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EREMOPHILA STUDY GROUP NEWSLETTER No. 41

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This Newsletter is being put together at a time when we are currently (late June) experiencing the 'break' to the very dry first six months of the year here in Adelaide. Elsewhere, and particularly in Queensland and New South Wales, it is obvious that some have had their share, plus, already this year.

I have, since taking on this position, had the opportunity to meet with several members locally, and in the next twelve months during school holidays hope to be able to make a few trips out of the state and call in on some of you on the way.

It is pleasing to get letters from members, they have been arriving at irregular intervals, only yesterday three arrived together from different locations. The information you are passing on is valuable and I ask that as many as possible write down their experiences so that they can be passed on to others.

I note that in the past the subscription has been "on request". Several members have already sent subscriptions to me, and for this I am grateful. It would seem timely to ask for all members to send their subscription now if they have not already done so. In this way I can get everything organised, and also everyone will have made their contribution for this year. I will then advise you when the next one might be required.

You may recall a reference to a collection of the materials presented in previous Newsletters being prepared in a book form. This has now passed the final proof reading stage and with the financial assistance of the S.A. region of SGAP is about to be printed. It covers the period of the first 30 or so Newsletters, with the 'social' news omitted, but with approximately 20 line drawings, not previously published, being incorporated. In this regard we appreciate the cooperation of the Herbarium of the Adelaide Botanic Garden.

The following are some of the extracts from letters received from members.

Norma Ali in Tasmania writes:

Eremophilas in Hobart

Considering a very dry year and a rabbit plague, my eremophilas are making satisfactory progress, although do not reach anywhere near the dimensions of plants on the mainland.

No new plant can be planted without a 27 cm high x 22 cm diameter wire guard around it, or it would be food for the rabbits! However, the rabbits seem to have certain preferences, although now I do not give them the chance to experiment! Two species which were not guarded about 2 years ago were *E. maculata* var. *brevifolia* (nearly eaten to ground level and now 80 cm x 70 cm) and *E. glabra* 'carnosa', completely stripped of its leaves and only the fruit left. It has made a remarkable recovery - just shows pruning is good for some plants!

E. nivea was also eaten and is slowly recovering. Young plants of *E. denticulata* were eaten above the guard, although they do not attack an established plant. *E. saligna* must have had a

special 'flavour' in its trunk, as that was "gnawed at" - fortunately I found it in time before it was ring-barked!

The following species are without guards, or have outgrown their guards (I used to take the guards away, but now leave them in position and let the plant grow through them) and are making good growth. *E. subteretifolia* (an excellent ground cover) has a little 'die-back' in the centre. *E. subfloccosa* - very good growth, which surprises me as usually the 'furry-leaved' species do not like the climate. *E. youngii* - good new growth after sooty mould and scale attack a year ago. Sprayed with "Winter Oil" and now looking good. *E. microtheca* - excellent growth and no rabbit attack, but some die-back in the centre. *E. drummondii* and *E. decipiens* both doing well and no rabbit attack.

Bruce Grose from Eltham in Victoria has asked for some closer ties to be established between members who live in the same area, e.g. suburban Melbourne, Murray Valley etc. Seems like a good idea, particularly when we are all so scattered across the country.

To this end we will send a full membership list to all members, you will then be able to see at a glance who is in your area and make the contact if you so desire.

Bruce also asks about cutting material being sent over to him; no doubt other members have similar thoughts. I will see what I can organise in this regard. It was a practice several years ago and was, I gather, quite successful. Any members with cutting material available could let me know, and anyone wanting material can write to me and ask. I think it best to wait now until the spring before any material is sent.

Bruce also writes ... I have a very dry garden in the summer and have to water a fair amount. The property is on the side of a hill facing east. The garden areas were dug over with an 18 inch tyne pick in his better days. The strata is a few centimetres of soil over a little clay over mud rock, iron stone and quartz all of which at times project through the soil. The sewage line was put across the top end of the property and quite a number of eucalypts have died. So as you will understand it will be quite a few years before things settle down again.

Jan Sked, ASGAP Study Group Coordinator, refers to two nurseries in Queensland which offer a good range of eremophilas, Brookway Park at Oakey on the Darling ranges and Fishers Native Nursery in Rockhampton. This note from Jan prompted the idea that we could in the next newsletter publish a list of the nurseries throughout Australia which do offer a good range of eremophilas; if we can support them, then they can also support us in the longer term. Please let me know of any you can recommend.

Jan also mentions the introduction of many *Eremophila* species in various projects in inland Queensland at Cloncurry and Longreach, and that they have been most successful.

At the recent International Garden & Greenery Expo in Japan earlier this year the major plant communities of Australia were featured in the design. In the Outback section, eremophilas were used extensively.

Gordon Brooks from Castle Hill, NSW, writes about his conditions which are a steeply sloped sandstone, with some black sandy loam topsoil in some places. The total area being about 0.5 hectares.

Gordon has eremophilas planted in both areas, but finds the crowbar an essential gardening tool to locate places of sufficient soil depth. His eremophilas enjoy full sun, or almost so, and after planting seem to remain healthy till about February or March. Some of the younger plants sustain their health until after the second summer. His problem is linked to the heavy summer rainfall (961 mm during the first four months of 1990 and something similar last year.)

The plants experience a drying off of foliage, starting with the bottom leaves and progressing along the stems to the tips. As his primary concern is to save the plant he cannot be sure whether the symptoms reflect root rot or some disease. Those plants which are ultimately lost usually display fungal attack of some sort, either root or collar rot.

Some of Gordon's eremophilas react favourably to a relatively heavy pruning, two notable successes being *E. maculata* var. *brevifolia* and *E. scoparia* both of which grew essentially new foliage. On the other hand *E. calorhabdos* likes neither the hot, humid summers nor the heavy pruning.

He goes on to refer to the approximately 40 species currently being grown, and the hope that with some experimentation he will succeed in improving the conditions of the plants.

Noel Gane in a brief note refers to a visit to SA which unfortunately ended in a major accident, fortunately without injury. He indicates that he will write later about the wet weather and the adverse effects on the eremophilas he has been growing.

To all of the members who have written, thank you. The material provided can be used and I welcome all contributions, particularly those relating to your experiences with the cultivation, propagation etc of the plants. If any of you are fortunate enough to get out into the bush and see things of interest, please share your experiences with us all.

When I started to prepare this Newsletter I was unsure of the amount of material I would be able to amass, but it seems to be significant, and, I hope, of value to you all.

Please, if you have any information to share drop me a line, the next Newsletter relies on you as members of the group.

Colin Jennings

FROST HARDY EREMOPHILAS
by Connie Spencer

The following *Eremophila* species are growing at the Olive Pink Flora Reserve in Alice Springs:

Eremophila christophorii, *E. freelingii*, *E. gilesii*, *E. goodwinii*, *E. latrobei*, *E. longifolia*, *E. macdonnellii* (various forms), *E. maculata*, *E. maculata* var. *brevifolia*, *E. ovata*, *E. polyclada*, *E. sturtii* and *E. willsii* and of these *E. latrobei*, *E. longifolia* and *E. freelingii* occur naturally.

Alice Springs can expect to receive, on average, 20-30 frosts during the months of June, July and August with temperatures usually around the -1° or 2°C. However, in June 1989 we experienced heavy frosts with minimum temperatures to -5°C for four or five consecutive nights. Although the temperature was not a record, the length of time the cold spell continued was.

Of the planted species at the Reserve, many are slightly sheltered by a building on the eastern side and a hill to the north. However, none of the eremophilas, whether planted or growing naturally, slightly protected or exposed, were affected by the frost; whereas, many of the broad leaf cassias were severely damaged, even those planted in similar aspects to the slightly sheltered eremophilas.

Our SGAP Group also has several of the above species planted on a site at the Showgrounds which are South of the town in a very exposed situation. *Eremophila ovata* was severely affected with the loss of a couple of plants while others were cut back to nearly ground level. The frost-pruned plants did re-shoot with the onslaught of Spring and returned to their

original size within a season. All of the other eremophilas took the frost completely in their stride.

Eremophila christophorii often takes on a purplish tinge in cold weather but apart from *Eremophila ovata*, all in all a very hardy lot when it comes to frost.

PROPAGATION
by Colin Jennings

I have in the last month or so been able to have a closer look at the contents of previous Newsletters, and one thing that I notice is that there is not an enormous amount printed about the processes we each use, and the successes we have had in the propagation of eremophilas from cuttings. Each of us probably uses different methods with differing degrees of success for in the case of some of the species, failure. I must admit to a number of the latter over the past few years, with more than just a few.

I thought that it might be worthwhile relating my methods (and I have used several) so that others might follow or feel the urge to comment. I certainly don't wish to give the impression that I have the secrets.

My first attempts were with the usual, readily available species like *E. glabra* and *E. maculata*, and I was able to successfully put roots on these with little difficulty, using Seradix 2, taking semi-hardened cutting material. With my first successes I thought, yippee!, this is going to be easy, so I attempted *E. weldii* in similar manner. Results again were very pleasing with a good percentage of strikes.

Having a background in chemistry I decided to try to make up my own hormone mixtures, and followed the recipes found in the *Encyclopaedia of Australian Plants*, Elliot & Jones, Volume 1. I made up a number of solutions with concentrations of the two hormones IBA and NAA in a range from quite low to about 2,500 ppm. These, since they are made in 70% alcohol, are stored in the freezer and seem not to have deteriorated in their two year storage period; or at least they still give favourable results.

In more recent times I have been using Clonex gel, it is expensive, but appears to be worthwhile with some of the species with which I have had limited success using powders and solutions. This gel comes in two concentrations, 3,000 ppm and 8,000 ppm; I have actually been using the lower concentration and a mixture of the lower and higher with some of the more obstinate cuttings. So far it is a little early to give any conclusive results, since I have not used it for long enough to be fully satisfied with its overall value. It does have at least one advantage, the gel seals the surface of the cutting from the cutting medium, and has a bacteriacide incorporated in it together with other materials which act as growth stimulants.

I might also add that I have tried to strike cuttings without any hormonal treatment, but with limited success; in fact I would say that I have been a failure in this regard. It is interesting to hear from other growers who say that they never use hormones and get good results.

Until recently I have raised all of my cuttings in an unheated glasshouse without the aid of any bottom heat or propagating frames. The trays of cuttings have been placed on a sound bed of previously used orchid compost thrown into a large aquarium-like structure built down the middle of the glasshouse. They have been surrounded by all of the other plants that I have growing in this house. Watering of the trays was done each morning and night in the summer time and once a day in winter, less if the weather was really cold. In simple terms they have been treated like already established plants; the results have been quite satisfactory, but I am sure that I will now be able to get a better outcome with the aid of the newly purchased propagating hot-bed and misting unit.

A brief resume of the results is:

E. weldii	strikes easily at any time from semi-hard cuts
E. microtheca	easy to strike in spring, semi-hard cuts.
E. saligna	only attempted once with almost 100% strike using Rootex solution.
E. phillipsii	struck easily using Rootex, new growth taken just below where bark had hardened.
E. behriana	Set roots easily from any mature material, have used low and high concentration hormones.
E. youngii	Not fast but does set roots after callousing, better with solution (2000 ppm) than with powders.
E. callorhabdos	Strikes well from cut sections of stem, preferably hardened or semi-hardened. Solution better.
E. decipiens	Slow but reliable, used powder, solution and gel with good results.
E. denticulata	One of the easiest, but roots are easily broken when transferring from trays to pots.
E. gibbifolia	Fair results, best with Rootex solution.
E. racemosa	Strikes easily from almost any material using all hormone sources.
E. pupurascens	Only on one occasion have I had any success, and that was at the start, and I can't remember what I did. (Pays to write down what is done).
E. barbata	Strikes easily from slightly mature material.
E. brevifolia	Had trouble with this rotting, but had recent success using clonex (3000 ppm), cuttings taken in January.
E. complanata	Set roots on anything taken, using anything offered.
E. debilis	Good results from material cut back when I trimmed the edges of a straggling plant.
E. densifolia	Good results, using semi-hard material, powder or solution.
E. ternifolia	Similar results to *E. densifolia.*
E. parvifolia	10/10 when I tried it last year from small tip pieces, with slightly mature base material; used Rootex solution.
E. polyclada	Good results from new growth using powder and solutions, concentration not important.

The failures would have to include such species as:

E. alternifolia, *E. battii*, *E. crenulata*, *E. dichroantha*, *E. duttonii*, *E. eriocalyx*, *E. homoplastica*, *E. interstans*, *E. longifolia*, *E. mackinlayi*, *E. oldfieldii*, *E. resinosa*, *E. scoparia* and *E. sturtii.*

The information is not complete, I have tried others, with varying success rates, but at least I have managed to get one or two from cutting material obtained from many different sources, and this has given me a plant to put in the garden which otherwise I would not have been able to obtain.

It has been well worth the time and effort, and since we are in a study group, I guess that you don't find out a lot unless you are prepared to have a go yourself, personal experience is one of the best teachers.

If you have any experiences involving propagation from cuttings that might shed some light on the methods best suited to a particular species, please let me know and I will have your information printed in a future Newsletter.

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Norma.