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Colour forms of our feature species E. alternifolia.
Andrew Brown’s pics of ssp latifolia top right, top left and lower right, and Lyndal Thorburn’s pics of ssp. alternifolia far left
Letter from the Editor
Welcome to 2019!!

Thanks so much to all of you who responded to the recent article on the *E. nivea* varieties, and my attempts to sort out some of the *E. maculata* yellow forms – it is really important that we get good records of these things, particularly when there are only one or two people who have the knowledge in their heads – publication of more information in successive newsletters enables us to finally build up the full story.

It would be even better if people had time to provide info in advance of the main feature – so we can get it all in one place at the same time, to make it easy for those tracking the story. In the next issue, the feature species is *E. polyclada*, I’d love to receive information on it before the next newsletter in (around) May.

In the interests of getting good records have continued the “Know your Eremophila” item this edition, this time exploring the origins of *E. maculata* Pink Mini and *E. glabra* Bev Rice – the latter erroneously named, as it turns out.

In addition to the feature species (which turned out to be a bigger task than I expected!!), there is a major request for help from University of New England – a great opportunity for those interested in Eremophila chemistry. Read about it on page 9.

Lyndal Thorburn
Leader and newsletter editor

What’s New in the Study Group

Congratulations to the Sydney sub-group of our ESG. This sub-group celebrated its 15th anniversary on 12 October 2018. The Victorian group has had a change of organiser, with David and Sue Oldfield stepping down and Neil Duncan becoming the new coordinator. Many thanks to David and Sue for their coordination activities and of course thanks too to Charles Farrugia who has been organising the Sydney sub-group since it started.

Eremophila in the News

There is an article at page 9 of this newsletter on phytochemicals derived from Eremophila, by members Dane Lyddiard and Ben Greatrex. Their work is published in a special April 2018 issue of Fitoterapia, a journal dedicated to medicinal plants and bioactive natural products.

That issue is dedicated to the late Emilio Ghisalberti, an Italian-born, Perth-based scientist who specialised in phytochemistry, publishing over 50 scientific papers on Eremophila and a further 250 papers on chemistry in other Australian species.

In addition to the work by Dane and Ben, the special issue includes three other articles on phytochemicals in Eremophila:

- Antibacterial compounds from the Australian native plant *Eremophila glabra*
- 5,6,7,3’,4’,5’-Hexamethoxyflavone from the Australian plant *Eremophila debilis* (Myoporaceae)
- Furofuran lignans from the Simpson Desert species *Eremophila macdonnellii*

All the articles in this special issue are at [https://www.sciencedirect.com/journal/fitoterapia/vol/126/suppl/C](https://www.sciencedirect.com/journal/fitoterapia/vol/126/suppl/C)

New members

Welcome to new members Andrew Brown, (WA), Virginia Moffat (NSW), Kevin Stokes (NSW) and Jennifer West (Vic).

Field Trip in 2020

There are plans afoot for an ESG gathering in Queensland next year – likely in the last weekend of July or the first weekend of August 2020, and to be centred on Warwick and Toowoomba.

More info will be published in the May newsletter.
Eremophilas in the National Arboretum Terra Australis Garden
Bronwyn Blake, Ros Walcott and Ben Walcott.

The Terra Australis garden in the National Arboretum was officially opened in November 2018.\(^1\) The garden has been beautifully designed by Lawrie Smith to showcase the beauty and diversity of Australia’s native plants and is cleverly broken into six growing and geographical regions. The trick of course, has been to select plants from these regions that will grow in Canberra at the very exposed windy Arboretum garden site. For this reason, until microclimates have established, some plants will not be planted for a year or so. What looks like a pile of rocks in the photos below, taken during construction in November, is actually a cleverly-designed creek and water feature.

\(^1\) ESG members Ros and Ben Walcott are intimately involved in its planning and development and have based recommended species on what grows well in their garden in Red Hill, Canberra.
The central or inland path sweeps through the garden from the tropical north to the temperate south, to simulate the Great Dividing Range. On each side of the path the varied plant communities south from the columnar basalt geology of Cape York and along the Pacific east coast are displayed.

The path rises beside the sandstone formation to the lookout on top of the range. The path then traverses the western plains sloping down from the granite boulder uplands of the Snowy Mountains, Grampians and Tasmania. On the opposite side, the inland slopes and western sand plains extend south and west to the coast.

The inland experience is complemented by the coastal path around the garden perimeter so visitors can fully appreciate the beauty, natural diversity and unique colours of the Australian flora. The plan includes the following Eremophilas in the six regions, bearing in mind the need to cope with Canberra’s climate and the site, potentially with substitutes with similar foliage, colour and height.

The aim is to include the following

| Region A – Tropical coast and hinterland – none |
| Region B – Subtropical coast and hinterland – none |
| Region C – Temperate coast and hinterland – none |
| Region D – Temperate Montane – 3 x *E. maculata* Compact Lemon |
| Region E – SW WA Coast and sandplains – 3 x *E. maculata* ‘Aurea’ (planted) 1 x *E. longifolia* ‘Berrigan’ (planted) 3 x *E. ‘Beryl’s Blue’ (planted) 3 x *E. maculata x racemosa* ‘Fairy Floss’ 3 x *E. glabra* ‘Belalla Gold’ (planted) 3 x *E. glabra* ‘Hello Cocky’ (planted) |
| Region F – Outback – none |

The garden was under construction last year and was opened on 25 November 2018. The completed garden is shown below.

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**Misidentification of Eremophilas**

*Lyndal Thorburn*

One of the unexpected (by me!) bonuses of our website image database is that, now these have been indexed by google, our own photos are now appearing in searches for images of Eremophila species.

This has alerted me to a number of mislabelled nursery plants. I suspect we are fighting a losing battle, but I would like to include in this newsletter an occasional list of species we know are being sold with the wrong labels – if members find them in nurseries let me know and we can approach the wholesaler to see if we can get it changed (you never know, they may listen!). This list may also help researchers like Dane and Ben (see page 9), who rely on correct nursery identification of species they are using.

- *Eremophila prostrata x goodwinii* – mislabelled as *E. prostrata x Goondiwindi*
- Wikipedia’s *E. chamaepihila* entry shows something that looks like *E. densifolia*.
- An *E. glabra* form (looks like yellow Mingenew), is being sold as *E. prostrata “Outback Sunrise”* by Outback Plants Wholesale (US).

**PLEASE REPORT ANY OTHER MISNAMINGS TO THE EDITOR SO WE CAN TRY TO GET THEM FIXED**

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2 This is the grey form of *E. longifolia*
Feature species – *E. alternifolia*

Lyndal Thorburn

*Eremophila alternifolia* is a green-leafed, branched shrub which grows from 0.4m-3.5m tall with many branches arising from near the ground. It is wide-spread across southern and central Australia and is commonly found in stony situations such as foothills and creek lines, occasionally in deep sands. It can reach up to 5m across.

The leaves are arranged alternately and are 10-45mm long and a narrow 7mm wide in the western part of the range, to a nearly-terete 2mm wide. The flattened leaf form which occurs along a coastal strip in WA had been named *ssp. latifolia* by von Mueller; Brown and Buirchell have retained the name whereas Chinnock rejected it and combined all variations under a single name, as broad leaved forms occur elsewhere. The narrow-leaved form is *ssp. alternifolia*.

Lower leaves are shed as the plant grows, so it can become somewhat leggy but with a dense, intricate crown. Old bark is rough and brown. The photo below from Andrew Brown was taken at Parmango Road south of Balladonia, WA.

There is a low growing form, found on the Great Australian Bight, with shorter leaves than those growing further inland (pic Russell Wait, next column).

The branches have noticeable resin glands, and where leaves have fallen off there are clear scars. Flowers are positioned at the end of a long S-shaped pedicel and the base of the corolla tube is covered with 5 overlapping sepals. The calyx is distinctive, with over-lapping rounded sepals which are normally pink, although tending to green or cream in some specimens.

*E. alternifolia* flowers from late winter to early summer but may flower sporadically over a longer period. The flower is described by Chinnock as “carmine, more rarely pink or yellow” and the outside of the corolla tube may be spotted or unspotted. A form that opens yellow and turns pink with age is known to occur, as is a near-white flower with external red spots found near Port Augusta (one of the ones shown on the front page).

The flowers are bird-pollinated (photo below of baby Eastern Spinebill on the spotted cream form from Lyndal Thorburn) with an upper lip of 4 acute tips. The lower lip is large, broad and rounded.

The three colour forms in common cultivation are cream with brown spots, cream with no spots, and pink with maroon spots (see cover pics). All common colour forms are found in both subspecies and across the geographic range. There is also a tall, broad-leaved selection that
has flowers which vary from pink to white, to candy-cane stripes to half and half colouring, basically confined to individual branches, but which carry the variable colours forward when grown from cuttings (photo below by John Newton).

It is distinguished from the closely related *E. purpurascens* by its leaf shape (obovate in the latter) and the absence of glands on its leaves.

**Horticulture**

The species is hardy and can grow in full sun or in semi-shade. It is drought-hardy and bird-attracting. It responds well to pruning and can be pruned back quite hard (potentially, to a leafless stump) to re-invigorate older shrubs. Boschen, Goods and Wait report that not all forms are frost-hardy but I have grown both sub-species in Canberra and all three colour forms and all seem have coped with our -7°C winters.

**Propagation**

*E. alternifolia* can be propagated from cuttings although this must be young growth taken from younger plants as it becomes harder to strike with age. It also grafts well. Grafted plants last longer in wetter regions.

The hybrids listed below can also be struck from cuttings although Ken Warnes reports growing his Meringur Pink from seed.

**Other uses**

*E. alternifolia* is used as a traditional medicine by Aboriginal people – see Newsletter 115 for the full article.

**Hybrids**

*E. alternifolia* hybridises enthusiastically. Ken, based on his observations, believes it is always the pollen provider. This article reports on nine, formed through hybridising with 5 other species.

Most of the hybrids listed below were discovered/developed by Ray Schilling or Frank Fitzpatrick, the latter by growing seeds collecting on the ground in his Eremophila plantation. Their respective contributions were described in Newsletter 115, November 2015.

Ray’s hybrids take the name “Meringur” after his local town in Victoria.

Frank, based in Walpeup, raised many Eremophila from seed and had an eye for novel forms. Frank names all his hybrids ‘Walpy’ something, and used the names of relatives and people known to him as the second part of the name. While many of Ray’s hybrids are grown widely, Frank’s seem to be limited to private gardens near Walpeup, and the Dryland Memorial Garden that is maintained by volunteers in Walpeup itself.

*E. alternifolia* x *E. bignoniiflora*

This is the most common hybrid of *E. alternifolia* – all from Ray Schilling or Frank Fitzpatrick. They are all spectacular feature plants, as many have a flower size similar to that of *E. bignoniiflora*, with the long pedicel of the *E. alternifolia* parent, meaning they are well-displayed on the plant. Many of these hybrids grow from cuttings but can also be grafted. They also respond well to pruning.

‘Meringur Pink’ is a large, rounded bush that grows to about 4m x 2m, is frost hardy and flowers throughout the year. There may be more than one ‘Meringur Pink’ hybrid in cultivation as there seems to also be one that looks more like the *E. alternifolia* parent than the photos below. The flower is almost as large as that of *E. bignoniiflora* (photo of bush, over, from Russell Wait and of flower from Keith Boschen).

There are several other named “Meringur” hybrids of *E. bignoniiflora* (e.g. E Meringur Midnight) but these do not involve *E. alternifolia* and hence are not included here).
'Meringur Crimson' is another similar hybrid (pics at right are from Russell Wait). It also flowers throughout the year and can be pruned. It has much brighter flowers that are somewhat narrower than those of 'Meringur Pink' but are still very large.

Both of these hybrids can handle large amounts of water and respond with vigorous growth.

There are two hybrids believed to have the same parents, grown by Frank Fitzpatrick at Walpeup in Victoria. ‘Walpy Julie’ (named after Frank’s daughter) has a dark *E. alternifolia* parent and the hybrid has a large purple flower and a long narrow leaf like *E. bignoniiflora*. Frank’s notes report it is >2m tall and flowers for long periods. He also noted that it grows well in poorly-drained (clay) soils (pics below and next column from Jocelyn Lindner). Walpy ‘Mark Jenkins’, named after a co-founder of the Dryland Gardens, is a similar hybrid with smaller leaves and a different flower colour.

‘Walpy Merle’, named after Merle Pole from Seven Pines at Walpeup, is also of the same
cross. It has a beautiful pale pink flower with darker spots on the throat. It gets to about 3m x 2m (pic below from Jocelyn Lindner).

\[E. alternifolia \times E. glabra\]

This hybrid came up in Bob Chinnock’s garden and is a green rounded shrub to 1.5 m high flowers on most of the year. It has pink to red flowers and is a bird attractor (pics Russell).

\[E. alternifolia \times E. maculata\]

The \( E. maculata \times E. alternifolia \) hybrid has been available through the nursery trade for some years (photo below by Kevin Sparrow).

It is sold under many names: Eremophila Magenta Magic (in SA, seems not to be sold under this name at present), Eremophila Blue Thunder\(^4\) (e.g. by Mole Station), Eremophila Magenta Dream (e.g. by Tarrawood and Gondwana Nursery) and Eremophila Wild Berry (e.g. by OzTrees and Benara Nurseries).

The hybrid has flowers very similar to the \( E. alternifolia \) parent but are deep pink with prominent purple spots that are surrounded by cream in the corolla tube, and smaller elongated purple spots on the outside of the corolla. It flowers prolifically and the bush is very vigorous (photo Lyndal Thorburn).

\(^4\) Non-hybrid \( E. maculata \) is also sold under the name Blue Thunder (e.g. by Plantmark), adding to the confusion
This hybrid reaches about 2m tall by 1.5m wide and responds well to pruning. It is a good bird attractor and is frost hardy. It grows in full sun or part shade (photo below from Russell).

**E. alternifolia x Myoporum platycarpum**

There are at least two hybrids known of this particular cross. The one in common cultivation is was found near Whyalla in South Australia. The plant is tall and thin, growing to about 5m x 2m with pale pink flowers that are shaped like those of Myoporum but are a little larger. It is difficult to strike (photo from Russell).

**E. alternifolia x E. purpurascens**

There may be two two forms of this particular hybrid in cultivation, one from the wide-leaved form of *E. alternifolia* and another from the narrow leaved form.

The hybrid pictured (photo from Russell) was collected by Ray Isaacson from the wild in the very late 1970’s or early 1980’s. It was first thought to be a narrow form of *E. purpurascens* and is likely to be a cross from *E. alternifolia ssp. alternifolia*. It has prominent glands, and a few small spots on both the outside and inside of the corolla. It grows to about 4m high with pink spotted flowers.

**Acknowledgements:** thanks to Jocelyn Lindner, Russell Wait and Ken Warnes for assistance with sorting out all the hybrids, contributions to the text, plus photos!

**The Eremophila Phytochemical Database**

*Dane Lyddiard & Ben Greatrex*

(photos below, Ben on the left and Dane on the right)

It will probably come as no surprise to members that there is a great deal of scientific interest in the chemicals *Eremophila* produce. The scientific literature is full of new compounds from *Eremophila*, many with useful properties, such as antimicrobial and antiviral activity. The identification of chemicals in the plants can also assist in the taxonomy (chemotaxonomy) of this genus.

To assist researchers and enthusiasts, we have begun developing an online database of phytochemicals found in *Eremophila* species. This is part of a larger PhD project by microbiologist and botanist Dane Lyddiard, supervised by chemist Dr Ben Greatrex at the University of New England (Armidale, NSW).

The database started in 2016, with the generous assistance of the late Tim Kolaczyk, who maintained an extensive private *Eremophila*
garden near Inverell (NSW). From this garden we collected over 90 small leaf samples and extracted their phytochemicals. We then analysed these samples using a process called Gas Chromatography Mass Spectrometry (GCMS), which allows us to separate and identify the many volatile compounds in the extract.

Our aim at the time was to uncover species which were likely to contain previously unidentified compounds, in particular those with antibacterial activity and warranting further study. This ultimately led to a publication in the recent Emilio Ghisalberti memorial issue of Fitoterapia. Ghisalberti was a chemist who spent much of his career studying *Eremophila*.

We quickly realised the value such a phytochemical survey could have for taxonomists and decided to expand the number of species and replicates included. The Australian Arid Lands Botanic Garden (Port Augusta, SA) kindly supported us by preparing samples of their plants, as we had done in the Kolaczyk gardens, and which we then analysed with GCMS.

This led to a large quantity of data that was becoming difficult to manage and warrant the creation of a database. While looking for database solutions we decided that (in the name of good science) it should be something openly available to other researchers and enthusiasts, and so we produced it online with raw GCMS files and full datasets freely accessible.

The database now contains 117 species of *Eremophila* and 225 original analyses with another approximately 50 species/specimens undergoing analysis at present. We have taken samples from gardens, herbarium vouchers, and nurseries, and have extended our analysis methods to include larger extractions, compound isolation and nuclear magnetic resonance spectroscopy-based compound identification.

We are also collating information from published sources to complement our data.

It is hoped that researchers can use our data to supplement their own datasets, undertake preliminary hypotheses testing, and help with species identification. It may also assist in homing in on species which have few known compounds and those that may contain something novel.

**We need your help.**

We need more specimens. We are asking *Eremophila* specialists and enthusiasts who have *Eremophila* species which have already been acceptably identified (e.g., a specimen bought commercially, a specimen identified using a botanical key, or a species identified by a botanist or horticulturist) to provide us with samples.

Even if the species is in the database, we are interested in the spectrum of chemicals that may be present and fresh samples are more useful than herbarium samples. If you are willing to help out, contact Dane Lyddiad (dlyddia2@une.edu.au) with the names of the species you have, and if suitable, he can organise to send you a specimen collection kit which only requires a few leaves at most (usually 1 is sufficient) to be placed in a vial with solvent (which will be provided) and sent back to the University of New England for analysis.

In the meantime, enjoy the website as it continues to develop! [www.eremochem.com](http://www.eremochem.com).
Chinnock key is in error for *E. maculata*.

**Peter Olde**

At two Sydney sub-group meetings in 2018, the Sydney Chapter tried its hand at keying Eremophilas using Chinnock’s key. We started with just one plant, *Eremophila maculata*, and to ensure we were on track we keyed it both forwards and backwards. On both occasions we were unable to key this species out and I must conclude that the key is wrong for this species.

*Eremophila maculata* occurs in XXII. *Eremophila* Section *Stenochilus*. However, in order to get there you have to go through the Key to Sections (P. 184–85) of which there are 25. There are two points that lead to Section *Stenochilus*. They are 11 and 16*.

Here is the pathway we followed

1*, 2*, 4*, 21*, 22*, 23, 24*, 28*. Obviously we lost our way at 4* because the next lead was 21, well beyond 11 and 16*. Where did we go wrong?

Here it is again in detail:

1* must be correct. The alternative leads to Sect. X

2* We selected ‘vegetative parts glabrous or hair’ (sic!) from the two alternatives. This takes us to 4, 4* which invites us to select between two alternatives again (this is a dichotomous key).

4* We selected this lead because the alternative choice ‘Branches possessing branched hairs’ was not correct. We all examined the branches off several plants carefully under a microscope and hand lens. The hairs were either sparse or moderately dense, but always simple, eglandular (i.e. lacking a glandular viscid tip). They are definitely not branched.

The Key to Sections is wrong at 4, 4*

Let us go to Section Stenochilus. There on P. 562, in the Key to Species, lead 11 states

**Branches pubescent with simple, eglandular hairs** etc. *E. maculata*.

I rest my case, Your Honour.

More on *E. nivea* Blue Velvet

**Phil James**

Here is some more information on *E. nivea*:

**Blue Velvet** PBR – Humphris Nursery 2000/285

Origin: Chance seedling identified in breeder’s garden in 2000. The putative parent is *Eremophila nivea*. As the seedling grew and matured it displayed darker flowers, a more uniform habit, and grew slightly bigger than original *E. nivea* whilst still maintaining its shape. It also displayed a resistance to rot. Selection criteria: No rot, maintaining shape while still displaying striking flowers. Propagation: asexual, grafted with no change for five generations. Breeder: Humphris Nursery, Mooroolbark, VIC.

Pic. below is “std” nivea on left and Blue Velvet on right

E. Gubbura Bells
(right)

May be a selection of *E. nivea*, but grafted and marketed as such. Possibly may have come originally from Kings Park
form.

To throw a cat into the mix grafting, on some occasions, may alter the habit of plant, also various soils could also change the habit.

We monitor the various _E. nivea_ protected sites at least twice per year and also various Perth and country gardens to view _E. nivea_. Below is a photo of _E. nivea_ variations available from markets around Perth.

**Spring Mist**, all we see is plants very compact/dense growing 1-1.2mx 1-1.2m, some as old as 7 years, not watered or pruned (see pic below). Possibly the original _E. nivea_ was purchased from Kings Park WA by a renowned Nurseryman in WA, who then named it Spring Mist. So this means that _E. nivea_ and E. Spring Mist are the same. However, it is possible that from the original plant, material taken from it over time may display some different characteristics.

It would appear that the plants, when cultivated in soils different to their original habitat, seem to do a lot better. On Dadd’s original farm they are still powering away with little water, only when it rains and maybe they are 1.5m x 1.2m now and 7 years old. We also know that the some nursery people have taken material from these plants.

**Know your Eremophila**

_E. glabra_ lime yellow - “Bev Rice” or not?

**Bev Rice**

Ho! Hum! Where do I begin - this is the story of how a snowball causes an avalanche!

Some 20 years ago, I think, I purchased an _Eremophila glabra_ with limey-yellow flowers and grey leaves from Tony Clarke [Mannum], just as another _E. glabra_. It was easy to propagate; hence I had a few around the garden. John & Julie Barrie [Daisy Patch at Coonalpyn] visited and John spied this small bushy _E. glabra_ and took some cuttings and, as was his habit, he labelled them with the source of his cuttings, which was B. Rice. I saw it 18 months later at Peter & Rhonda Hall’s stand at the Kapunda Field Days – it was labelled _E. glabra_ Brice – then sometime later I see it had Bev Rice attached to it – ahem! All by default!

I think it is the same as _E. glabra_ lime-gold in Victoria [maybe lime glow]. So you see, it really has nothing to do with me but the name has stuck! I think Lime-gold is a good name for it.

Even the local Barossa Nursery placed a gardening item in the local paper about Eremophilas and their hardiness, and – quote ‘we are lucky enough to have one named after a local grower’. I hastened to go and tell the Nursery that it was nothing really to do with me – but the word was out!

I asked Tony Clarke years later about it and he thought he found in W.A. (somewhere)? It is a great little plant and the rabbits think its breakfast, lunch & dinner!! It might be interesting to find what other members know it as – just as long I get rid of the Bev Rice bit!!
Hope that explains the origin of the name! All one big mistake!

**E. maculata Pink Mini or Minnie the Pink?**

Ken Warnes

From the memory archives again. I’m pretty sure this name was derived from the pop song, Minnie the Pink. Remember it? “She invented medicinal compound, most efficacious in every case”.

Originally it had nothing to do with the size of the plant, although at times I have seen it spelt “mini pink” (see size comparison between a plant bought as “pink mini” on the right and the ‘normal’ sized *E. glabra* of similar colour on the left below).

And that question applies to Nurseries as well. The “the” has dropped out over time and so the original, somewhat cute and quirky, derivation has been lost. Remember that, collectively, we know far more about these plants and their history than even the best-intentioned Nursery.

There are quite possibly several sources for the plant material in cultivation. I had one from a population near Renmark which the collector called white but in cultivation has ALWAYS been pale pink with orange buds and I suspect is the original Minnie.

But Ian Tranter’s plant (two photos over) appears so lush that it hardly looks the same plant, water and situation can do just so much. If I were to actually see Ian’s plant I would have a better idea.

That Nurseries may have applied the name to any pink flowered *E. maculata* is quite possible, especially if a printed label is available. Bernie’s report of a pink *E. maculata* (mislabelled as *E. glabra*) would support this idea.

Leaf width can vary over the bush. I think, in general terms, it would appear that new growth has narrower leaves than mature leaves (sounds a bit like the human body) and the aforementioned rainfall and situation come into it as well. Age of bush and pruning play their part as well.

For what it’s worth, I suspect that both Minnie and Mini are in the trade, different plants from different sources and quite probably the names may be thought to be inter-changeable and may be regularly misapplied.
Pruning of *E. acrida* Bushy Park

Conversation between Ken Warnes and Charles Farrugia

*Charles:* *E. acrida* Bushy Park Station is planted in (Sydney) in an area facing west, and it is in full sun from 11.00am. It has been constantly in flower for the last 18 months and was last fertilised when I planted it in clay soil that is refined a bit with compost and coir. It is watered irregularly, sometimes with washing machine grey water.

After the recent heavy rain, it started sending new growth but, like the previous heavy rain period we had, the new growth is only on the branches that get the first sunlight – more or less the branches facing north.

Although the branches facing south have quite healthy growth on the upper part of the stems, they have never set new growth. Interestingly, it doesn’t respond to artificial heavy watering, but it does respond to natural very heavy rainfall, when some new growth will appear on a bare section of a stem.

If I prune it back to the new growth on the lower parts of the stem to try and get new growth on the older stems will it work, or is *E. acrida* one of those Eremophila that don’t send new growth from old wood?

*Ken:* Bushy Park is a station about 120km NE of Alice Springs and I collected the original material along the Plenty Highway in 2006. The flowers are a sky blue, without throat markings, whereas those closer to Alice Springs (e.g. Standley Chasm entrance road), are almost white. My plants died several years ago, and I am constantly surprised when Charles continues with reports of his specimen surviving for so long. Obviously, warmer conditions suit it better, after all, it was collected in the Tropics, just.

I would suggest, Charles, that before you try anything too drastic with pruning that you, or others, establish a few more plants, as it grafts readily. If you do prune, I would think that you would need to prune the whole bush so that sap flow is even throughout.

If you cut the dormant wood hard and leave the more northerly branches with their fresh new growth it could throw the whole show out of balance and the old wood would die. I can’t speak from experience but that seems logical to me.

Whatever, we need more plants as it is unlikely that the small group from which I collected is still there and there’s a fair chance that the road grader, which was a handy marker, has been moved.
And more on the E. maculata yellow
David Oldfield

One of my photographic friends is Sandra Neill (nee Gordon). I sent her a copy of the latest ESG and she asked me to pass these comments on to you:

“My father, David Gordon did indeed find and describe a yellow-flowered *Eremophila maculata* (with spotted throat) just east of Jones Creek between Surat & saying it had been named *Eremophila maculata* ‘Aurea’. Most *E. maculata* in the area are low-growing, approx. 60cm x 80cm with spotted orange-brown flowers. The yellow-flowered ones he found were growing amongst the common local ones and were similar in every respect but flower colour.

“I saw them myself growing near the road (close to where Dad found them) when I lived in the district, and looked again after roadwork in the area, but sadly couldn’t find any. Hopefully, there may be some in adjoining paddocks as I only looked on the stock route.

“My comments re photos:

“1/ many people enhance colours in photoshop or similar post digital processing, making it difficult to trust modern photos.

“2/ digital photos can be taken with incorrect colour balance which can also throw the finished result.

“3/ many computer screens are not colour calibrated so the same image can appear different colours on different screens!”

Eremophila Grey Horizon
Ian Tranter

There are only five Eremophilas which have applied for or been granted Plant Breeders Rights, one of which is EREM1, which I had never seen.

On Facebook there has now been posted a photo of the plant, which is a close relative of ‘Kalbarri Carpet’. Apparently, it is being called ‘Blue Horizon’ and is being marketed as having “less gaps” than Kalbarri Carpet, because of its more branching habit. I am still unsure of its origin. Originally the lodged material said it was a sport; the Facebook post says it was a seedling; the PBR site now says it was a selection from the wild.

This last seems most likely, as Kalbarri Carpet, Amber Carpet, Carramar Carpet, and a related prostrate *E. glabra* are all said to be closely related selections from the wild.

The same form is being marketed in the US as “Grey Horizon” to avoid confusing consumers who may expect to see blue flowers.

The photos below are published with permission from the OzBreed website (www.ozbreed.com.au) – OzBreed owns the PBR-registered variety. It is reported as growing 0.25m x 1m and is recommended as a low border or ground cover.
Sub-Group meetings

Sydney group

Charles Farrugia

Also see the article from Peter Olde in this newsletter about their October 2018 meeting.

Special thanks during 2018 to Ken for his knowledge sharing and cutting donations to the group. Also thanks Margaret & Peter Olde for their kind hospitality and Peter’s expertise – even though he’s late to every meeting - including his garden; and to Ian Tranter for sharing his scientific knowledge and his skilful explanations to us ignorant laymen.

And last, but not least, to Lyndal for the magnificent job she is doing with the newsletter & as a Study Group leader.

The next meeting is on 9 February 2019 at Seven Hills. For more information email Charles Farrugia: eremgenus4719 (at) hotmail.com. Some new Study Group members are expected so the conversation will be focussed on introducing them to the genus.

Queensland group

Jan Glazebrook

Eight members attended the meeting at the end of September. The meeting reviewed the highly successful Winton trip (reported in the October 2018 newsletter). Laylee Purchase then led the discussion on Eremophilas of the foliosissima/gilesii/spectabilis group and the clarkei/georgei group.

Laylee then led the group on a tour through her garden. No-one had seen the garden so badly drought affected before. Despite losing a number of plants to the drought it was amazing to see so many of the Eremophilas were withstanding the extreme conditions, most notably was an E. nivea which was looking lush and in full flower.

The Queensland group’s next meeting is on Saturday 13 April 2019 at the home of Gail and Adrian Wockner, 5 Horizon Court, Highfields, Qld 4352. For more information contact Jan Glazebrook: janglazebrook (at) gmail.com.

Victorian group

Neil Duncan

Eighteen participants, including Genevieve Duggan from Mt Annan Botanic Garden, came to the Melton Botanic Gardens for the study group meeting on 18 November.

We enjoyed morning tea in their well-equipped tea room. While we enjoyed our cuppa, Neville had to find Norma and Keith, whose GPS had directed them to the car park at the other end of the gardens. After our cuppa we then got down to business.

Victorian group on their trip to Melton Botanic Gardens (L to R): Bernie and Glenda Datson, Jean Weybury, John Upsher, Neil Duncan, Margaret and Bob Blake, Christine Strachan, Normal Boschen, Brian Hendrickson, Neville Collier, David Oldfield, David Pye, Sue Oldfield (pic by Keith Boschen)

Bags of cuttings were spread across the tables and the group discussed the best way to propagate particular plants (pic next page). Neville had brought some rootstock he had originally obtained from Norma, so some plants could be grafted, while others would grow quite successfully from cuttings.

Neville discussed using a soft drink bottle with the bottom removed as a mini glasshouse on his grafts with good success. Norma barely scrapes the bark to expose the cambium layer and gets good grafts using this method.
It was then time for a quick lunch before being taken on a tour of the gardens by David Pye. The gardens have themed garden beds, including for Western Australian and South Australian plants, and which obviously include many Eremophilas. The beds are only 1 - 2 years old but the Eremophilas were thriving.

The natural soil is heavy volcanic clay, so the beds have been built up with imported soil and topped with about 100mm of river sand from northern Victoria. This sand allows water to penetrate but keeps the soil underneath moist, which suits the Eremophilas very well (see below for *E. glabra*). There were also spectacular plants of many other genera in the gardens, which rely on about 50 volunteers to maintain them.

There is a large lake in the gardens with indigenous plants around the edge as well as bush food gardens and garden beds designed by local Koori students.

As the garden is in a low rainfall area, it also has an extensive South African garden section, which is suited to the climate. An interesting plant in this bed was the kangaroo grass which is also native to South Africa but of course is not called kangaroo grass over there.

The return walk took us through some stunning Eucalypts in the Eucalyptus arboretum before a final purchase of plants from the nursery at the gardens.

Thanks to Anne Langmaid and Barbara and David Pye for organising the day, which I am sure inspired many participants.
The date of the next meeting of the Victorian group is at Russell Wait’s on Saturday 18 May 2019. Russell lives at Riddell’s Creek, about 30 minutes’ drive from Tullamarine airport. Timing is still to be organised. If you would like more information please contact Neil Duncan on neilduncan61(at)gmail.com.

Website Image Database

Thanks to those who have again provided photos for our image database. It turns out that two on the October list – *E. eversa* and *E. graciliflora*, both in Bob Chinnock’s book – haven’t been seen since they were first collected. They are believed to be hybrids of *E. homoplastica* x *E. metallicorum* and *E. longifolia* x *E. oldfieldii* respectively. We only have a couple of gaps now in the early alphabet (still missing *E. fallax* – the only one I have seen of this is a rather long-distance photo in the Boschen/Goods/Wait book).

We are currently working on filling gaps in species starting with *L* and *M*. I am in direct contact with those who have contributed photos to date (meaning, I send pleading emails with lists of pics I am looking for). If you’d like to be in the loop please let me know.

More photographers are welcome!

Finding Eremophila Books

*Lyndal Thorburn*

I occasionally get requests from people trying to buy copies of the Eremophila books:

- Chinnock’s *Eremophila and Allied Genera*,
- Boschen/Goods/Wait’s *Eremophila – changing gardens for a changing climate* and

These are all out of print. However, you can find them all listed on [www.trove.nla.gov.au](http://www.trove.nla.gov.au), the National Library of Australia’s website. Searching for the word “Eremophila” and limiting it to Australian content will give you 152 books, so you have to enter the author name too, to get the three above.

If you click through from there to the title, you will find that on the right it says how many libraries hold the publication – 49 in the case of the Boschen/Goods/Wait publication. Click again on the title and at the bottom of the screen is the list of those libraries – so while the items are not for sale, they can still be borrowed direct from these libraries, or on inter-library loan. Voila!!

I have my own copy of *Eremophilas for the Garden. SA Region* has given me permission to scan it so it will soon be available again as a PDF to Study Group members and to the general public (for a small consideration!).

Compendium of Cultivars

Ian Tranter is compiling a compendium of Eremophila cultivars and would be interested in hearing from other members who might be willing to help. He already has a spreadsheet of all known cultivars, but he wants to collect a photo of each and note distinguishing features, origins, and any known horticultural requirements.

Let the editor know if you may be able to help, or if you would like a copy of the cultivar spreadsheet.
From Your Letters

Dave Bishop (NSW):
Don't know if this has happened to any other members of the group but I have/had two *E. mackinlayi* which got burnt by the frost last winter and I thought I had lost them.

The one close to the large stone (grey, image over) had a few leaves (lower) not burnt but the other out in the open had no leaves at all after the frosts (green one, right).

Now this has occurred, the new shoot form the one that lost all its leaves is looking like *Myoporum insulare* but Ian Tranter, from whom I got the plant, says he didn't do any grafting, so it’s not the old root stock reshooting.

Just thought you would be interested.

Norma Boschen (Vic): We had 110mm over three days 13th and 14th and 16th of December and the *E. alternifolia* are all in flower; plus lots of other species. Up until then we had only had just over 200mm for the year.

Charles Farrugia (NSW): I have been growing *E. debilis* for quite a few years. Over the years I had a couple of *E. debilis* seeds germinate in a pebbled garden path. I always wondered about the age of the germinating seeds. Recently, I noticed an *E. debilis* germination in a sandstone path surrounding a 2-year-old garden, not far from a planted *E. debilis*.

Also, my *E. debilis* seems to be very frost sensitive. In our area we only have two to four frosty days (mild frost) but for the last two years my *E. debilis* looked totally dead during the winter months. As soon as the weather got warmer it started sending out new growth.

Yet Robb says that in his garden at Appin NSW, where he has plenty of frosty days his *E. debilis* is not affected at all by frost.
Below and next column are photos of *E. decussata* and *E. eriocalyx* cream form.

The photo below, left to right, is *E. glabra x subfloccosa* on *E. denticulata ssp trisulcata* rootstock; *E. cordatisepala* on same rootstock, *E. caerulea* on *E. prostrata* chimera and *E. psilocalyx* on Russell’s chimera

During the rainy spell we had around 120 mm of rain. Straight after Xmas the daily temperature has ranged from 35 to 39 and on a couple of days it was 41 degrees.

Most of the Eremophilas have handled the conditions quite well with a very few exceptions: *E. hillii* – I have tried this quite a few times
grafted and on its own roots, but they don’t survive. The latest one was donated by Ian Tranter growing on its own roots. Just before the rain it got pruned back and came back with quite a bit of new growth. One the heat started, it started going backwards. It was watered regularly because it was in a new garden section. After the last few hot days it is a total write-off. I get the impression this species cannot handle Sydney’ summer conditions.

*E. denticulata ssp trisulcata* – all the old foliage got burnt while the new foliage looks quite healthy (this is situated next to a colourbond fence on the western side of the back garden. The one just planted in the new section (regular watering) is very healthy with beautiful, bright green foliage

*E. ‘Pink Pantha’ & E. eriocalyx* – plenty of flower buds after the rain but most of these got burnt.

*E. aurievisca* – upper stems that were clean and green before, and after the rain are now black (like sooty mould) but the foliage looks quite healthy. No signs of scale or mealy bugs. What would be the cause of this?

*E. acrida* Bushy Park Station and *E. exilifolia x spathulata* both in full bloom. The latter is probable one of the hardest Eremophilas in my garden. Whether not enough rain, too much rain or too much heat, nothing seems to bother it.

*E. prostrata* chimera some flower buds burnt but still plenty of flowers on the bush.

Charles

**Jane Fountain** (Qld – ANPSA): Wow, Lyndal, what a treasure trove of pics and information – your group is going from strength to strength. Thank so much for all the work you put into it. Thanks also for the picture of Brian Walters - he is our Mister Magic working the website and it is good to see him there too.

**Bill Handke** (ACT): I returned in October from a holiday in Spain. Well, this was a surprise. In Valencia, lots of Australian native trees growing around southern Spain: kurrajongs, casuarinas, Callitris, bottlebrushes and of course gums growing as street plantings. Also, this row of things (below), looking very much like Eremophila!

When over there I thought it was *E. mackinlayi* or *E. conferta* – it had that look about it. I thought the leaves were slightly too big for *E. glandulifera*, and the flower shape didn’t quite match *E. spathulata* and the leaves were not overall spoon-shaped.

I don’t know if the spotted throat is particularly diagnostic, as it seems this can vary a lot in a species. Others will no doubt have a better idea than me. But the long row of them was a surprise and a delight.

Postscript – Andrew Harvie has since ID’d these as *Leucophyllum frutescens*, a US native. (common name Texas Sage). He says “Belongs to the family Scrophulariaceae, which is where Eremophila was before being put in Myoporaceae. It looks so similar to Eremophila it's not funny.”

**Virginia Moffat** (NSW): I am very keen to obtain cuttings from WA Eremophilas. I have
Just completed six months travelling through WA and saw the most wonderful Eremophilas. I have grafting stock (*Myoporum insulare*) and am familiar with grafting.

If any members can help Virginia please contact her through the editor.

Phil James (WA): For those not aware, *Eremophila microtheca* was described in 1870 from near the Murchison River (originally as *Pholidia microtheca*). Another population ascribed to the same species was found south of Kalbarri near Eneabba and was described by Chinnock as having more flattened leaves.

Following genetic and taxonomic analysis, the Eneabba form was renamed *E. sp.* Narrow leaves in 2013 and in 2017 was described as *E. subangustifolia*. I have been to the new site for *E. subangustifolia* (photo below) and it does have that little pungent aroma.

Russell Wait (Vic): I have to clear up what has been said on the web. The new species does not smell like *E. microtheca* as *E. microtheca* doesn’t smell. It could smell like *E. subangustifolia*.

Left to right below: *E. nivea*, *E. sp.* Mullewa, *E. microtheca* and *E. subangustifolia*.

Phil Trickett (NSW): There seems quite a bit of colour variation in *E. abietina ssp. ciliata*. Here is a photo of three plants in our garden. The one on the left is one we have had for at least 6 years of unknown origin. It has very little spotting. The second is one we purchased at Arid Lands in September, named the Ron Dadds form, while

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6 See Brown, A et al: *Eremophila subangustifolia* (Scrophulariaceae), a rare new species from the Mid West Region of Western Australia, with notes on *E. microtheca* Nuytsia 29:17-20 short communication
the one on the right may have come from Peter Olde’s garden.

All great plants! We have four plants, all grafted onto *M. acuminatum*, which thrives in our rich, black volcanic soil. The soil is nearly always moist so maybe they need such conditions to thrive.

We bought the Ron Dadds form at Arid Lands as a grafted plant, so I don’t know what the stock is. The one downside is their susceptibility to our strong westerly winter winds. We had a magnificent young specimen planted in the open, and the first of our winds in May destroyed it in two days by tearing off the main branches. Our remaining plants are all planted in protected locations in our garden.

*Ken Warnes has later said:* It would appear that on the left you have the pale blue Ray Isaacson collection from the 70’s or early 80’s. This is the form we all grew for many years, and is illustrated in the Changing Gardens book.

The heavily spotted one, we have been told, is the collection of Ron Dadds from more recent times. I also have a smaller, white flowered collection from Keith Pitman, but it is inferior to the others and barely survives. *E. abietina ssp. ciliata* was named by Bob for a fringe of hairs on the leaf margins, but they are obscured by the heavy resin coating.

I find all collections graft readily on *M. insulare* but I have trouble growing them in the ground. Perhaps there is a long-term incompatibility. A pity, because the flowers are superb. In the field the bushes are pretty ugly at best.

Russell Wait has said that he suspects there could be some hybridisation involved but has no definite findings. If so, it would explain the variation in flower. Currently, my best specimen is on its own roots but is hardly a show-stopper. The one illustrated in the book from Bacchus Marsh is no longer alive.

True *E. abietina* has shorter leaves rounded in cross section but has proved much more difficult and I don’t know of anyone growing it. Halls at Pinery had a poor plant for some years but I don’t know if it was struck or grafted.

*Ken Warnes* (SA): Of interest, it is now 3 year since the Pinery Fire and in early December I walked through a 5 acre patch of scrub where a friend and I have made many interesting findings. I counted 78 *E. glabra* seedlings and 74 *E. subfloccosa ssp glandulosa*; and that wouldn’t have been all of them. I didn’t see what, I suspect, is an earlier collected hybrid between the two but struck cuttings have flowered and the flower is green. I also saw two of what can only be *Exocarpus sparteus*, a beautiful broom-like root parasite which we hadn’t seen before.

**Nescofilm become Parafilm**

Study Group supplies of Nescofilm have been used up!! Member Ross McDonald has donated a box of Parafilm, which is similar to but slightly heavier than Nescofilm and not quite as stretchy. Same deal - $2 per metre, plus $1 postage, please deposit into the ESG account and email the editor.

**Next Newsletter themes**

The feature species for the May 2019 newsletter is *Eremophila polyclada*.

I am also working on an article on cultivar registration and have sought comment from the Australian Cultivar Registration Authority before finalising.

I didn’t hear anything from people re Eremophila growing in windy areas – contributions still welcome.

**Please provide your inputs by mid-April.**
Financial report

My apologies for not putting the financial report for 2017-18 in the last Newsletter. But here it is now! Our finances are healthy. As at June 2018 we had 124 members: 38 from Vic, 23 each from SA and NSW, 20 from Queensland, 7 each from ACT and WA, 4 from NT and 2 from Tassie. The surplus shown below is mostly forward payments by members for future years – I enter these as income for the current year, rather than trying to treat them as pre-payments.

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Eremophila Study Group
3 Condine Close
Greenleigh NSW 2620

Balance Sheet
As of June 2018

Assets
General Cheque Account
Total Assets

Liabilities
GST Liabilities
GST Paid
Total GST Liabilities
Total Liabilities

Net Assets

Equity
Retained Earnings
Current Earnings
Historical Balancing Account
Total Equity

Eremophila Study Group
3 Condine Close
Greenleigh NSW 2620

Profit & Loss [Cash]
July 2017 through June 2018

Income
Memberships
Conference fees
Travel reimbursement
Propogation material sales
Miscellaneous income
Total Income

Cost Of Sales
Total Cost Of Sales

Gross Profit

Expenses
Conference fee refunds
Printing and photocopying
Postage
Stationary
Software
Travel
Travel insurance
Prints
Accommodation
Meals
Bank fees
Total Expenses

Operating Profit

Other Income
Bank Interest
Total Other Income

Net Profit (Loss)
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 posted to 3 Considine Close Greenleigh NSW 2620 or (preferably) 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](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](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.

Leader: Dr Lyndal Thorburn, life member of ANPS Canberra. Contact her through lthorburn(at)viria.com.au or phone 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) ([jlfountain5(at)gmail.com](mailto:jlfountain5(at)gmail.com))

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NEXT NEWSLETTER MAY 2019

FOR SALE

*DVDs of all the formal presentations from the September 2017 SA field trip*

To purchase, deposit $12 in the Study Group account and email the Editor with your details