



Streamlines

Newsletter of the Pullen Pullen Catchments Group Inc.

August 2022

Welcome to the August edition of Streamlines which begins with a report on the highly successful Tree Planting Day in Anstead Bushland Reserve. Staying with Anstead Reserve, there's been great excitement since our Creek Catchment Officer, Brendan McIntyre, identified *Rhodamnia rubescens* in the Reserve. *R. rubescens* is on the National and Queensland Conservation lists as a critically endangered species of plant – hence the excitement! Some information about the plant extracted from various sources appears on page 7.

Beginning on page 5, Jim Williams provides an interesting update on his progress revegetating his nature strip.

We're all familiar with the more obvious effects of global warming such as Pacific islands being submerged and more frequent and more severe weather events. On page 7, John Ness draws our attention to one of the more subtle effects – rising temperature increasing the water holding capacity of the atmosphere and the effect this has on trees. It could result in changes in the composition and extent of our forests.

Pullen Pullen Catchments Group is conducting a survey to collect information on members' views and preferences. We'd love all our members to complete the short questionnaire for us – it will only take around 5 minutes of your time and your responses will be invaluable for us! The survey will remain open until Friday 16 September. A report summarising the results of the survey and ideas for the future will be circulated to members later in the year. Go to page 8 for more details.

All members are welcome to submit articles to Streamlines via helian@pretirementresorts.com.au. The deadline for the next issue is 15th November 2022.

Helen Ogle
Editor

CONTENTS

Page

Pullen Pullen Catchments Group.....	2
Anstead Bushland Reserve Tree Planting Day – July 31.....	3
Part 2 – Transforming our Nature Strips into a Resource for Nature.....	5
To Kill a Tree.....	6
<i>Rhodamnia rubescens</i>	7
Pullen Pullen Catchments Group Membership Survey.....	8



Pullen Pullen Catchments Group

A Landcare Group

Website

www.pullenpullencatchments.org.au

Meetings

Meetings are held at 6 pm on the first Wednesday of each month at Pullenvale Environmental Education Centre, 250 Grandview Road, Pullenvale.

Committee Members 2022

President:	John Ness	3202 7556	john.ness@emsolutions.com.au
Vice President	Richard Ponsonby	3202 9484	members@pullenpullencatchments.org.au
Treasurer	Kaaren Ness	3202 7556	
Secretary	Liz Dominguez	0419 794 550	contactus@pullenpullencatchments.org.au
Committee Members	Margaret O'Grady Ron Tooth Karen Roberts Jim Williams Corinne Foster	3202 5115 3374 1002 (W) 0438 458 935	m.ogradey@live.com.au r.tooth@uq.edu.au bobnbert@internode.on.net jimawilliams@hotmail.com corinneh@tpg.com.au
Bushcare Coordinator, Pullenvale	Lynn Brown	0417 648 050	emmacaja@bigpond.net.au
Bushcare Coordinator, Anstead	Gillian Whitehouse		gillianmw1949@icloud.com
Website Coordinator	Emma Barrie	0457 467 562	pullenpullencatchments@gmail.com
Wildlife Officer	Irene Darlington	0409 026 883	irene.darlington@outlook.com
Streamlines Editor	Helen Ogle	3323 7407	helian@pretirementresorts.com.au
Creek Catchment Officer	Brendan McIntyre	0481 908 543	brendan.mcintyre@brisbane.qld.gov.au

Membership Options

Membership fees are:

- Annual Membership – \$10 per person payable on March 1 each year
- Life Membership – \$100 per person

We are delighted to accept donations.

- a) Send a cheque payable to PPCG to PO Box 1390, Kenmore, 4069 or
- b) Transfer the funds electronically to BSB 064 152, Account No.10107038 Ref: your name.

Working Bees

Anstead Bushland Reserve – 1st Sunday of the month, 8.30 – 11 am (April-September), 7 – 9.30 am (October-March); 2nd and 4th Saturdays of the month, 2-4.30 pm (April-September), 3.30-6 pm (October – March)
Pullenvale Forest Park – 2nd Sunday of the month, 8.30 – 11 am (April-September), 7.30 – 9.30 am (October-March)

See also the Events Calendar on the website (<https://www.pullenpullencatchments.org.au/events-calendar/>)

Tools, gloves, etc are provided at Working Bees. Just wear sturdy boots and sunsafe clothing and bring water and a hat!



Dedicated to a better Brisbane

“The PPCG acknowledges the support of the Lord Mayor’s Community Sustainability and Environmental Grants Programs for a grant to help with administrative, bushcare and educational costs”

Anstead Bushland Reserve Tree Planting Day – July 31

Gillian Whitehouse

The Tree Planting Day was a great success thanks to all the hard work from the team. Special thanks to those who put in so much time in the few days prior: Karen's organisation of a contractor to spread mulch and dig 500 holes made it all possible, Jim's long days at the site supervising all this ensured it worked as planned, and John, Jim, Karen, Kaaren, Lynn, Craig and others (apologies to those left off this list!) brought it all together by transporting plants, watering holes, delivering equipment and getting everything set up. Brendan organised the Portaloo and provided support and help with logistics every step of the way.

On the day, Jim, Karen, John, Kaaren and Richard managed the tree planting process, assisted by Lynn and Corinne who also helped keep the picnic and look out areas connected. Margaret (and others) took some fantastic shots of the activities. Brendan and Wes set up an excellent BCC marquee and signage at the picnic area and along Hawkesbury Road for parking overflow. We also commandeered some shelter space to display posters on PPCG projects and set up the free trees for participants to take home. Brendan was terrific as an MC and did a great job looking after Cr Adermann – introducing him to the group at the picnic area and walking him up to plant a hoop pine and back again.

All the presenters (Farvardin Daliri's giant animals, Wild Call and Hollow Log Homes) arrived on time and were greatly appreciated by participants. The Rotary van arrived with a team of helpers and served up sausages and drinks.

There were 77 registrations for the event (73 on Eventbrite and another 4 from the National Tree Day site). We don't have an exact count of how many attended but all the trees were planted, some using Jim's dedicated 'ownership' scheme, and the Wild Call and Hollow Log Homes presentations both attracted an interested crowd as did the giant animals.

It ended up being a great day and hopefully generated interested in ABR and PPCG's bushcare activities.



Part of the audience watching Wild Call's wildlife presentation



Farvardin Daliri's giant platypus, sulphur-crested cockatoo and kookaburra



Some enthusiastic tree planters at work amongst freshly planted trees



Part 2 – Transforming Our Nature Strips into a Resource for Nature

Jim Williams

I am delighted to report that since my previous article (see Streamlines May 2022) the transformation of our nature strip has been simply magnificent. The good winter rains have really produced wonderful growth in all the grasses that were planted and many have seeded with plenty of new plants emerging. The postie is happily using the finely mulched footpath, whilst the tough prostrate grass-like plant *Cyperus gracilis* is beginning to show signs of forming a blanket there. Reptile and insect life have taken up residence, so the birds are happy.



A challenge has been to find suitable prostrate plants that can take full exposure to the westerly sun. In Brisbane, native plant nurseries grow very few of these. *Vittadinia sulcata* (Furrowed Daisy) and *Enchylaena tomentosa* (Ruby Saltbush) are showing signs of success although the unusually high level of winter rainfall has resulted in a few losses.

People are amazing and very supportive of the endeavour, even extending to actually delivering and planting *Wahlenbergia queenslandica* (Queensland bluebell) for me, thank you so much!



Vittadinia sulcata
(Furrowed daisy)



Enchylaena tomentosa
(Ruby Saltbush)



Wahlenbergia queenslandica
(Queensland bluebell)

Included in the strategy is to collect and spread suitable seed from private land where the owners give me permission and are allowed to do so. This is already showing positive signs with seedlings surprisingly emerging during our wet winter.

The idea of using the nature strip to actually support nature is catching on and I was delighted that the BCC made me aware of "The Shady Lanes Project", see: <https://shadylanes.com.au/>, a wonderful online resource that allows likeminded people to share, plus much more.

So the journey so far has been without any significant problems and I would encourage anyone with a nature strip anywhere from the bush to the city (ensuring that your council allows for this) to have a go and use our nature strips for nature. Just imagine if everyone came on-board and streets were nature's corridors that followed the roads. This surely is a "do-able" example of "thinking globally and acting locally", for most of us.

To Kill a Tree

John Ness

One of the very first activities that the first European colonisers of Australia set about upon landing in Australia was the chopping down of trees. This task was continued with great enthusiasm for the next 200 years until the reality of the saying 'you never know what you've got until it's gone' slowly began to sink into the Australian collective consciousness. Within the first 70 years, arguably the tallest ever trees in the world, certain *Eucalyptus regnans* specimens, were chopped down and ever more efficient ways to kill trees were invented. Ringbarking and poisoning proceeded apace and then the chainsaw gave more immediate satisfaction in the quest to clear the scrub. The pinnacle of mechanical destruction was reached in the 1960s with the 'ball and chain' towed behind two heavy bulldozers to clear hectares of brigalow in a good day's work!

This clearing of trees persisted, and still persists, despite the mounting evidence of the major problems of soil erosion, loss of soil fertility, salinity, destruction of ecosystems and animal extinctions and the outbreaks of diseases in trees. Perhaps the massive die back of the remaining eucalyptus forests in the New England Tablelands in the decades after 1960 was the example par excellence of what damage tree clearing can cause although this has more recently been repeated in the alpine regions of NSW with the wide scale dieback deaths of *Eucalyptus viminalis* forests.

A different manifestation of a massive death of trees occurred in 2015/16 when about 75 km² of mangrove forests died along a 2000 km stretch of the coast of the Gulf of Carpentaria. The trees in effect died of thirst due to a persistent El Nino pattern resulting in a long succession of low tides in the Gulf.

An estimated 40 million trees died and although mangrove trees are relatively small with an estimated average carbon content of only 20-25 kg, this still represents nearly 1 million tonnes of carbon or around 3.5 million tonnes of carbon dioxide ready to be released into the atmosphere. (Australia emits about 500 million tonnes of equivalent CO₂ per annum so this patch of dead mangroves is a small (<1%) but not negligible possible contributor).

Mangroves are the best trees in the world for locking up carbon dioxide as the decaying matter forms a carbon rich mud rather than being released as carbon dioxide. The mud can hold the carbon for hundreds to thousands of years compared to a carbon lifecycle of about 100-200 years for terrestrial forests.

While this mass mangrove death may not have been directly driven by human activities, the author of this note can verify a similar but much smaller area of mangrove deaths of about 50 hectares occurring in mangrove flats south of Townsville around 60 -70 years ago. However, increasing tree deaths are now being recorded in forests in North Queensland due to human driven global warming. The average death rate in trees over a 50 year period has doubled from around 0.01 to 0.02 deaths per 100 trees. The data was collected from 24 sites that have been monitored in North Queensland forests from 1971 [1].

Essentially, as the atmosphere warms not only do trees have more heat stress but the atmosphere can also hold more water so what is called the vapour pressure deficit increases. This difference between the actual

water vapour in the atmosphere and the water vapour that the atmosphere can hold drives the evaporation demand. With increasing temperatures, the wider vapour pressure deficit puts more stress on trees to maintain higher evaporation rates. Of the 80 or so tree species examined, it was found that trees with higher density wood, mainly hardwoods, were less susceptible to this sustained stress so over time there is likely to be a change in the species composition of the forests.

[1] D.Bauman et al. 'Tropical tree mortality has increased with rising atmospheric water stress' Nature Vol 604 18 May 2022

Rhodamnia rubescens

Commonly known as the scrub stringybark, brush turpentine or brown malletwood, *Rhodamnia rubescens* is a member of the family Myrtaceae along with eucalypts, bottlebrushes and lilly pillies. It is an evergreen tree found in rainforests from Bateman's Bay, New South Wales, to Gympie, Queensland. It is identified by its stringy bark and its three-veined leaves.

R. rubescens is a small to medium tree growing up to 25 m tall with a trunk up to 75 cm diameter. The bark resembles that of its relative, the turpentine tree, *Syncarpia glomulifera*, being reddish-brown, brittle, scaly and 'stringy'. The tree's small branches are scaly with the same reddish bark as the trunk. New shoots are covered in minute hairs.

The leaves are in pairs opposite each other on the stem. They are elliptical in shape, greyish-green and 5-10 cm long with tips tapering to a point. They have three prominent veins with one central vein and two curved veins that closely follow the curve of the leaf margin. The underside of the leaves is downy and lighter in colour than the upper surface.



R.rubescens showing the deeply furrowed reddish-brown bark and paired leaves (left) and reddish-brown young stems, downy underside of leaf and three conspicuous veins (right)

Clusters of fragrant white flowers appear between August and October. The fruit is a small berry about 6 mm in diameter. It is red at first, maturing to shiny black between October and December. The fruit is eaten by various birds, including the brown cuckoo dove, figbird, green catbird and rainbow lorikeet.



R. rubescens flowers (left) and fruit (right)

Now for the bad news! As well as being critically endangered, *R. rubescens* is very susceptible to infection by the myrtle rust fungus, *Austropuccinia psidii*. The fungus attacks actively growing shoots, stems and other soft young tissues such as fruits, flowers and emerging seedlings causing yellow-brown spots and distorting the part it has infected. Bright yellow (rarely yellow-orange) masses of spores form on the underside of the leaf. The spores are wind-borne and infect many plants in the family Myrtaceae. Since myrtle rust was first detected in NSW in April 2010, it has spread across Australia. It is now found in all states except South Australia.



Myrtle rust symptoms on *R. rubescens* (left) and yellow spore masses on the underside of a leaf (right)

Pullen Pullen Catchments Group Membership Survey

To thank you for your participation, you can go into a draw for \$100 worth of native plants from a local nursery. Just fill in your contact details at the end of the survey and your name will be entered in the draw. Your contact details will be kept separately from your responses to the survey questions to ensure they remain confidential.

Your responses will be used only to produce aggregate statistics and no individual will be identified in the survey report.

Complete the survey here:

