



HARBOUR GEORGES RIVER Group of APS NSW NEWSLETTER – April 2024

NEXT HARBOUR GEORGES RIVER EVENT:

Saturday 11th May, from 10 am

**Gumnut Community Centre, Gumnut Place,
Cherrybrook.**

Quarterly Meeting of APS NSW

Presentation at 1:30 pm

Topic: Threatened Flora of the Cumberland Plain

With Dan Clarke

VISITORS ARE ALWAYS WELCOME

Welcome to the April 2024 edition of the APS Harbour Georges River Group Newsletter.

APS HGR is not having an event in May as there is a Quarterly meeting of the whole of APS.

This is the AGM – a chance to meet the Board and ask questions.

There are many events in our neighbourhood. I've started a new section – Coming events, as well the Neighbourhood Watch on past events of interest. The Random Jottings seems to get bigger each month as there are many encouraging news items among the doom and gloom of climate change, greed & wars. I look forward to hearing your good news stories in future editions of the newsletter.

Dorothy Luther, Editor

In the spirit of reconciliation, the APS Harbour Georges River 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.

<https://www.austplants.com.au/Harbour-Georges-River>

Table of Contents

NEXT MEETING.....	3
APS NSW Quarterly Meeting, Sat 11 th May	3
Florilegium Exhibition	3
LAST MEETING	3
Adaptations of Australian Plants in Extreme Conditions.....	3
Plant Table	6
GROUP NEWS.....	7
Bon Voyage	7
ANPSA Biennial Conference	7
NEIGHBOURHOOD EVENTS COMING UP	8
Menai Wildflower Group activity on Sunday, 5 May.....	8
Wolli Creek Eco-Paddle – Sun 19 May – 2pm – 5pm.....	8
A Yarn and Wander through Burwood Council Parks.....	8
Mason Park Wetland, Homebush	8
Inner West Council Biodiversity Strategy Presentation.....	9
NEIGHBOURHOOD WATCH	9
Controlled Burn in Wolli Creek Regional Park	9
Cooks River Mini Tour, Sat 27 th April, 10 am	10
RANDOM JOTTINGS	11
First Puggle Born in RNP in 50 years	11
Soil Emits Carbon Dioxide!.....	11
Invertebrate of the Year 2024	11
IVF for Coral Reefs.....	11
New Sport in the Netherlands	12
EAST HILLS GROUP CONTACTS.....	12



Controlled burn, Wolli Creek Regional Park, Wed 27th March. Photo taken Sat 13th April by Dorothy Luther

NEXT MEETING

APS NSW Quarterly Meeting, Sat 11th May

Hosted by the Parramatta Hills District group.

For full details, see the web site: <https://www.austplants.com.au/event-5688115>

Program:

10 am to 12 noon:

Tour of the **Community Environment Centre, Currie Avenue, Annangrove** – A Must Visit!
See <https://www.facebook.com/groups/532672163534997/> for some of their recent events.

12noon – 4pm: **Gumnut Community Centre, Gumnut Place, Cherrybrook, 2126.**

12:00-1:00 Lunch and plant sale. BYO lunch or purchase locally.

1:00-1:30 **AGM for APS NSW** – reports from the Board & election of new Board members.

The agenda, including the minutes from the previous AGM, is available [here](#).

Our 2023 Annual Report is [here](#).

To send your apologies, please email: office@austplants.com.au

Please [email](#) any financial questions by Friday 3 May and we will provide responses at the AGM. Questions on other topics can be asked at the meeting.

1:30-4 pm Quarterly gathering, \$5 members, \$10 non-members.

Presentation by Dan Clarke, 'Threatened flora of the Cumberland Plain', followed by afternoon tea.

Florilegium Exhibition

5 April – 5 May 2024, Royal Botanic Garden, Sydney

<https://www.botanicgardens.org.au/our-science/our-collections/botanical-illustration/the-florilegium-society>

The Art exhibition known as The Florilegium: Rainforest Species at Risk will be held at Royal Botanic Garden SYDNEY, in the old Herbarium, which has been repurposed as a new gallery space, the Garden Gallery, Royal Botanic Garden Sydney. Enter via Reception, on Mrs Macquarie's Road.

Entry is free and the exhibition contains works by some of the best Botanical artists in the world who have been invited to contribute works. Scientific illustrations by Lesley Elkan and Catherine Wardrop, scientific illustrators with the RBG will also be on display as well as exquisite early twentieth century works by Margaret Flockton.

Karen Fong has visited it & recommends it highly.

LAST MEETING

Adaptations of Australian Plants in Extreme Conditions

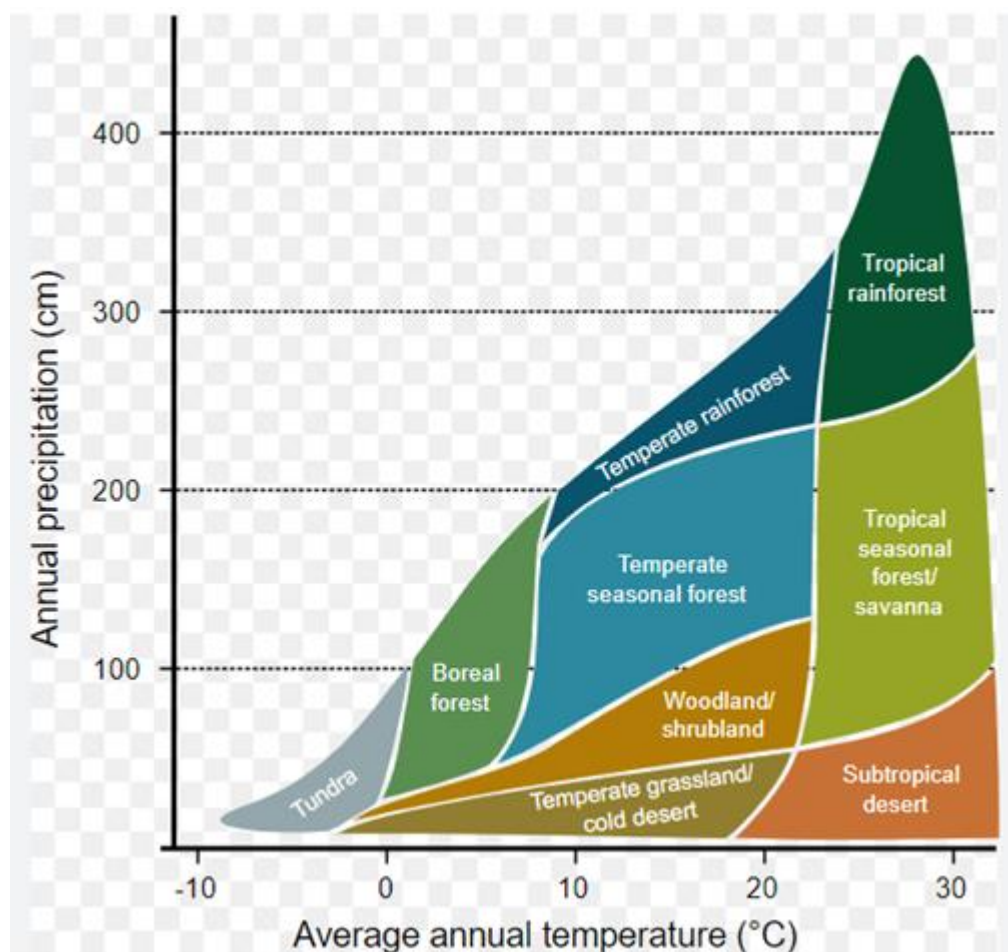
Wednesday 4th April

Talk 'Research on the adaptations of Australian plants in desert and alpine landscapes' – an informal slide show by A/Prof Andy Leigh, UTS (also a member of APS HGR).

Notes by Liz Cameron & Peter Geelan-Small

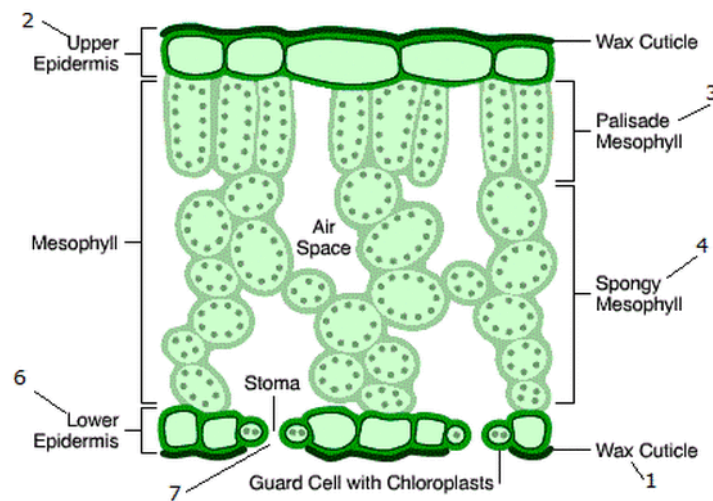
Andy Leigh is a plant ecologist with a particular interest in extreme environments, which are not uncommon in Australia. She argues that temperature is the most important climate factor affecting how different plant (and animal) species are distributed on Earth. Different plant species have developed particular mechanisms to deal with the level of heat stress caused by the characteristic temperature and amount of water available in their environment.

Temperature and rainfall (climate) and geology shape biomes, which are major types of environment that exist on a large scale. The diagram below shows the major terrestrial biomes and how they are related to annual rainfall and average annual temperature. As each biome is related to a particular combination of climatic factors, the same biome can occur wherever that particular climate prevails. [see diagram, <https://openoregon.pressbooks.pub/envirobiology/chapter/3-3-terrestrial-biomes/>]



To understand the responses of plants to their environment, Andy and her team study leaf function and survival, using a range of techniques in both glasshouse and field research; these include electronic sensors to measure the transpiration, heating and other properties of leaves.

The main strategies employed by plants are regulation of water loss (transpiration) and reflection of the sun's radiation. Water loss is regulated by pores (stomata) on the undersurface of leaves which can open and close; these are illustrated in the following diagram: <https://biology-igcse.weebly.com/leaf-structure.html>:



Photosynthesis, which occurs primarily within leaves, is a really important process. Heat stress mainly harms photosynthetic machinery and that's what Andy and her team really care about.

Plants can cool down by transpiring (or 'sweating') - losing water vapour out of their stomata - but in arid areas where water is scarce, loss of water through the stomates could lead to extreme dehydration and leaf death.

In low rainfall areas, therefore, many plants adopt different strategies to stay cool. The leaves are often small (which reduces the surface area over which water loss can occur) and tend to have tiny hairs; surface hairs reduce water loss and, as Andy pointed out, also reflect the sun's radiation. Another adaptation to reflect radiation is waxy coating on the leaf's surface. The combination of hairs and wax gives leaves a paler and greyer appearance – typical of Australian desert plants such as Mulga (*Acacia aneura*) and many species of *Eremophila*.

Another strategy to reduce high levels of radiation and water loss, is for the leaves to hang vertically to reduce the surface area exposed to the sun, for example the pendulous adult leaves of eucalypts.

The issue with climate change is not only increasing heat; the extremes of weather are increasing, so cold climate plants are affected too. In alpine areas the temperature range is widening and causing earlier snow melt. The snow acts as an insulating blanket, so some alpine plants that are exposed prematurely are suffering cold stress.

Some of Andy & her team's research is conducted around Uluru, where their results obtained from electronic sensors inserted in leaves, differ markedly from results obtained in Europe (where the sensors were developed).

They are working with the local Indigenous people to learn which plants are culturally important and merit further attention in their research. For example, Mulga (*Acacia aneura* or Warranee) is not only important for fixing carbon but also as a food source – the Anangu roast and grind mulga seeds into an edible paste, eat the gum of the tree and also the 'mulga apples' (galls caused by wasp larvae) and dig up witchetty grubs from around the roots. It is a two-way exchange, with the local people keen to learn more about the internal structure and function of plants.

So far, there has not been much work done on selective breeding of native plants to better survive climate change. The Australian Arid Lands Botanic Garden in Port Augusta is doing some work and Greening Australia has commenced research in this field, too.

We look forward to hearing of improvements in land management coming from this most important area of research.

For further information, see a talk Andy gave at the Australian Arid Lands Botanic Gardens on 12 May 2015: <https://www.uts.edu.au/about/faculty-science/partners-and-community/uts-science-focus/environment/temperatures-rising-andrea-leigh>

Plant Table

Thanks to Boyd for the following:

Some notes and photos of two of the cuttings that I bought to our last meeting. As we were at a new venue only a few garden cuttings were on display.

<i>Banksia spinulosa</i> 'Honeypots'	Dwarf <i>Banksia</i> hybrid
<i>Chrysocephalum apiculatum</i>	Yellow buttons
<i>Plectranthus</i> spp. (See discussion) <i>P.cremnus</i> (Synonym <i>Coleus cremnus</i>)	Cockspur flower



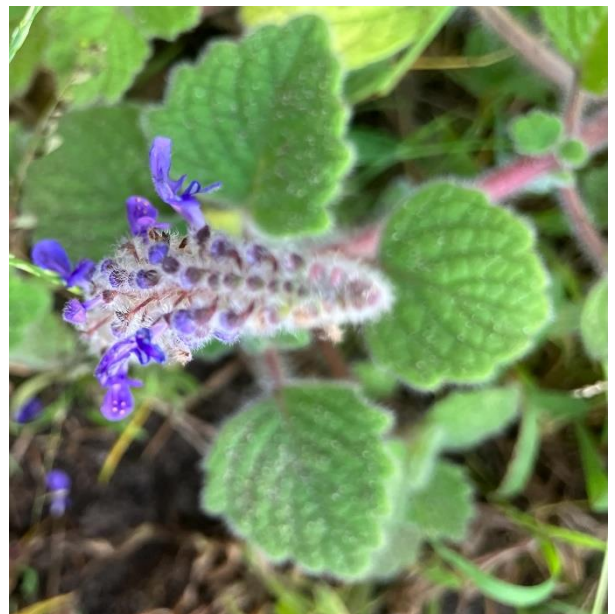
***Banksia spinulosa* 'Honeypots'**

A popular dwarf *Banksia* hybrid that grows to 1m in height and width. The emerging spikes are yellow and develop to a bright orange-red colour. Nectar attracts birds. The flowering period is from late summer through winter. The cutting displayed was from a plant that receives full sun and is now in its second season of flowering. A 'sister' plant in a shady part of the garden has yet to flower this year.

***Plectranthus* species.**

The non-aromatic cutting on the plant table, with its ovate leaves and blue flowers in small clusters on a terminal

inflorescence, has many features in keeping with the Sydney native, *P.parviflorus*, which is found in rocky areas in moist open forest. Looking back at labels and old notes I realised that my groundcover is more likely to be *Plectranthus cremnus*. (It was acquired as tube stock brought to meetings many years ago by Graham Walters). *P. cremnus* has a more prostrate form and the ovate leaf is broader



than *P. parviflorus*. *P. cremnus* is considered rare, being found naturally now only in sandy soils on the NSW North Coast. In my Maroubra sandy soil it favours shady moist areas. Forms of *P. parviflorus* are found with white flowers and the hybrid *Plectranthus parviflorus* 'Blue Spires' has a variegate green and white leaf.

Following taxonomic work in 2019 many *Plectranthus* species, including the Australian native members, became classified as *Coleus*, with *Plectranthus* restricted to a group of African plants. Wikipedia has the 2022 edition of Plants of the World Online listing *P. parviflorus* as *Coleus australis*. The synonym for the plant table specimen is *Coleus cremnus*.

(Notes & Photos by Boyd Webster)

GROUP NEWS

Bon Voyage

At least 3 of our members are going off to Europe in May/ June, so Bon Voyage to:

- Billie who is off to Portugal & Spain and a quick visit to Basel in Switzerland.
- James who is going to England to try and find if there are native gardens there.
- Dorothy who is going on a tour to Italy and may see some interesting countryside around Tuscany and Lake Como.

Anyone else? We won't insist that you tell us about it when you get back.

ANPSA Biennial Conference

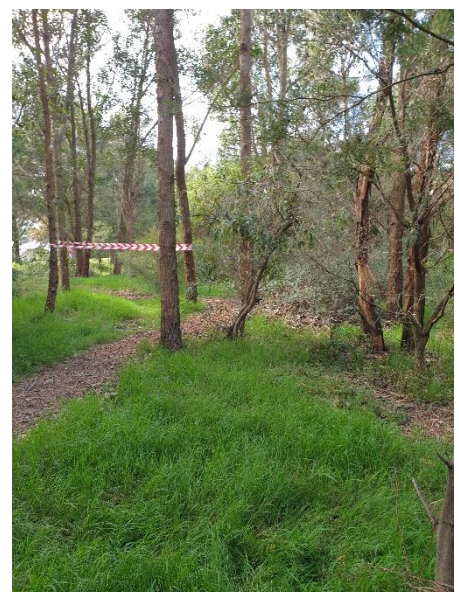
ANPSA is the national parent body of APS NSW and the other state-based groups. It holds a week-long national conference every 2nd year. Each state takes it in turn to host the conference. Last time it was NSW turn, and was held in Wollongong. The next conference is hosted by the Victorian group from 30th Sep – 4th Oct 2024.

Book now for early bird rates. To register your interest, go to <https://apsvic.org.au/anpsa-biennial-conference-2024>

Tours before and after will go to Victoria's best wildflower areas and day excursions will feature new botanic gardens, private gardens and wild areas.

More general information is available on the ANPSA web site at <https://anpsa.org.au/anpsa-biennial-conference-and-seminar/>

Image from bush care site opposite Ewen Park, on Cooks River.



NEIGHBOURHOOD EVENTS COMING UP

Menai Wildflower Group activity on Sunday, 5 May.

Join Sutherland Bushcare to learn about the fragile salt marsh on the shore of Burnum Burnum Reserve at Worona. We will begin at 9.00am with a talk by Bushcare Officer Sabrina Thompson who has been looking after this area with the help of her team of volunteer. Salt marsh is an important part of the environment but is often lost to development, stomped over by foot and bike traffic, or invaded by weeds, and rubbish. Sabrina will discuss why salt marsh is significant and how this area has been regenerated. After morning tea join the volunteer team to do some weeding, or take a walk through the reserve. High tide is about 6.30am and low around 1pm so hopefully it won't be too soggy.

Wolli Creek Eco-Paddle – Sun 19 May – 2pm – 5pm

The Wolli Creek Preservation Society is again partnering with the River Canoe Club of NSW. The tour will start from the River Canoe Club, Richardson Crescent, Marrickville, and finish with light afternoon refreshments back at the clubhouse. The River Canoe Club will provide paddle guidance, and all the gear including canoes and life jackets. The Society will provide an informative tour covering the local history and ecology of the area. You get a very different view of the Wolli Creek Valley from creek level, and it's a chance to get a gentle and short introduction to paddling as we cater for beginners.

For more information and to register for this activity please go to: <https://events.humanitix.com/wolli-creek-eco-paddle-sunday-19th-may>

A Yarn and Wander through Burwood Council Parks

Thanks to Billie Ayling for this information.

Join us for a walk and talk through our parks. All welcome.

Uncle John Dickson from Nangahmi Ngallia Aboriginal Corporation will lead a tour through our parks to raise awareness of the history of First Nations people and their culture within the area.

16 May 2024 at Cooks River, Flockhart Park, Hextol St, Croydon Park from 4pm - 5pm

11 July 2024 at Burwood Park, Park Ave, Burwood from 4pm - 5pm NAIDOC Week

See https://www.burwood.nsw.gov.au/For-Residents/Our-Community/Community-Programs/A-Yarn-and-Wander-through-our-Parks-ev_d7cd2a8e744d4c3494935e9c65e383d4 for latest details and to book your place.

Mason Park Wetland, Homebush

From of BirdLife Southern NSW

Mason Park Wetland is a tidally-influenced saltmarsh near the extensive mangroves of Sydney Olympic Park and is an important habitat for wetland birds. We hope that with planned improvements aimed at increasing tidal flushing, these wetlands will soon become favoured habitat for migratory shorebirds, as it has been in the past.

Our next maintenance session will be in May or June (on a Saturday morning) to remove juvenile mangroves which germinated in summer. And we are keen to see more supporters

join us in this important work. If you would like to participate in our activities or just learn more about the great work we are doing at Mason Park, contact our project coordinator, Elisabeth Dark, at southernsw@birdlife.org.au

Inner West Council Biodiversity Strategy Presentation



the 'Marrickville Nursery' means the community nursery in the Addison Rd Community Centre, 142 Addison Rd, Marrickville. Annandale Nursery is the community nursery at 22 Wisdom St, Annandale. Petersham Service Centre is at 2-14 Fisher St, Petersham.

NEIGHBOURHOOD WATCH

Controlled Burn in Wolli Creek Regional Park

From Paul Ibbetson, WCPS Bushcare Coordinator

There was a Hazard Reduction burn (HR) by NPWS in Girrawheen Park in Earlwood on Wednesday 27th March. The fire spread well through the good bushland across the lower areas and through parts of the weedier upper section. This gave WCPS volunteers an opportunity to get to some of the denser areas of bush and to weed bits that are usually too hard to access. To make the most of this they held a couple of one-off Bushcare events at Girrawheen in April, on Saturday 13th and Wednesday 17th.

This was a great opportunity to visit a different bit of the valley, and make a big difference to the largest area of good bushland between Tempe and Bexley North.



The burn went around the ferny valley below Sutton St. which was so lovely until the little stream dried up. And the huge elk horn fern in its little glade survived too. We cut down or pulled out a lot of privet saplings round it.

The area directly below Sutton St. hardly burnt at all as its pretty mesic (that means the plants hold a lot of moisture, so don't burn. Unfortunately, this tends to mean weeds). The natives such as False Sarsaparilla vine (*Smilax glycyphylla*) with their oily leaves, fried, but tiny seedlings are already sprouting up. It will be lovely by spring.

Cooks River Mini Tour, Sat 27th April, 10 am

Doug Benson (author of 'Missing Jig Saw Pieces, bush plants of the Cooks River Valley') kindly agreed to lead a tour to introduce some locals to the Hurlstone Park section of the Cooks River.

We started from Foord Ave, at the Cooks River foot bridge. Doug started by pointing out the image in his book 'Missing Jigsaw Pieces' of the sandstone cliff we were now visiting, as it was when the book was published in 1998. [Page 45, a sandstone outcrop with a few Matrush (*Lomandra longifolia*) plants]. He suggested establishing heath plantings to provide additional wildlife habitat. When he retired, Doug decided to do the work himself, since no-one else had taken the hint. He started from the top of the cliff where the sandstone soil was quite thin but hadn't been significantly contaminated. He and Chris Bartlett cleared the grass and weeds by the traditional method of covering with cardboard and wood chips. They then planted a lot of heath plants such as banksias, hakeas and some acacias.



The patch is now good small bird habitat as they see Superb fairy wrens and Silvereyes quite frequently. This area enjoys full sun.

A new patch has now been started on the opposite side of the grass area, against a sandstone wall. This is shady and they have planted *Dodonaea* and *Viola hederacea*.

The section below the cliff line is a completely different ecosystem, with a lot of ferns and small rainforest plants, in almost full shade, and with run off from the cliff top.

We then moved on to inspect the biofiltration installation, which looks very lush. Below that is a little grassy area with some floodplain grasses such as *Stipa ramosissima* and reeds.

The large patch opposite Ewen Park was started by Sue Bishop and Nadia Wheatley. They planted *Eucalyptus robusta* which has seeded and created a shady area with varying sized

trees. The understory is mainly *Microlaena* and Kidney weed, with other tiny ground covers among it. There is very little mid-storey as the eucalypts create so much shade. There is a pleasant mulched path through it.

RANDOM JOTTINGS

These are items of general interest found on the World Wide Web & other sources. All contributions for future editions gratefully accepted.

First Puggle Born in RNP in 50 years

Despite the pollution problems from the nearby Metropolitan Colliery, a platypus puggle has been born in the Royal National Park for the first time in 50 years. A breeding program released a number of platypus into the area last year and so the six-month old offspring of two of the released platypus, who has been named Gilli, is certainly a welcome find for the scientists involved in the program. Gilli's name was selected by Yuin, Walbunja, Dhoorga Gurandgi cultural man Uncle Dean Kelly meaning 'flame' or 'life has been ignited' in Dharawal language. <https://www.abc.net.au/news/2024-03-21/new-baby-platypus-born-royal-national-park-despite-pollution/103604914>

Soil Emits Carbon Dioxide!

Australia's soil to become net carbon emitter and threat to climate goals, report says. Modelling points to 'huge' soil emissions in interior rangelands, which are more sensitive to a warming climate. <https://www.theguardian.com/environment/2024/apr/03/australia-soil-carbon-emissions-sequestration-report-net-zero>

Intensifying extreme heat and drought due to the climate crisis will make Australia's soil a net emitter of carbon dioxide, impeding the country from reaching its climate goals, new analysis has found. Soil carbon stocks fluctuate naturally with rainfall patterns but are also affected by land management practices. Drier and hotter conditions are associated with more soil carbon escaping into the atmosphere and lower rates of sequestration.

Invertebrate of the Year 2024

<https://www.theguardian.com/environment/2024/apr/02/invertebrate-of-the-year-2024-all-hail-earths-spineless-heroes>

The Guardian is launching a competition to celebrate the diversity of invertebrate life found in Britain. In showcasing the wild world of invertebrates, their innovative ways of being and their importance, we hope we can raise awareness of the loss of their abundance and diversity, and what we can do about it.

IVF for Coral Reefs

<https://www.theguardian.com/environment/2024/apr/20/scientists-experiment-is-beacon-of-hope-for-coral-reefs-on-brink-of-global-collapse>

"If we can keep enough reefs alive through the next two or three bumpy decades to be able to recover, we've then got the reefs for the future, once the climate is under control," Simpson said.

"People say that coral reefs might be the first ecosystem we could lose, and I like to think that, therefore, they are the first ecosystem we can save. If they're on the brink, and we can save coral reefs, we can save anything. And they become a beacon of hope."

New Sport in the Netherlands

Rip up your paving and plant a garden! *tegelwippen*, “tile whipping” a light-hearted competition where, up to October, municipalities compete to get rid of the most paved infrastructure.

<https://www.theguardian.com/environment/2024/apr/04/we-need-to-accept-the-weeds-dutch-towns-compete-to-remove-the-most-garden-paving>



You’re a happier person when you live in a green surrounding, so every slab you flip is 900 square centimetres of potential happiness. You’re also healthier and, if that’s not enough, there are the big problems we are facing with climate change. Of 5.8m Dutch domestic gardens, only 8.64% reach its target of being four-fifths green, to allow rainwater drainage and biodiversity. You can choose ornamental grasses where very few weeds grow, or a mat of plants that give good ground cover and need very little maintenance.

Inner West Council have got in on the act too. This is their version outside Summer Hill shopping centre. The plants may not be natives, but at least they’ve ripped up the tiles.

EAST HILLS GROUP CONTACTS

President	Graham Fry	9580 6621	fryg45@gmail.com
Secretary	Liz Cameron	9580 6621	elsmere02@gmail.com
Newsletter Editor	Dorothy Luther	9564 6513	dlutherau@yahoo.com.au
Website Editor	Kerry Snelgrove	0403 176 739	Ksnelgrove@ozemail.com.au
Membership	Kerry Snelgrove	0403 176 739	Ksnelgrove@ozemail.com.au

<https://www.facebook.com/groups/1328674687627886>

<https://www.austplants.com.au/Harbour-Georges-River>

