

NEWSLETTER Issue 52 September 2021

Welcome to Spring! And Welcome to new Friends!

While it's a quiet transition for all of us into the new season, the trees at the Arboretum have been feasting on the bountiful rain and are now celebrating the warmer weather! Over winter, a wonderful Warm Trees celebration took place along with several ceremonial tree plantings and an inaugural Friends Fund Raising dinner in early June.



The Pod Playground was decorated gleefully as part of the Warm Trees Celebration. The Himalayan Cedars and Camden White Gums, as well as Dairy Farmers Hill and the entrance to the Village Centre were also decorated. We hope you were able to visit!

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Hyperaccumulator Plants – A new form of mining?

Article prepared by Helen Hemphill

Hyperaccumulators are rare plants that accumulate metal and metalloid elements to extraordinary high concentrations in their living biomass. This may be hundreds or thousands of times greater than is normal for most plants.

While an excess of metals such as zinc, cadmium or nickel is toxic for most plants, around 700 plants species can accumulate high amounts of these metals, particularly those growing on ultramafic rich soils. Ultramafic soils contain high concentrations of these natural minerals and include manganese and cobalt.

Seventy per cent of 700 known hyperaccumulator species contain high quantities of nickel. They are found in temperate and tropical areas with their greatest numbers in New Caledonia, Cuba, and the Mediterranean Region.

One of the species from Malaysia, *Phyllanthus balgooyi*, can accumulate 16.9% nickel in the phloem sap. New Caledonia has hyperaccumulators. For example, *Pycnandra acuminata* contains 25% nickel in its latex, which is coloured blue green. This was first discovered 40 years ago.

Recognition of this uptake of metals is important for the potential utilisation of phytomining and agromining. An example is nickel agromining which is a special type of cultivation of hyperaccumulator plants followed by harvesting and incineration of the biomass to produce a high-grade bio-ore from which nickel metal or pure salts can be recovered.

There is a demonstration 'metal farm' in Malaysia which has been running for five years, with yields of 200 to 300 kilograms of nickel per hectare. While commercialisation is still a long way off this shows that using plants which accumulate metals is a possible way of sourcing nickel in a more sustainable way.

Nyssa sylvatica, Black Tupelo, in Forest 43 in the National Arboretum is another hyperaccumulator species and has shown it can accumulate considerable amounts of cobalt in the leaves. It offers promise for phytoextraction of cobalt and cobalt 60 from contaminated or mineralized soils.

Locally, Dr Antony van der Ent from the University of Queensland is currently doing tests on the Macadamia tree on its ability to absorb manganese. The leaves and sap are rich in Manganese, not the nut.

Why these plants absorb such large amounts of metal is still unknown, but it could be that this ability provides some protection against insects and grazing animals.

Other plants, or course, accumulate small amounts of minerals in their leaves and bark. For example, some Eucalypt trees draw up gold particles from deep in the soil via water absorbed by their root system. This gold, though probably toxic to the plant, is later shed in the leaves and bark. Its presence can be useful in locating shallow sources of gold. While hyperaccumulator plants may offer more sustainable pathways to metal extraction, many of them are unfortunately threatened by the unsustainable clearance of forests in their natural habitats.

Further information can be found at:

The discovery of nickel hyperaccumulation in the New Caledonian tree Pycnandra acuminata 40 years on: an introduction to a Virtual Issue - Jaffré - 2018 - New Phytologist -Wiley Online Library

Chair's Report

Dear Friends ... the continuing challenges of the pandemic!

Friends are being compliant with the Arboretum and ACT Government's Covid-19 Requirements. Consequently all our activities are 'on hold' till lockdown has ended. However, there is good news! Warm Trees 2021 was a great success with our diplomatic partner, the High Commission of the Republic of Singapore.



The Convenor for Warm Trees over the past 7 years, Jocelyn Plovits, well known to many, dare I say most of you, was responsible for this ongoing success. We all recognise Jocelyn's huge commitment to this iconic project from concept design and engagement of volunteers to the display and finally the dispersal of the freshly washed scarves to charities. Recently Jocelyn handed over the reins as Warm Trees Convenor to Jan Morgan. We thank Jocelyn for her dedication

and passion for the Arboretum and particularly for the many years of Warm Trees. I have sent a letter of appreciation to Jocelyn expressing these sentiments.



The Singapore High Commissioner, Mr Kwok Fook Seng, attended the opening of Warm Trees with his wife, Mrs Pearl Kwok. They were thrilled to receive the amazing Merlion and orchid panels, created by Jocelyn and Friends.

Warm Trees 2022 planning is underway already and a decision has been made that since Warm Trees is generally launched in early July which coincides with NAIDOC Week the theme will be Aboriginal Warm Trees. Jan will keep you posted on future plans. Watch this space! In the meantime the knitting can begin in all those wonderful colours of the Aboriginal and Torres Strait Islander flags- red, black, yellow, white, blue, black and green.

Those of you who attended the most recent Seasonal Talk enjoyed the presentation by local bird lover and expert, Tony Lawson. He mentioned that as the Arboretum sits alongside the Molonglo Valley, large numbers of different birds of prey are uniquely located close to our city centre, perhaps a dozen species of diurnal and nocturnal birds of prey which are being seen for now. As the new suburbs are developed many of these species will disappear.

As to the future, Tony expressed his optimism small birds will continue to seek nesting opportunities in the growing forests. Suburbia to the north and west of the Arboretum is bringing exotic bird life. Tony concluded his talk with a list of resources - books and apps to consider:

Local Field Guide Taylor & Day, Field Guide to the Birds of the ACT (New Edition December 2013 Picture Books on local birds COG, Birds of Canberra Gardens, (Second Edition, 2009) Best National Guide Pizzey & Knight, The Field Guide to the Birds of Australia (Ninth Edition, 2012) Bird apps Pizzey & Knight or Morcombe – everything in the Field Guide plus sound, photos ...

More good news....our recent grant request to the ACT Government in support of our submission for funding the Forest Gazebo was successful for \$20,000. We are very much looking forward to seeing the first finished Friends showcase Gazebo on Dairy Farmers Hill, once lockdown delays are behind us.

Suggestions for your Christmas shopping list the new Arboretum Book and the Friends Calendar will be available from either The Curatoreum or on the Friends website. See you at the Arboretum in the fullness of time. Meanwhile keep safe and enjoy your home gardens in the warming afternoon sunshine.

Trish Trish Keller OAM Chair Friends of the National Arboretum

Chat with Cally

By Cally Earnshaw, Community Engagement officer

National Bonsai and Penjing Collection Australia

It's not often you can send your bonsai collection around the world, but thanks to the latest stamp series from Australia Post, the National Bonsai and Penjing Collection of Australia (the NBPCA) at the National Arboretum Canberra, you can do just that!

Bonsai are the feature of a new stamp series released by Australia Post in July that highlight both the adaptability and fragility of nature. The Australian native species featured on the stamps are a bottlebrush, fig, and paperbark, each crafted in a different style. The NBPCA is extremely proud to be involved in this stamp issue that highlights the beauty and art of Australian native plants as bonsai. Leigh Taafe, Curator of the NBPCA worked with Australia Post in the tree selection from the Collection and he features on the Medallion cover.

You can order your collectable stamps and medallions at <u>www.auspost.com.au/stamps</u>. This material has been reproduced with permission of the Australian Postal Corporation. © Copyright Australian Postal Corporation.



Governor-General of Australia Ceremonial Tree Planting

A Grevillea robusta (silky oak) was planted by the Governor General His Excellency General the Honourable David Hurley AC DSC (Retd), Governor-General of the Commonwealth of Australia and Her Excellency Mrs Linda Hurley in the Central Valley at the National Arboretum on 1 June 2021.





Ngunnawal elder William Tompkins provided the Welcome to Country for the dignitaries, including Mr Andrew Barr MLA Chief Minister, and for Friends and guests.

The Governor General spoke of his love of trees and reflected on the vision of those behind the National Arboretum and on what the already spectacular site will be like in decades to come.

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Governor-General of New Zealand Ceremonial Tree Planting

Her Excellency The Rt Hon Dame Patsy Reddy GNZM, QSO, Governor-General of New Zealand and His Excellency Sir David Gascoigne KNZM, CBE were warmly Welcomed to Country by Ngunnawal elder, Aunty Violet Sheridan. The sounds of the didgeridoo were enjoyed by all, played by Yidinji Elder Greg Joseph.

Due to inclement weather, the Governor General symbolically planted a Podocarpus totara inside the Village Centre and spoke of the tree's significance to the Maori people.



Mr Brendan Smyth, Commissioner for International Engagement spoke of the bond, connection and friendship between New Zealand and Australia that was reaffirmed with this tree planting.



New tourism tours

The National Arboretum Canberra has softly launched three new Indigenous Australian tourism tours. Ngala tours presented by Indigenous Australian staff include the 'Walk on Country Tour' every Tuesday in STEP forest, 'Art on Country workshop' running each month on the weekend, and 'Discover Art and Country Tour' every Thursday. For more event details please visit <u>https://www.nationalarboretum.act.gov.au/visit/whats-on</u>

Local Roads and Community Infrastructure

The sealing design phase of internal roads at the National Arboretum is now complete and the construction stage has gone out to tender. Onsite works will commence in September 2021, with clear public communication regarding which internal roads are not accessible during construction for both public and staff. Across the Arboretum site new boom gates have been installed at major access points. These gates, which are solar operated, can be operated through an app to provide greater site access. The walking paths through the Himalayan Cedar Forest will be upgraded with a new asphalt seal to improve accessibility to the very popular bbq area.

Forest 24 – overflow carpark

Additional irrigation has been installed in Forest 24, known as the overflow carpark and 500 *Lagerstroemia Fauriei* will be planted shortly to complete this forest.

More National Bonsai & Penjing News:

Winter Bonsai Pruning

Staff and volunteers are busy pruning the NBPCA deciduous trees. Winter is the best time in the Collection to see the structure of the deciduous trees making it easy to make decisions on removal of unnecessary branching. The Assistant Curator, Sam Thompson, is working on an English elm from the permanent collection. This tree dates back to 1987 and was originally styled by Melbourne bonsai artist Max Lehey.

New Queensland Loan Trees

The NBPCA has recently taken delivery of new loan bonsai from Queensland. The new trees will be staying with us for around two years. Here you can see a stunning bougainvillea that will again be in flower as shown in the picture in the warmer months.



Data & GIS: Soil Nutrition Mapping

The horticulture team is creating a nutrition schedule plan that will utilise soil survey data that was conducted by soil scientist, Peter Fogarty from the Soil and Land Conservation Consultancy. The coloured map reflects the different soil categories mapped at the Arboretum and will help determine soil nutrient requirements. The hard copy soil map will be This tree, on loan from Tony Bebb, dates back to 1920. It was a garden tree for many years before being transformed into this stunning bonsai. The other image shows a beautiful Queensland small leaf fig. Its wonderful roots and strong trunk base is accentuated by the delicate and intricate branching. This 52 years old tree is on loan from Rod Whiting.



digitised for use in ArcGIS Collector so that soil nutrient applications can be updated on a monthly basis.

Horticulture:

Ten Year Plan of Management

The horticulture team, led by the Horticultural Manager, have been preparing a 10 year Plan of Management for the living collection. This includes detailed Forest Management Guidelines for each forest, as well as dataset visualisations outlining scheduled maintenance practices required for every forest for the next 10 years. This will have a significantly positive impact on planning and budgeting for the living collection for future years.

Field Operations

The team have been busily undertaking winter maintenance practices, including formative pruning and garden renovations. They have also been working closely with the Friends working bee volunteers on a whole of forest maintenance approach, including removing epicormic growth, mulch detail, irrigation testing and removing noxious weeds.

The Curatoreum News

Hey Friends!

The shops might be closed for a little while, but we are still here working behind the scenes. For the moment we are able to offer a 'Click and Collect' service at both stores, as well as free delivery in Canberra for orders over \$50. We have some exciting news about our revamped Loyalty Program as well as a few of our picks for Spring reading. We hope that you enjoy, Mel and The Curatoreum team. xx

The Curatoreum Loyalty Program vs Member Discount

We understand that as a Friend of The Arboretum you currently receive a 10% discount for immediate purchases. Unfortunately, with the current contactless retail requirements, all purchases need to be finalised online, and because we can't verify memberships on our website, we can't apply your discount. Therefore, we are encouraging all members to sign up for our regular loyalty program, so that you can continue to receive a discount. Once we are able to see each other again in-store we can revert back to the member discount if you prefer.

How it Works and How to sign up

When you make your first purchase online you will receive 10% of your purchase back as a credit, to be redeemed against future orders. Use your credit each time you make a purchase or save them up for a rainy day - the choice is yours. The loyalty credits apply to all in-store and online purchases.

If you already receive our direct emails, email us at arboretum@thecuratoreum.com so



NEW NATURALISM Designing and Planting a Resilient, Ecologically Vibrant Home Garden



that we can enable your account for the loyalty program. If you don't receive our emails, just sign up as a new customer on our website <u>www.thecuratoreum.com</u> and your account will be linked automatically.

The Curatoreum Spring Picks

New Naturalism - Designing and Planting a Resilient, Ecologically Vibrant Home Garden, by Kelly D. Norris - \$49.99 In New Naturalism, horticulturist Kelly D. Norris shows readers how to design and

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plant eco-friendly, naturalistic home gardens that are resilient and sustainable, distilling complex design principles down for the average homeowner.

https://thecuratoreum.circlesoft.net/p/gardening-books-new-naturalism-designing-and-planting-a-resilient-ecologically-vibrant-home-garden-4c833701-29e4-4b27-9640f4e8fe680a06?barcode=9780760368190&selected_category=93239



Gardening in Summer-Dry Climates: Plants for a Lush, Water-Conscious Landscapes, by Nora Harlow - \$38.99

Dry summers? Wet winters? This is your must-have guide. Gardening in an area defined by arid summers and soggy winters can be challenging. But gardens can thrive in such conditions, and this definitive handbook shares the plants and practices that will help you succeed. Landscape architect Nora Harlow and award-winning photographer Saxon Holt explain how plants adapt to the climate and how topography and climate relate. A comprehensive plant directory provides details on each plant's needs, and stunning photography shows how smart design can help address seasonal issues. It's everything you need to create a flourishing summerdry garden.

https://thecuratoreum.circlesoft.net/p/gardening-books-gardening-in-summer-dryclimates-plants-for-a-lush-water-consciouslandscapes?barcode=9781604699128&selected_category=93239

Regrown: How to Grow Fruit, Herbs and Vegetables

from Kitchen Scraps, by Paul Anderton & Robin Daly - \$32.99

Regrown is a beginner's guide to growing fruit and vegetables from kitchen scraps. With a focus on repurposing produce found in any supermarket, it shows how to regenerate, propagate and give new life to cuttings otherwise bound for the waste bin. Ranging from fruits and herbs that will sprout in a matter of days, to vegetables that will delight in later seasons, this easy-to-follow book includes everything from carrot tops and mushroom stalks to ginger, avocado and even pineapple. https://thecuratoreum.circlesoft.net/p/gardeningbooks-regrown-how-to-grow-fruit-herbs-andvegetables-from-kitchen-scraps-240d77aa-e346-4fd6-b535-



ecf6fc47429b?barcode=9781784884031&selected_category=93239



Japanese Style Companion Planting - Organic Gardening Techniques for Optimal Growth and Flavor, by Toshio Kijima - \$27.99

Japanese Style Companion Planting brings the techniques of a master farmer in Japan to home gardeners all over the world, with over 175 easy-to-follow colour illustrations and detailed texts. Japanese gardeners typically work with small plots and are experts at making the most efficient use of available garden space. They have long understood that when compatible vegetables and fruits are grown together, the result is increased yields, healthier plants, fewer pest problems and better taste. Vegetables from small gardens are the mainstay of Japan's famously healthy cuisine and movement towards farm-to-table dining tradition.

https://thecuratoreum.circlesoft.net/p/gardening-books-japanese-style-companionplanting-organic-gardening-techniques-for-optimal-growth-and-flavor-ba378591-7317-4e99-8384-6ab2feobo6b4?barcode=9784805315491&search_key=companion+planting

Discovery Kitchen Garden & Harvest Group Update Article and photos by Ange McNeilly



Yes, it had to happen! The ACT has entered into a 5week lockdown due to escalating numbers of positive Delta variant COVID-19 cases. This will no doubt have a disruptive effect on businesses, government, schools etc. However, it is an opportunity for all of us to slow down, stay at home and do some of the chores that usually get put off (you know the ones I mean) when the weather is so good that we would rather be outdoors!

The Harvest Group would like to welcome two new members, Danice Duffield and Maddie Pichaud. It is anticipated that Danice and Maddie will derive much enjoyment in undertaking the many and varied activities of the Harvest Group. Welcome to you both!

Unfortunately, the Harvest Group Market Stall that was scheduled for 21 August 2021 has had to be cancelled and will be rescheduled to a date yet to be specified so please continue to check the Arboretum website for notification. There is much produce on hand for sale including fig products both sweet and savoury, chutneys, seeds, plant seedlings, topiaries and decoy butterflies to deter those pesky cabbage white butterflies.



The plants in the Discovery Kitchen Garden are starting to respond to the warming temperatures. Sweet peas and snow peas are beginning their ascent up the posts. The blue borage flowers are attracting bees as are the vellow broccoli flowers left especially for these busy pollinating creatures.

Ornamental kales are spectacular! Pansies have been flowering since autumn when they were planted and this year, both Flanders Red and Ladybird poppies have been planted to bloom in time for WW1 Rememberance Day.

Some plants have not done well this winter. Tuscan Kale is stunted compared to previous



Colourful broad beans yet to produce pods.

years and the usually floriferous marguerites are not so much. The frost has also been quite savage for nasturtiums which sometimes manage to survive for a number of years. Parsley, French sorrel, globe artichokes, fennel, and broad beans (left) are doing well.

However, the crimson and chocolate flowering broad beans have not set pods even though flowering for some months now.

Seeds from these spectacular plants are wanted for harvesting to sow in future years and also for sale if enough are produced.

There is little to do in the Discovery Kitchen Garden during the next few months other than the occasional fertilising, monitoring plant growth, removing damaged foliage and checking for any pests. Companion planting and natural pest control methods ensure that pests are few and plants are healthy. This winter has been wetter than usual and watering has not been an issue.

The Friends' Wollemi Pine Propagation Project continues to progress well. The 30 plants repotted into 200mm pots to grow on until March next year when they will be ready for sale, are making good growth.

Attention, if you wish to be one of the lucky people to own one these very special first trees from this project, grown right here in Canberra from seed obtained directly from currently growing Arboretum Wollemi Pine forest trees, a list is being compiled by the Harvest Group. It was heartening to discover that this pilot project sparked interest from another jurisdictional botanic garden wanting to also grow this iconic species for sale to the public. This is a positive step for the continuation of this rare and endangered species. Every garden can have a Wollemi Pine as they are suitable for growing in pots for many years and make a fabulous 'Australian' Christmas tree.

Due to unforseen circumstances at the Yarralumla Nursery, there have now been three managers for this project. As mentioned in the previous Friends' Newsletter, horticulturalist Tracey Bool has now taken over the project and works weekly, Wednesday to Friday. The latest visit to the Nursery was scheduled for 6 August 2021 and enabled Roger Hnatiuk and myself to meet with Tracey to inspect the emerging and

the more established Wollemi Pine seedlings. There is a considerable difference in size between the first and third germination batches.

A consequence of the recent change to the management of this project has been that the remaining seedlings from the first germination batch have been repotted into Super Tubes instead of 200mm anti-swirling pots, which was proposed by the previous manager. These plants will need close monitoring over the next six to eight months to ensure they do not become root-bound and have ample space to grow on before being repotted into their final 300mm pots as is currently being proposed. Many thanks to Roger Hnatuik for his ongoing support and willingness to provide monitoring for this long-term project. It has been, and continues to be, an exciting and informative experience.

Looking forward to spring, the tulips planted for Floriade are now sprouting through the soil and the tiny pansies are flowering to form a colourful groundcover beneath. It is hoped they will all



Roger and Tracey inspecting the sturdy Wollemi.

flower on time for Floriade as this is the first time that bulbs have been grown in pots for this purpose at the Arboretum. There will be a proliferation of flowers in the Discovery Garden this spring!



One final tip, do not throw away grapevine prunings as these make wonderful natural wreaths, either decorated or au naturelle. Recycle, repurpose and reuse! Happy gardening!

Wreaths from grapevine prunings

Friends' Fundraising Dinner – 8 June – What a Night!

Graced by the presence of the Governor-General His Excellence the Honourable David Hurley AC, DSC (Retd) and Her Excellency Mrs Linda Hurley, the Friends' first fund-raising dinner was a huge success.



Well over 100 guests enjoyed the fabulous hospitality from Ginger Catering – more than we hoped for!

The event was memorable for its many activities – the Harvest Group donated jars of produce as centrepieces for the table for guest purchase; Gail Neuss, Indigenous Education Officer donated one of her beautiful paintings for auction; Valentyna Crane, who has exhibited her artwork at the Arboretum, also donated one of her gorgeous paintings for auction. The Curatoreum provided a generous gift voucher, and there was even a signed Brumbies football for auction! Which was purchased and admired by the Governor General himself!

Our MC, Scott Saddler AM, was in his

element as he enticed guests to bid high for the individualised Ngala Bus tours on offer.

We are grateful to everyone who contributed to this wonderful evening. It was a hugely successful evening as seen by the warmth of conversation and the financial outcome totalling over \$15,000. Thank you, everyone!

Keeping in Step

As Spring approaches, I hope that the prospect of warmer days and the joys of renewal of growth in your gardens, at NAC and Forest 20 will sustain you through these difficult



times. While I am at present in Queensland (where I have experienced their lockdown), it is now such a disappointment that ACT is in the same predicament.

In preparation for Wattle Week much work has gone into walking track along our Acacia plantings with paper and mulch to suppress the weeds. Negotiation with the Arboretum has allowed us to have duckboards on the path where there is excessive water seepage but the lockdown has stalled that project temporarily.

Friends of the NAC

very interesting feature. We were pleased to rec

(see below) from the Southern Tablelands in front of the gathering node.

Adding to the diversity of Forest 20, there has been a significant planting of pea species

While at present it resembles a mini forest of plant guards, in time to come it will be a



We were pleased to receive a grant from Friends of Grasslands to enable us to update our grasses brochure and provide more signage for an area we have devoted to Southern Tablelands native grasses (see below) Also, we were very pleased to receive a donation from the ACT government which will allow us to proceed with putting all our plants onto an electronic database. We thank Chief Minister Barr very much for this generous support.

It was sad to hear of the death of Shirley Pipitone on 15 July. Condolences were sent to the family as her work for her Masters of Landscape Design and Architecture informed the development of STEP and she had a close association with STEP members over the years.

On a final note, we submitted our volunteer hours to Cally Earnshaw for the 2020-2021 financial year. Total hours were 2641, which is 330 eight-hour days, or 66 five-day working weeks. That a lot of weeding, planting, mulching, pruning, path constructing and digging. Thank you all for a stirling effort. Stay safe and well.

Regards Judy Smith President STEP



Planning your Escape from Lockdown-opportunities for Friends at the Arboretum

Update from Cally Earnshaw, Community Engagement Officer

While all Volunteer activities are on hold due to the lockdown, we thought it might be a good time to let you know about the many ways to get involved and support the Arboretum once the lockdown is over! If any of these opportunities interest you, please get in touch with me by simply emailing <u>arboretumvolunteers@act.gov.au</u> with your details and what activities interest you. To sign up as a new Volunteer I will guide you through a site induction and help you complete additional governance paperwork telling us essential information about yourself. I will also set you up as a volunteer in our volunteering software so that you can sign up for preferred shifts and log your volunteer hours.

National Bonsai and Penjing Collection of Australia

While bonsai knowledge is welcome it is definitely not essential! Training and information is available to all Bonsai Volunteers. Our Bonsai Volunteers support the collection with public interpretation and generally supporting the living collection seven days a week, especially during weekends and public holidays. Bonsai volunteers are supervised by the Collection's Curator Leigh Taafe and Assistant Curator Sam Thompson during business hours. Regular Volunteer shifts include: 9am-12.30pm, 11am-2pm. 12.30-4pm, 7 days per week

General Arboretum guiding

Volunteers who enjoy engaging with the public deliver free introductory visitor tours, Ngala bus tours and Forest Walks. They also provide a concierge role that involves greeting Arboretum visitors and providing orientation information and recommendations of what to see and do during their visit.

Regular Volunteer shifts include:

Free introductory walks: 10am-1pm daily Concierge: 1pm-4pm daily Ngala bus guiding: 1.15pm-2.30pm Wed-Sun including public holidays Forest Walks: 11am Monday and Sunday, 2pm Saturday

Ngala bus driving

New drivers are always welcome to help deliver the Ngala discovery tour. There are some additional governance requirements to drive this 12 seater bus which includes an annual medical check and applying for a public bus drivers' licence. The driver is always paired up with a general Arboretum guide to provide the bus commentary. For more information about public bus licences please see here or contact me I will help you through the induction! https://www.accesscanberra.act.gov.au/s/article/public-vehicle-driver-licensing-tab-application-requirements

Volunteer shifts include: Ngala bus driving : 1.15pm -2.30pm Wed-Sun & Monday public holidays

Mapping projects

There are many database projects that require the help of volunteers, some of these tasks are from a desk, however most duties require mapping Arboretum assets/information while on the site. Some of these database mapping projects include: forest seat locations across the site, collecting forest data sets, documenting weed management and plant identification etc. Please rest assured all training is provided and simple to follow on the assumption you're reasonably comfortable using a computer/tablet, there are also some options for working off hardcopy maps. Regular Volunteer shifts vary, depending on the project and season. We are also looking for help with content writing and photo cataloguing for Arboretum Explorer. This could involve reviewing other sites such as Plants of the World Online and other resources that openly share information with proper citation credits as well as writing original stories. If there are any botanical artists out there that would like to have their work featured in Arboretum Explorer, please let us know!

Frogwatch

Spend an evening wetlands at the Arboretum learning to listen and identify frog calls under the guidance of Dr Roger Hnatiuk.

Regular Volunteer Shifts:

Evening surveys (after dark, within about 2 hours after sunset) 7 times throughout the year, ranging from 6pm start times in winter through to later 9pm start times in summer.

Wollemi Seed Counting

During summer and autumn, the Arboretum periodically has volunteer opportunities for counting Wollemi pine tree seeds. The first stage is identifying cones to be collected and placing mesh bags over the cone to collect the seed. The second stage is sorting the collected seed into viable and non-viable seeds so that the viable seed can be sent for storage at The Australian Botanic Garden at Mount Annan. This volunteer work best suits those who like careful, methodical, detailed tasks.

Harvest Group

The Harvest Group pick, preserve and sell produce grown in the Arboretum's forests and Discovery Kitchen Garden. Their activities are seasonal, with the main fig harvest around Feb/March each year and cooks transforming the produce into delicious relishes, chutneys and jams. The Harvest Group also hold market stalls selling produce, plants propagated by volunteers along with dried seeds and herbs collected from the garden. The Harvest Group will provide training on how to safely preserve the produce and can provide recipes or cooks can use their own.

Discovery Kitchen Garden

The Discovery Kitchen Garden is maintained by Harvest Group volunteers who choose to be rostered to plant, water and weed the garden and ensure it is productive and looks good all year round. They harvest garden produce and process it for sale as well as save seeds and propagate seedlings. Training is provided to ensure tasks are carried out safely.

STEP working bees (Thursday mornings 8am-11am)

At Forest 20 each week, Southern Tablelands Ecosystems Park (STEP) have an allwelcome working bee. Maintaining the regional botanic garden includes planting, pruning, mulching and propagating. STEP offers opportunities for learning about native plants and animals, for visitor outreach and for social interaction.

Forest Working Bees – Tuesdays and Thursdays (currently at capacity)

Forest Working Bees follow an 'all forest approach' and Volunteers support the Arboretum's horticultural services team in mulching, pruning and caring for the 94 forests of the Arboretum. Please email us if you would like to place your name on a waiting list.

Events and program support

The Arboretum has many educational groups that visit the site for activities including orienteering, kite making and stories in the forests. If you enjoy interacting with children to help them get the best out of their visit to the Arboretum, and supporting Arboretum staff to ensure the smooth delivery of booked programs, please let us know.

A New Opportunity to Volunteer on a Friends Project!

Help record the Arboretum's history. The Friends are planning to embark on a project that will capture the 'told' and 'untold' history of the Arboretum. It is envisaged the history will be compiled through interviews with the players in all sectors who were involved in the early planning and decision-making that led to the opening of the NAC in February 2013. The Friends' Council, would oversee the project. Email: contact@arboretumcanberra.org.au If you would like to discuss being involved in this

important historical project.

Thank you to all our Sponsors and Contributors:

If you have ideas for articles, or items that might be of interest to the Friends such as stories or photos from the Arboretum or further afield, please contact me Nicole Pietrucha on: <u>pietruchanac1@gmail.com</u> Many thanks to the people who have contributed articles and photos for this and previous issues of the Newsletter, and given generously of your time to write, read and proofread. I could not do it without your help.



How to join the Friends

Visit arboretumcanberra.org.au to join online or to find out more about the benefits of being a member

OR

Email your details to: contact@arboretumcanberra.org.au and pay by funds transfer or cheque

OR

Complete the Application Form and mail it to:

The Secretary, Friends of the National Arboretum Canberra, PO Box 48, Campbell, ACT 2612, and pay by funds transfer or cheque.

Bank details for funds transfer: Westpac, Petrie Plaza, Canberra, ACT: BSB 032 719. Account: 375379 – please include surname in description.

Cheques payable to: Friends of the National Arboretum Canberra Inc.

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Membershin tune 1 year

membership type	i year	z years
Individual	\$45	\$80
Household	\$55	\$100
Concession*	\$25	\$40
Club/Association**	\$100	\$180
Business**	\$500	\$900

*Pensioners, health card holders & students **See website for details

Membership Application Form

Membership type:			
Title: Firsl	name:		
Last name:			
OR			
Club/Association/Bus	iness name:		
Address:			
	State:	P/code:	
Email address for new	sletter and up	dates:	
Phone:	Mobile:		
Number of parking pa	SS8S:		
Total amount payable	(include meml	bership/s and parking pass	
amounts): \$			
Signature:			
Date:			
Parking Pass	1 ye	ar	
Friends' Annual Parking Pass	\$35	per vehicle	
For a parking pass, ple number.	_	our vehicle's registration	

Note: An Individual Member is entitled to apply for one Parking Pass at the Friends' rate and a Household Member is entitled to apply for two Parking Passes at the Friends' rate.

Parking passes are issued for one year from the date of purchase.