items to achieve in my term. As I move into my sixth year as Chair, I am pleased to report that we have achieved many of those items (more about that at the AGM next week on 13 May). But as I move into another year, I am keen to further develop the Friends in new and exciting ways. At our AGM we will be announcing the Volunteer of the Year, Life Membership and a special award. I am also hoping you will come to the meeting with innovative ideas to discuss.

We have a fine team of volunteers who are helping but we always have room for more. Please don’t be shy as there is a task for all skills, and experience is great for developing the intellect. You may have noticed that Bek Hyland has joined our Council and has already given us a presence on social media with our Facebook page.

Currently we are planning a two-day tour to three key arboreta on the South Coast in spring 2014. We will soon be asking for expressions of interest to discover whether you are keen on taking up this unique opportunity.

We have signed a Letter of Agreement with the ACT Government which confirms to date much of what we have offered and had offered to the Friends. Within that agreement are opportunities for two social events at the Margaret Whitlam Pavilion each year. So I am asking for your ideas regarding what social events we should hold?

Please email your ideas to: friends@arboretumcanberra.org.au.

A social event is different to the very successful Friends’ Talks series which we have commenced this year in collaboration with the Arboretum. The talks are held in the Margaret Whitlam Pavilion at two-monthly intervals and we use the opportunity to raise funds for the Arboretum. The next talk will be held on 23 June and will provide an interesting update on the Southern Tablelands Ecosystems Park display garden in Forest 20, and also focus on Biosecurity—don’t miss out!

A really major achievement this quarter has been finalising the new Arboretum book, albeit that it has been a year of very hard work for those concerned. The final draft is now going through a final check before it goes to the printers. We know there will always be developments at the Arboretum so the story can never be complete, but this book gives a very full account of the history, the development of the site, all the forest species, the festivals and concerts, the artworks, the bonsai and much more. It is expected to be launched at the end of June, but a separate notice about the launch will be sent to you when we are further ahead with the book’s production. Congratulations to the team that have prepared it: Linda Muldoon, Roger Hnatiuk, Jennie Widdowson, members of the Arboretum Team, and consultants to the Arboretum.

What a wonderful day we had for the Royal visit. The Duke and Duchess of Cambridge really appreciated all the children being there. They played with them in the Pod Payground before going on their busy way. World-wide news coverage of the event was icing on the cake.

And a final thought. Have you participated in a working bee yet? There is nothing like getting close to trees in a particular forest to enable you to appreciate the Arboretum’s work, research, education and potential for the future. Now we have the opportunity to see the trees when they are just getting established and this is a great time for us all to learn more. Would you like to be involved on Tuesday or Thursday mornings, or both?

See you at the Arboretum!

Jocelyn Plovits
Chair
Ceremonial planting of The Children's Tree

BY LINDA MULDOON

The Arboretum celebrated its first birthday on Saturday 8 March 2014, and the first item on the program was the planting of a hoop pine (*Araucaria cunninghamii*) on the Events Terrace. This tree, to be known as The Children's Tree, had been grown and donated by the Foundation and Friends of the Royal Botanic Gardens Sydney and was appropriately planted by a group of children.

A band played on the south deck

Ms Fay Steward (above), Executive Director, Parks and City Services Division, TAMS; Mr John Mackay (centre), Chairman of the Arboretum Board; and Ms Katy Gallagher MLA, ACT Chief Minister (right) all addressed the gathering.

PHOTOS BY LINDA MULDOON
Canberra’s one-year-olds joined in by having their heights measured so that their growth can be compared with the growth of the tree in years to come.

Kite-making and flying, workshops, bus tours, guided walks, talks and many other activities, drew large crowds. Many members of the Friends assisted or participated.
The ACT Tree Register

BY SAMANTHA NING
Tree Protection Officer, Urban Treescapes, City Services

The ACT Government manages one of the largest urban forests in Australia, including the National Arboretum Canberra and approximately 730,000 trees on unleased territory land. Territory and Municipal Services (TAMS) administers the ACT Tree Register, in line with their commitment to the management and protection of our urban forest. The Register recognises and protects exceptional individual trees and groups of trees in the built-up urban area of the ACT.

Registered trees, both public and private, have been identified as being exceptional for:

◆ their natural or cultural heritage value;
◆ their landscape and aesthetic value; or
◆ their scientific value.

A number of the species in the Arboretum forests can also be found on the Register. Whilst most Arboretum forests are still in their early stages of growth, the trees on the Register offer an opportunity to view exceptional examples of the same species in their mature or over-mature stages.

Haig Park has been included on the Register in recognition of its important role in defining Canberra’s garden city concept. The park was established in 1921 and is the first example of wind-break shelter belts, established to protect the first suburbs in the vicinity of the civic centre from wind and dust. Haig Park contains a number of Arboretum species, namely: Himalayan cedar (*Cedrus deodara* in Forest 11), pencil pine (*Cupressus sempervirens* ‘Stricta’ in Forest 34), radiata pine (*Pinus radiata* var. *radiata* in Forest 76) and English oak (*Quercus robur* in Forest 82).

Other examples include two small-leaved limes (*Tilia cordata*) that were placed on the Register as beautiful examples of the species. They are located within the Bega Court Apartments in Reid and have a historic connection as part of the original landscape, planted in association with the post-war international architecture style present on the site. This species occupies Arboretum Forest 38. A group of Euphrates poplars (*Populus euphratica*) is also included on the Register and can be found at Kingston Foreshore. This species occupies Arboretum Forest 74.

<table>
<thead>
<tr>
<th>Species</th>
<th>Register No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Cedrus deodara</em></td>
<td>PTR035, PTR036</td>
</tr>
<tr>
<td><em>Cupressus sempervirens</em></td>
<td>PTR035—group, PTR032—group, PTR139</td>
</tr>
<tr>
<td><em>Tilia cordata</em></td>
<td>PTR058, PTR059</td>
</tr>
<tr>
<td><em>Pinus radiata</em> var. <em>radiata</em></td>
<td>PTR035—group, PTR032—group</td>
</tr>
<tr>
<td><em>Quercus robur</em></td>
<td>PTR035—group, PTR138</td>
</tr>
<tr>
<td><em>Populus euphratica</em></td>
<td>PTR127—group</td>
</tr>
</tbody>
</table>

Seeking more trees for the Register

Do you know an interesting or historic story about a tree or group of trees that is waiting to be told? Anyone can nominate tree/s to be considered for the Register, so why not tell us about the tree/s that are important to you?

The entire Register can be seen spatially online via the ACTMAPI website at [www.actmapi.act.gov.au](http://www.actmapi.act.gov.au).

This is a good way to explore the trees on the Register and discover why each tree or group of trees is exceptional. Through this mapping website, you can access all the information about a tree by zooming in on the tree and clicking on the green dot.

The Register and the forms to nominate a tree are available from the ACT Tree Register page of the TAMS website at [www.tams.act.gov.au](http://www.tams.act.gov.au), or by contacting Canberra Connect on 13 22 81.

If you have any questions regarding the Register or would like to help us promote and protect the best trees in Canberra, please contact Samantha Ning through Canberra Connect or email samantha.ning@act.gov.au.
ANU Cedar of Lebanon turns one hundred

BY LINDA MULDOON

Our forthcoming book about all the Arboretum tree species has caused us to look for many mature specimens to photograph and I discovered this tree at the entry to Old Canberra House on the ANU campus. It was conveniently labelled Cedrus libani, complete with the fact that it was planted on 3 April 1914, under the direction of Charles Weston. One hundred years later, it is a healthy, handsome tree and looks to have many more years of growth ahead.

I could not have known that over the years there had been some controversy about this tree and that some experts have believed it to be a Cedrus deodara. But the jury is still out and the ANU is retaining the Cedrus libani plaque until someone can prove that it is not what it claims to be. The historical records show that it was planted as a Cedrus libani and there is much confusion about three species that are related: Cedrus libani, Cedrus deodara, and Cedrus atlantica. Many of the young Arboretum trees in Forest 39 are descended from two Cedrus libani trees in the grounds of St Saviour’s Cathedral in Goulburn, so I visited Goulburn to photograph those trees. One is multi-trunked and broad with male and female cones much larger than those on the other tree, which is much taller with a single trunk. It will certainly be interesting to see how the trees in Forest 39 develop. So far, they have the same short foliage as the Goulburn trees, but are not showing the same bluish colour (Cedars of Lebanon leaves can be dark green or bluish green). The needle-like leaves are usually short on cultivated trees but according to Farjon, a world expert on conifers, there is considerable variation in leaf length in the wild.

Believing that any tree that reaches one hundred years of age is worth celebrating and with the support of the ANU’s Associate Professor Cris Brack, the Friends held a 100th birthday party for this tree on 3 April 2014—and sang ‘Happy Birthday’ to a tree! The cake was then cut and sampled by the assembled Friends.

From left to right: Professor Stephen Dovers, Director of the Fenner School of Environment and Society; Dr Daniel Connell from the Crawford School; Ms Jocelyn Plovits, Chair of the Friends; and Associate Professor Cris Brack of the Fenner School and Arboretum Board.
**Himalayan Cedars Tree Mapping and Counting Project**

**BY JIM PAYNE AND ROGER HNATIUK**

**Background.** The new forest plantings at the Arboretum have maps showing the locations of each tree. These maps are a critical component of the sampling program used to measure the growth of trees. The 'old' forests of the Arboretum do not have any extant maps and this makes developing the statistical tree sampling scheme difficult. Also, these forests cannot be mapped using aerial photography because their canopies are not regular enough in shape to allow the position of the trunks to be recorded.

To remedy this shortcoming of the 'old' forests, new maps are being prepared. The first of these was completed by Rob Ey and his family in early 2013. Now the Himalayan cedar mapping has been completed.

The status of the mapping of the old forests is:
- Forest 1: *Quercus suber* (cork oak) complete
- Forest 2: Local eucalypts (mostly) to be mapped
- Forest 11: *Cedrus deodara* (Himalayan cedar) complete
- Forest 76: *Pinus radiata* var. *radiata* (radiata pine, planted in 2004) to be mapped

**Aim.** The aim of the project was to map and count the trees of the Himalayan cedar forest and to record certain unusual details about each tree.

The Himalayan cedars occur in two adjacent areas, separated by Cork Oak Road:
- main forest—west of Cork Oak Road (it is the large one containing the BBQ area and toilet); and
- subsidiary forest—east of Cork Oak Road, containing the tree that carries Christmas lights (seen from Tuggeranong Parkway in December 2012).

**Method.** The work involved walking each forest row, recording the position of each:
- living tree and how many trunks the tree had to about 2 m above ground level;
- dead tree;
- gap in the grid where a tree could have been in the past; and
- significant footpath and vehicular track.

Gaps were readily determined because the forest was clearly planted in a regular rectangular grid (*Figure 1*). Thus a missing tree was obvious, based on the spacing of the surrounding trees.

To ensure the mappers knew which row they were up to, the ends of current and preceding rows were marked. Certain strategic markers were left in place until the end of the project to assist with back-tracking when an error was found (which happened from time to time). The mappers are pleased to say that they didn’t get lost (well, not too often!). When the public look at the forest everything looks to be in nice straight rows but the mappers can guarantee that there are parts of the forest that can be most frustrating.

**Table 1. Elements recorded while mapping**

<table>
<thead>
<tr>
<th>Legend</th>
<th>Code</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living tree—1 trunk</td>
<td>L1</td>
<td>1806</td>
</tr>
<tr>
<td>Living tree—2 trunks</td>
<td>L2</td>
<td>367</td>
</tr>
<tr>
<td>Living tree—3 trunks</td>
<td>L3</td>
<td>172</td>
</tr>
<tr>
<td>Living tree—4 trunks</td>
<td>L4</td>
<td>51</td>
</tr>
<tr>
<td>Living tree—5 trunks</td>
<td>L5</td>
<td>16</td>
</tr>
<tr>
<td>Living tree—6 trunks</td>
<td>L6</td>
<td>4</td>
</tr>
<tr>
<td>Living tree—7 trunks</td>
<td>L7</td>
<td>2</td>
</tr>
<tr>
<td>Dead tree</td>
<td>D</td>
<td>57</td>
</tr>
<tr>
<td>New tree in mapping area</td>
<td>N</td>
<td>6</td>
</tr>
</tbody>
</table>

**Sub-total** 2481

New tree outside mapping area 70

**Total living trees** 2494

Gap in grid where a tree could have been 1176

Safety goggles were essential due to the low-hanging branches in the centre of the forest (*Figure 2*). These branches were dead, hard and sharp, with many at head height. It should be noted that trees have been pruned around the perimeter of the forest and in areas where the public would normally walk, but pruning of the whole forest is a large job-in-waiting.

*Figure 1.* Field mappers Tom Weir (left) and Jim Payne (right) in the main Himalayan cedar forest (Forest 11). Note that the cedars are planted in a regular rectangular grid.

*Figure 2.* Jim Payne kitted out with eye protection and clip board. Note the abundance of low dead branches.
We used an Excel spreadsheet as the base for mapping this forest. This worked well overall but had limitations where the forest had idiosyncrasies but all problems were overcome one way or another.

The project took four to five months from start to finish. About 54 hours of field time were recorded and an unknown amount of office time processing and reporting the results.

From the workers’ point of view, it was an interesting and satisfying project and we have wisely or stupidly signed up for mapping the remaining ‘old’ forests.

**Findings.** The results of the numbers of trees are shown in Table 2. The map master copies are in Excel spreadsheets. Simplified copies of these maps can be seen in Figures 3 and 4.

*Figure 3. Main Himalayan cedar forest. Black = live tree, red = dead tree, gold = ‘gap’, trails are in turquoise and facilities are in dark blue, ‘road’ = brown. Two red squares at right are alignment marks to subsidiary forest (Figure 4). North is to the top.*
The approximately 2500 living trees recorded in this forest compare with an average of 1000 trees in the Arboretum’s database of tree numbers in each forest. The results of this mapping project greatly improve the quality of information available to the Arboretum managers for use in their interpretation and maintenance of this forest.

If anyone wishes to see the detailed records that Figures 3 and 4 are based on, please contact Roger on: rjhnatiuk@yahoo.com.au

Table 2. Numbers of trees in categories used in mapping the Himalayan cedar forest in 2013

<table>
<thead>
<tr>
<th></th>
<th>Main forest</th>
<th>Subsidiary forest</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living trees</td>
<td>2424</td>
<td>86</td>
<td>2510</td>
</tr>
<tr>
<td>Dead trees</td>
<td>57</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>Gaps where trees may have been</td>
<td>1176</td>
<td>42</td>
<td>1218</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>3657</td>
<td>131</td>
<td>3788</td>
</tr>
</tbody>
</table>

The results are intended to be available through the Arboretum’s and the Friends’ websites in due course.

The original Himalayan cedar plantation was possibly twice the size of the current one. About half of the area was burnt during the 2003 bushfires and many trees that survived the fires but were scorched have succumbed since. The remaining trees are mostly healthy, though a few are still marginal with respect to their long-term viability.

With maps produced, it will be possible to set up a sampling scheme for measuring growth, on a similar basis to that used in the new forests.

Acknowledgments. We would like to acknowledge the help of Tom Weir, a member of the Tree Monitoring Group of the Friends for all the help he provided with the mapping. Thanks also to the Friends of the National Arboretum Canberra for supporting this project.

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Figure 4. Subsidiary forest. Black = live trees, gold = ‘gaps’, red = dead trees. The two red squares at left are alignment marks for the main forest (Figure 3). North is to the top.

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Have you paid your membership?

Thanks to everyone who has paid for membership—and to those who’ve paid for multiple years, a special thank you. If you are a volunteer or a guide, you need to be a financial member for insurance purposes.

Your Membership Card entitles you to a 10% discount at the Arboretum shop and Sprout Cafe, and also to purchase an annual parking voucher at the discounted price of $25 through our website: www.arboretumcanberra.org.au

Soon we will be publishing *The Arboretum Book: forests of the National Arboretum Canberra* and this will put a strain on our finances in the short-term, though may well reap some profits in the long term, so your prompt payment of membership fees would be most welcome.

You can complete the form on the back of this newsletter and post it, together with your cheque, or go to: www.arboretumcanberra.org.au and ‘Become a Member’ and follow the prompts. You can make a secure payment on line and pay for 1 year, 3 years or 5 years of membership.

Membership fees and contact details are listed on page 14.
**Member's walk was full of surprises**

**BY TRISH QUAYLE**

I was especially thrilled to receive the Friends’ Activities Calendar 2014 and note that member’s walks are planned on the third Sunday of each month. However, when 16 February arrived, my enthusiasm waned as I drove through a huge rain storm on the way to the Arboretum. The rain eased at 9:30 am and much to my surprise, there were three other intrepid walkers waiting at the Village Centre.

Our guide Janet arrived and discovered that we were also Arboretum guides and her plan to take us on an extended Event Terrace walk/talk and to STEP Forest 20, depending on the weather, met with groans of ‘Oh, we’ve done that a thousand times!’ Fortunately, with remarkable grace and good humour, Janet agreed that we would head off together and make up our own walk.

We headed for the Buchan blue wattles (*Acacia caerulescens*) in Forest 13, to examine their condition following extremely hot conditions, and then crossed the STEP forest, sharing our knowledge as we strolled along. We progressed past the works depot, worked out the five forests representing five continents, headed through Forest 28, the African huilboerboon (*Schotia brachypetala*), circled the new dam and then entered Forest 36, the European larch (*Larix decidua*).

Then we headed for Forest 46 nearby, and viewed the Cedros Island pines (*Pinus radiata* var. *binata*), followed by the beautiful stone pines (*Pinus pinea*) in Forest 56. These trees are already broadening in shape, heading towards attaining the quintessential umbrella-shaped canopies found along the Mediterranean coast. Janet explained the differences between the pines and later, we compared these with the Turkish pines (*Pinus brutia*) in Forest 61, the mature radiata pines (*Pinus radiata* var. *radiata*) and Aleppo pines (*Pinus halepensis*) in Forest 60 on Dairy Farmers Hill.

We began making our way uphill between the Japanese snowbells (*Styrax japonica*) in Forest 67, the Chilean cedars (*Austrocedrus chilensis*) in Forest 57 and the Silk floss trees (*Ceiba speciosa*) in Forest 58, but we stopped at the remarkable twisted trunk of one of the weeping snow gums (*Eucalyptus lacrimans*) in Forest 68.

At the top of Dairy Farmers Hill we talked about the geological features of the Arboretum and looked to see if we could spot the whale’s tail planting pattern in Forest 64 where two New Zealand species combine. Whales are significant in Maori traditions.

We discussed the logistics of leading walks for the public—setting a realistic pace, following the contours of the land (no steep slopes), vantage points to stop for a talk, as well as sharing information about the forests. Much to our surprise we found we knew a little about a lot! All agreed that the most important thing was to be out walking in our beloved Arboretum.

After a few hours out strolling amongst the forests, we discovered that this was a fantastic way of spending a Sunday morning!

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**THE TREE WITH A TWIST**

We ran a photo of this tree in Forest Talk, Newsletter 21, May 2013 (see photo at left taken 17/03/13). The photo at right was taken on 18/02/14 and the trunk had expanded to take up all the space within the loop. We await further developments—*Ed.*

**PHOTOS BY LINDA MULDOON**
These palms are located in Forest 26, on the slope in front of the Village Centre. When they are mature, their clear trunks will preserve views of the other forests and beyond.

**Overview.** This is a large, slow-growing palm tree that reaches up to 25 m in height with a spread of 6 m. Its lower trunk can reach 1.3 m in diameter (often thicker higher up) with a smooth grey surface showing a pattern of leaf scars. The deep-green leaves are pinnate, 3–5 m long, and are comprised of 60 cm-long leaflets. Leaves fall from the tree as soon as they die, leaving a clear trunk. Masses of purplish male and female flowers are produced in early summer. They are held in large brown bracts, hanging on long stalks at the neck of the tree. The 6 cm fig-shaped fruits are sweet, fleshy, and bright yellow when ripe in late summer/autumn. Each contains a single, round, smooth-shelled nut, about 4 cm in diameter, with an open-centred edible kernel, known as a cokernut or pygmy coconut.

**Native habitat.** This species is native to central Chile where it grows in woodlands on the foothills of the Andes, up to 1400 m elevation and mainly on the steep slopes of dry ravines.

**Conservation status.** *Jubaea chilensis* is listed as vulnerable. There are estimated to be about 120,000 palms growing in the wild. It is the only surviving palm within its genus and is now partially protected within Chile. Collecting the sap requires cutting down the tree and the number of trees that can be harvested for sap is now limited by law. Land-clearing for grazing and...
pressures from increasing human populations have reduced tree numbers in recent centuries.

**Uses.** After the tree is cut down, the crown is removed and the sap is drained from the top of the trunk over a period of several months, sometimes yielding over 300 litres. The sap is then fermented for wine or made into a sweet syrup known as palm honey or *miel de palma* which is used for cooking. The nuts can be harvested for food, or for extracting oil, and the leaves are used for making baskets. The tree is now grown successfully in several countries around the world for pot plants and impressive landscaping.

**Timelines.** Forest 26 was planted in 2012. Trees of this species can live several hundred years.

**Planting pattern.** This forest is planted in curved rows.

**Other common names.** Coquito palm and honey palm; Spanish names: *palma Chilena* and *coquito de Chile.*

**Origin of species name.** *Jubaea* is named after King Juba II of Numidia and Mauritania in North Africa (82 BC–23 AD); and *chilensis* refers to the species originating in Chile.

**FURTHER READING**
http://www.floridaqua.com/ref/J/juba_chilensis.cfm
http://www.junglemusic.net/Chilean_Wine_Palm_Tree/jubaea_chilensis_palm_tree.html (Jungle Music Palms & Cycads)
http://kew.org/plants-fungi/Jubaea-chilensis.htm (Royal Botanic Gardens, Kew)

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WE GET BY WITH A LITTLE HELP FROM OUR FRIENDS!

This was a Thursday morning working bee in Forest 89 (*Pseudopanax ferox*—toothed lancewood from New Zealand). These trees are brown and look quite dead until they are about 1.5 m high and then they turn dark green. It has been suggested that they developed this strategy to avoid being eaten by the NZ Moa. Although we have no Moas, the trees are sticking to their usual routine. Please note our very friendly maggie recruits—they are very helpful in removing grubs from the mulch!

*Jocelyn Plovits*

PHOTO BY MIKE WOOLEY
A RIGHT ROYAL TREE
On 24 April 2014, Their Royal Highnesses, the Duke and Duchess of Cambridge visited the Arboretum to plant an English oak (Quercus robur) just along from the Village Centre’s north deck, above the Central Valley. They were joined by Ms Katy Gallagher MLA, ACT Chief Minister, 50 members of the public who had been selected by ballot, school children and other invited guests. After the ceremonial tree planting, they moved into the Pod Playground where they mingled with the public and played with the children.

BIRD SURVEY
Many thanks to the Canberra Ornithologists Group (COG) who have invited eight participants from the Friends to help with a bird survey commencing at 7:00 am on Saturday 20 September 2014. COG has run this survey in collaboration with the Friends for a number of years now. Tony Lawson revealed in his very interesting address at the Friends Talk series on Monday 28 April, that 72 species have now been sighted at the Arboreum, including raptors, water birds, parrots and many more.

If you are interested and can commit to this time, please contact friends@arboretumcanberra.org.au

MEMBERSHIP OF THE AFFM
We are now members of the Australian Federation of Friends of Museums and its ACT sub-group, Friends Around the Lake (FAtL). Through this membership, we will be able to offer members of the Friends additional opportunities to attend events at the icons around Lake Burley Griffin. This will include specific FAtL events at the Australian War Memorial, Australian National Gallery, Australian National Museum, Canberra Museum and Gallery, the National Library of Australia and so on. You will get notifications of events as they become available.

Also, the Arboretum will be featured in a talk by Carolyn Forster (ACT President of AFFM) at the next international conference. Friends are eligible to attend these AFFM conferences and the next Australian one will be held in Melbourne in October. Please let Jocelyn know if you are interested in going on friends@arboretumcanberra.org.au

PLANTING KANGAROO GRASS IN FOREST 100
On Sunday 27 April, Max Bourke and the small Friends Forest maintenance team planted 200 kangaroo grass seedlings (inside guards to prevent rats and kangaroos from eating them). We plan on collecting seed from these clumps for a future seeding program. Soon there will be a seat on the concrete pad in this forest, so if you venture that far south in the Arboretum, you will be able to sit and admire the view and watch the Friends Forest of drooping sheoaks (Allocasuarina verticilla) and the kangaroo grass growing steadily.

STEP’S OUTDOOR CLASSROOM IS TAKING SHAPE
There is now great progress being made in Forest 20 (Southern Tablelands Ecosystems Park). The heavy equipment moved in on 3 March and since then there has been much shaping, cutting new paths and positioning rocks for the new outdoor classroom.
FIRST FRUITS IN THE CANARY MADRONES
These young trees are planted in Forest 50, on the eastern side of Dairy Farmers Hill. They were planted in 2010 and have been flowering since 2011, but now some of them have also been producing these showy orange fruits.

LONG AND SHORT OF IT
In the past few months the tree measuring sub-group has measured the mature pines on the top of Dairy Farmers Hill and found that the tallest was about 27 m tall. But here in Forest 89 they met the other extreme—a tiny, toothed lancewood (*Pseudopanax ferox*), just a few centimetres tall.

ANOTHER FUNGI
These dainty white parasols sprang up overnight at the southern end of the Arboretum, after heavy rain in early April. They were identified as the introduced *Macrolepiota dolichaula*. Like many other fungi we see, they are beautiful but toxic!

TRAVELLING THE BICENTENNIAL NATIONAL TRAIL
This family (a mother, two sons and four horses) from rural Victoria were travelling through the Arboretum on 6 April. They had left Healesville, Victoria, in December and were heading for Cooktown in northern Queensland. The trail covers a total distance of 5330 km and mum Carol is walking and leading one of the two pack horses. Days off usually happen every three days or when the grass is good for the horses. Canberra is the only city the trail travels through, so it was essential for the family to replenish their stocks here. They had caught buses everywhere and visited the War Memorial and the National Museum. Travelling on escalators in shopping centres was a new experience for the two country boys.

BLOWING BIRTHDAY PARTY BUBBLES
In case you thought the Friends in the photo on page 5 were eating before the cake was cut, they were not. Jocelyn had brought along many vials of bubble-blowing liquid to the 3 April birthday party (for the tree at the ANU). Here the Friends are happily reviving their skills of yesteryear!
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 ........................................................................... Last name ...........................................................................................................

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

Address ........................................................................................................................................................................................................

........................................................................................................................................................................................................

Postcode .............................................

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

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

Please circle your relevant membership category/parking voucher request:

Single 1 year $35  3 years $95  5 years $155  Friends’ annual parking voucher $25
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

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.)

PLEASE NOTE THAT ALL RENEWALS ARE DUE IN DECEMBER

Details for direct deposit are: WESTPAC, Petrie Plaza, Canberra, ACT

Account—Friends of the National Arboretum Canberra Inc.

BSB No. 032719  Account No. 375379

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

PLEASE REMEMBER TO NOTIFY US ABOUT CHANGES TO YOUR CONTACT DETAILS