# PENTACHONDRA

*Journal of the Australasian Plant Society*

NUMBER 66 MAY 2021



***Grevillea rosemarinifolia* 'Jenkinsii'**

# AUSTRALASIAN PLANT SOCIETY

**Promoting the cultivation and conservation of Australasian plants, and their closest relatives, in northern hemisphere gardens**

**Number 66**

**May 2021**

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# APS NEWS

Compiled by Judy Clark

## Events 2021

Lockdown may be easing but covid uncertainty isn't the only reason why events which were tentatively planned have had to be cancelled. Sadly, many plants in Sue Norburn's garden suffered in the cold weather of late winter and early spring. Abbotsbury Subtropical Gardens are open but even though we might be free to travel getting accommodation could be difficult, so this visit has been postponed to 2022. The Wisley Specialist Plant Show, due to be held in June, has already been cancelled.

At the time of writing the Great Dixter Autumn Plant Fair at Northiam in East Sussex is scheduled to go ahead. It is usually held in early October.

As yet no arrangements have been made for the 2021 Annual General Meeting, though we expect to hold it in November as usual. Circumstances will dictate whether the AGM can be a face to face meeting or whether it will be Zoom again. Please keep an eye on your inbox for further details. If you would like to be kept up to date about events but don't use email contact the editor by phone or letter (see back cover for contact details).

## Pentachondra on the APS website

Many thanks to Jeff Layman who has scanned all the remaining issues of Pentachondra, and to Ben Ram who uploaded the PDFs onto the APS website. Now you can browse every issue from 1 to 62, plus indexes for issues 1 to 30.

To access this amazing resource you will need to log in to the the website. If you don't have a username and password contact Ben Ram at webmaster@anzplantsoc.org.uk.

## Vale

The Society is sad to announce the death, in December 2020, of longstanding member Dr Rob Senior. A GP in Cornwall for 40 years, he found solace in plants and gardens and grew half hardy species from all over the world, including Australasia. He was growing banksias in the 1980s; in the first edition of Banksias (2008) he reported that one of his *Banksia marginata* specimens was already 25 years old! Well known in the world of half hardy plants, for many years he was chairman of the Half Hardy Group of the Hardy Plant Society. He contributed an interesting chapter to Gardening on the Edge (Alison Hodge 2004), suggesting that little-known Australian genera such as *Hibbertia* (guinea flowers), *Dianella* (flax lilies), *Xanthorrhoea* (grass trees), *Pandorea* and *Casuarina* (sheoaks - some are now *Allocasuarina*) would be well worth trying in mild coastal gardens.

## Seed list news

Unfortunately problems with obtaining new stocks of seed have continued. Ordering takes more time than it used to and parcels from Australia take around twice as long to get here as they used to. (Maybe covid, maybe Brexit, maybe the postal system - who knows?) Seed also costs us more than it used to as we are required to provide a phytosanitary certificate ( an official document stating that seeds have been inspected and are free from pests and diseases) and they don't come cheap.

Notwithstanding these obstacles we are now awaiting delivery of seeds from the Australian wholesaler AustraHort. The seed list has also been boosted by

donations from members George Smith, Tim Smith, Jan-Willem Vos and Judy Clark, for which The Society is very grateful.

The 2021 seed list and an order form are enclosed with this newsletter. Please be patient after putting in your order as we are unsure when some new stock will arrive. It also takes some time to complete each order and we only have one seed manager, the wonderful Janet Miller.

Currently we are unable to send seeds directly to European Union countries unless the seeds are accompanied by a phytosanitary certificate. Efforts are being made to get this regulation changed for small amounts of seed but in the meantime if you reside in Europe please contact Janet before ordering.

## Photography competition

The competition will be held again in 2021. The rules are simple. The photo should be of a native Australasian plant or plants being grown in the northern hemisphere in a pot or in the ground; either is fine. Each member can submit one photo. The deadline for submission will be three weeks before the date of the AGM (date yet to be finalised), but you don't need to wait till then to submit your entry.

As in 2020 the winner will be chosen by a vote of members and the prize is a print of a Celia Rosser banksia drawing.

## Have you paid your subscription?

If you have not yet paid your 2021 subscription you will find a final reminder to do so enclosed with this newsletter. Please ignore it if you have paid very recently as you could have paid after the editor received the membership list.

## Could you contribute to Pentachondra?

As always, many thanks to everyone who has provided material for this issue. Our journal would not be what it is without members' contributions as there is nothing like first hand experience for adding to our knowledge of growing Australasian plants in the northern hemisphere.

Essentially, the only thing required of articles for Pentachondra is that they have some connection, with Australasian plants and their close relatives, 'Australasia' including Australia, New Zealand and neighbouring islands. If you want inspiration try browsing some back copies of Pentachondra - plenty of ideas there! Length is not important, and if you don't fancy writing an article photographs on their own are fine but please include captions.

The deadline for the next issue is **31st October 2021**. Please send contributions as word documents or similar (**not** as a PDF) and please do **not** compress photographs. If you have any questions about contributing please don't hesitate to contact Judy at enquiries@anzplantsoc.org.uk I'll be delighted to hear from you.

## For sale

**Australian Plants – A Guide to their Cultivation in Europe**

We have managed to obtain some more copies of this excellent book by Thomas Ross and Jeff rey Irons, one of the founders of the APS. It has detailed information about selected Australian species that can be successfully cultivated in Europe along with a list of the characteristics and cultivation requirements of another 500 plants. This data is based on personal experience; the authors cultivated

almost all of the plants listed in the book themselves, in gardens in Britain, Germany and Spain.

The temperature data on are particularly useful. As hardiness varies with circumstances a 'danger zone' is given for every plant listed. At the upper limit plants growing in less than ideal conditions are likely to be harmed; at the lower limit even established plants will most probably be severely damaged and may die.

**Eucaflip**

This full colour photoguide is designed to enable easy identification of all 29 eucalypt species native to Tasmania. It was recommended by the late John Purse as the best guide for identifying eucalypts in the UK, as the species most commonly grown here are from Tasmania. It illustrates the key diagnostic features - fruit, buds, bark and leaves - with life-size photographs. It is laminated and light enough to carry. When fully open it measures 92 by 48 cm but it folds up to 23 by 12 cm.

Contact enquiries@anzplantsoc.org.uk to buy Eucaflip for £7.50 plus postage, or Ross and Irons for £10 plus postage.

## Collections of Australasian plants in Great Britain, Ireland and France

Five years ago the APS became an organisational member of Plant Heritage. National Plant Collections© form a key part of their conservation work. To quote from their website (www.plantheritage.org.uk), "*a National Plant Collection is a registered and documented collection of a group of plants. these can be linked botanically by plant group, or perhaps have a shared history or geography.*" At the time (May 2016) a list of collections comprised wholly or partly of Australasian plants was published in Pentachondra. So when Gary Firth sent an update in early 2021 it seemed timely to publish a revised list.

There are now 650 National Plant Collections©. Table 1 on page 4 lists the 33 containing Australasian plants. Eleven of these, including three new collections, are held by APS members. Some collections, those held in gardens open to the public, are easy to access. Others are located in private gardens but happily many of these are open by appointment. To obtain details about how to access a collection go to the Plant Heritage website and click on 'National Plant Collections'.

Plant Heritage also run a Missing Genera campaign, highlighting important plant groups for which no collection yet exists. Currently they are looking for enthusiastic people to host collections of *Phormium* and *Pittosporum.* Could that person be you?

Two members living in France hold the French equivalent of a National Plant Collection©, called CCVS collections (Conservatoire des Collections Végétales Spécialisées). One is Tim Darrington who has a collection of *Banksia* at his home in Viene. Ben Ram wrote about visiting Tim's collection in the December 2020 edition of Pentachondra. The other is Jan-Willem Vos who holds four collections at Château Pérouse Botanic Garden in the south of France. Two of these - *Acacia* and *Eucalyptus* - are full national collections (CN) and two - *Melaleuca* and *Podocarpus* - are approved collections (CA). Approved collections need more taxa and/or more information about the plants and their cultivation to achieve CN status.

## Table 1: Plant Heritage National Plant Collections of Australasian plants located in Great Britain and Ireland

* = new collection; M = APS member; *Hebe* and *Veronica* are synonymous

| Collection | Holder / Contact | Location |
|---|---|---|
| *Banksia* South East Australian species | Mr Robert Blackhall-Miles (M) | Gwynnedd, Wales |
| *Clianthus* & *Sutherlandia* | Logan Botanic Garden, Richard Baines | Dumfries & Galloway, Scotland |
| *Cordyline australis* (and 6 other *Cordyline* species) | Mr W. Stanley Payn | Fauvic Nurseries Ltd., Jersey |
| *Corokia* | Mona Abboud (M) | London, England |
| *Correa* | Dr Judy Clark (M) | East Sussex, England |
| *Cortaderia selloana* and *C. richardii* cultivars | Mr AJ Shipperley | Berkshire, England |
| *Eucalyptus* | Dr & Mrs DJ Smith (M) | Hampshire, England |
| *Eucalyptus* species* | Geoffrey Cooper (M) | Oxfordshire, England |
| *Eucalyptus* species | Mr T Hart Dyke (M) | Kent, England |
| *Eucryphia* | Mrs K and Mr A Bunn | Devon, England |
| *Eucryphia* | National Trust - Bodnant Garden | Conwy, Wales |
| *Eucryphia* | Seaforde Gardens, Lady Anthea Forde | County Down, Northern Ireland |
| *Eucryphia Nothofagus* | Mount Usher Gardens, Mr S Heffernan | County Wicklow, Republic of Ireland |
| *Eucryphia* species and primary hybrids (hardy in S England) | RBG Kew - Wakehurst Place, Jo Wenham | West Sussex, England |
| *Griselinia* species | Logan Botanic Garden, Richard Baines | Dumfries & Galloway, Scotland |
| Harold Comber Collection (includes Tasmanian plants) | National Trust - Nymans, Mr J Whelan | West Sussex, England |
| *Hebe* - The Douglas Hall Chalk Hebe Collection | Plumpton College | East Sussex, England |
| *Hebe* (dwarf) | N Hutchinson | Yorkshire, England |
| *Hebe stricta*, *traversii* and cultivars | Stephen Harding (M) | Kent, England |
| *Hoheria* | Abbotsbury Subtropical Gardens, Mr S Griffith | Dorset, England |
| *Leptospermum* species | Logan Botanic Garden, Richard Baines | Dumfries & Galloway, Scotland |
| *Libertia* | Zoological Society of Ireland | Dublin, Republic of Ireland |
| Myrtaceae (Tribe *Myrtaea*) (including *Lophomyrtus*) | Dr G & Dr M Firth (M) | West Sussex, England |
| *Nothofagus* | The National Trust for Scotland - Crarae Garden, Robert Carroll | Argyll & Bute, Scotland |

| | | |
|---|---|---|
| *Nothofagus* | Mount Usher Gardens, Mr S Heffernan | County Wicklow, Republic of Ireland |
| *Nothofagus* species | RBG Kew - Wakehurst Place, Jo Wenham | West Sussex, England |
| *Olearia* | Fingal Co Council -Malahide, Talbot Botanical Gardens, Mr Pascal Murphy | Dublin, Republic of Ireland |
| *Olearia* | The National Trust for Scotland - Inverewe Garden, Mr K Ball | Highlands, Scotland |
| *Podocarpus* and related Podocarpaceae | Caerhayes Castle; Mr C. Williams | Cornwall, England |
| *Podocarpus* and related Podocarpaceae | Dr & Mrs DJ Smith (M) | Hampshire, England |
| *Prostanthera* species and cultivars* | James and Katie Treseder (M) | Cornwall, England |
| *Pseudopanax* | Louise Dowle | Kent, England |
| *Veronica* (The Douglas Chalk Hebe Collection)* | Stephen Harding (M) | Kent, England |

# THE GREENHOUSE CHAINSAW MASSACRE

Jeff Layman

Well, not exactly, but…

Many of the articles written for Pentachondra concern the cultivation of plants from seed to fruiting; some concern themselves with vegetative propagation. In essence, it's about making more plants. As far as I remember, perhaps with the exception of the odd mention of pruning, there has been nothing about reduction.

When I first visited Western Australia in spring almost 40 years ago, I was amazed by the flowering of the bush. There were not enough adjectives to describe the extraordinary number and variety of the plants, and their shapes, foliage, and flowers. This was, of course, years before the internet, and although I had seen some books showing a very limited number of the plants I might find there, nothing could prepare me for what I found on a five-day wildflower tour from Perth to Kalbarri. It was like a botanical kaleidoscope.

It must have been about the third or fourth day, in an area where there were fewer flowers, that I realised something else. It was that the plants were all over the place. This wasn't a garden, it was a scruffy mess. Very few plants were a perfect shape, as they were growing through and around each other, no doubt fighting for the slightest advantage in the very poor, nutrient-deficient "soil".

So what has that to do with this article? Well, consider the situation where plants adapted for a poor soil are given far better growing conditions. They will grow fast, but will they grow "better" - whatever that may mean?

I have been growing Australian plants for around 35 years, usually under glass. In the current greenhouse (a 14 x 8 ft Halls Magnum), erected 8 years ago, many plants have grown so well they have had to be brought under control. A few years ago *Hakea victoria*

(royal hakea) was pushing on the roof glass and had to be cut back with loppers. No only that, but it was growing outwards too, and its dead leaves, which remain on the plant, make those of holly seem like velvet tissue paper! Other plants such as *Corymbia ficifolia* (red-flowering gum) also needed pruning. Both these plants had flowered, so earned their keep. Others didn't flower at all, or were very mean with them. Even a *Melaleuca* (paperbark) species flowered only occasionally, and then with a few small, pale lilac pompoms. It had to be pruned regularly, and lopped on occasion.

But this year I wanted to be ruthless. The most difficult decision involved a plant I had been growing for almost 20 years. On holiday in Cornwall in 2001, we went to Lower Kenneggy nurseries near Marazion. I bought a few plants, including an 80 cm tall *Knightia excelsa* (rewarewa; New Zealand honeysuckle). For the first dozen years it remained in a pot, and grew slowly. In 2013 I bedded it out in the new greenhouse with several other Australasian plants. It grew and grew, but never showed any signs of flowering. By summer 2020 it was pushing 230 cm in height, and growing out sideways, so blocking quite a bit of light from reaching other plants in its shadow. There were still no sign of flowers, and although the foliage was interesting (although not any more so than some other Proteaceae I grow), I decided it had to go.

So last year, in early November, I "attacked" the greenhouse with loppers, pruners, and a small saw (see photos page 10). The *Knightia* was cut to 30 cm in height This spring it has started shooting from its stump and it should grow pretty fast as it has a lot of root to support it. I wonder if the shock of being hacked will provoke it to flower?

The *Corymbia ficifolia* was again lopped, as was the *Hakea victoria*. The M*elaleuca* was cut to almost ground level (it is difficult to dig some plants up as they are too close to others). Many years before I had been given a plant which was labelled *Calocephalus brownii* (cushion bush, now *Leucophyta brownii*). It grew to a couple of metres, so was obviously not that plant, but never flowered. It looked a bit like a *Melaleuca*. It has now gone too. Other hacked plants included a *Chorizema cordatum* (flame pea) which had many thin branches extending to almost two metres. It now has half-a-dozen about 60 cm long. Even an *Isopogon formosus* has had to be cut back from about 180 cm high and 100 cm across to 120 cm high and 80 cm across, and restrained by tying it up! A W*estringia fruticosa* (native rosemary) was cut to 40 cm, and a *Carmichaelia* (New Zealand broom) cut back to a couple of 30 cm stems.

I must say that my shredder was working overtime during this clean-up, but it was not easy to force the *Hakea* stems and leaves into it, as they are so stiff. I also removed a lot of dead and fallen leaves - including those of a *Xanthorrhoea preissii* (balga; grass tree), which are surprisingly brittle.

It wasn't just Australasian plants which had to be dealt with. *Iochroma australe* (now *Eriolarynx australis*) and *Dais cotinifolia* were severely pruned, and the climbers *Macfadenya unguis-cati* and *Bauhinia yunnanensis* were taken back to one or two long stems. Neither of the climbers have flowered so may not survive much longer in the greenhouse!

I also took the opportunity to dig up a 3 m high sheoak, *Allocasuarina verticillata* (in a 2.5 m high greenhouse!), and put it in a pot at least

temporarily before it is planted in the garden, or someone else's garden. I already have one which has been outside for about 5 years, and has never shown any signs of frost damage. I'd waited until the weather got really cold before digging it up, hoping it was reasonably dormant, but I still doubt the tree will survive the move.

Once the tidying-up had been completed, I was able to get to most of the glass on the inside and give it a good clean, for the first time in many years. When finished, I was very satisfied with the state of the greenhouse, and that it was possible to see just about everything growing there relatively clearly.

And then I glanced upon the several pots of small seedlings waiting to be planted out in it. I guess I'd better not put those loppers away where I can't find them!



# GONDWANA PLANTS AT DUNDEE BOTANIC GARDEN

Clare Reaney

The University of Dundee Botanic Garden was established in 1971 and developed with a phytogeographic layout, including an extensive Australian area. More recently a Garden of Evolution was built in order to demonstrate some of the connections between plant families. As part of the display in the temperate house needed renovating, it was decided to develop a new display to bring some of these stories together in a feature including plants of Gondwana.

We chose to concentrate on the Jurassic period, around 180 mya (million years ago). At this point the climate became humid and tropical with a varied flora of conifers, cycads, lycopods, tree-ferns and a ground cover of mosses and smaller ferns. The ancient conifers included members of the Araucariaceae. Jurassic fossils found in Australia dated to 150 mya were recently found to match the living plant relic *Wollemia nobilis*, the wollemi pine. There are four *Wollemia* at Dundee, growing outside.

Today there are fragments of relict Gondwana rainforest in several continents (and in Sri Lanka) but we chose the Australian rainforests as our main reference point. The availability of material is always a factor to consider as much of this flora is protected in its native land. There is however abundant information as most of the Australian rainforest is within National Parks and a UNESCO World Heritage site.

There were two large soft tree ferns (*Dicksonia antarctica*) in the glasshouse which had reached the roof. We decided to fell and replant them to make a centrepiece of the new area. A small pond had been almost completely obscured by a huge (male) clump of *Baloskion tetraphyllum* (Restionaceae). I had assumed the pond had sprung a leak and would need repair work but in fact the water loss was due to the *Baloskion* taking up all the water!

Most of the existing plants were removed and propagated if needed. A rare *Vaccinium acrobracteatum* from New Guinea remains in a corner until we can be sure the cuttings have taken (then we can remove it) and numerous *Viola hederacea* (ivy-leaved violet, found in SE Australia and New Zealand) have been relocated. Some elderly abutilons were propagated and moved elsewhere and we began to assess plants already in the collection

but situated elsewhere which could be considered suitable.

The felling of the large *Dicksonia* gave us a few nervous moments as we needed a controlled fell to avoid damage to the surroundings. We also needed enough trunk length to replant them deeply so that unsightly staking would not be necessary. The timing was perfect as the felling took place just before new fronds unfurled. Luckily the garden staff were proficient with a micro digger!

Despite the clearance the new area (photo opposite) is just 48 $m^2$ and the large canopy of the tree ferns takes up quite a lot of space. As we can now admire them clearly for the first time, we should ensure the new planting is managed for maximum variety but to maintain visibility! New tree ferns of another species will be added (*Cyathea australis* - rough tree fern) in order to have plants at different ages. The remaining stumps make a feature which can support the *Lycopodium* species (clubmosses).

With all the beautiful foliage material the area already looks very striking, apart from the fact of not having any colourful flowers! The final step is to provide exciting interpretation and offer the visitor the amazing stories of our Dinosaur plants. This year is the 50th anniversary of the garden and we hope that our new feature will inform and entertain a new generation of visitors.



# BANKSIAS IN WEST SUSSEX

Greg Plenty

For me, gardening is an experiment. I have no interest in serried ranks of red roses, no matter how fragrant they are. The lumps of easy to grow small leaved hebes leave me cold, even though they are easy to grow and flower well.

After several years with very few Australian plants in the garden, at one of our APS physical meetings, as it were (remember them?), I was given a banksia seedling, *Banksia serrata* I think. I planted it amongst succulents in a south west facing raised bed filled with a little of the local alluvial clay plus plenty of sharp sand and grit. It grew very slowly but it seemed OK - until I had a sand collapse which buried the main stem. It's still alive but not looking too good.

Nevertheless, I like banksias and was determined to try some more in our garden, just 500 m from the sea but in a frost hollow. We have seen no proper snow since 2013. Last summer on a visit to Cornwall I picked up three new banksias. Little did I expert the worst winter here in many years, not just in low temperatures but in the length of the cold spell. Even the grit drive froze solid!

From Penberth Plants came two very good quality specimens, *B.* 'Giant Candles' and *B. praemorsa* (red form). 'Giant Candles', in its pot outside, has apparently come through well and is now planted on top of a gabion full of stones, sharp sand, composted bark and a bit of possibly alkaline garden soil, in company of succulents and palms. I'm waiting for for the first flower …….

The *praemorsa* sat in its pot under a *Trachycarpus fortunei* during the very mild spell at the end of 2020. I had repotted it into equal parts of composted bark, sharp sand and garden soil. After the cold spell of January onwards it has damage to its top leaves. Will it survive in the long term? I've just planted it under the palm. Let's see.



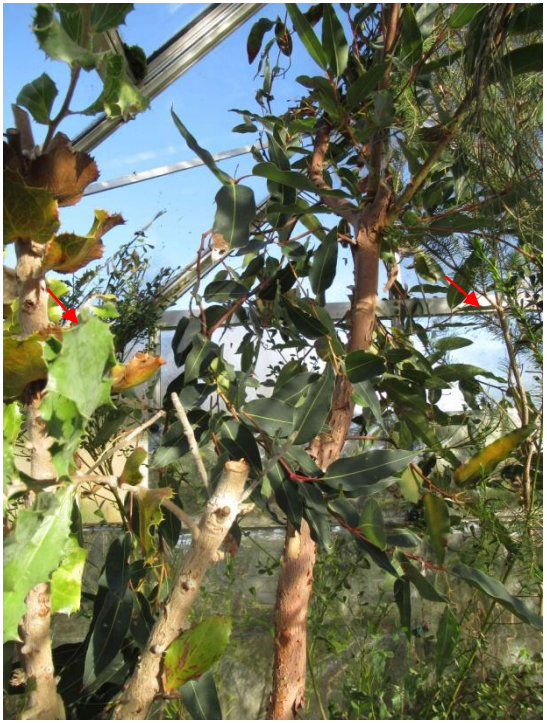
**The temperate house at Dundee Botanic Garden showing tree ferns in their new positions. Staff member Trevor Whyte's support is NOT necessary!**





above: **Lemon bottlebrush**

left: **In the snow: some of Gary and Maria Firth's National Collection of Myrtaceae: *Lophomyrtus* x *ralphii* cultivars on the left and *L. obcordata* plus *Ugni* to the right**



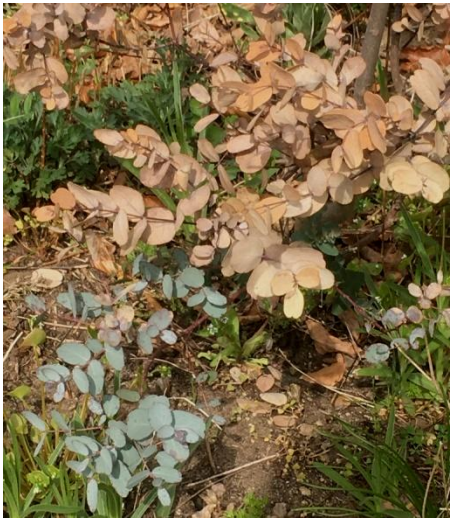


**Before the "attack"**
above left:
***Hakea victoria* and *Corymbia ficifolia*, both lopped in 2019, pushing at the roof again**

## The Greenhouse Chainsaw Massacre



**After some really hard pruning**
above right
**Stumps of (left to right) *Westringia fruticosa*, a *Carmichaelia* species and *Knightia excelsa***
left
**Stumps of a melaleuca (right) and not *Leucophyta brownii* (left)**







**Martin Krüger's garden: winter survivors in East Germany**

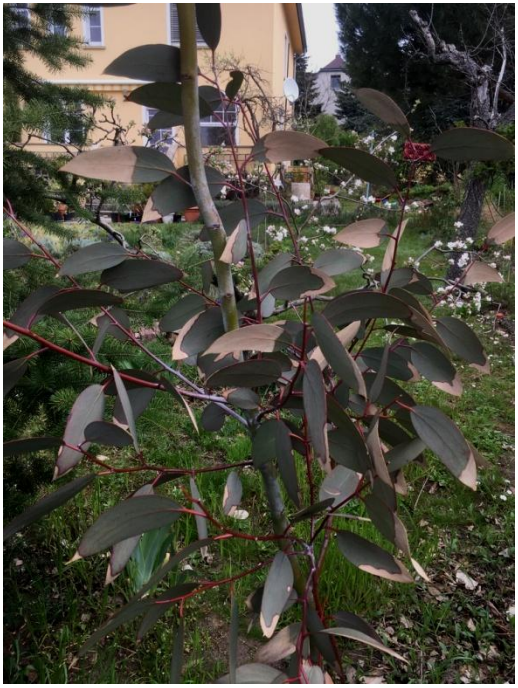
above left: **Eucalyptus gunnii showing the snow line**

above: **Tasmannia lanceolata looking good**

left: **Griselinia littoralis asking "Was there a winter?"**

below: **Hakea microcarpa, no sign of distress**







**more of Martin Krüger's plants**

above: ***Eucalyptus pauciflora*** **subsp. *debeuzevillei*, little affected in the open but severe damage close to the house**

below: ***Banksia marginata*** **looking only a little bit anaemic**



above: **a happy *Banksia* 'Birthday Candles' in Greg Plenty's garden**



Finally the real success story, I hope. *B.* 'Birthday Candles' (a selection of *B. spinulosa*) was purchased at a very reasonable price from Lower Kenneggy nurseries, already with flower spike in bud on it. It was planted in the same soil and aspect as 'Giant Candles'. Result: still looking good after being unprotected all winter, with no obvious damage to be seen (see photo opposite). Here's to more growth and flowers this year! Anybody else tried these outside away from the balmy south west?

❀❀❀❀❀❀❀❀❀❀❀❀❀❀❀

# NOW IS THE MONTH OF MAY

Martin Krüger

Sitting under the sun, still feeling some of last winter‘s cold blowing with the easterly winds into the garden, everything starts breathing again. Slowly but surely spring has come to free us from last winter‘s agony.

In the east of Germany we are used to the cold, but the last few years have made us uncautious concerning the choice of our garden plants. This year‘s winter made it clear to us again that we are not the Canary Islands or some enchanted garden paradise like Britain or the south of France. The frosts only departed around the end of April, whilst in January temperatures made a free drop to -14°C, and in some unlucky frost holes to -20°C. During the daytime the maximum was about -8°C for about 10 days. This doesn‘t seem too extreme, but unfortunately the plants were just not adjusted to this sudden freeze. Like a present from heaven was heavy snowfall just before the big cold. I have never seen that much snow in our region. Everything was covered under approximately 35 cm of white powder.

My anxious feelings concerning my Australian plants grew stronger with every day of frost. It was the first year I had dared to plant out so many Australian plants into the garden. The potential loss could not be greater. But things always turn out differently. Whilst some plants obviously had to die others survived unexpectedly.

My biggest loss is my *Eucalyptus pauciflora* subsp. *debeuzevillei*, having grown to a 4 m slender tree in the last few years. As its common name is Jounama snow gum I was very surprised and sad to find it nearly completly defoliated. I am hoping for some new growth showing here and there, but obviously it is severely weakened and maybe I will have to cut it down completely. Another specimen from the same lot of seeds bought at Berlin Botanical Gardens, younger, and not growing close to the house but in the open completely unprotected from the winds, looks much better (photos opposite). Even the very top tips are still alive. Chance is a game changer.

Plants which were cut to the ground were *Grevillea rhyolitica* (whose survival I saved with cuttings), *Hakea salicifolia*, *Grevillea* 'Canberra Gem', *Eucalyptus gunnii* (!!) (photo page 11) and *Acacia dealbata*. That was it!

The list of the survivors is longer, including:

- *Grevillea australis* - no injury at all
- *Hakea microcarpa* - no injury
- a very young *Banksia marginata* - it was covered under the snow (photo opposite)
- *Olearia x haastii*
- *Leptospermum rupestre*
- *Griselinia littoralis* - no protection, no damage at all (photo page 11)
- *Lomatia myricoides* - many leaves blackened but fine new growth

- *Lomatia ferruginea* - no damage at all (yes I know, it is not from Australia, but I am still happy)
- *Brachyglottis greyii* and *B. monroi*
- *Tasmannia lanceolata* - no damage at all (photo page 11)

And, concerning Macaronesian plants: very odd, but not deniable, an *Echium candicans* survived only two metres away from the now nearly dead *Eucalyptus pauciflora*. This leaves me quite flabbergasted. It seems that nothing is certain ... a bit like a parable for our times. But it also leaves me looking forward to the future, as there are many other species to try, and even though they might be labelled as 'not hardy', this won't daunt me!



# ANOTHER TALE FROM THE SEED LIST: LEMON BOTTLEBRUSH

Judy Clark

In 2001 I put in an order for APS seed for the very first time. Among the packets was one containing seeds of the lemon bottlebrush, *Callistemon pallidus* (*Melaleuca pallida*). My notes from the time tell me that the seed came from Mount Wellington on the outskirts of Hobart in Tasmania, and that it had been collected 10 years previously, in November 1991.

With some trepidation I sowed the tiny seeds on 12th July, scattering them on the surface of the compost and watering them in. The pot went into the greenhouse and the first seedlings were poking their leaves above the soil about a fortnight later. Success! I was then very new to growing Australian plants from seed and this really boosted my confidence.

I used the bog method which involves sitting the pot with the seeds in a container of water until germination occurs. This ensures the compost always remains moist. I still use this method for small seeded species of plants in the Myrtaceae family, and it rarely fails; if it does I blame the seed!

Bottlebrushes grow quite quickly. Seedlings don't need to be potted up immediately but I presume did these ones later that year. I didn't record when I planted one out in my garden, but it must have been in 2002 or 2003. Now I have a beautiful shrub over 2 m tall. Every year it rewards me with a profusion of lemon brushes (photo page 9) usually in May though it could be later this year due to a rather cool spring. As a bonus it often produces a few more flowers in November.

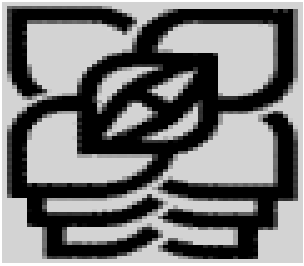
Bottlebrushes usually flower better if they are regularly pruned so I try to remember to do this after it has finished flowering, cutting just behind the spent inflorescences. Every so often I remove a larger branch or three to prevent the plant from becoming too congested. Bottlebrushes can be cut back much harder than this, even to the ground, a good way to rejuvenate an old plant.

My experience of *C. pallidus* is that it is pretty hardy. It is supposed to prefer a moist situation but I have never felt the need to water my specimen, even during periods of low or no rainfall. It has taken everything the weather can throw at my garden without so much as a scorched leaf or a dead twig, and that includes salt-laden south westerly gales.

My specimen may be reaching its 21st birthday but it shows no sign of decline and with luck it will give me pleasure for many more years. Does anybody else have experience of germinating elderly APS seeds?

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## BOOK REVIEW:

### Banksias

**Kevin Collins, Kathy Collins and Alex George**
**Bloomings Books Pty Ltd**
**ISBN 978-0-9922900-3-0**

Maya Nedeva-Petkova

Banksias are Australia`s most iconic plants after eucalypts. This second edition of Banksias by Kevin Collins, Kathy Collins and Alex George has been much revised and includes descriptions and illustrations of all 79 known species, including the recently discovered *Banksia vincentia*. The three authors have, between them, studied and grown all 79 species of them, with their combined experience totalling over a hundred years.

The book starts with history of their discovery and naming, beginning with Captain Cook's expedition in 1770, followed by the various collections made by subsequent explorers and mariners to Australian shores, moving on to other collectors, explorers and botanists. This chapter finishes with tables setting out the various details in concise form.

There are sections on the classification of banksias, fossil banksias and banksia biology. There are 28 pages with photographs on the utilisation of banksias, especially in the artistic world. The front and back covers

feature two of Celia Rosser's superb paintings, on both the dust cover and the hard cover.

Then there is a very comprehensive chapter on propagation and cultivation of banksias (54 pages - almost a book in itself). There is information regarding manual seed extraction techniques, seed treatment and germination, propagation by cuttings, grafting banksias, use of fertilisers, growing banksias in containers, transplanting, and pests and diseases. As a person growing banksias in a climate very different to their natural environment, I found very useful the tables which group banksias according to their tolerance to different conditions. For example, banksias tolerating frost or snow, high pH, seasonally wet conditions, adaptable to different soil types, etc.

The propagation and cultivation section finishes with information about public and private collections including a mention of both the UK and French national collections. I found this quite useful with really interesting information regarding growing conditions of the different collection holders, and drawing my own conclusions as to which plants have the potential to be successfully grown in my own garden.

The rest of the book comprises detailed descriptions of each of the known species, subspecies and varieties, listed alphabetically. Information is provided on the naming and collection of each species including date and locality; a concise description of the plant; its distribution and ecology (including a distribution map); a brief note on similar species and how they differ; cultivation and propagation notes; and any special features. The book finishes with a bibliography and index.

Throughout the book, all chapters are illustrated with multiple coloured photographs. Each species has a number of illustrations showing close-ups of the inflorescence, usually a shot of the whole plant, occasionally a seed cone and always a drawing of an individual seed. The close-ups are good, but some of the photographs of the whole plant are indistinct. This is my only criticism amongst the many great features of this publication.



# FIRES IN EASTERN AUSTRALIA – WHERE DO WE STAND TODAY?

Tina Bell

This article was first published in issue 33 (January 2021) of Research Matters, the Newsletter of the Australian Flora Foundation (AFF), and is reprinted here by kind permission of the author.

Tina Bell is an Associate Professor of Fire Ecology at the University of Sydney School of Life and Environmental Sciences. She has investigated the response of plants, fungi (and some animals) to fire and changed nutrient supply for much of her research career. She is the Editor of the AFF newsletter and a Council Member. She can be contacted at tina.bell@sydney.edu.au.

Just over a year ago, southern and eastern Australia was experiencing one of the worst bushfire seasons since European settlement. The Black Summer fires started in September 2019 and continued through to March 2020, stretching from far North Queensland, along the east coast down to Tasmania and westwards across the continent. Post-fire assessments tallied direct loss of life of 34 people, destruction of nearly 6,000 buildings,

and an area of 18.6 million hectares burnt. Estimates of native fauna deaths numbered in the billions. It was calculated that 306 million tons of $CO_2$ were released into the atmosphere during the months-long bushfires. Direct economic losses were estimated at more than $10 billion and indirect losses have been calculated to be 10-fold greater. One of the most tragic and alarming indirect losses has been attribution of the death of more than 400 people from smoke-related illnesses (Johnston *et al*. 2020). This is not entirely unexpected as air quality on some days during the Black Summer was 23 times above hazardous levels.

There is no doubt that it will take years for human communities affected by the Black Summer bushfires to recuperate from their personal, economic, and social losses. It will also take time for disturbed forests and woodlands to recover. The affected areas may return to a state that resembles what was present before fire but, equally, they may never completely return to their original pre-fire state. Regeneration of vegetation depends on the condition of the forest or woodland prior to being burnt (Bennett *et al*. 2016), the intensity and extent of the fires and post-fire conditions aiding recovery processes. For example, prolonged drought prior to a landscape-scale fire event may cause widespread tree stress (De Kauwe *et al*. 2020) and will affect how readily plants can respond after being burnt. Vegetation subject to high intensity fires tends to require longer recovery time compared to low intensity fires. Site conditions also dictate post-fire processes. Volkova and colleagues (2019) found that forests located in high rainfall areas (900-950 mm per annum) in eastern Australia had quicker accumulation of fuel (and presumably growth) after both high and low intensity fire than low rainfall areas (600-650 mm per annum).

**Immediate post-fire plant recovery**

Within months of the Black Summer fires (March 2020) there was evidence of recovery of the vegetation. In moist forest in the Blue Mountains in NSW, the first green to appear were resprouting shoots from a range of herbaceous species in the understorey (photos page 19). The brown tips of leaves from grass trees (*Xanthorrhoea resinosa*) show the extent to which the heat penetrated the growing tip or caudex of plants. The caudex of this species is typically located at ground level or underground but may grow up to 1 m above ground (Tozer and Keith 2012). In any of these locations, tightly packed leaf bases provide insulation around the growing tip and if the caudex is belowground, soil will provide an additional layer of insulation. Soil is a good insulator against the conductive heat from fire but, if the soil is dry, the insulation capacity is very much reduced.

Bark is also a good insulator from heat (Wesolowski *et al*. 2014). Within a few weeks post-fire, buds protected beneath bark emerged as green and red shoots along trunks of burnt trees. Here they can take advantage of high levels of light with removal of surrounding vegetation. Leaves associated with these epicormic buds have been shown to be thicker and more porous (i.e., increased intercellular airspace) and have very high rates of respiration in the second year after fire (Turnbull *et al*. 2014). Surprisingly, it is not until three or four years after bushfire that leaves produced by epicormic buds have rates of photosynthesis that suggest the tree no longer needs to rely on carbon stores of the tree.

There is often an impressive show of flowers after fire with some species taking advantage of an excess of insect pollinators (photos page 20). Most often these will be herbaceous monocotyledons (Kubiak 2009). *Xanthorrhoea* sp. (grass tree) typically flowers profusely after fire with individual flowers on the sunnier north side of the inflorescence opening first. Other plants, mostly woody dicotyledons, will only have vegetative growth post-fire and may not flower for several years after fire. This is often referred to as a 'secondary juvenile period' and will differ among populations of the same species according to soil conditions, nutrient availability, rainfall and length of growing season (Kubiak 2009). Resprouting members of the Proteaceae tend to have a long secondary juvenile period and, often, have protracted 'primary juvenile periods' (i.e., time from germination to first flowering) ranging from between 5 and 9 years (Myerscough *et al*. 2000). This makes them particularly vulnerable if fires return to the area in the time before seed stores held in the canopy or soil can be replenished.

Seedlings of many species also cover the ground, emerging after the first rains of autumn and winter as the soil profile wets up. Some species, including acacias and other legumes, require heat from fires to crack seed coats, others require a chemical stimulus from smoke or solutes released from ash. Other species, including many species of invasive weeds, may not need fire to promote germination but take advantage of reduced competition from other plants either killed or reduced in size by the fire.

**One-year recovery of vegetation**

A year after the Black Summer bushfires and regeneration of the forest is in full swing. To show this, images of a private property near Cobargo on the south coast of NSW have been provided (photos page 21). Here, trees have resprouted vigorously and lush green grass is a result of good winter rains. Fire weather, typified by high temperatures and low annual rainfall, has been strongly linked with the El Niño Southern Oscillation (e.g., most recently by Harris and Lucas 2019). We are currently at the start of a La Niña phase and the expected wet spring and summer has provided excellent rain for regrowth of trees and grass alike.

Recovery of vegetation is related to fire intensity, but rates of regeneration also depend on forest type and structure. Recent work using satellite remote sensing has reiterated the complexity of landscape-scale recovery of forests with the only clearly discernible patterns being within a single forest type and relatively small patches (36 hectares or 600 x 600 m) (Hislop *et al*. 2019). Fire history (past patterns of bushfires including intensity, size, season and frequency) has a role in shaping the vegetation after a fire event. One study has found that fires even as far back as the mid-Holocene determined current forest structure (Wolfe *et al*. 2014). Of course, fire has been a part of the Australian environment for millennia and maybe for as long as 60 million years ago (Crisp *et al*. 2011).

**Longer-term recovery of vegetation**

If allowed to regenerate undisturbed, most forests and woodlands will eventually recover (photos page 22). Over time, the amount of bare ground is reduced, initially with regrowth of herbaceous grasses and forbs and later with regrowth of woody shrubs. Seedlings that germinated after the fire will increase in size, with some species growing at faster rates than others. Epicormic growth of overstorey trees







**Bushfire in the Blue Mountains**

above, top: **Often the first green to appear after fire are long thin leaves of grass trees**

left and above: **Resprouts of eucalypts showing differing post-fire form, density, and rate of growth among species**.

**These images were taken in Blackheath New South Wales in early March 2020, three months after burning in late December 2019.**







top: ***Blandfordia cunninghamii*, a tufted perennial herb found near Mount Hay, NSW in November 2020. There were hundreds of individuals flowering in the vicinity.**

above: ***Celmisia longifolia* (Snow Daisy), found near the Newnes Plateau, NSW, the northern extremity of its range, had successfully germinated and flowered after the fire in November 2020.**

left: **Post-fire flowering spike of *Xanthorrhoea resinosa* (grass tree) with the first creamy flower opening on the northern side of the inflorescence; located near Picton, NSW in June 2020.**








Left top and middle: **The effect of bushfire on a property near Cobargo on the south coast of New South Wales after being burnt on the 23 January 2020 (images taken 24 January 2020).**
Right top and middle: **The same setting after 11 months of forest regeneration (images taken 22 December 2020).**
Bottom: **Restoration of a dam and surrounding vegetation on the property after good spring and early summer rains.**









Left top and bottom: **Early epicormic resprouting of eucalypt trees after a bushfire near Springwood, NSW in November 2013. Bare ground is clearly seen.**

Right top and bottom: **Extent of regrowth of vegetation in the same location by January 2021.**

continues to thicken and, as the canopy of these trees is restored, the growth on trunks and lower branches often dies off due to shading and restoration of apical dominance of canopy shoots. Studies using satellite imagery have shown that full 'regreening' of forests and woodlands dominated by resprouting eucalypts can occur within 5-7 years of a bushfire (e.g., Heath *et al*. 2016).

A sound understanding of the recovery of forests and woodlands after bushfire is needed for the most effective post-fire management of forests and woodlands. We need to know when to intervene, for example, for weed control and prevention of erosion, and when we can allow the vegetation to recover more or less undisturbed. At some point, regenerating forests and woodlands will have accumulated enough fuel to support another bushfire. Managers will need to decide if they intervene to reduce the fuel load using planned controlled fire or to wait until other components of the vegetation have recovered. This includes naturally slow-growing species (long secondary juvenile periods), plants that have recovered from seed stores but are yet to flower (long primary juvenile periods), those that have low seed set or flower infrequently and those that must still replenish their stored energy reserves. Managers must also consider the fauna that rely on recovery of vegetation for food and shelter. It is an even greater vexed situation when people live in and amongst fire-prone vegetation and their health and safety is of paramount importance.

**References and further reading**


Bennett LT, Bruce MJ, MacHunter J, Kohout M, Tanase MA, Aponte C (2016) Mortality and recruitment of fire-tolerant eucalypts as influenced by wildfire severity and recent prescribed fire. *Forest Ecology and Management* 380, 107-117.

Crisp MD, Burrows GE, Cook LG, Thornhill AH, Bowman DMJS (2011) Flammable biomes dominated by eucalypts originated at the Cretaceous–Palaeogene boundary. *Nature Communications*, DOI: 10.1038/ncomms1191

De Kauwe MG, Medlyn BE, Ukkola AM, Mu M, Sabot MEB, Pitman AJ, Meir P, Cernusak LA, Rifai SW, Choat B, Tissue DT, Blackman CJ, Li X, Roderick M, Briggs PR (2020) Identifying areas at risk of drought-induced tree mortality across South-Eastern Australia. *Global Change Biology*, 26, 5716-5733.

Harris S, Lucas C (2019) Understanding the variability of Australian fire weather between 1973 and 2017. *PlOS One* 14, p.e0222328.

Heath JT, Chafer CJ, Bishop TFA, Van Ogtrop FF (2016) Post-fire recovery of eucalypt-dominated vegetation communities in the Sydney Basin, Australia. *Fire Ecology* 12, 53-79.

Hislop S, Jones S, Soto-Berelov M, Skidmore A, Haywood A, Nguyen TH (2019) High fire disturbance in forests leads to longer recovery, but varies by forest type. *Remote Sensing in Ecology and Conservation* 5, 376-388.

Johnston FH, Borchers-Arriagada N, Morgan GG, Jalaludin B, Palmer AJ, Williamson GJ, Bowman DM (2020) Unprecedented health costs of smoke-related PM 2.5 from the 2019-20 Australian megafires. *Nature Sustainability*, 1-6.

Kubiak PJ (2009) Fire responses of bushland plants after the January 1994 wildfires in northern Sydney. *Cunninghamia* 11, 131-165.


**Have you moved recently?**

The Society has had a couple of cases of Pentachondra going astray. If your address changes please don't forget to tell membership secretary Jeremy Spon (contact details inside the back cover).

# SOME NEW ZEALAND PLANTS AND THEIR RELATIVES

Steven Harding

We tend to think of the Norfolk Island Pine (*Araucaria heterophylla*) as being a true New Zealand native, but like so many plants it is an imposter in the Land of The Long White Cloud. In the 1800s scores of western families sailed the oceans to make a new life in their chosen destination. On the long voyage to New Zealand the ships would stop off at Norfolk Island to take on supplies. It became the custom to give the families either a single plant or seeds of the Norfolk Island Pine to plant on their new land.

The trees were planted on the northern side of the house, to provide shade from the sun and keep the northern rooms cool, and 'to avoid the drapes fading'. Many of these trees still stand today in the grounds of old colonial houses but many are having to be removed as they are damaging the properties. It is a question of 'right plant, right place'.

The pines can grow to a height of 200 ft (about 60 m) and can be found growing in New Zealand, Australia and the Mediterranean area. The only tree in the UK known to have actually grown into a mature specimen used to be at Tresco on the Isles of Scilly.

Two other species of *Araucaria* are *A. bidwillii* and *A. araucana*, native to Australia and Chile respectively. The latter, is known as the monkey puzzle tree, and its highly prized timber as pirahna pine. It is a glorious orange colour and makes very durable furniture.

Related to the araucarias is the pride and joy of New Zealand, the kauri, *Agathis australis*. It grows on North Island from Northland down to Tauranga. The trunks grow straight with absolutely no knots. Young branches are attached to the trunk in a flange like way, and drop off when past their usefulness leaving no marks or wounds on the trunk. I have seen these majestic trees in the wild and can understand why the Maori hold them dear. Like most trees, they have been exploited for timber for the last two centuries. There is a huge conservation effort underway to restore the ancient kauri forests.

One area of New Zealand which hosts several endangered plant species is the Kermadec Islands. They sit midway between North Island and Tonga (in the South Pacific Ocean) and consist of several volcanic islands: Curtis Island, Cheeseman Island, Raoul Island, L'Esperance Rock and Nugent Island. Of interest are rarities such as *Cyathea kermadecensis*, a tree fern endemic to Raoul Island which grows to 20 m. Also from Raoul Island is *Metrosideros kermadecensis*, differing from the New Zealand mainland pohutukawa or New Zealand Christmas tree (*M. excelsa*) by having smaller leaves and a tendency to flower all year round. It resembles trees found on Hawaii.

Found on both Norfolk Island and the Kermadecs is the palm, *Rhopalostylis baueri*. On Norfolk Island it is under serious threat as the local rat population feast on the seeds and young seedlings. On Raoul it is happy to colonise the island as the rodents have been eradicated. The fruits of this palm were eaten by early settlers and tasted of nut when eaten raw and like artichoke when boiled.

Found throughout the two main islands of New Zealand as well as the Kermadecs and Three Kings Islands, and naturalised in Australia, is

*Coprosma repens*. On cliff tops it hugs the ground but it reaches 8 m tall in sheltered spots.

The important plant though is a very rare hebe. *Hebe breviracemosa* (now *Veronica breviracemosa*) was thought to be extinct on Raoul Island. Goats had been introduced to clear scrub and were too efficient. When the last goat was shot in 1983, on the same day a goat hunter stumbled across a single *Hebe breviracemosa* growing on a cliff edge. Until 1997, this was thought to be the only living plant in existence. However, a group of people on a weed eradication program discovered a colony of 50 plants in amongst the volcanic rocks on the steep cliffs. Cuttings from these plants have been planted all over Raoul but this hebe is still considered threatened due to weeds competing with it and the very unstable volcanic rocks. One plant of *Hebe breviracemosa* is growing in Abbotsbury Subtropical Gardens but it is too tender for many areas of the UK.

### The genus Araucaria

Nowadays *Araucaria* is usually treated as comprising twenty extant species. The genus has a highly disjunct distribution. Two species are found in South America; *Araucaria araucaria* in Chile and Argentina and *A. angustifolia* in Argentina, Brazil and Paraguay. Three are found in Australia: *A.bidwillii* in Queensland, *A. heterophylla* on Norfolk Island (an Australian territory) and *A. cunninghamii* in New South Wales and Queensland. The range of *A. cunninghamii* extends to New Guinea, where *A. hunsteinii* is also found. The remaining fourteen species are endemic to New Caledonia.

# TWENTY TWO YEARS LATER

Judy Clark

This article was indirectly prompted by Jeff Layman's offer to scan those Pentachondras not already on the APS website. He sent me one to look at, which as it happened was issue 22, May 1999. I flicked through it and was immediately struck by how much the information in it remains relevant, and by the many connections across the years.

### The APS in 1999

In 1999 the Society seems to have had a more northerly emphasis. The majority of those contributing to issue 22 were based in the north of England, as were the Honorary Secretary (Jeff Irons), the Treasurer (Tony Entwistle) and my predecessor as editor, Sue Hyams; sadly, Jeff and Tony are no longer with us. The 1999 AGM was to be held at Ness Botanic Gardens in the Wirral; the APS was to take a stand at the first ever RHS Show at Tatton Park; and the theme of the Southport Flower Show was to be Australasia.

Tony Entwistle had put together an Aussie Info-Pack - 17 items on 80 sides of A4 - ranging from a list of selected UK nurseries offering Australasian plants to a list of endangered and threatened Australian plants. I remember receiving it when I joined and being totally overwhelmed by so much information. Our current welcome pack includes far fewer items but should we include more? I would be very grateful for suggestions.

### Wahlenbergia

Jeff Irons contributed a piece about true blue flowered plants on the seed list, including the beautiful *Wahlenbergia gloriosa*, endemic to south eastern

Australia. Its English common name is royal bluebell but the genus *Wahlenbergia* is actually in the bellflower family, Campanulaceae. I obtained a plant from Jeff quite a few years ago and found, as he says, that it will grow outside (as it was then in North Yorkshire) but it needs really really good drainage. And it's a slow grower. Jeff also mentions the New Zealanders *W. akaroa* and *W. pygmaea*. Does anyone still grow them? I couldn't find any UK suppliers (albeit it was a cursory search) but several nurseries do offer *W. gloriosa* and also *W. albomarginata*, another New Zealander.

**Yellow waratah seed**

Also on the 1999 seed list was a species labelled *Telopea truncata* f. *lutea*. Now 'lutea' means yellow and as you will know from last December's issue of Pentachondra there is such a thing as a yellow waratah. The seed provenance is described as follows: "*Taken from the first yellow flowered Tasmanian waratah plant to be discovered, this seed will give about 25% yellow flowers. Because of that, much of the seed has been given to the Welsh National Botanic Garden, which will grow the seedlings to flowering size. Some has been retained for APS members with both space in their gardens and patience. Vegetatively propagated plants from the parent are sold under the name 'Essie'.*" So what happened next? Jeff Irons wrote a long article on waratahs in issue 24 but in this he simply repeats the information in issue 22. Did anyone ever succeed in raising a yellow flowered *Telopea truncata*?

**Anopterus glandulosus**

The genus *Anopterus* was the subject of an article by Gary Dunlop. The better known of its two species, *Anopterus glandulosus* (Tasmanian laurel) is hardy in milder gardens in the British Isles. I contacted Gary and he tells me he still has a specimen growing in his County Down garden, albeit blown flat on a slope by a storm some years ago. Gary also donated plants to the National Botanic Gardens of Ireland (Glasnevin site, Dublin) and to Belfast Botanic Gardens. Now that some botanic gardens provide online lists of plants in their living collections it is much easier to find out whether that collection includes a specific plant. *Anopterus glandulosus* is not listed in the index (dated 2018) for the Glasnevin collections but a bit of searching produced a 2018 record of a specimen at Logan Botanic Garden in Dumfries and Galloway, Is anyone else growing this attractive rainforest plant? Regrettably Gary recently stopped contributing to Pentachondra but his articles, always informed by practical experience, remain very worth reading.

**Cordyline indivisa**

Fortunately Greg Plenty is still contributing, albeit from West Sussex rather than West Yorkshire where in 1999 he was growing the challenging *Cordyline indivisa* (mountain cabbage tree). His article is actually entitled "It's a pig", reflecting the temperamental nature of this plant. Greg's searched for information about it on the internet. His article reminded me how new it was in 1999; no googling then! Anyway he found that it likes shady damp conditions, which it does. Incidentally, the nursery where Greg purchased his plant, Architectural Plants, is still going and still stocks *C. indivisa*.

**Eucalyptus vernicosa**

Greg also contributed one of two articles about *Eucalyptus vernicosa*, the varnished gum. The other piece about this Tasmanian endemic, the smallest of all the eucalypts, was written by Brian

Halliwell. Brian, one of the founders of the APS, died in 2014. He bequeathed to the APS a large library of books covering a whole range of subjects pertaining to Australasian plants. The Brian Halliwell library is held at Lullingstone Castle and accessible to all APS members by prior arrangement with APS President Tom Hart Dyke.

Lullingstone is also a place where you can see the varnished gum with its shiny green leaves. However Tom tells me that it struggles at Lullingstone because of temperature extremes; *E. vernicosa* doesn't like it too hot or too cold. He also tells me that the plant he gave to Bedgebury Pinetum looks fabulous.

The varnished gum is small - in its native habitat it grows to about 1 m but gets larger in the more benign conditions of cultivation - and slow growing, so it will fit into an average sized garden, which is more than can be said of most eucalypts. Seed is available from the APS seed list, and it apparently germinates best if exposed to winter cold.

This account by no means exhausts the contents of issue 22 but I hope it has given a flavour of how useful back issues can be.



# UPDATE FROM FOAMLEA COASTAL GARDEN, DEVON

Beth Smith

Since becoming members in 2015 significant steps have been taken in our knowledge of and fascination with Australasian plants, to the extent that a real passion has developed. In the December 2016 edition of Pentachondra we provided a modest list of bought plants thriving outdoors but now we've moved on to the value and satisfaction of growing from seed. Some came from the APS seed list, and more came direct from a small seed company in Australia. Reading of other members' experience and knowledge has been a huge encouragement. Visits to Western Australia and to our Chairman's garden in North Wales spurred us on too.

Germination has been pleasing though we have to own up with some embarrassment at not recording dates of sowing, pricking out and potting up. A big disappointment has been in sustaining *Dryandra* (now *Banksia*) and *Beaufortia sparsa* seedlings, and indeed in losing a beautiful bought-in *Dryandra praemorsa* (now *Banksia undata*) plant which flowered profusely in each of two years.

In these recent years we have become aware of an increasingly damp climate in the west of the UK and of the growing frequency of northerly winds. Staking has been needed on more shrubs this winter than ever before; in fact, very few plants required support in earlier years. Root rock has deprived us of a fine specimen of *Correa lawrenceana* - which had begun to produce its flowers - even though it had shelter behind hedging. These changes in the climate lead us to reflect that most of our established shrubs are New Zealand genera and cultivars, whereas the next chapter has been to start a collection of Australian *Banksias* along with trying *Alyogyne, Anigozanthos, Callistemon, Calothamnus, Eucalyptus, Olearia* and more.

We bought a few *Proteacae* to get us started. They arrived in air-pots but the peat in which they grew was not compatible with our clay based soil and would have led the plants to be trapped

in a ‘wet sump’. Air pots seem to need a drip-feed system to prevent drying out, something we can’t offer but nurseries can. We tried to wash off as much peat as possible, resulting in death. Growing from seed on windowsills was our solution, potting on with a high proportion of grit and sand in peat-free compost, and with careful attention to watering because drainage is so efficient. Our banksias, of both south-east and Western Australian origins, now range between 50-80 cm in height. They have had two years outdoors in clay pots and this year will be transplanted into the garden.

The wide range of *Banksia* leaf forms has provided constant pleasure and makes us feel quite patient about the wait for flowers and cones. *B. paludosa* has already had numerous blooms (photo opposite) and is a portent of many more glories to come. Collections of *Corokia, Correa, Grevillea* and *Westringia* are in flower now (March), with the irrepressible *Correa* ‘Marian’s Marvel’ and *C. backhouseana* blooming all year round. Our cliff top micro-climate brings rewards from many areas of the world.



# WINTER IN EAST SUSSEX

Judy Clark

When a week of unusually cold weather accompanied by periods of north easterly and easterly gales was forecast for Hastings in early February, I did something I have never done before. I rushed out in search of horticultural fleece to protect some of my larger Australian plants. For smaller specimens I already had a collection of plastic bell cloches and large water bottles (photo opposite) which serve just as well. That I had already acquired them was partly fortuitous. My local fox has an annoying habit of digging up newly planted specimens and I find that covering them deters it. But some had been purchased specially to protect three newly obtained Western Australian banksias.

In general I'm not in favour of using artificial protection, preferring to create sheltered spots through positioning of trees and shrubs. Australian plants like fresh air and more humid conditions don't suit many of them. However I had also experienced the aftermath of the 'beast from the east', a nasty spell of gales and cold weather which had arrived at a similar time in 2018. This time I wasn't going to be caught out.

Following 2018's harsh weather two of my banksias - Western Australians *Banksia grandis* and *B. blechnifolia* - gave up on life. I replaced them in 2019 with specimens from Penberth Plants. The winter of 2019-2020 was so mild - just one light frost - that no protection was needed. In fact both plants grew so well that by 2021 *B. blechnifolia* only just squeezed into a large cloche while *B. grandis* had gained so much height only a swathe of fleece would do. *B.* 'Giant Candles' and *B. ericifolia* were really badly affected in 2018 so I wanted to protect them both (photo opposite) but I ran out by the time I got to the latter and had to hope that the large hop bush (*Dodonaea viscosa*). next to it would provide sufficient shelter. *B.* 'Birthday Candles', unaffected last time round, got a fleece cover just in case.

Then there were my new babies from Penberth Plants: *Banksia caleyi*, *B. media* and *B. repens*. As mentioned above I had already planned to protect them with cloches, not because I

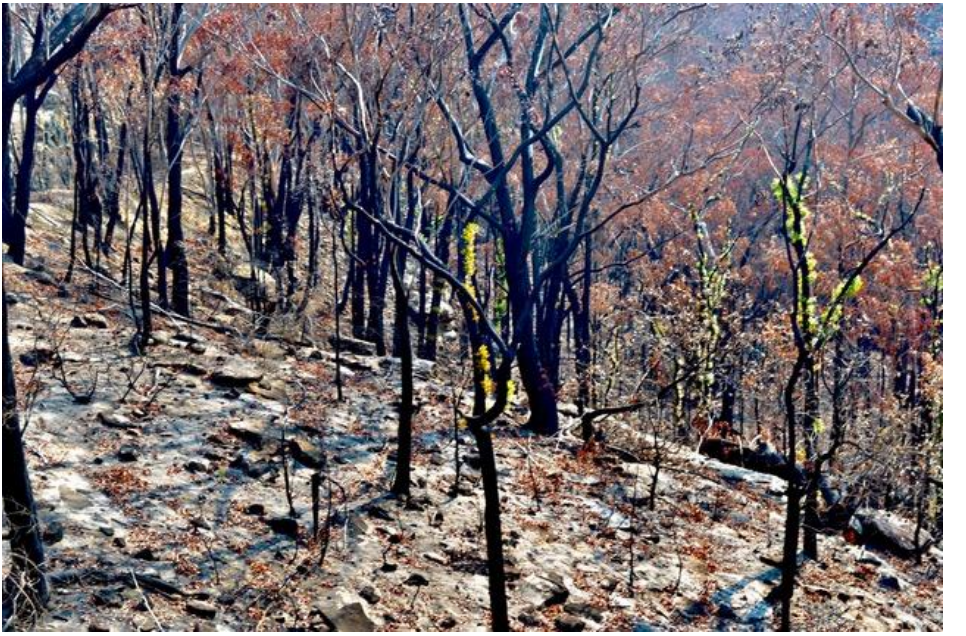


**Swamp banksia, *Banksia paludosa*, at Foamlea, Devon**

**Winter protection, Hastings: a water bottle with the base removed protects *Banksia caleyi* while *Banksia* 'Giant Candles' gets a fleece blanket**









**Len Kerswill: nature recovering in New South Wales**
**January 2020**





**Hastings, clockwise from top:**
***Hibbertia aspera* in full flower, with dying kangaroo paw leaves below**
***Grevillea juniperina* subsp. *sulphurea***
**New growth on *Banksia caleyi***





**Flowering now in Hastings:**

left: ***Goodia lotifolia* - one of its common names is golden tip**

bottom left: **probably *Grevillea* 'Poorinda Constance' (but not *G. williamsonii* as it is often labelled**

below: **Hedge hebe, *Veronica* x *franciscana* (*Hebe* x *franciscana*) - the two prominent stamens that help identify it as a veronica/ hebe are visible in the open flower**





anticipated particularly dreadful weather but because I hoped that by planting them out young and protecting them during their first winter or two they would establish better than if I grew them on in pots for several years.

Other small specimens that got cloches included *Melaleuca elliptica, Acacia redolens, Hakea dactyloides, Prostanthera calycina, G.* 'Mason's Hybrid', *Cassinia aculeata, Leptospermum polygalifolium* var. *montanum* and *Templetonia retusa*. And I had to protect my spear lily, *Doryanthes palmeri*, which went into the ground in 2019 and had staged a miraculous recovery from the beast from the east. All its leaves went brown and it looked so lifeless that I thought it surely must be dead. It was pure chance that I didn't dispose of its pot before it began sprout new leaves, in August, nearly six months later! (There's a lesson here: don't give up too soon on the apparently deceased - plants have amazing their powers of recuperation.)

Older and/or larger plants were wrapped in fleece, including *Melaleuca pentagona, M. thymifolia, Boronia crenulata, Thryptomene saxicola, Darwinia diosmoides, Grevillea johnsonii* and *G. barklyana.* Known as gully grevillea, endemic to Victoria where it has threatened taxon status, and confined to a small area in West Gippsland, this was one grevillea I was determined not to lose. Tim Darrington gave me a plant which went into the ground in 2016, grew strongly, and then went belly up two years later following the beast from the east. Fortunately I had a cutting and by 2020 this was big enough to plant out. However subsequent attempts had been unsuccessful so I didn't have a spare.

The few really tender plants that I grow in containers go into one of my unheated greenhouses for winter as a matter of course. But what to do about all those other pots, the ones that I usually leave on the terrace and up against the walls of the house? I managed to squeeze a few extra under the large portable cover that I had made to provide overhead protection for my container-grown correas: it looks like an oversize wallpaper table with a polycarbonate top and folds up when not in use. I managed to squeeze a few more pots into the greenhouses but the remainder had to make do with an ad hoc construction of folded polythene sheeting, a garden table and chairs, bamboo poles and bricks.

In the event the weather was much worse than it was in 2018. We had 6 days when the temperature at 9am was below freezing (Monday February 8th to Saturday February 13$^{th}$). According to my local newspaper, The Hastings Observer, the last time this happened in Hastings was 1991. Over those 6 days the lowest overnight temperature I recorded was -3.3$^{o}$C and the highest daytime temperature was 1.2$^{o}$C. These temperatures might not seem particularly low to some readers, but the cold was prolonged, and in my experience a long cold spell will do a lot more damage than a single night at a lower temperature. Moreover we got a lot of sleet but hardly any snow, so plants had no insulating blanket. The predicted gales came too, three days of them with the wind moving round from north easterly to south easterly, blowing straight at or nearly straight at my back garden. All in all it was the worst spell of weather I've experienced since I started growing Australasian plants about twenty five years ago.

Thankfully, it seems that my efforts were worth it. Nearly everything that was protected came through with little

if any damage and most have started growing again as the weather has (very) slowly warmed up (photo page 31). Of course I can't know that plants wouldn't have come through without protection. But I have some evidence that it was needed. The fleece around *Banksia* 'Giant Candles' hadn't been well enough secured and most of it got blown off by the wind. 'Giant Candles' got scorched again, though not as badly as before. And the proximity of *Dodonea viscosa* wasn't enough to prevent the tips of the branches of *B. ericifolia* getting damaged. Meantime *Banksia blechnifolia* and *B. praemorsa* stayed snug in their cloches and are now romping away.

Only three plants have died to date. I was sad to lose *Thryptomene saxicola* it as it is a pretty little thing and I don't have a spare. I also lost both *Grevillea johnsonii* and *G.* 'Mason's Hybrid': is something trying to tell me attempting to grow them outside is an ambition too far?

And what of those plants that weren't protected? To my surprise, to date I appear to have lost very few. One that did go was *Grevillea rhyolitica*. I have never been successful with this grevillea - I think this was my third specimen - and I don't know why. Another was a young *Acacia pycnantha* that might have survived under a cloche, but I do have a spare. But *A. myrtifolia*, which was so badly affected in 2018 that it looked completely dead, seems to have suffered no untoward effects this time round. Possibly this was because it is now much better sheltered by its neighbours.

I've also lost several mint bushes (*Prostanthera*). My experience of growing plants in this genus is that generally they don't tolerate cold well, but if even a bit of life remains the plant can recover quite quickly. From my front garden, which is much less affected by north and easterly winds, I lost *P. incisa* and *P.* 'Poorinda Petite'. *P. baxteri* is just hanging on but *P. ovalifolia* 'Variegata and *P. rotundifolia* suffered no more than a bit of leaf scorch and will flower a bit later than usual. From my back garden I lost *P.* 'Poorinda Ballerina' (it came as this but may have been 'Poorinda Bride') and most of the others although alive look a bit sad. The exceptions are a large *P. lasianthos* that suffered only superficial damage to leaves at the branch tips, and *P.* 'Badja Peak' and *P. cuneata* which were totally unscathed.

Several correas in the back garden, one specimen of *C.* 'Marian's Marvel' and two of *C. backhouseana* var. *orbicularis*, suffered from quite extensive branch die-back. Although they are protected only by adjacent plants I suspect the real problem was that they got too dry because I didn't water them enough during the rainless period that followed.

Many of the strappy leaves of Kangaroo paws, *Anigozanthos flavidus*, went pale brown and papery (photo page 31) but this always happens after very cold weather. Their rhizomes are well buried and I had mulched them with gravel so I am confident they will recover. I expected to lose all my brachyscomes, those little perennial daisies that are often sold as annuals but usually survive Hastings' winters. But when I got round to weeding there several of them were, putting on new growth. I also expected to lose *Hymenosporum flavum* (native frangipani) as all its leaves went but its new growth is terrific.

Plants with lignotubers and epicormic buds have the potential to resprout even if all their foliage goes. These fire

adaptations seem to work for cold damage too. For example after the 2018 beast from the east *Eucalyptus leucoxylon* in my back garden was completely defoliated but by June it had started to resprout from the base and the branches. After the latest onslaught it looks rather wretched but I'm confident it will pull through as it did last time. *Pandorea pandorana* (wonga wonga vine) lost much of its foliage and all its buds, so no flowers this year. But *P.* 'April Showers', in a container by the house wall in the front garden, is blooming as I write.

Table 2 below lists some of the plants that came through unscathed or with very minor damage. Some have subsequently performed wonderfully, cheering up the garden during this spring's unusually cool weather. Particular stars (photos page 31, 32) , blooming profusely as I write include are *Goodia lotifolia*, *Grevillea* 'Poorinda Constance' (probably that cultivar), *G. juniperina* subsp. *sulphurea*, *G. miqueliana*, *Philotheca myoporoides* and *Hibbertia aspera*

Weather is always local and members living in other parts of the British Isles will have had different, possibly very different, experiences. For some, maybe even many of you, it won't have been the worst winter ever. But even if it was, really bad winters haven't occurred that often in the recent past and hopefully will continue to be rare in the future. Don't give up on those Australasian plants; they remain well worth growing.

**Table 2: Some unprotected plants growing in Hastings that came through the February 2021 cold and windy weather with no / insignificant damage**

| | |
|---|---|
| *Acacia baileyana* 'Purpurea' | *Casaurina cunninghamiana* |
| *Acacia melanoxylon* | *Dianella nigra* |
| *Acacia mucronata* | *Dianella revoluta* |
| *Acacia myrtifolia* | *Dianella tasmanica* |
| *Acacia pataczekii* | *Darwinia diosmoides* |
| *Acacia pravissima* 'Bushwalk Baby' | *Fuchsia procumbens* |
| *Acacia retinodes* 'Blue Form' | *Grevillea arenaria* |
| *Acacia siculiformis* | *Grevillea juniperina* 'Molongo' |
| *Allocasaurina paludosa* | *Grevillea juniperina* subsp. *sulphurea* |
| *Astelia chathamica* | |
| *Azorella trifurcata* | *Grevillea lanigera* |
| *Bossaeia riparia* | *Grevillea miqueliana* |
| *Bulbine glauca* | *Grevillea rosmarinifolia* 'Jenkensii' |
| *Bursaria spinosa* | *Grevillea rosmarinifolia* yellow flowered |
| *Callistemon pallidus* | |
| *Calistemon sieberi* | *Grevillea rosmarinifolia* x *lavandulacea* |
| *Callistemon citrinus* 'White Anzac' | |
| *Callistemon citrinus* 'Splendens' | *Grevillea* x *semperflorens* |
| *Callistemon pityoides* | *Grevillea victoriae* |
| *Callistemon pungens* | *Grevillea* 'Big Red' |
| *Callistemon subulatus* | *Grevillea* 'Canberra Gem' |

| | |
|---|---|
| *Callistemon* 'Happy Valley' | *Grevillea* 'Poorinda Constance' |
| *Callitris rhomboidea* | *Goodia lotifolia* |
| *Carmichaelia muritai* 'Huia Gilpen'** | *Hakea epiglottis* |
| *Carmichaelia* sp. | *Hakea microcarpa* |
| *Cassinia* 'Ward Silver' | *Hakea nodosa* |
| *C. alba* var. *alba* | *Kunzea ericoides* |
| *Correa alba* 'Pinkie' | *Hakea microcarpa* |
| *Correa alba* 'Starlight' | *Hibbertia aspera* |
| *Correa alba* x *C. backhouseana* | *Kunzea ambigua* |
| *Correa backhouseana* | *Kunzea ericoides* |
| *Correa decumbens* | *Leptospermum liversidgii* |
| *Correa glabra* | *Leptospermum rotundifolium* |
| *Correa glabra* var. *turnbullii* | *Leptospermum grandifolium* |
| *Correa lawrenceana* | *Leptospermum myrtifolium* |
| *Correa lawrenceana* var. *rosea* | *Leptospermum namadgiensis* |
| *Correa. pulchella* orange-flowered | *Leptospermum scoparium* (Nanum Group) |
| *Correa reflexa* from Tasmania | |
| *Correa* 'Dusky Bells' | *Leptospermum scoparium* (Unnamed cultivar) |
| *Correa* 'Ivory Bells' | |
| *Correa* 'Marian's Marvel' | *Libertia ixioides* |
| *Correa* 'Pink Mist' | *Libertia paniculata* |
| *Libertia peregrinans* | *Olearia* x *mollis* 'Zennorensis' |
| *Lomatia myriacoides* | *Olearia phlogopappa* |
| *Lomatia tinctoria* | *Olearia solandrii* |
| *Lophomyrtus* x *ralphii* 'Tricolor' | *Olearia virgata* |
| *Melaleuca alternifolia* | *Orthrosanthus* sp. |
| *Melaleuca armillaris* | *Ozothamnus ledifolius* |
| *Melaleuca brevifolia* | *Pittosporum tenuifolium* 'Silver Queen' |
| *Melaleuca cuticularis* | |
| *Melaleuca decussata* | *Prostanthera cuneata* |
| *Melaleuca ericifolia* | *Prostanthera* 'Badja Peak' |
| *Melaleuca gibbosa* | *Philotheca myoporoides* |
| *Melaleuca linariifolia* | *Phyllocladus aspleniifolius* |
| *Melaleuca pustulata* | *Pseudopanax adiantifolius* |
| *Melaleuca squamea* | *Pseudopanax crassifolius* |
| *Melaleuca squarrosa* | *Pseudopanax ferox* |
| *Melaleuca virens* (*Callistemon viridiflorus*) | *Pultenaea juniperina* |
| | *Themeda triandra* |
| *Melaleuca wilsonii* | *Viola hederacea* |
| *Melicytus crassifolius* | *Veronica perfoliata* |
| *Muehlenbeckia astonii* | *Westringia* 'Wynabbie Gem' |
| *Muehlenbeckia australis* | *Xanthorrhoea preissii* |
| *Myoporum montanum* | |

# BITS AND PIECES

Compiled by Judy Clark

## Aussies in the snow: West Sussex

Gary and Maria Firth's garden is in Haywards Heath. I liked Maria's photos so much that I put them on the front and back covers. Gary told me that he purchased *Grevillea rosemarinifolia* 'Jenkinsii' (front cover) a few years ago and it has flowered throughout the winter. The plant remains fairly compact, .possibly owing to competition from nearby Australasians including a wollemi pine. The photo on the back cover shows more aussies in the snow: *Leptospermum grandiflorum* in the foreground with *L. scoparium* and *Grevillea* 'Canberra Gem' in the backgound, with *Trachycarpus fortunei* (south central China and Myanmar) just visible behind them.

## Seed germination: Grevillea eriostachya

Jeff Layman wrote about his experience with APS seed in issue 63 and followed up with a postscript in issue 64. Applying the Jeff Irons principle of not discarding pots before three years of trying, in late January 2021 he put the remaining pots in his propagator in and watered them well. He was amazed when after a couple of weeks what seemed like a root appeared along the surface in one of them, with cotyledons following in late February. It was a seed of /*Grevillea eriostachya* which had come to life almost two years after it was sown. Sadly though it passed on after getting its first true leaves.

## Wildfires

Len Kerswill was in New South Wales not long after some of the worst bush fires of 2019-2020 were brought under control. "In January 2020 a friend took me on a trip an hours drive from Sydney to a forest that five weeks earlier had been savaged by a fierce fire. We were viewing the damage and remains and were pleased to see that rejuvenation of plant life was beginning (photos page 30). Green shoots on burnt tree trunks and greenery starting to grow on the forest floor. Nature was taking hold once again."

## Hebes running wild

A few years ago a seedling that I didn't recognise appeared in my garden. I potted it up and waited. It grew woody, it retained its glossy green leaves in winter, and eventually it produced a cluster of beautiful blue-violet flowers each with two conspicuous stamens. What else but a little *Hebe*, now renamed *Veronica*? It turned out to be hedge hebe, *Veronica* x *franciscana* (**photo page XX**).

I'd never previously come across a self sown hebe and the arrival of *V.* x *franciscana* in my garden made me curious as to whether it is naturalised in the British Isles. Stace's New Flora of the British Isles (fourth edition, 2019) told me that six hebes are known to have escaped the confines of gardens and gone wild and the BSBI distribution maps (BSBI.org.maps) told me where they have been recorded. *V.* x *franciscana* has been noted from sites all round the coasts of Britain and Ireland, including as far north as the Orkneys, as well as places in London. Naturalised *V. salicifolia* is just as widespread. Of the other four, *V.* x *lewisii* and *V. barkeri* are similarly widespread but recorded from far fewer sites, while *V. brachysiphon* and *V. diefenbachii* have the fewest records and almost all of these are confined to the southern half of Britain. Next up, to find more feral hebes in East Sussex.

# The Australasian Plant Society

## Minutes of the Annual General Meeting

## Held via Zoom on 28th November 2020

**Committee Members Present:**
Tom Hart Dyke - President
Robbie Blackhall-Miles - Chairman
Ben Ram - Webmaster
Judy Clark - Newsletter Editor
Jeremy Spon - Treasurer/Membership Secretary
Gary Firth - Events Co-ordinator
Jude Lawton - Conservation
Janet Miller - Seed-list Manager
Plus 21 other members.

### 1. Apologies for absence

Apologies had been received from David Tigwell and Mark Bennett.

### 2. Introductions

Robbie welcomed everyone, saying that the format of the meeting was quite strange, but that it was good to see so many members present, including some from overseas. He reported that due to coronavirus there had been no events since the last AGM, but that things were ticking over in the background. He then asked Tom to give his own welcome. Tom commented that he was missing the in-person contact of the usual AGMs at Lullingstone, but he was delighted to recall one of the best growing seasons for Australasian plants he could remember, and a year when 95% of the visitors to Lullingstone had come for the first time. He said that he was even more optimistic for the future than normal as we come out of lock-down. He then proceeded to give us a virtual tour of the World Garden.

### 3. Minutes of Last Meeting

These had been published in the May 2020 edition of Pentachondra, and were approved.

### 4. Election of Officers

a) Tom Hart Dyke said he was willing to continue as President, and the meeting agreed unanimously that he should do so.

b) Committee. As all members of the committee were willing to continue in post, the meeting agreed to re-elect them en bloc.

### 5. Committee Reports

a) Treasurer's Report (Jeremy Spon)

Jeremy reported that he expected a surplus of income over expenditure at the end of the year of around £600, and that our reserves were still at a healthy level, totalling

around £12,400. Membership was stable, with members lapsing being balanced by new recruits; the current membership stood at 191.The accounts for the previous year had also been published in the May 2020 edition of Pentachondra, and were approved by the meeting.

b) Newsletter Editor's Report (Judy Clark)

Judy thanked all those members who had contributed articles during the last year, and appealed to everyone to keep the articles coming, on any subject related to Australasian plants, not just those suggested from time to time in Pentachondra. She mentioned that sometimes her APS email failed to work, so she asked members to be patient if she did not respond immediately.

c) Seed List Manager's Report

Technical issues prevented Janet from reporting directly, so Judy spoke for her. There had been 40 seed orders in the last year, 6 from overseas; the most popular plants were Anigozanthos and Banksia, along with plants written about in Pentachondra. Changes in plant health regulations meant that phytosanitary certificates were required for all seed moving in and out of the UK; this was making restocking the seed-list and sending orders overseas much more difficult. More than one consignment of seeds from overseas had been intercepted by customs and either destroyed or returned to the sender. The committee was actively seeking ways to address these problems in time to order seeds for next year's list. Thanks were extended to those members who had donated seed to the list, in particular George Smith, Tim Smith, and Jan-Willem Vos – more donations from other members would be very welcome. Judy said that collecting and sending in seed was easy to do, but she hoped to include an article in the May 2021 Pentachondra about this; she would like to hear from anyone who might be willing to write such an article. Thanks were also expressed to Janet and Judy for all their hard work on the list.

d) Website Manager's Report (Ben Ram)

Ben said the website was working well, and now operating with the added security of https, which should help with its placing in search lists. Back issues of Pentachondra had continued to be loaded up, and a considerable number were now available in the members area, although some still remained to be added.

e) Social Media (Robbie Blackhall-Miles)

Robbie reported that although he was no longer on Facebook, the Society's Facebook Group was flourishing now that it had been opened to non-members. Our Twitter account (@GondwanaPlants) had 867 followers, and Robbie reminded everyone with a Twitter account to tag @Gondwanaplants, and to use the hashtags #ozplants and #ausplantsoc in any Tweet mentioning Australasian plants, as this would ensure it got retweeted.

g) Events (Gary Firth)

All planned events had had to be cancelled; next year it was hoped to attend the Wisley Specialist Plant Societies Show in June, and the autumn Great Dixter Plant Fair, if these events are able to go ahead. (The Dixter fair did go ahead in autumn 2020, but it was decided it would be safer for the members involved if we did not attend.) No private events had been organised yet, but any suggestions for possible

garden visits etc. would be very welcome. Robbie pointed out that we had paid for an annual licence for Zoom; the committee had used Zoom for committee meetings, but we should try and make as much use of it as possible. He asked any members who might be willing to give talks to members to get in touch with him.

h) Conservation (Jude Lawton)

Jude reported that not much progress had been made during the past year, but that the dispersed National Collection of Grevilleas was nearly ready to proceed, and she would be contacting all members involved in the new year. The Society was looking to support both the New Zealand and Australian Plant Conservation Networks, and Jude recommended both their websites for the wealth of information available. She also wanted to hear from any members who had grown Wollemi pines from the seed distributed by the Society earlier in theyear, so that experiences of growing these could be shared.

## 6. Any Other Business

a) Greg Plenty suggested an article could be produced for Pentachondra based on members experiences of growing plants from APS seed; Greg was happy to collate all information passed to him by members, and liaise with Judy about the article.

b) Photo Competition. Ben reported that four entries had been submitted, and published on the website for members to vote for their favourite. The winner was declared to be Blake Chaplin, for his photo of Eucalyptus caesia 'Silver princess', and Judy would be sending Blake the prize of a print of one of Celia Rosser's Banksia paintings.

## 7) Conclusion

Robbie thanked everyone for joining the meeting, and declared it closed, to be followed by a short break then a presentation about Robbie and Ben's trip to the North Island of New Zealand.


### Photograph acknowledgements

Judy Clark: page 9, below right; page 29 below; pages 31 and 32

Maria Firth; front cover;, back cover; page 9, below left

Len Kerswill: page 30

Martin Krüger: page 11; page 12, top and below right

Jeff Layman: page 10

Greg Plenty: page 12, below left

Claire Reaney: page 9, top

Beth Smith: page 29, above

**pages 19-22**

**Fires in eastern Australia where do we stand today**

Tina Bell: page 19; page 20, below right

Andrew Cox: page 20, top

Sally Anne Gaunt: page 21

Sebastian Pfautsch: page 22

Lesley Waite: page 20, below right

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**Aussies in the snow: Haywards Heath**