

Australian Native Plants Society (Australia) (ANPSA)

Eremophila Study Group Newsletter No. 117



Photo – Eremophila glabra prostrate orange (photo Bernie Shanahan)

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Letter from the Editor

Welcome to the May 2017 edition of the Eremophila Study Group Newsletter.

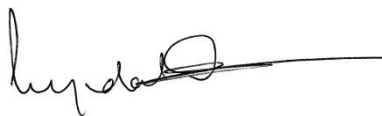
We had almost 40 expressions of interest (accounting for a total of 59 people) in our **ESG Gathering in South Australia in September 2017**. A second Event Newsletter and the close-to-final program were sent in March and April to those who registered interest, and this information is now included in this newsletter.

Your organising team (me, Ken Warnes and Bev Rice) have been working hard scouting out venues and contacting speakers. Bookings are now open – already 30 tickets have been sold out of a total of 60 (the maximum set by the venue capacity in Port Augusta). The event will include field visits on Friday (to wild areas north of Port Augusta) and Sunday (to Owen, and Ken Warne’s “patch”). Saturday morning will have formal presentations and Saturday afternoon will be spent at the Australian Arid Lands Botanic Garden on site and nursery tours. Our guest speaker Bevan Buirchell will present twice. A cuttings swap is also planned on Sunday. Read more on page 17.

Great to see some significant articles in this Newsletter from members – always welcome!

My plan to scan the Eremophila specimens collected by your former leader Colin Jennings has come to nought – as I reviewed the samples it was clear many were not in good condition, and the sticky tape and plastic used to hold them down reflected off the scanner light. So this collection has been binned, unfortunately.

Word is also getting around about Eremophilas. I am speaking on the study group, the genus and its horticulture at the Maroondah group meeting on 16 June and at Menai Wildflower Group on 8 July – check their websites for more info.



Lyndal Thorburn
Leader and Newsletter Editor,
Eremophila Study Group

What’s New in the Study Group

New members

Apologies to Ros Walcott (ACT) and Peter Hall (SA), whose names I inadvertently left out of the new members’ list last newsletter.

Welcome to new members Ali Ben Kahn (SA), David Copley (SA), Karlee Foster (NT), Dick Harding (Qld), Geoff Kenna (NT) Jaymee King (WA), Helen Lane (NSW), Chris Nayda (SA), Julie Owen (SA), Kevin Sparrow (Vic) and Keith Weeks (ACT).

Leavings

It is with sadness that we report the death of Tamara Cox, a long-term Study Group member and one of the founding members of the Sydney group, which has been meeting regularly since 2003.

We were also sad to hear of the death of Arthur Pratt, of Adelaide. Arthur had been a member of the study group since 1990.

Website

The list of “where to buy” Eremophila that was published in the last Newsletter is now up on the Eremophila Study Group website.

I have also completed a summary of your Study Group leaders past and present (with photos!) – it can be found at <http://anpsa.org.au/eremophilaSG/ESG-leaders.html> (thanks to Brian Walters for the IT assistance).

Eremophilas in the News

Ken Warnes has written a follow up article about the Pinery Fires in the February 2017 edition of the **Australian Plants Journal** (available by subscription to society members). He speaks of discovering *Swainsona prophylla*, *Angianthus* and *Nicotinia* and *E. glabra* and discusses *E. subfloccosa subsp. glandulosa*.

The **Garden Design Study Group Newsletter** Issue 97 has an article about using Eremophilas in garden design, by our new member Ros Walcott with photos by Ben Walcott. Ros reports that they have bought 423 Eremophilas of 167 varieties over the last few years, of

which two thirds have survived (most deaths due to frost, as she lives in Canberra). The article lists their experience with a number of these species. Full article available at: <http://anpsa.org.au/design/97.pdf>

Native Plants Queensland issue March 2017 has an article by Glenn Leiper entitled *From Little Things Big Things Grow*. This reports an excursion to the town of Lowood, west of Brisbane, where the local nursery owner Peter Bevan has created a garden, which includes Eremophilas, on vacant Council-owned land. This has now been “opened” by Council as a Rail Trail and its future seems assured.

Update from Pinery Fires

Ken Warnes (April 2017)

The majority of you may not know what has been happening around here since the Pinery Fire (November 2015). A friend and I have found *E. subfloccosa ssp glandulosa* in 5 burnt scrub areas including a plant in my own scrub.

Cuttings taken from the most vigorous plant rooted in a few weeks. It was down to a single known plant pre fire; and they are only the plants we have found. There's now in excess of 50 plants in total so what a result! Some of the *E. subfloccosa ssp glandulosa* seedlings are woolly: *x ssp lanata* at a guess. Some of the seedlings are below.



As a bonus, a seedling *E. subfloccosa ssp glandulosa* dug up from a wild germination has developed significant variegation in the foliage (next column). I'm not sure if that is a positive, but in early April I potted it into a 150 mm pot to see how it develops. The surprise here is that it is one of 14 seedlings in a single lump of dirt

dug up from where the last known natural plant was lost in the fire. They weren't going to survive like that and there were a lot more coming up so I brought them home. The rest look perfectly normal and consistent.



We have also now found 6 seedling *E. glabra* in our scrub, one of which appears to be a slight variation to the others. We have found *E. glabra* in some numbers in one of the other scrubs affected.

One of the green *E. glabra* in the Patch has flowered – it's brown! Perhaps *x* “Augusta Storm,” which was nearby (green *x* purple = brown?). The leaf looks right. Another of the green *E. glabra* seedlings is shooting straight up with no sign of branching: *x calorhabdos*? There's 45 in the box plus what are in the ground.

The many seedlings potted up and ready to plant out continue to amaze with their variations, which must be from hybridisation on a large scale (below).



As seedlings, some of the *E. glabra* in particular look like great foliage plants (over). Many are in bud and I await the flower colour with interest. Some of those from hybrid

parents would appear to have a 3rd party involved this time. Exciting, but messy!



The seedlings from my "Nullarbor Nymph" look very much as if a 3rd species is involved. Of the box of ~20 plants, about a third look true, half look as if *E. weldii* is involved, one clearly has *E. ionantha* present and one is a squat little plant with small, round, grey leaves that I can't even guess about (see below – potential *x weldii* front right, potential *x ionantha* back centre, unknown parent front left, "true type" Nullarbor Nymph back left).



Both *E. weldii* and *E. ionantha* are related to *E. parvifolia*, which is presumed to have provided pollen for the initial Nullarbor Nymph hybrid; it would be in keeping with my observations that hybrids are more common within related groups. I'd love to be planting but the ground is rock hard and too dry to create the row where I plan to put all the 2016 hybrid swarms.

The purported *E. hughesii* *x* WA *E. acrida* are also showing great variation left *in situ* (next column). Three have short leaves, no idea what's happened there, one is heading off along the ground and has purple flowers. That one almost certainly has *E. prostrata* in it,

which would fit an emerging pattern with *E. prostrata* in the same group as WA *E. acrida*.



Postscript April 2017 - My block is looking a bit better with several dead plants removed and vast swathes of wireweed cut off and cleared away to enable replacement plantings. It's been too dry to rip the line for all the seedlings and I have lost several of the more interesting ones in the past few weeks. It's frustrating, after nursing them along for over a year - roots just rotted off and I try not to over water them. About 50 mixed replacements and 100 plus seedlings to go. It's a big job for one person. I'm resisting tidying up straggly old plants in because visitors will get more out of a "warts and all" visit.

Eremophila calcicola

Eremophila calcicola is a newly described species of Eremophila that is found in the wild in WA. Phil James reports initially it was thought that this plant was rare however, after a fire through the site, many seedlings increased the numbers. Since then he has collected various forms from the site and his current Parmango Green grows 0.5m x 1.2m. It is in the *Stenochilus* group with green flowers but they are not conspicuous and the drupes are glossy green.

It has been available from plant nurseries for a few years and has been sold as *E. Parmango Road* (listed as same in the Brown/Buirchell Eremophilas of WA book) and is currently sold as *E. Parmango Green* in Western Australia by Benara Nurseries. Phil James reports that around 8 years ago he purchased a grafted plant from Ray Isaacson which was sold as

Eremophila sp. aff. decipiens and/or Toolina (likely because of the S-shaped pedicel).

E. calcicola has green flowers somewhat similar to those of *E. glabra*, but on long pedicels (see pic below, from Norma Boschen), and large round green fruit. In the wild, the plant is wider than it is high, and emerges as a bright green groundcover in disturbed soils. Flowers are not well-displayed and are close in colour to the leaves.



Horticulture

Members have reported variable results with this species. Many have noted its high value as a foliage plant because of its bright green leaves, but poor display value because of its insignificant flowers. It is vigorous, but may be less so in frosty areas.

Ros Walcott (ACT) reports a distinct lack of success, she thinks due to frost: “We planted three of them in October 2014 in a place with some overhead protection, as they were listed as a bit frost tender. These plants did not thrive at all and were removed in March 2016. We decided to put in another three in a well-drained sunny position in March 2016, but these were frosted off in August 2016 and did not survive the winter. So I am left in a quandary as to where to place them in the garden. I think our area is just too frosty for them.”

Lyndal Thorburn (NSW – but next to ACT) has had two plants in the garden for 3-4 years. Both flower in spring with a 2nd flush in autumn and have survived their frosts, but her site has a lot of overhead protection (from Eucalypts, which also suck water out of the soil). The specimen that was planted in a raised bed with new

garden soil (and hence less root competition) has done best and is now about 1m across and 0.5m high. Both also survived last year’s very wet winter. However the very dry Canberra climate and short growing season mean that the plants have not reached the lushness of those photographed in the wild in WA.

Bill Handke (also ACT) has been growing this species for a few years from a cutting-grown plant. “As you can see (below) it is growing under cover from Native Cherry, Callistemon and crowded from *E. glabra*, *E. "Crazy Mac"* and a Melaleuca.”



“It is in a very dry spot with morning sun and competes for moisture not only with those plants by also from a large *Eucalyptus scoparia*, in a raised well drained area of appalling Kambah white clay. It seems to do OK and is looking very fresh at the moment after the good rains we have had.”

Norma Boschen reports “I’ve had *E. calcicola* for about 10 years. The first one had to be removed, as a trench had to be dug to put the power under the ground. I then planted it under a White Cedar and I felt it was a bit too shady, although it grew very well. From there I have planted it way out under Buloke trees and another place under Sugar Gums. (they are 2-3 years old) (pic over page). It has done very well in all places. I give them some water in the first summer. I have found it very frost hardy. It must be drought-tolerant as no plants have died. We have taken some photos to send – I noticed it was flowering in the last few days. The flowers are mostly underneath. I

think it is an excellent quick growing understory plant.”



Phil James (WA) reports that *E. calcicola* survives well in landscape situations in Perth with some watering, used commercially on a regular basis at this point and that he has used the plant successfully in the Goldfields/ Pilbara areas with success – these areas are subject to extreme temperatures for long periods of time. Losses which occur in mine-site village areas are from overwatering. In Phil’s opinion the species is not a good retail item and is better suited to landscape situations, as the flowers are held under the leaves. However having said that, the market or enthusiasts may determine otherwise.

Jan Hall (Vic) has a plant that is 10- 12 years old and cutting grown. “It is growing in red clay soil which would have been 'improved' with gypsum, sand, and compost, and with a thin layer of poor quality, chunky council mulch. It is usually very dry in that area and partly shaded by the nearby trees plus having root competition. It has been a reliable , no fuss low spreading shrub. Size would be 50-60cm and 2m. wide. I do prune to tidy and keep it off the path. The very wet Winter-Spring did cause inner leaf drop and I am trimming it back to dense it up again.”

Christine Strachan (Vic) reports “*E. calcicola* would be one of the hardiest Eremophilas that I have ever grown and so easy to propagate from cuttings. Here in Melbourne I have two plants, one gets very little sun under a large Eucalypt and shaded by lots of taller plants (below). At the moment it is approx.. 1m x 2m but would

be wider if I didn't keep hacking it back. It is growing in a dry sandy loam and never gets watered. Flowers are insignificant but the foliage lush and attractive.



“The other plant in our garden gets morning sun and a little dappled afternoon sun – taking over smaller plants at the moment! I have planted several *E. calcicola* at our son's property in Northern Country Victoria, where the soil is heavy clay and summers are very hot and dry.

“The two main plants are both planted in raised beds (below), in full sun and are thriving. Both have to be pruned often as they are so healthy and lush. These plants would be over three years old and come back beautifully after heavy pruning. I have never seen any garden pests on *E. calcicola* and can only say it is a great plant as a low growing sprawling ground cover.”



Charles Farrugia (NSW – in a very wet part of Sydney) grew the species from tube-stock on its own roots, fertilised when potted up in

2014. “While it was in the pot this species gave me the impression that it could handle any situation nature threw at it. October 25th 2016 it was planted in a new garden area. This area consisted of clay-ey well-draining soil. Sheep manure was added and it just took off. At present it is covering an area of 1.2 m X 1 m and still growing (pic below).



“During the current wet spell we have had 195mm of rain and very little sunshine, and some of the stems started yellowing. When these yellowing stems were pruned off it was noticed that new growth was shooting from the lower end of the stem. That was mid-March, and the plant seems to be doing fine so far. It will be interesting to note how much more wet conditions it can handle.”

Russell Wait reports collecting *E. calcicola* in September 2003 south of Balladonia and subsequently grown from both cuttings and as a grafted plant. “It was growing in Mallee country that had been burn about 9 months before and was growing quiet lushly on a grey sandy loam with Grevillea and of course some species of Eucalyptus. There was a lot there in a couple of spots. I was there about 4 years later and they were becoming scraggy and I was there last year and I didn’t see any still growing.

“The original plants planted in 2004 they were still alive a year ago and they would have been 1m high by at least 7m wide. They mainly flower in the spring up NW of Swan Hill but where I live now they flower more often. They are flowering now in April and one planted 4 years ago and is 1m high by 4m wide. It will be

grafted in my new location as most if not all my Eremophilas are grafted down here.”

Ken Warnes (SA) says “My experience is limited to a single plant but it has grown so well that I haven’t bothered to build up numbers and there seem to be plenty about. The fact that it is hardly spectacular is another factor. It looks just like a robust Myoporum if the flowers are disregarded.

“My original (and only) plant came from material collected along Parmango Road and that location name is what we used until the recent publication of *E. calcicola*. The single specimen at my place (below) is now about 14 years old. I think it is on its own roots but it would take an expedition with a machete to be certain. It measures 5m x 4m x .7m so is a fair lump of a plant, much larger than reported in its natural conditions. It has remained densely foliated.



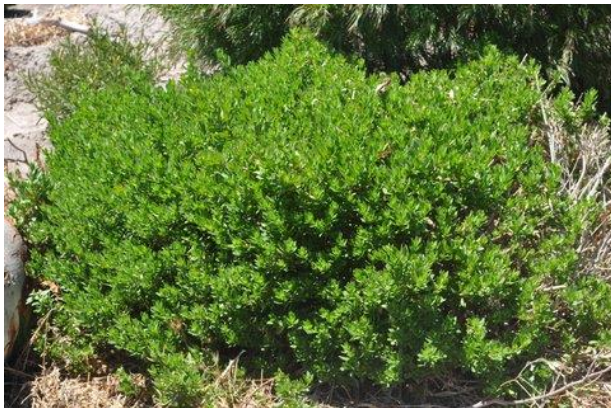
“I haven’t observed layering but I haven’t gone looking for it either under the bush and it is quite possible that it has done so. As an ornamental it would appear that young plants kept fresh by pruning would be the way to go. This would display the flowers, which on my plant just disappear into the general mass.

“Its main value would appear to be as a robust land-scaping plant, drought tolerant but also able to withstand wet periods. I presume nectar-feeding birds work the flowers but not obviously so. At this stage it has not germinated from seed and would not appear to be involved as a pollen provider for hybrids. The edges have not liked being run over by my ute but that’s the price it has paid for being so vigorous. Hence the oblong dimensions.”

Propagation

Phil Trickett has tried grafting with this species and reports he has a grafted *E. calcicola* “which is currently threatening to take over our entire garden. It is currently 3m x 3m wide and still growing vigorously. I grafted it onto *M. acuminatum* a couple years ago from a seedling. The original (ungrafted) plant is still alive in a pot but has hardly grown in the last two years. I don't know how it would go on its own roots, but it certainly wouldn't survive in the boggy ground where the grafted plant currently resides.”

Brian Freeman also reports “When I got this species I excitedly grafted some up. As I have since observed, this wasn't at all necessary. Photos (below) are of the best growing one (of course on the best site and soil of them all) and it is powering away on a graft with the rootstock being *Myoporum montanum*.



“I have cut it back by half to try to keep it under control. The plant suckers (or perhaps the correct term may be ‘layers’) easily on the good soil. As can be seen in the photo it is continuing to grow and send out suckers in all directions. It has sent out layering stems on the other side of the plant at the same distance. In winter I will probably remove this plant and replant the rooted layered stems in a creek that washed out in last year's abnormally wet winter.”

Ken Warnes suggests that it may have potential as a grafting stock because of its robustness.

However, for the rest of us, cuttings are the way to go. ANPS Canberra struck cuttings of this species in 2013, 2015 and 2016 with 82% to 100% strike rate, using IBA 2000 or 3000,

with bottom heat and overhead sprays. The first and third batches struck in 4 weeks, when cut in Spring and Winter respectively, and the second took 10 weeks when cut in Autumn. Another batch of cuttings done on 27 March 2017 had roots out of the bottom of the punnet on 12 April 2017.

Phil James in WA reports using tip cuttings in spring and no heat, neutral potting mix and Clonex Green (IBA 1500) or Clonex Purple (IBA 3000). Being in WA with hot summers, Phil also uses, in summer, a mix of 60% potting mix with 40% medium perlite – this mix keeps the moisture constant without overwatering. He gets strike rates of 85% with these mixes.

Charles reports that he has had prunings sitting in water and they have produced roots after 1.5 to 2 weeks (below). A batch of cuttings he set on 27 March with Yates Cutting Powder had strong roots growing out the base of the punnet on 19 April.



Russell has germinated seedlings out of fruit collected from the original site in WA.

Late news – Normal Boschen has just discovered a seedling in her garden – no-one else has reported these. Pic below.



Eremophila glabra Canning Stock Route

This photo (next column) appeared on the Eremophila Facebook Page in February courtesy of Brian Freeman. Ken Warnes has confirmed it as *E. glabra* Canning Stock Route form, brought back by Ronda and Peter Hall and sold from their former Nursery at Pinery. Ken believes that it was the southern end, as they did some detouring from about Well 5 because of wet roads.

The nearest to Brian's pic that Ken knows of was collected by Tony Clark inland from Kalbarri.



The form is distinctive with very tomentose sepals and a very large fruit; however, it is not currently part of *E. glabra ssp. tomentosa*, despite at times being included there.

Bob Chinnock's book shows widespread inland collections for that sub-species. However, Brown and Buirchell confine *E. glabra ssp. tomentosa* only to those diploid populations around Kalbarri and a narrow coastal strip.

This has left the similar inland forms in limbo and of course it is an enormous problem splitting them up into clearly defined forms of consistent, distinctive characters and distribution

Ken reports also collecting a nearly white-foliaged, quite outstanding form from the boundary between Billakallina and Parakyliya Station, south-west of Lake Eyre a few years ago. They struck but were all lost at potting on. "It was tough sandy country and perhaps they didn't like my kindness and care."

Chimeras

Ian Tranter

Chimeras are organisms made up of cells with different genetic compositions. They are a rare feature of grafted, cutting and cell culture propagated plants. A graft chimera occurs where a shoot from the graft union has cells from both the stock and scion. Other chimeras can arise from a mutation or genetic change in a cell at the growing tip that then propagates to the subsequent stem.

The first recorded chimera was mentioned by Russell Wait in newsletter 81, and is a particularly rare occurrence as it is a chimera between two different genera, two different chromosome levels, radically different flower types and very different growth habits. Russell reported that it arose in a graft set by Ron Paine from near Geelong in Vic, from material supplied by Russell as he was short of root stock at the time. The original plant is still alive, and very vigorous, but gets affected by scale.

The plant has a skin of an *Eremophila hygrophana* and the insides of a *Myoporum insulare*. Its leaf shape and large vigorous growth habit are like an *M. insulare* but it has grey green leaves and tiny mauve flowers. The plant arose when Ron Paine in Drysdale grafted an *E. hygrophana* (one of Russell's garden seedlings) onto *M. insulare*, and the chimera came up as an adventitious shoot from the graft (referred to in the rest of this article as 'Drysdale').



The 'Drysedale' chimera is a **periclinal** chimera which has the whole skin of one genotype and the insides of another. **Mericlinal** chimeras only have a strip of the skin being different, and sectoral chimeras have a segment through the whole stem being different. Mericlinal and sectoral chimeras are usually unstable as the most vigorous cell type will end up dominating their cell layers. 'Drysedale' is unusual in that the occasional branches that have reverted to a mericlinal state don't show a quick dominance by the *M. insulare* skin cells; nor does the naturally smaller *E. hygrophana* skin impose any significant constraints on leaf size or growth habit, as is the case in some chimera.

The stability of periclinal chimeras is a consequence of how plant stems grow. The shoot grows by continually generating new cells from its growth tip. Those new cells are in three layers that grow out from the three bands of undifferentiated tissue (meristem) at the top of the shoot.

The L1 layer is the skin (or epidermis) which makes up and controls the surface of the plants. This includes any hairs (trichomes) and the various physical and immediate chemical barriers to the outside world.

The L2 layer (or mesophyll) controls leaf shape, general flower shape and the gametes. The L3 layer (or core) makes up the vascular centre of the stem, and is also responsible for root formation. There is rarely any displacement of cells between the L1 and L2 layers. Therefore, if the meristem cells for the L1 layer are genetically different, then all the skin cells produced as the stem grows will retain that difference.

How to tell if you have a chimera

There is a range of ways to tell if a plant is a chimera including finding reversions, phenotypic evidence, and examination of the cytology, chemistry, pollen or gametes.

Reversion can occur in a stem when a cell from another layer is displaced. For example 'Drysedale' does occasionally revert as shown in the photo below, with the shiny *M. insulare* skin contrasting with the grey *E. hygrophana* skin.



The reversion has the characteristic start from a single *M. insulare* cell emerging lower down, broadening as its greater vigour takes over more of the L1 meristem so that segments of leaves, and eventually whole side shoots, have reverted. The flowers on these shoots are normal *M. insulare* flowers. A cutting taken from one of these side shoots will be also grow as a normal *M. insulare*. Another reversion test is root cuttings which will have the same genotype of the L3 layer (note these have to be from the roots, not suckers from underground stems or bulbs).

Chimeras have also been identified by studying the cell size, as polyploid cells are usually larger, or examining the chromosomes themselves. Chemical analysis has also been used as many waxes, sugars and resins are only expressed by the epidermis. Where fertile, the seeds of a chimera will reflect the L2 parentage in the vast majority of cases.

The International Code of Nomenclature for Cultivated Plants guidelines for naming an intergeneric graft chimera is to use a plus sign between both parents so 'Drysedale' could be called *Eremophila hygrophana* + *Myoporum insulare*. The alternative is to use a plus sign followed by a combination of parts of both genus names followed by a cultivar name: e.g. + *Eremoporum* 'Drysedale'. The name of a chimera within genera is: + *Eremophila* 'cultivar name'. Researchers normally designate a chimera by the species making the L1, 2&3 layers e.g. EMM or HII.

Distinguishing chimeras from hybrids

A chimera can often be distinguished from a hybrid by the distribution and mixing of characteristics. Hybrids usually have a mixture or blending of characters resulting in an intermediate phenotype. In contrast, a chimera is more predictable and each layer will be the same as its genetic origin. So for example in 'Drysdale' the leaf hairs (formed from L1) are those of *E. hygrophana* and the leaf and flower shape (formed from L2) are mainly of *M. insulare*. Leaf hairs appear to be singularly influenced by the F1 layer. Some plant features that depend on chemical and hormonal interchange between the layers can be more unpredictable.

The literature suggests that generally the F2 layer governs leaf shape and size but the F1 layer can have some influence on leaf size. Edge features such as serrations can be intermediate. With flowers the F2 layer governs timing, location, overall shape, the pollen and the gametes. However some of the incompatibility factors that prevent fertilization are in the F1 layer. Flower colour is largely from the F1 layer, especially anthocyanins (blues and pinks). Carotenoids (reds and oranges) can be in any layer. So in the 'Drysdale' example the flowers are getting their mauve/purple from the *hygrophana* skin.

Eremophila chimeras

Other than Drysdale, I know of four potential *Eremophila* chimeras.

The first is a plant I came across in Peter Olde's garden which is very similar to 'Drysdale'. It came from Phil Vaughan, who advises that it arose in his nursery garden at Curlewis from a graft of either *E. hygrophana* or *E. mackinlayii*. Both of my 'Drysdale' and 'Curlewis' plants have now flowered and are identical as far as I can tell. The only real differences are that 'Curlewis' doesn't revert and doesn't flower much.

The second resulted from a graft by Ken Warne of an *E. prostrata* on to *M. Monaro Marvel* or a similar hybrid. At first it looked like *E. prostrata* but then started producing branches of *Myoporum*, of *E. prostrata* and of a mixture

of both. The *E. prostrata* cutting I have of this is pure *E. prostrata* so I think it is likely that this was originally a sectoral chimera where a segment right through all layers is one species and the remaining segment the other. The side shoots off each segment will be the pure version of each species. To try to obtain a stable periclinal chimera from such a plant, the pure species side shoots should be removed. As mixed shoots grow, look for side shoots where some of the leaves are one species and their skin another (a mericlinal chimera). Prune off any other shoots and, as the mericlinal shoot grows, look for stems where the whole leaf has different skin to insides (periclinal), and then eliminate the others.

The third chimera was from a grafted *E. warnesii* onto *M. insulare*. After 3 years it started dying and Ken found an aberrant but healthy shoot. He grafted this and the chimera is now 1m high.

The fourth is *E. revoluta* skin on *M. parvifolium*. This was also reported by Russell Wait but he says he was never able to propagate it and the plant has since died.

Another plant of unknown origin (below) from Russell Wait has been discussed as a possible chimera. It doesn't appear to match any existing species. Could it be a chimera? The



flowers are not small and regular so we can eliminate it having a *Myoporum* L2. The only other *Eremophila* rootstock of which I know is *E. denticulata ssp. trisulcata* but this is unlikely as it has an S shaped pedicel (flower

stalk) whereas that of 'UnknownRW' is short and straight. Pedicel shape should be determined by the L2 layer. Nor do the leaf size and shape match *E. denticulata*. Given the mix of features, the mostly likely origin seems to be a hybrid.

These handful of known chimera involve multiple species in both genera which is an indication that more can be expected. Eremophilas seem to be very adaptable as suggested by their wide hybridisation capacity. By contrast I am not aware of graft chimeras in any other native plants. Grevillea are often grafted, yet Peter Olde cannot recall any in that genus. I asked three other top grafters with wide experience (Phil Vaughan, Phil Trickett and Brian Freeman) but they hadn't seen any other graft chimeras. A search of the all SG newsletters on the ANPSA website only turned up the Eremophila chimeras.

How to create a chimera

Graft chimeras are deliberately produced by waiting until a graft has just formed and then cutting it off across the graft point so that some of the callus from both stock and scion remain. Adventitious shoots from this callus can be the stock, the scion or a chimera. If it is a mericlinal chimera then the leaves that are mostly stock should be gradually removed and the top shoot pinched out once a fully periclinal side shoot occurs. The success rate is low and for many horticultural crops it has never succeeded. Many grafts that are cut back fail to produce any shoots from the callus and usually less than 5% of these shoots are periclinal chimeras.

Chimeras are now also artificially created by mixing cell cultures and then inducing shoots. Many natural 'sports' are also chimeras. As a mutation usually only starts in a single meristem cell it is confined to a single growth layer. The widespread propagation of Eremophila by cuttings increases the chances of such sports appearing over time. Plant breeders and researchers use colchicine treatment of buds to artificially induce polyploidy (chromosome doubling) and this can often result in chimeras.

Uses of a chimera

Many of the horticultural chimeras in cultivation have originally been sports selected for interesting new attributes such as variegation, flower colour, increased vigour, fruit characteristics, or disease resistance. Only subsequently have they been found to be chimeras. Deliberately created chimeras include some thornless blackberries, and tomatoes with stem hairs that discourage insect attack. One of the attributes of 'Drysdale' is that the *E. hygrophana* leaf hairs make it more resistant to thrip leaf disfigurement than straight *M. insulare*. Many chimeras are also created for research purposes to investigate the roles and interactions of the plant cell layers.

With Eremophilas it is less clear that chimeras are going to be highly desirable. 'Drysdale' and 'Curlewis' are vigorous large bushes that can be used as screening and work well as a root stock. But their flowers, while cute, are tiny. Russell has found that the 'Drysdale' form does work as a root stock but he does not feel it works as well as *M. insulare*, in particular because the bark is very soft it is inclined to tear the bark away when cut.

But there are possibilities. A chimera with a hairy Eremophila skin, say *E. glabra ssp. tomentosa*, could give a snowy look to a Myoporum. For example with a *M. floribundum* core you could end up with red or pink flowers along the tops of stems and thin pendulous white leaves. The nature of chimeras is that any that have a Myoporum L2 layer will also have tiny flowers and thus may be less horticulturally attractive than most straight Eremophila. However, Myoporums do have large numbers of flowers and these could be attractive if combined with a strong coloured skin.

Several Eremophilas have been used as a rootstock in the past including *E. bignoniiflora* and *E. maculata* but the former can be slow to strike and the latter is prone to side shoots. *E. denticulata ssp. trisulcata* is being used by Charles Farrugia with great success, and a chimera based on this would have a good flower size and it is possible the L2 layer would also contribute some red orange colour.

As the skin is responsible for much of the disease and insect resistance a Myoporum skin on an Eremophila centre may be more able to take humid coastal conditions. These would likely have the flower shape and size of the Eremophila stock but would be white, unless some red/orange colours are expressed in the L2 layers. The large range and intensity of colours in Eremophila flowers may indicate that their colours are expressed in multiple layers which would create interesting combinations in chimeras. For example, what would be flower colour of a *E. meulleriana+denticulata* chimera. And would the throat spots of *maculata* or the outside spots of *E. mirabilis* be present in a chimera?

Further reading: Plant Chimeras, by RA Tilney-Bassett (1986) – order online

Plant propagation principles and practices, by Hartman, H & Kester, D Prentice Hall - many editions.

Opportunities for synthetic plant chimeral breeding: Past and future by Burge, GK et al, Jnl Plant Cell, Tissue and Organ Culture 70: 13–21, (2002)

Using a periclinal chimera to unravel layer-specific gene expression in plants by Filippis, I et al (2013), Plant J, 75: 1039–1049.

What chimeras can tell us about plant development by Szymkowiak, EJ & Sussex, IM - Annual review of plant biology, 1996

Eremophilas in Sydney – the effects of flooding rains

Charles Farrugia (NSW)

Just jotting down some observations from my Eremophila garden after a two-week period of high humidity, continual rain, sometimes very heavy other times it rained morning, afternoon and night with intermittent breaks. We had about 50 mm of rain and very little sunshine, if any, in one week, followed by a further 65mm the following week.

Before this rainy period, my area had a very long period without any rain, and weekly heatwaves where some of the Eremophila in the garden were showing signs of stress. Those in pots were being watered every second day. Different sections of the front garden were getting a washing machine load of grey water.

The new back garden section had an initial watering. Eremophilas planted in this section

were being hand watered. Other sections in the back garden had no additional water at all till the rain came (pic below of *E. mackinlayi ssp. spathulata* with *E. racemosa* in background).



E. latrobei, *E. acrida* & *E. glabra* Mingenew are in full bloom. *E. acrida* showed no effect at all from the heatwaves.



E. warnesii & *E. fasciata* (photo over) are in a garden section that never got watered and they were showing some stress. These two I normally cover with a plastic sheet to keep the foliage dry on rainy days. So the covers went back on during the heatwave to give them a bit of shade from the midday sun.



Since the rainy spell the new growth on both of these species, especially *E. fasciata*, is incredible. There was dieback on *E. warnesii* where a few stems got wet. Mealy bugs infested the dried flower buds. *E. macdonnellii* Simpson Desert and green leaf forms (below) are full of flower buds.



E. glabra ssp elegans, *E. subfloccosa ssp lanata*, *E. deserti*, *E. glabra* Arrowsmith, *E. arbuscula*, *E. nivea* Beryl's Blue have plenty of new growth whilst *E. nivea* and *E. hygrophana* have dropped all the mature foliage and are a mass of new growth.

The latter species, which is in a large pot, was really struggling in the summer heat so it was moved to where it was shaded from the midday sun and then started to improve. Again *E. strongylophylla* has plenty of new growth, with the one in a more open area in full bloom, but they also have quite a bit of leaf dieback.

E. alternifolia ssp. latifolia was in a medium pot and only had a little bit of foliage at the end of each stem. It was re-potted into a larger pot just before the rain came. Now it has new foliage everywhere and has started to flower. I am not sure if repotting helped it or the rain – most probably both.

I was contemplating removing *E. tetraptera* because it was a real sorry sight. I persevered to try to get a successful graft from it. Since the rain there is new growth all along the stems, although again this another one that had a problem with mealy bugs amongst the dried seed pods.

E. delisseri and *E. veronica* both have new growth from the lower parts of the main stem and *E. oldfieldii* (below) is coming into full bloom.



E. decussata x parvifolia (Nullarbor Nymph) - on its own roots it was doing quite well before the rain then it got a little bit of leaf dieback. The unnamed grey-leafed hybrid is ready to burst into bloom, though this was also doing quite well during the dry spell.

E. calorhabdos (pic over) - 75% of the foliage was pruned before the heatwave. When the heatwave hit I was a bit concerned that any new growth wouldn't handle the heat but it kept flourishing. I think the main part of its root system is under my neighbour's sandstone area which probable accounts for the prolific new growth.



E. debilis came up as a seedling and was planted in the new section. It was doing quite well before the rain, but since then it has taken off and is in full bloom (below, with *E. "sulcata"* on the right). New growth needs to be controlled as it will steamroller everything in its path.



E. aurivisca - this is one of my earliest Eremophila, on its own roots. It is in flower for nearly 12 months of the year, year in year out. It is now included in the new Eremophila garden (photos next column), so maybe the soil cultivation and fertiliser encouraged it to send out new growth. Since the rain, new growth is appearing from the base of quite mature stems.



White and pink forms of *E. laanii* were heavily pruned before the rain and Milli Milli Station form (below) was struggling. The first two are ready for another pruning whilst the latter is a mass of green.



The front garden, I must say, has been sort of neglected – *E. muelleriana* (over page), *E. prostrata* (over page) are doing very well, even before the rainy period. *E. christophori*, which was heavily pruned pre-rain, is in full bloom.



In the old days, all one heard about Eremophila was that they didn't like too much water or you couldn't grow them in Sydney because of the humidity but I find them amazing - how they behave when conditions are tough and how quickly they react to favourable conditions.

Now let us see how they will react to the latest deluge (it is classified as a deluge in our area, in my opinion) – hope I didn't put pen to paper too early.



Open Garden at Lyn Barfield's

Sue Guymer

Lyn and Gordon Barfield's research garden was open to the public for the first time on 6 April 2017 as part of Open Gardens Victoria. Two-thirds of the garden is native plants, including *Eremophila latrobei*, below.

The only exception to all this good news is *E. calcicola* (Parmango Road) (next column, with yellowing stems).

This is on its own roots and is in the new garden. It was in a small pot for quite a long time, with the soil sometimes dry – but it recovered with a little bit of water. When it was planted in the garden it literally just took off. Since the rain some of the foliage is not looking too healthy. I have pruned the sad looking stems and on the very lower parts of these stems there is now healthy new growth.



We also photographed *E. georgeii x glabra*, *E. humilis* and *E. warnesii* (over, in that order).



Events

Sydney meeting

Ian Tranter

The Sydney group of the Eremophila Study Group met on 11 February 2017 and discussed published genetic evidence on the evolutionary age and origin of Eremophilas. DNA data seems to indicate that ancestors of Eremophila were in Africa some 50 million years ago when family Aptosimeae branched off – small plants with showy blue/purple flowers from semi-arid regions of Southern Africa, Arabia and India.

Then 30 million years ago (mya), the species *Androya decaryi* branched off and now occurs in semi-arid southern Madagascar. About 15mya a major split led to Eremophila migrating to Australia and Leucophyllum to Mexico. Both lines started branching into new species from about 10mya. Leucophyllum are now small-medium ornamental desert/semi-arid shrubs of Central America and SW USA, with blue/purple flowers. In Australia, data suggest Myoporum could have diversified from the Eremophilas. The soon-to-be-published study of Eremophila DNA should provide new data to help clarify evolutionary history.

The group also discussed whether the Eremophilas most closely related to Myoporums are more coastal tolerant, given the latter tolerate more coastal environments. Members' experience is that many of these Eremophilas will grow in the coastal cities, but then so do many unrelated species. The conclusion, as previously, was the importance of good air movement.

The group also discussed seed extraction and considered the nature of stock and scion compatibility. It was felt there would be benefit in identifying the best stocks for particular soils and climates.

The next meeting of the Sydney sub-group is on **Saturday 8 July** @ Peter Olde's place near Picton NSW, commencing 10 am. One of the subjects will be the search for the perfect grafting stock. Further info on the meeting from Charles Farrugia on [eremgenus4719 \(at\) hotmail.com](mailto:eremgenus4719@hotmail.com) .

Queensland meeting

Jan Glazebrook

Sixteen members of the Queensland group and three guests met in Lowood on 9 April. Sixteen members and three guests were present.

Group discussions focussed on horticultural aspects of growing Eremophilas. Members run a raffle and also share the costs of acquiring new stock when members travel interstate.

At this meeting the following species were discussed:

E. prostrata: from Central Aust. Good ground cover. Little purple flowers. Natural hybrids occur in Central Aust. Needs sun and good drainage. Jan had grown it from cutting material but it did not like wet weather. Peter Bevan will try grafting it;

E. wilsonii: plentiful on Simpson's Desert. Here it fails on its own roots so it needs grafting;

E. succinea: Peter still has a very small plant;

E. densifolia ssp pubiflora has dense grey hairy leaf. It does not like the humidity;

E. densifolia ssp erecta: still growing at Jan's; and

E longifolia: yellow form.

The meeting concluded with a tour, and for some a re-visit, of Peter Bevan's constantly spreading garden. The tour started in Peter's front garden where a number of seedlings are growing on the edges of the lawn areas that are subject to mowing. The fact that very few seedlings pop up in the actual garden bed led to discussion of the lawn mower assisted germination. Then Peter led the group down the "Rail Trail", which has developed over the years and now holds many mature and large species of native plants (see page 3).

The next Queensland sub-group meeting is on **Saturday 10 June 2017** at Jan and Ken Mathiesen's, 5 Strathdarr Drive, Torrington. Qld. Phone (07) 4630 4145. Topics are Eremophilas that are good for hedging and growing Eremophilas on black soil.

The meeting following is on **14 October** in Logan Village. For more information email Jan Glazebrook at [janglazebrook \(at\) gmail.com](mailto:janglazebrook@gmail.com)

ESG Gathering 8-10 September 2017

Plans for our event in Port Augusta are gathering pace. Those who have registered interest through our poll (https://www.surveymonkey.com/r/ESG_SA_2017) have received a 2nd Event Newsletter.

Bookings are now open and the event fee is **\$145**. You need email the editor for the URL to buy your tickets. Unfortunately this is necessary because a member passed the URL on to non-members. I want to make sure that longer-term members get first go at tickets. We have a maximum of 60 spaces (30 sold).

Please register for a spot at the event BEFORE you book accommodation. The meeting venues Friday/Saturday are the Acacia Ridge Motor Lodge, the Australian Arid Lands Botanic Gardens and the Standpipe Motor Inn (all in Port Augusta) and on Sunday, Ken Warnes' property at Owen (2 hours' drive south east).

What the \$145 covers: Friday evening supper, Saturday morning tea and evening dinner, Sunday morning tea and lunch, speakers' travel and accommodation costs (which are being subsidised by the Study Group) and venue hire.

What you need to pay for yourself: your travel to and from the venue and field sites, your accommodation, your breakfast, your dinner on Thursday and Friday nights, travel insurance and you buy your own plants!

What you need to bring: the usual Aussie stuff for a visit to the bush (hat, sunscreen, insect repellent and a 10x magnifier for the keying session on Saturday and the field trip), cuttings if you want to be involved in the swap on Sunday, a keen sense of inquiry and a sense of humour if anything goes wrong!

We hope to provide a list of places to see *en route* to Port Augusta. Those who received Event Newsletter 2 will have read about Kadina. We have since been informed that the Northern Yorke Peninsula APS Group has recently negotiated a new lease of the nursery for clubrooms and propagation. They have started propagating but are unlikely to have any plants for sale by September – but will by next May!! Contact them first if you want to visit.

Note – start time Friday is earlier than that previously circulated to those who registered interest via SurveyMonkey.

DRAFT PROGRAM TIMES & SPEAKERS	
E.S.G. S.A. VISIT - 8th - 9th - 10th September 2017	
FRIDAY MORNING: 8th September	
9:00 - ~16:00	Meet at Acacia Ridge Motel to share cars (possibly ~125km in the morning, 200km in afternoon, both round trips - expect up to 9 spp.) and go field viewing led by Ken (bitumen and some dirt roads, share 4WD). Bring CB raider if you have one. Lunch in Port Augusta in between. Those present, sign in for event
FRIDAY EVENING: 8th September 2017 ACACIA RIDGE MOTEL	
19:00 - 21:00	WELCOME - Sign in (if not already), Name tags, Program details <i>Tea/Coffee available - biscuits - "Chat time"</i>
SATURDAY: 9th September 2017 ACACIA RIDGE MOTEL	
8:15 - 8:45	REGISTRATION - Sign in, Name tags, Program details, Check Workshop sheets
8:45 - 9:00	WELCOME - & OPEN CONFERENCE - E.S.G. LEADER - LYNDAL
9:00 - 9:30	Speaker: Identifying Eremophila (Lyndal Thorburn)
9:30 - 10:30	Speaker: Hybrids in the field and in horticulture (Ken Warnes and Bevan Buirchell)
10:30 - 11:00	<i>Morning tea</i>
11:00 - 11:30	Speaker: Commercial uses of Eremophilas (TBC)
11:30 - 11:50	Speaker: Australian Arid Lands Botanic Gardens - introduction (TBC)
11:50 - 12:00	Close of morning session, and instructions for afternoon (LYNDAL)
12:00 - 13:45	LUNCH (free time) - AALBG or elsewhere for lunch (own cost)
14:00 - 16:15	AUSTRALIAN ARID LANDS BOTANIC GARDENS Split into 2 or 3 groups to inspect plantings at AALBG & Nursery Complex - Opportunity to purchase plants. Self cater for afternoon tea
16:15	ALL RETURN - disperse to own accommodation
18:00 for 18:30	DINNER: STANDPIPE MOTOR INN (buffet included - purchase own drinks) (invitation to be extended to friends of AALBG)
19:30 - 20:00	GUEST SPEAKER Bevan Buirchell - new Eremophilas in WA
21:30	<i>Instructions for following day - all return to own accommodation</i>
SUNDAY - 10th Sept 2017	
8:15	Owen by private transport [Toilets available at Hall in Owen]
10:30	Meet at Owen Hall - then travel to Ken Warnes' property. Morning tea provided
11:00	Inspect Large Eremophila Patch - Opportunity to take cuttings and CUTTING SWAP
13:00 - 14:00	LUNCH in Shed - Warnes' property (provided)
14:00	Final - Open Forum/Discussion - Closure of Conference
Finish 15:00	<i>Delegates can depart and visit any sites enroute - suggestions to be provided</i>
	Can stay in RV-friendly oval if caravans; nearest caravan park is Balaclava

Victorian meeting

David Oldfield

Eighteen members, partners and prospective members (below) met at the home of John and Corinne Upsher alongside the Maribyrnong River on 25 February 2017.



(Left to right) Merle Webb, Regina McDowall, Barb Pye, Ann Langmaid, John Upsher (Back row), Cathy Beamish, Mike Beamish, Christine Strachan (Back row), Max A. McDowall, Neville Collier (Back row), Neil Duncan, David Pye, Sue Oldfield (Back row), Norma Boschen, Russell Wait, Keith Boschen, Brian Hendrickson. Photo: Corinne Upsher

After a reviving coffee or tea for those who had travelled from across Victoria, we were shown John's delightful garden with many Eremophila species in flower: *E. weldii*, six *E. glabra* including "Roseworthy" four *E. maculata*, *E. Yanna Road (E. gilesii x E. latrobei)*, *E. ovata*, *E. gilesii*, *E. abietina x galeata*, *E. strongylophylla*, *E. drummondii x nivea*, *E. conglomerata*, *E. phyllopoda*, *E. accrescens (cuneifolia x phyllopoda)*, *E. cuneifolia*, two *E. alternifolia*, *E. alternifolia x bignoniiflora*, *E. veneta x glabra*, *E. calorhabdos*, *E. Summertime Blue (E. divaricata x E. polyclada)*, *E. platycalyx*, *E. macdonnellii*, *E. bowmanii ssp bowmanii*, *E. lehmanniana*, *E. warnesii*, *E. punicea*, *E. koobabiensis*, *E. nivea x georgei*, *E. splendens*, *E. aureivisca*, *E. decipiens ssp. linearifolia*, *E. nivea x christophorii*, *E. georgei x glabra*, *E. muelleriana*, *E. mackinlayi ssp mackinlayi*, *E. willsii*, *E. bignoniiflora* (pink and cream), *E. viscida* cream, *E. paisleyi*, *E. caperata*, *E. subteretifolia*, *E. pinnatifida*, *E. rotundifolia*, *E. flaccida*, *E. Big Poly (E. bignoniiflora x E. polyclada)* and also *Leucopyllum frutescens*.

We then adjourned to discuss a number of topics, chaired by Neil Duncan, some of which were continuations from our last meeting. Use of smoke or smoke water to stimulate germination of native seeds drew many contributions. John Upsher described his method of lighting a small fire of gum twigs and leaves at the base of an inclined galvanised iron drain pipe, followed by wiping the condensed residue with a cloth moistened with methylated spirits which was then placed in water to extract the smoke residue. Russell Wait used a container 5 feet long by 3 feet wide by 3 feet high to contain a fire of twigs and green leaves with a 44 gallon drum placed over it to contain the smoke and seeds in a tray for about an hour and a half. Russell had found success with his smoke method with over 50 eremophila species including *E. bignoniiflora*, *E. miniata*, *E. obovata*, *E. hispida* and *E. platythamnus*.

Another suggestion was to place seeds in an open weave bag which was then placed in a toilet cistern to leach out germination inhibitors before planting. It was noted that Ken Warnes had found many seedlings after his bushfire in the smoke zone not in the direct fire area. Neville Collier reported the use of a bee-smoker with burning pine needles for stimulating germination of grevilleas.

Discussion turned to garden pests, Norma Boschen had a plague of wingless grasshoppers, which had defoliated *E. sulcata* last year, but which were rapidly killed with a pyrethrum spray. Christine Strachan had problems with *E. calorhabdos* and red spider mites which responded to spraying with mineral oil. John observed that the best way to counter many pests was to maintain healthy growing plants which were more able to counter such attacks.

A discussion on various rooting materials followed, Russell always used *Clonex red*, Norma had success with *Rootex P*, others reported use of *Easy Root*. John reported some cuttings of *E. abietina* which had shown no progress for a year in a propagation mix but which then responded to grafting straight away.

A large number of Eremophila specimens for cuttings were exchanged and John demonstrated use of his microscopes to assist in plant identification.

The next meeting will be:

Saturday 23 September 2017 at Neville Collier's place, 123 Box Flat Track, Bong Bung near Avoca.

From Your letters

Ainslee Lines (NSW): I have had an Eremophila come up from seed recently. The parent died last year. A seed germinated in a hole in a brick which was used as edging around the plant. It's doing well. Its roots will be down in the soil past the depth of the brick, so I don't intend to do anything to disturb it while it is so hot. Later I intend to try to break the brick and build up the soil around where the brick was. The parent was *E. maculata* Goondiwindi.

Eremophila debilis comes up almost everywhere in my garden. They are natural to this area (Moree). I assume they are suckering. I once counted 50 plants along a stretch of railway line just south of Ashley, my home town (north of Moree). They were the only plants that were green at the time, during drought.

Phil James (WA) comments on the naming of undescribed plants he, Brown and Buirchell have located over the last 15 yrs. "*E. glabra* is a little mine field, however a scientist in Qld will assist with some limited DNA sequencing to try and establish some possible differences between the 30-odd undescribed *glabra* species we have in my yard. Just on that, *E. glabra* Mingenew Gold is an undescribed plant, same as Belalla Gold; they may be the same species, but located, say, 5-7 km from each other and display different habits etc. Many of the undescribed *E. glabra* have various habitats from sandy to moist and some even wet areas, this may eventually place them outside *glabra*."

Charles Farrugia (NSW): Just jotting down my experience with *E. decussata x parvifolia* Nullarbor Nymph. I got this as tubestock on its own roots from Ian Tranter. It was in a small

pot for two years. In September it got planted in the new garden section. After it went in the ground it doubled in size.

During January & February with the continuous heatwaves and humid conditions it was going great with plenty of new growth. March and April, with continuous wet weather, high humidity and also limited sunlight, was the end of it. First two weeks of daily rainfall in March were fine. Third week it wasn't looking happy, so I got a couple of cuttings that I am trying to grow on their own roots. So far they are still looking good. Fourth week of rain there was some dieback. First rainy week in April it just conked it overnight.

My belief is that humidity on its own doesn't worry quite a few Eremophila. But, some cannot handle wet foliage and high humidity. My conclusion is that this is one of the Eremophila that isn't suitable for the Sydney region, though I am willing to give it another go. By the way this is the second one I lost. The first one also died after a wet period. Hope Ian Tranter has a few of them on hand!

Phil Trickett (NSW): Our star Eremophila at present is a grafted *E. fasciata* in full flower which has thrived through the 499mm we had for March. The interesting part is that it has no disease whatsoever, which is surprising given the recent rain and humidity. The plant has only been in the ground for 6 months but has grown quickly to around 0.5 m.

Subscriptions

Subscriptions are due for those of you whose membership expires in June 2016.

You will have already received an email about this (or a letter, for the few of you still operating by snail mail). If you want to join us in September, your subscription needs to be up to date!!

Future Newsletter Themes

Eremophila calorhabdos

Send in your experiences of *Eremophila calorhabdos* for the next newsletter. *E. calorhabdos* grows naturally in an area around Coolgardie, Roe and Eyre in WA, but is widely propagated. There are two known hybrids (with *E. denticulata* and *E. glabra*) and several forms of the species itself. **As always, we would like photos, propagation and growing experiences please!**

Eremophilas in Hanging Baskets

The March 2017 journal Growing Australian, the journal of the Victorian ANPS region, Neil and Wendy Marriott talk about native plants in hanging baskets (p26).

Neil reports success with various species of Banksia, Chrysocephalum, Correa, Crowea, Goodenia, Isotoma and Scaevola and particularly notes the usefulness of species within interesting foliage as well as flowers.

Well, our hardy Eremophilas come in all sizes and also have interesting foliage AND flowers.

So, here is the question for you – do any of you grow Eremophila in hanging baskets? What species are suitable – send photos and information!!!

Grafting survey

A survey of the pros and cons of different grafting stock is planned, coming to an in-box near you, when your editor can get around the drafting it.

Brian Freeman has recently raised the question about susceptibility of different stock species to borers (his photo of one culprit below).



If you have thoughts about questions that could be asked (beyond the obvious ones of graft vs host compatibility and experiences of stock shooting below the graft) please email the editor by the end of May 2017.

Errata

In the last newsletter your editor referred to Myoporum Monaro Marvel as a form of *Myoporum montanum*. Thanks to Norma Boschen for writing in to correct me – it is registered with ACRA, which reports it may be a narrow-leaved form of *M. acuminatum*. It arose in cultivation near Geelong and was registered by Anne Rehwinkel of the (then) Monaro Nursery near Canberra.

However on further searching, your editor finds that the Australian National Botanic Gardens lists M. Monaro Marvel as a form of *M. parvifolium* (their photo below) and Norma has found a reference in Elliott and Jones' Encyclopaedia of Australian plants (p. 466) that refers to it as a hybrid of *M. montanum* with "something". so clearly there are different views out there!

Anyone know of any definitive genetic studies?



Don't forget you can order Nescofilm grafting tape from your Study Group leader - \$2 per linear metre + \$1 postage. Order by email or post; direct credit of payments preferred.

About the Study Group

The Eremophila Study Group aims to further knowledge about the cultivation, propagation and conservation of the 200+ species of Eremophilas, an endemic genus of Australian plants. It is one of several Study Groups which operates under the auspices of the Australian Native Plants Society (Australia) (ANPSA).

SUBSCRIPTIONS

Membership is \$5 per annum. Subscriptions for a financial year can be sent by cheque and posted to 3 Considine Close Greenleigh NSW 2620 or paid by direct deposit into the Group's bank account:

BSB: 105-125

Bank name: **Bank of South Australia**

Account No.: 013 751 340

A/c name: **ASGAP Eremophila Study Group**

Please put your surname and state/group membership in direct deposit details

ANPSA policy is that regional groups pay for two subscriptions in recognition that Study Group material will be used by several group members

New members, please download the application form from our website and send with your cheque/transfer (details below) <http://anpsa.org.au/eremophilaSG/index.html>

Study Groups allow members with specific interests to develop that interest to the fullest extent and to contribute in a practical way to the body of knowledge on the Australian flora. Active members collect information on the genus and send their observations to the leader who collates and publishes the information, in a newsletter or in other Society publications. The Study Group can record any aspect of cultivation, propagation and ecology of the preferred genus. Study Groups are expected to publish at least two newsletters per year.

In addition to paying annual fees, members must also be members of an ANPSA-affiliated regional society (<http://anpsa.org.au/region.html>).

This Study Group aims to study the cultivation and propagation of the genus *Eremophila*; to expand cultivation of *Eremophila* in gardens; and to examine the growing requirements of the various species to improve their reliability.

For information about the Eremophila Study Group contact Dr Lyndal Thorburn, Study Group leader [lthorburn \(at\) viria.com.au](mailto:lthorburn@viria.com.au)
Ph: 0418 972 438 or 02 6297 2437 Address: 3 Considine Close Greenleigh NSW 2620

Honorary members: Ken Warnes and Russell Wait

Newsletters are available in Black and White by post and in COLOUR by email or CD.

For more general information about Study Groups, contact Ms Jane Fountain Coordinator, Study Groups, Australian Native Plants Society (Australia) ([jlountain5 \(at\) gmail.com](mailto:jlountain5@gmail.com))

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NEXT NEWSLETTER NOVEMBER 2017



Eastern Spinebill on
E. decipiens ssp.
decipiens, May 2017
(Photo Lyndal Thorburn)