

APS EAST HILLS GROUP NEWSLETTER



April 2019

NEXT EHG MEETING:

7.30 pm, Wednesday 3 April 2019

Members' Night

Come prepared to talk for 5 - 10 minutes about a native plant you love, or one you can't seem to grow, or something you've learned about native plants (e.g. names, history, cultivation secrets, edible plants).

Bring a plant sample, a book or photos if they help to tell your story.

Please also bring specimens for the plant table and something to share for supper.

LUGARNO-PEAKHURST UNITING CHURCH

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

VISITORS WELCOME

WELCOME to the April 2019 edition of the East Hills Group Newsletter.

This issue includes a tribute to Hugh Stacy, someone we will all miss. It also includes information from our March meeting: a synopsis of Doug Rickard's talk, minutes, and notes from the plant table. Dates for your diary are on the last page as usual, but probably the most important date is next meeting because it's members' night and it's a chance for East Hills Group members to share their passions, priorities, problems and philosophies – as long as they're related to Australian native plants! So please be prepared and bring along your ideas to share!

Jan Douglas
Editor

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



Hugh Stacy

One of the stalwarts of our group, Hugh Stacy died on 5 March, his 83rd birthday.

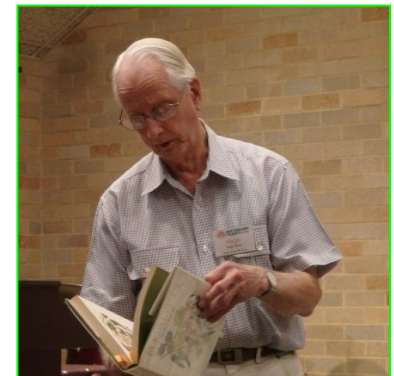
Hugh was a very active and valued member of the Australian Plants Society and its forerunner, the Society for Growing Australian Plants, for many years. He was the State President from 1978 to 1980 and State Treasurer from 1989 to 1996. In 1994 he was awarded life membership of the Society in recognition of his contribution.



Hugh's contribution to our own district group was also much valued. I am sure we all have memories of him discussing a plant or plant family and how amazed we were by the amount of research that he had done to discover this information. Hugh possessed a wealth of knowledge on so many native plants, and often at our plant table could provide detailed information about plants that others had brought along.

Hugh was also recognised as a skilled propagator of plants, and many of us have plants in our gardens - particularly hakeas - that he had propagated. These are a nice reminder of him.

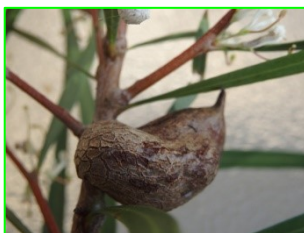
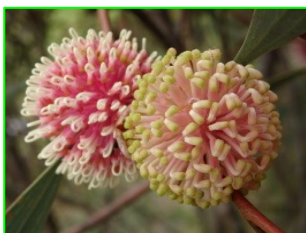
Seven members of East Hills Group were able to attend a thanksgiving service for Hugh at the Lugarno Peakhurst Uniting Church on Wednesday 13th March, and the large gathering of his family and friends included other APS members John Aitken, Leonie Hogue and Ian Cox. The service included beautiful musical interludes in recognition of another of Hugh's great interests. Two other members of East Hills Group and two members of APS who are well known to EHG members (Peter Olde and Pat Ovens) had attended Hugh's funeral service at Woronora that morning.



Hugh's genial company, enthusiasm for native plants, and extensive botanical knowledge will be greatly missed.

Graham Fry

The photos above show Hugh at a propagation session at Menai Wildflower Group's propagation facility in May 2017 and giving a talk at an East Hills Group meeting in April 2016. Below are some hakea photos in memory of Hugh.



FROM OUR MARCH MEETING

WILL OUR NATIVE PLANTS SURVIVE THE 21ST CENTURY?

Doug Rickard, Sutherland Group

Synopsis by Liz Cameron. Photos supplied by Doug Rickard.

Since 1788 at least 100 plant species have become extinct in Australia and another 1180 are threatened with extinction.

The main threats to our remaining native plants are:

- Population pressures
- Habitat loss
- Water shortage
- Degradation of soils
- Invasive weeds and diseases
- Climate change

Population pressure is the main driver of all the threats to our plants. By 2050 the population of Australia is likely to be approaching 40 million with over 75% of those people living in cities. The cities will grow to cover a lot of the surrounding land that is now used to grow food or is still bushland. Although the World's population growth is slowing, there will be an increasing demand from overseas for energy and food and Australia, as a major exporter of raw materials and food, will be expected to produce more.

Habitat loss and fragmentation – for the increasing population, a lot more land will need to be cleared, not only for housing in cities, but also across the country for more agriculture and forestry, mining and quarries, garbage disposal. The remaining bushland will be subject to

- More grazing and trampling by livestock
- Increased frequency of fires
- Reduced genetic diversity leading to greater susceptibility to plant diseases
- Greater risks from contamination by fertilisers, herbicides and pollution
- More competition from invasive weeds

Loss of native vegetation is accompanied by a decline in the animals that pollinate plants and distribute their seeds - native birds, bees and flying foxes; many of our native plants rely on specific pollinators. Feral animals are another problem; they have an impact on both native plants and animals.

An example of a plant under severe threat due to habitat loss is *Grevillea iaspicula*, the Wee Jasper Grevillea, found in only at a few sites in the Wee Jasper area of NSW. Most of its original range was submerged by construction of Burrinjuck Dam and remaining sites are threatened by weed infestation (mainly Blackberry, Sweet Briar and St John's Wort) exacerbated by fire and browsing by cattle, goats and wallabies. It is unlikely to survive in the wild.



Hibbertia fumana



Grevillea iaspicula

Hibbertia fumana is another; this plant had not been recorded for over 190 years and was thought to be extinct due to loss of habitat. Then in April 2016 it was rediscovered when the new freight hub was being built at Moorebank near Liverpool. Folk from the Plant Bank at Mt Annan collected seed and plants and *Hibbertia fumana* is now being propagated at the Australian Botanic Garden; plants could be translocated so that it continues to survive in the wild. ([See flower photo on previous page.](#))

Increasing agricultural production under current farming practice generally means clearing more land and cutting down more trees. Intensive farming methods such as hydroponics may reduce the area of land needed to grow some crops – but not commercial quantities of wheat, rice, cotton or grapes. An example of a native plant impacted by grazing is *Gentiana bredboensis*, the Bredbo Gentian. There are now only about 50 plants growing at a single site in a seepage area on private property near Jerangle, NSW. The site has been fenced off to prevent trampling and grazing by livestock but climate change, resulting in lower rainfall and higher temperatures in the future, is likely to cause its extinction in the wild.

Forestry: The continuing demand for timber has resulted in pine plantations covering vast swathes of land and, once planted, they tend to be harvested and replanted in perpetuity. Unlike native forests, pine plantations have few if any endemic understorey plants and they support few native mammals or birds. Logging of old-growth forests for furniture and floorboards is unsustainable – it takes a hundred years or more to replace a mature native hardwood tree.

Mining not only results in large holes in the landscape, but also fragmentation and destruction of bushland for easements for services such as railways and powerlines. Quarrying for building materials also destroys native vegetation close to cities.

Garbage disposal is an increasing problem and for economic reasons, most areas chosen for new dumps will be near our cities. After a full waste dump is covered over, it is unlikely that the bushland originally at the site can be fully restored. It is hoped that by the middle of the century we will have more recycling and cease to be a throw-away society.

Water shortage: About a third of the water used in agriculture is wasted through inefficient irrigation and evaporation from water storage bodies. Most of the water is extracted from rivers, resulting in reduced flows. With an inadequate flow rate, not only does native riverine vegetation suffer, but the rivers suffer increased salinity and turbidity, and blooms of blue-green algae. These problems are exacerbated by run-off of fertilizers, pesticides and herbicides from farms along the river banks. One good news story is the significant improvement in the health of native vegetation along the Snowy River since more environmental water has been released from the Jindabyne Reservoir.

Soil degradation: A recent study reported about 40% of the soils used for agriculture in Australia is now classed as degraded; by the middle of the century the figure is expected to be 90%. This degradation includes reduced soil fertility, increased erosion and salinity, and increased weed infestation and incidence of plant diseases. The main causes are removal of native vegetation, intensive cropping and over-grazing, and pollution. A reduction in soil fertility will result in more land being required to grow the same amount of food, requiring even more bushland to be cleared.

In natural bushland the loss of soil due to water and wind erosion tends to be balanced by new soil formation, but agricultural practices have greatly accelerated the rate of soil erosion and we are currently losing millions of tonnes of fertile topsoil every year. The main causes of soil erosion are removal of native vegetation and poor agricultural practices. If the vegetation cover is lost due to ploughing or drought and the topsoil is dry, it can be blown away by the wind.

Soil salinity is a major and growing problem for agriculture, particularly in Western Australia, and is also threatening the survival of many dry-land native plant species. Most soil salinity is caused by the removal of deep-rooted native vegetation and its replacement by shallow-rooted crops and pastures.

This causes the water table to rise, bringing mildly saline water to the surface where it evaporates leaving the salts behind. Gradual accumulation of salts in the topsoil renders the area unsuitable for crops and prevents regeneration of the native flora.

A native plant facing extinction due to rising soil salinity is *Muehlenbeckia horrida* subsp. *abdit*, the Remote Thorny Lignum. This critically endangered plant is found in only two small sites in the Lake Bryde - East Lake Bryde wetland in the far south of Western Australia. It depends on a regular cycle of freshwater flooding followed by drying of the lake bed. The number of plants has declined dramatically in the last 30 years due to a ten-fold increase in the salinity of the lakes. This, together with a forecast decrease in rainfall and increase in temperatures due to climate change, means it is very unlikely to survive in the wild.

Pollution is an on-going threat to many native plant habitats but generally it is controlled and remediated by local authorities. The main causes are water run-off from roads, pesticide and herbicide residues, waste and by-products from industrial processes, oil spills, sewage spills and dumping of rubbish.

Weed infestation and diseases: Many noxious weeds are out-competing native vegetation and they are being joined by garden escapees. We can only try to limit their spread and stop them forming monocultures that suppress native vegetation.

A number of orchids are amongst natives threatened by invasive weed infestation. *Pterostylis basaltica*,



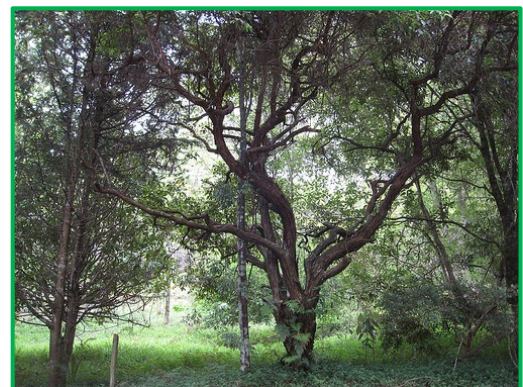
the Basalt Greenhood ([photo at left](#)), is known only from two populations in western Victoria. It is threatened not only by weed invasion, but also by climate change, roadworks, the application of fertilisers, and grazing by stock and rabbits. Despite current efforts to try and save this plant, it is unlikely to survive in the wild.

Caladenia robinsonii, the Frankston Spider Orchid, is one of Australia's most endangered terrestrial orchids. It is now confined to a small area on the Mornington Peninsula near Rosebud, most of its original habitat having been lost under Melbourne's urban sprawl; the small area remaining is threatened both by invasive weeds and further urban

development. Some plants have been translocated to other sites, but it is still unlikely to survive in the wild.

Introduced plant diseases, including Phytophthora Dieback, Myrtle Rust, Fungus Root Rot, Grey Mould and Mundulla Yellows (a fatal disease that affects eucalypts) are another threat to our native plants. A lot of work is being done to combat their spread but the focus of control of plant disease is on those affecting commercial crops rather than native plants.

Although *Rhodamnia rubescens*, the Scrub Turpentine ([pictured at right](#)), is found along the east coast from Batemans Bay in southern NSW up to Maryborough in Queensland, in only 14 years it has gone from being relatively common to threatened with extinction. This is due to its extreme susceptibility to Myrtle Rust; the prospect of naturally-selected resistance emerging before the collapse of populations is currently considered small.



Climate change: With some notable political exceptions, the World has finally agreed that climate change is real and the direct result of actions by mankind. The main drivers are:

- Power generation and heating
- Industry
- Deforestation
- Agriculture
- Transportation

The main driver of climate change is CO₂ emissions from the burning of fossil fuels to produce electricity. Many steps are being taken to reduce these emissions and by the middle of this century it is thought that most of the World's power will be generated by renewables. But the swing to renewable energy is being driven by private enterprise rather than by governments. Over 50% of America's coal-fired power stations have closed in the past 10 years because renewable energy from solar and wind, backed up by batteries and pumped-storage is now cheaper.

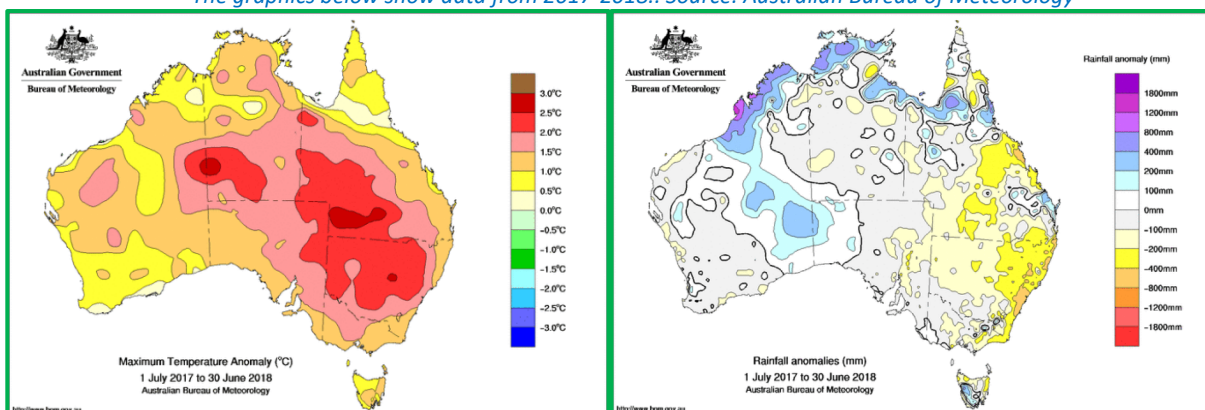
Australia has only 0.3% of the World's population but is responsible for 1% of global emissions, and our efforts to combat climate change are a bit of an enigma. We have the highest take-up rate of roof-top solar panels in the World and we are one of the top adopters of large-scale solar power and wind turbines. State governments are planting new pine plantations because trees are a sink for atmospheric CO₂ ... but more plantations is not good news for our native bushland! On the other hand Australia is one of the principle sources of global CO₂ emissions because we export so much coal. The coal we ship overseas to be burnt in other people's backyards adds about 400 million metric tonnes of CO₂ to the atmosphere every year.

Average global temperatures rose by about 1°C in the 20th century and temperature increases are accelerating. If we do nothing, we can expect average temperatures to rise a further 3 to 5°C by the end of this century. Average temperatures in Australia are currently rising about 0.17°C per decade and despite any actions we take now, southern Australia will get warmer and drier and there will be more extreme weather events across the country - storms, cyclones, droughts and bushfires. That could be a big problem for many of our native plants.

The areas facing the greatest loss of species due to climate change are our hotspots for plant diversity - south-western WA, North Queensland and, in NSW, New England and the alpine areas. The species most at risk of extinction are those that have long regeneration times, highly specific host relationships, small or isolated ranges, and low genetic variation. It is estimated that more than 100 Eucalypt species could be wiped out due to climate change. Their seeds do not spread very far and they take a long time from germination to being a mature tree producing more seeds – so they cannot relocate quickly.

Another species threatened by climate change is *Alloxylon pinnatum*, the Dorrigo Waratah. It is only found on the Dorrigo Plateau in northern NSW and in the McPherson Range in south-east Queensland. It is threatened by climate change and also by habitat loss from land clearing. Staff at the Australian Plant Bank have [collected seeds and are working on its conservation so, with a lot of help, it could](#) survive in the wild.

The graphics below show data from 2017-2018.. Source: Australian Bureau of Meteorology



Maximum temperatures above & below normal

Average rainfall above & below normal

What must we do to save our unique native flora?

To minimise the losses we must rein in global warming, which means we need to:

- Stop burning fossil fuels
- Stop deforestation (and plant a lot more trees)
- Eat less red meat.

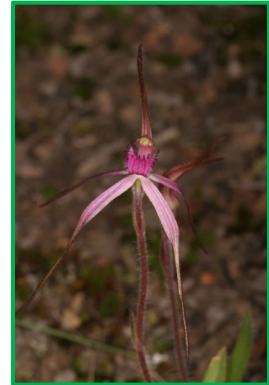
We have to radically change our farming methods, stop being a throw-away society, set aside sufficient areas of natural habitat, and above all, control global population growth.



Caladenia robinsonii



Muehlenbeckia horrida subsp. *abdita*



Caladenia rosella

FROM OUR MARCH MEETING

APS East Hills Group meeting, 6 March 2018

Lugarno–Peakhurst Uniting Church, Lugarno

Minutes recorded by Secretary Liz Cameron

The meeting was opened by President Graham Fry at 7.55 pm with ten members and four visitors in attendance. Apologies were received from Jan Douglas and Dave Crawford, Karlo Taliana, Karl Schurr, Tony and Kate Porritt.

Graham announced with sadness that Hugh Stacy had died on Tuesday 5 March. Hugh was a long-time member of the East Hills Group of APS and was a fount of information on native plants and held a number of positions on the Board of APS NSW.

Graham reminded members of coming events:

- Regional quarterly gathering on Saturday 23 March at the Ku-ring-gai Wildflower Garden in St Ives (details in the March issue of EHG Newsletter).
- April meeting of EHG will be a members' night and everyone is encouraged to bring along a topic or specimen to discuss and share with the group.
- ANPSA Biennial National Conference in Albany WA, September – October. Earlybird rates end on 30 April 2019.
- The following Biennial Conference will be hosted by NSW in 2021 and the Board of APS NSW will be looking for help to stage it, from all the district groups.

Graham reported that the February Board meeting approved a motion to no longer produce printed copies of *Native Plants for NSW* and to produce it only as a monthly online journal. The final hard copy of *Native Plants for NSW* is expected to be mailed to members in the next few months. Rhonda Daniels has agreed to be the interim editor of the online version but for a finite

period only; a permanent editor is needed. The main reason for the change is cost of printing – about \$10,000 per annum; also, if production is delayed, there may not be adequate advance notice of coming events. Graham is aware of at least three East Hills Group members who are not online, so provision will be made to print copies and hand-deliver or post them. Graham floated the idea of tacking the EHG Newsletter onto the monthly issues of *Native Plants for NSW* although this is probably not practical due to the special software that will be used to produce *Native Plants for NSW*.

Liz Cameron presented, on behalf of Jan Douglas, a request for the meeting to consider her offer to enter native plants in the Royal Easter Show on behalf of EHG. She invited others to participate or provide plants that she could enter on their behalf, but was happy to do the work herself. Jan had outlined in detail what she proposed to do and the group was happy to agree with her plans. Chris King amended Jan's original request for EHG to subsidise the entry fee with \$20, to EHG paying the full entry fee, in line with other groups.

THAT APS East Hills Group agrees to enter the Flower Show at the 2019 Royal Easter Show and authorises payment of \$35 for the entry fee.

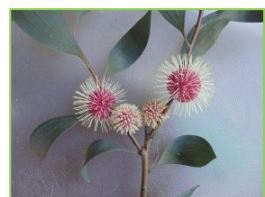
Moved: E Cameron Seconded: Marie O'Connor Carried unanimously.

In response to Jan's request for members to say if they were willing to let her gather plant material from their gardens, Lloyd Hedges said Menai Wildflower Group was not entering plants in the Show this year, and Jan was welcome to use plants from their garden at Illawong.

Dorothy Luther announced the Annual Bat Watch picnic hosted by Wolli Creek Preservation Society on the coming Friday 8 March in Turrella Reserve, Earlwood. The public was invited to come and experience a David Attenborough moment as the Grey-headed Flying Foxes streamed out from the Wolli Creek roost at dusk.

Doug Rickard then gave a sobering presentation on the topic 'Will our native plants survive the 21st century?'

The meeting concluded with a small offering at the plant table and the raffle draw, which raised \$38.



FROM OUR MARCH MEETING PLANT TABLE – MARCH 2019

Thanks to everyone who brought along plant specimens.

As usual, Graham Walters has provided notes on a few of the plants from the March plant table.

Austromyrtus dulcis (Midgen Berry)

Grevillea beadleana

Grevillea fililoba

Grevillea 'Clearview David' (a form of *G. rosmarinifolia*)

Grevillea beadleana is a beautiful dense spreading shrub with soft divided grey-green leaves. It generally grows to a height of about 2.5 m, with a similar spread. The flowers are purplish red, arranged in a one-sided raceme, and occur for most of the year. The species is reliable in well-drained soils in sunny or semi-shaded situations. Once established, it tolerates extended dry periods and frost. Propagation is from seed (preferably after nicking to partly expose the embryo) or from cuttings of firm current season's growth.



The species was found in 1982 in Guy Fawkes River National Park. Since then, scattered populations have been found in the Torrington area and Oxley Wild Rivers National Park. A population has also been found south-west of Grafton, but this may be a sub-species. It is classified as rare because only small populations occur in scattered areas.

The species was named in 1986 by Don McGillivray for Noel Beadle, who was Foundation Professor Botany at the University of New England and whose book of keys for plant identification is well-known to many APS members. (Photo: Warren and Gloria Sheather <https://austplants.com.au/Grevillea-beadleana>)

***Grevillea fililoba* (Ellendale Pool Grevillea)** is a small shrub to about 1.5 m in height with narrow leaves up to 45 mm long divided into narrow segments. It can be used as a screen or feature plant. The rather large flowers are bright red with a cream or yellow style and occur in loose pendulous racemes at the ends of branches. They are seen in Winter and Spring.

(Photo: Stan Sheba, Wikimedia Commons

https://commons.wikimedia.org/wiki/Grevillea_fililoba#/media/File:Grevillea_thelemanniana_ssp_fililoba_2.jpg)



***Austromyrtus dulcis* (Midgenberry)** This versatile small shrub is one of the best bush tucker of all, having small sweet berries that are borne in profusion in late Summer and early Autumn. It makes an attractive border and is suitable for rockeries and as a pot plant. It can even be trimmed into a low hedge. It will grow and fruit in sun, light or half-shade in well-drained or moderately moist conditions and tolerates light frosts. It is attractive to bees, butterflies, fruit-eating birds and mammals.

Editor's note: The midgenberry fruit is very pretty – it is white with tiny purple dots - and is usually eaten whole and fresh, although it can also be used to make jam. Midgenberry works well as part of a cheese platter or in a fruit salad. Happy plants can produce a large harvest, so even though individual fruits are small the plant can be very productive. Even plants in part shade can provide a useful amount of fruit. (Photo: Jan Douglas)





The Illawarra Grevillea Park

Rear of Bulli Showground, Princes Highway, Bulli

Close to Bulli Train Station.

Autumn Open Days 2019

Saturday 4 May, Sunday 5 May,

Saturday 11 May, Sunday 12 May

10am to 4pm

Garden tours at 11 am each day.

Vine Forest tours on Sundays only at 2 pm.

Entry: Adults \$5, children free.

Spend a few hours or a day in the park!

Over the summer, hundreds of new plants have been added to the garden's extensive collection and new paths have been built through the rainforest. An impressive variety of autumn natives, many rarely seen, are now in flower.

Come and see our **new Western Australian bed** and the recently-planted eremophilas. Eremophilas may be the next big thing in our gardens as we respond to climate change. They are arguably our most drought-hardy plants.

Hundreds of native plants are for sale, including grafted grevilleas, eremophilas and pimeleas. This includes the new release *Grevillea* 'Little Princess' (photo above) which is a compact hardy form of *Grevillea humilis* with pink flowers for most of the year. Height 20 cm, width 60 cm.

There are plenty of **books to browse and purchase** at low prices.

Barbecue facilities available and **easy access** to display gardens, including the rainforest, for wheelchairs and prams.

Want advice? Bring your questions and we will do our best to help!

For further information: The Illawarra Grevillea Park/Facebook, www.grevilleapark.org, johnelton@grevilleapark.org, or phone 0424 830 925.

INFORMATION ON THIS PAGE WAS SUPPLIED BY ILLAWARRA GREVILLEA PARK

COMING EVENTS – CHECK YOUR DIARY!

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

Friday, Saturday and Sunday each week from 1st to 31st of March 10am to 4pm	Boongala Native Garden open days 76 Pitt Town Rd, Kenthurst \$3 entry for adults. BYO picnic lunch. Large range of native plants for sale. Rainforest tours \$5 for adults. Children free.
Wednesday 3 April 2019 From 7.15 for 7.30 pm	East Hills Group meeting – Members' Night. Come prepared to talk for 5 to 10 minutes about a native plant you love, or one you can't seem to grow, or something you've learned about native plants (e.g. names, history, cultivation secrets, edible plants). Bring a plant sample, a book or photos if they help to tell your story!
Friday 12 April – Wednesday 17 April	APS NSW display at Sydney Royal Easter Show Come and see the APS NSW stand and chat to other members!
Saturday 13 April 1 pm	Menai Wildflower Group – Tony Wales on The Georges River Riverkeeper. Illawong Rural Fire Brigade Headquarters.
Wednesday 17 April 7.45 pm	Sutherland Group meeting – Bushcare Stories with Jason Salmon Gymea Community Hall, 39 Gymea Bay Rd, Gymea
Saturday 20 April	Competition day at the Sydney Royal Easter Show (Easter Saturday) Come and see the APS NSW competition entries!
Sat 4 May, Sun 5 May; Sat 11 May, Sun 12 May	Illawarra Grevillea Park Autumn open days – see page10 for details.
Saturday 18 May	APS NSW Quarterly Gathering and AGM hosted by Blue Mountains Group. 'Plants with a bite' (Carnivorous plants) https://austplants.com.au/event-3221687?CalendarViewType=1&SelectedDate=5/27/2019
September – October 2019	ANPSA Biennial National Conference: Blooming Biodiversity. Earlybird rates end on 30 April 2019. See your journal <i>Australian Plants</i> and https://meetingmasters.eventsair.com/QuickEventWebsitePortal/bloomingbiodiversity/eventinfo

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

