FLRBG

February 2021

Newsletter of the Friends of Lismore Rainforest Botanic Gardens Inc.

President's Message

On 12 December, as Works Coordinator Ros Little was working on the watering schedule, the rains came. This rain event ended with a torrential downpour resulting in flash flooding which caused multiple erosions of tracks, roads and carparks. All now being ably repaired by our volunteers, with the help of the motorised wheelbarrow and lots of road base. There was some erosion of the gullies but the many hours previously spent on erosion control minimised the damage.

The Friends committee successfully hosted two functions at the Gardens - within Covid-19 rules. The first was the **Open Day in August** which featured the opening of the Banks Walk and Garden and the launch of the interpretive education wheels relating to that area.

The second function was the long awaited **opening of the Amenities Block at the Visitor's Centre** by Janelle Saffin MP and Jeni Binns. This was followed by an end of year Christmas morning tea for guests, which included Lismore Council General Manager Shelley Oldham and volunteers. The building of these additional amenities was made possible by a CBP grant of $25,000 from the NSW government and the generous donations of Andrew and Jeni Binns. The success of our educational programmes for schools emphasised the need for additional amenities. It is hoped that these school visits will resume this year after the long Covid-19 break in activities.

We were delighted that at the Annual General Meeting of the Australian Association of Friends of Botanic Gardens, of the seven recipients of the **Handbury Awards**, two were nominated by FLRBG and included Andrew and Jeni Binns, and Pat Offord, former President and Curator of FLRBG.

Plans for the coming months include completion of the **bridge to span upper Fern Gully**. The bridge has been designed by engineers Lucena and Associates, survey work by Newton Denny Chapelle and will be fabricated by the Lismore City Council fabrication team supervised by Daniel Kubelka.

Hazel Bridgett, Lee Middleton, Ros Little, Thelma James and Tracey Whitby showing off the new educational wheels at the opening of the Banks Garden in August

Janelle Saffin & Jeni Binns cutting ribbon

The Committee has agreed that the next priority will be construction of a lean-to office to be built by BT Sheds on the Eastern side of the Visitors' Centre. As the additional space is urgently required it is hoped that, as funds allow, construction will commence as soon as possible. Next step is an amendment to the DACC for the Visitor's Centre.

Discussions are being held with a team of professional ceramicists, led by Suvira McDonald, to design **personalised pavers for a path** leading to a rotunda or deck in the Commemorative Garden at the western end of the Sensory Garden. This will complete the infrastructure in this part of the wheelchair accessible garden. Grant funding will be sought. **The frog hotel, bog garden and pond interpretive signage** has been costed and submitted for grant funding. An **extension of the Uncommon Plants Garden** is planned once suitable soil has been sourced. Further planting will commence in autumn. Thanks to all the volunteers who make the Gardens possible. **Hazel Bridgett**

President. @friendslrbg.com.au

Handbury Awards to FLRBG Members

Three remarkable members of the Friends of the Lismore Rainforest Botanic Gardens have been awarded the prestigious Handbury Award by the Australian Association of Friends of Botanic Gardens.

Pat Offord, Andrew and Jeni Binns were nominated by the Friends of the Lismore Gardens for their untiring and dedicated efforts in creating and continuing to support the Rainforest Gardens over many years.

Pat Offord with her award

Pat spent over twenty years as Curator and inspirational leader on the committee of the Lismore Rainforest Botanic Gardens. She was thrilled to receive the award and having recently left the region to be closer to family in Sydney, said the Handbury Award was a lovely finale to her active participation in the establishment and ongoing management of the Gardens

Andrew and Jeni Binns with theirs

Andrew and Jeni have made an exceptional contribution to the establishment of Lismore Rainforest Botanic Garden. It is wonderful to see them publicly acknowledged for their ongoing and very generous financial and general support since 2015. Dr Binns said, "This award will provide a good reason to further promote the important role of the LRBG in our community and to encourage visitors. In addition to the role of propagating and protecting our local flora and fauna, the Gardens provide other health, environmental, educational and social benefits for our region."

Tracey Whitby

The Handbury Award

This award is to recognise exceptional contributions to an Australian Botanic Garden, Arboretum or Park, by a group or members of group which is a member of the Australia Association of Friends of Botanic Gardens (AAFBG). The award is named after Geoff Handbury AO, an enthusiastic supporter of environmental causes who had a firm belief in the educational role and benefits of botanic gardens to the community. He was interested in the prosperity of botanic gardens Australia-wide and was a generous benefactor to the Association. The AAFBG Management Committee agreed that an annual award be named in his honour for a Friends group or individual that has done meritorious work in their Garden or community.

Adapted from article - AAFGB 'Eucalypt' November 2019

Nancy Bartrim Retires

December brought the resignation of one of our long term members from the Friends. For health reasons she has had to retire from work in the Gardens and has moved to Brisbane to be closer to family.

Nancy joined the Friends in 2008 and has been a much loved, reliable and very hard working member.

For many years now she has been leader of the weeding team and had a passion for removing the exotic Asparagus Fern from the Gardens, and had the process down to a fine art!

But she didn't stop at weeding – she would have a go at anything that needed doing and a couple of years ago worked with Florence and Susan to build the very successful anti - erosion 'Girlin Wall' in Fern Gully Creek! A great lover of all things gardening, and with special interest in orchids, she will be very much missed. We wish her well in this new stage of her life.

Time to train more Guides

Trainee guides on one of their training walks

In May 2018, after consultations and workshops with guides from the National Botanic Gardens, Canberra, the Royal Botanic Gardens, Sydney, and the Gold Coast Regional Botanic Gardens, the Friends of LRBG organised their own three-day guide training course. It proved to be a great success and we ended up with eleven graduates. Over time, for various reasons, some people pulled out of the guiding pool so **now it is time to run another training course**.

We will follow the pattern of the previous course. It was held in the Environmental Education Centre at the Gardens over 2 consecutive Saturdays with a later session with mentors to do their first guided walks.

After a short exploratory walk around the site, the guides were encouraged to choose a part of the Gardens they particularly enjoyed and focus on it as an area in which they would design their own guided walk. They were armed with information from the presenters about the area's first Australians, the objectives and development of the Gardens, some basic botany and features of what goes to make a successful walk.

They also had ongoing guidance from mentors and access to the Garden's extensive collection of relevant publications, to design their own half to one hour walk.

At the last session of day two each guide gave the group a short overview of their planned walk and in time met again to take each other on guided walks in small groups. Constructive and positive feedback from their peers and mentors was particularly helpful in refining their approach to future walks. The support from mentors continued as long as the new guides wanted it.

In 2021 we still have an enthusiastic core group of guides welcoming visitors on last Sunday of each month and specialising in a facet of native dry rainforests which fascinates them. Some months we have two or three walks as bookings from community groups are common. Groups are limited to ten people.

Areas which have proved popular for our walks include the **Useful Plants Garden**, the **Hoop Pine Forest**, the **Main Rainforest** and the **Sensory Garden**. We also have a **Wilson's Park Species Garden**, **a Butterfly Plant Walk** and the **Rare and Threatened Plants Garden**. There are two new areas - **Palm Gully** and the **Encounters 2020 Garden** - which are waiting for new guides to show visitors around. Scripted walks and extra notes have been shared by guides and are available to assist new guides.

There are also **School Groups** which need guides to guide students and their teachers, from pre-school to Year 12, on booked tours, or on special days such as World Environment Day or Science Week. Guides for these areas must have a Working with Children check which is free and available online through Services NSW.

NOW WE ARE NOW LOOKING FOR NEW VOLUNTEERS WHO WOULD LIKE TO TRAIN WITH US IN OUR NEW COURSE. NO PREREQUISITE KNOWLEDGE IS REQUIRED.

Graeme Patterson presenting one of the guide training sessions in May 2018

GUIDE TRAINING COURSE

Tentative dates

Saturday 20 & 27 March

9.15 am to 2.30 pm

Mentor and Trainee meeting 2 to 6 weeks later

All dates to be confirmed

CONTACT

publicity@friendslrbg.com.au

for more information or to enrol

IT'S FREE!

Covid safe practices are in place for all walks and training days

Looking forward to seeing you there - Tracey Whitby

Species profile

Elaeocarpus williamsianus Hairy Quandong

Family: **ELAEOCARPACEAE** *from Peter Gould*

Description:

Elaeocarpus williamsianus (Hairy Quandong) is a small to medium sized rainforest tree that can grow up to 16m in height. It is often multi-stemmed from the base.

Leaves:

The simple leaves are alternately arranged on the stem, but tend to be clustered at the ends of branches in pseudowhorls. They have eight to ten pairs of inconspicuous irregular broad teeth, broadly oblanceolate, 9 to 17 cm long, rounded at the tip and tapering quickly to the base. The upper surface of the leaf is dark-green, glossy and smooth except for the basal half of the midrib, which is rusty-brown. The under surface is dull and covered in dense rusty-brown hairs. Petioles are 23 to 32 mm long, densely hairy, swollen and slightly bent where the leaf base is attached.

Flowers:

Inflorescences are 11 to 16 flowered, 2.5 to 5 cm long and borne on rusty-coloured axillary racemes near the ends of branchlets or in the axils of the upper leaves. Flowers are pale-green and pendulous and flowering occurs between November and December.

Fruit:

The fruit is a globular blue drupe, 2 to 3 cm long and resembles that of Blue Quandong *(Elaeocarpus grandis).* Fruit is ripe from April to July and occasionally to December

Conservation status:

Hairy Quandong is listed as an Endangered species under both the NSW Biodiversity Conservation Act and the Commonwealth Environmental Protection and Biodiversity Conservation Act. It is also listed as Endangered on the International Union for Conservation of Nature and Natural Resources (ICUN) Red List 2002.

This rare tree is known from around twelve isolated stands in north-eastern New South Wales in the Burringbar Range, near Mullumbimby and south to Broken Head. Soils at these sites are derived from meta-sediments and are generally rocky and low in nutrients. Each of these stands consists of a number of clonal stems (root suckers) with usually one genetic individual occurring at each site. Only one stand is known to contain two (closely related) genetic individuals. So, though there are over 150 stems in total, each population represents only one genetic individual, and none of these isolated individuals produce viable seed. Cross pollination is needed for seed viability and isolation appears to be a key factor contributing to its failure to reproduce from seed.
The species was first recorded in 1980 and was named in honour of Mr J. B. Williams for his contribution to rainforest botany in NSW.

Key Threatening Processes:

The Biodiversity Conservation Act lists 39 threatening processes impacting flora and fauna. Of these Hairy Quandong is particularly impacted by:

- High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure
- Clearing of native vegetation
- Anthropogenic Climate
- Infection of native plants by Phytophthora cinnamomic
- Invasion, establishment and spread of Lantana
- Grazing by domestic livestock is also a threat though this is not listed in the act

Our role in the conservation of *Elaeocarpus williamsianus* Hairy Quandong

LRBG has been included on a list of ex situ conservation sites for this plant (managed under the NSW DPIE's Saving Our Species (SOS) program). We plan to extend the Pat Offord Rare and Threatened Plants Garden by bringing in soil and building up 3 to 4 raised rows to the east of the existing site. This will provide space for a grove of *Elaeocarpus williamsianus* from as many of the sites known as possible.

The aim is to bring together as much genetic diversity as possible in one planting and just maybe, produce viable seed through cross pollination.

LRBG is also monitoring Hairy Quandong for any flowering or fruiting, growth rate and health and providing this to the SOS program coordinator for the species. This information adds to the ecological information for the species. Interestingly, the plants in the gardens flowered for the first time in 2020, coinciding with a number of other ex situ plantings and also wild populations.

This new extension of the Rare and Threatened Species Garden will also provide space for two Critically Endangered species Scrub Turpentine *Rhodamnia rubescens* and Native Guava *Rhodomyrtus psidioides* and other rare and threatened plants.

***Elaeocarpus williamsianus* Hairy Quandong**

Image from NSW National Parks and Wildlife Service - Recovery Plan for Elaeocarpus williamsianus Artist: Lesley Elkan

REFERENCES:

Department of Environment and Conservation (NSW) 2004, ***Draft Recovery Plan for Elaeocarpus williamsianus,*** Department of Environment and Conservation (NSW), Hurstville

Floyd, A.G. 1990, ***Australian Rainforests in New South Wales, Vol 2***, Surrey Beatty & sons, Chipping Norton, NSW.

Harden, G.J. (ed) 1993, ***Flora of New South Wales,*** **Vol 1**, New South Wales University Press, Kensington, NSW.

Plantnet, Royal Botanic Gardens Sydney
http://plantnet.rbgsyd.nsw.gov.au/

NSW Department of Environment
Energy and Science, Key Threatening Processes:
https://www.environment.nsw.gov.au/threatenedSpeciesApp/threats.aspx (accessed 13/01/2021)

Royal Gardens Kew

Bulletin of Miscellaneous Information January 1897

"In 1863 Sir William Hooker projected a series of floras on an uniform plan and in the English language for India and the Colonies.… Of those works the most important are the "Flora Australiensis" commenced by Mr. George Bentham in 1863, and completed in 1878, and the "Flora of British India", commenced in 1875 by Sir Joseph Hooker with the assistance of other botanists, which he has happily succeeded in completing in 1885, since his retirement from the post of Director. Australia and India are the only two large areas of the world the vegetation of which has been described exhaustively."

NEXT REGULAR GUIDED WALK AT THE GARDENS

Sunday 28 February

Starting 9.30am

Numbers limited, groups welcome

Contact Tracey to book

Publicity@friendslrbg.com.au

ENCOUNTERS 2020 GARDEN …. ready for visitors

from Tracey Whitby

After a delayed, but very successful launch of the newly created Encounters 2020 Garden in August the new plants are becoming established and signage is in place to assist visitors to read about the objectives and planning of the garden.

Designed to commemorate over 60,000 years of the Aboriginal people's caring for country and sharing their knowledge of plant use, as well as the 250 years since the collection and scientific identification of Australian plants by botanists, Joseph Banks and Daniel Solander this garden is both and educational and recreational place to visit. Another aim is to keep the feeling of a natural environment which might have been seen by the botanists in 1770. An outdoor seating area has been installed for small groups.

The flora wheels, designed to match and give information about the plants in the garden, couldn't be trialled by school students because of Covid restrictions. However recently a group of guided tour visitors used them and appreciated the simple botanical information and interesting fun facts which are complemented by the detailed information on Aboriginal plant use. Two large signs have been installed – each sign featuring the eight plants on the matching identification wheel.

Our thanks to the National Maritime Museum for the Encounters 2020 grant, Delta Kay, Lee Middleton, Annette Deal, Lismore City Printery and the amazing volunteers in the Friends LRBG team who all supported this project.

BOOKING FOR GUIDED TOURS
should be made by emailing
publicity@friendslrbg.com.au
for adults and families or
education@friendlrbg.com.au
for pre-school and school groups

Hurdles and Hurrays!

Getting this project to happen wasn't all plain sailing.

In August 2019, one month after receiving the funding, a fire in the adjacent green waste facility closed the Gardens to volunteers and the public for three months.

Then, because of the very hot, dry conditions in spring and summer 2019-2020, we hesitated to plant young plants which wouldn't tolerate such high temperatures.

And as we moved into 2020 came Covid, halting access to the Gardens once again for months.

Then, just before the launch, the NSW /Queensland border closed. This prevented the courier (who was delivering the special card and rivets for the identification wheels) from driving from Brisbane to the printery in Lismore. The provider decided to fly the materials to Sydney without notifying the printer. Luckily, by this stage, we were beyond feeling stressed! They eventually turned up and we had several sample wheels ready on the day. We made it!

Phil taking photos of the opening

Tracey speaking to the visitors

Mick Roberts, Thelma James & Hazel

Ros, Thelma, Hazel and Lee with wheels

Banks Garden Wheel

Greeting Cards Now Available

Line drawings of plants in the new garden

No message – just beautiful illustrations by Ros Little

Only $10 for 12 cards

2 copies of each of 6 images

Contact Tracey on
publicity@friendslrbg.com.au

Opening New Amenities

It is almost three years since it was decided that we would build a new amenities block adjacent to the Visitors Centre, but finding funds, getting plans drawn, planning permission, builders etc etc to say nothing of floods and drought, heatwaves and fires, and to top it all Covid-19… and then two of our key volunteers both out of action for several weeks… progress hasn't been rapid.

However, by early December, even though there was still some final touching up to be done, the main construction work was completed and the toilets were ready for use by visitors and volunteers.

So on 9 December it happened! The new amenities Block was officially opened. It was a beautiful, not too hot summery morning with forty visitors and volunteers. (Covid 19 rules were seriously followed!)

The official opening happened outside the Visitors Centre with both Hazel, and then Janelle Saffin, our local state member and a long term Gardens supporter, speaking.

Cutting the ribbon

Janelle and, one our very generous donors, Jeni Binns cut the ribbon. There was some difficulty getting the scissors to cut but eventually the deed was done and the new block was officially opened! Some of the visitors lined up later to try out the new amenities!!

We also had special Christmas morning tea at the Education Centre for our visitors and our volunteers. Tracey and Hazel were the main organisers and all the other committee members and volunteers worked hard to make it happen.

Visitors and volunteers gathering for Official Opening

Theo, Michael and Will outside new building

Hazel making her speech

Dave, John, Grahame and Don

LCC General Manager adding colour to the day

Margaret, Tracey and Rosemary … someone has to do the washing up!

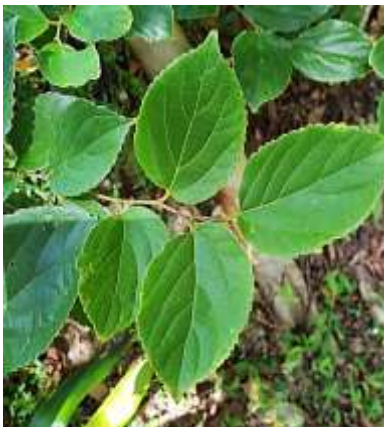
Vanessa Ekins, the Gardens special LCC Councillor

A sneaky monster in your garden?

Imagine a weed tree that promises to become worse than the notoriously invasive Camphor Laurel. A tree that is one of the top ten environmental weeds in this region, but nobody has heard of it. A tree so innocuous in appearance that it is virtually invisible. That tree is the ***Celtis sinensis***… and this lack of recognition by the general public makes it is a real environmental danger. It is spreading under our noses but we don't see it.

Description

Celtis sinensis, is native of China, Japan and Korea, is also known as Hackberry, Celtis, Chinese Celtis, Chinese Elm, Chinese Nettle Tree, Japanese/Chinese Hackberry. It is a large tree growing up to 20 metres in height with smooth mottled grey bark and a spreading canopy. Stems of younger plants have a zig-zagged appearance. The leaves are alternate,



Young leaves

asymmetric, elliptical shaped, 4–10 cm long and 3-6cm wide with a glossy upper surface and a slightly paler lower leaf. They have three main veins at the base and bluntly toothed margins, with more finely serrated in the upper half of the leaf.

In Northern NSW this tree is deciduous or semi-deciduous in late winter and the dry early spring period, when its inconspicuous small greenish-coloured flowers appear for a brief period of time. Celtis then produces thousands of fleshy fruits, about 7–8 mm in diameter. Unripe and green in spring and summer, the fruit turn reddish brown to orange when ripe in autumn and early winter, later becoming brown and wrinkled.

Celtis sinensis ripening fruit
Photo Brisbane City Council – Weed Identification

History

Celtis was first planted in northern NSW as early as 1912. In the 1940s it was being promoted as a street tree, as an ornamental feature and shade tree. It was still being planted in Kyogle in the 60/70s. These days it can be found in private gardens and public areas such as parks and schoolyards. Infestations are found in bushland in and around Lismore and Kyogle, and further afield from Taree to the Tweed. In Queensland it has spread rapidly to the Sunshine Coast hinterland and the Ipswich area. It has become a seriously invasive environmental weed both in gardens and bushland throughout SE corner of Queensland.

It just takes one mature tree and a few feeding critters, and this unwanted weed tree is off and running. As it fruits during the same period as Camphor Laurel, and similar birds feed on both species, both these weed trees species often spread together.

Control

Celtis could be successfully controlled in NSW with a coordinated use of manual and chemical methods. The removal of old established trees in private and public gardens is important as they are a big source of seed spread. Because of the associated spread of camphor laurel and celtis, both need removing at the same time or the remaining one will colonise the cleared land.

Celtis seedlings under 30 cm high can be hand pulled or dug out. Large trees can be cut down and the stump dug up and removed. Care needs to be taken to prevent the release of fruit when removing the canopy, or disposing of it in uninfested land.

Herbicides methods that are recommended include stem injection, application to basal bark for young plants, application to cut stumps, spot spraying for young plants and foliar spraying of seedlings. Herbicides include Glyphosate. 1:50 for spraying seedlings and coppice shoots. 1:1.5 for stem injections, scrape stem and cut stump application. Other available poisons require user permits

Judy Blood, LRBG Curator

Mature Celtis at Lismore Primary School without leaves in winter

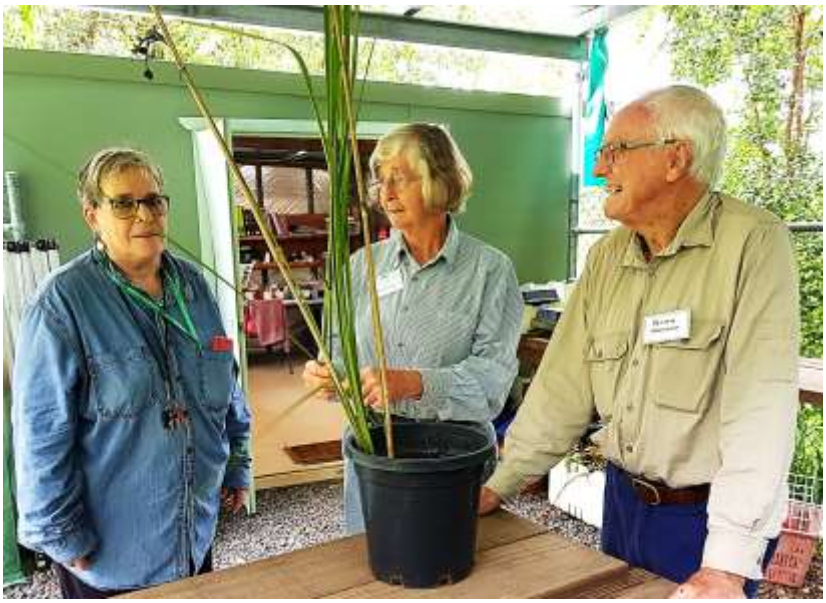
Settlers Twine tutorial

In January we an excellent presentation at the Gardens Nursery by Bev and Peter Henson about the plant *Gymnostachys anceps* – Settlers Flax or Settlers Twine. This plant grows along Australia's east coastal from Cape York to the Victorian border. While it is well known in some areas it is not very common around this part of the far north coast, though has been officially recorded in the Coffs Harbour region. Cows don't like to eat it because of it hardness and rough edges. So even where it is found, farmers do not tend to encourage it.

However, Bev and Peter found this plant growing happily on their property at Numulgi. At first they had identified it as Blady Grass but over time they realised that it had very different characteristics from the grass. They have become seriously interested in its properties, propagation and growth habits as well as possible uses by the indigenous people. They are chasing up all the information they can find about it and are successfully propagating in pots, and on growing it in the ground on their property.

This plant is extremely slow growing. The main stem can grow up to 2 metres. It makes a striking indoor plant!

Seeds forming on mature plants in pot on bench and reaching the high roof at the nursery



Bev and Peter Henson with our curator Judy Blood

It flowers when approximately four years old. The flowers are tiny and non-descript appearing on the rather wriggly tip of the flower spike- resembling in fact a thin brownish caterpillar!

Flower spike

The fruit is a black berry up to 8mm in diameter.

The seeds vary from black to green and almost white. They grow easily. Dorothy Shaw, Queensland plant pathologist who died in the 1980s , studied this plant and she is recorded as saying that she always planted the seeds horizontally but Peter and Bev have found that they germinate OK pushing pointed end – either end! - into commercial potting mix. Germination time has varied from 40 days to 9 months!

The plant has an unusual root system with contractile roots. This means the young plants will gradually be pulled further down into the potting mix.

Contractile roots of young plant

Young plants seem to do best if left in pots of gradually increasing sizes until main stem is about 30cm in height. At all stages of its life this plant needs to be in a well drained site with access to moisture. But not in swampy ground. Bev and Peter have found it grows well near the base of Eucalypts and Hoop Pine Trees preferring mottled sunlight or a semi-shaded position.

Brisbane Rainforest Action and Information Network has reported that the berry is NOT edible. Peter Henson has tried one and was not impressed! He also found that the root ball of a mature plant is similar to chunky root vegetable such as a turnip, however so far has found no information to indicate that it was ever used as a food source. He would welcome further information about uses of this plant.

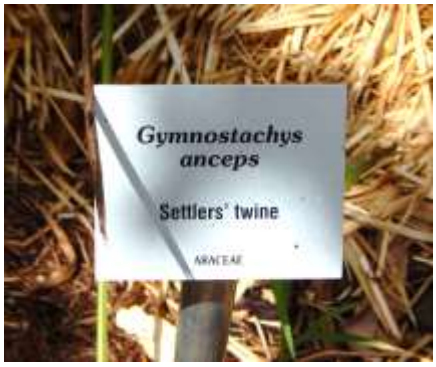
Gymnostachys anceps… Settlers Twine

Gymnostachys anceps is usually described as a member of Araceae family but a note on the PlantNet web site indicates that there is some doubt as to whether Gymnostachys does in fact belong in this family.

An article from the Australian Tropical Herbarium, centred at James Cook University in Cairns, and featured on their website, describes it as an Aroid. *'This species is the only member of its genus and represents an old evolutionary lineage. While all other aroid lineages in Australia are relatively young and must have arrived here via long distance dispersal over the past 30 million years (most likely through Southeast Asia), this old inhabitant has probably been around much longer. Gymnostachys lineage split from its closest relatives Orontium, Symplocarpus, and Lysichiton, who live in north east Asia and North America about 100 million years ago! This makes Gymnostachys anceps the only aroid that could have arrived in Australia when it was still a part of Gondwana.'*

Gymnostachys anceps was first recorded in 1810 by M. Brown in his publication *Prodromus Flora Novae Hollandiae* . This was the first attempt at a survey of the Australian flora which described over 2040 species, over half of which were published for the first time.

While little known these days, this Australian plant has a long history of use by indigenous people for binding tools or weaving bags or nets. A report from A. Meston, who led a government scientific expedition near Cairns in 1889, noted that the leaves "*would suspend 100lb (45kg)* and that *Aboriginal people use the leaves as rope, twisting a couple into a band, and that it can carry surprising loads, the weight all bearing on the band passed round the forehead". (AB & JW Cribb, 1982, 'Useful Wild Plants in Australia"*). Later European settlers used it in to make string. And there is a report that they used it to tie up pigs to carry them to market.



Our lone Gymnostachys in the Sensory Garden
Info compiled by Marie Matthews

Flora of NSW
Volume 4, Column 4
Family Araceae

The family Araceae (the Aroids), also contains two other plants which occur on the North Coast. One is Pothos, *(P. longipes)*, a climber on rainforest trees. and the other is Alocasia *(Alocasia brisbanensis)*, or, better known to us as Cunjevoi. They all have the same type of inflorescence - like an Arum Lily, with an outer spathe (the showy white part of the Arum Lily inflorescence), and an inner spadix - the yellow spike of the Arum.

We have certainly got Cunjevois growing, but I am not sure about the Pothos. Perhaps it would be worth exploring so that we have three native members of the family in the Gardens. The fourth is Typhonium, but I have never come across this and I think it is a bit further south than our catchment.

Jan de Nardi – Botanist and Nursery Manager

Sydney Morning Herald (NSW)

Monday 23 December 1872

"Settlers Twine" – to the Editor of the Herald

Sir, Under the head of Settlers Twine, in this day's Herald mention is made of a new(?) grass, said to have been found on the Upper Paterson by Mr. Frankland, and possessing a fibre strong enough to prevent its being torn asunder by a fair pulling by the hands. This so-called "grass" is no doubt the well known Gymnostachys anceps – a plant of the Arum family, and known all along our eastern coast as the "Travellers' Grass"; but although it has a range of growth extending from the southern limits of this colony northward far into Queensland, yet it is not sufficiently abundant in any one locality to be of any commercial value. Fine samples of it were exhibited in the News South Wales Court at the Paris Exhibition in 1867, and excited some attention from the immense strength of its fibre, which in its green state is perhaps the strongest of any known plant in the world. It may be seen growing in the Botanic Gardens.

Signed C.M. Botanic Gardens, December 19.

Source: HTTPS://trove..nla.gov.au/rednition/nla.news-article 13312542.txt?print+true

Thanks to Peter Henson for this information

Volunteering at the Gardens

Geoff Walker

Over the last twenty plus years of volunteering at the Gardens, I have gradually changed the jobs that I have done. In the very early days there was a period of sustained physical activity - site clearing, rubbish removal, barrowing on sloping paths, planting and weeding. I was also at times involved with guiding, working with Calder Chaffey doing the GPS on each specimen tree and giving talks about the Gardens.

Geoff togged up for a painting job 2016

There followed a very different period of the less physically demanding work of staining and painting of garden furniture and keeping signs and picnic tables clean and tidy. Now, as I have now reached a more venerable age I have moved across to the botanic gardens nursery where I pot up tiny seedling trees and label them appropriately. All these jobs I have enjoyed. And I still get great pleasure from working at such rewarding activities with a really wonderful group of people.

When we started we had a singular purpose… to clear the land and to plant hundreds of local rainforest trees as the nucleus of a brand new botanic garden. This we did.

Now the Gardens are flourishing but the tasks have multiplied. Today it is far more than clearing and planting. It is managing and maintaining the already established areas, keeping plant records, dealing with publicity, education, guiding and much, much more. So many of our wonderful helpers are doing multiple jobs on many levels.

The variety of work available to our volunteers is exciting but at times overwhelming. I feel that we are risking burn-out of key personel when they take on more of this extra work.

Sometimes, as they get older, experienced volunteers leave the group, feeling they can no longer do gardening. But there are so many other activities that are available, and help from other volunteers in such areas will lessen the burden on the long term multitaskers in our organisation. A listing below of volunteer jobs that come to mind as I write is incomplete, but it is representative.

Helping with planting on Open Day 2007

Working at the Nursery 2020

List of Volunteer jobs at Gardens

1. Digging, planting, fertilising mulching, labelling and ongoing watering.
2. Weeding (a full time job) and trimming of garden edges
3. Pruning in the season and brushcutting
4. Building and maintaining paths and carpark areas
5. Building small – and sometimes not so small - structures
6. Staining, painting and cleaning garden furniture, signs, handrails and bridges.
7. Nursery plantings in trays and pots; cleaning pots; keeping records; organising plant sales and hand printing labels;
8. Servicing of irrigation for the nursery and Gardens.
9. Annual audit of our books, tools, equipment and machinery.
10. Tool shed marshall – a place for everything and everything in its place
11. Machinery marshall - fuel, battery charging, replacement, parts, maintenance
12. Training and leadership of Garden guides. Organisation of guided walks
13. The organisation and leadership of School group visits
14. Organising open days and other events; organising catering and car parking
15. Media releases, developing information brochures, research, library
16. Speaking to visiting community groups
17. Getting out the twice yearly Newsletter
18. Maintaining Web site and Facebook page
19. Photographic records of Garden development
20. Mapping - paths, power and water pipes

… and much much more

Many Australian animals feed on mistletoe. The nectar and fruit of this plant are loved by native birds such as honeyeaters, lorikeets, bowerbirds, cockatoos… even emus… as well as the beautiful little Mistletoe Bird. As the Mistletoe is not dependent on rainfall for its water – getting all the fluid it needs from the host tree - the flowers and fruit often appear in a dry season when other plants are not producing. As well as the birds, koalas, sugar gliders and possums also feed on the fruit and flowers of the Mistletoe. Koalas and insects, even sheep and cattle, will all eat the leaves.

Adapted from article in Backyard Buddies
https://www.backyardbuddies.org.au/backyard-buddies/mistletoe

Mallotus phllippensis Red Kamala seed pods *Photo Florence Treverrow*

Our Gardens link to America?

While our Gardens have no direct link with Trump's, or now Biden's, America it does have a tenuous botanical connection with the new Vice President of the USA. Ms Kamala Harris shares her first name with two widespread native dry rainforest trees, Red Kamala *(Mallotus philippensis)* and the Yellow Kamala *(Mallotus discolor).* In a recent interview, she mentioned that the red powder of the former tree was used to mark her forehead in religious observances.

Both these trees are native to the East Coast of Australia. Indeed, they both belong to in the Euphorbiaceae family and can be found from Pakistan to the Pacific. Red Kamala bears the name of the Pacific country in which it was first identified. In Australia it grows from the Hunter district of NSW to North Queensland. The red seed pods of the Red Kamala are traditionally ground and used as a dye… and in some countries as a medication.

Florence Treverrow, our Secretary, has photographed many of our rainforest plants including the Red Kamala. Her colourful pic (above) was featured in our 2020 Calendar for the month of December.

Both Kamalas are rugged trees to about ten metres and quite useful in dry rainforest gullies. They are common in regeneration plantings around the hills of the Richmond River and Wilson River valleys.

Because of the winter climate in Washington, I doubt that these Kamala trees will be planted at the White House! *Geoff Walker*

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Breynia oblongfolia Breynia currently fruiting at the Gardens

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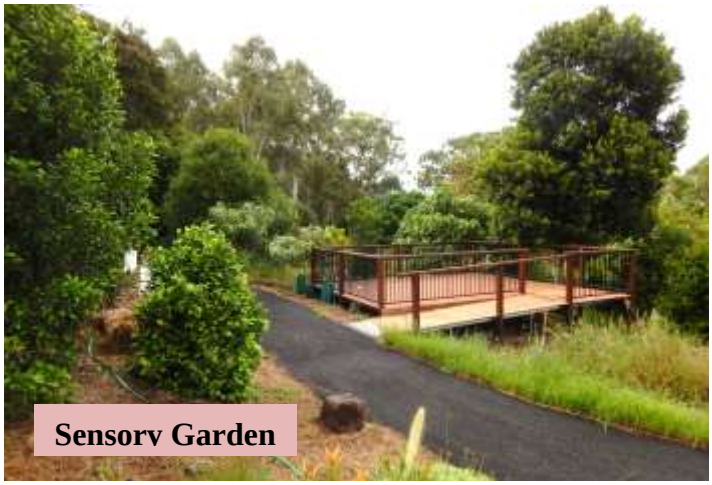

Sensory Garden

Rice Garden