

# APS EAST HILLS GROUP NEWSLETTER



## June 2021

### NEXT EHG MEETING:

**Wednesday 2 June at 2 pm to 4 pm**

The functionality of urban street trees

**With Sophie Moore**

Plant Scientist

Sophie is investigating the usefulness of street trees to the ecological and climate resilience of the urban forest compared to native trees.

**LUGARNO-PEAKHURST UNITING CHURCH**

**909 Forest Road Lugarno (opposite the Chivers Hill Lugarno shops)**

**VISITORS ARE WELCOME**

**WELCOME** to the June 2021 edition of the APS East Hills Group Newsletter.

This month we're having a little feature on aromatic plants, inspired by the number of such brought to the plant table at our May meeting. Following a very informative and rather alarming talk about climate change in May, June's speaker will be looking at the use of street trees to mitigate some of the projected problems. As the temperature increases, we need more shade.

Dorothy Luther, Editor

In the spirit of reconciliation, the APS East Hills group acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

<http://austplants.com.au/East-Hills>



## A NOTE FROM THE PRESIDENT

Des & I recently attend the quarterly meeting at Kurnell.

At the AGM, Heather Miles was elected the New APS NSW PRESIDENT. John Aitken has moved to Vice President after 6 successful years as President. Congratulations to all, especially Leonie Hogue for receiving the Life Membership award & John Arney the Conservation award. Those who know them both will agree the awards are justly deserved.

Dan Clarke gave an interesting talk about Captain Cook's journey, including the Transit of Venus, travelling around NZ & up the east coast Australia.

On the 19 & 20 June 2021 Dorothy Luther & I are attending the President's Strategy workshop in Parramatta to review the draft strategy the board has been working on and how to implement it. The strategy looks at:

- The State Office & how to best support and grow district groups
- Modernising for the future
- How we can engage with the wider community now and in the next 10 years.
- How to make the Bi annual conference meeting next year in Kiama a resounding success

For those interested in the details, see the following links [you might need to copy & paste]:

Draft strategy - Part 1: <https://www.dropbox.com/s/0ln6d7b231gird9/APS%20Strategy%202021-2026%20-%20Part%201.pptx?dl=0>

Background - Part 2: <https://www.dropbox.com/s/h6tg9211u4y4n1d/APS%20Strategy%202021-2026%20background%20-%20Part%202.pptx?dl=0>

Any feedback, comments and suggestions we can take to the meeting will be gratefully received.

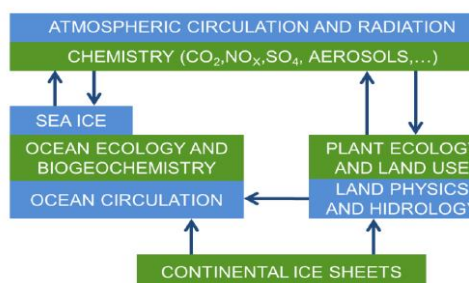
All the best to Kate & Tony Porritt who are off travelling for 2 months across the Deserts of WA & the NT. We will be looking forward to hearing from them on their safe return.

Marie O'Connor.

President, East Hills Group

## GUEST SPEAKER

Our guest speaker for May was Rebecca Riggs, a Climate Scientist. Her topic was "Australia's changing spring and summer temperatures: A look through to 2099"



A climate scientist studies the physics of climate – the transfers of energy and materials through the Earth's systems that influence the climate. This is different from weather forecasting, which is short term. The climate models calculate averages over time for a specific location. The models mostly look at temperature changes, as the results are more reliable than looking at rainfall.

There are many local factors affecting rainfall. The models are tested by 'hind casting' - looking backwards over time. Then the model becomes self-learning and is used to project multiple scenarios, looking at the heat retained in the atmosphere and the impact of our actions.

Figure 1 - Climate Model, courtesy of Rebecca Riggs

The Japanese have hundreds of years of records of the beginning of the cherry blossom flowering and its clear that this is happening earlier every year. This is one of the oldest continuous records of weather that we have, so this is not a short term phenomenon, as climate deniers claim.

**Scenarios**

The most commonly used modelling scenario is known as RCP 4.5, which results in a 2 degree C rise in temperature by 2100. [This is the target set by the Paris Agreement - Ed] After this, the temperature will fall again, slowly, but this is not much comfort. Achieving CP 2.6 requires drastic actions, which are showing no signs of happening. We had better pray that we avoid RCP 6.0 or RCP 8.5. The temperature in Australia has already risen by 1 degree since 1950, and the spring temperature has

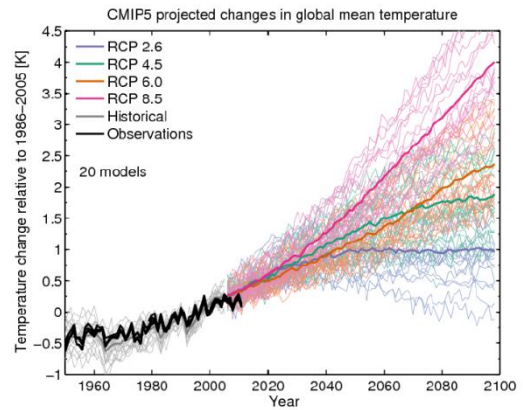


Figure 2 Scenarios, courtesy of Rebecca Riggs

increased more than the summer temperature.

<https://www.climatecouncil.org.au/resources/heat-map-clear-trend-global-temperature-change/>

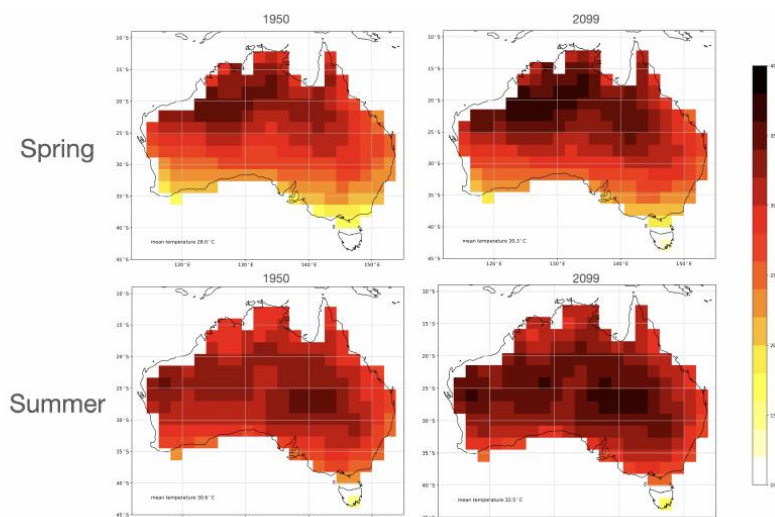
The increase has been higher in Europe but it is not so obvious as the overall temperatures are lower. This is more challenging for Europe as they are not used to heat and don't know how to react. They are not prepared for bush fires for instance.

**Projections**

The following heat maps (using RCP 4.5) tell an alarming story. Western New South Wales [where much of our food supplies come from - Ed] will be at the highest risk with the biggest increase in temperature. There will be less impact in Western Australia and Tasmania. The total change for spring will be 2.3 degrees with 1.9 degrees in summer. Spring will start earlier and summer last longer. By 2026, our spring will be like the current summer.

**Total temperature change**

	1950	2000	2045	2099	Total Change
Spring	28.0 °C	28.7 °C	29.5 °C	30.0 °C	2.3 °C
Summer	30.6 °C	31.0 °C	31.9 °C	32.5 °C	1.9 °C



The future in general is not promising - not only warmer springs, but more extreme weather events - fewer but more intense cyclones, extreme rainfall, heat waves which will result in fatalities for people, animals and plants. Sea levels will rise, resulting from the melting of land ice such as over Greenland and Antarctica. Reefs are already bleaching - Lizard Island for instance is no longer used for research, as there is nothing left. There will be storms and droughts. This is a global issue that Australia is not doing well in, although we have experience in these conditions and we will need to teach other countries how to cope. The increase in spring temperatures will have a significant impact on agriculture. Although more intense cyclones may bring more rain to the interior, this is not certain. Scientists can't model the great ocean oscillations as it's not understood why and how this works. Therefore this is not included in their models.

### **What Must We Do**

The science is there to solve the problem but there is no implementation of it yet.

Although COVID had a big impact with no air travel and many office buildings shut down, the carbon level in the atmosphere still increased. There is quite a lag between carbon levels and the increase in temperature.

We need to increase the yield of food production and decrease land use. This probably means lower meat consumption.

We are running out of our current supplies of fossil fuels and extracting from new sources, such as fracking, requires a great deal of energy [also emits a great deal of methane which is an even bigger problem than carbon dioxide – Ed]. We must find alternative energy sources. Third world countries don't have clean energy options as they are still too expensive unless the first world chips in.

In Europe, awareness of the environment is built into the culture; however, this is not so here. We need the government to set good examples and institute processes to enable awareness. Rebecca is based at the University of Hamburg where she is studying the impact of spring temperature changes on agriculture in Germany. She was not able to offer any comments on the impact on Australian Native plants or animals.

### **Possible Good News – Editor's Notes**

As well as all the doom and gloom stories, there are some cautiously optimistic stories, saying we have a hope of surviving. These are based on the actions that are slowly beginning to happen at Government level to commit to actual cuts in greenhouse gas emissions, and invest in alternative energy sources. Even the current largest emitter, China, has committed to carbon neutrality by 2060, or sooner.

Business and finance are also on board. The Australian Prudential Regulation Authority now considers climate change mitigation central to corporations' due care and diligence. Company directors who fail to consider and disclose climate-related risks could now be held liable under Australia's Corporations Act.

For the first time, political will and global public opinion seem focused on profound action across many domains. But to elude a catastrophic temperature rise of 3-4°C by 2100, we must make political ambitions, collective change and personal contributions concrete. We must take ACTION!

From <https://theconversation.com/more-reasons-for-optimism-on-climate-change-than-weve-seen-for-decades-2-climate-experts-explain-159233>



## GROUP NEWS

### FROM OUR MAY MEETING

#### Possible Project with Picnic Point Public School

We have been approached by Karen Sellick, the Principal of Picnic Point Public School. The school has a beautiful area that they are trying to re-establish with native plants. This area is called 'Minimbah' - which means a 'place of learning'. It was created by parents, the TAFE and local gardening enthusiasts 40 years ago. It is an area where teachers can take their students to learn, but had fallen into disrepair. The school has done a lot of work removing the weeds and clearing the area and they plan to replant in species native to this area. The school emblem is a flannel flower - so they believe that flannel flowers must have been on the grounds at some stage. They are asking for our assistance with rehabilitating.

Tony Porritt reports:

Other than supplying the plants for the project, Lloyd or the Menai group do not plan any involvement. He believes it is up to East Hills group to be the APS representative. He did suggest that someone from East Hills visit the proposed site to ascertain the type of existing vegetation & what the school wants to retain & understand what they want to achieve. After this the types of plants could be agreed. Jan may be able to attend a Belonging Day activity at the school on June 10th to view the area. We hope to hear more on this project in future meetings.

#### What's Flowering Now at the Georges River NP

Karlo Taliana bushwalks through the Georges River National Park time 3-4 each week and has undertaken to keep us posted on what is flowering there. The following pictures are from him (no words this month).



Woollsia pungens



Corybas aconitiflorus  
(Spurred helmet orchid)



Pterostylis nutans  
(Nodding Greenhood)



Caladenia picta



Acacia terminalis (Sunshine Wattle)

## PLANT TABLE – MAY 2021

List: David Crawford and Jan Douglas

Thanks to everyone who brought specimens.

<b><i>Aleurites rockinghamensis</i></b>	Candlenut
<b><i>Anatholea anisata</i> (synonyms <i>Backhousia anisata</i>, <i>Syzygium anisatum</i>)</b>	Aniseed Myrtle
<i>Banksia media</i>	Southern Plains Banksia, Golden Stalk Banksia
<i>Banksia</i> 'Giant Candles'	
<i>Banksia praemorsa</i> (Yellow-flowered form)	Cut-leaf Banksia
<i>Banksia spinulosa</i> 'Coastal Cushion'	Hairpin Banksia
<b><i>Grevillea biternata</i></b>	
<i>Grevillea preissii</i> var. <i>glabrilimba</i>	Spider Net Grevillea
<i>Grevillea</i> 'Sunset Blaze'	
<i>Grevillea</i> 'Miami Pink'	This is a hybrid between <i>Grevillea banksii</i> and <i>G. nana</i>
<i>Grevillea</i> 'Lollypops'	
<i>Grevillea</i> 'Robyn Gordon'	
<i>Grevillea</i> 'Silvereye Cream'	
<i>Hibbertia scandens</i>	Climbing Guinea Flower
<i>Melaleuca</i> sp.	
<b><i>Prostanthera</i> sp.</b>	Mint Bush
<i>Thryptomene</i> sp.	
<i>Xanthostemon chrysanthus</i>	Golden Penda (Foliage specimen)

We had some lovely **aromatic plants** for the plant table this month.

### Prostanthera sp. (Mint bush)

The coastal mint bought in by Marie has a lovely perfume.

In the night with the moonlight it also has a silver glow which Des particularly enjoys.

Your editor kept a piece in water for a week to enjoy the pleasant, refreshing aroma from the leaves, although I find some mint bush aromas quite unpleasant.

Unfortunately, we don't know the species. Its not *Prostanthera scutellarioides*, the species identified by Australian Plants Society NSW <https://austplants.com.au> as 'costal mint bush' because, unlike most mint bushes, the foliage of that species has virtually no perfume.

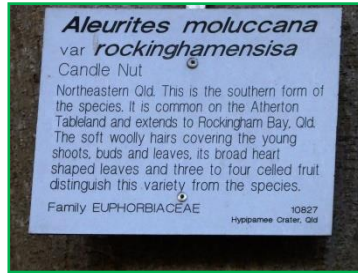
### Aleurites rockinghamensis (Candlenut)

*Aleurites rockinghamensis* (or *Aleurites moluccana* var *rockinghamensis*) is a member of the spurge family (Euphorbiaceae). Common names for this large tree include Candlenut and Candlenut Siris. It occurs naturally in rainforest in Northeast Queensland at altitudes ranging from near sea-level to 1000m. This fast-growing tree often grows in disturbed rainforest but is also found in well-developed rainforest. It has very large fruits each with three locules and each

locule contains a large nut. A large specimen of this tree grows in the Royal Botanic Garden Sydney. Its label appears to be out of date and /or inaccurate.

A related species, *Aleurites moluccana*, occurs in South-east Asia, and its large nuts are used (after roasting) as candles and as food. It is said (Factsheet - *Aleurites rockinghamensis* (anbg.gov.au)) that the raw nuts of *Aleurites rockinghamensis* may taste pleasant but they cause vomiting and diarrhoea!

The seed of the local species allegedly burns too, but the experiment conducted in the meeting wasn't convincing.



L to R above: Candlenut fruit; Sign in the Royal Botanic Garden (Sydney); Part of the top of a Candlenut in the RBG(Sydney). Photos by Jan Douglas.

## Grevillea biternata



*Grevillea biternata* photo by Karlo Taliana

This grevillea is native to Western Australia, from Geraldton to Perth, where it grows in open heath or shrubby mallee woodland in sandy or gravelly soils. This is also described as sandplains & wheat belt. It regenerates from seed and (at least in some populations) from rhizomes. It is a shrub from 0.3-1.8 m high.

Since it has very pretty white flowers and a vanilla aroma, it is surprisingly poorly represented on the internet. There are very technical descriptions in the botanical databases, but nothing in the popular sites, even Wikipedia.

Perhaps the prickly foliage discourages nurseries from featuring it - or maybe because the flowers don't look like grevilleas.

From 'The Grevillea Book - Volume Two' :-

Species name is derived from the Latin bi- (twice) and ternatus (in threes) in reference to the foliage, which is twice three-forked.

Prickly foliage provides suitable shelter and nesting sites for small birds.

## Backhousia anisata

From Wikipedia:

*Backhousia anisata* (aka *Syzygium anisatum*), with common names ringwood and aniseed tree, is a rare Australian rainforest tree with an aromatic leaf that has an essential oil profile comparable to true aniseed. The leaf from cultivated plantations is used as a bushfood spice and distilled for the essential oil, and is known in the trade as aniseed myrtle or anise myrtle.

The ringwood tree has a dense crown and grows up to 45 metres tall.

The leaves are 6–12 cm long with prominently undulate margins and rich



aniseed aroma when crushed. Flowers are white and sweetly scented, borne in panicles. The fruit are dry papery capsules around 5 mm long and are white in appearance. Ringwood's natural distribution in the wild is restricted to the Nambucca and Bellinger Valleys in the subtropics of New South Wales, Australia.

Marie advises that it's good in a vase or a few leaves in water in a bowl.

## APS Resource

Advised by APS South East NSW Group

If you go to the APS NSW website and click on the Resources tab, you will see a drop down tab for **Plant Database, Information and Newsletters and Journals**. The Plant Database is interesting, but it is another database that amazed me. Click on '**Information**', and then on the '**Conserving Native Plants and Habitats**' box. On the page where it says "To see all regions and data, click here", do just that and the regions and data options will be revealed.

## Understanding Native Plant Distributions - a Major Data Project

The project aims to:

- \* Promote bottom up activities by APS members
- \* Ensure APS members know where native plants are
- \* Provide prompts and benchmarking for bushwalking activities and lists
- \* Provide prompts and benchmarking for bushfire recovery and other changes due to global warming
- \* Assist activities to conserve Rare and Endangered species
- \* Augment our traditional stories and pictures with hard data to promote more fruitful communications

We have developed a series of spreadsheets from a project that aims to document the distribution of native plants in eastern Australia, prior to the latest fires. As data which pre-dates the recent fires, we hope it will provide a reference point for recovery, now or in the future. We hope it can be used to monitor, measure and learn.

The 'Southern Sydney' maps, provided by the Atlas of Living Australia, include the National Parks from Dharawal to Georges River.

The Native Plants Species List Southern Sydney is an Excel spreadsheet with 25 work sheets, listing the species in a number of different ways – by genus, by family and a number of sub lists by type of plant and family. It includes estimated occurrences of each species (number of plants) in each park region and cross references each species to the NSW Herbarium Plantnet database, as well as to Robinson and to Fairley & Moore. There are 1759 species identified, with 82 listed as rare, 45 as bushfire affected and a further 10 as both. These are also listed in a separate worksheet (Rare), showing 13 trees and 87 shrubs. The rest are herbs, vines or aquatic plants.

The problem of perpetual name changes is addressed by coding:

> = widely accepted recent name change,

\*> = recent name change proposal not yet accepted in NSW Herbarium Plantnet database,

\*\*> = partial name change - both old and new names still in NSW Herbarium Plantnet database

In the introduction to the spreadsheets, the person who put all this together, Tony Maxwell, explains how he began this project and what he has done - a huge amount of work and such a valuable resource. I hope you find it as interesting as I did.



# FROM OUR MAY MEETING

## APS EAST HILLS GROUP MEETING – WEDNESDAY 5 MAY 2021

Lugarno–Peakhurst Uniting Church, Lugarno  
Notes by Liz Cameron

### Meeting Notes

Fifteen members and six visitors attended and registered according to COVID requirements. Apologies received from Boyd Webster, Ellie Smith and Dave Crawford.

Marie O'Connor opened the meeting at 2.10 pm with an Acknowledgement of Country, and welcomed members and visitors. Rebecca Riggs, a postgraduate student in Ocean and Climate Physics at the University of Hamburg, then gave a presentation on "Australia's changing spring and summer temperatures: a look through to 2099".

Following Rebecca's talk the raffle was drawn; winning tickets were held by Carol Drew, Howard Witt (a visitor from Citizens' Climate Lobby), Jan Douglas, and Marie O'Connor (who donated the plant she won to Rebecca).

#### **General Business:**

Reminder about the APS NSW Quarterly Gathering and AGM at Kurnell on Saturday 15th May, hosted by Sutherland Group

Jan Douglas invited donations for limes, lemons and feijoas that she had grown, and raised \$38 for the Environmental Defender's Office.

Jan announced that the EDO was launching a joint program with WWF 'Defending the Unburnt Six' to protect unburnt pockets of forest in south-eastern Australia from logging.

Karlo Taliana and Graham Fry both had plants for sale during the afternoon. Plant sales raised \$53 and the raffle, a further \$46, totalling \$99 for the afternoon.

The meeting concluded with the plant table and was followed by afternoon tea.

### Correspondence Received

#### Native Plants for NSW – May 2021

The monthly e-newsletter of the Australian Plants Society NSW, available at

<https://resources.austplants.com.au/newsletters-journals/monthly-enewsletter/>

the Annual Report; study group notes; updates to some fact sheets on the APS NSW website (unfortunately the links don't work)

#### Australian Plants Society, Armidale NSW Group - Newsletter Autumn 2021

A 26 page newsletter - Catching up on 2020 - the year from hell; torrential rain hampering this year's excursions; update on their Arboretum; new publications emanating from the Botany Department at the University of New England; and some jokes.

#### Australian Plants Society, Sutherland NSW Group - Newsletter May 2021

From the April meeting - A walk through Woronora Cemetery, introducing the trees

#### Australian Plants Society, South East NSW Group - May 2021

May meeting - Landscaping Principles and Practicalities with Shane Doherty; Myrtle rust and a useful resource found in the APS website – see the story above, under the Plant Table section

#### Australian Plants Society, Menai Wildflower Group - Winter 2021

Grevillea hybrids; Illawong's Deep (Aboriginal) Past; other local history

## COMING EVENTS

For details of coming events, please see the APS NSW newsletter (which members should be receiving by email at the end of each month).

You can find more district group events on the APS NSW website at <http://austplants.com.au/calendar>

Wednesday 2 June 2021 2:00 pm to 4:00 pm	East Hills Group meeting. Sophie Moore on the functionality of urban street trees - Lugarno-Peakhurst Uniting Church, 909 Forest Road Lugarno
Saturday 12 <sup>th</sup> June at 1 pm	Menai Wildflower Group meeting – Justin Collett- Germinating difficult Australian native plants. Illawong Rural Fire Brigade Headquarters, Old Illawarra Road, Illawong. For a map: <a href="https://austplants.com.au/Menai-Activities">https://austplants.com.au/Menai-Activities</a>
Wed 16 June, 8 pm	Sutherland group meeting. Topic TBA at Gymea Community Centre, 39 Gymea Bay Rd, Gymea.
Mon 28 June, 7:30 pm	Oatley Flora & Fauna group meeting - Simon Gorta (UNSW postgrad, OFF grant recipient) – Habitat use by arid birds under land management and drought related stressors. Oatley RSL Sub-Branch Hall, building left of 23 Letitia Street, Oatley
3,4,10,11 July (10 am – 4 pm)	Illawarra Grevillea Garden open days. These are the first two weekends in July. The park is at the rear of Bulli Showground, Princes Highway Bulli. Only a 10 minute walk from Bulli Station

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<http://austplants.com.au/East-Hills>

