

GROWING *Australian*

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GROWING *Australian*

Epacris impressa
Common Heath
APSVic logo

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Submit articles to the Editor
Lachlan Garland
newsletter@apsvic.org.au

On the cover

Eucalyptus dolichorhyncha

Photo: David Pye

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THE SOCIETY

The purposes of the Society are:

- 1. to promote and maintain interest in growing and propagating Australian plants in home gardens and public places*
- 2. to encourage the recognition and development of distinctive landscape styles and forms using Australian plants*
- 3. to improve Australian plants as garden subjects*
- 4. to monitor and encourage the strengthening of the laws for preservation of flora*
- 5. to encourage the nursery industry to propagate and supply Australian plants to the general public*
- 6. to support all information received by the Society on methods of propagation and of the sources of supply of plants and seeds available for distribution and to publish such information from time to time*
- 7. to establish and encourage district groups*
- 8. to encourage and facilitate the conservation and study of Australian plants in the natural environment*
- 9. to establish and maintain a public fund to be called the APS VIC PUBLIC FUND for the specific purpose of supporting the environmental objects/purposes of the Society*
 - 9.1 the Fund is established to receive all gifts of money or property for this purpose and any money received because of such gifts must be credited to its bank account*
 - 9.2 the Fund must not receive any other money or property into its account and it must comply with subdivision 30-E of the Income Tax Assessment Act 1997*
- 10. to further the dissemination of knowledge and to act as a source of informed opinion on relevant issues*

Our purposes aim at ensuring the continued survival of all Australian native flora. The Society recognises the close relationship Australian native flora has with the native fauna in providing habitat, food, protection and a myriad of other benefits. The survival of one assists in the survival of the other.

District Groups operate across Victoria and the metropolitan area. The President, Secretary, and meeting times and places are listed on page 50. Please contact the relevant person if you wish to join in with the meetings and activities of a District Group.

Study Groups exist for many of the more popular groups of Australian plants. As a member of the Society, you can join one or more of these. Contact details can be found on our website.

Lachlan Garland

We all have special days on which we celebrate key events in our lives – birthdays and anniversaries.

On a national level there are special days that commemorate or celebrate key events in a nation's history, such as Anzac Day.

For Australian plant enthusiasts there are also special days, days assigned for the celebration of a particular group of plants or ecosystem. But do we actually celebrate them, or even know of their existence?

What were you doing on the 1st September? Did you know and celebrate the fact that it was National Wattle Day? Did you even know that the first of September each year is day reserved for the celebration of acacias?

How about 23rd March? This is National Eucalypt Day, which aims to raise awareness of eucalypts and celebrate the important place that they hold in the hearts and lives of Australians.

Well, how about National Tree Day? Have

you participated in one of the many activities on this day – Australia's largest community tree-planting and nature care event? This special day is usually held on the last Sunday in July. But in 2020 it is on Sunday 2nd August.

Some days are internationally special, such as the International Day of Forests. The 21st March is the day assigned where the United Nations raises awareness of the importance of all types of forests.

Do you personally do anything on these days to remember or actively foster the reason for these days?

Does your district group do anything to mark these days? It is hard to get the message out about the wonders of Australian plants. Could we use these days to not only commemorate the reason for the days but to inform others?

Mark these days in your diaries now. And for district groups, consider these days when planning your events for next year.

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From the President

Chris Long

I hope your garden is surviving the winter season. Most of our plants are thriving, with some decent rain over the past three months, but still below average. Despite our sandy well-drained soil I have difficulty growing banksias. An exception is a 4-year-old *Banksia* 'Orange Glow', which had a magnificent display this year.



I am experimenting with Neutrog's Whoflungdung mulch in the front garden. It is easy to apply, has a uniform pleasing appearance and lets the rain penetrate to the soil beneath. I only put it down six weeks ago so it is far too early to assess its effectiveness, but the plants look healthy. I am also trialling a monthly application of GOGO Juice and Seamungus liquids in both front and back gardens, as well as twice a year application of Bush Tucker. I know that some people believe that fertiliser is unnecessary for Australian plants but I think that it makes a positive difference in our low-nutrient sandy soil.

On our trip to the APS Ballarat Winter Flower Show and Plant Sale at the end of June we were very impressed with the specimen display. I am sure it was an eye opener to the many visitors, highlighting the beauty of Australian plants at a time of year not normally expected to have wonderful flowers. Of course we couldn't leave without a few more plant purchases that we then had to squeeze into our garden.

The very busy spring flower show and plant sale season is fast approaching and is an

opportunity to look at the wonderful displays and buy more plants for the vacant spaces in your garden.

I continue to be impressed by the dedication and enthusiasm of members that I meet in my visits to District Groups. It gives me confidence that our Society will continue long into the future.

Awards

The recommendations of the Awards sub-committee were endorsed at the June Committee of Management Meeting (COMM). Congratulations to all award recipients:

Honorary Life Member – Royce Raleigh

Impressa Award for outstanding service to APS Victoria – Jeanne Raleigh

Impressa Award for outstanding service to Australian Native Plants – Maree Goods

Certificate of Commendation – Shirley Carn

Awards will be presented at the AGM at Cranbourne or a suitable later occasion.

There will be a full write up of the commendations for the award recipients in the December issue of *Growing Australian*.

AGM

Our AGM will be held at Royal Botanic Gardens, Cranbourne on September 14th 2019 at 2 pm. I urge you to attend and show your support for the volunteers who take on committee positions and ensure the on-going management of our Society. I am pleased that we have written nominations for most of the positions.

Growth and Development Sub-committee

We seek new people to join the sub-committee. Please consider who you think would be good for APS Vic and put their name forward or, of course, volunteer yourself.

The committee meets about every 6 weeks on a Saturday afternoon at various locations around Melbourne. We look at forward planning, ideas for growth and development, act as a 'think tank' for the Society and are dedicated to work for the benefit of the Society at all levels from individuals to the federal (ANPSA).

ANPSA biennial conference 2023

It is our turn to host the ANPSA conference in 2023. This is a major event and requires a lot of organising by many people. Although 2023 may seem a long way off, we need to form a steering committee this year to do the basic planning. Please contact me if you are prepared to help.

Melbourne International Flower and Garden Show (MIFGS)

We have decided to participate in MIFGS in 2020 following our successful 2019 presence. MIFGS is a great opportunity for us to promote Australian plants to many thousands of people with an interest in gardening who attend over the five days. I think it is our best chance to promote Australian plants to the wider gardening public and we must be there.

I want to thank Dallas and Bernard Boulton who have again volunteered to co-ordinate our activities for 2020.

Now is the time to start thinking about and preparing for the hanging basket competition. We want to see many entries from District Groups and individuals showing the attractions of Australian plants to a wide audience.

Neutrog

We continue to develop our relationship with Neutrog and I am very happy with the results so far. We have two banners from Neutrog for use at plant sales and flower shows offering a free pack of Bush Tucker to anyone joining APS Vic on the day. APS Ballarat was the first to use a banner at their winter flower show and they signed up more than 10 new members. I look forward to similar results from the spring flower shows coming up.

FJC Rogers seminar 2020 – Mint bushes and allied genera

APS Yarra Yarra is progressing with preparations for this event and early indications are that it will be a wonderful weekend in keeping with the proud tradition of previous seminars. I encourage you to make a mental commitment to attend (it is too early to book yet) and join with fellow Australian plant enthusiasts to learn more about this interesting group of plants.

Banks-Solander 250th anniversary commemoration in 2020

2020 is the 250th anniversary of the arrival of Banks and Solander with Captain Cook on the *Endeavour*. They created a major European collection of our Australian flora. We plan to hold a commemoration event during the week of MIFGS, on Saturday 28th March 2020. Please reserve this date.

We will have a display for 7 weeks in the gallery at Federation Estate, Ringwood, on all things banksia, including original herbarium sheets from 1770. Planning is well underway but further ideas and suggestions are most welcome – send to Dallas Boulton, Alex Smart or to me.

Great Plant Out

By now I hope your 2019 seeds have germinated and the plants are well on the way to a magnificent floral display as the weather warms up. I have many plants in pots and they look very healthy, so I am hoping for my best ever display. I also have some self-sown plants in the garden from last year's plants. I encourage you all to keep a photographic record of progress and send it to our newsletter editor.

The Great Plant Out continues in 2020. Thank you to APS Bendigo who has volunteered to package the seed for 2020.

Website

We continue to make improvements to our website. John King does an excellent job and responds quickly to any questions. If you have suggestions for improvement please email our web administrator at webadmin@apsvic.org.au.

I encourage all District Groups to make sure that their information on the website is up to date.

Committee of Management Meetings (COMM)

Thank you to host volunteers – APS Bendigo Saturday 9th November 2019, APS Maroondah Saturday 28th March 2020 and APS Warrnambool in spring 2020. We are still looking for volunteers for June 2020 and November 2020.

I encourage District Groups to consider hosting a COMM. It can be as simple as hosting the COMM only, up to a full quarterly weekend.

Final Word

This is my last 'From the president', as at the AGM I will have completed the maximum three years allowed. Thank you to all who have helped with running the Society – you have made my job much easier. I intend to maintain my involvement with APS Vic and have nominated for the position of Secretary. I look forward to working with our new President and the rest of the Executive and Committee of Management.

Over the past three years we have met many members and experienced wonderful hospitality, learning much about plants from people generously sharing their knowledge.

We have travelled over 17,000 km on 53 trips – 20 to flower shows or plant sales and 25 visits to District Group meetings or excursions. I was pleased to be guest speaker on 15 of those visits. I want to extend a special thank you to those who provided billets for us.

May you continue to find pleasure and relaxation in your gardens and the natural environment.

– Chris Long, President

Australian Plants for Containers Study Group

The Australian Plants for Containers Study Group has been in recess for some time but Ros and Ben Walcott have volunteered to reactivate it.

As many people live in smaller units and apartments with balconies or have small areas for gardens, growing Australian plants in containers is a great way to have a small garden of native plants. Also growing in containers allows the growing of plants that otherwise won't tolerate local conditions.

Members of this study group focus their activities on investigating and trialling Australian plants that may be suitable for growing in pots or other types of containers.

Ros and Ben plan to produce a newsletter twice per year with contributions from interested members. Membership is free to all members of ANPSA affiliated Societies. All newsletters will be distributed by email.

To join the study group, email roswalcott5@gmail.com or benwalcott5@gmail.com.



Native Flower Show

Pomonal Hall
Sat 5th Oct 9:00 - 5:00
Sun 6th Oct 9:00 - 4:00
Entry \$5, Children free

Flowers Galore!
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Special feature this year:

Native Gardens for Wildlife



A rich and diverse garden attracts many forms of native wildlife

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Great Plant Out

While we wait for the plants in this year's Great Plant Out to come into flower, it is interesting to look back at visitors to last year's Great Plant Out flowers. It seems that not only humans are attracted to the flowers of *Xerochrysum bracteatum*.

Great Plant Out visitors

Neil Marriott

Amazingly, quite a number of our daisies from last year's Great Plant Out are still alive and flowering well. All those plant that were fed with high phosphorous fertiliser grew strongly, flowered well but are now dead, while most of those on low phosphorous are still alive and still flowering well.

During the late heat of autumn, we were thrilled to find that our 'Great Aussie Daisies' were being visited by a varied array of native bees and wasps. From a distance, we couldn't smell the flowers, however on smelling them close up we discovered that they have a very pleasant, albeit mild sweet perfume. This is clearly what is attracting the native pollinators. Here are some of the visitors to our garden attracted by the daisies. (CA)



Native bee on *Xerochrysum bracteatum*.

Neil Marriott



Flower wasp on *Xerochrysum bracteatum*.

Neil Marriott



Beautiful grasshopper or katydid.

Neil Marriott



Native bee on *Xerochrysum bracteatum* – note all the bright yellow pollen on the bees legs.

Neil Marriott



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Eucalyptus dolichorhyncha

Fuchsia Gum



Eucalyptus dolichorhyncha is a mallet form of eucalypt native to the south-west of Western Australia, where it has a limited range along north of Esperance, growing in sandy clay or clay soils. A mallet is a small-tree form of eucalyptus found in Western Australia. Unlike the mallee, it is single-stemmed and lacks a lignotuber. Trees of this form have a relatively long, slender trunk.

Eucalyptus dolichorhyncha grows to a height of 1–6 m, so is suitable for most reasonably sized suburban gardens. The bark ranges from pale grey to pale orange and pale brown. The adult leaves are lance-shaped to oblong.

Flowering generally occurs between January and May. The buds are large four-sided and winged and are bright red, with yellow stamens once the operculum has dropped off. The fruit is a woody capsule and like the flowers are square in cross-section.

It prefers light gravelly well-drained soil in an open sunny position; drought and frost resistant.

Within the eucalypts, *E. dolichorhyncha* is classified in a subgroup (series Tetrapterae) with *E. stoatei*, *E. forrestiana* and *E. tetraptera*. *E. dolichorhyncha* is distinguished from its three close relatives by the combination of a slender beaked operculum and four-winged buds and fruit that are square in cross-section. *E. forrestiana* has a shallow disc-like operculum that is never beaked.

E. dolichorhyncha was previously classified as a subspecies of *E. forrestiana*, but was raised to species status in 1993. The species name *dolichorhyncha* refer to: *dolichos*, narrow and *rhynchos*, nose, referring to the long narrow operculum.

E. dolichorhyncha and *E. forrestiana* are both cultivated as ornamental trees and both have frequently been incorrectly sold under the name *E. forrestiana*. If you think you are growing *E. forrestiana* in your garden then go out and look at the operculum. You may find you are growing *E. dolichorhyncha*. Either way both are spectacular small trees that draw attention in any garden. (GA)

Devious orchids seduce innocent fungus gnats

In the botanical kingdom sexual deception is ingeniously used to increase the chances of cross pollination. A subset of orchids have perfected this practice so well that they are able to deceive hapless male insects by mimicking their female counterparts. This leads to the male insects attempting to mate with the orchids, inadvertently pollinating them, and thereby bringing about seed production.

Researchers in the Royal Botanic Gardens Victoria's Orchid Conservation Program and the Australian National University have discovered that four of the five orchid species they have been researching lure pollinators to their blooms via sexual deception.

Using five different species to represent the three main clades or 'groups' within the orchid genus *Pterostylis*, the team began to test why pollinators were attracted to each of the species

being studied. They used potted plants of each species as bait flowers to record the behaviour of fungus gnats around the orchid, including mating behaviours and attempted copulation. The team also used concealed, 'baited' flowers to see if they could trigger a response from the gnats, even though the flowers were visually obscured.

The results confirmed that sexual deception operates in two of the three major *Pterostylis* clades, and showed that two families of fungus gnat (Mycetophilidae and Keroplattidae) are involved in *Pterostylis* pollination. This is the first known example of plant pollination involving Keroplattid fungus gnats.

This study highlights how effective pollinator baiting can be when used as a tool to understand the pollination mechanisms of plants which use floral odours as a pollination cue.

[Source: RBG Victoria]

Landscaping for wildlife

Neil Marriott

For most of us, the most satisfying thing about growing Australian native plants is attracting some of our precious wildlife to our garden. It is a thrilling experience to be able to observe a Painted Button-quail trotting through your garden with a line of fluffy black chicks in train behind! With a little thought, we can all do some wildlife landscaping in our own garden. We may not all be able to attract button-quail into our gardens, but we can all attract a variety of native birds, bees and butterflies.

There are four major requirements in landscaping to attract wildlife. To get the best from your landscape for our birds, bees, butterflies, lizards and the like, you need to provide:

- food
- shelter
- water
- nesting sites.

If all of these are supplied, there will soon be a good variety of our wonderful native wildlife moving into your garden – and depending on how well you have done your wildlife landscaping,

you may eventually be privileged to have some animals stay and breed.

This is a large topic to cover, so this article will focus on food. Even this one item is complex, and it depends on just what wildlife you are trying to attract.

For nectar-eating birds it is easy to plant a range of nectar-producing plants, being aware of the flowering seasons for all plants you wish to establish. Make sure you don't just plant spring-flowering specimens. The choices are great, so this article will look at some of the best plants to grow to attract honeyeaters.

To learn much more about attracting wildlife to your garden visit the forthcoming Pomonal Flower Show.

Banksia praemorsa

(Cut-Leaf Banksia)

Coming from the rugged south coast of WVA, this banksia has proven to be one of the most hardy in nearly all soils, both acid and alkaline. The typical form has lovely burgundy red flower spikes, however the rare yellow-flowered form



Banksia praemorsa (Cut-leaf Banksia)



Grevillea bipinnatifida (Grape Grevillea)

is now the more common form in cultivation. Honeyeaters absolutely love the plant, as it flowers heavily for many months from late winter, right through spring and into summer. We have been thrilled to even have Yellow-tailed Black-cockatoos feeding on the woody seed capsules once flowering is finished. Plants are large, growing to around 3–4 m tall and 2–3 m wide and grow best in a sunny site.

Grevillea bipinnatifida

(Grape Grevillea)

Well known by grevillea enthusiasts, *Grevillea bipinnatifida* is a variable free-flowering shrub from the Darling Range region of WA. The best forms flower heavily for most of the year, the showy large flowers absolutely dripping with nectar. A hardy plant growing in most well-drained soils, plants will flower right through summer given a little extra water at this time of the year. Prostrate forms are lovely, while larger forms can grow 1–2 m. We find that the smaller forms tend to be far more prolific in flower. They attract lots of birds, and are particularly loved by Red Wattlebirds.



Neil Marriott

Grevillea bipinnatifida

Calothamnus quadrifidus

(One-sided Bottlebrush)

One of the absolutely toughest plants for any garden, this calothamnus is also one of the best for attracting honey-eating birds to the garden. It has massed showy red flowers from late winter right through to mid-summer. These contrast with the soft silky grey-green foliage, and even when not in flower, the plant makes an attractive grey bush. One-sided Bottlebrush comes from south-west WA, where there are numerous species of *Calothamnus*; however, *C. quadrifidus* is the most widespread. As a result it varies in size and habit, but is typically an erect dense shrub to 2 m and often a little less wide. There is even a tall slender form marketed as *Calothamnus quadrifidus* 'Pencil'. This form makes a spectacular screen along fence lines and the like.

***Eucalyptus caesia* ssp. *magna* 'Silver Princess'**

This superb eucalypt needs little introduction as it is so widely grown. However it is still one of the very best small gums for attracting birds



Neil Marriott

Eucalyptus caesia ssp. *magna* 'Silver Princess'

into the garden, with its massed large rich pink to red flowers for most of the winter and spring. When in flower it is constantly visited by flocks of lorikeets.

It needs well-drained soil and can blow over if not well anchored until it is established. I suspect that this is usually the result of plants being sold with overcrowded or poor root systems. It is therefore wise to avoid plants sold with floppy trunks or that are heavily staked. Select carefully and then plant into a warm sunny site in well-drained soil and you will soon be thrilled with the birds it attracts.

***Banksia spinulosa* 'Schnapper Point' dwarf forms**

Honeyeaters love this plant, as it comes into flower in early autumn and flowers right through the cold months of winter. The dense flowering cones are full of nectar, attracting loads of honeyeaters and wattlebirds to the garden. Plants are compact, only growing 0.5–1 m tall and around 1.5 m wide. They prefer a sunny to dappled shade site in well-drained acid soils and are happier with some subsoil moisture over the summer months. Hardy and SO showy!



Banksia spinulosa 'Schnapper Point'

Neil Marriott

***Correa reflexa* 'Red Empress'**

This spectacular, free-flowering correa was one that I discovered decades ago at Steiglitz, in the Brisbane Ranges. When I ran White Gums Nursery at Deep Lead I must have raved about it so much that it soon became known as *Correa reflexa* 'Neil's Best'. This was not really a good name for such a lovely plant, so Maria Hitchcock registered it with ACRA as *Correa* 'Red Empress'. It is one of the toughest selections of this species, growing well in full sun to full shade, but best in a dappled site in reasonably well-drained soil. Once established, plants sucker lightly and this allows you to cut them back hard if needed to promote the vigorous young new plants. It flowers for many months of the year, attracting spinebills and numerous other honeyeaters to the garden. (GA)



Correa reflexa 'Red Empress'

Neil Marriott

Mostly Aussie Nursery
 Australian Ornamental Tubestock & some exotics.
 Good selection of Grevilleas & Eremophilas with some grafted plants.
 Find us on Facebook

A bit of desert colour in Gippsland

Col Jackson

Calandrinia reticulata

Parakeelyas (*Calandrinia* species) have fascinated me since I first saw them in Central Australia. Although not always noticeable in drier seasons, after good rains, patches of the desert can be painted with their flamboyant purple colouring. This colouring may be in small patches (as shown in the centre photo taken in far western Queensland), or in extreme cases can consist of literally acres of almost continuous colour.

There is nothing shy or shabby about them when they do burst into life. With vivid greens and flamboyant purples accented with those gentler yellow centres, they are certainly out there competing for their share of insect pollinators.

I'm not sure exactly when or where I got my specimen, but it would be many years ago now. Actually, it's not exactly the original one. The plant has died many times and I have kept it going by taking cuttings periodically.

It works well in a large pot in a sunny position but, although I have tried several times, I haven't been able to maintain it through a winter in the garden. It was on a recent visit to the Australian National Botanic Gardens in Canberra that I noticed they had it growing successfully in a raised sandy bed in a desert plants section. This has re-ignited my enthusiasm and I now have plans for creating a raised bed using a section of pipe or some similar apparatus filled with an open, sandy soil. With a bit of luck, I might be able to have my own bit of desert colour in the garden.

©A

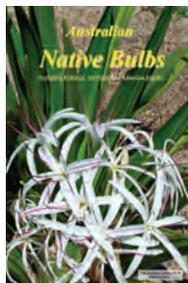


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Growing at Wartook Gardens

words and photos by Royce and Jeanne Raleigh

While writing this the rain continues to drizzle. We have had wonderful rain over the last couple of months. The crops are looking great throughout the Wimmera and our two dams that were bone dry are now both filling with water.

At long last we believe we are finally rid of rabbits out of the garden. This will make planting and maintenance much easier and we can remove all the pieces of wire netting that had previously protected plants but detracted from the visual impact of the garden.

Acacia caesiella

(Tableland Wattle or Bluebush Wattle)

A tall shrub to 6 m with attractive silvery, almost bluish, foliage. Grows easily in a variety of soil types. Grows naturally in NSW in the northern Blue Mountains, further north and on the Western Plains. A very showy species that makes a wonderful display when in full flower. It makes a great background garden shrub but is also most attractive as a specimen plant.



Prostanthera aspalathoides

(Scarlet Mintbush)

A dwarf shrub with hairy young growth, usually low growing, but can be up to 1 m x 1 m. Flowers are usually red to pinkish-red but can be orange, cream, greenish or rarely yellow. When in flower they are profuse and conspicuous. Does best in drier regions where it will grow in a wide range of soil types. It is hardy to frost and grows best in full sun. It also does well in containers. Pruning promotes compact growth and provides cutting material which strikes readily.



Hardenbergia violacea

(Purple Coral Pea, Native Sarsparilla)

A climber, small shrub or scrambler to 1–1.5 m by 1–2 m. Flowers are usually purple or violet, but can be white or occasionally pink. Flowers are usually most conspicuous and profuse. It is a most variable plant and has been used in gardens to drape a fence, cover an archway or as a groundcover. Some forms can be very vigorous and form extensive root systems. Pruning will maintain shape and heavy pruning can rejuvenate plants.



Banksia corvijuga

(previously *Dryandra corvijuga*)

A shrub to just over 1 m from the Mt Desmond area, WA, near Ravensthorpe and restricted to that area. Flowers have similarities to *Banksia rufa* (previously *Dryandra ferruginea*) but leaves have only shallow serrate margins. It is uncommon in cultivation and is reported to be difficult to establish in gardens. At Wartook, plants have done very well in a raised well-drained bed and after 35 years are still growing well. Plants have proved drought and frost tolerant.



Hakea francisiana

(Grass-leaf Hakea or Emu Tree)

An erect tall shrub or small tree without lignotuber with very showy racemes 12 cm x 5 cm at base. It is one of the most spectacular hakeas in full bloom and occurs naturally in the semi-arid and arid regions of southern WA and central and western SA. Colours range from pink and cream, pink to deep pink and red. The photo shows the Gawler Range form, which at Wartook has the largest flowers of all the forms of *H. francisiana* that we are growing. Frost and drought hardy. The flowers can be used as cut flowers. A great plant for a sunny position.



Bossiaea aquifolium

(Water Bush)

A shrub 1–2 m x 1–2 m with holly-like leaves with the central nerve ending in a pungent point. New growth is often bronze in colour. Flowers typically pea-shaped and can cover the bush when in full bloom. Grows in well-drained situations in dappled shade. Not widely cultivated but well worth growing. Pruning after flowering improves the look of the plant. (GA)



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Chorizema cordatum

A small shrub which can be sometimes be more of a scrambler with sometimes toothed or smooth foliage. It is the best known and most widely grown species with a range of colour forms now available. We grow our plants in dappled shade in well-drained garden beds. It also does well as a container plant. Depending on the season, it can burst into flower sporadically throughout the year. There are other *Chorizema* species which also make great garden plants.



Acacia acuminata

(Raspberry Jam Wattle)

An upright small tree up to 10 m with long thin phyllodes to 25 cm and bright yellow rod flowers. It grows well in a range of soils and prefers partial to full sun. It is frost hardy and tolerates dry periods. We have plants growing on sand in partial shade under big eucalypts. When freshly cut the wood smells like raspberry jam. The wood is dense and is quite heavy.



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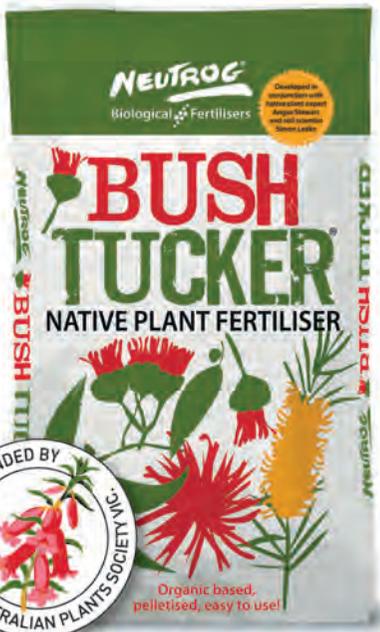
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Bill & Sue

We have had a lovely lot of rain since our last Book Talk. We have done a lot of planting in the last couple of months, and look forward to picking up many new, beautiful and unusual plants from the APS plant sales coming up in spring.

Our two book reviews this quarter are *Rainforest of Australia's East Coast* and *Wattles of the Mount Alexander Region*.

The other new book we have is *A Guide to Crickets of Australia*. This book comes from CSIRO and is written by David Rentz and You Ning Su. Keys, distribution maps, illustrations and detailed colour photographs describe each of the 92 genera of Australian true crickets, mole crickets and ant crickets. Note that raspy crickets, king crickets and pygmy mole crickets are not included as they are not considered to be true crickets, but more closely related to other groups such as katydids.

We haven't any other new books to talk about this time, so we thought it would be good to feature a group of books relating to rainforest. There are probably not many parts of Victoria where you could have a rainforest garden, but many gardeners manage to set up an area of rainforest in a more protected area of their garden. We have several books relating to rainforest in addition to the new book mentioned above.

Nan and Hugh Nicholson produced a six-volume series of photographic guides called *Australian Rainforest Plants*. Each volume covers over 100 different species with large, clear colour photos, as well as descriptions and interesting background information.

There is an *Australian Rainforest Plants* book in Leonard Cronin's series called Cronin's Key Guides. This guide covers more than 300 species: each illustrated with full-coloured drawings, in-depth description and distribution map.

Australian Rainforest Fruits is a field guide to the colourful fruits of 504 fruiting rainforest plants, written by Wendy Cooper. Each species is illustrated with a gorgeous drawing by acclaimed artist William T. Cooper, diagnostic characteristics and a distribution map. The book is arranged by fruit colour.

Rainforest Trees of Mainland South-eastern Australia (second edition), by Alex Floyd, covers 402 rainforest tree species in Victoria and New South Wales, including some distribution extensions into Queensland. The identification key uses features which are present in all seasons. Each species is illustrated with a line drawing and extensive feature descriptions.

On a related subject, we have *Ferns of Emerald Victoria*, a field guide from the John Hill Landcare Group. This covers about 20 fern species occurring naturally in the damper areas east of the Dandenong Ranges. Each species is illustrated with clear photos of the plant, and features such as croziers and spores.

We have more titles than fit on the booklist. Contact us on books@apsvic.org.au or phone (03) 9872 3583 for a book not on the list – so long as it relates to Australian plants or related areas such as native fauna or weeds. If you want to pay by PayPal, please email and we will provide instructions. (GA)

NATIVE FLOWER SHOW

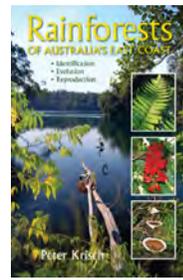
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Merbelia dilatata



Rainforests of Australia's East Coast

By Peter Krisch

Published by New Holland Publishers 2019

272 pages, paperback, colour photographs

Members' price \$26.25 plus postage

Rainforests are the most diverse and complex ecosystems on Earth. Not just flowering plants, but also mosses, liverworts, fungus and slime moulds interact. This little book brilliantly describes the structure, evolution, species characteristics and reproductive processes of three different kingdoms in lucid, elegant language.

Rainforests are closed forests and except for dry rainforests, all types have annual rainfall over 1,000 mm per annum. The introduction distinguishes the major types of cool temperate, warm temperate, subtropical and tropical, and monsoon vine forest. These types roughly follow a northward progression and progressively consist of greater complexity of vegetation. For example, there are 850 species of rainforest trees and shrubs recorded from temperate to subtropical rainforest on Australia's east coast but 1,740 from tropical North Queensland. The introduction concludes with a description of the evolution of forests over the last 485 million years. Many rainforest trees have primeval ancestry that predate Eucalypts and Acacias.

Each subsequent chapter describes a different group of rainforest inhabitants, following an evolutionary trail. Mosses and liverworts (bryophytes) come first. Due to identification difficulties, only six individual species are illustrated.

Fungus follows, where the different roles of saprophytic, parasitic, mycorrhizal and endophytic species are described, before the different weird and wonderful shapes – gilled, coral, jelly, pored, brackets, stinkhorns and ascos. Over 50 individual species are illustrated, yet this is only a small fraction of the total.

Bushy, leafy and crusty lichens are explained and illustrated.

The slime moulds chapter has some fascinating facts. These are the amazing species which do in real life what trifids could only

do in novels – they move. The top recorded speed of slime moulds is 1.3 mm per second. They're smart: they can find the shortest route between food sources and avoid harmful substances even though they have no brain or nervous system.

Fern allies and ferns include the first vascular plants with true roots. About 10% of all the rainforests' ferns are illustrated emphasizing wide distribution and growth habit.

Next to evolve were gymnosperms which have female reproductive cells not protected by an ovary, which finally evolved in the angiosperms. With less than 20 rainforest species, most are illustrated.

Angiosperms, with over 2,600 species are by far the largest group. Two groups – orchids and palms – have their own chapters, but the majority are sorted by leaf characters - average size, simple or compound, and margins. This avoids the shortcomings of flowers (i.e. short lifespan and out of reach) but means that plants in the same genera are not necessarily in the same grouping. Even within a grouping the plants are not in any alphabetical order (family, genera or common name). While individual species descriptions are excellent, only 10% are included, and the photos are too small, so, the value as a field guide is limited.

At this point I wondered where was the other kingdom – the birds, animals and insects – but they are not included.

As a general introduction to all the (non-fauna) components of rainforests, both in their evolution and their current anatomy and reproduction, this little book is excellent and features a comprehensive bibliography of books and websites. For a field guide, its small size causes difficulties.

– Geoff Lay

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Book Review

Wattles of the Mount Alexander Region By Bernard Slattery, Ern Perkins and Bronwyn Silver

Published by Friends of the Box-Ironbark Forests 2018

118 pages, soft cover, colour photographs

Members' price \$8 plus postage



The Friends of the Box-Ironbark Forests (Mt Alexander Region) was formed in 1998 by those in the local community interested in highlighting the significance of the Box-Ironbark Forests and Woodlands in this region of central Victoria. The Group currently has over 100 members.

One aspect of their activities has been in disseminating information on the natural vegetation in this area, and so far three guide books have been produced: *Mosses of Dry Forests* (2014), *Eucalypts of the Mount Alexander Region* (2016) and most recently *Wattles of the Mount Alexander Region*.

Wattles of the Mount Alexander Region covers 20 species – three wattles with true leaves, 13 with phyllodes, two that are rare in the region and two weed species. Many of these species have a much wider distribution than just the Mount Alexander Region – in fact, ignoring the two rare species and the two weed species, 15 of the remaining 16 species described in the book also feature in *Flora of Melbourne*. So the book may also be useful to people around Melbourne and elsewhere wanting to learn more about some of their own local wattles.

For each species, a description of the plant is provided as well as information on the derivation of its name, details of similar species and information on where to see them. Each species is illustrated with colour photographs and black and white line drawings. Because of the format of the book, the illustrations are necessarily small, but they are still clear and of good quality to be useful in species identification.

Many members of the APS Vic will fondly remember the late Ern Perkins (1934–2016), and it is noted in the book that Ern is a continuing inspiration. Along with his wife Lesley and other field naturalists, Ern strove to discover and

document the diverse flora of Castlemaine and surrounds over a period of more than 40 years. The information provided in this book is based on the notes that Ern made about wattles in the district over this period.

This Friends Group is an amazingly active and dedicated group. As an indication of some of their current activities, they have just embarked on preparing another guide book, this one relating to the 50 species of pea plants in their region and they are mounting a photo exhibition later this year. They are also trying to modify VicRoads tree clearing mania and they are having a bit of a campaign against irresponsible advertising of 4WD vehicles.

– Bill Aitchison



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Collector's Corner

Neil Marriott

Grevillea magnifica

I first saw this spectacular grevillea growing around the base of Mt Caroline, in the Central Wheatbelt of Western Australia. Fortunately for this species and for *Eucalyptus caesia* ssp. *magna* 'Silver Princess', which occurs with the grevillea, they grow naturally on and around isolated granite outcrops, such as Mt Caroline. As a result they have avoided being cleared, unlike the vast majority of the surrounding vegetation. And like *Eucalyptus caesia*, there are several subspecies of *Grevillea magnifica*.

At Mt Caroline, and on several nearby granite outcrops, the type species is found – *Grevillea magnifica* ssp. *magnifica*. When we first saw this truly amazing grevillea, Peter Olde and I agreed that the plant warranted recognition as a new species, and that the name 'magnifica' was most appropriate. Up until then, McGillivray had included it in *Grevillea petrophiloides*, a far smaller species, in flower, foliage and habit. *G. petrophiloides* also occurs extremely widely in the south-west of WA on a variety of soils, but never on granite.



Grevillea magnifica ssp. *magnifica* – note the pale pink flowers.

The other subspecies of *Grevillea magnifica* occurs many kilometres south and east in the Southern Wheatbelt and the semi-arid mallee woodland south-west of Coolgardie, on the edge of the Great Western Woodlands. The type locality for this subspecies, Cave Hill, was in fact so isolated that Peter Olde and I had no hesitation in naming it subspecies *remota*, as at the time, this was the only known location for this subspecies. Since that time, many more populations have been discovered, all growing on isolated granite hills and outcrops, and most are hundreds of kilometres apart growing well south of subspecies *magnifica*.



Grevillea magnifica ssp. *remota* – note deeper pink flowers.

Both subspecies make large and truly spectacular feature plants for a well-drained site in the garden. Under good conditions they will grow to around 3 m tall and 2 m wide. They are tolerant of cold wet conditions including heavy frosts, but will not cope with poor drainage or summer humidity. So the solution to successful cultivation is to grow them on a large mound of sand, sandy-loam or gravelly loam if you are

concerned about the depth of your soil. For gardens on sands, gravelly loams or volcanic loams ensure there is good depth to the soil and you should have great success.

Plants are fast growing, and will flower in the second year. Flowers appear as spectacular bottlebrush-like flowers on long, leafless canes which can be over 2 m and well above the foliage. It is this feature, among the several other botanical differences, that readily separates *Grevillea magnifica* from *G. petrophiloides*.

Flowers can appear in many months of the year, beginning in winter and flowering right through until the soils dry out in mid to late summer. Over this length of time a plant can produce thousands of its beautiful flowers. These attract continuous hordes of honeyeaters and lorikeets to feast on the abundant nectar and pollen.



Neil Marriott

The leafless, long flowering canes are ideal for cut flowers when picked as the buds just begin to open.



Neil Marriott

Massed flowering of *Grevillea magnifica* ssp. *remota*.

Propagation of *Grevillea magnifica* is from seed, cuttings or by grafting, although the latter form of propagation has eluded most nurserymen. Plants set vast quantities of seed, which will germinate well when pre-treated with smoked water before sowing into a perfectly drained seed mix. This is best done in early to mid-spring, so resultant seedlings can grow on strongly over their first summer, and then be ready for planting out the following autumn. Otherwise, cuttings of selected good forms can be readily struck using Clonex Purple and placing in a mix of one part coir peat to four parts moist medium-grade perlite.

As well as the typical large form of *G. magnifica* there is a superb dwarf form developed by John Mahoney from Geelong. It only grows to around 1.5 m – far smaller than the usual 3 m. As a result it is better suited to smaller gardens, but has the same spectacular flowers as its larger parent. Plants of this and the two subspecies are only occasionally available, but keep your eyes out as Phil Vaughan, Goldfields Nursery, Sun Valley Plants and Kurunga all stock this truly spectacular plant sometimes. At the annual Grampians Group's Pomonal Flower Show this grevillea is always a show stopper. It is one of the very best of all grevilleas, and that's saying something in such a brilliant genus! (GA)

Footnote: In *Flora of Australia* 17A (2000) Makinson has placed *Grevillea magnifica* back in with *Grevillea petrophiloides*. I understand this was done with little knowledge of both species, and without ever seeing the plants in the wild! As mentioned above, there are many botanical characters that readily separate the two species, and Peter Olde and I will shortly be publishing a new botanical paper re-instating *Grevillea magnifica* to its rightful species status.

A brush with bush tucker plants

Helene Wild

In 2016 I began working on a series of watercolours featuring bush tucker plants.

That subject has long fascinated me so I was determined to promote, though my art, a small selection of Australia's edible plant species. Of course, there are also many well-known examples of native animal foods such as kangaroo, emu, crocodile, goanna and witchetty grub.

Unfortunately traditional native food has been affected by the onset of European migration, especially in the more densely colonised areas of Australia. The introduction of non-native foods, combined with the loss of traditional lands, has resulted in reduced access to traditional bush tucker.

My bush tucker plants project came to fruition in time for a 2019 calendar and for reproduction on cards, etc.

Maclura cocinchinensis (Cockspur Thorn). A native to northern New South Wales and Queensland where it grows in rainforests as a vine or scrambling shrub. The orange fruits are produced generously, but only on female plants. Humans and birds



find the fruit delicious but, unfortunately, this species is too rampant to plant in suburban gardens.

Ficus macrophylla (Moreton Bay Fig). This imposing strangler fig occurs along the east coast from the Atherton Tableland to the Illawarra. Birds deposit the seed in the canopy of a host tree where it germinates and sends out roots that slowly strangle the host. The robust



roots eventually establish contact with the ground and it then becomes a freestanding tree. The edible

fruit is an inverted inflorescence with the flowers lining an internal cavity. Another species far too large for a suburban garden. It is, however, featured in many public gardens.

Banksia marginata (Silver Banksia). This woody tree or shrub occurs in New South Wales, Victoria, South Australia and Tasmania. Its common name, Silver Banksia, refers to the silver-white underside of the leaves. Indigenous people sucked the sweet nectar from the flowers or soaked them in water to make a sweet drink. They also mixed the nectar with wattle gum to make a lolly.



Syzygium paniculatum (Magenta Cherry). This broad, dense, bushy rainforest tree is native to New South Wales. Fluffy white flowers are followed by clusters of edible fruit that is usually magenta in colour, but can be white, pink or purple. This is a well-known edible wild fruit with a pleasantly sour apple-like flavour. It can be eaten straight from the tree or made into jams and jellies.



Morinda citrifolia (Cheese Fruit). This fast growing tree is found in South-East Asia and in Australasia. It is called Cheese Fruit because it smells like some types of ripening cheese. The fruit



is not delicious, but was eaten raw with salt, cooked it, and ate the roasted seeds. In some areas it is called Famine Fruit and was eaten when more palatable food was scarce.

Planchonella australis (previously *Pouteria australis*) (Black Bush Apple). Native to Queensland and New South Wales where it grows in various types of rainforest. The fruit



looks a lot like some varieties of European plum, and other common names include Wild Plum and Black Plum. The sweet fruit is good to eat when it has fallen from the

tree; and the fruit makes wonderful jam.

Cyttaria gunnii (Myrtle or Beech Orange). A specific parasite of *Nothofagus cunninghamii* trees, this pleasant-tasting edible fungus is endemic to Victoria and Tasmania. When young,



the fruits are pear-shaped and smooth, becoming spherical as they age. On maturity, the surface erupts into a honeycomb of apricot-coloured cavities. Myrtle Oranges have a jelly-like consistency.

Ficus coronata (Creek Sandpaper Fig).

This native fig is found along the east coast from Mackay to Mallacoota. Its common name refers to the rough textured leaves that Aborigines



used as sandpaper. While all our native figs are edible, the Creek Sandpaper Fig has the reputation of being one of the most delicious – sweet and palatable after the hairy outer skin is removed.

Davidsonia jerseyana (Davidson's Plum). This tree is endemic to a restricted area around Mullumbimby on the north coast of New South Wales, thus its other common name of Mullumbimby Plum. Fruits emerge from the trunk and look superficially like European plums.



Trees are capable of producing large quantities of fruit. The fruit is rather sour but delicious and high in antioxidants and vitamins. Davidson's Plums are used in both sweet and savoury dishes.

Pandanus spiralis (Screw Pine). Native to northern Australia, the edible fruits, seeds and leaf bases are gathered by the local inhabitants.

The cylindrical fruit consists of a number of individual woody wedges containing seeds. Each wedge has a fleshy base with a sweet smelling pulp that tastes like Custard Apple but needs to be cooked before consumption. Leaves were traditionally used for weaving.



Atractocarpus fitzalanii (Yellow Mangosteen). Found in tropical Queensland, the Yellow Mangosteen has lush growth and beautifully perfumed flowers that smell like Gardenias.

The round fruits have tart yellow segments that were eaten fresh by Aborigines. Because of the fruit's high acidity, the Yellow Mangosteen is ideal for making jams and jellies.



Australian Plants Revealed

An exhibition highlighting unique Australian flora collected by Joseph Banks and Daniel Solander in 1770.

17 February to 17 April 2020

The Gallery of Maroondah Federation Estate
32 Greenwood Ave, Ringwood
9.00 am to 4.00 pm Monday to Friday, 12 noon to 4.00 pm on Saturdays

2020 will mark the 250th anniversary of Captain James Cook with naturalist Joseph Banks and botanist Daniel Solander visiting and collecting plant specimens up the east coast of Australia.

APS Vic supported by APS Maroondah, Maroondah City Council and the National Herbarium of Victoria will present a special exhibition which, as a highlight, will include six of the actual plant specimens collected by Banks and Solander in 1770. There will be images of 30 other specimens they collected.



Banksia serrata

This exhibition presents a once in 250 year opportunity for APS members and the general public to examine actual plant specimens and to appreciate the amazing work of these collectors.

Actual Banks-Solander specimens are so precious they rarely leave the Herbarium. When the exhibition is finished APS Vic will donate framed images displayed as part of the exhibition to the State Collection which will enable the Herbarium to display and lend images without risking damage or deterioration to the precious specimens.

Financial support from APS Vic and APS Maroondah have made it possible to conduct the exhibition and lectures as free events.

Two keynote lectures – 28 March 2020 at 2.00 pm

- Bruce Pascoe will speak on *Aboriginal plant uses for sustenance and medicine*.

Bruce is a Bunurong man. He is a member of the Wathaurong Aboriginal Co-operative of southern Victoria and has been the director of the Australian Studies Project for the Commonwealth Schools Commission. Bruce has had a varied career as a teacher, farmer, fisherman, barman, lecturer, Aboriginal language researcher, archaeological site worker, editor and author of over 15 books, including *Dark Emu: Aboriginal Australia and the Birth of Agriculture*.



Portraits of Sir Joseph Banks and Dr Daniel Solander.

- Prof Tim Entwisle will speak on *Sir Joseph Banks' cabinet: botanical bounty of the Endeavour's voyage to New Zealand and Australia*.

Tim is Director and Chief Executive RBGV, and is a highly respected scientist, scientific communicator and botanic gardens director. He is an expert in freshwater algae but has a broad interest in all plants and related life forms. In 2014 Tim published *Sprinter and Sprummer: Australia's Changing Seasons*, challenging the use of the traditional four seasons in Australia. He writes for a variety of science, nature and garden magazines and maintains an active social media profile.

The lectures will be followed by afternoon tea and viewing of the exhibition.

Additional events – 28 March 2020

- **Committee of Management Meeting** (during the morning)

APS Maroondah will host a Committee of Management meeting at the Maroondah Federation Estate at Ringwood. This will enable people attending the COM to stay for the lectures and to view the exhibition.

Who was Solander?

Daniel Carlsson Solander (19 Feb 1733–13 May 1782) was a Swedish naturalist. He studied at Uppsala University where his lecturers included Carl Linnaeus.

In 1768, Solander accompanied Joseph Banks on James Cook's first voyage to the Pacific Ocean aboard the *Endeavour*. Solander was the first university-educated scientist to set foot on Australian soil.

Solander helped make and describe an important collection of Australian plants while the *Endeavour* was beached near present-day Cooktown. These collections later formed the basis of Banks' *Florilegium*.

Solander died at Banks' home in Soho Square of a stroke, aged 49. Solander's reputation has been profoundly influenced by his limited number of publications and his premature death.

Request for assistance

- **Saturday afternoons**

Council staff will be present during opening hours on weekdays. APS Vic members will be rostered on five Saturdays from 12 noon until 4.00 pm. **More volunteers are needed.**

- **Lecture attendance 28th March 2020**

It would be an immense help if district groups would estimate and advise the number of members likely to attend the afternoon lectures. This would assist planning for the potential size of the audience allowing APS members to be given priority for seating.

During the morning there will be activities for members not attending the COM.

- **Dinner at Ringwood RSL – 6.00 pm**

Arrangements are being made for a dinner to be held at the local RSL. This is within walking distance from the day's activities and will cost \$40.00 per head. This will depend upon a number of acceptances. Closer to the date there will be a call for bookings.

More details will be in the December issue of *Growing Australian*.

If you would like further information contact: exhibitions@apsvic.org.au or Alex Smart smartie38@bigpond.com.

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Research report

Barbara Buchanan

Last issue I wrote about fruitful co-operation between our keener APS members with no formal academic qualifications and professional botanists. The latest volume of *Muelleria*¹ has an article on the *Acacia boormanii* complex providing an example of this in the contribution of Alan Gibb, a member of APS Warraratta.

There are two isolated groups of *A. boormanii* found at Mt Typo and Gapsted near Myrtleford in north-east Victoria. The main area of occurrence is East Gippsland, extending up to southern NSW.

Both the Mt Typo and Gapsted plants differ in observable characteristics from the type species *A. boormanii* ssp. *boormanii*. Some differences are seen in the phyllodes but the major differences from a horticultural viewpoint are the non-root suckering characteristic of the Mt Typo form and the lack of seed production by the Gapsted plants.

The type group and the Gapsted plants both sucker from the roots, with the type group and the Mt Typo form both producing some seed. Alan Gibb recorded no seed production by the Gapsted group in over 20 years. This indicates they are a relic group, relying solely on vegetative reproduction.

The non-suckering characteristic could be a very useful attribute in today's smaller gardens. In a windbreak situation root suckering could be advantageous.

Alan initially collected the Mt Typo form in 1976 and it now has subspecies status – *A. boormanii* ssp. *gibba*. 'Gibba' alludes to both the profile of Mt Typo and recognises Alan's important field work contributing to sorting out the taxonomy of this species.

Snotty Gobbles for weed control

The University of Adelaide Environmental Institute has been investigating the potential use of *Cassytha pubescens* (Downy Dodder-laurel or Snotty Gobble) as a biological control agent for introduced noxious weeds². This native parasitic vine is common through south-east Australia and is able to kill gorse, Blackberry and Scotch Broom, while not damaging native plants.

Parasitic plants attach to hosts via 'suckers', hijacking water and nutrients so they can grow at the expense of the host plant. *Cassytha* is particularly successful growing on almost anything including barbwire fences! I observed this first hand before I became aware of the research interest in *Cassytha* when a vine gradually killed a very large Blackberry clump at Myrree in north-east Victoria.

Cassytha has been found to have a very deleterious effect on the growth of gorse, a nitrogen-fixing legume, regardless of the level of nitrogen in the soil. *Acacia paradoxa*, also a nitrogen fixer, was found to be considerably less affected by the Snotty Gobble. It was previously thought that because nitrogen fixation came at an energy cost to the plant these host plants would all be more vulnerable to *Cassytha* in low soil nitrogen situations. The finding that soil nitrogen levels had no influence on the effect of *Cassytha* on either weeds or native plants highlights its potential to control invasive weeds without damaging natives. Presumably this is a result of the co-evolution of the dodder with other native species.

Interestingly, the seedling stage of *Cassytha* grows independently for the first 6–8 weeks after germination. It develops a short root that dies back once the vine has found a host and wrapped itself securely around it. The soil seed bank would allow the establishment of a new population in the event of fire destroying the adult plants.



Cassytha pubescens parasitising *Brachyloma daphnoides* (Daphne Heath).

Donald Høben (Wikimedia Commons CC BY 2.0)

In a further contribution to the environment, both *Cassytha pubescens* and *Cassytha glabella* (Slender Dodder-laurel) are food plants for caterpillars of the very pretty Bordered Emerald Moth, which feed on the young shoots and flowers of these dodders.

Germinating persoonias

Speaking of snotty gobbles, this is the common name used in South and Western Australia for *Persoonia* species. In the eastern states we tend to be kinder and call them geebung. Persoonias are one of the native species that have a very hard, woody endocarp encasing the seed, resulting in them being very difficult to germinate for horticultural purposes. Other species with similar seed cases include *Astroloma*, *Leucopogon*, *Eremophila* and *Scaevola*.

Research work over a number of years at Kings Park, WA,^{3,4} has aimed to determine the specific set of requirements to germinate *Persoonia longifolia*, *P. elliptica*, *P. quinquenervis* and *P. saccata*.

Persoonia longifolia is found in the Jarrah forests which are mined for bauxite and mining companies have been unsuccessful in re-establishing this species when rehabilitating sites. The first study involving nursery, laboratory and burial trials on *P. longifolia* showed that the seeds required between two and four summer thunderstorms of more than 10 mm of rain each, to break the dormancy. Following that the length of the warm summer period was critical, with seeds needing exposure to summer temperatures for at least 2 weeks. Germination finally occurred at fluctuating winter temperatures of 10–20°C. The seed of *P. longifolia* therefore has physiological dormancy and requires both warm, wet summer conditions and a cold, wet winter burst before germinating in spring.

Later work investigated the germination requirements of the *P. elliptica*, *P. quinquenervis* and *P. saccata*. The best results at 49% germination for *P. quinquenervis* were achieved when warm stratification was applied in the laboratory. This simulated summer storms, however, the result was not replicated in the nursery even after



Kevin Thiele/Wikimedia Commons CC BY 2.0

Persoonia elliptica

summer rain with germination below 20%. Soil-stored seed remained viable over the 2 years of the trial indicating it could still germinate in a third year.

Persoonia elliptica germinated poorly in all trials at less than 10% and soil-stored seed did not remain viable. *P. saccata* seeds germinated once the endocarp was removed indicating that the woody nature of the endocarp inhibits germination.

The main conclusion is that *Persoonia* species have very specific germination requirements almost certainly linked to the conditions they experience in their natural habitat. This finding should assist in researching the germination needs of other species of horticultural significance. In Benalla a handful of *P. linearis* seed scattered in the soil resulted in three seedlings emerging, so it's always worth a try. (GA)

¹ Tucker, K.J., Murphy, D.J. and Walsh, N. (2018–2019) Examining the *Acacia boormanii* complex (Fabaceae: Mimosoideae): classification of a new subspecies. *Muelleria* v.37 pp.23–32.

² 'Snotty Gobble' could be good weed controller. *University of Adelaide News*, 10 Oct 2016. www.adelaide.edu.au/news/news88302.html

³ Chia, K.A., Sadler, R., Turner, S.R. and Baskin, C.C. (2016) Identification of the seasonal conditions required for dormancy break of *Persoonia longifolia* (Proteaceae), a species with a woody indehiscent endocarp. *Annals of Botany* v.118 no.2 pp.331–346.

⁴ Australian Flora Foundation Annual Report 2018

Australian Amaryllidaceae

Bruce Schroder

I was interested to read Neil Marriot's article on *Calostemma purpureum* in the June 2019 issue of *Growing Australian*. I have been growing this species for many years and have had a fascination with Australian Amaryllidaceae species since encountering the fleshy leaves of a totally unknown plant species at the edge of a claypan somewhere north of the Flinders Ranges in the early 1970s. Digging down in rock hard clay in an attempt to determine where the leaves came from, I gave up after almost a metre with still no sign of a root system! Follow up research told me I had found an Australian member of the genus *Crinum*.

Amaryllidaceae are not particularly well represented in Australia, even though we have been growing imported members of the family for near on 200 years, such as *Narcissus* species (daffodil and jonquills), and *Amaryllis belladonna* (Naked Lady or Belladonna Lily). There are records of hybridisation programs for the latter genus in Australia dating back to the 1840s, by William Macarthur at Camden Park, NSW.

In Australia there are only three genera within the Amaryllidaceae family, and not so long ago, only a handful of species, but the splitters have moved in and what was once recognised as one species (*Crinum flaccidum*) has been split into 12 species: *arenarium*, *flaccidum*, *joesmithii*, *kakaduense*, *lakefieldense*, *luteolum*, *muelleri*, *pedunculatum*, *roperense*, *uniflorum*, *venosum* and *yorkensis*. The majority of these are northern in origin.

Probably the most commonly grown Australian *crinum* (a genus with numerous species in South Africa, Asia and the Americas) is *Crinum pedunculatum* which grows in moist, generally sandy soils along Australia's east coast, often within a stone's throw from the sea. This is one of the giants of the Amaryllidaceae family with a single plant quite capable of developing a fleshy pseudostem 300 mm in diameter. Some of the tropical Asian species are just as large, if not more.

As a rule, where access to moisture is generally plentiful *crinums* are evergreen. Where not so, they develop as deciduous bulbs with their large fleshy storage parts (bulb and roots) often buried 600–1,000 mm below the surface of the soil. Unlike daffodils that develop a new root system each year, these *crinums* retain their fleshy root system, developing new roots when there is access to moisture. In times of drought, *crinums* such as *C. flaccidum* and *C. luteolum* may not appear for years but will miraculously, after late summer storms, within days, suddenly put forth a show of new leaves above the soil surface immediately followed by a flower stem. From first appearance to setting seeds is often only a matter of weeks, an adaptation to survival and perpetuation of the species.

The key to growing any of these species is attempting to replicate their growing conditions as much as possible and of course, for the dry inland species, this means extremely well-drained soil and keeping on the dry side over winter (and



Crinum luteolum flowering en masse near Quorn, SA.



Crinum luteolum in flower.

Julian Slade

Julian Slade

summer). Growing in containers is the obvious choice and you must ensure snails are kept at bay as they love the fleshy new leaves.

Probably Australia's second most commonly grown genus in the Amaryllidaceae family is *Calostemma* of which three species are currently recognised: *purpureum*, *luteum* and *abdicatum*. The latter is known from only one locality, the Everard Ranges in remote north-west South Australia. The other two are relatively common in the drier inland areas of north-western Victoria, eastern South Australia, central and western NSW and south-western Queensland, although it appears *C. purpureum* may not quite make it into Queensland. *C. luteum* is rare, if occurring in Victoria at all. It has recently been identified at Blanchetown on the Murray River in South Australia, one of its southern-most recordings.

Like the dry region crinums, the two eastern *Calostemma* species respond in the same way to summer storms. My *C. purpureum* first show through in early February after 2–3 months of complete dormancy (I am surprised Neil experienced them flowering at Hattah Lakes in late spring). The first flower scapes open within a week of the new growth appearing. There are numerous flowers in a scape and they open progressively over a couple of weeks. Individual flowers are usually very quickly pollinated and a scape will often consist of developing fruit, open flowers and buds. *Calostemma luteum* tends to grow in areas subject to inundation and can often be found in open table drains beside country roads. If kept moist, it can remain evergreen in my experience.



Calostemma luteum

The final genus in the Australian Amaryllidaceae family is *Proiphys*, a tropical genus of five species: *alba*, *amboinensis*, *cunninghamii*, *infundibularis* and *kimberleyensis*. A number of people have had success growing and flowering *P. cunninghamii* (or Brisbane Lily as it naturally occurs close to Queensland's capital) as a container specimen in Melbourne but it requires protection from the cold and is best suited to a greenhouse or indoor conditions. I keep mine quite dry in winter and ramp up the watering in summer as new growth appears. It flowers for me in January although rarely sets seed.

Calostemma and *crinum* are both extremely easy to propagate from seed, if you can obtain it. Seed of both genus is recalcitrant, meaning you cannot stop it from germinating! It must therefore be sown extremely fresh. This of course means you need to be in the right place at the right time to collect it, especially given the rapid passage of time between commencement of seasonal growth and seed set. Their general occurrence in relatively remote locations doesn't help matters. Seed is certainly never



Germinated *Crinum arenarium* seed showing the new bulb forming below the large seed and the radicle below that.

available from commercial seed suppliers, only enthusiasts, and is seasonally occasionally offered for sale on eBay, fetching prices as high as \$7.50 per seed for *Crinum luteolum* for instance.

Crinums can be very slow to flower from seed, often taking 10 years or more, whilst calostemmas will generally flower 3–4 years from sowing the seed.

Species of both genera from the more arid regions have a unique root system that actually pulls the developing bulb deeper into the soil. Bulbs are initially a long and narrow fleshy tuber and do not develop into a typically spherical bulb until they are deep enough in the soil to be sufficiently distanced from the changeable nature of the shallower upper soil horizon.

In this regard if grown in pots, the pots only need to be narrow but very deep. Do not be alarmed by the limited growth above the surface of the pot, it's what is going on below that is important!



Bruce Schroder

Two-year-old *Crinum luteolum* seedlings. Note the narrow tuberous juvenile bulb and fleshy roots that have hit the bottom of the pot they have been growing in.

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Cranbourne Friends

The Cranbourne Friends was formed to support and assist the Royal Botanic Gardens at Cranbourne, and in particular they try to assist with items the Gardens find difficult to fund from their own budget.

Since its inception, the Friends group has donated over \$600,000 to the Cranbourne Gardens towards a range of buildings, materials and equipment. The donations have included amounts for signage, plant labels, entry development and funding for the lease of the Garden Explorer people mover for 3 years, as well as possum proofing for the Garden nursery.

The Cranbourne Friends is an enthusiastic group of more than 700 members who share a love of Australian plants and nature. The Friends group has several sub-groups:

Basketmakers – novice to experienced weavers using native plants to create items ranging from the useful to the sculptural

Botanical Fabricators – work with fabric crafts using materials or designs featuring and highlighting the beauty of Australian native plants

Botanical Illustrators – who share ideas, information, and support whilst working on paintings and drawings

FiGs (Friends in the Garden) – are all keen to work in, and learn about the Australian Garden

Friends in Focus – get together to learn about photography, take photos and enhance and practise skills

Growing Friends – propagate a great variety Australian native plants that have been sourced from the Gardens

Herbarium Collectors – find, photograph and collect plant specimens at each stage of their development at Cranbourne Gardens.

The most recent donation from the Friends was towards the cost of an environmental fence. This protective fence was needed in the Cranbourne bushland area, says Gardens Executive Director Chris Russell, because 'the wallaby population on the limited Cranbourne

site has increased, resulting in over-browsing of certain areas of the site, including the ground-plane flora of the grassy woodland and heathy woodland communities.

We have seen a reduction in the abundance of the colourful flowering of *Platylobium*, *Aotus*, *Hibbertia*, *Bossiaea*, *Dillwynia*, *Pultenaea*, *Comesperma* interspersed through the snowing of white/cream/pink of *Leptospermum myrsinoides* (Heath Tea-tree) over the last 10 years or so.

The attribution to the impact of wallaby browsing has been robustly evidenced through the monitoring of exclusion plots over a number of years. The fence forms part of an important trial excluding wallabies from a 50-hectare area to observe what happens (both inside and outside the fence) when browsing pressure is reduced'.

Royal Botanic Gardens Victoria is grateful to their Friends' members and others who have contributed.

To find out more about Cranbourne Friends visit rbgfriendscranbourne.org.au/.





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Aussies in a Cowshed

Liesbeth Uijtewaal

It has been an incredibly hot summer so far: for the first time in recorded history the temperature in the Netherlands rose above 40°C. Under these circumstances I was so happy to grow Australian plants since at least they can cope with the hot weather – as long as I keep the hose ready for them. Of course, I did. On the hottest days I needed to do an extra watering round, particularly for the plants in relatively small pots and for the plants in the glasshouses where it got even hotter.

At end of July, the temperatures dropped at last, and we even got some desperately needed rain, albeit very little. We managed to get an extra bore, so now Bert can water the garden with eight sprinklers instead of three, a great help. Initially he was against installing a watering system for the garden since the plants should go and look for water themselves and become self-sufficient rather than spoiled, but under the recent hot and dry conditions this is not feasible anymore. Fortunately there is still plenty of water in the ground.

And, fortunately for me there's still plenty of water in the tap too! There are no water restrictions for us as yet.

In my previous article I mentioned *Banksia incana* var. *brachyphylla* budding up like it never did before. I was hoping at least one of these buds might develop into a decent flower at last and yes, it happened! I could admire the glorious number of TWO flowers this summer, as the majority aborted again, but at least I've seen what the flowers are like. Gorgeous!



The gorgeous flowers of *Banksia incana* var. *brachyphylla*.

My mystery plant, the seedling that came up from a batch of *Beaufortia elegans* (Elegant Beaufortia) seed, turned out to be *Kunzea glabrescens* (Spearwood). The flowers are quite attractive but their scent is less so ... yuck.



A mystery solved. It's *Kunzea glabrescens*.

Another less attractive feature of my beloved Aussies is that they can cause a bad rash. Earlier in the year the skin of my forearms was covered in an itchy and burning rash, with big yellow blisters to finish things off which lasted for several weeks. The culprits probably are *Grevillea robusta* (Silky Oak), *G.* 'Peaches and Cream' and/or *G.* 'Robyn Gordon'. Friends urged me to get rid of these plants, but how could I? The latter cultivars are way too beautiful to get rid of, flowering all year round and making a lovely entrance to our courtyard. *G. robusta* is indispensable to graft other beauties on, so I'll just need to be more cautious and keep my fingers crossed this rash doesn't occur again.



The beautiful, but offending grevilleas in our courtyard.

With respect to grafting, I find it is a great way to propagate plants, and to obtain more vigorous plants too. There are several grevilleas that do survive and grow on their own roots for me but pieces from specific young cutting-grown plants that I grafted were way ahead of the original plant within a couple of months after grafting. Examples of this are *G. bracteosa* (Bracted Grevillea or Grey Spider Flower), *G. cirsiifolia* (Varied-leaf Grevillea) and *G. formosa* (Mt Brockman Grevillea). The latter, being from the tropics, will be difficult for me to grow, and even a grafted plant may be hard to get through winter. We will see how it goes.

Some grevilleas are not successful when grafted on *Grevillea robusta*, as they are not compatible. They may not grow at all, or they can grow vigorously for a while but then drop off spontaneously, as I was very sorry to find out this spring with my 10-month-old grafted *Grevillea* 'Peaches and Cream'.



An unwanted occurrence – the spontaneous dropping off of growth on my grafted *Grevillea* 'Peaches and Cream'.

However, non-compatible species/varieties can be grafted on *G. robusta* if an interstock is used – i.e. another type of grevillea is grafted in between. For example, a piece of *G. banksii* (Red or Dwarf Silky Oak) is grafted on *G. robusta* and then a piece of the desired variety is grafted on top of that. I tried that some months ago and to my huge delight I got several combinations growing.

Another reason for grafting plants, apart from increasing vigour, is that some species, like *Corymbia ficifolia* (Red-flowering Gum), simply can't be propagated from cuttings or take very long to flower from seed. I grafted some

pieces of a compact red flowering variety that a friend kindly sent me last year on *C. ficifolia* seedlings and now, 13 months later, the plants are flowering profusely! Those are the lovely surprises that make growing Aussie plants truly rewarding. GA



Grafting *Corymbia ficifolia* resulted in a lovely surprise.



A double graft works a treat for some grevilleas.

Don't wear perfume in the garden
– unless you want to be pollinated
by bees.

– Anne Raver

Marj Seaton

Some of you may remember me from my days as Membership Officer. I have now taken over as Seedbank Curator from Amy Akers, who has left me with a very well-organised collection and some spreadsheets to play with. Many thanks for an excellent job Amy.

I have been reading some of the letters that were sent to Amy, and have been most impressed with the initiatives that some members have attempted on their properties.

There haven't been many orders and donations during the winter – not many plants have been seeding anyway in the cold.

Thank you to Peter Cox for his generous donations.

Additions

Arthropodium milleflorum
Corymbia ficifolia
Eremophila muelleriana
Eucalyptus lansdowneana
Eucalyptus lehmannii

Deletions

Arthropodium fimbriatum
Banksia tenuifolia
Rhodanthe manglesii

Below is some information on species added to the seed bank to assist with your seed selection.

Corymbia ficifolia

(Red Flowering Gum)

Small to large tree with rough barked trunk, from 10–15 m high. Leaves are broad and leathery. Flowers can be red, orange, pink or cream in summer. Seed capsules are urn-shaped. Attractive to seed- and nectar-feeding birds. Moist, well-drained soils best, but will withstand dryness.



Corymbia ficifolia

New contact details:

Seed Bank Curator
Marj Seaton
36 Voumard St,
Oakleigh South Vic 3167
(03) 9570 6293
seedbank@apsvic.org.au

Eremophila muelleriana

(Round-leaved Eremophila)

Dense shrub growing to about 2 m high. Velvety grey-green leaves. Dark purple flowers in late winter/spring. Full sun, drought tolerant but frost tender. Propagate from cuttings.

Eucalyptus lansdowneana

(Crimson Mallee, Red-flowered Mallee Box)

Medium tree, frequently of mallee habit, 3–12 m high, 2–8 m wide. Smooth white to brown trunk. Flowers may be cream or purplish-red, appearing in spring and summer. Most soils but not wet. Full or part sun.



Eucalyptus lansdowneana

Arthropodium milleflorum

(Pale Vanilla-lily)

Leaves slightly fleshy to 40 cm. Pale pink or mauve and white flowers to about 2 cm wide on branched stems from November to February. Strong tubers were eaten by Aborigines. Full to part shade; moist to well-drained soils.



Arthropodium milleflorum

Eucalyptus lehmannii

(Bushy Yate, Lehmanns Mallee)

Small mallee tree up to 5 m high. Buds are fused and finger-like. Flowers are a bright yellowish-green in winter and spring. Full or part sun.



Eucalyptus lehmannii

Marj Seaton

Australian Plants Society Ballarat District

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Apart from painting and gardening,
I'm not good at anything.

– Claude Monet

Knowledge can be elusive

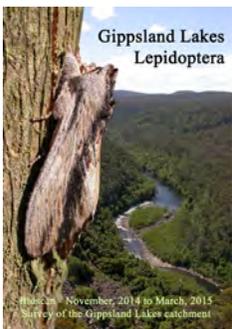
Cathy Powers

I have had the privilege to be invited to and attend meetings of District Groups. My presentation subjects are many and varied but the theme is usually nature based. Most know that my passion, at least today, is the subject of Lepidoptera.

In 2008, *Moths of Victoria Part 1* was published by Peter Marriott (with backing from The Norman Wettenhall Foundation). It was an instant success, used by 'moth-ers' worldwide. Now the series has progressed to include parts 1–8 and they are readily available.

Unfortunately for those of us who crave information about the entire spectrum of moth families, the process of accurate and detailed publications means research and verification takes time and commitment.

For the general public and certainly for APS Vic members who live in eastern Victoria, *Morwell National Park Lepidoptera & Neuroptera* by Ken Harris and Peter Marriott (Entomological Society of Victoria, 2018), provides an insight into the moth families not yet described in the *Moths of Victoria* series. The more specific region of the Gippsland Lakes and nearby hinterland was surveyed between the end of 2014 and early 2015. This resulted in the publication *Gippsland Lakes Lepidoptera*.



These publications do not contain the details found in the *Moths of Victoria* series but do have images and scientific names. Further research may be required by the users but at least the basic content is a start.

Following the success of the location guides and in conjunction with Museums Victoria, our 'Moth Team' conducted three Bioscan events in the

Otway Ranges. The culmination of this work, and inclusion of data from previous events conducted in the Otway region, resulted in *Great Otways National Park Lepidoptera* (Entomological Society of Victoria, 2019), containing over 700 species' images. This means that members from the southern parts of Victoria, in particular, have an opportunity to own a field guide for Lepidoptera in their area.

The Bioscans involved species surveillance – monitoring the Lepidoptera at certain locations for signs of diversity, range extension of known species, climate change impact and more.



The sponsorship by Museums Victoria, a permit approval from Parks Victoria and a team of volunteers facilitated three light-trapping events in seven locations within the Otway Ranges.

The equipment was set up at dusk each of the nights (three in October; two in November and three in March) and put away at dawn. During the night, every insect that arrived at the sheet/s or discovered in the surrounding vegetation were noted and photographed. This resulted in images and a Lepidoptera list of over 450 species. Records of other invertebrates were forwarded to various departments at Museums Victoria.

Volunteers took turns resting in tents, vehicles or a camper which also served as places to warm





Light traps set up as part of the Otway Bioscan project.

up because it was usually wet and cold by early morning (typical cool-temperate rainforest or coastal heathland conditions). At two sites we had members of the public visit. The first was an opportunistic visit by a bus load of overseas visitors intent on seeing the glow worms located near our location. A few were more interested in our activities than their original subject but even our bright lights did not diminish the 'glow'.

The second time was an organised public event. There were three sheets set up, the public were notified and invited to attend after dusk and the response was very good. Families with children, adults interested in nature and, once again, opportunistic visitors enjoyed the opportunity to see moths of every size and colour. Camera flashes were almost constant and even that did not deter some unique arrivals. The species list was increased by both known and never-before-seen moths. Members of the team were observed to be standing on picnic tables, balancing on chairs in the toilet, kneeling underneath shrubs and endeavouring not to step on anything that snuck in unseen just to get an observation record.

Of course, moths and humans were not the only noted species. We listened to the calls of Yellow-bellied Gliders, Boobook Owls and frogs. Tracking down the noisy frogs was more of a challenge than photographing moths but eventually we were able to find one enjoying the night while calling from a vehicle car rut. (Now we were wet and muddy. We should have stuck with the moths.)

The statement in the booklet encompasses one of the outcomes: *The rich moth fauna reflects the varied habitats available and the protection offered by the Great Otway National Park, declared in 2004.*

My next project awaits! I have images of over

600 moth species from the Brisbane Ranges just waiting for the next booklet. It will profile species found west of Melbourne in a similar fashion to the current publications. I send out a request to all APS Vic members who have visited the area and photographed Lepidoptera. Please send me the records and, if you are willing the images to verify species.



Cycloprodrades melanoxyta (left) next to a leaf (right).

Nish Nizar

I extend, to District Groups, the offer of a presentation on the subject and/or help in conducting a light-trap event in your area. It is amazing what you will discover. If it is on private land no permit is required, just permission by the landowner. If it is in a reserve or park, permission from the management department may be required.

Last, but not least: it has taken a while but investigations are now being initiated to discover how much pollination occurs with the help of insects moving about during the dark hours. For plants that have flowers which do not close at night, visitation by creatures (even invertebrates) that are active between dusk and dawn may facilitate pollination. Keep an eye out for research projects involving this subject because it is an area so understudied that it reflects poorly on natural science. (GA)

Images during the Bioscan provided by Nish Nizar, Museums Victoria.

Images of booklets provided by Peter Marriott, Moths of Victoria team leader.

Location map created with Google Maps.

Booklets can be purchased from the Entomological Society of Victoria (email: vicmoth@entsocvic.org.au).

Study Group Roundup

Phil Royce

Banksia no. 23 (Spring 2018)

Australian Geographic recently included an article on Banksia Farm, WA, the world's only complete arboretum of banksias, and owned by the study group's leaders.

A report detailed a trip to gardens in the UK and Western Europe where banksia and other proteaceae are grown. The owner of a garden in Wales is actually a study group member.

Grevillea no. 113 (June 2019)

Gardening Australia (29 March 2019) featured Grevillea Park in Wollongong, NSW, and the work of its founder, one Roy Brown.

Grevillea caleyi is on the Critically Endangered list of plants for NSW and the Commonwealth.

Weddin Community Native Nursery at Grenfell, NSW, is a volunteer-run, not-for-profit organisation trying to rescue many of its local native plants – *G. lanigera* Grenfell form and *Prostanthera ovalifolia* Grenfell form (Brundah Mint Bush) amongst them – that are quickly disappearing because of predation and ground degradation of feral goats, pigs and rabbits.



Grevillea caleyi (Caley's Grevillea)

Correa no. 59 (June 2019)

Study group leaders, Bob and Dot O'Neill, note how their 100+ *Correa pulchella* and *C. reflexa* give them pleasure through colour, leaf and feature variation. (Their garden will be open as part of the Open Garden Scheme on 14 and 15 September 2019.)

Maria Hitchcock describes three correas taken from Flinders Island, SA, that are now in

flower; as well as eight different correas from a garden in Pomonal, Vic, that are now being trialled in her garden in Armidale, NSW.

A report on this year's Correa Crawl through south-west Victoria in June, where *C. reflexa* and *C. alba* forms were the most commonly observed.

Members from Ararat, western Victoria to Tarrawingee, north-east Victoria, share the experiences with *Correa reflexa*, *C. glabra* and cultivars.

Hakea no. 70 (June 2019)

A two-day excursion in the Kondinin-Kulin area, WA, last year resulted in 35 species being sighted. One species was the two forms of *Hakea preissii*. Around the edges of salt lakes it tends to grow as a low dense suckering form or from a lignotuber. The other (northern) form tends to have longer leaves and which are narrower in diameter, and more open than the southern forms. Also growing around salt lakes was *H. kippistiana* which tends to be a tall shrub. Other species of note were *H. platysperma* and a huge plant of *H. lehmanniana*.

Mike Beamish reports on the hakea population, and its health, in his Gippsland garden. His large old locals, Dagger Hakea (*Hakea teretifolia* ssp. *hirsuta*) and Willow-leaved Hakea (*H. salicifolia*) are still going strong and are both over 5 m tall, the latter being an annual favourite of Black Cockatoos, which don't let it get any taller. *Hakea dactyloides* is also well over 5 m tall and a bit leggy as it searches for the light from underneath taller eucalypts. *Hakea eriantha* is a short, scraggly thing, covered in capsules, which probably should be replaced by one of its offspring. Mike's tried and failed with many other species, from both eastern and western Australia, but they don't thrive at all, growing well for a short time before succumbing to Sudden Summer Death Syndrome or they grow well, get too big for their root systems and fall over in the next gale.

In a Hakea Study Group and Adelaide Herbarium collaboration, members are photographing hakeas in the wild, collecting

a specimen of branch and seed capsule, germinating a seed and photographing at the seedling stage.



Kevin Thiele (Wikimedia Commons CC BY 2.0)

Hakea preissii (Needle Bush)

Eremophila no. 123 (May 2019)

This newsletter features *Eremophila polyclada* – covering the plant's physical description, range, horticulture, propagation and hybrids.

Following up from newsletter 122 on eremophila phytochemistry, study group members were asked to assist the research by providing samples. Over 400 plant samples were provided to the researchers at the University of New England (Armidale).

Leader Lyndal Thorburn writes about ACRA, PBR and cultivar registration, an issue that this study group, and potentially all others, is experiencing. Current interactions were identified and questions posed for study group members to share feedback. Interestingly, ANPSA, our national body, has withdrawn from ACRA while APS Vic continues to maintain a member.

Waratah and Flannel Flower no. 17 (June 2019)

Harry Loots discusses propagation of *Actinotus helianthi* (Flannel Flower) and getting them into the garden.

Members shared recent observations and

experiences that ranged from prolific flannel flowers to growing *Teloepa speciosissima* 'Sunflare' cuttings, and early blooming in the wild, to dealing with scale and pruning cut damage. Wonderful photos of stained glass windows featured lovely waratahs (and others).

Maria Hitchcock shares some of her propagation trials, including grafting a piece of *Teloepa* 'Mallee Boy' onto a *Grevillea robusta*. Then Lyndal Thorburn's discusses her work on smoking *Actinotus forsythii* seeds and William d'Avigdor's reports on his *teloepa* germination trials using sphagnum moss.

Wallum and Coastal Health no. 43 (May 2019)

The newsletter contains reports of members' recent trip to Sandstone Point, Qld.

This issues feature plant is *Tricoryne elatior* – with description of the plant's habit, leaves, fruit and name derivation.

There's a brief story of some regrowth after a fire in Wallum country on Bribie Island.



John Tamm (Wikimedia Commons CC BY 2.0)

Tricoryne elatior (Yellow Autumn Lily)

Acacia no. 144 (May 2019)

The loss of a large acacia growing in a nature strip by lightning-damaged tree in the Maroondah City Council area has seen the stump crafted into a carving of two black cockatoos. Don't miss the cracker photograph of the end result.

Acacia corusca is a new species found in the Pilbara region, WA.

There are descriptions of *Acacia chinchillensis* and *A. triptera*.

A member provides insight into D.H. Lawrence's novel *Kangaroo* and his confused use of 'acacia' with 'mimosa'.

– continued on page 43



Mellifluous Mints and more besides

FJC Rogers Seminar, October 24 & 25, 2020

Prostanthera lasianthos, so redolent of the Australian bush and many others will feature at the 13th FJC Rogers Seminar, *Mint Bushes and Allied Genera*, being run by APS Yarra Yarra at the Eltham Community and Reception Centre, Melbourne, on the last weekend in October, 2020.

Mint bushes and allied genera

Prostantheroideae, a subfamily within the Lamiaceae family, contains 17 genera, some with as little as two known species and some with up to 100, such as *Prostanthera*. The 2020 Seminar will focus on *Prostanthera* and *Westringia* and some of the species within other genera such as *Hemiandra*, *Hemigenia*, *Dasymalla* and *Pityrodia*. Many of the species in the allied genera hail from Western Australia, are quite woolly and not so disposed to growing well in the wetter, more humid climate of the eastern States. However given the changes we are experiencing, some experimentation may be warranted.

Our speakers will tell us about the science behind the grouping of these species, the work going on to elucidate the taxonomy of *Prostanthera* species and thereby their conservation status. We will also hear about exciting developments in regard to the chemistry of their essential oils and applications. We will learn about who pollinates what – there are quite a variety of pollinators involved



Miriam Ford

Prostanthera lasianthos

such as birds and insects such as bees, beetles and flies – and how the morphology of the flowers has evolved to take best advantage. We will hear about how to cultivate and propagate these species, the range of niches they occupy in the wild and their potential in our gardens.

Plants for sale

As per the spirit of past seminars we will have a large range of species available that are otherwise difficult to obtain anywhere else. APS Yarra Yarra growers have been working hard to source and propagate many rare and endangered species as well as others that are more widespread.

Gardens of Earthly Delights

Saturday will be a day of lectures and discussions with an optional afternoon garden visit followed by an evening dinner with an after dinner talk on the pollination of *Prostanthera* with real time footage of how that works. Our entertaining speaker will even tell you about his foray into the world of artisan beer brewing using a yeast strain isolated from the nectary of *Prostanthera walteri*. The mind boggles!



Miriam Ford

Prostanthera magnifica, Mt Jackson form

Then on the Sunday we will visit three superb large local gardens which have featured in the Victorian Open Gardens scheme. These gardens while predominantly native offer an eclectic mix and there will be an array of different mint bushes and allied genera present amongst many stunning plants.

Come along and stimulate all your senses. We look forward to seeing you there.

To register your interest, send your name and contact details to: fjcrogersseminar2020@gmail.com or phone Miriam 0409 600 644. (GA)



Prostanthera walteri

Miriam Ford

Study Group Roundup – continued from page 4 I

An article by Geoff Carr discusses why Australian *Acacia* species make very good weeds, at home and abroad. Members are encouraged to comment and provide their feedback for the next issue of the newsletter:



Acacia triptera (Spur-wing Wattle)

Garden Design no. 107 (May 2019)

The theme of this issue is: Sunshine and Shade as a Design Tool.

The study group leader gives his thoughts about this theme, including: never think you've got it (sun and shade) sorted because change is inevitable, and as your own garden matures so does the neighbour's.

Members give their experiences of sunshine and shade. From them all I enjoyed a comment from Jo Hambrett (NSW): 'Gardening is all about working with what we've got – soil, climate, space, and time available whilst producing the most beautifully possible effects in an environmentally sustainable way!'

One sunshine and shade consideration from Colleen and Geoff Keena, Glamorgan Vale, Qld, describe what I have in Geelong – a planting of deciduous *Melia azedarach* on the north side of my home. While the photos show bigger trees than mine, the colours of seasonal leaves and flowers are perfect match. (GA)



STOKES BAY BUSH GARDEN KANGAROO ISLAND

— as featured on ABC Gardening Australia

The garden offers an easy look at a unique collection of Kangaroo Island and Australian plants in a 3-hectare natural bush setting.

OVER 1,200 NAMED SPECIES

Over 150 Kangaroo Island varieties (17 endemic).

Large selection of native terrestrial orchids.

Many rare, endangered and spectacular plants in the garden.

FLOWERS, SEED AND NATURAL

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Melburnian (Wikimedia Commons
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Out and About

Nicky Zanen

Outside my front door is a row of gums – *Corymbia maculata* and *C. citriodora*. They stand next to a railway line, growing taller by the minute, but I am ever so grateful that they are there providing perching spots and food to various birds, bats and insects. The challenge is of course to grow plants underneath them, and after several years I feel I'm finally achieving results.

A star player that catches my eye is *Wahlenbergia stricta*, one of the Australian bluebells.

One plant has crept significantly and is now at least four times its original size. A creepy crawly. It may not be respectful to call it such, but it did make me think of other plants that expand without our interference. There is also *Wahlenbergia gracilis*. They are both beautiful.

A Creeping Boobialla (*Myoporum parvifolium*), crawls over a bed near my front door blending in well with a *Chrysocephalum apiculatum*. I am surprised at the different forms available, and this one performs well without much attention.

I have a grevillea and a westringia growing close to each other, and poking through the understorey a goodenia crawls along the ground. Mostly it is unseen until a little bit of tidying gets done and a stem proves to have rooted.

Around one of the gum trees I have three *Goodenia amplexans*. These surround the trunk and are very low maintenance, so much so that I thought I'd try planting these at work.

The conditions here are tough; stuck between our office building, the footpath and the street, and rainwater is scarce as this is partially blocked by the roof. Additionally, the garden is west facing and plants have to cope with extra hours of terribly hot sun in summer. The goodenias did well and provided protection to another creepy crawly, *Brachyscome multifida*. Generally, these also performed well and pruning them helps, but after two years I removed the plants as they looked tired and beyond redemption, and have now replaced them.

In a trickier spot, opposite our reception area, is a space that is easily seen from inside, but gets even less rain. Watering is not an option. Two years ago, three plants of Pigface (*Carpobrotus rossii*) spread out beautifully carpeting the area of 5 m x 3 m, and giving an illusion of a lawn. This worked well until air-conditioning mechanics stomped over the area damaging the plants extensively. These are now being replaced with new plants.

Other creepy crawlies that come to mind include some nodding greenhoods that one of our members had in a pot which have now escaped into her garden. How good is that?

Climbing Saltbush (*Einadia nutans*) forms a blanket spreading over rocks and footpath, and provides a bonus feed, albeit not a lot.

Grasses self-seed easily, almost to the point of being problematic, and in the part of my garden with indigenous plants, this area is filling quite quickly. I had several *Poa labillardierei* in my backyard but found this too aggressive so have evicted them. But when I drove around a corner near Mont Albert Railway Station and found a grass valiantly poking out above the gutter, I reckoned that epitomised a creepy crawly. (GA)



A grass valiantly poking out above the gutter.

Events Diary

7 September – APS Wilson Park's Spring Plant Sale at Wilson Botanic Park, Berwick, in conjunction with the City of Casey who will be holding a Garden Expo.

14 September – Committee of Management meeting (10 am), AGM (2 pm). Auditorium, Royal Botanic Gardens Cranbourne.

14 & 15 September – APS Yarra Yarra Australian Plants Expo. Eltham Community & Reception Centre, 801 Main Rd, Eltham. 10 am–4 pm. Check apsyarrayarra.org.au for plant lists.

21 & 22 September – 50th Anniversary of Anglesea Wildflower Weekend and Art Show. Celebrating the area's remarkable biodiversity and wildflowers. Anglesea Memorial Hall, 3 McMillan St, Anglesea. 10 am–4 pm.

21 & 22 September – APS Bendigo Flower Show. Kangaroo Flat Primary School Gym, Freeman Drive, Kangaroo Flat, Bendigo. 9.30 am–4.00 pm.

24 September–20 October – Maranoa Gardens Florilegium. Town Hall Gallery, 360 Burwood Rd, Hawthorn. Twelve local artists from the Balwyn Community Botanical Art Group have painted an exquisite series of plant specimens picked by the curators of Maranoa Gardens in Balwyn. Free entry.

1 October – APS South East Melbourne have John Arnott from Royal Botanic Gardens Cranbourne talking on 'Care for the Rare'. Hughesdale Community Hall, cnr Poath and Kangaroo rds, Hughesdale. 8 pm.

5 & 6 October – APS Grampians Group Pomonal Native Flower Show. Pomonal Hall. 9.30 am–5 pm on Saturday, 10 am–4 pm on Sunday.

12 October – APS Echuca Moama Native Flower Showcase, Echuca Masonic Lodge Hall, 426 High St, Echuca. 9 am–4 pm. A huge flower display, plant sales, floral art, native bonsai, basket weaving and other displays and demonstrations.

12 & 13 October – APS South Gippsland Native Plant Sale and Flower Show. South Gippsland Historical Automobile Club Pavilion, Leongatha Recreation Reserve. 10am–4pm.

12 & 13 October – Wimmera Growers of Australian Plants at Horsham Spring Garden Festival, Horsham Botanical Gardens, Firebrace St, Horsham. 8 am–5 pm.

12 & 13 October – Biodiversity Symposium – 'Restored Ecosystems or Green Deserts and Ecological Traps'. Hosted by the Field Naturalists Club of Victoria, 1 Gardenia St, Blackburn. See page 51 for further details.

19 October – APS Mitchell Plant Expo and Sale. Kilmore Memorial Hall, 14 Sydney St, Kilmore. 9 am–3 pm.

26 & 27 October – APS Ballarat Spring Flower Show, flower display, plant sales, craft items. Robert Clark Centre Ballarat Botanic Gardens, Gilles St, Ballarat. 10 am–4 pm.

26 & 27 October – Cranbourne Friends Spring Plant Sale. 10 am–4 pm.

9 November – Committee of Management meeting hosted by APS Bendigo.

17 February to 17 April 2020 – *Australian Plants Revealed* – See page 51 for further details.

25–29 March 2020 – Melbourne International Flower and Garden Show (MIFGS), Royal Exhibition Building and Carlton Gardens.

28 March 2020 – Keynote addresses by Bruce Pascoe and Professor Tim Entwisle as part of *Australian Plants Revealed*.

28 March 2020 – APS Victorian Committee of Management meeting hosted by APS Maroondah.

4 April 2020 – APS Geelong Australian Native Plant Sale. 'Wirrawilla', 40 Lovely Banks Rd, Lovely Banks. A BBQ, refreshments, books sales, children's activities and a great selection of native plants.

18 April 2020 – APS Yarra Yarra Australian Plants Expo. Eltham Community & Reception Centre, 801 Main Rd, Eltham. 10 am–4 pm.

2 May 2020 – APS Mornington Plant Sale, Seawinds, Arthurs Seat State Park, Purves Rd, Arthurs Seat. 10 am to 3.30 pm.

24 & 25 October 2020 – 13th FJC Rogers Seminar on 'Mint bushes and allied genera'.

The Albany Pitcher Plant will straight up eat you (if you're an ant)

Adam Coss

Research Fellow, Curtin University

Reprinted from

THE CONVERSATION
July 26, 2019 theconversation.com/au

On a warm evening in early 1802, Robert Brown sat aboard the HMS *Investigator* describing several plant specimens collected that day. Brown was the botanist on Captain Matthew Flinders' expedition, and they had been anchored in King George Sound for nearly a month documenting the remarkable flora of the area.

He keenly awaited the return of their gardener, Peter Good, who had left earlier in search of a curious 'pitcher plant' discovered the previous morning by botanical artist Ferdinand Bauer and landscape artist William Westall.

Unbeknownst to him, in minutes he would be gazing upon a uniquely wondrous plant: *Cephalotus follicularis*, the Albany Pitcher Plant.

Named after the south-western Australian port city around which it occurs, the Albany Pitcher Plant stands out as an oddity even by the standards of carnivorous plants. The species is instantly recognisable, as it produces distinctive insect-trapping pitcher leaves that sit on the ground almost expectantly waiting for prey.

The toothed mouth and overarching lid of these pitchers look superficially similar to those of the tropical pitcher plants (*Nepenthes*) and North American pitcher plants (*Sarracenia*). However, these plants are not related; this similarity is a remarkable example of convergent evolution. The Albany pitcher plant is unique.

C. follicularis is the only species in the genus *Cephalotus*, which is the only genus within the family Cephalotaceae. Its nearest living relatives are rainforest trees from tropical South America, from which it is separated by some 50 million years. Indeed, it is the only carnivorous plant among the 70,000 species, a quarter of all flowering plants, that make up one of the largest evolutionary plant groups, the rosid clade.

The Albany Pitcher Plant is more closely related to cabbages, roses and pumpkins than it is to other pitcher plants.

The Albany Pitcher Plant only grows in a very small area of Western Australia, and is thought to be an ancient Gondwanan relict from a period when this region was almost tropical. It grows in nutrient-poor soils of coastal swamps and lowlands, where it survives by luring insects into its traps to be digested in a pool of enzymes at the base of each pitcher. Each pitcher bears a lid to prevent rain from diluting the pool of enzymes, with translucent windows to disorient trapped prey and prevent escape.



Close up of the pitchers.

H. Zell (Wikimedia Commons CC BY-SA 3.0)

Interestingly, one species of insect not only survives inside the fluid of the pitchers, but relies on it for survival. The wingless stilt fly (*Badisis ambulans*) lays its eggs in the pitchers, and the larvae develop in the pool of pitcher fluid, feeding on captured prey.

These stilt flies live only in the dense vegetation of the swamps inhabited by the Albany Pitcher Plant. They look more like an ant

than a fly, which is probably a deliberate mimicry of the ant *Iridomyrmex conifer*, the primary prey of the pitcher plant. It is likely that these three species – plant, fly and ant – have co-evolved together over millions of years.

The Albany Pitcher Plant was probably widespread in the south-west corner of WA before European settlement, and almost 150 populations have been recorded throughout this region. However, the species has declined dramatically over the past century as extensive land has been cleared throughout the south-west for agriculture and urban development.

The Albany Pitcher Plant now occurs only as small, isolated populations in remnant habitat patches. It is thought that less than 3,000 hectares of habitat suitable for the species now remains in the greater Albany region. Recent survey efforts suggest that fewer than 20 populations of the Albany Pitcher Plant still exist, and fewer than 5,000 plants remain.

Despite the perilous state of the Albany Pitcher Plant, it still has no formal conservation status. Indeed, swamps containing the species have been bulldozed for housing development in the past 12 months. But habitat loss and changes to bushfire frequency and water flow are not the only threats to this amazing species. Current



Holger Hennrich (Wikimedia Commons)
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Albany Pitcher Plant growing in the wild.

projections of a drying climate in the south-west of Western Australia may see the species pushed towards extinction in the coming decades.

Incredibly, the Albany Pitcher Plant is also at risk from poaching. The species is prized for its horticultural novelty, and unscrupulous individuals dig up plants from the wild either to grow or sell. At one accessible location where the species was known to grow in abundance, every single plant within reach has been removed. At other sites, entire populations have been dug up.

Without improved conservation measures, and tough penalties for removing this incredible species from its natural habitat, the Albany pitcher plant and its complex web of insect relationships face a potentially dire future. (GA)

Vale Philip Robinson

Philip with his wife Moira founded the iconic and much-loved Robinsons Bookshop in Frankston in 1963 which they sold in 1992.

Philip's love of native plants and membership in APS Vic saw him take on the role of newsletter editor for 7 years, finishing his term with the first full-colour edition of *Growing Australian* in June 2010.

In 2006 Philip took over as ANPSA Study Group co-ordinator as well as starting the newly revamped APS Mornington Peninsular. In 2014 he was the recipient of the Impressa Award for outstanding service to APS Vic.

Philip passed away on 10 June 2019 aged 89 years.

Our sympathy to his wife Moira and family.

Vale Joan Barrett

Joan Barrett's professional life was as a social worker in child and family guidance and welfare including work with at-risk youth and encouraging the reunification of birth families wherever possible.

All her life, Joan practised environmentalism, aiming to leave as small a footprint as possible: gardening, composting, recycling, avoiding waste, and recognising the importance of trees.

Later in life, with characteristic energy and commitment, Joan wholly embraced Australian native plants and garden design, through the Society for Growing Australian Plants. Systematically, she removed every exotic plant from her Kew garden.

Joan passed away on 6 May 2019 aged 92 years.

Our sympathy to her family.

Conservation Report

Neil Marriott

What an amazing change from this time last year! So far, we have had above average rains for most of the winter. If this continues into spring we may be in for a good year to come! I hope you too, have had good rains.

Dead Tree Detectives

A citizen science project known as Dead Tree Detectives¹ is asking people Australia-wide to report observations of dead or dying trees around Australia. Knowing where and when trees have died will help ecologists work out what the cause, identify trees that are vulnerable, and take steps to protect them.

Tree planting to pause climate change

If six major nations, including Australia, worked together to replant degraded and waste land with millions of trees and shrubs, the world could buy another 20 years before the tipping point is reached, according to recent research report in the journal *Science*². This could be enough time for the world to drastically change its CO₂ emissions and change to largely clean energy production.

The research also found that coastal ecosystems store CO₂ up to 40 times faster than forests, and that this must also be taken into consideration. Research has shown that mangroves and seagrass meadows are far more efficient in CO₂ uptake, and therefore vital for our biodiversity survival.

Campaspe River pollution

Due to unprecedented expansion of business in the upper Campaspe, lax EPA controls, combined with massive releases of effluent from abattoirs etc., the Campaspe River has become 'totally polluted' in its upper reaches. This was discussed on a recent report on ABC radio. The Campaspe River flows into Lake Eppalock, which is part of Bendigo's water supply. If this water is so contaminated, what is it doing to the flora and fauna it is supporting?

Death of centuries-old Sandalwood Trees

Drought and climate change has been blamed for the death of centuries-old Sandalwood Trees³ by ecologist John Read on his property on Eyre Peninsula, SA. Australian Sandalwood (*Santalum spicatum*) is a threatened species, as wild harvesting means whole plants are removed, roots and all, for the incense and aromatherapy trade.

Feral cat crack down

Feral and domestic cats have serious impacts on our wildlife. On Bruny Island on the east coast of Tasmania, Kingborough Council now requires cat owners to register cats and have them de-sexed before the age of 6 months⁴. Stray cat owners and those failing to comply with these new laws will be fined \$600 for each offence. It has been estimated that at least 180,000 native birds and animals are killed by cats in the Kingborough Shire area alone every year.

Globally, cats are listed as one of four species that threaten incredible numbers of endangered native animals. Just in Australia feral cats kill 466 million reptiles and 272 million birds annually. I urge you to talk to your council and suggest that they adopt similar legislation.

Grazing pressure effects on biodiversity

At Panrock Ridge we have been amazed at the spectacular regeneration inside the 40 acres that we have fenced out to exclude vermin. We hoped to see a gradual build-up in the numbers of ground-nesting or -feeding birds and animals, and were quite thrilled with the unexpected numbers of Painted Button-quail, Diamond Firetails, White-browed Babblers and many more, not only in abundance, but nesting and raising young.

The most amazing discovery has been the marked increase in diversity and numbers of native plants to regenerate, free from the

pressure of grazing by rabbits, hares, deer, wallabies and kangaroos. We are seeing species thrive, flower and set seed in abundance, with numerous species appearing that are new or rarely recorded for the Black Range. We have discovered beautiful plants of *Astroloma pinifolium* (Pine Heath), *Stylidium graminifolium* (Grass Triggerplant) and thousands of Twining Fringe-lilies (*Thysanotus patersonii*) inside the fence. There are also numerous young Cherry Ballarts (*Exocarpos cupressiformis*) germinating, free from grazing amongst the prolific native grasses.

David Attenborough warning

In a recent UK Parliamentary enquiry, Sir David Attenborough was called to speak about the impact of climate change. Amongst his extremely persuasive warnings Sir David stated that 'I am very sorry that there are people in power in the USA and Australia who are doing nothing to address climate change.' He went on to say that these people are blocking open debate, despite Australia being already more greatly impacted by extreme weather events than most other countries!

Sir David stated that drastic action is now needed to address the threat, before the world hits the tipping point where it would become almost impossible to turn the climate change around. Meteorologists now warn that this is less than 10 years away if nothing is done.

Murray–Darling Basin Plan 13 billion dollar ‘rort’

That’s how a senior legal figure described the Murray–Darling Basin water infrastructure scheme in an explosive ABC *Four Corners* exposé recently. The \$13 billion Basin Plan is supposed to restore our rivers to health, but this investigation revealed secret deals undermining the Murray–Darling Basin Plan and ripping the lifeblood out of our rivers. Big farmers have become millionaires overnight, and now even big businesses have got into the act.

Those interviewed defended their right to be paid up to 2.7 times the market price by

the Basin Authority for a percentage of their water entitlement licence, and then buy more water at a fraction of the price elsewhere in the basin system. In this way, taxpayers have funded massive development of vast irrigation schemes that are using MORE of our precious water, in the name of water saving.

The entire scheme has NEVER been audited, with the outcome being there is no evidence that there has been ANY savings of water at all, and many experts who are convinced that more water is now being extracted than before!

There has been an expected flurry of criticism of the report by irrigation organisations; however, none can escape the fact that the federal and NSW governments are still refusing to allow a full audit of the scheme. If they have nothing to hide, then why oppose an independent review?

Please feel free to contact me at neil@whitegumsaustralia.com if you have any concerns or need any help with a conservation issue. (CA)

¹ biocollect.ala.org.au/acsa/project/index/77285a13-e231-49e8-b212-660c66c74bac

² Chazdon, R. and Brancalion, P. (2019) Restoring forests as a means to many ends. *Science* v. 365 Issue 6448, pp.24–25.

³ www.abc.net.au/news/2019-07-07/centuries-old-australian-native-trees-dying/11282364

⁴ www.abc.net.au/news/2019-06-12/bruny-island-introduces-strict-new-cat-laws/11202024

Don't like driving at night?

Prefer a daytime meeting?

**Why not try the
Foothills Day Meeting**

10.30 am to 12.30 pm,
second Tuesday of the month at
Field Naturalists Hall, 1 Gardena
Street, Blackburn. Mel 47K10.

Enquiries Barry Sanders, 9561 4939

Geelong Botanic Gardens: First Australians Guided Walk

Geelong APS hosted the COMM on Saturday, 15 June at the Geelong Botanic Gardens. Also organised was a garden tour at the Gardens after the meeting and lunch.

There were a lot of keen attendees, with some 30 people gathered under an imposing River Red Gum at the Garden entrance, where the tour started, to hear Liz Bennito and Sally (from the Friends of the Gardens) explain how the Wathaurong, the traditional Aboriginal people of the Geelong area, used the plants in their everyday life.

We walked slowly around the garden for a most fascinating 2 hours, stopping and starting at many different plants whose role was explained to us by our guides. Many Indigenous rules apply to the harvesting of food which helped with their management of country.

Some of the plants described included:

Muehlenbeckia florulenta (Tangled Lignum) – was harvested for seed.

Eucalyptus viminalis. Lerps growing on leaves were a good sugar source and were eaten like lollies

Gynatrix pulchella (Native Hemp) – bark used to make string

Goodenia ovata (Hop Goodenia) – used as a mild sedative

Dodonaea viscosa (Sticky Hop-bush) – used for tooth aches; scrunched to make an alcoholic drink

Callistemons – flowers used to make a sweet drink

Lomandra longifolia (Spiny-headed Mat-rush) – used for weaving baskets and eel traps

Callitris – long straight stems used for spears and ends lit and used as torches, cross bracing spars in canoes

Eucalyptus camaldulensis (River Red Gum) – A very significant tree used by Indigenous people all over Australia. Bark used for didgeridoos and canoes.

Microseris (Yam Daisy) – A staple food in the

Wathaurong people's diet. The taproot was eaten fresh or roasted. It was the destruction of the fields of yam daisies by European settlers that was a major reason why the Aboriginal people starved.

Xanthorrhoea australis (Austral Grass-tree) – flower stem used as the base for fire making and for spears; bees feeding on flowers would be followed back to hives for honey.

There were also many other plants described as we walked along that are growing in the garden but normally not found in the Geelong area, some truly large and imposing specimens: *Araucaria cunninghamii* (Hoop Pine), *Brachychiton rupestris* (Narrow-leaved or Queensland Bottletree), *Macrozamia* sp., *Macadamia* sp., *Castanospermum australe* (Black Bean) and *Araucaria bidwillii* (Bunya Pine) – do not be standing under this when one of their enormous heavy seed pods fall off! There is evidence that Indigenous groups would take seeds and propagate many of these plants into other areas to assist with food supply.

At the entrance there were some notable painted figures. One in particular was Daniel Bunse. He was the first curator at Geelong Botanic Gardens and came from Tasmania. He supported fair treatment of the local Indigenous people and teamed up with an Indigenous guide (Jemmy) who took him to many of the surrounding areas in Victoria explaining the Indigenous use of plants and their local names. He was an advocate for Aborigines who got into trouble with the law and wrote the book *The Language of the Aborigines of the Colony of Victoria*.

Fittingly, we finished the tour at a most awe-inspiring venerable elder; a tree that Daniel Bunse himself had planted. And there it was, a gloriously gnarled, luminously golden, 150-year-old *Ginkgo biloba*.

Thank you to the guides and APS Geelong for a splendid afternoon.

– Bruce McGuinness and Miriam Ford

Membership Matters

Anne Langmaid

I recently finalised booking my trip to the APNSA conference. I had attended part of the one held in Geelong in 2009 but as my children were then 11 and 8 years old I couldn't justify the full week. Now, I can leave them to look after the pets and gardens and indulge my plant passions. Being able to share knowledge and contact with others can strengthen our whole Society. Obviously, that is why I am attending. Plus, the Albany conference and associated trips sounds such fun.

I became blown away by south-west Western Australia over many years when watching talks at APS meetings. A few of the plants I managed to grow in my garden; most I killed. Finally, I grew to know the ones that may live at my place and so I killed a far less.

Then, under the direction of David and Barbara Pye, we made a Western Australian and South Australian Garden at Melton Botanic Gardens. It extended my knowledge of where the plants from WA come from, which area, and what may help them survive so far from home. It meant that when I began to see the plants in their natural environment a couple of years ago, I was finally able to begin to make sense of their needs. A plant that grows on ridges in deep sand needs perfect drainage while the one that grows in the drainage ditch a kilometre away needs more water. Both Avon Sand Belt, but differing needs.

I have learnt a lot over the last couple of years because I realise how little I know and how much there still is to learn. Yet another genus I have never heard of. Another stunning or weird floral plant to amaze me. I don't think our brains are big enough to hold all of the information at once, but it is big enough to appreciate nature in all its forms.

Welcome to the most recent members to our APS family. May our flora constantly amaze you as it does me.

Julia Hamer, St Andrews

Alicia, Paul, Arwa, Danny Polakiekiewicz, Eltham

Simon Gilliland, Cape Paterson

Stacey Waylen, Marc Brooke, Adam Pretty, Wakool

George Hardwick, Kerang

Geoff Brunton, Eden Park

Tracey Crane, Kilmore

Geoff Mabbett, Kilmore

Lorraine Shaw, Kilmore

Bob Thomkins, Broadford

Angela Turner, Kilmore

Glenn James and Sue Dusting, Kilmore

Nicholas Adams & Thanisa Nariptapna, Broadford

Ron Wood, Echuca

Lyn Stead, Bairnsdale

Catherine Tenni, Blackburn

Kate Kennedy, Hamilton

Emma & Nathan Eubergang, Tarrington

Margaret Rogers, Mt Eliza

Michael Crabb, Stawell

John Muchan, Port Melbourne

Jan, Adam & Emma Sutton, Ascot Vale

2019 Biodiversity Symposium

Environmental restoration or green deserts & environmental traps?

Sat 12 & Sun 13 October

Venue: RSL, South Parade, Blackburn

Presented by the Field Naturalists Club of Victoria

We will examine the revegetation, recovery, rehabilitation, reinstatement, replacement, regeneration and 'restoration' of ecosystems after they have been damaged or destroyed by human activity.

Saturday: registration 8.30 am, speakers 9 am–4.30 pm

Sunday: 9 am–noon, afternoon excursion to Westgate Park.

Prior registration and payment required.

Contact FNCV office (admin@fncv.org.au) for further details and to book your place.



ANPSA News

Nineteen people joined the ANPSA Council teleconference on the 14th of May. As the member societies are autonomous bodies allowing for differences, these meetings of delegates and elected office bearers are an opportunity to share information and find common ground.

Our next meeting will be the Biennial meeting associated with the conference in Albany. An important feature of the conference is the handing out of the Australian Plants Awards. This year the Award recipients are Professor Kingsley Dixon, who was nominated for the professional category by the Wildflower Society of WA, and Glenn Leiper nominated by the Native Plants Queensland for the amateur category.

The main practical role of ANPSA is to support the Study Groups. Jane Fountain as the ANPSA Study Group co-ordinator provided us with a report of the current state of the Study Groups. There are currently 17 active Study Groups. Sadly the Boronia and the rainforest groups have closed. Good news is that the Goodeniaceae Study Group has been restarted with Royce Raleigh as the leader and Maree Goods as the newsletter editor. Their first excellent newsletter has come out.

The ANPSA website is an excellent resource of information, including Study Group newsletters. Nicky Zanen, our publicity officer, has reminded us that the *Australian Plants* was first published in December 1959 – 60 years ago. A copy of that edition is on the website.

We all appreciate the excellent work of our webmaster Brian Walters. He reports that there is now an online archive of newsletters produced by 44 current and closed Study Groups. The archives can be accessed from the general SG page: anpsa.org.au/study.html.

The online image database for the *Eremophila* Study Group now has over 160 *Eremophila* species. A dedicated website for the newly activated Goodeniaceae SG has been set up (anpsa.org.au/goodeniaceaeSG).

There is ongoing discussion on the future management of the ANPSA website, as succession planning is necessary to ensure smooth continuity should Brian become unable to manage. The likely outcome eventually will be engaging a commercial firm to manage the website. At the same time it would be wonderful for someone to volunteer to work with Brian and learn the ropes. Even if a commercial firm is engaged, a person with knowledge of the Society and plants will be needed to guide and instruct on the contents.

Our conservation officer Eddy Wajon has continued to lobby actively in relation to the expansion of the Jandakot Airport with commercial development into a reserve. Another issue of national importance is the insidious spread of Myrtle Rust. Eddie is keeping us informed of the attempts by government authorities to develop a management plan in a nationally coordinated way. The NSW government's anti-environmental legislation protecting feral Brumby horses in the Australian Alps has been another issue. Chris Long, APS Victoria President, has also sent a letter to the NSW Minister for the Environment. Eddie reported that in Western Australia damage to roadside vegetation by local council clearing practices is continuing.

The inevitable shift to distributing journals/newsletters electronically is slowly happening. NSW delegates informed us that the NSW journal is now only available digitally to the members. Libraries get paper copies, but statutory bodies prefer digital versions.

ANPSA public officer John Carter is stepping down from his position. A new public officer who is a resident of Canberra will need to be appointed at the beginning of 2020. We will also be looking to fill the position of the publicity officer with a new candidate as Nicky Zanen will be stepping down after the Albany conference. Nicky deserves recognition for her contribution over the years.

– Riitta Boevink, ANPSA President

Beginnings of a State prohibited weed botanical garden

A Weed Spotter who was recently visiting a property on the Mornington Peninsula found a healthy patch of what they suspected was alligator weed growing in a driveway gutter. The Weed Spotter took a good quality photo of the plant and sent it to the Weed Spotters email address, where it was quickly confirmed as Alligator Weed (*Alternanthera philoxeroides*).

Agriculture Victoria biosecurity officers inspected the property, then proceeded to trace the Alligator Weed infestations on to two further properties, upstream and downstream of the reported infestation.



Agriculture Victoria

Alligator Weed found growing in a drain at a property on the Mornington Peninsula.

During tracing, the officers were surprised to find another aquatic State prohibited weed, Water Hyacinth (*Eichhornia crassipes*). Fortunately the Water Hyacinth was not flowering and in a location where potential spread is expected to be low. Interestingly, it wasn't floating in an obvious water body as it usually does. Instead, it was in an earthen drainage line in which shallow water was flowing slowly and soaking the surrounding ground.

As State Prohibited Weeds are uncommon, it is unusual to find two in such proximity. Discussions with landowners, present and past, have yet to yield any information about the origins of these infestations.

Agriculture Victoria staff examined historical aerial imagery from the area and discovered that Alligator Weed was visible in imagery at

one of the properties in 2015, indicating that it had been present for quite some time.

Agriculture Victoria will undertake best practice management to eradicate the infestations at these sites at no cost to the landholders.



Agriculture Victoria

Water Hyacinth found growing at an adjacent property.

If you see Alligator Weed or Water Hyacinth, or have it on your property, report it to Agriculture Victoria on 136 186 or email weed.spotters@ecodev.vic.gov.au. Agriculture Victoria biosecurity officers will safely and securely remove the plants for free.

You can help in the control of State Prohibited Weeds by joining Weed Spotters (agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds/weeds/weed-spotters), a volunteer network assisting in protecting Victoria from the threat of weeds. (GA)

Source: *Weed Spotter Newsletter* Issue 25 Winter 2019.

Member discounts at select native nurseries

APSVic has recently negotiated discounts for members at several native plant nurseries. These are shown with a red symbol on the listing on our website.

To identify yourself as a member when asking for a discount show the label on the front of your *Growing Australian* mail out envelope. Put the envelope in the glovebox of your car so that you always have it available.

District Groups directory

APS Albury-Wodonga Inc

President: Tom Bird

Secretary: Christine Young

ausplants.aw@gmail.com

11 Topaz Crt, West Wodonga Vic. 3690

apsvic.org.au/aps-albury-wodonga/

Meetings: Age Concern, Townsend St, Albury.
4th Tuesday at 7.30 pm (Feb–Nov).

APS Ballarat District Inc

President: Phyllis Wright

Secretary: vacant

aps_ballarat@yahoo.com.au

PO Box 123W, Ballarat West Vic. 3350

Meetings: Robert Clark Horticultural Centre,
Ballarat Botanic Gardens, Ballarat. Access from
Gate 3, Gillies St. 2nd Wednesday: Oct, Nov, Dec,
Feb, Mar at 7.30pm; Apr–Sep at 2 pm.

APS Bendigo Inc

President: Tony Brown 0418 135 213

Secretary: Sandra Birch 0400 149 319

bendigo@apsvic.org.au

PO Box 669, Bendigo Vic. 3552

Meetings: Golden Square Hall, Old High St,
Golden Square. 3rd Tuesday at 7.30 pm (Feb–Nov).

APS Colac-Otway Inc

President: Geoff Beilby 0427 358 252

Secretary: Paul Kennedy (03) 5231 5569

apscolacotwaygroup@gmail.com

210 Aireys St, Elliminyt Vic. 3249

Meetings: Colac Neighbourhood House,
23 Miller St, Colac. 3rd Wednesday at 8 pm
(Feb–Nov).

ANPS East Gippsland Inc

President: Cliff Ireland

Secretary: Cath McInnes (03) 5147 1897

eastgippsland@apsvic.org.au

PO Box 1036, Bairnsdale Vic. 3875

Meetings: Noweyung, 84 Goold St, Bairnsdale.
In future meetings will be on the second Tuesday
at 7.30 pm (except Dec and Jan).

Echuca-Moama District APS Inc

President: Sue Robertson 0421 377 429

Secretary: Drew Gailey 0429 832 310

2 Airlie Crt, Echuca Vic. 3564

echucamoama@apsvic.org.au

Meetings: Echuca Library, 310 Hare St, Echuca.
4th Thursday at 7.30 pm

APS Foothills Inc

Leader: Janet Hodgkiss

Secretary: Nicky Zanen (03) 9761 1933

foothills@apsvic.org.au

PO Box 65, Boronia Vic. 3155

Meetings: Evening – Knox Park Primary School,
Kathryn Rd, Knoxfield. 4th Wednesday
at 7.45 pm (except school holidays).
Day – Field Naturalist Hall, Gardenia St, Blackburn.
2nd Tuesday at 10.30 am (Feb–Oct).

APS Geelong Inc

President: Bruce McGinness (03) 5278 8827

Secretary: Phil Royce

apsgeelong@gmail.com

PO Box 2012, Geelong Vic. 3220

www.apsgeelong.org

Meetings: The Ballroom – Hamlyn Park,
1 Carey St, Hamlyn Heights. 3rd Tuesday at 7.30 pm
(Mar–Nov).

APS Grampians Group Inc

President: vacant

Vice President: John King

Secretary: Andrea Shelley

grampians@apsvic.org.au

c/o Pomonal Post Office, Pomonal Vic. 3381

Meetings: Pomonal Hall, Pomonal. 3rd Tuesday
at 7.30 pm (Feb–Dec).

SGAP Hamilton Inc

President: Ainsley Wilson

Secretary: Liz Cummins 0438 741 223

hamiltonsgap@hotmail.com

Meetings: HIRL, North Boundary Rd, Hamilton.
2nd Wednesday at 7.30 pm (Feb, Apr, Jun, Aug,
Oct, Dec).

APS Keilor Plains Inc

Leader: Jane Canaway 0425 701 756

Secretary: Anne Langmaid (03) 9336 3228

info@apskeilorplains.org.au

PO Box 115, Niddrie Vic. 3042

www.apskeilorplains.org.au

Meetings: 54 Raleigh Rd, Maribyrnong.
1st Friday at 8 pm (Feb–Dec).

APS Latrobe Valley Group Inc

Leader: Rhonda Fitch 0459 749 885

Secretary: Judy Hetherington

latrobevalley.aps@gmail.com

PO Box 112, Boolarra Vic. 3870

Meetings: Horticultural Building, Federation Training,
Morwell. 2nd Thursday at 7.30 pm (except Jan).

APS Loddon–Murray Group Inc

President: Andrew Farley (03) 5457 2394

Secretary: Linda Coote 0447 134 913

coringapark@gmail.com

56 Dawe Rd, Murrabit Vic. 3579

Meetings: Kerang Lions Club Den, Park Rd, Kerang. 4th Wednesday at 7.30 pm (bimonthly). Alternate 4th weekend – weekend outing/field trip.

APS Maroondah Inc

President: Bruce Schroder (03) 9728 1342

Secretary: Peter Rogers (03) 9801 6946

maroondah@apsvic.org.au

PO Box 33, Ringwood Vic. 3134

australianplantsoc.wix.com/maroondah

Meetings: Australian Unity Hall, 8 Main St, Blackburn. 3rd Friday at 8 pm (Jan–Nov).

APS Melton & Bacchus Marsh Inc

President: Christine Huf 0412 081 074

Secretary: David Pye (03) 5428 9369

apsmeltonbacchus@gmail.com

PO Box 946, Bacchus Marsh Vic. 3340

www.runningpostman.org.au

Meetings: Botanica Springs Children's & Community Centre, 249 Clarkes Rd, Brookfield. 4th Thursday at 7.30 pm (Feb–Jun & Aug–Nov).

APS Mildura Inc

President: Tony Langdon 0428 214 117

Secretary: Peter Lang (03) 5023 2551

PO Box 259 MCP, Mildura Vic. 3501

apsmildura@hotmail.com

Meetings: Lutheran Church Hall, cnr 9th St and Olive Ave, Mildura. 2nd Thursday, 7.30 pm (Feb–Nov).

APS Mitchell Group Inc

President: Norbert Ryan

Secretary: Ian Julian (03) 5793 8270

mitchell@apsvic.org.au

PO Box 541, Kilmore Vic. 3764

www.apsmitchell.org.au

Meetings: John Taylor Room, Kilmore Library. 3rd Monday at 7.30 pm (Feb–Nov).

APS Mornington Peninsula Inc

President: Verena Reich 0402 842 494

Secretary: Jenny Bolger 0428 284 974

morningtonpeninsula@apsvic.org.au

162 Balnarring Rd, Merricks North Vic. 3926

Meetings: alternating between the 3rd Tuesday at Bentons Square Community Centre, 145 Bentons Rd, Mornington (times alternate between 7:30 pm and 2:30 pm) and outings on the 3rd Saturday starting at 10:30 am. (Feb–Nov). Contact secretary for time and date details.

SGAP Shepparton & Districts Inc

Leader: David Doyle (03) 5829 8416

dwdoyle1@optusnet.com.au

5 Boschetti Rd, Tallygaroopna Vic 3634

Secretary: Jenny Polinelli (03) 5825 4210

jcpolin@tpg.com.au

15 Ros St, Mooroopna Vic 3629

Meetings: Shepparton Vision Centre, Channel Rd, Shepparton. 2nd Tuesday at 8 pm (Feb, Mar, Apr, May, Aug, Oct, Nov).

Excursions: Jun, Jul, Sep, Dec.

APS South East Melbourne Region Inc

Leader: John Thompson (03) 9598 6982

Secretary: Helen Appleby 0419 310 849

SEMELB@apsvic.org.au

PO Box 8835, Armadale Vic. 3143

Meetings: Hughesdale Community Centre, cnr Poath & Kangaroo Rds, Hughesdale. 1st Tuesday at 8 pm (Feb–Dec except Cup Day).

APS South Gippsland Group Inc

President: Jim Lyons (03) 5674 2864

Secretary: Geoff Trease

sgaps@hotmail.com

170 Kardella Fairbank Rd, Kardella Vic. 3951

Meetings: Uniting Church Hall, 16 Peart St, Leongatha. 2nd Wednesday at 7.30 pm (most months).

APS Strathbogie Ranges Inc

Leader: Val Kneebone (03) 5798 5453

Secretary: Pete Kelly 0402 882 959

aps.strathbogie.ranges@gmail.com

10 Tuan Lane, Longwood Vic. 3665

Meetings: (contact leader for details). 4th Saturday at 10.30 am (Feb–Nov).

APS Wangaratta Inc

President: John van Riet (03) 5725 7207

Secretary: Alison Earp (03) 5729 7518

apswangaratta1@gmail.com

21 Frascas Lane, Myrree Vic. 3732

Meetings: Park Lane Nursery, Park Lane, Wangaratta. 4th Thursday at 7.30 pm (Feb–Nov) unless otherwise advised.

APS Warrnambool & District Inc

President: Dorothy Mattner (03) 5567 6477

Secretary: Mike Halls (03) 5562 6519

warrnambool@apsvic.org.au

127 Rooneys Rd, Warrnambool Vic. 3280

www.apswarrnambool.org.au

Meetings: Mozart Hall, Gilles St, Warrnambool. 4th Friday at 8 pm (Feb–Nov).

APS Waverley Inc

Leader: Jenny Kelso (03) 9889 1195
Secretary: Virginia Barnett (03) 9803 4502
apswaverley@gmail.com
PO Box 248, Glen Waverley Vic. 3150
www.apswaverley.host56.com

Meetings: Wadham House, 52 Wadham Pde, Mt Waverley, 3rd Thursday at 8 pm (Feb–Nov).

APS Wilson Park (Berwick) Inc

President: Alex Smart (03) 9707 5275
Secretary: Wendy Smart (03) 9707 5275
secretary@apswilsonparkberwick.org.au
PO Box 278, Berwick Vic. 3806
www.apswilsonparkberwick.org.au

Meetings: Wilson Botanic Park, Admin. Building, Princes Hwy, Berwick. 2nd Tuesday (Feb–Dec).

Wimmera Growers of Australian Plants Inc

President: Royce Raleigh (03) 5383 6200
Secretary: Anthea Garth (03) 5382 4383
wgapinc@gmail.com
PO Box 533, Horsham Vic. 3402
wimmeragap.weebly.com

Meetings: Wimmera Lodge, 8 Dumesny St, Horsham (September at Town Hall, Warracknabeal). 1st Thursday at 7.30 pm (Feb–Nov).

APS Wyndham District Inc

President: Colleen Miller 0401 645 468
Secretary: Sue Gwilym 0401 250 331
apswyndham@gmail.com
PO Box 883, Werribee Vic. 3030

Meetings: Old Shire Offices, cnr Watton St and Duncans Rd, Werribee. 2nd Wednesday at 7:30 pm of every even numbered month. Outings are held on odd numbered months.

APS Yarra Yarra Group Inc

Leader: Miriam Ford 0409 600 644
Secretary: Sue Gwilym 0401 250 331
apsyarrayarra@gmail.com
PO Box 298, Eltham Vic. 3095
apsyarrayarra.org.au

Facebook: www.facebook.com/APS Yarra Yarra/
Meetings: Orana Building, Araluen Centre. 226 Old Eltham Rd, Lower Plenty. 1st Thursday at 8 pm (Feb–Dec).

Please send changes to:
APS Vic Secretary
secretary@apsvic.org.au

Bushfire-affected Alpine Ash forests given a helping hand

Forest Fire Management Victoria has embarked on an extensive program to re-seed areas of forests and parks by aerial sowing Alpine Ash (*Eucalyptus delegatensis*) seeds following bushfires across the Alpine region last summer.

Gippsland's Assistant Chief Fire Officer, Beth Roberts said: 'Most of the forest landscape is expected to regenerate naturally following the recent extensive fires but we're carrying out a re-seeding program to support and encourage the regrowth of Alpine Ash in parts of our forests and parks.

'We had multiple high-severity fires spread across state forest and national parks affecting almost 15,000 ha of Mountain and Alpine Ash forests,' Dr Roberts said.

'While the eucalyptus species typically regenerate after a high severity fire, over time successive fires can cause vulnerability to local forests if trees have not reached reproductive maturity. Following initial aerial assessments, over two-thirds of the impacted ash forests are expected to recover naturally and without intervention.

'To support regeneration of the forests, seed collected and stored over several years was prepared for the first re-seeding flight.

'Over 1,000 ha of ash forest has been assessed as being optimal for re-seeding with helicopters used to fly over the strips of bushfire-affected forest to distribute about 130 million viable seeds. A monitoring program to assess the success and outcome of the re-seeding operation will assist in informing future management approaches,' Dr Roberts said.

'While large-scale interventions can be difficult to implement, we've seen previous success stories such as the 2013 aerial sowing in the Harrietville area, where Alpine Ash was burnt multiple times.

'Other re-seeding operations have been conducted following the 2003, 2006-07 and 2009 bushfires in Gippsland and north-eastern Victoria, mostly with success. By giving the area a helping hand the forest has begun to revive.

[Source: DELWP Victoria]

Webspot

It's an unfortunate reality that many of our native plants are threatened with extinction, and are classified as threatened, vulnerable, rare or endangered. In Victoria, the number of plants¹ that fall into these categories makes sobering reading:

| Category | Vascular plants | Mosses & liverworts | Fungi & lichens |
|------------------|-----------------|---------------------|-----------------|
| Presumed extinct | 41 | 2 | 0 |
| Endangered | 350 | 16 | 3 |
| Vulnerable | 498 | 18 | 2 |
| Rare | 822 | 32 | 4 |
| Poorly known | 232 | 86 | 0 |
| Total | 1,943 | 154 | 9 |

The Victorian Department of Environment, Land, Water and Planning's website (www.environment.vic.gov.au/conserving-threatened-species/) contains information to increase your knowledge of these plants. Such knowledge can raise our consciousness of what are threatened and could be the catalyst for us all to do more to save, if not all, then some these plants.

Action Statements

Action statements are a requirement under the *Flora and Fauna Guarantee Act 1988*. Currently there are action statements for 152 plant species in Victoria. Each action statement gives a comprehensive background of the plants, conservation status and current conservation measures.

The statements not only inform on many of Victoria's lesser known plants, they also detail the work that is ongoing in the plants' conservation and hopefully, decrease in the plants' threatened status.

Threatened Species Advisory Lists

The Advisory Lists are maintained by the Department and are based on technical information and advice obtained from a range of experts. While they are reviewed periodically, the latest Advisory List dates from 2014, so an update is well overdue.

¹ Victoria. Department of Environment, Land, Water and Planning Advisory List of Rare or Threatened Plants in Victoria – 2014.

The information in these lists are used in a range of planning processes.

The list refers to plants considered rare or threatened in Victoria only; their status elsewhere in Australia or beyond is not considered in assigning Victorian conservation status. Taxa are eligible for inclusion in the list if:

- they are recognised as taxonomically valid by the National Herbarium of Victoria, and
- they currently occur, or occurred, naturally in Victoria, and
- they are, or are highly likely to be, rare or threatened in Victoria.

Victorian Threatened Communities

Not only are there threatened species, entire ecological communities are threatened. The Scientific Advisory Committee (SAC) has produced a set of descriptions of Victorian Threatened Communities. The descriptions help field recognition of the various communities of flora and fauna currently listed as 'threatened' under the *Flora and Fauna Guarantee Act 1988*.

The descriptions are based on final recommendation reports produced by the SAC. They include the location of the community in Victoria and details of the plant and animal species that occur in each community.

Committee of Management

Executive

President: Chris Long (03) 9766 6470/0425 755 610
president@apsvic.org.au

Vice President: Greg Brown 0421 331 954
vicepresident@apsvic.org.au

Vice President: vacant

Secretary/Public Officer: vacant
secretary@apsvic.org.au

Treasurer: Bev Fox (03) 9762 5086,
treasurer@apsvic.org.au

Elected Ordinary Member

Conservation Officer: Neil Marriott
(03) 5356 2404, conservation@apsvic.org.au

Lone Member Officer: Linda Huzzey
(03) 5726 1875, lonemember@apsvic.org.au

Membership Officer: Anne Langmaid
(03) 9336 3228, PO Box 329 Keilor Vic 3036,
membership@apsvic.org.au

Newsletter Editor: Lachlan Garland
(03) 9598 4963, newsletter@apsvic.org.au

Publicity Officer: vacant

Research Officer: Barbara Buchanan
(03) 5762 3625, research@apsvic.org.au

Study Group Liaison Officer: Phil Royce
studygroup@apsvic.org.au

Appointed Positions

(no voting rights)

Book Sales Officer: Bill Aitchison/Sue Guymer
(03) 9872 3583, books@apsvic.org.au

Historian: John Walter (03) 5423 9383

Mail Collector: Annie Treasure

Newsletter Post-out Officers:
Bernard and Dallas Boulton

Newsletter Production Officer:
Graeme Nicholls, 27 Masons Rd, Blackburn Vic
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newsletterproduction@apsvic.org.au

Seed Bank Curator: Marj Seaton, 36 Voumard St,
Oakleigh South Vic 3167, (03) 9570 6293,
seedbank@apsvic.org.au

Web Administrator: John King
webadmin@apsvic.org.au

Sub-committees

Growth and Development Sub-committee
Ross Field (chair), Greg Brown, Richard Cameron,
Jill Lulham, Chris Long (ex officio)

Awards Sub-committee
Brendon Stahl (chair), Tony Cavanagh, Marj Seaton,
Chris Long (ex officio)

District Group Delegates

APS Albury-Wodonga Inc

APS (SGAP) Ballarat District Inc: John Hastie
(03) 5341 5567

APS Bendigo Inc: Sandra Birch 0400 149 319

APS Colac-Otway Inc: Paul Kennedy
(03) 5231 5569

ANPS East Gippsland Inc: Cliff Ireland

Echuca-Moama District APS Inc

APS Foothills Inc: Nicky Zanen (03) 9761 1933

APS Geelong Inc: Bruce McGinness
(03) 5278 8827

APS Grampians Group Inc: Wendy Marriott
(03) 5356 2404

SGAP Hamilton Inc

APS Keilor Plains Inc: Elaine Whalley
0401 802 198

APS Latrobe Valley Group Inc: Rhonda Fitch
0459 749 885

APS Loddon-Murray Group Inc: Barry Teague
(03) 5033 1020

APS Maroondah Inc: Dallas Boulton
(03) 9729 1538

APS Melton & Bacchus Marsh Inc: David Pye
(03) 5428 9369

APS Mildura Inc

APS Mitchell Group Inc: Ian Julian
(03) 5793 8270

APS Mornington Peninsula Group Inc: Chris Long
(03) 9766 6470

APS SE Melbourne Region Inc: Marj Seaton
(03) 9570 6293

SGAP Shepparton & District Inc: Carolyn Edwards
(03) 5821 4826

APS South Gippsland Group Inc

APS Strathbogie Ranges Inc: Jill Fidler
0407 871 603

APS Wangaratta Inc: Helen van Riet (03) 5725 7207

APS Warrnambool & District Inc: Bob Artis

APS Waverley Inc: Jenny Kelso (03) 9889 1195

APS Wilson Park (Berwick) Inc: Joy Buck
(03) 5998 7608

APS Wyndham District Inc: Dianne Winters
(03) 9395 7369

APS Yarra Yarra Group Inc: Miriam Ford
(03) 9178 2702

Wimmera Growers of Australian Plants Inc

and furthermore . . .

Maintaining the web of life

Gardens contain a complex web of life. Gardeners are partners in ensuring the continuing health of their small patch. We manage our plants and delight in the creatures that call it 'home'. We delight in birdsong, chirruping crickets, maybe piercing cicada songs, the 'ka-plonk' of pobblebunks, a tiny spider's fragile web.

There are also unwanted and annoying creatures that invade our gardens. We squash a brood of redbacks found under a garden chair or tip out a saucer of water full of mosquito wrigglers.

It is the gardener's choice which remedy is used to manage garden pests: chemical spray, toxic bait, exclusion netting or non-toxic means. Chemicals such as DDT that were lauded in the 1950s as a catch-all solution to unwanted insect pests are now banned as they were toxic to untargeted 'good' species, entering the food chain and killing or adversely affecting birds and animals, including humans.

Gardeners do need to control pests, but must always be mindful of which method causes least harm and makes good ecological sense. Tiny creatures, many unseen, inhabit gardens.

Little spiders and insects are part of the web of life and food sources for the creatures that give us joy, pollinate the flowers or 'naturally' control pests.

White oil is a non-toxic spray which has been used for generations. It is easy to make at home from just two ingredients. It will control aphids, scale, mealy bug, citrus leaf miner and caterpillars on broad-leaved plants. It kills the pests by blocking their breathing pores so that they suffocate.

White Oil recipe

To make it:

In an electric blender or big glass jar, mix 4 cups vegetable oil (any sort) and 1 cup dishwashing detergent (any sort).

The mixture can be stored for up to 6 months in a cool place.

To use it:

Mix 1 tablespoon of mixture per litre of water. Spray or apply with a paint brush to cover all affected surfaces.

Note: White oil is not suitable for use on soft-leaved or hairy-leaved plants.

– Helen Van Riet

RB print
digital & traditional

At RB Print, we specialise in traditional and digital printing and have the facilities to produce a variety of printing products.

Our printing range includes Brochures, Presentation folders, Newsletters, School Yearbooks, Business Cards, Magazines, Calendars etc.

Our staff can design and print a variety of quality full colour printing products you need at a competitive price.

RB Print Imaging, 12a Trent Street, Moorabbin. Vic. 3189. Ph: 9532 1945



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 NURSERY

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Native
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