AUSTRALASIAN PLANT SOCIETY
NEWSLETTER

PENTACHONDRA

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Common Shaggy Pea, *Oxylobium ellipticum*

AUSTRALASIAN PLANT SOCIETY

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

Newsletter Number 55

December 2015

CONTENTS

APS News	1
Grevillea wilkinsonii, Jeff Layman	6
Oxylobium ellipticum, Gary Dunlop	8
Building a National Collection of Corokia, Mona Abboud	12
Which Orthrosanthus?, Peter Kohn	14
The Botanic Garden at Villa Thuret, John Purse	15
Winteraceae, Gary Dunlop	17
Sweet bursaria, Judy Clark	25
"Liquid Smoke" flavouring as a cheap germination enhancer, Paul Cumbleton	29
Australasian plants in my life, Morwen Tregudda	34
2015 meetings: Reports, Peter Kohn, Judy Clark and Jeremy Spon	37

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APS NEWS

AGM 2015

Our annual general meeting and get-together was held at Lullingstone Castle on November 14. Attendance was the best ever for an AGM and chairman Robbie Blackhall-Miles kept discussion to the point so ensuring plenty of time in the afternoon for a look round the World Garden, the hot and spiky house and all those southern hemisphere plants under cover. The minutes will be published on the website in due course, and in the May 2016 issue of Pentachondra.

The new reading room

The newly decorated APS Reading Room at Lullingstone Castle was opened at the AGM. It houses the collection of Australasian plant books recently bequeathed to our society by the late Brian Halliwell. Photos of the Reading Room (along with others from the AGM) have been posted on the website.

APS members are welcome to visit and make use of this resource. Please contact Tom Hart-Dyke at president@anzplantsoc.org.uk, giving him at least 24 hours notice.

Events 2016

The APS welcomes Gary and Maria Firth as our new events co-ordinators. They will be familiar to some APS members through their work for Plant Heritage, the charity that champions the conservation of plants and gardens. Any APS member can propose a meeting or other event so if you have any ideas for 2016 or subsequent years do get in touch with them. Their contact details are inside the back cover.

Three meetings have been proposed for 2016. This year's visit to Gary and Maria's garden in West Sussex had to be cancelled at the last minute, but is being rescheduled for 2016 and will be combined with a visit to Tim and Gill Burr's place. They wrote memorably about their trip to Western Australia in issue 54 of Pentachondra. Robbie proposed a visit to the Chelsea Physic Garden in London. Although probably best known as a garden of medicinal plants it also contains many southern hemisphere treasures. He also suggested a meeting at Ness Botanic Gardens near Chester; this will hopefully include a visit to Jeff Irons' old garden where many of his plants still grow.

It is many years since the APS has put together a display for a show. This year we will have a presence at the RHS Plant Society Show (formerly All About Plants), the aim of which is to promote specialist plant societies. It will be held at RHS Wisley on June 18-19. If you can offer plants for the display, or can help put it together, or can spare some time to assist during the show, please contact Gary and Maria.

As is now customary, the AGM will be held in November. As soon as we have full details of events these will be posted on the website and included in the email newsletters. And, of course, members will find all this information in the May 2016 issue of Pentachondra.

Register of members' gardens

Wouldn't it be nice if it were easier for you to visit other members' gardens? At the AGM it was decided to set up a contact list of members

Can't get into the members area of the APS website? For a password contact Ben at webmaster@anzplantsoc.org.uk.

and their gardens, large and small, in order to facilitate such visits. If you would like to be included on this list please send the following information to Robbie at chairman@anzplantsoc.org.uk: your name; your address, phone number and email (and website if you have one) and a brief description of your garden indicating any specialties.

Obviously we don't want to publish a list of our members' contact details for everyone to see. The register will appear in the members only area of our society website, so it will only be visible to other members.

While the APS encourages the use of electronic communication (not least to cut down on the use of paper) we do recognise that not all members want to use email or the internet. If you are such a member and would like to be included on the register of members' gardens then send the relevant information by letter or postcard to Judy at the address inside the back cover. You will be sent a paper copy of the register when it is published on the website. Similarly, if you don't want to be included on the register but would like to see it, and don't use electronic communication, please let Judy know and she will ensure that you receive a paper copy when it is published.

Facebook group

After years of discussing it the APS now has a closed facebook group for members only. We hope that this will turn out to be a great forum for us to discuss growing Australasian plants. You can find the group by searching on facebook for "The Australasian Plant Society" and sending a request to join.

E-newsletter

The latest e-newsletter was sent out in November. It included news of both the the register of members' gardens and the new Facebook group. Are you getting it? If it's not in your junk mail folder then maybe we don't have your **current** email address. To check contact Ben, webmaster@anzplantsoc.org.uk

New members

The APS would like to extend a warm welcome to Rob Asbridge, Helen Baxter, Kathryn Gale, Anne Griffin, Steve Haines, Dianne Jennings, Ceilidh Keyworth, Susan Milford, Darryl Moore, Clare Reaney, Hannah Sindall, Margaret Soderstrom, Warren Town and Jan-Willem Vos, and to welcome back Thomas Naylor and Andrew Parsons.

Treasurer's Report

Membership Subscriptions

The cost of APS membership has, for UK members, remained fixed at £10 (£12 for 'joint' or 'household' membership) for 10 years now. We are fortunate that despite increasing printing and postage costs for Pentachondra, this subscription still just covers the costs of providing all the current benefits of membership.

However, as was mentioned in Pentachondra this time last year, it is desirable to plan both for continuing increases in costs, and for providing

extra funds to allow further development of our society. So, a proposal was put to, and accepted at, the AGM, to increase subscriptions by £5 per year for all members, **with effect from January 2017**. This means that subscriptions will stay the same for one more year, but after that UK members will pay £15 and non-UK members £20. The new amount will be for household membership, so the existing higher rate for 'joint' membership will be scrapped.

Your committee very much hopes that members will continue to regard membership as excellent value, and continue to support the society. More information about how the increase in subscriptions will be implemented, especially for those who pay by standing order and Paypal, will be given in the next issue (May 2016) of Pentachondra.

Paypal

The use of Paypal to allow members joining online to pay their subscription is now well established. Since the beginning of 2015 payments have been set up as recurring; that is renewal is automatic on the anniversary of joining (although of course any members who do not wish to renew are able to decline the payment request, or ask the Treasurer to cancel the payment).

In my report this time last year I mentioned that the use of Paypal has a cost to the society; specifically, of the £10 members in the UK currently pay via Paypal, the society only receives £9.46. We would therefore prefer it if members paid by cheque, or better still by standing order, in the years after they have first joined.

When subscriptions rise in 2017 Paypal's fees will probably be less in percentage terms than at present, but we will still lose some of the subscription money in this way. So I would like to ask all members who currently pay by Paypal to consider setting up a standing order for their payment instead. I can send you a form to complete and hand to your bank. For those who use internet banking and prefer to set up the standing order up themselves, the Society's bank details are given in the box on page 4. I would simply ask that you include your name as a reference so I know who payments have come from, and that you let me know you have set up the standing order so I can cancel any recurring Paypal payment.

I should add that any member who prefers to continue paying by Paypal will still be accepted as having renewed their subscription, as we understand that not everyone is happy with using standing orders.

Overseas members please note: As Paypal remains the cheapest, safest and easiest method for you to pay your subscriptions, we will continue to take payments from you by this method, if you are able to use it.

Jeremy Spon

Seedlist

One of the benefits of being a member of the society is that you can order seed from our extensive seedlist. Whilst we have always tried to offer the largest range of seed available this often means that the society is left with a excess of certain species. Viability of some has become an issue and so over the coming months we intend to have a full review of the species offered.

We would also like to make our seedlist more relevant to what our

Subscriptions are due!

All subscriptions are due on **1st January 2016**. If you don't pay by standing order or similar please complete the enclosed renewal form and send it with your cheque (payable to Australasian Plant Society) to APS Treasurer & Membership Secretary Jeremy Spon.

Annual subscriptions are £10 for UK members and £15 for members resident elsewhere.

If you would like to pay by standing order you can obtain a form from the Treasurer, or you can set one up yourself, using sort code 60-19-24 and account number 29872677. Please include your name as a reference for the Treasurer, and let him know that you have set up a standing order.

If you pay by standing order or have already paid for 2016 you will not have received a renewal form but please contact Jeremy if any of your details have changed.

members wish to grow as well as having a bit of a clear out of excess stock and offering some new and exciting species. So if you have something that you would like to try and grow from seed, or knowledge of a certain family or genus of Australasian plants that you can share in order to help us with this process, or have seed to offer the list, we would very much like to hear from you.

Expect a few changes to our seedlist come the new year! You can find the list online in the members area of the website. It costs only £4 (£5 for overseas members) to order 20 packets of seed and it is open all year round. To place an order visit www.anzplantsoc.org.uk/latest-seed-list/ or alternatively wait until the new list arrives with the May 2016 issue of Pentachondra.

If you do not use the internet and would like to order seeds before the seedlist is published in Pentachondra is published please contact Janet Miller by phone or post (details inside the back cover).

Where to buy Australasian plants

A number of APS members run their own nurseries, some specialising in Australasian plants and others offering them alongside usual and unusual plants from elsewhere. The leaflet enclosed with this newsletter is a first attempt to provide information for APS members about such nurseries. If you run a nursery and have been omitted from the leaflet I do apologise. Please contact Judy with your details so you can be included.

National Plant Collections

Plant Heritage is the UK's foremost charity involved in the conservation of cultivated garden plants. One of the ways Plant Heritage helps to safeguard Britain's garden flora is through its promotion and support of National Plant Collections. A surprising number of collections are comprised wholly or partly of Australasian plants and, perhaps not so surprisingly, a subset of these are held by APS members.

Longstanding members will probably know that Gary and Maria Firth hold a national collection of Myrtaceae (tribe Myrteae) which includes *Lophomyrtus*, endemic to New

Zealand, as well as *Luma*, *Myrtus* and *Ugni*. Tom Hart Dyke and Doug Smith both hold collections of *Eucalyptus* and the latter has now added Araliaceae and *Podocarpus* and related Podocarpaceae to his. In 2015 Plant Heritage awarded National Plant Collection Status to three more APS members.

Mona Abboud gained recognition for her collection of *Corokia*. She writes about its how she developed it on page 12 of this issue.

My collection of *Correa* also gained recognition. Correas, known as Australian fuchsias, are evergreen shrubs with striking, mostly pendulous, bell-shaped flowers that are produced from autumn to spring. An article about correas and their cultivation is planned for the May 2016 Pentachondra. In the meantime, if you have a *Correa* in your garden **please, please tell me** about it. I am collecting data about hardiness plus, you never know, yours could be one I don't have in my collection.

Robbie Blackhall-Miles and Ben Ram first became interested in *Banksia* whilst studying the fossil history of the family Proteaceae to which they belong. They soon found out that the many of the *Banksia* species native to the south east of Australia are very tolerant of the British climate when given the right soil conditions. Their collection, which holds 13 of the 20 or so such banksias, grows in their small back garden alongside many other members of the Proteaceae. You can find out more at www.fossilplants.co.uk.

And that's not all. There is a similar organisation to Plant Heritage in France, *Le Conservatoire des Collections Végétales Spécialisées* (CCVS). The CCVS has awarded Tim Darrington's collection of *Banksia* species the status of *Collection agréée*, the equivalent to a British Provisional National Collection, and Tim hopes to gain the *Collection nationale* award in due course. Seven years ago Tim wrote a superb and very detailed article about growing *Banksia* (Pentachondra issue 40, May 2008). If you missed it you can get a copy of issue 40 from me.

Judy Clark

Pentachondra contributions

As always, many thanks to everyone who contributed to this issue. Pentachondra wouldn't be what it is without you. Most issues feature at least one new contributor. If you've never done so, why not have a go?

Both longer articles and short snippets are welcome, as are stand-alone photos and drawings (as long as a caption is provided). Pentachondra's pages used to be graced with black and white drawings of plants by the previous editor, Sue Hyams; it would be wonderful to be able to do so again. According to our survey, readers really like articles about members' experiences with plants, successful or otherwise, so why not try writing about one of your favourites? Personally, I like to learn of new gardens to visit, and of Australasian plants in growing unexpected places. My *Olearia solandri* came from a crack in the pavement on Eastbourne seafront where plants were self-seeding.

The deadline for the next issue is **31st March 2016**. Contributions should be sent direct to the editor, Judy Clark, either electronically or as typed hard copy. Please **don't**

compress photos, and please **do** contact Judy if you have questions of **any** sort about contributing.



GREVILLEA WILKINSONII

Jeff Layman

In 2009 I requested some seeds of *Melaleuca fulgens* from the APS seedlist. I can't remember much about them, other than the packet contained a fairly heterogeneous mix of plant material. It was all sown in one pot, subjected to smoke treatment (along with other Australian seeds sown at the same time), put in a propagator, and left. After a few weeks I noticed that a seedling had appeared.

As it grew out of the cotyledon stage, it soon became obvious that this was not *M. fulgens*. In fact, the leaves did not look anything like any *Melaleuca* leaf I had ever seen. It was left in the 7.5 cm pot in which it had germinated, and when we moved in September 2012 it came with us. A new greenhouse was erected in November, the clay soil dug out and replaced with a 15 cm depth of a 1:3 Ericaceous JI : washed sharp sand mix, and numerous plants put in, including the "not" *M. fulgens*.

It slowly grew, and I still could not identify the family to which it belonged. A crushed leaf had no smell at all, so it probably did not belong to the Myrtaceae. In late March I was pottering around the greenhouse, and noticed an odd pink-purple colour flower almost hidden by foliage. Apart from a *Hardenbergia violacea* 'Happy Wanderer', I didn't have any plants with flowers of that colour as far as I knew. It was a bit awkward to get to but on close examination I was amazed to find the flower was that of a toothbrush grevillea! I have previously grown a toothbrush grevillea (*Grevillea barklyana*), but I did not know any had flowers of that colour. A trawl through Google images of toothbrush grevilleas revealed - at least as far as any had been uploaded to those pages - that there was only one plant with those colour flowers (and leaf shape), and that was *Grevillea wilkinsonii*. But that just led to another question - how did a seed of a rare eastern Australian grevillea from 3000 km away get into a packet of the west Australian species *Melaleuca fulgens*? As far as I was aware, the APS had never offered seeds of *G. wilkinsonii*.

The key thing needed was a positive identification, so I took a photo of the flower and emailed it. with background information, to the Royal Botanic Gardens, Sydney. By return I received an email from Bob Makinson (a conservation botanist at the RBG) who had first described *G. wilkinsonii* in 1993. Apart from attaching some good photographs of *G. wilkinsonii* (see pages 9 and 10) Bob replied:

"The photo is not great but yes, beyond reasonable doubt that is *Grevillea wilkinsonii* (Tumut Grevillea). There is one hybrid that I know of on commercial release (G. 'Bedspread', *G. wilkinsonii* x 'Royal Mantle'), but that has much broader and coarsely lobed teeth. What you have looks to be the wild type of *G. wilkinsonii*. How on earth this would have got in with seed of *Melaleuca fulgens* is beyond me - the seed is many times the size and weight of that species.

I've been involved with *G. wilkinsonii* since it was first brought to my attention in 1991; I described it in 1993. It occurs mainly on the Goobarragandra River east of Tumut, in remnant native vegetation in riverbank situations. We lost about 60% of the 600 or so plants in the natural range in a huge flood in 2012. Fortunately we had done some experimental and precautionary translocations, within the natural range but deliberately well above any conceivable flood height, back in 1993 or thereabouts, and these plants and their offspring now form a much higher proportion of the wild population than previously. We have been seedbanking on a small scale for the last 3 years now, but there is a long way to go in getting the wild numbers back up.

G. wilkinsonii is normally a fairly robust shrub to 2.5m tall and 3m across. There is also a prostrate or decumbent form (represented by only 2 or 3 plants on a hillside near Gundagai) that holds that habit from cuttings. Attached FYI are a couple of my photos ex cult."

So there you have it - a very unexpected tale. Perhaps the moral is to never throw away something you can't identify, even if it is not what you believe you have sown.

Now I have to make sure that I take care of what is obviously a very rare plant. From what Bob Makinson said about the prostrate form, it is possible to propagate *G. wilkinsonii* from cuttings. That method of propagation isn't exactly my strong point, but if the plant grows well there should be enough material to try.

And that would have been the end of this article, but for some excellent detective work by Judy Clark which has shed some light on the possible source of the seed. It seems that the APS had offered seed of *G. wilkinsonii* in the 2009 seedlist, although not in 2007 or 2008 (the earliest seedlists in Judy's records), and not since 2009. So it appears that *G. wilkinsonii* seed could have found its way into the *Melaleuca fulgens* seed packet.

But that raised another question - where had the *G. wilkinsonii* seed come from? It is a rare and endangered plant in the wild, so it would have been illegal to collect and export seed from such a source. However, the plant was being grown in cultivation in 1999 by Neil Marriott in his garden in Stawell, Victoria. In a short article in the ASGAP (now ANPSA) Grevillea Study Group Newsletter he notes that it had produced copious seed[1]. From June 2005 *G. wilkinsonii* seed appears on the GSG seedlist[2]. Jeff Irons belonged to various Australian plant groups and might well have obtained *G. wilkinsonii* seed from this source. Jeff obviously grew it himself, as he specifically mentioned *G. wilkinsonii* in his 2007 cultivation notes on *Grevillea*: "Fresh seed of *G. wilkinsonii* is said to germinate well. Our experience has been that even when received and sown in the year of collection this species needs cold moist stratification. *G.wilkinsonii* exhibits phytotoxicity[3]."

So was Jeff Irons growing *G. wilkinsonii* from GSG seed, and did his *G. wilkinsonii* flower and set seed, which Jeff then gave to the society? Judy has checked indexes of Pentachondra to see if there was any mention of *G. wilkinsonii*, but has not found anything relating to it.

Notes

1. GSG Newsletter number 52, anpsa.org.au/grevSG/grev52.pdf

2. GSG Newsletter number 71, anpsa.org.au/grevSG/grev71.pdf

3. There has been some discussion over what Jeff Irons meant here by "phytotoxicity". As usually defined, this means that some plants can inhibit other species from growing nearby by chemical means. It is, for example, commonly seen with some rhododendrons. However, Bob Makinson has noted that "there is no evidence that I am aware of, from field or cultivation, that *G. wilkinsonii* shows this trait".

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OXYLOBIUM ELLIPTICUM

Gary Dunlop

Oxylobium ellipticum is an attractive small shrub in the pea family, now called the Fabaceae, replacing the older name of Leguminosae. It was first discovered by the gardener David Nelson, who was recruited by Joseph Banks on the recommendation of James Lee of the Vine Nursery, to serve as gardener on the ill-fated third voyage of Captain Cook from 1776-79. He was stationed on the Discovery, the second ship under Captain Clerke, which accompanied Resolution under Captain Cook, and whose compliment included Anderson as surgeon and naturalist.

The ill-fated voyage to discover the Northwest Passage from the Pacific side was dogged by stormy weather from the outset. Particularly stormy weather in the Southern Ocean, whilst heading from the Cape of Good Hope to the Pacific, caused some damage to the ships. They eventually found shelter in Adventure Bay on the eastern side of Bruny Island (Tasmania), due south of where Hobart was later to be established. Whilst the crew carried out repairs, Nelson explored the island for plants, which is where he came across *Oxylobium ellipticum*. Whether he collected seed or a seedling is not clear, but as well as discovering it, he was considered to have first introduced the plant into cultivation, though it does not seem to have survived for long. Nelson is also credited with introducing *Melaleuca squarrosa*, and *Podalyria serica* from South Africa.

Oxylobium ellipticum was again discovered by Jacques Labillardieri, who was appointed naturalist on Bruni d'Entrecasteau's expedition to Oceania in search of the lost ships of a previous expedition of the Comte de La Perouse, setting off in 1791. This expedition was unsuccessful in finding any trace of the previous expedition, but did visit south west Australia, Tasmania, both islands of New Zealand, and the East Indies, where zoological, botanical and geological specimens were collected. Whilst in the East Indies, the French revolutionary wars had broken out, and when their ships visited in Java, in 1794, the scientific collections were seized by the British as spoils of war. Labillardieri subsequently appealed to his friend Joseph Banks for the return of the collections and was successful in having them returned to him. Between 1804 and 1807 he published *Novae Hollandiae Plantarum Specimen* in instalments. His name was commemorated in the establishment of the Australian endemic genus *Billardiera* Sm., and also Labillardieri Point on Bruny Island, which was named after the expedition's leader[2]. It was December 1805 before Labillardieri



left:
***Oxylobium ellipticum*:**
habit

below:
***Grevillea wilkinsonii*,**
flower





left: **in cultivation** ***Grevillea wilkinsonii***,

below; ***Corokia*** **'Limey'**



below: ***Corokia*** **'Yellow Wonder'**



published one of his discoveries as *Gompholobium ellipticum*[3]. However, earlier that year the French botanist Etienne Pierre Ventenat, had published the same plant as *Callistachys elliptica*[4], possibly from a live plant if Labillardieri had collected seed, or perhaps from Labillardieri's herbarium specimen.

Neither name, however, lasted for long as in 1811 Robert Brown[5] reclassified the plant in Oxylobium, a new genus established by Andrews in 1807 when he named *Oxylobium cordifolium*[6]. Robert Brown or perhaps Peter Good, the gardener accompanying him on his exploration of Australia, did apparently collect and bring back seeds of *Oxylobium ellipticum* but again it does not seem to have survived long in cultivation. It was described and illustrated for the first time in the Botanical Magazine, from a plant raised at Kew, which was raised from seed passed on from RBG Edinburgh and which was sent them by William Henderson in February 1829 marked "Prussian Shrub"[7].

Oxylobium ellipticum, which goes by the vernacular name of common shaggy pea, is a small evergreen bushy understorey shrub 1-2.5m tall and 1-2m wide, though dwarf forms exist in exposed locations. It has small dark green elliptical leaves, with dense terminal clusters of 20-50 bright yellow typical pea flowers with a central red flush, in spring[8] (see front cover and page 9). It is normally found in areas with poor soils and fixes nitrogen in the soil with its roots, as do many plants in the family, clover being probably the best known for this attribute.

It would seem to be quite uncommon in cultivation, and was only listed for

Oxlyobium ellipticum from seed

Quite by coincidence, this year I attempted to grow *Oxylobium ellipticum* from seed. It is on the APS seedlist but my seed came from Seeds from Tasmania (now Wildseed Tasmania). I have to admit that I had had the seed for some time - the packet stated sow by December 2012 - and I only came to sow it because in the course of a tidy up I came across several packets of seed of Australian pea species that I had forgotten about. I had purchased them because I hoped the species would turn out to tolerate frost, but now the seeds were mostly out of date. (Nonetheless, every one of the species I sowed germinated, which demonstrates that seed should always be tried before discarding it.)

Like many pea family seeds *O. ellipticum* requires treatment to soften or damage the seed coat to allow water to penetrate. With some of the seeds I tried heat treatment as per the instructions on the packet, soaking them for 22 hours in freshly boiled water. The rest were abraded with sandpaper. I didn't count the number sown, from memory maybe 10-12 for each treatment, but germination was very poor for both. After 27 days for the soaked seed and 20 days for the abraded seed, just one seed had germinated in each case, This could be because viability of *O. ellipticum* seeds decreases with age, or because the embryos in the rather small seeds were damaged by the treatments.

Judy Clark

a few years in the RHS Plant Finder, by two small Scottish nurseries. It would seem to be quite hardy, as even as a young plant, as it survived several nights of –14ºC in my garden, several years ago. Unfortunately and inexplicably, part way through flowering last spring, it died.

References

1. Lemmon, K.1968: The Golden Age of Plant Hunting. 83-106

2. Anon. Wikipedia: Jacques Labillardieri

3. Labillardieri, J. 1805: Novae Hollandiae Plantarum Specimen 1

4. Ventenat, E. 1805: Jardin de la Malmaison 2

5. Brown, R. 1811: Oxylobium ellipticum Hortus Kewensis Vol. 3. p.10

6. Andrews, H.? 1807: Oxylobium cordifolium Botanist's Repository Vol.7 tab. 492

7. Graham. 1847: Oxylobium ellipticum Bot. Mag. Vol. 60 Tab. 3249

8. Howells, C. ed. 2012: Tasmania's Natural Flora 2nd revised ed. p.189 Australian Plant Society, Tasmania Inc. Hobart

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BUILDING A NATIONAL COLLECTION OF COROKIA

Mona Abboud

My love affair with corokias started nearly fifteen years ago. It was not a sudden flash in the pan which then promptly burned itself out, but a gradual discovery which culminated in an overwhelming passion.

A friend of mine who lives by the seaside in Suffolk had been growing a *Corokia* x *virgata* 'Yellow Wonder' (photo page 10) with great success and was pleased with its tolerance to wind and sea salt. So I acquired one and planted it in my front garden and over the years pruned it to give it a parasol shape. Then, after an inspiring trip to Cornwall, visiting, amongst others, the Lost Gardens of Heligan, I discovered Burncoose Nurseries and bought a couple more, namely *Corokia cotoneaster* and *Corokia* x *virgata* 'Frosted Chocolate'.

At first I thought that *Corokia* comprised only a few varieties. It's only in recent years that I found out that in New Zealand the genus comprises three species[1], namely the evergreen shrubs *Corokia macrocarpa*, *Corokia buddlejoides* (korokio) and *Corokia cotoneaster* (wire-netting bush). The many *virgata* varieties are a cross between *C. cotoneaster* and *C. buddlejoides* and it was when I discovered that there are lots of cultivars that I started collecting corokias in earnest.

About six years ago I discovered County Park Nursery in Hornchurch, Essex. My internet search revealed that they grew a great variety of Australasian plants including corokias. So I decided to pay them a visit. Behind a 1930s bungalow, within an apparently dilapidated and overgrown site, I discovered a veritable treasure trove of rare and extraordinary plants, many of which I had never seen before.

As soon as I met the owner, Graham Hutchins, I realised that getting him to part with his precious plants, and prise them away from him would be like drawing teeth! Every time my eye fell on a desirable specimen he would firmly state: "*This is for trade!*" Two of us can play this game,

I thought, so after a long battle of wills I managed to extract some wonderful shrubs from him. These included quite a few corokias, including one he had bred which still had no official name.

I returned a year later and managed to come away with a few more plants. Sadly Graham passed away over four years ago. Thankfully his grandson Paul Boosey has taken over the nursery and is keeping his grandfather's legacy going. With his help I added considerably to my *Corokia* collection as well as to my other Australasian plants. The idea of a National Collection started germinating.

In February 2015 the friend who introduced me to my first *Corokia* more than fifteen years ago came to visit me. I told her of my intention to apply for a *Corokia* National Collection and showed her all the plants I had acquired in the last few years. She was suitably impressed and told me to go for it. She then drove back to Suffolk. I also went out, leaving my mobile behind. Within minutes of my return home my mobile rang. It was my friend. "Mona, I'm in Waitrose near Ipswich." So she is shopping in Waitrose, why is she telling me this, I thought. "Yes…?" I said."The thing is there is a plant stand in front of the store, and they are selling corokias. They look different from the ones you showed me. The label says Corokia 'Limey'". "There is no such Corokia in existence, I should know!" I said rather tersely. "Well, that's what it says, do you want it or not" she countered. "Of course, get them anyway, please," I said.

She brought them down to London the following week. In all my research I had never come across a *Corokia* 'Limey'. After peering at the label through a magnifying glass for a considerable amount of time I finally came across a website address in minute print, www.sonkoot.nl, which proved to be a very large nursery in Holland. I rang them immediately. They were most charming and helpful and they confirmed that they had indeed bred this brand new *Corokia* hybrid 'Limey' (photo page 10).

The moral of this story is that the most exciting new discoveries hang by a thread, or rather by a few minutes. Had I not returned home when I did, my friend would not have been able to contact me, and she would have left Waitrose without my precious new *Corokia*, and I would not have acquired this exciting new plant to add to my collection, or discovered this Dutch nursery which incidentally has bred other new *Corokia* hybrids.

In early December I learned that Plant Heritage have awarded me full National Collection status for my *Corokia* collection. Box 1 lists all the plants I have so far. If there are any APS members who can help me add to my collection I can be contacted via my website, monasgarden.co.uk/.

I hope to use my collection to promote Corokias. I feel that they are still largely unknown and undervalued by gardeners, despite being very gardenworthy plants. They are very versatile evergreen shrubs, easy to grow, able to withstand semi-shade, and not susceptible to diseases. They have a delicate, attractive foliage, and come in a great variety of colours from subtle shades of green through to bronze, yellow and silver, and even

variegated foliage. They reach different heights and therefore can be incorporated in any size garden. As they can be clipped they are a good alternative to box, which is prone to box blight. They can be used as attractive specimen plants, or as a hedge, or as part of a mixed border. They are well suited to suited to seaside conditions being drought, wind and salt tolerant, and quite hardy up to -8ºC provided they are given good drainage.

Editor's note

1 *Corokia* used to belong to the family Cornaceae but is now placed, with *Argophyllum*, in the Argophyllaceae. *Corokia* comprises 6 species. *C. cotoneaster* is found throughout New Zealand, *C. buddleioides* is native to the North Island, and *C. macrocarpa* comes from the Chatham Islands. The other three species are subtropical and all are rare. *C. whiteana* is found in rainforest in a small area straddling the NSW-Queensland border; *C. carpodetoides* is endemic to Australia's Lord Howe Island, and *C. collenettii* is endemic to Rapa, the largest and only inhabited island of the Bass Islands in French Polynesia.

Box 1: **Mona's *Corokia* collection**

Species

C. buddlejoides	C. cotoneaster
C. macrocarpa	C. x virgata

C. x virgata cultivars

Banana Royal	Griff's Green
Bronze Lady	Havering
Bronze King	Limey
Cheesemanii	Mangatangi
Coppershine	Pink Delight
County Park Lemon	Red Wonder
County Park Orange	Silver Ghost
Everglades	Sunsplash
Frosted Chocolate	Sunsprite
Geenty's Ghost	Welsh Whisky
Geenty's Green	Yellow Wonder
Gold Stars	

WHICH ORTHROSANTHUS?

Peter Kohn

Some years ago we raised plants of *Orthrosanthus polystachyus.* This proved hardy in our Scottish garden at Kerrachar and also set viable seed for us.

After returning to Sheffield we acquired seed of *Tulbaghia violacea* from Silverhills Seeds in South Africa. It germinated well but was soon spotted by Ian Turner, the Curator of the Sheffield Botanic Gardens, as being an *Iris* relative and therefore not *Tulbaghia*. Plants were grown on, overwintered outside and in the second year they flowered. We immediately identified them as identical to the *Orthrosanthus* we had grown in Kerrachar. However, they were also identified as *O. chimboracensis* by a friend who had grown this species, whilst James Hitchmough agreed that they were an *Orthrosanthus* but thought they resembled *O. laxus*! This suggests that either these three species look extremely similar or that one or more of us had grown plants under an incorrect name.

Enquiries to Silverhills Seeds to try to identify the plants grown from their seed brought an explanation that their *Tulbaghia* seeds were obtained from outside suppliers and a request for pictures of the flowers. After a further exchange of emails the possibility that they might be an *Aristea* was raised since Rachel Saunders was unaware of any species of *Orthrosanthus* being grown in South Africa. However, we are pretty certain that our plants really are *Orthrosanthus* but that still leaves us

the problem of identifying which species.

There are nine recognised species of *Orthrosanthus*, four of them being endemic to Western Australia and the other five being found in Central and South America. All have blue flowers. Ours (both our original Kerrachar plants and the plants raised from the South African seeds) are a very pale china blue. The name *Orthrosanthus* is derived from the Greek *orthros*, morning and *anthos*, flower because the flowers open in the morning and have gone over by early afternoon. The RHS dictionary only describes two species, *chimboracensis* from the Americas and *multiflorus*, which is one of the Australian species.

The Pacific Bulb Society website, usually pretty reliable, shows pictures of four species, and our plants are more consistent with *O. chimboracensis* than *O. polystachyus*, which is shown with more cobalt blue flowers, whilst *O. multiflorus*, which is also shown with pale blue flowers, is much taller than our plants.

If one searches the internet for images of *O. polystachyus*, most of the images are the same cobalt blue as shown on The Pacific Bulb Society website. The Chiltern Seeds website, however, shows exactly the pale blue of our plants but describes the plant as a South American species; the true *O. polystachyus* is Australian. However, the Australian Botanic Garden website also shows *O. polystachyus* with a pale blue flower.

To confuse matters still further, Plant World seeds offer seeds of four Orthrosanthus species: *chimboracensis, laxus, multiflorus* and *polystachyus*. Of these, it is *O. laxus* which is described as having the unusual pale china blue flowers.

At this point I am completely confused. Our plants have pale china blue flowers, are hardy to -5ºC at least, have multiple flowering stems (which fits with the name polystachyus), are roughly 50cm tall, and have leaves about 0.8cm broad. However, I have yet to find a proper key to separate the species so I am still unsure of the identification.

For the record, this year we have germinated seeds obtained as *O. chimboracensis* from the Hardy Plant Society and these germinated at almost exactly the same time, and with very similar appearance to seeds of our own plants. Next year I plan to try all four species from Plant World as well as ordering both species offered on the APS seed list (*O. laxus* and *O. multiflorus*). At the very least the latter should be safe additions to the planting on the Australasian section of the Mediterranean Garden in Sheffield Botanic Gardens.

Meanwhile, if anyone can point me to an authoritative source of information about this genus, I would be extremely grateful.



THE BOTANIC GARDEN AT VILLA THURET

John Purse

In January 2015 I had the opportunity to visit the botanic garden at Villa Thuret, on the Cap d'Antibes near Cannes, on the Mediterranean coast of France. The garden has had a long and interesting history, including the

trialling of many Australian plants that are only marginally hardy in Europe. So for some years it had been on my wish-list of places to visit. Up-to-date information on the garden is sparse. The website says it is freely open to the public, but only Mondays to Fridays! This itself suggested it would be a rather different experience to most botanic gardens…..

The garden was established in 1857 by a wealthy and noted amateur botanist, Gustave Thuret. He bought four hectares of land on the then-barren Cap d'Antibes for his home and garden. The garden quickly became well known in botanical circles, and also in wider society; Thuret was evidently a good host, and the arrival of the railway meant that visiting became quite easy. Other people copied Thuret and built homes at this agreeable spot. Thuret died in 1875, and the house and garden were bought by his elder brother's wife, Madame Fould, in 1877. She immediately donated the garden to the French state in order to ensure the survival of the garden and the scientific work associated with it.

The first director of the new garden was another noted botanist, Charles Naudin. He was appointed in 1878 and remained director until his death in 1899. Naudin was a pioneer of the study of plant hybrids, both natural and artificial, and of acclimatisation of plants on the French Rivera. Some trees in the garden date from his time, including many palms and some now very large eucalypts.

Naudin clearly suspected that eucalypts could hybridise, but the first compelling evidence that this was possible came from one of his friends, Professor Louis Trabut, the government botanist in Algeria. Trabut had specimens of *Eucalyptus botryoides* and *E. rostrata* (now *E. camaldulensis*) planted in the garden of Nuestapha hospital from 1874. One of the *E. botryoides* performed sufficiently well for seed to be collected from it in each of the years from 1886 to 1889. Few of the resulting plants looked like *E. botryoides*, and most were vigorous and looked very different. He became convinced that the latter plants were hybrids with *E. rostrata*, and reported this at a scientific meeting in France in 1891. This conclusion was controversial at the time, but became accepted within a few years. That hybrid became known as *Eucalyptus* x *trabutii*, and it is still a common tree in southern Italy.

It was left to the Australian botanist and taxonomist Joseph Maiden to fully describe some of the more unusual eucalypts that Naudin had planted. For example, he assigned Naudin's *E. viminalis* var. *longifolia* as *E. viminalis* x *globulus*, and named this *E. antipolitensis*, after the name for Antibes in Greek and Roman times, Antipolis. The tree is still there, and now immense. Naudin presumably selected it as an unusual seedling from a batch of *E. viminalis* germinants.

The programme of introductions to the garden continued throughout the 20th century, and is said to continue today. Many of the older trees are most impressive. However, the garden does not seem to have prospered under the control of a succession of government bodies, and the civil servants employed there clearly have no desire or incentive to work at weekends! Many of the

shrubs are unlabelled (very frustrating, as I would really like to know the identity of the *Hakea* species there), and the number of successful introductions seems very small. The garden website[1] includes a page entitled "Collections" but there is no plant list, or general description of the introduction programme. There is no guidebook. The gardens are tidy enough, but there is no sense of much happening there other than maintenance. I was the only visitor for much of my time there.

Despite this, there is much of interest if one is aware of the history of the garden. And some introductions have thrived; for example, *Eucalyptus preissiana*, a yellow-flowered shrub from Western Australia, is evidently very happy and was in flower at the time of my visit (see photo, back cover). There is a very healthy *E. dorrigoensis*, planted some time before 1937 and now 2 metres in diameter and 38 metres tall.

Today, the garden is just about the only public green space on the Cap. Most of the palatial nineteenth century houses have been replaced by apartment blocks, or exclusive houses behind high walls, and the few remaining ones (and their gardens) will clearly suffer the same fate before long. I suspect that Thuret and Madame Fould would be aghast at the appearance of the Cap today, but at the same time happy that their legacy does at least still exist. With reasonable funding and good direction it could become a wonderful and fascinating resource once again.

1. www6.sophia.inra.fr/jardin_thuret

WINTERACEAE

Gary Dunlop

The Winteraceae is a small primitive family, in the group collectively known as basal angiosperms[1], and closely related to Magnoliaceae family, but from the southern hemisphere rather than the northern one. The family was established by Robert Brown in 1830 when he integrated the system of Jussieu, with the sexual system of Linnaeus[2]. Like many antipodean plant families, its origins lie in South America in the Jurassic period. It now comprises five genera, though most plants were originally classified as being in the genus *Drimys*, now restricted to Central and South America species.

The family is quite well represented in Australasia. Two genera, *Tasmannia* and *Zygogynum*, occur is Australia, with the latter also occurring in Indonesia, the Solomon Islands and Lord Howe Island. One genus *Pseudowintera* occurs in New Zealand, and there is one monotypic genus *Takhtajania* in Madagascar[3]. The current status of a sixth Indo-Malesian genus *Exospermum* is uncertain, as is the total number of species in the family, (estimates currently varying from 50 to 120), the total number being reduced considerably with a large number of described species being reduced to synonyms.

The first species in the family was discovered almost 200 years before it was given a botanical name. It was for a long time known only as Winter's bark. The name derived from a Captain Winter who commanded the Elizabeth, one of four ships accompanying Sir Francis Drake on his circumnavigation of the

world in 1577-80. The Elizabeth was the only one of the accompanying ships to successfully round Cape Horn, along with the Golden Hind, but became separated from it, and then turned back. Apparently illness was taking its toll of the crew, and Captain Winter sent a small boat ashore in Tierra del Fuego to collect medicinal herbs. The bark that was collected from one tree proved an effective cure for what was almost certainly scurvy. Captain Winter must have realised the significance and sent the boat ashore again to collect more. He then returned to England, with a supply of the bark, arriving home in 1579. It thus became an esteemed preventative and cure for scurvy, long before the discovery of vitamin C[4].

The plant was first collected, as a botanical specimen in 1772 by JR and G Forster, the father and son, who were the naturalists, and who accompanied Lieutenant Cook on his second voyage around the world. They subsequently named it *Drimys winteri*, in 1776[5], after Captain Winter, and supplies of Winter's bark were obtained to keep the crew healthy on the voyage across the Pacific.

In the succeeding years the plant was collected by various botanical explorers and collectors over the length of South America and given a variety of other names, but it has now been reduced to one species. It can grow up to 30m in the wild but in cultivation the tallest plant in the British Isles at 21m is in Fota Arboretum and Garden, just east of the city of Cork in the Irish Republic. The other tallest trees in the British Isles are also in southern Ireland, at Powerscourt and Killmacuragh, south of Dublin[6]. It obviously grows best in a cool most climate, and in my experience can reach 10 m in about 20 years, after which further upwards growth would seem to slow significantly. The variable forms of this tree are discussed by Bean at some length[7]. One of the most common forms is a narrowly upright multi-stemmed form with mid green leaves, up to about 20cm long and 6cm wide, which is the form I have grown for many years. A second form with slightly darker, larger, broader and thicker leaves (22cm x 8.5cm) with glaucous undersides is in cultivation and may have been propagated from the plant at Fota, mentioned by Bean and described in an old Fota catalogue as *D. winteri glauca latifolia*. Most forms are free flowering, usually in umbellate clusters of white flowers (see photo page 19), in April or May. It is by far the tallest and largest leaved species in the Winteraceae that can be grown in the British Isles.

A shrubby form, which only grows to about 3m tall, and found at high altitude, is a classified as a distinct variety, *D. winteri* var. *andia*. A second similar species *D. granadensis* is established for the most northerly trees, in central America and extending north into Mexico, and has recently being introduced into cultivation. It is described in New Trees[8].

Tasmania gave its name to a second genus when AC Smith, on the basis of chromosome counts, re-established the genus *Tasmannia* R.Br.as being different from *Drimys* Forst., and reclassified a total of 12 species as belonging to the genus[9]. Whilst Brown had named the first species *Tasmannia aromatica*[10], Smith re-



left:
Drimys winteri
flowers

below:
Pseudowintera colorata
leaf forms compared
left:
red suffused
right:
red speckled



Bursaria spinosa



Unripe fruits



Empty seed capsules



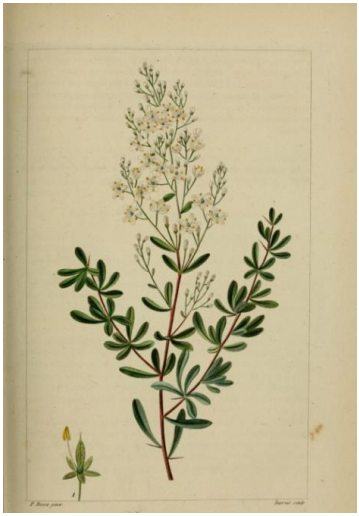




in full flower, flowers densely packed on branches, and flower close-up



***Bursaria spinosa*, shrubby form, Wurundjera Garden, Melbourne**



Itea spinosa The botanist's repository of new, and rare plants, 1803



Bursaria spinosa, Curtis's Botanical magazine, 1815



Tasmannia lanceolata

top to bottom:
buds with berry
flowers
mature flowers





established the name as *Tasmannia lanceolata* (Poir.) A.C.Sm., probably because Mueller had previously reclassified Brown's original name as *Drimys aromatica* (R.Br.) Muell[11], a duplication of the name that had previously been published, though wrongly as a synonym for *Drimys winteri*, by Descourt. In Tasmania the shrub is colloquially known as the Mountain Pepper, though it ranges from wet coastal to subalpine areas[12]. Within its natural habitat, it can range in height from 1 to 5m and from 1 to 3m broad, but will probably grow taller in garden conditions; my shrub is already about 5m tall in about 20 years, and being in light shade it branches more openly and less densely than when grown in open conditions. It is evergreen, with dark green narrow oblanceolate leaves on contrasting red stems. In April it produces copious clusters of pale yellow flowers at the end of shoots; they mature pink (see photos on page 22). It is monoecious and produces small berries, initially red and maturing black, with a strong pepper flavour. It is variable and several forms are listed in the RHS Plant Finder, including apparently both male and female forms, as well as a variegated form.

Tasmannia lanceolata also grows in Victoria and New South Wales, where a further 8 species of the genus, plus two subspecies grow, one extending north into Queensland. None of these would seem to be of horticultural interest. Other species apparently grow in Borneo, New Guinea and the Philippines.

The genus *Zygogynum* now replaces *Bubbia* and *Belliolum* according to Byng[1], but the Australian Plant census compiled by the Council of Head of Australian Herbaria (CHAH) maintains the genus *Bubbia*, with 4 species and 2 subspecies, and regards *Zygogynum* as a synonym. The genus *Zygogynum* would then appear to relegated to covering the species growing in Indonesia to the Solomon Islands, and New Caledonia.

The remaining genus *Pseudowintera* is found in New Zealand and is now comprised of 4 species, of which only one is in cultivation in the British Isles. The first three species were all first described and classified as being in the genus *Drimys* in the 19th century. The New Zealand plants were recognised as being in a new genus *Pseuodwintera* by Dandy who published the revision in 1933[13].

Pseudowintera axilaris was the first species to be discovered and named as *Drimys axilaris* by JR and G Forster in 1776[5]. It forms a small evergreen tree up to 8m high, with green leathery leaves that have glaucous undersides. It is found throughout the North Island but its range does extend into the north of the South Island. It is not particularly gardenworthy, as the flowers are insignificant. It has a similar common name to its Tasmanian cousin, the lowland pepper tree.

A second species, *Pseudowintera colorata*, was described by Raoul in 1844, though again as *Drimys colorata*[14]. It is found throughout both North and South Islands, and is variable. It is an attractive and colourful evergreen shrub with pea green or yellowish leathery foliage, with the new foliage either suffused or speckled with red. Although the New Zealand books do not make it clear, these two forms of the species also have slightly different shaped and coloured leaves (see photos page

19). The differences between suffused and speckled red may be an indication of habitat, which may be either open and exposed directly to sunlight or in dappled woodland light. The red suffusion is most pronounced on new leaves and fades as the leaves mature. This is almost certainly a protection from ultraviolet light, which is much stronger in New Zealand than in the British Isles. The leaves are quite thick and fleshy, and markedly glaucous beneath.

Plants of both leaf forms can have one of two different growth habits, either low spreading bushes up to about 1.5m, or more upright growth up to about 8m in the wild, but apparently rather less in gardens in New Zealand. I seem to have managed to acquire all four forms, but the more upward growing plants are slow to gain in height. The tallest one in cultivation is probably the plant at Castlewellan Arboretum which has reached about 6m or more, but is now showing its age, having lost many of its lower branches, as well as its earlier more columnar from. The pale yellow flowers are insignificant and occur in April, mostly singly at the junction of the leaves and stems, and face downwards, so they are all but invisible, unlike those of the South American and Tasmanian relatives.

A third species, *Pseudowintera traversei,* was described by Kirk in 1898 as *Drimys traversei*[15]. It is a small leafed shrub up to about 1.5m high, with a limited habitat range. Few New Zealand horticultural books even bother to mention it, but one does have a line drawing of it[16].

Surprisingly, after a gap of more than a century, a fourth species, *Pseudowintera insperata*, was discovered and described by Heenan and de Lange in 2006[17]. It had previously been assumed to be a naturally occurring hybrid between *P. axilaris* and *P. colorata*. This rare species forms a small tree up to 7m tall, with evergreen mid-green leaves with a distinct yellow central vein, and only occurs in several very small colonies north of Auckland.

It would seem that all the three garden worthy members of this family, *Drimys winteri*, *Tasmannia lanceolata*, and *Pseudowintera colorata* that are likely to be hardy in the British Isles, have been in cultivation for some time. Most are readily available and make a worthwhile contribution to almost any garden. For those who have not sampled the peppery flavour of the leaves of *Pseudowintera* or *Tasmannia*, caution is advised. The flavour is not sensed immediately, but develops slowly and becomes quite intense.

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SWEET BURSARIA

Judy Clark

Sweet bursaria is one of five species and two subspecies in the Australian endemic genus *Bursaria*, a member of the *Pittosporum* family (Pittosporaceae). Its scientific name is *Bursaria spinosa* Cav. and both the species and the genus were described and named in 1797 by the eminent Spanish botanist José Antonio Cavanilles[1]. The genus name derives from the Latin *bursa*, meaning purse, in reference to the fruits which are purse-like heart-shaped capsules (see photos page 20**),** not dissimilar to those of the European shepherd's purse (*Capsella bursa-pastoris*), while the species name refers to the spines which are often present on the branches[2].

Sweet bursaria, the 'sweet' recalling its pleasant fragrance, is just one of its common names. Others include native blackthorn and prickly box, names apparently first used by early graziers because of the damage the plant's needle-sharp spines could do to sheep and cattle. In Tasmania it is also called Christmas bush because it flowers at that time of year[3], though it is not the only Australian plant which goes by this name[4].

In full flower sweet bursaria is a gorgeous thing, with its branches smothered in delicately scented white blooms. The flowers are small but so dense on the stems it doesn't matter (see photos page 20). The hairless leaves are shiny, quite a dark green, and oval shaped but widest above the middle (the technical term is obovate). My plant's spines are small and slender and very prickly (think *Berberis*) but this character is very variable, as are leaf size and habit; it can be anything from a medium to tall shrub to a tree which can reach 10m[2,5]. At eight years old my specimen is now about 2.5m tall and, with some judicious pruning, growing into a fine tree. I have seen both shrub and tree forms growing in Victoria (see page 21); there is a particularly attractive tree growing near the entrance to the Royal Botanic Gardens in Melbourne. My plant first flowered in its fourth year, and flowers in July and into August.

Cultivation is not difficult. Good drainage - how often do we repeat this mantra? - is the key[5,6]. My soil is pretty clayey, so I made the planting hole quite deep and added lots of grit and compost. Otherwise sweet bursaria doesn't seem too fussy.

In my garden it has proved completely hardy, having flourished outside without any protection since planted out as a two year old in 2009. I do realise I live in the south of England, by the seaside, but even we experience frost and snow and ice, sometimes lots of, and sometimes it

lingers. My plant's first two winters were the worst in here in 25 and 30 years respectively, so it was well tested at an early age. In fact, Ross and Irons[6] suggests that -8ºC is the danger point for *Bursaria spinosa*, lower than I have recorded in my garden in the past 10 years. There is also that there is some evidence that smaller-leaved forms, like mine, may be hardier. However, even if they take cold well, plants in my garden also need to be a bit salt tolerant and able to endure quite a lot of wind. My sweet bursaria copes admirably.

In short, beautiful, easy to cultivate, hardy enough: what more could anyone want of a plant? Why, then, does *Bursaria spinosa* seem to be so rare in cultivation in the UK?[7].

It is not by any means a new introduction. In Britain the first authoritative description appeared in Curtis's Botanical Magazine in 1815[8], but it had been introduced more than twenty years previously, in 1793, by the Marchioness of Rockingham. Unsurprisingly, as Cavanilles was yet to name it, it was introduced under a different name, *Itea spinosa*, published by Charles Henry Andrews in 1803 in "The botanist's repository for new, and rare plants"[9]. The illustrations in the two publications (see page 21) clearly show identical plants, but while *Itea spinosa* Andrews is still listed a taxonomic synonym for *Bursaria spinosa* Cav[1] the name fell into disuse once *Bursaria spinosa* became accepted.

Sweet bursaria continued to be mentioned, with approval, in the gardening literature of the 19th and 20th centuries. For example, it is listed in Joseph Paxton's Botanical Dictionary of 1863[10] and again in George Nicholson's Illustrated Dictionary of Gardening of 1884-88[11]; these publications respectively describe it as "desirable" and "handsome". The Hillier Manual reports that *Bursaria spinosa* was given an AM (Award of Merit, which used to be given to exhibition plants) in 1928[13]. The entry in my pre-war edition of Sudell's New Illustrated Gardening Encyclopaedia[14] says it "makes a pretty display" while in Arnold-Foster's Shrubs for the Milder Counties[15], first published in 1948, it is described as "elegant". WJ Bean[16] remarks that its "great crop of reddish fruits is ..... decidedly striking". It has an entry in Huxley's 1992 New RHS Dictionary of Gardening[12] but by the twenty-first century *Bursaria spinosa* has gone, missing from the 2008 RHS A-Z Encyclopaedia of Garden Plants[17] and un- mentioned in recent books such as Gardening on the Edge[18].

Jebb and Andrews[12] article of 2001 identifies some plants in cultivation. In 1919 EA Bowles reported a plant growing in Llanarth (Cornwall); this in turn had come from cuttings struck from a plant growing against a wall at Bitton Vicarage in Bristol, in the garden made famous by the Rev. Henry Nicholson Ellacombe. It has been grown at Kew, Edinburgh and Glasnevin botanic gardens, by inference at sometime last century, as all these plants had died before Jebb and Andrews' article was published. They mention only two living specimens, both growing in Ireland, one in Mount Usher gardens and another in a private garden south of Dublin; the latter plant could then have been as much as 75 years old.

While my research has certainly not been exhaustive it does suggest that

at the very least that sweet bursaria has always been uncommon in cultivation in the UK, despite its acknowledged attractiveness. One explanation could be that it is too difficult to propagate, but I have not found any information to suggest that it is. On the contrary, Andrews in 1803 reported that *Itea spinosa* was easy from cuttings taken in April given bottom heat, and of those publications already cited which mention propagation, all repeat similar advice. Ross and Irons support this, stating that semi-ripe cuttings of *Bursaria spinosa*, taken in summer, strike quite readily. Of course an existing plant is needed for vegetative propagation, but, lacking that, my experience suggests that the species is not too difficult from seed as long as one is patient.

According to my notes my plant was grown from seed purchased in January 2006 and sown the following September. I left the pot outside from November (presumably I checked Ross and Irons' guidance that cold stratification might be needed). I put it back in the greenhouse in early spring and was eventually rewarded with one seedling. I had more success with seed collected in September 2013 from my own plant, possibly because it was fresher. It was planted two months later and the pots were overwintered in a sheltered spot outside; the result was a dozen or so seedlings. Of course, nowadays seeds of Australian plants are not so difficult to get hold of, but this may well not have been the case in the past.

There is also its reputation for being a bit tender. In 1803 Andrews described it as a "hardy greenhouse plant"[9] and this recommendation is repeated in the other 19th century publications I have cited. Even though grown outside by the early 20th century, it still retained its less than hardy reputation. Sudell says it is "suitable for mild districts" and Bean makes a similar comment, while Arnold-Foster describes it as "not suitable for cold gardens". Jebb and Andrews refer to Huxley's 1992 volume in stating that in Britain it should be grown on a warm south or west-facing wall in locations where frosts are "light and fleeting".

Although I have provided evidence to the contrary, sweet bursaria's reputation as not very hardy should not be immediately dismissed as wrong. It is widespread in southern and eastern Australia (being found in every state except Western Australia), and it grows in a variety of habitats from coastal to subalpine areas[2]. This makes it likely that provenance could be important in determining hardiness.

The seed for my *Bursaria spinosa* came from Tasmania (Oyster Cove Seeds; I do not know if they are still trading), although from where exactly I don't know. But the odds are that it would produce a hardier plant than seeds from mainland Australia, unless it had been collected from a mountainous area. The Marchioness of Rockingham's *Itea spinosa* came from New Holland[9] (the historic name for mainland Australia), and in 1793 this new land had been little explored. Her plant (or plants) probably originated from coastal New South Wales. Coming from a warm temperate climate, the odds would be against her plant being able to tolerate frost and snow, so keeping it in a greenhouse would simply be being sensible. Of course it was not

long before Victoria and Tasmania had been better explored (the Botanical Magazine[8] reports that Joseph Banks had in his herbarium *Bursaria spinosa* specimens from Van Diemen's Land (Tasmania)) but one can also speculate that early experience with it became received wisdom, regardless of the source of a *Bursaria spinosa* plant.

Maybe it was Ellacombe who first tried *Bursaria spinosa* outside - he was an eminent plantsman - but who knows where his plant came from? Did it do "exceedingly well"[16] at Bitton just because of where it was growing, or did its provenance help? Botanic gardens, however, would surely understand provenance. The three mentioned above apparently lost their plants during cold spells. But no detail is given about temperatures, or how long the cold lasted; was it just a bit cold, or was it exceptional cold? And was the continuing recommendation of 'mild gardens only' again the reiteration of received wisdom rather a statement based on substantial evidence?

My experience suggests that sweet bursaria's reputation as too tender for the great majority of gardens is undeserved. But such a reputation would reinforce its rarity in cultivation; if it's not grown because it's regarded as tender it won't be well-known, and if it's not well-known it's unlikely to be grown, even by those who might think it well worth experimenting with. This is why I wanted to write about it: to promote it as a plant worth trying, not just in ideal locations but also in less favoured ones. There may be a need to be philosophical about the possibility of losing it to severe and prolonged cold, but even that should diminish as climate change progresses.

I would be delighted to hear from anyone who is growing sweet bursaria, or has grown it in the past. Do you know the provenance of your plant? How well does it tolerate cold? When does it flower?

Finally I cannot finish without mentioning that thanks to going to this year's APS meeting in Sheffield (see page 38) I now know that I am not alone. I was absolutely delighted to discover that Sue Kohler grows *Bursaria spinosa* in her beautiful suburban garden in Sheffield, though she did tell me that her plant does not flower well, and got "slaughtered" in the dreadful winter of 2010-11. That did daunt me a little, but I would still strongly recommend it to the optimist and experimenter as a very gardenworthy plant.

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"LIQUID SMOKE" FLAVOURING AS A CHEAP GERMINATION ENHANCER

Paul Cumbleton

It is well known, especially in areas often affected by natural wild fires, that the germination of some plant species is enhanced by chemicals in smoke. Some of the best-known examples within the South African flora that respond to smoke treatment include ericas, proteas and restios. Smoke can contain literally thousands of chemicals and it took many years of research before a significantly active chemical was isolated and shown to be effective in enhancing the germination of some species. The breakthrough came in 2004 when two teams of scientists independently discovered the chemical and published papers[1,2]. The chemical belonged to a group of compounds called butenolides and the specific one involved was subsequently called karrikinolide (KAR). This chemical has since been synthesised, along with other analogues of it, all of which have shown activity in promoting seed germination in smoke-responsive species.

What to use as a smoke treatment?

When trying to germinate plants known to be responsive to smoke, many amateurs have used "smoke discs" – these are filter papers impregnated with smoke. You simply put the filter paper in water to dissolve out the chemicals and then use the resulting solution to treat the seeds. You can buy these smoke discs

easily on the Internet. One example comes the packet shown on page 32.

However, these discs are quite expensive. There is a much cheaper alternative available – a food flavouring known as "Liquid Smoke". This is produced by burning selected woods and passing the resulting smoke through water. It is used for flavouring things such as barbequed meats. Various brands are available and each produces a range of flavours made with differing woods. One recommended type that has been researched and used by scientists is Colgin Mesquite Liquid Smoke. You can buy this in various delicatessens, some supermarkets or over the Internet. The product is shown on page 32.

What effect does it have?

The precise effect varies enormously, but here is just one example: In one set of experiments[3], scientists used it to see what effect it would have on the germination of a grass known as Piligrass (*Heteropogon contortus*). They used a 1% solution (ie 1 part of the liquid smoke flavouring to 99 parts of water) and soaked the seeds for 15 minutes before sowing. Of untreated seeds only about 1% germinated, whereas about 40% germinated of the ones treated with the liquid smoke.

Is it useful for bulbs?

While this information may be of use to those of you who grow ericas etc, is it of any use specifically with the bulbs that most of us grow? The brief answer is "maybe".

In addition to plants known to be dependent on smoke-aided germination, karrikinolide has been shown to affect a wide variety of plants that are not dependent on the effects of smoke for germination, so it may be worth testing its effects on almost any species. Of South African plants tested by scientists, most geophytes do not show any improved germination when treated with liquid smoke. Just a few examples of those that do not respond include *Aristea major*, some *Romulea* and *Geissorhiza* species, and some species of *Moraea*, *Albuca*, *Agapanthus*, *Watsonia*, *Cyrtanthus*, *Kniphofia* and *Bobartia*. One or two however do show a response, such as *Aristea africana* and *A. racemosa* and *Wachendorfia* species. However, it is not a simple story. The concentration of the chemical used and the method and duration of application can affect what happens and many experiments done so far have often used just a single strength or method of application and for a single length of time. Varying these may have produced differing results. The picture is also complicated by the fact that other factors such as temperature, light and the dormancy state of the seeds all interact with each other and can influence whether or not the smoke has an effect at any particular time. So there is plenty of room for further experimentation!

Effects on growth

As well as affecting germination, smoke treatment has been shown to affect the subsequent growth and yield of some crop plants. For example scientists studied its effects on growth of Papaya seedlings[4]. They transplanted seedlings into peat-filled pots that were saturated with different concentrations of smoke-water (0%, 1%, 2%, 3%, 4%, 5%, 7%, or 10%, v/v). Summarizing the findings they said that "Results showed that all



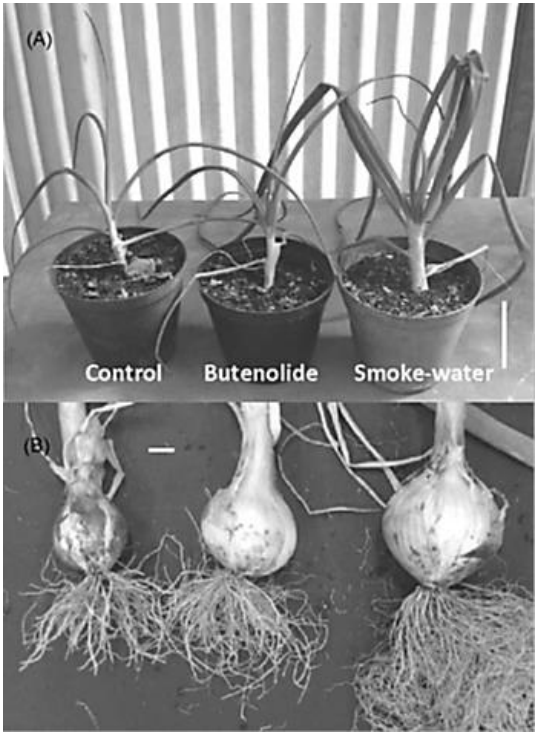
left:
Pondering a eucalypt at Borde Hill Garden

below:
The old rock garden at Nymans, newly planted with Australasian species









above:
Smoke papers and Liquid Smoke flavouring
left:
Onions treated with liquid smoke solution

growth parameters increased significantly compared with the control. In addition, smoke-water treatments consistently and significantly increased the percentage of nitrogen in roots and shoots and significantly increased the percentage of magnesium in shoots. In these experiments, smoke-water …. promoted multiple growth attributes such as chlorophyll content and seedling vigour index at all concentrations in papaya seedling production."

Of more interest to us is perhaps an experiment[5] done with onions which are of course true bulbs. Onion seedlings were watered with smoke water twice a week during their growing season, or with a butenolide or with just water as a control. The picture opposite shows the visible results. More specifically some of the results were:

- Smoke-water-treated onion plants had a significantly higher number of leaves compared with untreated plants, and these leaves were all longer than in the untreated plants
- In smoke-water-treated plants, dry leaf weight was significantly higher than the untreated plants
- Smoke-water treatment of onion plants resulted in significantly larger and heavier bulbs compared to untreated plants
- Smoke-water-treated plants significantly increased both absolute growth rate and harvest index in comparison to untreated plants

Using Liquid Smoke

I have not yet experimented myself to see if any of the bulbs I grow may respond in a similar manner, but the results shown above are surely tempting to give it a try and you may think the same. In the experiments I have read about, the concentrations used vary quite a lot so it would be worth trying differing ones. The typical range used is anywhere from a 1% (1 part liquid smoke to 99 parts water) to a 10% solution (10 parts liquid smoke to 90 parts water). For germination, methods varied from soaking seeds in the solution for anywhere between 15 minutes and 24 hours, or sowing as normal but then watering the seeds in with the liquid smoke solution. For growth promotion, water at whatever interval you choose right through the growing season. If any of you do choose to experiment, please share your results with the rest of us!

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Notes

For those wishing to dig into this subject in more depth, the best recent summary of the state of our knowledge about smoke effects on plants is the book "Ecology of Plant-Derived Smoke: Its Use in Seed Germination" by Lara Jefferson, Marcello Pennacchio, Kayri Havens-Young. Published by Oxford University Press USA 978-0-19-975593-6, 27 March 2014. This book:

- Gives 1355 species accounts of plants, with information on how the seed of species interacts with various types of smoke.
- Examines plant-derived smoke as a tool for promoting seed germination and growth.
- Is a continuation of the research presented in "Uses and Abuses of Plant-Derived Smoke" published in 2010. Both books are the first of their kind in what is now an ever-expanding and exciting field of research. This volume focuses on the use of plant-derived smoke as a tool, used for promoting seed germination and growth.

Many thanks to Paul Cumbleton and the Southern African Bulb Group for permission to reprint this article.

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AUSTRALASIAN PLANTS IN MY LIFE

Morwen Tregudda

Picture the scene: two Cornish economic migrants standing in a cold, dripping Cotswolds garden facing the dead and blackened remains of hebes and olearias brought with us from home. It was March 1966, and it was that tragedy that first made me aware of these plants from the antipodes that needed warmer climes more like their own. The sunken garden that mother thought would protect them turned out to be a frost pocket.

Although I spent my childhood in Cornwall, surrounded by Australasian trees and shrubs, I had paid them no more attention than any other exotics. I was much more interested in wildflowers and their lore, and the herbs grown by my mother and great aunts, mainly native and Mediterranean species, with one eucalyptus tree in later years.

I can trace my first serious interest in Australasian plants to the early 1990s. I was in London then, and had become involved with the Nuclear Free and Independent Pacific movement (NFIP), meeting visiting speakers from the islands, New Zealand and Australia, including Maori and aboriginal women. I began to study Pacific region plants and their medical and magical uses, and sought them out in Kew's Palm House and Temperate House, and on Cornish holidays.

After a two year 'Celtic walkabout', in 1984 I settled on Ynys Môn (Anglesey) where I had a garden of my own to design and stock. The island and the Gwynedd coastal lowlands have a climate mild enough for hardier Australasian plants to grow outdoors, including species of *Hebe*, *Olearia*, *Eucalyptus*, *Dianella*, *Pittosporum* and *Griselinia littoralis* which had just been introduced as a salt-resistant hedging plant.

Prevented from studying archaeology by lack of funding, I turned to my beloved plants to make a living, and set up Magic Gardens, a design and herbal supply business. I remained in touch with NFIP, and I had acquired some NZ and Australian penfriends who did their best to answer my botanical queries and sometimes sent

me packets of wild-collected seeds and illustrated local floras.

Rainy days found me in the Science Library of University College North Wales (UCNW) researching genera and species in which I had become interested, taking pages of notes from the RHS Dictionary of Gardening and Bean's Trees and Shrubs Hardy in the British Isles, and from whatever I could find about economic and medicinal plants. I joined the UCNW School of Plant Biology's Friends Group, which organised lectures and garden visits. Thanks to them I was able to collect seeds and cuttings from Australasian shrubs and trees in the university grounds; as usual, having a lot more success with the cuttings than the seeds.

By 1989 I had an expanding collection of shrubs, mainly from cuttings, which included hebes, olearias, *Pittosporum tenuifolium* and *Eucalyptus gunnii*. Mail-order firms Glenville and Merlin Rooted Cuttings - remember them? - provided some rarities, including *Trochocarpa thymifolia* from Tasmania and *Olearia semidentata* from the Chatham Islands. Alas, both were not long for this world. Although it seemed there were no specialist nurseries in North Wales (it was only later that I discovered Celyn Vale) I managed to find Australasian plants at Bodnant, Crûg Farm and even some garden centres, including my first huon pine (*Lagarostrobos franklinii*), hop bush (*Dodonaea viscosa*) and *Podocarpus alpinus*.

Other plants came from clients, including *Pellaea falcata*, *P. rotundifolia* and *Platycerium bifurcatum* from a fern grower, and a huge *Hebe armstrongii* that arrived on the back of a motor bike! Two of my oldest Australasian friends I found completely by chance: a Norfolk Island pine (*Araucaria excelsa*) in Llangefni market, and an umbrella tree (*Schefflera actinophylla*) thrown out of a Cotswold garden that was being cleared for development. I also devoured Chiltern Seeds' amazing catalogues and tried growing a range of species but with little success, apart from some eucalypts, New Zealand spinach (*Tetragonia tetragonioides*) and the Chatham Islands forget-me-not (*Myosotidium hortensia*) which sprawled over my rockery nourished by seaweed from Llanddona beach.

Then, in June 1989, I had to move back to the Cotswolds killing fields to care for my mother during her last illness. I stripped the Môn garden and took everything with me in pots except for the eucalyptus. Although I over-wintered most of them indoors the house was north-facing, cold, and damp, and I lost most of them over the next 18 due to enforced neglect and their sad conditions. But, despite this second tragedy, I was sustained by the hope of returning to Cornwall and starting a herb garden with an Australasian specialism. But the 1990s recession intervened and so there was nothing for it but to go to London and find work, at least for a year or two.

As usual, all my surviving plants came with me, but now I was renting houses on short contracts they had to stay in their containers. While in London I again made use of the study resources available, including the RHS's wonderful Lindley Library, the Natural History Museum Library, and Kew, and I enjoyed visits to the

botanical gardens in Oxford and Cambridge. Over the years I kept my Cornish herb garden dream alive. I managed to replace some of my Australasians, including *Fuchsia excortica*, *Dodonea viscosa*, *Tasmannia lanceolata* and *Solanum laciniatum*. Some of these came from County Park Nursery, but that was along and complicated trek without a car, despite its unequalled plant range. More plants came from the Crews Hill garden centre complex in north London, Hampton Court Flower Shows, and the South London Botanical Institute. They had a huge *Sophora tetraptera* in full flower in the garden behind their house, and I bought one of its seedlings.

The revival of interest in ferns in the 1990s enabled me to acquire some new species including *Asplenium bulbiferum* which lived until this year. I fell in love with tree ferns and photographed the first ones to be planted out in London's squares, and I read avidly about the discovery and propagation of the Wollemi pine. And, last but not least, I discovered the Australasian Plant Society and have been a member ever since.

At long last, in December 2008, I was able to go home to Cornwall, and the plants came too. I had great hopes of growing more, and less hardy, Australasian plants here, as the experts were telling us that global warming would bring temperatures up to Mediterranean levels. In fact, three days after my arrival in Penwith the temperature dropped like a stone and it snowed for the first time in 30 years! My Australasians spent the cold winters of 2008-09 and 2009-10 indoors. I lost only my *Syzygium australe* which had been packed in the wrong crate and left outside.

Now I have lists of all my tender and half-hardy plants to bring indoors depending on how conditions deteriorate from October onwards. That is *one* advantage of container gardening! This cottage has deep window-sills ideal for plants, and double-glazing to keep them warm, and they seem happy. The paved patio in front can reach Australian temperatures un summer, and that is where most of my non-medicinal plants live for most of the year. A walled patio at the at the back, and some brick walling at the end of the big garden provide shelter from the strong winds off the sea, and are home to medicinal plants from Australasia, Japan and South America.

Cornwall must be the nearest place to heaven for lovers of Australasian plants, except for their native lands. Readers will probably be aware of our show gardens such as Tresco, Trebah, Heligan and Glendurgan, but these plants can also be seen in our parks, lining our streets, and in many private gardens. Falmouth's Dracaena Avenue is actually lined with cordylines. They are now called Cornish palms and are ubiquitous as are phormiums, *Griselinia*, hebes, olearias and callistemons. Most garden centres and nurseries sell a wide range of the more reliable species and Burncoose, Treseders and Lower Kenneggy nurseries are continually introducing and trialling new ones.

Over the last six years I have trebled my collection of Australasian plants, including the long coveted tree fern (*Dicksonia antarctica*) and the Wollemi pine (*Wollemia nobilis*). Others - 'herbs' - include *Cordyline fruticosa* (syn. *C. terminalis*),

Corokia buddleoides, *Correa alba*, *Eucryphia milligani*, *Eucalyptus gunnii*, and *Dodonea viscosa* and several aromatic *Prostanthera* species (*cuneata*, *rotundifolia*, *lasianthos*, *rhombea*, *spinosa*, *staurophylla* and *walteri*). I have also bought *Ozothamnus ledifolius* and *O. rosmarinifolius*, *Hoheria sexstylosa*, *Dianella tasmanica*, *Acradenia frankliniae*, *Olearia phlogopappa*, *O. virgata*, *O. solandri* and *O. traversii*, the multi-named bluebell creeper (*Sollya*/*Billardiera*), and *Muehlenbeckia* and *Callistemon* species.

I would love to hear from other APS members in this area or anywhere else for plant chat, advice and continuing education, especially on medicinal plants and my special plants. I can be contacted at 7 Long Row, Sheffield, Paul, Penzance TQ19 6UN, Cornwall/Kernow.

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2015 MEETINGS: REPORTS

Sheffield

Peter Kohn

Overnight thunderstorms must have kept Robbie and Ben awake in their van and they certainly caused delays on the roads which slowed down the arrival of Mary and Ken, but by 11:00 the sun was shining and eight of us were in the area of Sheffield Botanic Garden where the University of Sheffield Department of Landscape Architecture has a couple of trial plots on which they are researching suitable South African species for introduction into their low maintenance planting schemes. This is the group responsible for the planting in the London Olympic park and their schemes are used all over the world. So far I don't think their researches have included the Australian flora so maybe that should be their next research project?

Sheffield Botanical Gardens was opened in 1836, originally as a garden for subscribing local worthies. Robert Marnock won the competition to design the gardens and he also became the first Curator. Marnock went on to design many other public and private gardens after winning another competition to design the garden in Regent's Park for the Royal Botanic Society. As Judy well knows, his final garden was Alexandra Park in Hastings. The garden he created in Sheffield features many specimen trees, often on mounds so that the whole shape of the tree including the roots could be appreciated, and the present gardens feature a wide range of interesting specimens, some of them quite rare and with a number of 'champions'.

There are several Australasian plants dotted around but the main areas of interest to the society are a section of the Pavilions and the Australian section of the Mediterranean Garden where plants endemic to each of the five geographical regions which share a Mediterranean climate are displayed in separate areas .

The design of the glass pavilions were also the result of a competition and Joseph Paxton was one of the judges. The pavilions combine some of the earliest curvilinear domes with ridge and furrow connecting sections and it is believed these are the only glasshouses in the country with this combination still in existence. However, the original ridge and furrow sections were demolished in 1902 and it was only in 2003 that the

fully restored glasshouses were reopened. The design of the planting within them was largely dependent on the advice of David Mitchell, Curator of the Glasshouses at the Royal Botanic Gardens in Edinburgh.

The group explored the pavilions before lunch and the general consensus seemed to be that many of the plants in the Australasian section were better suited to being grown outdoors (several of them are also in the gardens already). Maybe whenever a replanting is undertaken plants from more tropical areas such as Queensland might be attempted,

We ate lunch basking in the sun on the terrace outside the Curator's House, which is now a restaurant, before setting off to explore the Mediterranean Gardens. There are still large spaces needing filling in the Australian section and various ideas were put forward. Most of the shrubs already in the area are winter flowering (Correas especially) but *Hakea teretifolia* was in full flower.

The visit to the garden ended with a walk through the 'Evolution Garden' which is the main teaching area with boards describing the evolution of plants. It also contains a very fine collection of conifers and a 'fossilised tree stump' which is actually a cast of the roots of a giant club moss from the carboniferous period.

From the Botanic Gardens we moved on to Millhouses, a suburb in the southwest of Sheffield laid out in the 1920's and 1930's, an era when land was cheap and large house plots were created giving really long back gardens. Sue Kohler is President of the Friends of the Botanic Gardens in Sheffield and a long-standing member of the APS. As well as providing us with refreshments she also produced a list of 39 Australasian plants growing in the garden (at least two of them originally from Jeff Irons). The fortieth plant, a Podocarpus, grown from a cutting, was identified as *Podocarpus salicifolia.* I have known Sue's garden for at least thirty years and it is a delightful sheltered haven full of interesting species. It was a real pleasure to wander round it with her.

Most of us then paid an unscheduled visit to Simon Olpin's very similar plot used in a totally different way. Simon's passion is bamboos and his back garden is a long tropical journey through a forest of bamboos underplanted with tree ferns and many other exotics. It is almost impossible to believe that one is in a suburban Sheffield garden and equally impossible to comprehend where the many tender plants that he lost in the severe winter of 2010-2011 could have fitted. We had to invade the neighbour's garden to actually get a look at some of the plants, so tall and dense is the planting.

By contrast, George Smith lives out in Mosborough (strictly in Halfway) on a much more modern housing estate, and consequently with a much smaller plot on which to garden. Once again we were regaled with wonderful refreshments by George's wife, Cynthia. before examining the garden into which they have crammed a wealth of variety and interest, not least a *Eucalyptus gunnii* which has made a miraculous recovery from apparently terminal damage in the same winter that devastated Simon's garden.

West Sussex
Borde Hill Garden

Judy Clark

Before this year I had visited Borde Hill once, many years ago when I was very much a novice gardener. I don't remember much about that visit, but what stuck was the idea that it was mostly a place for shrubs such as camellias, rhododendrons and roses, and rare trees. Later I learned that when it was founded plant material had been supplied by some of the great plant collectors, and that consequently it contained lots of interesting species, including many champion trees. But I didn't imagine it would contain much in the way of southern hemisphere plants until Gary Firth suggested an APS visit.

I discovered from the website that Colonel Stephenson R Clarke, when he created Borde Hill Garden in the early 1900s, filled it with species gathered from expeditions to the Himalayas, China, Burma, Tasmania and the Andes., This sounded promising. The website told me very little about what specific plants I might see, though among the few mentioned were *Richea scoparia*, *Olearia nummulariifolia* and *Correa backhouseana*.

In June a friend suggested we meet there, so I had had a chance for a brief look around. It was fortunate that I had because in the event Gary was unable to accompany us. (You will be pleased to know that he has now completely recovered.) So when we met in the morning of 22nd August, on a day that turned out to be the hottest of the year in West Sussex (what is it about APS meetings?), I suggested we make for the Italian Garden, with its stunning views across the countryside to the east, where I remembered I'd seen some eucalypts. So we did, and there were eucalypts (see photo page 31), but where were the *Eucalyptus* experts when you needed them? Fortunately there was a label, but I didn't make a note of the name at the time - was it *E. nitens*? Another striking plant was an old *Olearia*, with branches going every which a way.

From there we went via the Upper Terrace, where beds edged with myrtle (in place of box) were admired, to the Round Dell and the Old Potting Sheds. With its sunny aspect, and walls and sunken areas providing protection, this part of the garden seemed a good spot for less hardy plants. We were not disappointed. Among Australasians in this area were *Callistemon*, *Correa backhouseana*, *Clianthus puniceus*, a *Phyllocladus* and *Olearia solandri* in full flower. Other southern hemisphere species doing well included *Colletia armata* and *Cestrum parqui*, both from Chile, the latter in full flower, and *Eryngium pandanifolius* from South America. *Eryngium* is a cosmopolitan genus which has its centre of diversity in South America but includes half a dozen Australian species.

By then we were getting hungry, and we had a plant swap to attend to as well as another garden to visit in the afternoon. So it was time to leave, admiring the borders along Paradise Walk as we walked back to get lunch. In our short time there we actually saw very little of the formal gardens, which cover nearly 7 hectares. I will be going back not only to try and find that *Richea scoparia* and to visit the Mediterranean Garden, but also to revisit the areas we did see because

I'm sure I missed other interesting plants.

Nymans

Jeremy Spon

We were met at the entrance by one of the gardeners, Tom Whalley, who was keen to show us a newly planted area for which he was responsible, and which features mostly Australian plants. So we walked briskly to the further end of the garden, stopping only briefly on the way to look at one or two particularly rare (though not Australasian) plants. What was originally a rock garden has been replanted as a dry garden; as well as trying to find plants that would not need watering, the intention is to test the hardiness of a range of plants never before grown at Nymans.

The planting was actually planned and undertaken by Flic Archer, a trainee gardener working at Nymans for the past two years under the National Trust's Academy scheme. The site looked promising, a miniature ravine running more or less due north south, and sloping to the south. The plants had only been put in at the beginning of June, so the garden had not really grown in at all, but the selection of species means that it will be a very interesting space to see develop over the next few years (see photo page 31).

All the plants previously on the site had been removed, apart from two old Japanese maples, which were too historic to risk moving. Plants had been mainly sourced from the nurseries Urban Jungle and our own Graham Blunt's Plantbase. There was a feeling among the members present that the selection was a little bit random, with doubts expressed about the likelihood of some of the plants surviving even a mild winter, but the intention was to experiment, so who knows. Among the interesting species noticed were *Melaleuca linearifolia, M. thymifolia, Coprosma repens, Paraserianthes lophantha, Callistemon linearis* and *Entelea arborescens.*

Tom left us to discuss the plants amongst ourselves as he had other jobs to do; not a day off for him, and we are grateful he could spare the time to show us the garden. We then moved on to the South African garden, which is nearby, and was looking quite spectacular, with impressive groupings of *Elegia capensis, Kniphofia uvaria, Berkheya purpurea* and *Melianthus major.* It is clear that the soil at Nymans is well-suited to growing southern hemisphere plants, and the intention of the gardeners there to keep experimenting means that it should be well worth further visits in the future. We ran out of time to see the rest of the garden, which has many other interesting areas, including one created by former owner Leonard Messel to accommodate plants collected in Tasmania by Harold Comber in the 1920s. So I for one will certainly be going back for another look before too long.

Illustration acknowledgements

Mona Abboud: page 10, right and below
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John Purse: back cover
Hilary Spon: page 31
commons.wikimedia.org: page 21, below

CONTACTS

President	Tom Hart Dyke Lullingstone Castle Eynsford Kent DA4 0JA
Chairman	Robbie Blackhall-Miles FLS chairman@anzplantsoc.org.uk
Treasurer and Membership Secretary	Jeremy Spon 1 Iffin Cottages Iffin Lane Canterbury Kent CT4 7BE Tel : 01227 780038 membership@anzplantsoc.org.uk
Newsletter Editor	Judy Clark 36 Collier Road Hastings East Sussex TN34 3JR Tel : 01424 720369 editor@anzplantsoc.org.uk
Seed Manager	Janet Miller Westwind Main Road West Keal Spilsby Lincolnshire PE24 4BE seeds@anzplantsoc.org.uk
Event Co-ordinators	Gary and Maria Firth 9 Harlands Close Haywards Heath West Sussex RH16 1PS Tel: 01444 413626 meetings@anzplantsoc.org.uk
Webmaster	Ben Ram webmaster@anzplantsoc.org.uk
Enquiries	enquiries@anzplantsoc.org.uk



***Eucalyptus preissiana* in the garden at Villa Thuret**