FLRBG

February 2023

Newsletter of the Friends of Lismore Rainforest Botanic Gardens Inc.

President's Message

The New Year has brought lots of enthusiasm and plans for the coming year are in full swing. Since the August 2022 edition of the Newsletter, the Friends' focus has been on flood damage repairs and making our Gardens less vulnerable to heavy rainfall in the future. The Sensory Garden's raised bed and entrance will need to be restructured, pathways made more accessible and plantings replaced. This will be made possible with funds from much appreciated NSW Disaster Recovery grants. The plants, however, have continued to thrive in the rainforest and other specialty gardens, particularly Fern Gully, Wilson's Park Species Garden and the rainforest rooms. The crossing at the southern end of the main creek through the rainforest was washed away and we are seeking solutions to this problem.

Our Open Day in August to celebrate the 20th birthday of our first planting was enjoyable, in spite of the absence of a couple of key FLRBG personnel. Rose Hand Nursery was officially named and Honorary Life membership was bestowed on Jan de Nardi, Denis and Marie Matthews. Geoff Walker had previously missed the ceremony for his Life Membership so was included in this event, as well as receiving a booklet about his time at the Gardens.

Leaving a very large legacy at the Gardens, Jan de Nardi, nursery coordinator and long-time volunteer, member of the executive and committee member, died peacefully at home in December. Her wake was held in the Gardens. Plans are underway to plant two small trees… and grasses to honour Jan. Our thanks to Marie for putting together a book of Gardens' memories in time for Jan and her family to read and reminisce.

Bridge over Fern Gully – both spans in place as of this week's work morning! Now for decking and approaches. Thanks Will and all the construction team

The office has now been fitted out and is in use beside the Visitor's Centre. Thanks to Don and Dave for the painting and woodwork. It has been interesting re-reading some of the archival documents and planning notes which have come to light during the move. These have already been influencing the regeneration of the Sensory Garden.

The Friends' Education Team is hoping to begin guided walks for schools in the near future after a long break because of Covid and floods, and is now ready for bookings. Guided walks for the public have also resumed. Walks will take place on the third Saturday and on the last Sunday of the month, starting at 9.30 am.

At our AGM in November, the hard-working committee was re-elected. My sincere thanks to Vice President, Hazel Bridgett, who filled the role of President in my absence over the past six months. Leanne Davis resigned from the committee because of work commitments. We appreciated Leanne's efforts in coordinating Sunday workdays for many years.

Florence Treverrow is Secretary and Treasurer; Ros Little, the tireless Wednesday workday co-ordinator: Jenny Wilson, our new Nursery Co-ordinator and Peter Gould, Curator. Marie Matthews has made a welcome return to the committee.

Our meetings are held on the third Saturday of the month at 9.30 am in the Visitor's Centre. Everyone is welcome. If you would like to receive the agenda and minutes, contact Florence secretary@friendslrbg.com.au

We are very lucky to have such a wonderful group of Wednesday workers, who cheerfully get on with their work, enjoy a cuppa together, share produce and chat about plants, gardens and life in general. We welcome any new volunteers. There is so much to do. Just arrive at 8am on any Wednesday morning in Carpark 2, or call Ros on 0412 317744 to tell her you'd like to come along.

Tracey Whitby
President@friendslrbg.com.au

Plant Profile *Ailanthus triphysa*

Common Name White Bean

Family SIMAROUBACEAE *from Peter Gould*

Foliage of young tree

White Bean is an attractive, slender, tall tree growing in Dry Rainforest, Littoral Rainforest and Subtropical Rainforest from the Clarence River to North Queensland and Asia, as far north as India. Floyd lists one tree growing in the Murray Scrub that attained 35m in height and trunk 86cm in diameter.

Bark

The bark is brown or grey in colour and rough with a sandpaper like feel due to the presence of innumerable small pimples or warts.

Flowers

White Bean flowers from November to January producing creamy green, separate male and female flowers in slender panicles 5 to 7 cm long. Male flowers are about 6mm in diameter. The calyx is made up of five sepals. There are five minute petals 2mm long.

Leaves

Are compound, alternate to sub opposite with 15 to 60 narrow, ovate-lanceolate leaflets. Leaflets are 2.5 to 13 cm long, curved or sickle shaped and drawn out to a long blunt point. They are very unequal at the base, glossy above and somewhat downy below. The leaves give off an unpleasant smell when crushed.

Timber

The timber is white to yellow, soft and easily worked but decays rapidly in the weather. It is known by the trade name White Syris.

White Bean is known as Halmaddi in India, where its resin, is used in incense making and as a traditional medicine for the treatment of chronic ulcer, dysentery, dyspepsia and bronchitis.

Fruit

The fruit is a samara about 5 cm long with a single seed in the central part surrounded by a fawn coloured papery wing. Fruits commonly occur in clusters of 2 to 4.

References:

Floyd, A.G. 1990, Australian rainforests in New South Wales (vol2), Surrey Beatty & Sons, Chipping Norton, NSW.

Floyd, A.G. 2008, ***Rainforest trees of mainland eastern Australia,*** Terania Rainforest Publishing, Lismore, NSW.

Harden, G., McDonald, B. and Williams, J. 2006, ***Rainforest trees and shrubs. A field guide to their identification,*** Gwen Harden Publishing, Nambucca Heads, NSW.

https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:813557-1

https://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Ailanthus~triphysa

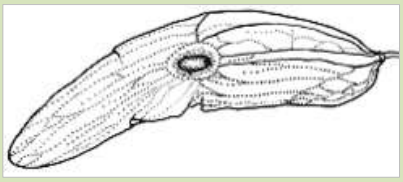
White Bean in the Garden?

While this graceful tree may reach 35m in the wild it is generally smaller in cultivation and so can be suitable in a large garden. A fast growing tree, it has a spreading leafy crown and can be useful as a shade or street tree particularly in low rainfall areas. With its ferny foliage it grows into a very handsome tree. It needs very well drained soil with protection from wind when young.

From Gardening with Angus
www.gardeningwithangus.com.au

Mature White Bean tree
Photo www.daleysfruit.com.au

A **samara** is a simple dry fruit, in which a flattened wing of fibrous, papery tissue develops from the ovary wall. The shape of a samara enables the wind to carry the seed farther away from the tree than regular seeds would go.



Such seeds are sometimes known as helicopter seeds.
Wikipedia
Image from Plantnet

Jan de Nardi

Jan de Nardi - long term active FLRBG member died in early December.

Jan came to the Gardens in 2002 . She was very welcome in the FLRBG group - not only was she another willing worker but she was a qualified botanist with experience working in Sydney Royal Botanic Gardens. She was a gift from the gods!!!

Jan was elected president in August 2008 and stayed in that role till 2013. – a period of great development at the Gardens.

She remained on the executive and her focus moved more to propagation and education. When Rose Hand resigned as Nursery Manager at the end of 2017 Jan took on the role. She was also an instructor of guides and 'go to' person for plant identification and much more. Her knowledge of plants and her ability to share that knowledge was immeasurable. She had a particular love of native grasses. She was always interested in and enthusiastic about whatever came across her desk and very supportive of all of us… always ready to chase up information and follow up on projects etc. She has been one of our greatest assets!!

Her last event at the Gardens was the receiving of FLRBG Life Membership on 21 August 2022.

Jan's wake at the Gardens, was a wonderful celebration of her life with her immediate and extended family as well as personal and Gardens' friends. She is missed by all of us.

The Legacy of Jan De Nardi

Most of my life I had not known Jan De Nardi , but in the 6 years prior to her death she became a mentor and a friend.

Neil Walker, Geoff Walker, Jenny Wilson and Jan in Potting Shed at Nursery

Jan sparked my interest in, and love and understanding of the wonderful and intricate world of rainforest plants and systems.

Jan led the volunteers of the Nursery with kindness, and humour, always ready to share her extensive knowledge, taking every opportunity to teach, and to answer questions. We will miss her in the Nursery, but are attempting to carry on her good work, using many of her ideas and systems.

When I recently returned to the Nursery, after a short Christmas break, I wandered around the shade house, just as Jan would do on arrival at the Nursery on work days. It was cool and fresh with thriving plants and newly emerging seedlings. Jan's presence was palpable in that special place, and I thought how she would have loved to have been there to wander through, to marvel and problem solve and point out things of interest. It did appear to be her "happy place"

Jan had a long career as a botanist from her early days when not many women pursued careers or were able to work in fields that were their passion, and I 'm sure that there are many people out there today who have carried forward this knowledge and tradition.

And now I reflect on Jan's life, and suggest that there can be no better legacy than to raise a close loving family and to be a teacher who inspires others to have an interest in the study of and promotion of rainforest plants.

Jenny Wilson. LRBG Nursery Manager

Jan with sons David and Ben and granddaughter Rosella… and Hazel having presented Jan with her Life membership Certificate

Update Construction Projects

The bridge over upper fern gully is well on the way to completion thanks to the hard work and ingenuity of the construction and maintenance volunteers led by Will Evans.
Flood recovery work in the Sensory Garden and its roads and paths continues with the help of a flood recovery grant.

Other major projects are the installation of a large steel water tank at the western end of the garden in the old quarry face and a three bay storage shed and workshop. These projects will require grant funding.

Smaller projects to be built by our construction and maintenance team include cupboards, supports for vines, a gazebo in the commemorative garden, a boardwalk across the gully in room 6 and a music cubby in the rainforest.

The quarantine beds will be completed with fencing and a small shade house. Planning has also begun on a new Acacia bed in the eastern end of the Gardens below the Hoop Pine Forest.

The new office adjacent to the Visitors Centre is complete and installation of our long stored records and equipment is well underway.

Volunteers interested in joining our construction and maintenance team are very welcome.

Hazel Bridgett Project Manager

Open Day August – Life Membership, 20th Birthday - . Naming of Rose Hand Nursery

Hazel presenting Life Membership Awards

Geoff with Certificate and his Life at the Gardens booklet

Denis & Marie Matthews with awards

Rose Hand with Nursery team at naming of The Rose Hand Nursery

Dianna selling cards and greeting visitors

Susan and Judy supplying information to Visitors

Anne on coffee and washing up duty

Louise ready for customers at the Nursery

Peter with Guided Walk grou p

The Anniversary Cake

LRBG Seed Conservation

I met up with Karen Sommerville at the 7th Global Botanic Gardens Conference held in Melbourne in October 2022, where we discussed how LRBG might cooperate with the Rainforest Seed Conservation Project (RSCP) at Royal Sydney Botanic Gardens.

Karen Somerville at work

The RSCP researches the storage potential of Australian rainforest plant seeds. While seed banking is a very cost effective way of conserving vulnerable rainforest plants, not all species can survive the necessary drying, freezing or cryopreservation techniques. The RSCP focusses on assessing the storage potential of seeds from Australian rainforest species, storing those seeds suitable for seedbanking and looking for alternative conservation measures for those that are not. Until this project commenced, little was known about how many of these species could be conserved using seed banking techniques.

Karen was very interested in receiving seed of the rare and threatened plants in our collection and our first batch of seed was sent to Sydney in December 2022 - about 100 seeds, from four different parent plants - of the critically endangered

Coastal Fontainea - *Fontainea oraria.* I believe we have the basis for a very fruitful cooperation and I will be sending seed of more species in the near future.

http://www.rbgsyd.nsw.gov.au/science/our-science-staff/dr-karen-sommerville

Peter Gould. FLRBG Curator

Mountain Tea Tree - *Leptosporum wooroonooran*

In Australia, Leptospermum species are considered to be typical of scelerophyll, non-rainforest vegetation. The presence of it in rainforest warns against rigid definitions. It is found in north-east Queensland on a few exposed peaks 1100-1500m altitude near Cairns. Some individuals are thought to be at least 1000 years old. On Mt Bellenden Ker their horizontal trunks, up to 1 metre thick , provide evidence of past cyclones. Such gross disturbance may actually be necessary for seedling establishment.

Although not long in cultivation this plant seems to be hardy in a range of soils and conditions suggesting that it tolerates rather than requires cold, ever-wet sites. It forms a compact shrub.

Extracted from page 43, Australian Rainforest Plant IV by Nan & Hugh Nicholson. Published in Australia by Terania Rainforest Publishing, The Channon NSW 2480

Mountain Tea Tree at Mt Lewis Photo Hugh Nicholson

… and in the Garden?

It is an attractive and useful shrub for the garden, being adaptable to a range of soils and climates. The new growth has a beautiful bronze colour and the plant produces masses of white flowers in spring and early summer. In its native habitat it can reach heights of over 13m, but it tends to be much smaller in cultivation, reaching heights of around 2m. It forms a compact shrub and responds well to a yearly pruning to maintain its shape. The leaves are lightly scented.

www.gardeningwithangus.com.au/leptospermu

Story Time among the trees!!

Lismore Library Story Time for young children will be happening at the Gardens on Thursday 9 March. All children and their parents or other carers are welcome. Just turn up at the Visitors Centre at 10.30... or earlier if you wish. The Gardens are open all day. Make sure the children wear protective clothing including shoes and hats. Sunscreen and insect repellant are also recommended.

The library staff, with help of Gardens' volunteers, will be reading stories and doing craft among the trees. There will also be a special tour of the Gardens for children to learn more about the incredible natural world of plants, animals and fungi that live in rainforest, and how important they are to us. There will be time for play in the surrounding gardens and woodland.

It is planned that these visits will continue on second Thursday morning of each month for the immediate future. For further information phone Lismore Pop-up Library on 02 6621 2464

The Cool Cubby near the Visitors Centre

More Guided Walks at the Gardens

After ongoing interruptions last year with Covid and floods, Guided Walks for the public have started again for this year with the first one held on Sunday 18 February.

There will be two Guided Walks - on Sunday 26 February. Rainforest Pollinators with Graeme and Hoop Pine Forest with Trudi. Meet at the Visitor's Centre at 9.15 am for a 9.30 start for both one hour walks. Wear hat and sturdy shoes. Morning tea in the Visitor's Centre after the walk. Gold coin donation appreciated.

Walks are planned for the rest of the year on the third Saturday and on the **last Sunday of each month**, **starting at 9.30 am**.

. These walks are very popular so to secure a place please book ahead. Numbers are strictly limited. Contact Florence secretary@friendslrbg.com.au

Walks are many and varied

Some of the most popular are those the Useful Plants, the Hoop Pine Forest and the Pollinators Walk. -

Useful Plants Walk

This walk is designed to show visitors the local dry rainforest plants used by Aboriginal people for over 40,000 years, for medicine, tools, food and shelter. The walk begins in the Sensory Garden and continues into the Useful Plants Garden.

Plants are labelled and signage also gives extra details about these wonderful native plants which you can grow in your home garden. It is a shady, unpaved walk, with one small incline.

Pollinators Walk

Focussing on the wonderful insects, birds and animals which pollinate the plants in the rainforest.

The walk also takes you to see the native bee hives located throughout the Gardens. Learning about the importance of these stingless bees gives visitors an opportunity to think more about your own home garden and how you can help invite these happy workers in to dinner at your place. This walk is level and unpaved.

Hoop Pine Forest Walk

Cool and shady with the fresh scent of the Hoop Pines, this walk meanders up a medium incline on an unpaved path, through a 35 year old plantation of Hoop Pines. The light filtering through the trees at any time of the day is entrancing. Learn more about their reproduction, unchanged since the time of the dinosaurs. Look out for the **Sit and Ponder Place**, the ferny glades where you can recharge your love of nature. At the top, enjoy the **Stone Labyrinth**, ring the **bell** and appreciate picturesque places to sit and relax. ***Tracey Whitby***

Walks for March

1 walk Saturday 18 March

2 walks on Sunday 26 March

Details of these walks will be widely advertised when arrangements are completed - on our **Website** www.friendslrbg.com.au, on our **Facebook** page and by **email**s to members. The walks will also be mentioned on the local FM radio

A list of upcoming walks will also be posted on our **three notice boards at the Gardens** – at the Visitors Centre, the Tool Shed and the Environment Education Centre.

Graptophyllum illicifolium - Holly Fuchsia is an attractive shrub - suitable for small gardens if kept pruned. Best in well drained soil in partial shade but will also thrive in full sun if watered regularly when young.

FLRBG Greeting Cards

ONLY $20 A SET OF 12! **Blank for your own message.**

Email publicity@friendslrbg.com.au

Term 'Tree Hugger'— deep hstorical roots

The term "Tree Hugger' is often used these days as a disparaging term for active environmentalists who have a particular love of trees… though it can be a badge of honour for serious tree lovers! However this term has deep historical roots.

In 1730, a reported 363 Bishnoi people in India sacrificed their lives to stop their trees from being cut down, inadvertently laying the foundation for a strategy of peaceful resistance that has come to be used the world over.

Amrita Devi and her three daughters were the first to be killed when the Bishnoi protested the felling of their trees.(Image from: Cari Vander Yacht

The tale of the Bishnoi, and later the Chipko movement that it inspired, would even go on to provide a "beacon" during the early years of Australia's environmental protest movement.

The Bishnoi are a Hindu community from northern and north-western India who adhere to the teachings of Guru Jambhoji.

https://www.abc.net.au/news/science/2022-08-07/tree-hugger-bishnoi-chipko-defiance-deep-historical-roots/101247020?utm_source=abc_news_web&utm_medium=content_shared&utm_campaign=abc_news_web

Elaeocarpus williamsianus in flower

News from the Nursery… *from Jenny Wilson*

Jenny and Geoff in shade house

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Some of the Nursery Team at work in propagation shed

In early February we held a morning tea/ informal meeting up at the Nursery.

It was a good opportunity to thank the nursery volunteers for their hard work, and at the same time to thank the Friends on the committee and Damian for their support for us since we lost Jan de Nardi, our Botanist and Nursery Manager. That very practical help over this time has been invaluable to keep us on track.

Peter Gould updated us on future plans for the critically endangered Native Guava *Rhodomyrtus psidioides* which we hold temporarily in our shade house until it can be resited into a special quarantine area. A small tree/shrub, this plant is critically endangered. We also have an advanced Hairy Quandong *Elaeocarpus williamsianus,* a small tree, classified as endangered. which will also be moved to the new quarantine area.

We discussed the future direction the nursery might take and many ideas came up.

Damian suggested starter packs of plants that could be obtained from us in order to start up a rainforest regeneration site. We settled on a handout list or brochure listing the special "nursery" plants, which if planted on a bare site, tend to bring in and support the growth of other local indigenous species. Damian agreed to advise on this.

Florence Treverrow suggested we could specialise in something like grasses. We have been propagating fewer large trees for many months concentrating more on raising smaller trees, shrubs and ground covers, as these are the plants that have been mainly requested by the public on sales days, and are also needed at the Gardens.

It was suggested that we donate some *Cordylline stricta* to Landcare as we have excess. The Tucki Creek Landcare group were keen to accept this offer of 3 dozen plants.

To lift awareness of our function at the Nursery it was decided to prepare some signs and display them on the fence area. This will give information such as the function of the Nursery, the hours we are open for plant sales, information about some specific plants and the fact that it is run by volunteers.

Also we could indicate our need for more volunteers to help in our Nursery on Wednesday mornings.

Jenny Wilson Nursery Manager

The world's loneliest tree

Sitka Spruce on Campbell Island
Photo Ellen Rykers Atlas Obscura

For many years a tree in the middle of desert in north Africa was officially recognised by the Guiness World Records as the World's Most Remote Tree. But when it was knocked down by a visiting vehicle in the late 1970s, a tree on Campbell Island, 700kms south of the South Island of New Zealand (NZ) assumed the role. A nine metre Sitka Spruce, this tree was planted in 1907 by the then New Zealand governor. It is 250km away from its closest companion sitting in the middle of an uninhabited subantarctic island. On more than one occasion visitors to the island cut the top out of the tree to use as a Christmas tree!

However, this tree has another role. Its very existence is now helping to advance ground breaking climate change research. NZ research institute, the Institute of Geological and Nuclear Sciences Limited (GNS), is a New Zealand radiocarbon science leader. Dr Jocelyn Turnbull, Senior Scientist at GNS, leads a major research project, part of the Antarctic Science Platform. The aim is to improve understanding of Antarctica's impact on the Earth's system.

The Southern Ocean takes up about 10 percent of all the CO2 that we've emitted since the Industrial Revolution. However, there have been questions about whether the amount the ocean is absorbing might be changing.

To reach a conclusion, Dr Turnbull needs to compare historic and current measurements of radiocarbon and carbon dioxide in the atmosphere around the Southern Ocean. "We did not collect samples in the Southern Ocean 30 years ago, and can't go back and sample the air that was there 30 years ago because it's not there anymore," she explained. But as it turns out, tree rings can give this record. Every year, the tree produces a clearly visible growth ring and it is possible to measure the radiocarbon in them, and then can get the story back in time of what's been happening in the Southern Ocean and what has been changing

But why this tree? The team needed to get as far into the Southern Ocean as they possibly could without running out of things to measure. At 52 degrees south latitude, Campbell Island was the furthest south the team could go where there was a living tree. With only one tree available it had to be this tree.

https://www.theguardian.com/world/2022/sep/06/scientists-hope-worlds-loneliest-tree-will-help-answer-climate-questions
https://www.rnz.co.nz/news/world/474181/how-the-world-s-loneliest-tree-is-helping-scientists-advance-climate-change-research

How to take core samples rings from living trees without cutting down tree?

Scientists have devised a system of taking core samples from trees. Less than the diameter of a pencil, these core samples do not damage the tree which quickly heals itself. Care is taken with equipment so as to be sure they are not spreading any diseases between trees. If forest managers are concerned for a particular forest, they can deny scientists permission to core trees when they apply for a permit

https://serc.carleton.edu/trex/students/labs/lab2_2.html

Acacia peuce

The loneliest species of tree of Australia?

On the edge of the Simpson Desert, about four hours drive from Alice Springs is a small forest of *Acacia peuce* – commonly called Birdsville Wattle or Waddy-wood . The Arunda people know the tree as Aratara,

The *Acacia peuce* exists in only three locations across Australia: two in south west Queensland and one near Andado Station in the Northern Territory.

It endures the harshest of conditions, standing tall – though not really big - in large open plains that receive less than 150 millimetres of rain a year.

Botanist Dr Catherine Nano says it recruits only during rainfall events, and can live for up to 200 years.

These trees play a key ecological role as a refuge for birds and animals in this desert environment where temperatures soar regularly above 40 degrees.

Acacia peuce was once more widespread but as the continent dried out and the sand dunes of the Simpson Desert moved in, the population has become more and more fragmented.

Realising the unique ecological value of these trees the current owners, many years ago, fenced off 2 stands of *Acacia peuce* 40kms from their homestead. These trees are now protected within a 30 square km reserve.

Seedlings grow very very slowly. Once they reach a certain stage their growth pattern changes and they grow lateral branches. It is presumed that the growth in the first 5 years is focussed on root growth rather than foliage growth. In such an arid environment with rare rainfall events their specialisation is to sit and wait.

www.abc.net.au/news/rural/2013-05-28/acacia-peuce-tree-simpson/4717284
www.abc.net.au/catalyst/australias-favourite-tree-part-one/14021222

‘Father of Rainforest Botany in NSW’

Alex Floyd, the father of rainforest botany in NSW, died on 12 December 2022 aged 96.

Alex had a vast knowledge of plants in Australia and around the world. However, rainforest was his specialty and throughout his life he delighted in accumulating and disseminating knowledge about it.

He was an inspired teacher, able to pitch his information to the level of the student. He never made anyone feel foolish for not knowing.

In 2008 Alex Floyd was awarded the Medal of the Order of Australia for services to botany, particularly for his research and identification of sub-tropical rainforest plants, ongoing support for the North Coast Regional Botanic Garden at Coffs Harbour, of which he was co-founder, and for his contribution to environmental education and conservation generally.

With his expert knowledge, he developed a series of booklets and publications including ‘Rainforest Trees of Mainland South-Eastern Australia’. This book quickly became the bible for rainforest scholars and enthusiasts because of its extraordinary detail.

Dr Robert Kooyman, Research Fellow in Biological Sciences, Macquarie University said ,“His contribution to our botanical understanding of the rainforests of south-eastern Australia is unsurpassed. Anyone alive today with an interest in Australia’s rainforests knows his name, and likely has referenced his work. He provided a reference point for all of us in our rainforest learning, and has been an essential guide throughout.”

Alex Floyd

Photo Hugh Nicholson from ABC News website

Conservationist Ashley Love, long term National Parks and Wildlife Service employee said, “Alex Floyd made the foundational contribution to the understanding and conservation of rainforests in New South Wales and a valuable contribution further afield. Without his assembling the building blocks of knowledge of the rainforests it is unlikely they would have been identified, recognised and protected as well as they now have been.“

Alex had several rainforest trees named after him, including the genus Floydia, and the species *Bosistoa floydii, Cryptocarya floydii, Endiandra floydii* and a grass, *Alexfloydia repens.*

He will be greatly missed by the many people who valued him as a rainforest authority and as a kindly, modest man.

Facebook post Nan Nicholson 13 Dec 2022
https://www.facebook.com/100063546045198/posts/pfbid08o6EuN8LNugMkQPQGqA2FTXeN6GBGEpmUwPfqzF4jjomYTgdzjyk4tzgz2wqC5c7l/?mibextid=Nif5oz
www.newsofthearea.com.au/celebrating-the-life-of-alex-floyd-oam article Andrea Ferrari
www.abc.net.au/news/2023-01-23/

Sundew species rediscovered

Daniel Anderson, from Jurien Bay, WA, stumbled across a flower he had never seen before so he took a photo of the unusual bloom and shared it on the Wildflower Society of Western Australia's Facebook page.

It turned out Mr Anderson had rediscovered a type of carnivorous sundew, *Drosera rubricalyx*, not seen since WA's first government botanist, James Drummond, collected a sample of the species in the 1850s.

Drosera rubricalyx

Story and photo story on ABC Great Southern by Olivia Di Iorio
https://www.abc.net.au/news/2023-01-28/new-species-of-carnivorous-sundew-discovered-on-social-media/101900468

Boab Carvings

Carvings on 12 Boab trees in NW Australia are mainly of snakes and relate to an important Indigenous Dreaming track in the area, known as the Lingka Dreaming.

Based on their girth, the researchers estimate these carved trees, in the Tanami Desert, are already several hundred years old.

Though not classed as a rainforest tree the Boab *Adansonia gregorii* does grow in monsoon thickets as well as open desert plains

ABCSciencenewsletter@mail-list.abc.net.au 12 October 2022
Australian Rainforest Plants V by Nan & Hugh Nicholson Terania Rainforest Publishing The Channon Pub 2000

Ancient Forest in Chinese Sinkhole

Ancient forest has been found at the bottom of a giant sinkhole in China, with trees up to 40 metres (130ft) tall. Scientists believe it could contain as yet unidentified plant and animal species. Cave explorers in the Guangxi region of southern China alerted scientists when they found the sinkhole. It is among 30 sinkholes in Leye County - this is the largest, at 306 metres long, 150 metres wide and 192 metres deep.

https:www.livescience.com Article by Stephanie Pappas 12 May 2022

Oldest Olive Tree in Greece ?

Ancient Olive Tree of Vouve, Greece

One day about 3,000 years ago, at a time when the Minoan civilization still ruled over Crete and long before the rise of Classical Greece, an olive fell to the ground. or perhaps it was planted by human hand, in the area of Vouves in Greece. That olive seed sprouted and grew into a tree. And incredibly that tree is still alive today – and still producing fruit.

The **Olive tree of Vouves** is probably one of the oldest olive trees in the world. Tree ring analysis demonstrated the tree to be at least 2000 years old however its exact age cannot be determined. The use of radioisotopes is not possible, as its heartwood has been lost down the centuries. On the other end of the scale, scientists from the University of Crete have estimated it to be as much as 4,000 years old.

The tree remains productive to this day, having been grafted with the cultivar 'Tsounati'. The trunk has a perimeter of 12.5 m and a diameter of 4.6 m .

In 1997, the tree was declared a protected natural monument. Branches from the tree were used to weave victors' wreaths for the winners of the 2004 Athens Olympics and the 2008 Beijing Olympics.

https://www.histecho.com/3000-year-old-worlds-oldest-olive-tree-island-crete-still-produces-olives-today/

And Australia's Oldest Tree?

Tasmania is home to one of the oldest organisms in the world. The Mt Read Huon Pine *Lagarostrobos franklinii* grove from Tasmania's western ranges. It is a clonal population spread over about 1 hectare, originating from a single male plant. Ancient preserved pollen from a lake near the grove shows that the trees origin dates back more than 10,500 years.

The plant was discovered by forest ecologist Mike Peterson in the late 1980's while plant collecting in sub-alpine scrub on Mt Read in Tasmania's central west coast region. Further study on the grove took place in the early 1990's which revealed some astonishing information about this unique specimen.

The plants are all genetically identical male clones and therefore no seeds are produced. So how did this grove establish itself?

One of the principle theories is that over the millennia the plant has gradually layered itself as branches weighed down by snow and ice have touched the ground and then taken root, eventually forming their own trunks. The original single trunk has long since disappeared but the plant lives on. This grove is also the highest altitude occurrence of Huon Pine known. Its speed of growth is extremely slow with 25 cm cross sections taken from some trunks showing more than 1000 growth rings, that's averaging around 4 rings per millimetre of trunk growth.

A specimen of the original Mt Read Huon pine is established in the Tasmanian plant collection at the Royal Tasmanian Botanical Gardens. It was originally grown from a wild collected cutting off the original plant. On visiting the plant in the garden you will notice that it is also slightly different, being a little darker green and also having thicker branchlets than the other forms of Huon pines surrounding it in the garden.

https://gardens.rtbg.tas.gov.au/collections/huon-pine/

Huon Pine in the Royal Tasmanian Botanical Gardens. Image *rtbg.tas website*

Diploglottis campbellli -

Small leaved Tamarind Cordial Recipe

Marinate 1 cup of fruit of the Small Leaved Tamarind in 1 cup Apple Cider Vinegar in the fridge for 3 days.

Make a syrup by boiling 1 cup sugar, a squirt of honey and 1 cup of water. Allow to cool.

Add the strained vinegar and fruit mix to the syrup. Store in a sterilised bottle in the fridge. Use as a cordial with soda water and ice.

Diploglottis campbellii Small Leafed Tamarind fruit

When made the cordial is pale pink in colour and has a refreshing flavour. The recipe was recommended by Jan de Nardi and shared with the Nursery Group. I made it last year and it makes a delicious drink.

The Small-leaved Tamarind fruit is a recognized Bush Tucker food. As well as using it to make cordial it can be used in jams and chutneys. The fruit is ripe February to March - so now is the time to collect some.

From Irene Gallagher

Conservation project for Native Guava

Image credits L to R Veroncia Viler, Nathan Nathan and Veronica Viler

Lismore Rainforest Botanic Gardens is part of an exciting and important project to provide an insurance population of the Critically Endangered Native Guava (*Rhodomyrtus psidioides*).

Funded by the Commonwealth Environmental Restoration Fund, the Australian Network for Plant Conservation (ANPC) is leading a collaboration between botanic gardens and government agencies in QLD, NSW, the ACT and Victoria to deliver conservation actions for the Native Guava using a pilot dispersed-custody model (metacollection).

Native Guava is critically endangered due to Myrtle Rust and collection of samples for genetics and for propagation, along with distribution of plants to botanic gardens for safe keeping, is key to the survival of this species while long-term recovery actions are investigated.

This project is providing a coordinated national response to the conservation of this species across its range through the following activities:

1. Boosting *ex situ* conservation through collection of Native Guava germplasm from NSW and Queensland. Genetic analysis of this new material will allow us to better understand population dynamics in the wild.
2. Providing resources for maintaining potted Native Guava collections in Queensland and NSW.
3. Engaging with researchers and promoting partnerships to provide Native Guava plants for further research. This can include tissue culture trials, susceptibility assays, RNAi vaccine trials, genetic research and investigating host/pathogen interactions.
4. Supporting the creation of an in-ground living collection of Native Guava at six locations across NSW, Victoria, Queensland and the ACT. This dispersed living collection of 60 individual plants will contain genetic lineages from the NSW germplasm collection.
5. Raising awareness of Myrtle Rust and promoting the project by creating a short video.

The Native Guava *Rhodomyrtus psidioides* is one of two species of plants in the family Myrtaceae (the other being Scrub Turpentine *Rhodamnia rubescens*) that have been so severely impacted by the introduced fungal pathogen *Austropuccinia psidii* (Myrtle Rust) that they have been declared Critically Endangered.

The Native Guava project is a pilot program testing out the viability of this model for future application to the preservation of other species threatened with extinction by Myrtle Rust. It is possible that 20 to 40 species of Myrtaceae will be Critically Endangered by Myrtle Rust in the next few years.

https://www.anpc.asn.au/safe-custody-for-native-guava/

John Moye … lover of native orchids

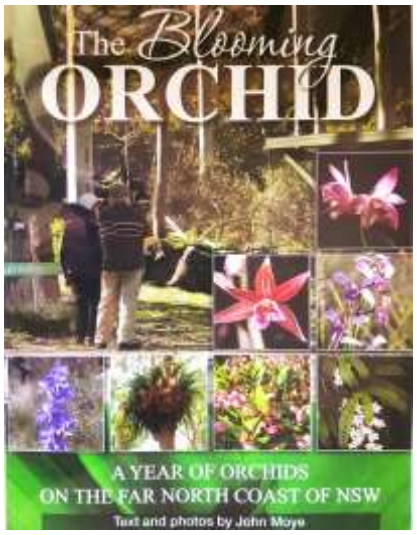
About sixty years ago the Late John Moye counselled me on a field day to "look down as well as up". We were on a native plants excursion and I seemed indifferent to indigenous plants other than those above me. John introduced me to terrestrial orchids even those hiding beneath the leaf litter.

Through the local branch of The Native Plants Society and later in our Botanic Gardens we sought his advice about native orchids. He opened our eyes to a new world far removed from eucalypts and acacias. With his wife Beryl we walked trails from the Coolgardie Range and later from their final home in Alstonville, searching for native orchids, particularly the near-extinct *Phaius tankervillea*.

John was a popular secondary schoolteacher retiring from Ballina High School. He was to give the Botanic Gardens over the years his seasoned advice about native orchids of our rainforest.

John died last winter. The Friends of Lismore Rainforest Botanic Gardens offer their deepest sympathy to Beryl and family. His passing is our loss.

Geoff Walker



John Moye authored "The Blooming Orchid', a booklet describing a broad selection of Native Orchids from the far North Coast of NSW. When the local branch of the Australian Plants Society folded almost 20 years ago this booklet and others in this series were donated to the Friends. 'The Blooming Orchid' with black and white line drawings… and a later edition with colour photos, are both available from FLRBG - $5 and $20 respectively.

Antarctic forests and methane

While diving the Antarctic in waters at base of Mt Erebus in 2006 a team from Oregan State University was surprised to find a large white fluffy microbial mat on the dark volcanic sediment. Samples were collected and frozen for further analysis.

In 2016 another team from Oregan State was in Antarctica examining the ecology in Terra Nova Bay. They came across a similar white microbial mat. Methane seeping into this later find encouraged them to further inspect the earlier samples. Isotypes of the methane could still remain providing evidence of a methane seep at the 2006 site. If so they are keen to return and see if it was indeed pumping out methane and if so investigate any animals around feeding on food produced by the microbes.

Antarctica used to be covered in lush rainforests. With continental drift, changes in sea levels and changes in world air and sea temperatures over time these have gradually become buried by ice and permafrost producing methane and other gases as they break down. As the climate currently changes and warms the permafrost will defrost in some areas and release the stored methane. Do the white mat microbes actually feed on or transform the methane into food edible by local animals in this area? Or is it going to go into the atmosphere and be an added problem with global warming. If microbes settle in the communities and consume the methane, and produce food, then it could be a benefit - an alternative food source maybe relieving stress on the marine animal life in Antarctica. That is a lot to be investigated. Currently there are plans to go back and further research this phenomenon, this year, 2023.

Our Changing World RNZ July 2022 – broadcast on What the Duck, ABC RN 10 September 2022; https://www.rnz.co.nz/audio/player?audio_id=2018850609

Some of the team getting the first truss span in place

Fern Gully Bridge

Way back in the very early days of the Gardens the idea of putting a high level pedestrian bridge over the rugged eastern end of Fern Gully was suggested. A quote was obtained - $35,000 – which was completely outside any available funds we had at that time. And the idea was dropped.

However, thanks to a recent generous anonymous donation, boosted by accumulated funds, it was decided to put the project on our To Do list – with the idea that our volunteers would do as much of the work involved as possible.

Once plans were approved Lismore City Council manufactured the two steel truss spans while Will Evans and the rest of the construction team – all FLRBG volunteers - worked on the approaches and supports.

Getting the trusses from the car park where they had been unloaded to the very inaccessible build site prove a big problem but with lots of ingenuity, creative thinking and persistance it has happened. There is still a lot to do but the idea of having a high level crossing in that area is now a reality . And costing a lot less than that early quote! Thanks to all involved – we are proud of you!!

Will immediately after getting the second truss span in place

FLRBG Committee

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Vice President - Hazel Bridgett
Secretary/Treasurer Florence Treverrow

Committee

Ros Little – Workday Organiser
Peter Gould - Curator
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We couldn't do it without you – THANK YOU!