APS Australasian Plant Society

PENTACHONDRA

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Syzygium australe

AUSTRALASIAN PLANT SOCIETY

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

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TONY ENTWISTLE

The APS has lost one of its founder members, and one of the key people in its creation and development, with the death last December at 86 of Tony Entwistle (photo page 9). Along with the late Jeff Irons, Tony was instrumental in setting up the Society, and acted as Treasurer for many years. Those who met him will have encountered a very modest man, who nevertheless seemed to recognise, and often to have grown, almost any unusual plant you cared to mention. The tribute to Tony that follows is based on information provided by his widow, Ann, and some of his many gardening friends.

Tony's professional career was as a GP in Widnes, a career that lasted over 40 years, including the time when he worked as a locum after officially retiring from the practice. A colleague described him as a doctor of the old school, providing more or less 24-hour care of his patients, and loved and respected by them for his kindness and patience. Ann recalled how, when he was working as a locum, patients would ask when he was next in the surgery, so they could book appointments to see him rather than their normal doctor!

Gardening was a passion of Tony's for many years. Sam Youd, who until recently was Head Gardener at Tatton Park, recalls first meeting Tony some 45 years ago at Liverpool Botanic Garden, which Tony used to visit a couple of times a week. His enthusiasm and knowledge marked him out even then as a true plantsman. Sam met up with Tony again at Tatton Park, where he was a member of the Tatton Garden Society, served on several committees, and acted as seed collector for many years. This involved collecting, cleaning, drying and packeting seed from the garden, and producing the Garden's seed list, which was sent to Botanic Gardens around the world. Sam recalls he and Tony being involved with exchanging seed with many of these gardens, including some in China, then not open to the West.

Tony had a great knowledge of Latin, and of plant names, and a terrific memory for plants, and where he had seen them. He could recall, and give exact directions to, rare plants growing in many places he had visited at home and abroad. He particularly loved Australian plants, and grew many rare ones over the years, often from seed. His researches into these plants, and how to grow them, led him to compile an information pack for the APS which, although now rather out of date, was a valuable resource at the time, including much information otherwise unavailable, some of it gathered on the internet - Tony was always willing to embrace new technologies.

As well as his long involvement with Tatton Park, Tony was also a supporter, and member of the management committee, of the Lovell Quinta Arboretum (established by the astronomer Sir Bernard Lovell.) He was also remembered here with great affection, as a helpful and knowledgeable plantsman. And on top of all his gardening interests, Tony was also a very active supporter of Scouting in the North-West, organising local and international events for them.

All in all, Tony's life was a very full one, and the APS was very lucky to have his whole-hearted involvement

from the very start. His last years were dogged by ill-health, but he never complained, and continued to take an interest in the affairs of the Society. He really will be greatly missed, and our deepest sympathies are extended to his family.

Jeremy Spon

JOHN PURSE

Members will have seen in the December issue of Pentachondra the very sad news that long-standing APS member John Purse died suddenly in November. Quite a few of you will have met John at an APS event, and he wrote several very interesting articles for Pentachondra – what follows is a brief tribute partly based on information provided by John's widow Elaine, and partly on personal recollections.

John was only 67 when he died, although he always seemed much younger, due in part no doubt to his devotion to keeping fit, which included many hours spent mountain-biking in Bedgebury Forest. His background was in chemistry, initially receiving a degree in that subject from Durham University, then moving to Aberystwyth where he completed a PhD in the more specialist area of plant chemistry. This led to a job with the research division of Shell at their facility in the Kent countryside just south of Sittingbourne. Initially working on cereal research, he ended up in the forestry division, and travelled to many exotic locations, including Uruguay and the Congo, advising on the many commercial forestry projects Shell was undertaking at the time. The withdrawal of Shell from the agrochemicals business saw John move Shell forestry to East Malling Research Station, where he headed up Shell's forestry research before they withdrew from that business and he took early retirement and set up his own forestry consultancy business.

During his time at Shell John had become particularly interested in the use of eucalyptus for commercial forestry, and his business increasingly specialised in this area. Persuading landowners in the UK to take eucalyptus seriously as a crop was at first an uphill struggle, but gradually he built up a clientele willing to commission him to source seed and contract the growing of seedlings, and recently, after trials, the Forestry Commission took up the idea of using eucalyptus for timber production.

As will have quickly become apparent to any member who discussed them with him, John was both fascinated by, and incredibly knowledgeable about, eucalyptus. He worked closely with Owen Johnson of The Tree Register of the British Isles (TROBI) on recording eucalyptus in cultivation in the UK, and forged close links with several landowners who allowed him to plant various species to test their suitability for growing in the UK. He also became increasingly interested in breeding improved forms of eucalyptus for ornamental use, work which was ongoing when he died. The APS is helping John's widow, Elaine, to find suitable homes for the plants he produced in this breeding work, so that they can also be trialled, and his efforts over the past several years do not go to waste.

When he died, John had also been working for some time to try and produce hardy red-flowered

leptospermums, by crossing existing L. scoparium forms with other hardier species (photo page 9). One cross from this work is currently being trialled by a nursery in The Netherlands.

John was very supportive of the APS over recent years, not only by attending meetings and writing articles for Pentachondra, but by always responding very promptly and helpfully to queries relating to eucalyptus. In person he was modest and unassuming, but with a quietauthority and a dry sense of humour. Visiting my garden on one occasion he observed of a 50 ft (15.2 m) tall Eucalyptus urnigera "You do know it gets big, don't you – really big?" in a tone of voice reminiscent of Sir Humphrey in 'Yes Minister' asking Jim Hacker "Is that wise, minister?". I, and I am sure all APS members who knew him, will miss John greatly, and we pass on our sincere condolences to Elaine and her children.

Jeremy Spon

A *Eucalyptus* collection

Earlier this year, on an extremely windy February day, Owen Johnson and I visited one of John's eucalyptus plantations in Kent. Owen had previously visited this collection with John and so, armed with a planting plan, Owen was able to identify which species were which. And, despite the wind, he had a go at measuring them. Owen's comments (below) about the best trees in the collection illustrate just how important John's work with eucalyptus was.

Eucalyptus camphora: a remarkably happy-looking luxuriant tree, exceeded in Britain as far as I know only by one in Cornwall.

Eucalyptus cinerea: two good examples of a seldom seen species; another may be a chance hybrid (and perhaps particularly interesting?)

Eucalyptus crenulata: The best specimen remains the largest known in Britain for this small tree.

Eucalyptus cypellocarpa: The most vigorous specimen is by far the best in Britain and is likely to overtake one older tree known from County Wexford; it's grown 25 m in 12 years which is as fast as any tree in Britain.

Eucalyptus gregsoniana: though only a bush, it represents a very rare species.

Eucalyptus moorei: the only established tree currently recorded in Britain.

Eucalyptus nicholii: Two good examples of a pretty species which often dies in cold winters, so they could be hardy forms better suited for the UK.

Eucalyptus nova-anglica: this tree has grown into the best in Britain - an older one in Devon is taller but much thinner.

Eucalyptus saxatilis: the first established plant recorded in Britain.

Eucalyptus stellulata: two healthy examples of a very rare species.

APS NEWS

Welcome!

The APS would like to extend a warm welcome to new members John Anderson, Kevin Ball, Christopher Gliddon, Catherine Hocking, Tarek Idri, Benoit Klein, Florence Mary, Martin Morris, David Renouf, David Sharp and Anne Blanco White.

Meetings and shows

RHS Plant Society Show, Wisley, Saturday 17th and Sunday 18th June

After our successful display at the 2016 RHS Specialist Plant Society Show at Wisley Gardens we decided to exhibit there again in 2017. The show features many specialist societies besides ourselves and this year it has been moved to the main lawn where it should attract many more visitors than in previous years.

The show is open from 9am to 5pm on both days and offers a great opportunity to meet APS members, including some of your committee, and to learn more about growing Australasian plants. It is being co-ordinated by APS events organiser Gary Firth; contact him at meetings@anzplantsoc.org.uk if you would like to help and have not already volunteered. The only qualification required is lots of enthusiasm for Australasian plants!

RHS Hampton Court Flower Show Tuesday 4th to Sunday 9th July

APS members, in conjunction with Plant Heritage, will be displaying plants from Australia and New Zealand, including plants from nine Plant Heritage National Collections (see box) and Plant Guardians. APS members will be on the stand every day, so come along and say hello. Hampton Court is a show where you can buy plants, so a visit also provides a great opportunity to purchase interesting items from specialist nurseries, including of course plants from Australia and New Zealand.

National Collections on show at Hampton Court

Myrtaceae including Lophomyrtus: Gary and Maria Firth

Muehlenbeckia: Jan Michalak

Corokia: Mona Abboud

South East Australian Banksia species: Robbie Blackhall-Miles

Hebe stricta, traversii & cvs.: Steve Harding

Correa: Judy Clark

Eucalyptus spp.: Tom Hart Dyke

Podocarpus and associated Podocarpacae: Doug and Linda Smith

Araliaceae: Doug and Linda Smith

Marks Hall Gardens and Arboretum, Essex: Saturday 5th August

The Marks Hall tree collection is organised geographically with plants from the temperate regions of the world grouped together. There are areas representing Europe, Asia, North America and the southern hemisphere, all set in more than 200 acres of historic landscape. . Highlights include the Millennium Walk, designed for structure, colour and scent; the largest planting in Europe of Wollemi Pine (see box, next page); and an inspired combination of traditional and

contemporary planting in the 18th century walled garden. More information can be found at www.markshall.org.uk/.

The gardens are situated between Coggeshall and Earls Colne, with access from the M11 and A12. There are brown and white signs on the A120 north of Coggeshall. The meeting will start at 10.30 am, with, we hope, a guided tour, so we suggest members aim to arrive about 10am or soon after. Admission charges will depend on the size of our group. For fewer than 10 standard admission charges will apply; 10 or more and the cost reduces to £4.50. The guided tour is an additional £2.00 .

Afterwards there will be time to visit nearby RHS Hyde Hall Gardens which is holding its annual flower show that weekend. The Dry Garden, which showcases drought-tolerant plants and includes many southern hemisphere species, should be of particular interest to APS members.

For further details please contact Gary Firth at meetings@anzplantsoc.org.uk. If you run into problems on the day contact Robin on 07436 111 780 or Judy on 07724 045 701.

Mona's Garden: Saturday 13th August

APS member Mona Abboud will be opening her award-winning garden from 2 to 5.30 pm under the auspices of the NGS. The garden is home to the Plant Heritage National Collection of Corokia as well as containing other unusual southern hemisphere and Mediterranean plants. The emphasis is on texture and shapes and leaf colour. For pictures and more information, visit monasgarden.co.uk/.

Admission is £3.50 and includes light refreshments. All proceeds go to charity. The address is 33 Wood Vale, London N10 3DJ.

Wollemia nobilis, the Wollemi Pine: Critically Endangered

In 1998 the total number of mature individual Wollemi Pines known in the wild was fewer than 50. Since then more have been found, bringing the total to about 80 mature individuals or clumps and about 300 juveniles and seedlings. However, all the plants are confined to a single location, a remote gorge in the Wollemi National Park in New South Wales. Its small population size combined with a restricted distribution mean that the Wollemi Pine is very vulnerable to external threats, and so the IUCN classes it as Critically Endangered in its native habitat.

External threats include disease caused by exotic pathogens such as *Phytophthora cinnamonii* and disturbance caused by unauthorised access to where it is found. Severe bushfires too represent a significant danger, while changes in rainfall and temperature patterns due to climate change are another potential threat.

Thanks to an ex situ conservation and research programme, the Wollemi Pine is thriving in cultivation and has actually proved more adaptable and cold- hardy than expected. This has reduced the chance of the species becoming extinct, but it would be a tragedy if it disappeared from the wild.

Source: The IUCN Red List of Threatened Species: www.iucnredlist.org/details/34926/0

Hastings: Judy's garden and Alexandra Park, Saturday 30th September

Judy Clark's small suburban garden will be open from 10.30. It is packed with around 300 southern hemisphere plants, the majority Australian, including a Plant Heritage National Collection of correas, also known as Australian fuchsias. Correas can bloom from August to May and, fingers crossed, many of them will have started flowering by late September. This part of the event is joint with Plant Heritage Sussex.

Please contact Judy at editor@anzplantsoc.org.uk to let her know that you are coming so that she can prepare sufficient morning tea! And bringing plants to swap or sell will add interest for everyone.

For lunch bring a picnic, or there is a reasonable cafe with a fantastic sea view about 5 minutes walk away on the West Hill.

In the afternoon Dr Owen Johnson, author of the **Collins Tree Guide** and **Arboretum**, will show us round Alexandra Park, starting at about 2.30 pm. The tour will focus on southern hemisphere species but will not neglect other interesting trees. Alexandra Park is regarded as the best public park in England to see rare and well-grown trees, and currently holds 16 Champion trees. A donation to the Friends of Alexandra Park would be appreciated.

Judy lives at 36 Collier Road, TN34 3JR for navigation aids. Her house is on the West Hill, about 500 m inland from Hastings Castle. Be warned, the house numbers go up one side and down the other, but the front garden should be obvious. There is free on street parking in Collier Road and nearby streets. From Hastings station (trains from Victoria, Brighton and Charing Cross) it is approximately a 25 minute walk (including a steep hill), or catch the 28 bus (if you can find one; they run roughly every 70 minutes) from the station to the West Hill and then it's a 5 minute walk.

Alexandra Park is a short (20 to 25 minutes) walk from Judy's house or a 5 minute drive plus a walk the length of which depends on where there's a parking space.

AGM 2017: Saturday 18th November

As in previous years we would like to welcome you to Lullingstone Castle for what always proves to be a fun day. We will start at 10am and the business aspect of the AGM will be confined to the morning session. After a buffet lunch there will be a tour of the world famous World Garden, not to mention opportunities to catch up with old friends and make new ones, purchase Australasian plants from specialist growers and swap plants with other society members.

Could you write a piece for Pentachondra?

Many thanks as always to everyone who provided articles for this issue. Pentachondra has always been a magazine by members for members and the greater the number of contributors, the greater the diversity and interest of our journal.

Have you ever thought of writing something? It could be short or long or in-between, as long as it has some connection with Australasian plants and their allies. Maybe you could tell us about your own garden, where it is,

what the soil and climate are like, and the successes, and otherwise, you have had growing Australasian plants. As Graham Sumner's article is this issue (**page X**) illustrates, knowing what doesn't work is as important as what does work. This is especially important when it comes to growing plants from seed. Every one of us, from the novice to the most proficient - can learn from others' experiences. And if I can't convince you that your adventures with Australian plants will be of interest to others then how about recommending a book, or a garden or nursery that you enjoyed visiting.

The deadline for the next issue is **15th October**. If you have any questions about contributing please don't hesitate to contact Judy at editor@anzplantsoc.org.uk; she'll be delighted to hear from you.



THE 2017 SEEDLIST

Judy Clark

The APS seedlist has been extensively revised since last year. We are offering fewer species, but we have restocked the most popular ones as well as introducing many new ones. If you can't find what you want please let us know and we'll do our best to get hold of some seed.

The list itself has been reorganised. Species are now arranged according to the plant family they belong to, something we hope not only makes the list more readable but also makes it easier for you to select species that you would like to grow. The codes too have gone. We felt they were not very user friendly, and in any case they dated from an era when it was not nearly as easy to access information about Australasian plants as it is today,

Where to find out more about the species on offer

There's lots of specific information in back issues of Pentachondra, some of which are available on the members' area of the APS website. (Contact Ben at webmaster@anzplantsoc.org.uk if you need a password.) Another invaluable source is **Australian Plants: A Guide to their Cultivation in Europe** (Ross and Irons, 1997; available to APS members for £10 plus postage). As well as detailed accounts of 142 Australian plants particularly recommended for cultivation its Plant Reference List contains detailed information about the characteristics and requirements of a further five hundred or so species.

However , none of these sources are encyclopaedic, and that's where search engines like Google can be your friend. The problem here is that, as we all know, electronically sourced information can vary enormously in quality, so how can you tell whether what your search engine comes up with is reliable?

Remember that common names often apply to more than one species, with obvious implications for search results, so always search for a plant using its scientific name. However, even if you do this the information that comes up may not be accurate; for example there are far too many pictures of plants on the internet that have the wrong name attached.

So, also ask yourself who is providing the information that comes up. You can be pretty sure of the websites of well-respected organisations such as the Australian National Botanic

Gardens (www.anbg.gov.au/gardens/) and the Australian Native Plants Society (anpsa.org.au/index.html). Look for anbg.gov.au or anpsa.org.au in your search results, or go direct to one of these websites and search for the plant you are interested in. Or just explore; flick through pictures till a plant takes your fancy and then see if it's on the seedlist. I am less familiar with equivalent New Zealand organisations , but the website of the Department for Conservation (Te Papa Atawhai) looks a good place to start (www.doc.govt.nz/nature/native-plants/).

That I have suggested these websites as reliable doesn't mean that other sites provide wrong information; indeed, if you have a favourite, please do let us know. However, such sites are more comprehensive when it comes to Australasian plants than, say, UK gardening sites such as the RHS and BBC Gardeners World.

Which species are cold hardy?

You can never be absolutely sure that an Australasian plant that you grow from seed will prove cold hardy in your garden. This will depend not only on the climate where you live but also on the age of the plant (established specimens tend to cope with cold better than young plants), the microclimate(s) in your garden, and the specific weather that the plant encounters during its lifetime. Even if prolonged cold is rare, when it comes it can be much more damaging than one or two nights of very low temperatures, and plants in sodden ground are less likely to survive a cold spell than those in well-drained soil.

Probably the most comprehensive source of information about the cold hardiness of Australian plants in Britain and Europe is the aforementioned **Australian Plants: A Guide to their Cultivation in Europe**. Its authors, Ross and Irons, use the concept of the danger zone (page 18): "*The danger zone is a temperature range: at temperatures above the upper limit of the danger zone, there is little risk of frost damage, even for young plants. First damage may occur under unfavourable circumstances when temperatures start falling into the danger zone, and only established plants in protected situations will be able to withstand temperatures close to its lower limit. At the lower limit, even old specimens can be expected to be killed or cut to the ground. ..... If your average winter lies in the upper half of the danger zone you can reasonably hope that a young plant will grow into a more resistant adult specimen. If winter temperatures regularly fall far into the danger zone, chances are that young plants will suffer so much damage that they will never get established.*" As our climate changes, and (we hope) average winters get warmer, so it should become possible to grow more and more Australian plants outside in the ground throughout the year.

In selecting new species for the seedlist the focus has been on plants which we think have a reasonable chance of proving cold hardy in more places than just mild coastal areas of the UK and the warmer parts of Europe. However, cold hardiness may also depend on the provenance of the seed, something we generally have less information about. For example, we may know that seed was collected in, say, Tasmania, but not whether it was gathered near the coast or from an inland area, but this could make a



above:

Tony Entwistle (far right) with other members at the 2013 APS AGM at the National Botanic Garden Wales, the last time Tony attended an APS event



right:

One of John Purse's *Leptospermum* crosses, 'Red Haze'





above left:
***Microcachrys tetragona*, female cones**
right:
***Hardenbergia violacea*,**
below:
Prickly conesticks*, Petrophile sesselis*



difference to a plant's cold hardiness in the northern hemisphere .

Given all these considerations, growing Australasian plants outside has to be a bit of a gamble, but it is one worth taking. You need to be adventurous and willing to experiment. In all likelihood you will have disappointments too. But that's one of the great things about growing plants from seed; usually you end up with enough specimens to take risks.

One final point on cold hardiness. Australian sources often describe plants as frost hardy. However, what this usually means is that the plant in question will survive a night or more of low temperatures, but not prolonged cold for days and nights at a time. In contrast, RHS hardiness ratings can be quite conservative.

Germination: some general points

The pleasure that I get from getting a seed to come to life never diminishes, no matter how many seeds I sow. But, as I well know from my first attempts, it can be horribly disappointing when nothing appears in one's carefully nurtured pots and trays. If you are just starting out, be consoled: your success rate will improve as you become more experienced and as you learn more about the conditions that more picky species require.

General advice about germination abounds; detailed information about the conditions required by particular species can be harder to come by.. Again, try Ross and Irons and back issues of Pentachondra, or check out information provided by companies from which we purchase seed; these include Nindethana, the Australian Seed Company and New Zealand Tree Seeds. You can also send questions to enquiries@anzplantsoc.org.uk but please read the rest of this article first!

Depending on germination conditions and time of sowing, many species on the seedlist will germinate quite quickly. Others are just slow and take some time while some will show sporadic germination over time. Yet others need special treatment before they will germinate at all; in the next section you will find information about how to coax into life some of the more obstinate seeds we offer. And, unfortunately, a few may never germinate. The seed we obtain from commercial and private sources is always offered in good faith, but in some cases it is just not viable.

Nonetheless, there is a message here: be patient! Jeff Irons used to say you should keep pots in which you've sown seed for at least five years. You'd have to be more organised than me to manage this, but I have had seeds germinate many months after they were sown; a recent case being an *Acacia baileyana* seedling appearing in pot where it had been sown over 9 months ago.

Seed raising mixes vary but the general principles don't. Seeds need an environment that is moist, yet well drained, with plenty of air between the particles (oxygen is needed for germination). Among materials available to the non-professional are compost (sieve it), coir, potting grit, perlite and vermiculite, which can be combined in various ways and proportions depending on the conditions required. For example, choice of materials may depends on just how moist the compost needs to be. Perlite helps with soil aeration and drainage while vermiculite holds moisture well.

Finally, don't bury your seeds. Cover lightly those that need covering. Surface sow fine seed and water it in with a fine rose. Seed which needs light to germinate must be surface sown, but it can be covered with a thin layer of perlite or vermiculite, which let light in.

Smoke treatment

Smoke treatment is used to promote germination. With some species its use may achieve better and faster germination; for others the treatment may be essential. Information about with some species;

For the first time we are offering Kirstenbosch Seed Primer paper discs. According to the supplier discs should be stored in a refrigerator until used. They will keep for up to two years and each disc can be used to treat 100 large seeds.To use, place the paper disc in a small container. Add 50 ml of water to wash the primer from the paper. Soak seeds for 8 to 24 hours in the primer solution. Remove seeds and sow.

There are other methods for 'smoking' seeds; see for example issue 55 page 29 and issue 50 page 33.

Some species information

Even if I had the knowledge there is insufficient space here to cover every plant on the seedlist. The ones I've picked out reflect both my experience and my inclinations but I have tried to include many of the new additions.

The two new conifers belong to the Podocarpaceae family. The prostrate ***Microcachrys tetragona*** (photo page 10) and ***Pherosphaera hookeriana*** are Tasmanian endemics both of which grow at high altitudes. I've not tried either from seed (though Jeff Irons was successful). Murray Ralph[1] doesn't suggest any special treatment though he cautions that seed viability can be variable.

Another that I've not tried from seed is ***Atherosperma moschatum***, a rainforest tree found in Tasmania, Victoria and New South Wales. Seeds are said to take 2 to 3 months to germinate[1]. The infused leaves are said to make a pleasant drink[2] **(**please do your own research before consuming!).

Monocot species (Doryanthaceae to Poaceae) on the list vary in the ease with which they germinate. Kangaroo paws (***Anigozanthus*** sp.) I have grown from seed. In fact the first Australian species I ever germinated was ***A. flavidus***, which shows that it can't be too difficult! This was long before I kept records and all I remember is that I put the pot on a shady window sill in the middle of summer. Since then I have read that seed should be surface sown and watered in before covering lightly, kept warm and moist, and watered with a fine spray to avoid disturbance of the seed. The other ***Anigozanthus*** species are said to have poorer germination rates, and may benefit from smoke treatment[1] (see box).

The beautiful native irises (***Patersonia*** sp.) are said by some authorities to be easy to germinate[3,4], requiring no special treatment, while others recommend smoke treatment to improve germination rates[1]. Surface sow and cover with vermiculite, and keep warm and moist, but not too wet as seeds may rot.

You will see there are lots of new ***Banksia*** species (Proteaceae) on the seedlist, many of which are eastern Australian species which should be a

lot easier for those in cooler and more humid regions to grow. Robbie, *Banksia* expert extraordinaire, provides germination tips below. ***Petrophile*** species (photo page 10), new to the list, are also members of the Proteaceae. Ralph[1] suggests that germination rates and times can be variable, so keep your pots, and avoid over watering as new seedlings are prone to damping off[5].

The Fabaceae include wattles as well as many lovely species with pea type flowers. To help select ***Acacia*** species from the many on offer try back issues of Pentachondra (for example 57 and 40). All the acacia species added to the list are good candidates for being hardy, and, except for ***A. dallachiana***, are shrubs or small trees[6]. Propagation from seed is mostly straightforward but because acacia seeds have hard seed coats they need to be treated to promote germination, either by soaking in hot or boiling water, or by nicking the rounded end of the seed, or by abrading the seed with sandpaper[7]. Sow to no more than the depth of the seed and to avoid the seed rotting before it germinates do not overwater.

Banksia germination notes

Robbie Blackhall-Miles

Banksia seed is easy to germinate but the following tips will help you out

The most important thing for banksia germination is that they have a day/night variation in temperature (about 15°C). This is easiest achieved by sowing seed in a 'change' season like spring or autumn and leaving them to germinate in an unheated area that is exposed to the day/ night temperature cycle. For more accuracy putting seeds in the fridge overnight and then indoors at room temperature during the day can give really good results.

Most banksia seed will germinate readily without any special treatment but some species need fire or cold to do so. The easiest way to find out which is which is to have a read about their ecology and where they come from. Those from very high altitude (*B. marginata, B. saxicola,* and *B. canei*) need a period of cold stratification. Those from fire prone areas (*B. ornata, B. aemula* and *B. serrata*) may need treatment with smoke water solution. If at first you don't succeed try something different next time.

Soaking seed for 24 hours in a 1% Hydrogen peroxide (H_2O_2) solution can really help increase germination rates. You can buy 6% H_2O_2 from a pharmacy and dilute it down by adding 5 parts water to 1 part H_2O_2.

I sow my seed quite densely on the surface of the compost and prick out the seeds into their own pots when I see the radicle (the first root) showing. This saves space and means that there is less root disturbance for the seedlings when potting them on later.

You should see germination within 18 to 30 days after sowing but never give up on a banksia seed as I have had them germinate 2 years after I originally sowed them.

Banksia seeds come packed full of nutrients ready for the plants as they grow but it is worth feeding them as soon as they start to produce true leaves. You can do this with a seaweed fertiliser, off the shelf protea food or with a home-made mix. The most important thing to remember, though, is that it is safer to never give them anything containing phosphorus. Some species can cope with a little but most die when exposed to it.

Other members of the pea family also need treatment to break seed dormancy. I have successfully germinated a number of them by soaking the seed in hot (not boiling) water, including ***Hardenbergia violacea***, a beautiful evergreen climber that is hardy in milder parts of the UK (photo page 10). The same treatment is recommended for ***Davesia*** and ***Sophora*** species[8]; the ***Sophora howinsula*** seed was kindly donated by Paul Boosey. In contrast, nicking seed is recommended for ***Hovea corrickiae*** as its seed is prone to rotting. This is typical of much of my experience of seeds of Fabaceae, so do not water your seed pots, or your seedlings, too enthusiastically.

Micrantheum hexandrum is a delightful small shrub (photo page 19) with sweetly scented flowers. It now belongs to the Picrodendraceae but used to be in the Euphorbiaceae. It's not well known but it's certainly one to try outside, once you've germinated the seed. Elliot and Jones[9] say seed does not require any pre-treatment.

Many members of the Myrtaceae family, including ***Callistemon***, ***Calothamnus***, ***Corymbia***, ***Eucalyptus***, ***Kunzea***, ***Leptospermum*** and ***Melaleuca***, produce seed with high viability and which is easy to germinate successfully using the what is known as the bog method, making these genera very rewarding for beginners. The method involves standing the pots in which the seed is sown in a shallow tray of water, and keeping the water level topped up so that the seed-raising mix remains saturated. The fine seed should be sown on the surface, gently watered in and covered with perlite or vermiculite (some sources suggest the one, some the other).

How well this method works for other Myrtaceae on the list I do not know, but seed viability of some of these species is apparently more variable, making success harder to achieve. Seed of ***Syzygium australe*** has been provided by Gary Firth from his own plants (see page 18) and is apparently easy to germinate. Smoke treatment is recommended[10] for ***Beaufortia sparsa***, ***B. squarrosa***, ***Calytrix tetragona***, ***Darwinia citriodora*** (photo back cover), ***Hypocalymma angustifolium*** and ***H. robustum***.

I fell in love with ***Hypocalymma angustifolium*** when I first saw it growing in Melbourne (photos page 20). This dainty and floriferous shrub is said to be frost hardy to -7°C and recommended for Canberra region gardens[11]; who knows how it might do on this side of the world. Another genus I like is ***Kunzea***. I haven't risked ***K. baxteri*** outside; fortunately it is perfectly happy in a pot. But ***K. ambigua*** seems perfectly hardy and I believe ***K. ericoides***, found in New Zealand as well as Australia is even hardier (photos page 21). ***Melaleuca nesophila*** is one of the loveliest honey-myrtles (photo page 22), but very borderline; fortunately it too is happy in a pot. In contrast, ***M. squamea*** (photo page 22) is one of the hardiest of the genus.

Members of the Rutaceae present rather more of a challenge. There seems to be little consensus about how to go about germinating seed of the Australian species on the seedlist, except that it is usually difficult. That doesn't mean it is impossible. In August last year I sowed some *Correa* seed collected from a cultivar in my garden in a mix of coir, perlite and a little sieved Silvagrow. The surface

was covered with smoke granules which were watered in. The pot was placed on a shelf in the greenhouse (kept just frost free in winter) and watered sparingly. One seedling (from 3 seeds) appeared in April 2017. Try smoke treatment with ***Correa alba*** and other Rutaceae on the seedlist.

Melicope ternata (wharangi) is a New Zealand member of the Rutaceae. It is not a plant I have grown but it is said to germinate easily without pre-treatment. Our seed is pretty fresh - it came earlier this year from Alexandra Boyle who grows this shrub or small tree in the south of France.

One of my favourite members of the Malvaceae is ***Hibiscus trionum***. It is found in the wild in both Australia and New Zealand, but there has been debate about whether it is native (see box). Regardless, it is easy to germinate and flowers in its first year; it may overwinter but in any case seed is easy to collect; and it is very beautiful . The ribbonwoods, ***Plagianthus regius*** and ***P. divaricatus,*** are New Zealand natives in the same family (see page 23 and issue 57). Pre-treatment is said to be unnecessary for either, though four weeks cold stratification may speed up germination of ***P. divaricatus***[12].

Notelaea ligustrina is a small tree found in moister environments in south-eastern Australia. Although one of its common names is native olive its colourful fruits are reputed to be inedible. It is rare in cultivation in Britain but it has been grown on and off for many years so presumably it is not too difficult from seed.

The Goodeniaceae are an almost wholly Australian family. ***Goodenia ovata***, hop goodenia, is an attractive small shrub with glossy green leaves and yellow flowers (photo page 22). It is another that does well in the Canberra region and is said to be hardy to -7°C[11]. Germination information is scarce; one source says propagation is easy from seed[2] . Smoke treatment is recommended[10] for ***Brunonia australis*** and ***Scaevola aemula***. I use the latter for ground cover; you may know as a hanging basket plant.

Hibiscus trionum

Hibiscus trionum is a very variable species with a cosmopolitan distribution. Some authors have regarded it naturalised in the places where it occurs in Australia and New Zealand; others have argued that the plant, or some varieties of it, were indigenous. Recently Craven et. al. (2011) undertook a taxonomic re-evaluation of the species and concluded that three Australasian species should be recognised, two native to Australia and one native to Australia and New Zealand. In addition they recognised a diploid *H. trionum* race that is fully naturalised in New Zealand and was formerly treated as indigenous.

Reference

LA Craven, PJ de Lange, TR Lally, BG Murray & SB Johnson (2011) A taxonomic re-evaluation of Hibiscus trionum (Malvaceae) in Australasia, New Zealand Journal of Botany, 49:1, 27-40

Seed of members of the Asteraceae family tends to lose viability quickly so if you want to grow any of the species listed order them this year. (It is not to late to sow the annuals which can flower in ten weeks.) Most of the species are everlastings but ***Bedfordia linearis*** (endemic to Tasmania), ***Olearia myrsinoides*** and ***Ozothamnus obcordatus*** are shrubs. With many

species light promotes germination so they should be surface sown.

Hymenosporum flavum (native frangipani, a member of the Pittosporaceae) germinates easily but is said to lose viability after 18 months[1]. ***Bursaria spinosa*** seed lasts a bit longer but requires a bit more effort to germinate. Seed can be cold-stratified, or, as with banksias exposed to day -night temperature cycle . I have achieved very good germination with garden saved seed sown in late September. The pot was left outside in a sheltered spot and seedlings appeared in 30 days. It was then removed to a frost free greenhouse and the seedlings transplanted in the spring.

Last but not least, the two **seed challenge** species were chosen because I think both are desirable plants but they are reported to be "*very difficult*" from seed[1]. ***Ricinocarpus pinifolius*** is a small shrub from eastern Australia known as wedding bush, presumably because of its profuse white flowers. Treatments suggested include smoke treatment, combining heat and smoke, and immersing seed in almost boiling water. ***Siegfriedia darwinioides*** (photo page 20; it could be better) is the only member of a genus endemic to south-western WA. Try hot water treatment or smoke. There will be a prize for the first person to germinate each of these species.

By sharing our experiences we can all improve our germination skills. Please, please, tell us about your adventures with growing from seed: what methods you used, what worked and what didn't. I hope your successes are many and that your plants flourish, and that when they do you will consider collecting seed from them and donating some to the seedlist.

References:

1. Ralph, M. 2003. **Growing Australian Native Plants from Seed** (second edition).

2. Howells C. (ed.). 2012. **Tasmania's Natural Flora** (second edition)

3. www.anbg.gov.au/gnp/gnp8/patersonia-sp.html

4 Seeds of South Australia, saseedbank.com.au/index.php

5. anpsa.org.au/APOL29/mar03-3.html

6. See worldwidewattle.com/

7. For more information see Pentachondra issue 54 (May 2015) page 37

8. For more information see Pentachondra issue 57 (December 2016) page 42

9. Elliot WR and Jones DL, **Encyclopaedia of Australian Plants**, vol. 6, p. 394

10. www.nindethana.net.au/

11. Australian Native Plants Society Canberra Region Inc. 2015. Australian Plants for Canberra region gardens and other cool climate areas (5th edition)

12. www.nzseeds.co.nz/shop/Plagianthus-divaricatus

CONSERVING AUSTRALASIAN PLANTS: HOW WE CAN HAVE A REAL IMPACT

Robbie Blackhall-Miles

During our special general meeting on 15th November 2014 it was decided that we, as a society, needed a clear guide as to what we wanted to achieve. A mission for the society was created which would drive everything the society does into the future. So we became The Australasian Plant Society **for promoting the cultivation and conservation of Australasian plants and their closest relatives in northern hemisphere**.

The cultivation aspect of this is comparatively easy to achieve as we all love growing amazing plants from Australia and New Zealand but the conservation aspect is a little trickier. We have decided to take a two-pronged approach.

Protecting Australasia's cultivated plant varieties

Australasian plants form an important part of the world's garden flora. They extend the season of interest in gardens right through the winter and provide much needed food for pollinators during difficult times. They are unique, they challenge us, and they give us a taste of the exotic. Yet, this exact set of attributes puts these antipodean gems at risk in cultivation outside their native lands.

Many have been grown in Europe for over 200 years yet are considered tender and difficult, a label which is often unwarranted. To help us combat the loss of cultivated varieties of Australia and New Zealand's plants we have joined forces with Plant Heritage (the world's leading cultivated plant conservation charity) to help stop the loss of these cultivars and varieties from our gardens. Several members of the APS hold National plant collections and go a long way to keeping these plants in cultivation. We are now able to go a step further though the Plant Heritage Plant Guardians scheme. If you grow an Australasian plant that you know to be rare in cultivation (a good guide is if it is listed by two or fewer nurseries in the RHS plant finder) you could register as a Plant Guardian. You don't have to be a member of Plant Heritage to do so as you can do it directly through your membership of the APS.

By conserving plants this way we can help the world meet important international targets through the Aichi Biodiversity agreement (part of the Convention on Biological Diversity). Target 13 states: *By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of [their] wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.*

If you would like to know more about the Plant Guardians scheme or would like to conserve a threatened plant through it, contact Robbie by email at chairman@anzplantsoc.org.uk.

Conserving Australasia's threatened plant species

Australia has over 20,000 species of vascular plants and New Zealand has a further 2,500 (most of which are endemic). It is an unfortunate fact that many of these species are severely threatened with extinction. In 2002 the Global Strategy for Plant Conservation (GSPC) was adopted by the Parties to the Convention on Biological Diversity. It was a bold step for the conservation of the world's plants.

Part of the GSPC is concerned with the conservation of plants through cultivation and this goal was laid out in Target 8 of the strategy: *At least 75 per cent of threatened plant species in ex situ collections and at least 20 per cent available for recovery and restoration programmes.*

Through an agreement with BGCI (Botanic Gardens Conservation International) we are now able to make

the plants you are growing in your gardens count toward this target. BGCI is the world's largest plant conservation network and it is through its Plant Search database that the GSPC Target 8 is assessed.

We are now able to upload information to the database enabling us to make sure the plants conserved in your gardens really count for conservation internationally. If you have a collection of Australasian plants that you would like to count towards worldwide conservation targets, then go to the online version of this article in the members section of the APS website (www.anzplantsoc.org.uk) and follow the instructions. BGCI is an independent organisation and is governed by the Data Protection Act any information passed to them will be anonymous and only the details of the species held by APS members will be shared.

With over 400,000 known plant species, and such vast diversity and endemism in Australasia, the challenge of conserving plant diversity is too big a job for just a few people. It is with your help that we, as a society, can really step up to this challenge and make a difference for the plants we all grow and love.



SYZYGIUM AUSTRALE

Gary Firth

Syzygium is a large genus of flowering plants in the family Myrtaceae with over 1100 accepted species recognised by the PHS Plantlist. They are primarily southern hemisphere plants of the old world ranging through Africa and Madagascar, southern Asia and the Pacific especially Malaysia and north east Australia. Many are not yet fully described. The majority are evergreen trees and shrubs and many bear edible fruit. The most economically important is the clove, *Syzygium aromaticum*, the unopened flower buds being cultivated as a spice.

There are 52 species found in Australia where their common names include brush cherry, satinash and lilly-pilly. *Syzygium australe* is a rainforest tree native to New South Wales and Queensland, north to Batemans Bay. It grows to about 25m high in the wild but usually about 15m in cultivation. The leaves are opposite, simple, lanceolate, and from 4 to 8cm long. The new flush of growth is an attractive bronze-red colour. The flowers are white, in clusters with long stamens, and the fruit red to pink coloured and about 2cm long (photos front cover and opposite). They are not at risk in the wild.

S. australe is frequently cultivated in eastern Australia. The fruit are edible with a pleasant crisp flavour when raw but may also be cooked or used in jams or jellies. I am told that they can also be made into liquors, in much the same way as I have done with other members of the Myrtaceae family such as *Ugni* and *Myrtus.* A number of dwarf cultivars such as 'Aussie Compact' and 'Minipilly' are available in Australia, often growing to about 2m high. They flower from November to February, growing in full sun or partial shade. With their white flowers, attractive fruit and bronze coloured new leaves these make useful hedges. They respond well to clipping. Sadly, these cultivars are not available in the UK.





above:
Micrantheum hexandrum

left and below:
***Syzygium australe*, ripe and unripe fruits**









above and right:
Pink-flowered myrtle, *Hypocalymma angustifolium*, in full flower

below:
Siegfriedia darwinioides







clockwise from above
Kunzea baxteri.
Kunzea ericoides
Kunzea ambigua





above: ***Goodenia ovata***
below: ***Melaleuca nesophila*** (left)
Melaleuca squamea (right)





I first acquired seed of *S. australe* (under the invalid name of *Eugenia myrtifolia*) from Chiltern Seed about eight years ago. These germinated and grew well, flowering after about 4 years at a height of about 2m. Surprisingly, flowering generally starts around September with the fruits ripening during March and April. The fruits have a pleasant crisp taste but do leave something of an aftertaste. Sadly the plants are susceptible to frosts. The plants will survive about -2ºC for short periods of time but gradually decline after successive exposures to frost.

However, *Syzygium* species, especially *S. buxifolium*, have been shown to be suitable subjects for bonsai cultivation and they also tolerate heavy pruning very well, often putting out new growth from the lower trunk. I have found that the plants can be kept at heights of 1m or less and still flower and crop well hence they are very suitable for the greenhouse or conservatory. They may be grown in either peat based or John Innes compost in good light but do require regular watering. I have even grown them and fruited them in 14 inch hanging baskets.



PLAGIANTHUS DIVARICATUS

Jeremy Spon

In his interesting article on *Plagianthus regius* in the December 2016 edition of Pentachondra, Gary Dunlop mentions in passing the related species *P. divaricatus* and comments that as it grows in saltwater marshes it "*is unlikely to be suitable for cultivation in gardens or arboreta in the British Isles.*" However, I think Gary is being unduly pessimistic, not least because I have a plant of this species growing in my garden as I write, and it is looking quite healthy, and coming into leaf, after having been planted out last summer.

There is in fact some history of cultivation of *P. divaricatus* in Europe, as evidenced by the entry for it in Bean[1], which comments "*it was cultivated by the Vilmorins at Verrières, near Paris, and flowered there as long ago as May 1851. At Kew it was grown on a wall, for which it made a graceful and distinct covering, developing into a thick tangle of dark slender stems, many of them pendulous and unbranching for more than a foot of their length.*" A lecture given by Charles Williams at Caerhays Castle in 2010 also reveals that it was grown at Caerhays in the past (the text of this lecture[2], on "Tree Ferns and Australasian Plants at Caerhays", is available on the Caerhays website, and is well worth reading, not least for the comments on hardiness and recommendations of more unusual plants, especially from New Zealand.)

My plant was bought at the Beervelde Plant Fair in Belgium in May 2016 (from a nursery called Hulsdonk, whose stand I always made a beeline for when I went to Beervelde, as they had the most amazing range of unusual plants at very reasonable prices. Sadly, due to ill-health, the nursery has now closed.) When I got it home I took several cuttings; these rooted quite easily in the Root Riot cubes recommended by Gary Firth[3] which gave me the confidence to try it in the garden.

Last winter was by no means severe, with a minimum of less than -6ºC, so it was not a great test of the plant's

hardiness, but it showed no signs of stress, and is now growing away well. I placed it among my other Australasian plants, so it had well-drained soil, but I did not make any other concessions to its native habitat. Although it is used in New Zealand for coastal re-vegetation and restoration planting, it is also sold by nurseries there for general garden use, and even for hedging, so although it will tolerate extremes of coastal exposure and salinity, it also seems to be amenable to more general cultivation. If it makes as dense and intricate a bush as seen in some images on the internet, I will be delighted, and if it produces flowers, even better – these, though tiny, are said to be very sweetly scented!

References:

1. www.beanstreesandshrubs.org/browse/plagianthus/plagianthus-divaricatus-j-r-g-forst/

2. www.caerhays.co.uk/page.cfm?page=Australasian_plants

3. Pentachondra 56 (May 2016) page 16

Editor's note:

Both Plagianthus species are on the seedlist.

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OLEARIA 'HENRY TRAVERS'

Peter Kohn

It was good to learn that Ben and Robbie had found their way to Garden Cottage and Ardfearn (see issue 57, December 2016, page 6.) These were our nearest nurseries when we were at Kerrachar[1] (eighty and ninety miles away respectively).

We successfully grew many of the plants mentioned in the article even further north[2] than Inverewe including many different olearias but we conspicuously failed with *Olearia* 'Henry Travers'. And we did try hard. It was one of the rare plants that we tried three or more times with but we always lost it over winter. It seems very susceptible to something (*Phytophthora*?) and the only successful plants we encountered were Ben's plants at Garden Cottage Nursery which are planted on open moorland above the woodland which shelters his nursery. The site is on something approaching blanket bog, very nutrient poor and acidic and exposed to a lot of wind. Those plants survived for many years but didn't luxuriate.

Another unpromising location was Cathair Dubh just north of Lochinver where a new house was sited for the magnificent view (and thus exposed to the full force of Atlantic gales) and various plants were planted into poor peaty soil. The 'Henry Travers' there were absolutely stunning - one of the reasons we kept trying. I think we even took cuttings but didn't succeed with them. Trish also has memories of another successful plant, she thinks at Scourie, even further north. Again it is likely to have been in pretty peaty acid soil. Ben Rushbrooke definitely thought that poor acidic soils were protective and our improved (and limed) land at Kerrachar just didn't seem to suit.

One amazing garden that Robbie and Ben missed on their visit to northwest Scotland is Durnamuck, the garden of Will Soos and Sue Pomeroy. Will is also Head Gardener at nearby Dundonnell House, another very fine garden. Both gardens are open under Scotland's Gardens Scheme (Yellow Book). Sue reports that they have

several plants of 'Henry Travers' in their boundary 'hedge' at Durnamuck which flower almost continuously. Again the soil is unimproved and the plants are very exposed to wind and a certain amount of salt. Sue agrees that olearias resent rich soils (although it was only 'Henry Travers' which failed at Kerrachar).

Sue and Will were at Inverewe for many years and they report the plant was also grown successfully there. True *O. semidentata* is apparently even more tricky than *O.* 'Henry Travers' and hard to source although it is growing at Tresco. Sue and Will agree with Ben Rushbrooke that the foliage of true *O. semidentata* is finer than 'Henry Travers' and speculate that it may be a naturally occurring hybrid. Olearias, like much of the New Zealand flora, are pretty promiscuous. Sue advises that 'Henry Travers' is really a coastal plant not tolerating much frost.

Other olearia species grew well for us at Kerrachar. *O. macrodonta* was widely used on Scotland's west coast as a front line shrub in exposed salty situations. Ours grew very fast and did get too large for its site in only a few years. *O. traversii* was used in a similar way. Both species, being evergreen and fast-growing, are vulnerable to the very high wind speeds in northwest Scotland. Our most decorative Olearia was *O.* x *scilloniensis* which was smothered in white flowers for weeks.

Checking on the internet I discovered that the Bluebell Nursery, one of the few suppliers, concede that 'Henry Travers' can be difficult to establish. There is also a lengthy description of Olearias at Inverewe in Horticulture Week of 24th April 2014, available on the internet.

Notes:

1. See Penatchondra issue 43, December 2009, page 16, and issue 47, December 2011, page 34 for more about the garden that Peter and Trish nurtured at Kerrachar.

2. All the locations mentioned are on the northernmost stretch of Scotland's west coast to the north of Inverewe. Durnamuck lies on raised ground above the south shore of Little Loch Broom a dozen miles north-east of Inverewe and facing inland in a south-easterly direction towards Dundonnell House which is just beyond the head of the Loch. Our old garden at Kerrachar was another thirty miles further north, right on the south shore and close to the mouth of Loch a Chairn Bhan, another sea loch running in a southeasterly direction. All these gardens enjoy a maritime climate although Dundonnell, being a little inland, is the coldest of the three.



ACACIA MISCELLANY

Graham Sumner

I found both Judy Clark's 'Wattles in Hastings' and John Gibson's 'Smelly Acacias and Climate' in Pentachondra, issue 57 (December 2016), most interesting.

Judy's article rang very many bells for me and caused me to reflect on my successes and failures (mostly the latter!) trying to grow wattles in my old garden, by the harbour in Aberaeron, west Wales. I tried and tried, bringing seedlings on for the first few years in my conservatory and, finally, when they had reached adolescence, planting them in the garden. Some may remember my occasional articles in previous issues of

Pentachondra[1] highlighting the fate of Australasian plants in my walled garden, following numerous winters. I did leave a fairly healthy *Acacia melanoxylon* behind in the garden when I left Aberaeron in January 2015. It was in bloom, if somewhat sulkily. Doubtless the garden's new owners will have given the garden a makeover without recognising the blood, sweat and tears behind the Australasian plants still surviving there after the twin winters of 2010. No, I don't want to know!

Although the garden was coastal, only 100m from the inner harbour, in some winters I recorded what many would regard as exceptionally low night-time minima for such a location; Christmas morning 2010 saw the lowest, -12° C. This was a function of extremely cold air draining down the Aeron valley, and stagnating over the flatter low level area by the river's mouth. That dispatched 90% of the Australian plants in the garden, let alone much fussier wattles.

However, there were many mild winters when the lowest temperatures were only -3 or -4° C. Even in these winters, however, most of my wattles succumbed, even if I had somehow managed to get them to a metre or more in height. Salty gales were clearly one factor. There may also have been other causes of death more to do with poor siting or hardening off after a few winters as pot plants in my conservatory.

However, received wisdom (!) plus my background in climate research, both in Wales and in Australia, suggested to me that wattles with their feet wet did not respond happily to sudden frosts. 'Wales is wet', but the western coastal fringe, if near sea level, does not experience anything like the high rainfall totals of the uplands just a little way inland; wet enough, though, to mean that soils are saturated for most of the winter. There was, however, also another factor which I pondered over and perhaps even mentioned in print or in a lecture or two at the time (a lot of time has passed since those days, so memories are sparse!), and that is that in many temperate parts of Australia rainfall tends to be concentrated in the winter and spring, rather than in the autumn and winter, as in the UK. Wattles may already be struggling in saturated ground during the autumn in the UK, certainly in the wetter west. Sudden frost during the winter months must subsequently serve only increase a poor wattle's distress.

Those were the days, so to speak. Now we have moved nearer to family in south Oxfordshire. We live on the north slope of the Wessex Downs, and just to make it even more interesting, right on the spring line between the Lower Chalk and Upper Greensand, at an altitude of about 90m; strongly alkaline soils, which most Australian plants do not like. I am still trying to grow Australasian plants, though. I have read that *A. retinodes* is one the more alkaline tolerant wattles; pity it is not one of the hardier….

As of mid-March 2017 a couple of last year's *A. pravissima* seedlings (about 20 cm in height), grown from APS seeds, have happily survived several of nights around -6 or -7° C in pots outside against a south-facing wall. I have also found a couple of eucalypts - little *Eucalyptus parvula* (*parvifolia*?- see box) and *E. perriniana* - which are allegedly lime tolerant. The former is looking healthy after two winters, the

latter after only this last one. They have recently been joined by an *E. nicholii*; ever the gambler! I lost a small *E. pauciflora* subsp. *niphophila* during the first winter, perhaps due to honey fungus which I now know killed a large walnut tree in that part of the garden a few years back.

Otherwise my grevilleas (*Grevillea rosmarinifolia* and *G.* 'Canberra Gem') and the larger leaved *Callistemon* are mostly confined to pots. Some specimens of the latter exhibited signs of chlorosis a few months after being transplanted into the ground, with the apparent result that they were even less tolerant of -7° C than those in pots. The smaller leaved *Callistemon* are a lot happier (mostly *C. linearis* and *C. rigidus*). All have been grown from seed collected from my Welsh garden more than two years ago, and sown last year or the previous year, following our move. They are too small still to flower, but one larger specimen which had flowered nicely when in a large pot in Wales, has shown great reluctance to flower since being planted in the Harwell garden two years ago. My other Australians, *Ozothamnus ledifolius*, *Prostanthera cuneata*, *Leptospermum grandifolium* and *L. lanigerum* seem happy enough in the garden after a couple of years. Not surprisingly I have been experimenting with New Zealand flora now I live in a location with much more demanding climatic and soil conditions, but that is another story ….

Just a final, parting thought; fellow members of my local gardening club seem to be mystified by my gardening preferences. I wonder why!

Editor's note:

1. See issues 47 (December 2011) p29; 44 (May 2010) p15; and 42 (May 2009) p11.

What's in a name?

Eucalyptus parvula and *E. parvifolia* are nomenclatural synonyms for the small-leaved or Kybean gum. The correct name is now *E. parvula*.

The rules for naming plants are set out in the **International Code of Nomenclature for algae, fungi and plants**. One rule is that the first plant to be given a particular name retains that name if subsequently the same name is given to another plant. In this case the name *E. parvifolia* was found to have already been used to name a fossil species, so a new name had to be found. The specific name *parvula* comes from the Latin for little, *parvulus*, and refers to the fact that this gum is generally of a small size, including the leaves.

Reference

Hill, K.D. & Johnson, L.A.S. (1991), Systematic studies in the eucalypts - 3. New taxa in Eucalyptus (Myrtaceae). *Telopea* 4(2): 233.

CLIANTHUS PUNICEUS

©Gary Dunlop

Fortunately, not all plants that are critically endangered in their natural habitats are rare in cultivation[1] and thus at further risk from plant collectors. *Clianthus puniceus*, is one such plant. It's name translates as crimson glory-flower and it is also know as crimson glory-pea, referring to the family it belongs to. It is more commonly known as parrot bill in New

Zealand (derived from the Maori name) but lobster claw in the British Isles.

It is a lax growing shrub or small tree and deemed to be rather short-lived though does readily produce seed. Its natural habitat is in scrub and forests near the east coast of the northern half of North Island, from Hawkes Bay north to East Cape and with a further disjunct habitat north of the Bay of Plenty and on various offshore islands, notably in the Bay of Islands near the northern tip of New Zealand[2]. Its decorative properties were clearly appreciated by the Maoris who cultivated it widely, most likely for its attractive appearance, though it has also been suggested that it was to provide nectar for the tame birds they kept. They may have extended the range of where it grows, and certainly reduced the risk of it becoming extinct.

It might have been such cultivated plants on the east coast, but more likely to be the plants native to the locality, which were first seen by the earliest western plant hunters to visit New Zealand. They were Joseph Banks and Daniel Solander, in 1769, accompanied by their botanical artist Sydney Parkinson, who produced an excellent illustration of it[3]. Unfortunately Parkinson did not survive the trip back to England, and Joseph Banks' plan to publish a lavish Florigeum with engravings made from Parkinson's 738 watercolours was not realised in his lifetime. Daniel Solander named the plants on the herbarium sheets, and gave the locations of where the specimens were collected. He also produced descriptions of them in a manuscript, held in the British Museum. These descriptions were not published as they were intended for the Florigeum, which was only finally published in several parts from 1900 to 1905.

The first description and published illustration of this new plant under the name *Clinathus puniceus* was by John Lindley, in 1835[4]. In it he corrected the genus name *Donia* which had been published with description in 1832 by George Don[5], who named the species after his father with the same Christian name. He was wrongly presumed to have based his description on the herbarium specimen of Solander and changed the original name of the genus, but research published in 1995 by Peter Heenan[6] established that Don's publication of the plant was based on a different herbarium specimen in the collection of A.B. Lambert FLS, which could only have been a duplicate specimen collected by Banks and Solander. Heenan designated both this specimen and the very similar Solander one as the lectotypes, as no holotype (specific herbarium specimen) was mentioned by either Don or Lindley in their published description of the species[6]. Heenan recorded that the Banks & Solander herbarium sheets comprised specimens from possibly three different nearby locations, Motuara, Tigadu, and Tolgala Bay on the east coast which is approximately mid way between Hawkes Bay and the East Cape to the north. This discovery of the original location of the new plant established almost beyond doubt that it was the southern, larger form of the species that was first named and described by Banks and Solander.

In his article Lindley summarised the origin of the first plants in cultivation, which had been raised from seed sent back by a missionary in New Zealand,

who had apparently described the plant as a large tree, though Lindley noted that it had only reached 4ft high in England. It was though, only 3 years since seed had arrived in the UK, and the paper was read in December 1834. (Whilst the description of a large tree must be an exaggeration, plants from the north grow only to about 6ft tall[2] whereas those from south of East Cape grow to 12ft tall[7].)

The specimen which was supplied to Dr Lindley, and well-illustrated by the botanical artist Miss Drake, came from a Mr Gower whose garden was at Tinsel near Godstow. He grew it successfully and it flowered well outside in a peat bed, whereas a plant grown in a greenhouse by Mr Gower's gardener was sickly and didn't flower. (This could be due to too much fertilizer, particularly as it was likely to contain phosphate which New Zealand soils are deficient in.) The recipient of the seed from New Zealand, the Rev. John Coleman, did succeed in flowering it in a large pot in a greenhouse, and ripening seedpods on the plant.

In the same article, Lindley also transferred two other species of *Donia* as described by Don into the genus *Clianthus*, as *C. speciosa* and *C. dampieri*. They were subsequently determined to be the same plant, now called *Swainsonia formosa*, or colloquially Sturt's desert pea, which is an annual or short lived perennial that grows widely in arid regions of Australia and is the floral emblem of South Australia. (The original specific name *dampieri* was to commemorate the original discoverer of the plant, who was not a botanist but the surprisingly literate and curious buccaneer William Dampier, who had explored the northern coast of New Holland on his circumnavigation of the world in 1699. He subsequently published a best-selling book of his voyage and exploration, which included some of his illustrations of the flora and fauna that he discovered[8].)

The publication of this newly introduced plant in Edwards Botanical Register[9] the following year, relied heavily on Dr Lindley's article but with additional comments from the botanist in Australia, Mr Alan Cunningham. The accompanying illustration (page 31), which was made from a specimen again supplied by Mr Gower, presented an excellent close-up of a cluster of open flowers on one side shoot sprouting from a short section of the branch it grew from.

The following year. 1837, it was illustrated in the Botanical Magazine[10] (page31) from a plant supplied by Mr Lowe of Clapton Nursery in 1835 and grown at RBG Edinburgh. It had come from the same original source, but with more detail provided. The seed was apparently sent by the Rev. Richard Davis, a Baptist missionary based at the Bay of Islands which has a semi-tropical climate; even in winter the temperature can reach up to 25°C, though light frosts are occasionally experienced. They were received by Rev. John Noble Colman of Ryde, who sowed the seed on arrival in autumn 1831. By spring he had a number of fine plants, some of which had signs of blooming by the autumn.

The new plant did not thrive outside in the open ground at RBG Edinburgh, though Hooker suggested that it might do better against a wall. However it grew well under glass and flowered in

February 1837. Hooker noted that in the south of England the plant bears winter with impunity, and also in Devonshire and the Isle of Wight.

None of the three published descriptions of the new plant give specific details, and. despite variations in the botanical illustrations, none could be confidently determined to be identify which of the two forms of *Clianthus* was being grown. However, the original illustration by Parkinson[3], with larger leaflets on the new shoots, would almost certainly confirm that the original discovery was the southern form.

In 1885 the New Zealand missionary and knowledgeable keen amateur botanist, William Colenso, published details of a second species *C. maximus*[8]. He had arrived in New Zealand in 1834 via the Bay of Islands where he was based for many years and where he first encountered the species growing in the gardens of the other missionaries there, which almost certainly included the Rev. Davis. In 1844 he moved with his wife to the mission in Napier towards the south of Hawkes Bay, where he again grew *Clianthus* in his garden, from cuttings he obtained from the Maoris.

He noticed differences in the plants there to those that he was familiar with at the Bay of Islands. Initially it was differences in the flowers and later in the height and size the plants grew to. He subsequently examined the plants more closely and discovered what he believed to be a '*true specific difference*', or at least '*showing a marked variety*'. He obviously presumed that the plant he was familiar in the north was the species originally described by Lindley in 1835.

In the mid 1840s Colenso sent specimens of the southern form of *Clianthus* along with other plants to William Hooker, who was by then based at Kew, drawing his attention to the differences that he had detected. Hooker replied that botanists there could not detect any significant differences between Colenso's specimens and theirs of *C. puniceus.* Even though it was likely that the plant introduced to cultivation the previous decade was still being grown at Kew, there may not have been any herbarium specimens of it, or else his reply might indicate that the Banks & Solander type specimen and the plant introduced into cultivation in England were both the southern form.

Almost two decades later, after being busy on other matters, including sending details and specimens of many new plants to Hooker at Kew, and having been the first New Zealander to be elected a Fellow of the Royal Society (in 1866), Colenso was still unsatisfied with Hooker's original response regarding *Clianthus*. He had obtained a plant from the northern population to grow alongside the taller local (southern) form and summarised the differences in his paper on the species[8], which he read before the Hawkes Bay Philosophical Institute on December 14th 1885 giving detailed comparative sizes of the flowers.

Subsequently, in 1899, the botanist Thomas Kirk reduced this new species to a variety of the species *C. puniceus* var. *maximus*[11] as the differences were not regarded as sufficient to warrant it being a new species. It was very similar to *C. puniceus* but it was taller growing, more robust, and with longer leaflets and smaller flowers of varying shades.





***Clianthus*: Nineteenth century illustrations**
Edwards Botanical Register (left) and Curtis Botanical Magazine (right)



The southern form of *Clianthus*: immature side branch compared with full sized leaf.





Gary Dunlop's *Clianthus* in flower in 2015: February (above) and 5th June (below)

The status of *C. puniceus* var. *maximus* was subsequently accepted by Thomas Cheeseman in 1925[2]. In accompanying notes he mentions that a white form of *C. puniceus* was said by the Maoris to grow on the Tiniroto cliffs, and, after endorsing Kirk's view regarding the larger form, he noted that a Mr Hill had informed him that there was a significant variation in the colour and size of the flowers of plants growing in localities of the East Cape.

Harry Alan, who compiled the first Flora of New Zealand in 1961[12], also accepted the status of *C. puniceus* var. *maximus*, noting its distribution was south from East Cape whereas the range of *C. puniceus* was implicitly deemed to be cover the locations further north.

What William Colenso did not know, nor could have any way of knowing, was the location of the first collection of the plant by Banks and Solander, which was almost certainly of the southern larger form. It seems likely that the subsequent botanists, Kirk, Cheeseman and Allan would also not have any way of knowing the location of the original collection and based their opinions of the species on the assumption by Colenso.

After a century of being demoted to a variety of *C. puniceus*, *C. maximus* was re-established as a species by Peter Heenan in 2000[13]. This is perhaps surprising (see box) as no previous botanist considered this more robust form to be worthy of being even a subspecies of *C. puniceus*, but they were probably relying on herbarium specimens or Colenso's description, rather than comparing live material. The reasons provided by Heenan were largely confirming those points identified by Colenso but in addition mentioning that the leaves of *C. maximus* were slightly thicker and had a slight sheen whereas those of *C. puniceus* were matt. There were also differences in the length of the calyx lobes and in the internal structure of the leaves. Heenan only attributed one lighter red colour to the basic species but several deeper red colours to his re-established species from the southern habitat range, though the rather vague colour terms that he used would not be very helpful to most readers.

It would seem that Peter Heenan was so preoccupied in establishing the difference between the two distinct forms of Clianthus that he overlooked the significance of his earlier discovery of the original location of the first plant described and named. He should thus have been establishing the smaller, northern form as being different to the species. Instead he maintained the error that the plant first described as the species was the northern form.

Splitters and lumpers

This opens up a subjective problem amongst botanists, as to what differences between plants are sufficient to warrant different classification. There does not seem to be any accepted standard as to whether some differences are sufficient to warrant the establishment of a new species, or just a subspecies, a variety, or merely a form of one species, or whether any further classification is warranted at all. The two extreme schools amongst botanists are termed 'splitters' and 'lumpers', with the opinion of many botanists being somewhere in between these two extremes.

Peter Heenan, in the article which re-established *C. maximus* [14], included a map of the North Island of New Zealand (page 367) giving the locations from where all the herbarium specimens of *Clianthus* had been collected since 1980, and many earlier ones as well. It provided for the first time a clear visual representation of the habitat range of the two forms of the species.

There was only one post 1980 specimen of *C. puniceus* which was from an area near the city of Auckland. All other post 1980 specimens which were deemed to be *C. maximus* were collected from the Eastern Cape and southwards to Hawkes Bay. Significantly, he overlooked that the original specimens collected by Banks and Solander were near the middle of this habitat range. The pre-1980 New Zealand herbarium specimens classified just as *Clianthus* were also shown, and were clearly divided into the two widely separate groups, one group southwards from East Cape, and the other group being from further north on the east coast, slightly to the south and north of the latitude of Auckland. These sites were based on locations given in the earlier botanical publications, but without reference to specific herbarium sheets. One significant factor not mentioned is the elevation of where the plants were found. The northerly populations are found at an elevation of less than 200m whereas those from south of the East Cape are mostly from higher elevations between 200 and 1000m.

Irrespective of the classification of the herbarium specimens, which are from the northern habitat range, it seems improbable that any plants from this area would be very hardy in the British Isles. Auckland is apparently deemed to have an almost sub-tropical climate, with winter lows of about 8ºC. It is thus questionable that the northern form of *Clianthus* would be hardy except in mild winters in most parts of the British Isles. This makes it more likely that any *Clianthus* that is hardy in the British Isles is more likely to have come from the East Cape region or further south. It turns out that the Tiniroto cliffs, which is where the white form of *C. puniceus* was discovered, are near the town of Wairoa which is on the northern coast of Hawkes Bay, near the most southerly extent of the habitat range of *Clianthus*. The white form of *Clianthus* was apparently last seen growing on the Tiniroto Cliffs in the 1950s. It has very recently been returned there after the discovery of an old packet of seeds in a local garden shed, which when they were germinated produced the white flowered form of *Clianthus*[14]. Genetic testing apparently confirmed the origins of the white form to be in the Wairoa Region.

It would appear that the finer details of the white form of *Clianthus* has not been studied by botanists, probably because almost all plants would be of cultivated stock rather from its natural habitat, and nursery growers and gardeners may well have been unaware of any noticeable difference in the species other than flower colour. This was extended by crossing the white form with the red form to produce pink flowered forms which are now called *C. puniceus* 'Roseus'. The other naturally occurring red colour forms in cultivation, which have at times been given cultivar names, are similarly classified as forms of *C. puniceus*.

I recently checked the leaflet length on the scarlet flowered *Clianthus puniceus* that I grow (see photo page 31) as leaflet length is the easiest way for a non-botanist to differentiate between the two forms. The mature leaves turned out to be at the top end of the range as described by Heenan for *C. maximus*, but in reality being the southern form as this is the true *Clianthus puniceus* as first collected by Banks and Solander. My plant has for the second consecutive winter produced premature flowering, which was obviously not due to the recent unusually long mild autumn and early winter. Last winter my plant also produced quite a few clusters of flowers, as a photograph I chanced to take in February 2015 confirms (see photos page 32). The normal flowering period is, in theory, late spring or early summer. The current flower clusters have not been adversely affected by several, fairly light, hoar frosts or a light covering of snow, though they are currently slightly smaller that usual and paler coloured. It is thus very likely that nearly all the *Clianthus* plants in cultivation in the British Isles and probably New Zealand as well, are the true species *C. puniceus* as first described, being the hardier and more robust southern form, from the southern population.

Irrespective of what the accepted botanical naming of the plants becomes, and hopefully it will be corrected, *Clianthus* is still a very decorative shrub, and one well worth growing. Whilst in the wild it grows in the open, in cultivation in the British Isles it is almost universally grown against walls because of its vigorous but rather lax habit, though possibly also because it was not originally regarded as very hardy. It responds well to being pruned, and quickly makes fast growing new shoots and branches, most of which splay out from the wall. The largest that I have seen, quite a few years ago, was growing up to the eaves on the front of an old two storey house, making it a good 6m tall, though it must have taken significant maintenance to keep it in good trim with regular pruning after the initial securing of branches to the wall.

Clianthus is easy to grow and does not need much feeding, as New Zealand soils are almost devoid of phosphate. Metcalf[15] notes it grows well in most soils except heavy clay soils, and young plants can be damaged by a heavy frost after a long period of rain. In the British Isles it does suffer badly from two major predators, slugs and snails. They can and do, defoliate plants in a remarkably short time, which often proves to be fatal. Surrounding the base of the plant with slug pellets is only a partially effective defence, as snails can and do climb up the wall against which the plants are grown and gain access at a higher level, so regular vigilance may be required.

It may take some time before the nomenclature is corrected, and the southern form, currently called *C. maximus*, is correctly reclassified as *C. puniceus* and the northern form is given another name, be it either a separate species or a variety of the species. This can only be done by a botanist.

Is transport a problem?

You'd like to attend a meeting but don't drive? Or don't have a car? Contact the organiser to see if a lift can be organised. .

References

1. Givern, D G 1981: **Rare & Endangered Plants of New Zealand**. p.77 AH & AW Reed Ltd. Sydney, Australia & Auckland, NZ.

2. Cheeseman,T.F. 1925: Manual of the New Zealand Flora.2nd ed. p.527 Government Printer Wellington

3. Ebes,H. 1988: **The Florigeum** (Cook-Bank- Solander 1768-1771) No.452 p.150 Ebes Douwma Antiques Prints and Maps Melbourne & Southerby's Austraila & British Museum of Natural History.

4. Lindley, J. 1835: *Clianthus puniceus*. Trans. Hort. Society London ser.2 I pp 519-21 & Edwards Botanical Register Vol.21

5. Don, G. 1832: General History 2 p.467 (Note:. This George Don was the son of George Don and brother of David Don who was librarian to A.B.Lambert).

6 Heenan, P.B. 1995: The typification of *Clianthus puniceus*. New Zealand Journal of Botany, vol. 33 pp.561-2.

7. Colenso, J. W. 1885: Trans. & Proc. New Zealand Inst. Vol.18 pp.291-5

8. Dampier, W. 1981: A Voyage to New Holland. (republished combined version of his original book published in two parts in 1703 & 1709. Alan Sutton, Gloucester.

9. Lindley, J. ed. 1836: Edwards Botanical Register tab. 1755

10. Hooker, W. ed. 1837: Curtis Botanical Magazine tab.3584

11 Kirk, T. 1899: **Student Flora**. p. 118

12. Allan, H.H.B. 1961, 1982 reprint: **Flora of New Zealand** Vol.1 pp.368-9

13. Heenan, P.B. 2000: *Clianthus* (Fabaceae) in New Zealand: A reappraisal of Colenso's taxonomy. New Zealand Journal of Botany. Vol 38 pp.361-71

14. Anon. journalist 2015: Rotorua Daily Post dated October 23rd 2015 – on line

15. Metcalf,L.J. 1972: **The Cultivation of New Zealand Plants** p.85 Reed Methuen Publishers Ltd. Auckland

BITS AND PIECES

Groundcover at its best

The spiny everlasting, *Nablonium calyceroides* (synonym *Ammobium calyceroides*) is a valuable compositae in our Devon garden. It is an endemic of Tasmania, where it grows in the south-west, west and on some of the Bass Strait Islands in coastal areas.

It is a small perennial with basal rosettes of leaves 4 to 5cm long. The flower heads are white, solitary, prickly edged, erect on stout stems 1cm in length. It covers the ground tightly and fairly rapidly. We can recommend it for seaside or damp sites.

Beth Smith

Plants of Victoria on the web

Vicflora (vicflora.rbg.vic.gov.au/), which provides a comprehensive and up to date guide to the wild plants of Victoria, is a website I feel I ought to have discovered long before now. There are descriptions, loads of images (both photographs and drawings), distribution maps and links to information in floras produced by other states. Moreover, it can be searched using common names as well as scientific names.

Judy Clark

Illustration acknowledgements

Judy Clark: page 9 below; page 10, page 19 top right; page 20; page 21; page 22; back cover

Gary Dunlop: page 30 below; page 31

Gary Firth: front cover , page 19, below

Maria Firth: page 19 top left

Hilary Spon: page 9, above

The Australasian Plant Society

Minutes of the Annual General Meeting
Held at Lullingstone Castle, Eynsford, Kent on 12th November 2016

Committee Members Present:

Tom Hart Dyke - President
Robbie Blackhall-Miles - Chairman
Ben Ram - Webmaster
Judy Clark - Newsletter Editor
Jeremy Spon - Treasurer/Membership Secretary
Gary Firth and Maria Firth – Events Co-ordinators

Other members present:

Steve Harding
Jan Michalak
Hannah Sindall
Jeff Layman
Graham Blunt
Kevin Denson
Jude Lawton
Alexandra Boyle
Mary Thomas

1. Apologies for absence

Apologies had been received from Janet Miller (Seed List Manager), Tony Entwistle, Tim Darrington and Greg Plenty.

2. Introductions

After a welcome from Tom, Robbie asked everyone present to explain briefly who they were and what their main interests were.

3. Minutes of Last Meeting

These had been published in the May 2016 edition of Pentachondra, and were approved.

4. Election of Officers

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

b) Social Media. Robbie explained that currently he was responsible, in addition to being Chairman, for our Facebook and Twitter accounts, and the e-newsletter, but that work commitments meant that he badly needed to hand over at least the compilation of the e-newsletter to someone else. Jan Michalak agreed to take this on; Robbie would continue to be responsible for actually sending it out.

5. Committee Reports

a) Events (Gary Firth)

Both displays, at the Wisley Specialist Societies Show, and at Hampton Court, had been first-class, well-received by visitors and the RHS, and successful in involving members new to displaying plants. Following feedback provided by the APS among others, the Wisley Show would be moved to the main lawn next year (17th and 18th June), which should increase footfall. Gary said that it was important to be able to sign up new members on the day, as quite a few leaflets were given out, but very few new members actually joined. Jeremy said that there was no problem with this providing they paid by cash or cheque; taking card payments, even via Paypal, would be unlikely to be cost-effective. Gary also suggested that more incentive was needed to join on the day, in the form of a members pack and/or a free plant. This would need to be sorted out before next year's shows.

Robbie said that the garden visits had also gone very well; we do need more members to volunteer to host visits.

Gary then outlined the plans for Hampton Court next year (set-up between 29th June and 2nd July, open to public 3rd - 9th July – volunteers would be needed to man the stand, and some free tickets to the Show would be available for them.) Our display would be based on National Collections held by members; Robbie was keen that we stress the fact that many of these were held in ordinary, small back gardens, and Judy hoped we could concentrate on plants that could be grown outdoors in the UK.

There was some discussion about publicity. Graham Blunt suggested trying to involve the Australian Embassy; his stand would be more or less right next to ours, and he hoped to combine promotion of his and the APS stand. Robbie said he was also working on involving media personalities in promoting our display, on TV he hoped.

Gary confirmed that our application had been accepted by the RHS and outlined the financial implications to the APS. He hoped to more or less break even, provided we had plenty of plants to sell (members were all encouraged to propagate a few plants for this purpose); although it might be possible to find a sponsor, the meeting agreed that it would be reasonable, given the current financial position, for the APS to fund the display itself.

After some further discussion about the layout of the display, and the possibility of buying tee-shirts or aprons to identify APS members manning the stand, it was agreed that decisions on these and other details would be taken by Gary, with input from an informal sub-committee drawn from the main committee, over the next few months.

b) Other Events Robbie said that we needed to plan further ahead – 2 to 3 years, rather than 2 to 3 months! The AGM was effectively already fixed; other events for 2017 included visits to the Linnaean Society and Ness Gardens, and Paul Boosey was hoping to organise a work party where APS members would help him clear the old County Park Nursery site in exchange for free plants. Judy suggested we could also visit Hastings, to see her garden and Correa collection, and to go round Alexandra Park with Owen Johnson. Robbie had noted that there had been some complaints about there having been no events in the Northern half of the country in 2016; the Ness visit would

partially address this for 2017, but he would like to see 1 or 2 events in the North every year.

There was some discussion about the possibilty of holding joint events with other Societies – the Mediterranean Plant Society had specifically asked if we would be interested in one with them. Robbie said it might be possible for this to take the form of a tour round the newly re-designed garden at the Natural History Museum, which he was involved with, in January 2018. It was agreed that joint meetings could be beneficial, but that not all events should be of this type, as it was important that individual societies kept their unique identities.

The possibility of weekends away, or even longer trips, was also discussed; Alexandra Boyle said that the area around Menton in S. France would be ideal as there were several very good gardens there; the committee would look into this over the coming year.

c) Treasurer's Report (Jeremy Spon)

This had been circulated in the May 2016 edition of Pentachondra; there were no questions, and the accounts were approved.

d) Newsletter Editor's Report (Judy Clark)

Judy said there had been a good level of contributions over the last year, including several from new members; the only potential problem on the horizon was the workload if membership continued to increase – she might need help preparing Pentachondra for posting. The possibility of putting back copies of Pentachondra on the website was discussed. Volunteers would be needed to scan issues 1 to 38; subsequent issues already exist in electronic form. It was agreed that they should be available only to members, and Ben could arrange this, with the contents pages visible to all, as an incentive to join. It was also agreed that it would a good idea to have a catalogue of the APS library at Lullingstone online, to encourage more use of it. Adrian Cooper volunteered to compile this.

e) Website Manager's Report (Ben Ram)

Ben said the website was still working well as a recruitment tool, but more photos were needed, and he encouraged members to send in pictures of what was in flower in their garden, together with some notes on the plants shown.

f) Social Media (Robbie Blackhall-Miles)

Robbie reported that we had a good number of followers on Twitter, but the Facebook group was rather stagnant It needs more members to get involved, and use it as a forum.

g) Seed List

Robbie read out a report received from Janet Miller, which noted that there had been 30 orders this year; like other societies, members contributions to the list were declining as those who sent in seed in the past were getting older. We need to remind members of the fact that the seed list is now open all year round, and also need to be prepared for increases in orders for seed of plants featured in Pentachondra.

Judy reported on the ongoing review of the list, which involved deciding what items should be re-ordered when they run out, and what things should be removed from the list altogether. Robbie felt the list should be pruned quite a bit, then allowed to grow again as new plants were added, perhaps as a result of members suggestions or research. Judy planned to finish the review, order seed, and reprint the list by spring 2017.

It was suggested that it might be an idea to have a seed challenge – two free lots of seeds, one easy and one difficult, to be available to any members who wanted to try them, with a view to encouraging more members to try growing from seed, and to keep detailed records.

6. Any Other Business

a) Publicity

Robbie said that the APS 'Brand Image' in the form of the recently designed new logo, needed to be as widely visible as possible, and the definition of this 'Brand', i.e. what the APS is about, needed to be consistent across all platforms. We also need to establish what new members should receive by way of welcome. Kevin Denson said he was happy with the personal contact that followed his joining online; Jeremy said that he tried to do this with all new members, and also gain feedback on why they join. It was agreed that we should continue to send the most recent edition of Pentachondra to new members, plus a car sticker (which Robbie had now had printed), some free seeds and brief information on how to sow them. The germination notes which used to be sent to new members are probably too out of date; more up to date information would probably be better made available on the website.

Postcards were suggested as a cheap and effective way to promote the APS at events like Hampton Court, and if they featured specific plants with information on how to grow them, they would meet the educational requirement for our stand as well. Robbie said he was looking into a revised design for the membership leaflet.

Robbie then initiated a discussion on the 'mission' of the APS, saying he felt we had the opportunity to be more involved in conservation, through our contacts with Plant Heritage. Knowledge of what members actually grow could be invaluable in assessing conservation potential of cultivated material, and in moving towards a global target of 75% of threatened plants being conserved ex-situ. Records could be entered in the BGCI Plantsearch database under the umbrella of the APS, without individual members being identified, which would help to address privacy and security issues. Robbie also urged any member growing unusual plants to consider registering them with Plant Heritage under the Plant Guardians scheme – this could also be done through the Society's membership if preferred.

b) Conclusion

Robbie thanked everyone for attending, and Tom and Camilla for hosting the meeting and organising the food, then pronounced the meeting closed, after which Tom led a tour of the garden and greenhouses.

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Lemon-scented myrtle, *Darwinia citriodora*, in a Melbourne garden