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EREMOPHILA STUDY GROUP NEWSLETTER No. 45

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The Study Group has a good bank account at present, however a significant amount of this is from the sale of the Booklet over the past eight months and we are obliged to pay some of that back to the SA Region of SGAP.

Despite a number of requests for our members to pay their dues, there are still a number who have made no contact with me, either to pay up or to indicate their intention to withdraw from the group.

Our postage costs alone are now $1.72 for the three issues we try to put out each year, together with envelopes and mailing stickers this comes very close to the $2 subscription; that makes the Newsletter a "free" item. I will in the new year have time to go through my records and will unfortunately have to remove unfinancial members from the mailing list. If you have not paid, and still wish to be involved, please do so promptly.

SGAP 1992 SPRING SHOW

The Eremophila Study Group has been asked to present a display at next year's SA Region SGAP Spring Show in the Hamilton Hall, Wayville Showgrounds.

It is our intention to make the display educational as well as informative and colourful. To do this we will need to have a collection of a wide range of *Eremophila* species as cut flowers; with planning we should be able to display a number of the less commonly seen species. We will be wanting flowering plants in pots also, these we would use in preparing a landscaped floor display.

Although it is a good way off, the planning for the potted plants needs to be made now. If you think that you could help in this regard, please get started and let me know of your intentions early in the new year.

More information will be put in the next Newsletter when we are clearer about what we will do.

In view of the request to hold another seminar, maybe we could tie in the two events. At present I have not been given the date for the show.

STUDY GROUP BOOKLET

We still have plenty of these available at $6 per copy plus $2.50 postage anywhere in Australia.

If you have not yet purchased one, you can be guaranteed of a well presented, indexed collection of edited 1972-1985 Newsletters of the Study Group in one cover.

Perhaps you could encourage your SGAP Group to purchase one for its library or you could introduce a friend to the fold.

STUDY GROUP SEMINAR

The seminar, held on Saturday 28th and Sunday 29th September, was a great success, thanks to the contribution of all who participated.

On the Saturday morning 29 members of the group registered in the lecture room of the Adelaide Botanic Garden. It was very pleasing to see a number of our interstate members at the gathering. Had it not been for the clash of dates with the National Conference of SGAP, we might have had a few more present.

Bob Chinnock presented two papers, one dealing with the classification of the Myoporaceae, the other with aspects of morphology and pollination. Guy Richmond presented a paper relating to his research on the germination of *Eremophila* seed; this being part of his work connected with the rehabilitation of the flora of part of the Goldfields area of WA. Guy is currently a Ph.D. student at the Curtin University in WA.

All present agreed that the presentations were excellent and from each we were brought up-to-date with current research.

A hands on session dealing with grafting techniques was popular, with Ray Isaacson showing us the method he has used so successfully. From a couple of reports received since the seminar several members have already had some success with material taken from the exchange material.

A feature of the seminar was the vast amount of cutting material brought in for exchange. Everyone was able to collect a good assortment of species. There was so much left over afterwards that I was able to send packages of good cutting material to interstate members who had asked me to send it to them.

The visit to Peter Hall's property at Pinery and to Ken Warnes' plantings at Owen was a real eye-opener to most. Peter has established a very good, comprehensive collection of eremophilas and he showed us some newly introduced species, together with some excellent plants of some of the less commonly grown ones. On the way to Ken's we stopped off at the Owen Primary School planting where we saw a magnificent *Eremophila purpurascens*. Ken's plantings are spread over several areas, and include some of the first plants of some species introduced into cultivation, thus holding a heritage position. Ken would have the most representative collection of eremophilas, built up over many years of dedicated collecting and growing.

Special thanks are extended to my wife, Myrnie and to Bob's wife Shona for their preparation and presentation of the excellent morning and afternoon teas and the delightful luncheon. Thanks also to Peter Hall and his wife, Ken Warnes and his wife for having us to their places on the Sunday.

The question being asked at the end was "When is the next one?"

FROM YOUR LETTERS

In response to Ken Warnes' article, "Some thoughts on Grafting", Chris Strachan has written:

> I agree that it would be most preferable to have our "eremophilas growing on their own roots but I must admit that grafting has a major role in extending the range of species we can grow".
>
> Here in Melbourne where we have just experienced the wettest, most miserable winter I can remember, all of my grafted grey and woolly leafed eremophilas, that are so prone to rot and mould in damp weather, are fine. I doubt that I would have kept them on their own roots.

> The main problem I find with grafted plants is that they tend to be shallow rooted and wobble around unless staked or propped up; we have sandy loam and plants in general don't seem to get a deep, firm hold as they do in heavy soils and clay.

Frank Prichard has supplied a list of the plants which are currently growing well at Galore Hill, Lockhart, NSW.

Due to the severe drought many of the new plantings have not survived, yet the more established plants have managed to survive, together with the plants from last year's planting.

Frank is offering to provide cutting material to anyone who passes through Lockhart. Quite a number of people call in to see the reserve and have become interested in the eremophilas as a result, however, the only ones likely to be obtainable from nurseries are the forms of *E. maculata* and *E. glabra.*

Ralph Carter, who attended the Seminar and is one of our newer members wrote about his attempts at growing eremophilas at Windsor, some sixty kilometres north of Adelaide.

> "... I have been stimulated into attempting to strike some 200 cuttings with hopefully a little more success than my last season's 40 survivors of 4 species.
>
> When I left Ken's farm on Sunday I went across to Windsor where a friend and I are both trying to regenerate remnant mallee scrub and linear roadside vegetation. I was delighted to inspect my friend, Eric Williams' 60 young eremophila seedlings. Eric and I have been avidly reading everything we can find about propagating them from seed, but success came from an accident.
>
> Rain in June accidentally found its way into a rusty half 20 litre drum containing fruit from *E. glabra*, *E. longifolia* and *E. maculata*, the first two are local to the area. When this was discovered in July, the sodden, smelly mass was tipped out. Odd shoots were noticed and these fruits were planted in tubes; from some 50 shot fruits 40 separate tubes had seedlings, of course some had two or more plants growing from the fruit, but as these are impossible to separate they are not counted individually.
>
> By the end of July shooting stopped and did not start again until the end of September when a further 20 seedlings were produced. Attempts were made to try different approaches mentioned in the newsletters. Initially the fruits were flushed with clean water with the idea of removing any inhibitor. Sulphate of ammonia was added to some fruit. Iron chelates to some fruits and some were left in their rusty tin under an old windscreen. All were left in a tea coloured soup and most shoots appeared under the glass. Maybe the combination of warmth and rust enabled the shoots to overcome the physical restriction of the drupe shell. *E. longifolia* and some larger fruit have shot, but as yet it is unclear if both *E. glabra* and *E. maculata* have grown."

Beverley O'Keefe sent a return letter after I had sent her some cutting material from the seminar.

> "We have had a very dry year here. We had 321 points in the first week in January, 523 points in the first week of February, 160 points on 20th May and 172 points on 8th July, and that is all for the year. It is all we can do to keep water up to the lawn, the poor old garden has to look after itself. We find the eremophilas are ideal for this. They seem to battle on regardless.

We have had a lovely spring showing from *E. sturtii* and *E. oppositifolia* subsp. *rubra*, and *E. bignoniiflora* is drawing the Lewin honeyeaters. Most of the other eremophilas have done their bit and given us their usual lovely display, though maybe with less enthusiasm than last year."

NOTES ON *EREMOPHILA*

Ken Warnes

MYOPORUM PLATYCARPUM x *EREMOPHILA CRASSIFOLIA*

This somewhat bizarre combination must occur in several locations. As far as I know the two original plants grew on a small sand ridge on the Mack's "Eremophila Park" property at Waikerie. These plants were small and straggly. In cultivation it is not much better, my plant measures a rounded 1 m, the flower is quite nondescript and it has no use apart from its curiosity value. Actually, if *M. platycarpum* is a parent why do plants grow to only 1 m high?

I have had no success in propagating the plant, obtaining my specimens from other enthusiasts. I believe some have grafted it but can't recall the details. Perhaps Leila Scott could try this method with her plant at Karoonda, especially if the recent rains have prompted new growth.

On the subject of hybrids I wonder if nature sometimes makes "mistakes" in producing a non-thrifty hybrid. Among my many seedlings from the 1983 flood is a plant dug up under *E. pantonii* and crossed with a red-flowered species, probably *E. maculata* or *E. alternifolia*. Seemingly healthy new tips die back and plump buds show colour but abort without opening. After 8 years this plant is still only 40 cm x 50 cm and has never really thrived. I'm sure in nature this hybrid would die out without re-producing, as would, I suspect the purported *M. platycarpum* — *E. scoparia* hybrid.

Others, such as Bob Chinnock's *M. platycarpum* — *E. alternifolia* hybrid show promise as quite attractive shrubs, as do some of the interspecific hybrids e.g. *E. maculata* x *E. duttonii* and *E. bignoniiflora* x *E. polyclada*.

EREMOPHILA OPPOSITIFOLIA

The genetics of this species intrigue me. In South Australia at least, this attractive species occurs in small colonies. Invariably the flower colour varies through the colony, ranging from creams through pinks to mauves, even pale violet. Why? Also the flowers are often twice as large on young plants and much more abundant.

A point of interest is that half of each corolla lobe is cream, regardless of the tube colour (as also is the underside of the tube). Closer study reveals that the cream area is where the lobes are overlapped in bud. Presumably light has something to do with colour development.

Calyx colour also varies from cream to bright pink.

I believe various colours also appear interstate but I do not know whether this occurs within a colony as I have observed here.

It is a pity that this species is slow to form roots because at its best *E. oppositifolia* makes a beautiful specimen and deserves to be widely planted. It will also grow on highly alkaline soils which many species resent.

EREMOPHILA IN AFRICA

Guy S. Richmond

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Bentley, Perth, Western Australia.

As part of an international programme to introduce potential farm forestry species to the Embu-Meru-Isiolo arid lands of Kenya, Australian scientists have introduced several *Acacia*, *Eucalyptus*, *Lysiphyllum*, *Atalaya*, *Casuarina* and *Allocasuarina* species to these regions. Average annual rainfall for the area is 600 mm. In addition to the above species, *Eremophila bignoniflora* (Gooramurra) was also selected as a trial species which, like the other species, may produce useful products for the increasing number of farmers who are becoming permanently settled in one location. This species occurs throughout all regions of Australia (except Tasmania) and is particularly prevalent in Queensland.

The trial in Kenya was carried out on a publicly owned site of 8 ha which had previously been used as rough grazing. The natural vegetation is dense *Acacia seyal* bush, along with *A. tortilis*, *A. reficiens*, *A. mellifera* and *Boscia coriaceae*. The soil is an extremely deep, self-mulching, vertisol alkaline in nature as indicated by calcium carbonate nodules at depth. The trial area was cleared of *A. seyal*, which was then used to fence the perimeter. Following clearance of scrub, the area was worked by a tractor with a disc plough. Seedlings were planted into small holes in the ploughed land. The trial was established in November 1989. A total of 34 species was intercropped with beans in the first two seasons.

One of the main problems associated with agroforestry is grazing damage which occurs when the farmer is attempting to establish a commercial crop. Within this region of Kenya, elephants appeared to visit the area at six monthly intervals to break the fence and eat some of the trees. During the establishment of the trial, it became evident that the elephants were damaging many of the trial species with the exception of *E. bignoniflora* a striking plant due to its size (up to 5 m in height) but it possesses attractive 2.5 cm long white flowers which are tubular and drooping. Traditional uses of *E. bignoniflora* by Aborigines included the leaves as a laxative and for treating septic wounds, while the fruits were used as a drastic purgative. In Australia, this plant has been recorded as being readily eaten by livestock and is particularly important as drought fodder. It is interesting to note that Warnes (*Aust.Pl.* 6, 51: 295 (1972)) grew *E. bignoniflora* in South Australia which became chlorotic on a highly alkaline soil. Though the direct reason for elephants avoiding this *Eremophila* is unknown, the local inhabitants are now considering planting *E. bignoniflora* around areas which they wish to protect from elephant damage.

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