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Association of Societies for Growing Australian Plants
EREMOPHILA STUDY GROUP NEWSLETTER No. 50

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Since writing for the last Newsletter my wife and I have enjoyed a very interesting overseas trip. Alas not many eremophilas to be seen in the USA, Great Britain, Europe or South Africa, but we were not totally disappointed, for we were very interested to see several species growing in the glasshouses of the Botanic Garden in Edinburgh, and they were surviving relatively well.

Thank you to those of you who have forwarded your subscriptions, I appreciate your contributions.

This month we have several interesting letters from which to extract material. Please keep the reports coming in — the Newsletter you receive is exactly the one you all contribute to and we cannot rely entirely on the good efforts of the few. From a membership of 150 plus we can surely present a comprehensive issue three times a year.

Guy Richmond had his paper, "*Eremophila*, germination studies", published in the March 1993 issue of *Australian Plants*. This is a very well presented account of the research being conducted at Curtin University in Western Australia. Guy has also had a paper published in the *Journal of the Adelaide Botanic Garden* entitled "A Review of the Uses of *Eremophila* (Myoporaceae) by Australian Aborigines". This too is most informative reading. We have to thank Guy for two further articles which are presented below.

The Wangaratta District Group of SGAP are holding their Native Flower Show on the weekend of October 2nd and 3rd. They are planning a display of eremophilas to fit the theme of 'Plants for Dryland Gardens". I have indicated that I will be travelling over for their show and will assist with the display by taking plants from South Australia, I may be able to collect material on the way across the northern part of Victoria as well. If you can assist in any way please let me know in the near future so that I can organise my plans. Anyone travelling in the area at that time will be welcomed.

I trust that your plants have survived the ravages of winter, mice, frosts, the wet, winds etc. and that you can look forward to a good flowering spring season.

Colin Jennings

STUDY GROUP BOOKLET

These are still available at a cost of $6 plus $2.75 postage anywhere in Australia. I have a number of requests for this booklet from students who are studying at TAFE colleges etc. in the field of horticulture. They are using the information to help them with their various projects reports. It is encouraging to see that our efforts of years past are being rewarded in the students making use of the information collated.

FROM YOUR LETTERS

Noel Gane, Panania, New South Wales

I have grown *Eremophila nivea* in the same spot for many years. Usually after two or three years I replace it with a new plant. A large hole is cleared out and refilled with compost, fertiliser then added to help the new plant along.

Two years ago I took an old plant out and much to my surprise here was a grey leaf seedling alongside some sandstone. I carefully transplanted this prize, potting it on a couple of times; now it is a garden specimen. It flowered on New Year's Day 1993, a typical *E. nivea* flower, but with denser foliage and a nice upright plant. The plant is now approximately a metre high and 60 cm across. It is growing in full sun.

Cuttings have been taken as well as a few side grafts. I am determined to keep this plant if it is at all possible.

I, like every other grower, have failures. I have tried desperately to grow *E. hillii, E. willsii, E. granitica* (pink form), usually losing them after transferring them into a larger container. Goodness knows how many cuttings of *E. fraseri* I have tried, with not the slightest hint of success. Fortunately I have been able to graft the grey leaf form of *E. macdonnellii* which makes a good garden shrub. *E. abietina* var. *ciliata* I find difficult to strike and just as difficult to grow on, however, grafted plants do well on *Myoporum* stock.

The compost that I make has a pH of 6.5, however, I was told that worms do not like orange peel in the heap, that has proven correct. Lots of peel and kitchen refuse, manure, *Helichrysum* and *Helipterum* cuttings, which break down quickly, are used; lately I have been adding a few handfuls of wood shavings plus some dolomite. This mix, after sieving, has been ideal for potting on.

All garden plants are still heavily mulched with stable manure and get well watered from time to time. Paton's Native Plant Food is applied to all plants at least twice a year.

Russ Wait, Piangil, Victoria

In a brief note accompanying Russ' record of his plant collection he refers to a number of hybrid plants collected from the north west corner of Victoria. The ones he listed as growing in his collection are:

E. polyclada x *E. bignoniiflora*	*E. alternifolia* x *M. platycarpum*
E. polyclada x *E. divaricata*	*E. glabra* x *E. denticulata* ?
E. polyclada x *E. divaricata* x *E. bignoniiflora*	*E. maculata* x *E. duttonii*
E. glabra x *E. alternifolia*	*E. willsii* x *E. gilesii*
E. crassifolia x *E. polyclada*	

This is the summary of all hybrids growing, not all are from the area mentioned.

Beverley O'Keeffe, Springsure, Queensland

I found Colin's description of 'propagation and after care' very helpful and interesting. Not, on the whole, so very different from what I do, (which is reassuring) but lots of little things to notice. The main thing I do differently is to pot the cuttings four to a little 25 mm tube. (I probably have a lot more failures!) This way I can easily see when the roots start coming out the bottom. I sit them in a dry foam box in the shade. Probably sand in the bottom of the box would keep a more even moisture. I water once a day with a fine rose on a watering can. When struck, I pot up into 50 mm by 150 mm tubes, which I put in part sun and then into 150 mm pots which I place where they have full afternoon sun. I use straight creek sand for the cuttings and at least 50% creek sand with scrub loam for the potting on.

Last year I put in a lot of cuttings and am including a record of the results — or lack thereof. Actually, when I set it out I feel that I should just file the list in a dark corner. There are an awful lot of failures. Most probably this is the result of my method rather than the difficulty of the species. As I only put in 6 or 4 cuttings of each species the results are probably not very

enlightening. Though some of the easier to strike species (for me) seem to have once again come out on top. I have summarised for you.

Species which did not strike at all:

E. alternifolia, E. bignoniflora, E. bignoniflora × *polyclada, E. clarkei, E. "crenulata", E. dalyana, E. decipiens, E. dichroantha, E. exilifolia, E. fraseri, E. freelingi, E. georgei, E. gibbifolia, E. gilesii, E. ionantha, E. "jucunda* subsp. *pulcherrima", E. "labrosa", E. maitlandi, E. microtheca, E. "praecox", E. psilocalyx, E. pterocarpa, E. punicea, E. purpurascens, E. spinescens, E. sturtii, E. willsii.*

Species with strike of less than 50%

E. bowmanii, E. christophorii, E. densifolia prostrate, *E. densifolia* upright, *E. glabra* 'Murray River', *E. hillii, E. mackinlayi, E. maculata* 'prostrate', *E. laanii, E. oppositifolia* 'rubra', *E. pustulata, E. youngii.*

Species with strike of 50% or more

E. calorhabdos, E. glabra 'carnosa', *E. glabra* 'Rottnest Island', *E. macdonnellii, E. maculata* 'brevifolia WA', *E. maculata* 'Nyngyn' form, *E. maculata* 'Simpson Desert form', *E. maculata* 'Waikeri' form, *E. nivea, E. racemosa.*

Unfortunately, I have since lost *E. gibbifolia, E. jucunda* and *E. microtheca.*

I have decided that it is not worth trying more cuttings until it rains and brightens the plants up a bit. Normally I find that I have some success with cuttings taken in the autumn, so if it does rain I'll try again after Easter with some of those previous failures — especially the ones of which I only have one plant.

I was pleased to have the list of members. Not many listed in Queensland I see. It will give me the incentive to contact other members if I am in the area. It would be interesting to see what species are grown by Angus Emmott at Longreach. I'll have to drop him a line some time.

Kevin Fluris, Para Hills, South Australia

Kevin has, together with a detailed set of notes about the plants grown and their sizes etc. referred to the method used to propagate from cuttings.

> "I propagate cuttings in pure leaf mould or a mixture of leaf mould and potting mixture, with good success rates. This is done in a 'hot' plastic house."

PROPAGATION OF *EREMOPHILA* BY TISSUE CULTURE

Whilst most *Eremophila* species can be propagated either from stem cuttings or by grafting onto *Myoporum* rootstock's, and occasionally from seed, recent research at Curtin suggests that it is also possible to propagate *Eremophila* by tissue culture.

Nodal tissues taken from *in vitro* grown seedlings of *E. "mirabilis"* were explanted on Murashige and Skoog's medium containing minimal organics (MSMO) and kinetin (0.2 mg/L), and incubated at 28°C with approximately 2500 lux illumination and 16-hour photoperiod. Axillary shoots developed strongly on this medium. After 3–4 weeks, the shoots were excised and rooted on a MSMO medium containing indole-butyric acid (1 mg/L). Rooted shoots were deflasked and hardened off in a glasshouse.

The suckering habit of *E. "mirabilis"* was also evident from the adventitious regeneration of suckers from lateral roots *in vitro*. The tissue culture of other eremophilas, especially rare and endangered one (*E. nivea, E. viscida*) is being investigated at Curtin.

I wish to thank Dr Beng Tan who provided technical advice on plant tissue culture.

Guy Richmond

EREMOPHILA ECOLOGY STUDIES SEMINAR AT CURTIN UNIVERSITY

A seminar on ecological studies of *Eremophila* was given on 17 July, 1993 to members of the Northern Suburbs Wildflower Study Group (Association of Societies for Growing Australian Plants) at Curtin University, Perth. The seminar covered a range of *Eremophila* which occur from Wiluna (central WA) across to Laverton (Great Victorian Desert) as well as the more rare and endangered varieties within the wheatbelt (*E. nivea).* Flower colour of shrub and tree forms of each species was discussed, as well as their practical management characteristics in terms of pastoralism (as either stock feed or weed)! The management of specific species for soil and minesite rehabilitation programmes highlighted the incredible range of uses *Eremophila* have to offer, most of which are currently untapped. After the seminar, a demonstration of how to excise seeds from fruits was given, for those as keen to grow them from seed. This was undertaken since research at Curtin has shown that seeds, when excised, can germinate with a rate of up to 96%. A trip to the University's Field Trial Area (FTA Nursery) finalised the day's proceedings, where two different forms of Emu Bush (*E. maculata* subsp. *brevifolia* from Leonora-in flower and *E. maculata* subsp. *maculata* from Alice Springs) were appraised. The nursery also includes *E. "clavata", E. inflata, E. linearis, E. longifolia, E. "mirabilis"* (MS), *E. platycalyx, E. "praecox", E. pustulata, E. resinosa, E. verticillata* and *E. viscida.* The construction of an *Eremophila* aboretum at the FTA is currently underway, and I hope to lay the irrigation piping within the week, and plant the first eremophilas the following week. I don't think we will be able to match Ken Warnes' impressive collection of eremophilas at Owen, but hopefully this will encourage others to become interested in eremophilas, not only from a research point of view but also simply because of their profusion of spectacular flowers. The seminar was a good opportunity to meet other members of the Wildflower Society in Perth, and exchange ideas. David Bright, President of the Northern Suburbs Wildflower Society Branch and a member of the Eremophila Study Group, is thanked for helping to organise the event.

Guy Richmond

IT NEVER ENDS!!!!

As there was a bit of space left I thought I might mention the most recently found eremophila. Two C.A.L.M. officers searched Steep Point (extreme tip of Shark Bay, W.A.) to look for a new species that I needed material of as it was only known from one poor collection. They did not find it but one of the officers asked me (phone) what was the red-flowered species occurring at Useless Loop where he resided. The only one known from the area was *E. glabra* and I asked him to send a piece over for confirmation. When I received the plant it turned out to be a superb new prostrate species which has erect ovate leaves clothed in long soft hairs and bright red flowers which are very broad like *E. maculata* and *E. duttonii.* I hope to get more material including cuttings in the near future. If it has a good plant form and grows easily it will leave all other prostrate species for dead.

Bob Chinnock

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