

Association of Societies for Growing Australian Plants
EREMOPHILA STUDY GROUP NEWSLETTER No. 91

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The last Newsletter was posted very hard on the heels of posting the book *Eremophila and allied Genera*; so much so that I omitted to include receipts for monies received both for subscriptions and for the book. Most members who ordered the book received their receipts in the book, but the other receipts were not enclosed. I have enclosed all receipts with this issue. Sorry for the oversight.

For obvious reasons I did not include a page of colour photos of eremophilas in the April issue. I think that you have a surplus of pictures if you purchased the book. A decision to reproduce pictures in the next issue will depend on the demand for them from you the members.

It is almost ten years since I did an update of addresses etc. I usually make alterations as I receive mail I return from you. I am aware that APO has altered the delivery details of a number of residences, especially in rural areas. If the address sticker on your Newsletter is not the correct current address, would you please drop me a line so that I can bring my records up to date and alter the address labels!

Another oversight was to mention that all subscriptions are payable by the end of June for those who have not paid in advance. Would all who have not paid please send their subs to me as soon as possible for the coming twelve months. To make it easier I have put the red spot on the top right hand corner of the front page of the Newsletter sent to those who have not to this date renewed. Normally it would have been attached to the April issue! Thank you to those who anticipated the due date and have sent to me their renewals. I have also included a few receipts dating back to December which were left out of the April issue.

To all who ordered the book I say thankyou. As mentioned last time: we received a very good discount from Rosenberg Publishers and as a result I was able to let you have the book at a significant reduction on the recommended retail price. To date I have posted out a total of 150 books and our bank account is the better for that to the tune of approximately \$750, allowing for the few posting satchels which I still have.

I have made some enquiries about Nescofilm and have decided to purchase 2 rolls (total 100m) for resale to members. Recently there has been quite a bit of interest expressed, after a lull in interest some ten months ago when I first put the idea out that I might be able to get more. This will be available on a first come first served basis at a cost of \$1.50 per metre, plus postage. It was previously sold at \$1.25 per metre but there has been quite a significant increase in price since my original purchase some five years ago.

I thank Hans Griesser for his article on "Tolerance of Eremophilas to Heavy Frosts". Hans sent this to me some time back, but due to limited space in the last issue and not a lot of time to put it together I left it out. This article gives a further view on frost tolerance and also summarizes the effects of frosts on a range of eremophilas – this time growing in the Adelaide hills.

I still have a few books left for members who may have missed out. Same price as advertised, \$75 each post paid. Please send money, payable to ASGAP Eremophila Study Group, with your order.

NATIONAL CONFERENCE - NEWCASTLE

Myrnie & I will be attending the National ASGAP Conference in Newcastle in late September. It is our intention to present a display of eremophila cuts and if possible some plants. When we did this at the Ballarat, Canberra and Adelaide conferences the displays brought plenty of comments and we were able to further place the genus before native plants enthusiasts. I thank Russell Wait for making the cuts available for me to collect on the way across to the conference. On the way I will also collect some grafted plants from Ray Isaacson who has made some available for me to take over to sell.

BOOK PRESENTATION

It was a pleasure to acknowledge the work of Dr Bob Chinnock in a public presentation of the recently released book, *Eremophila and Allied Genera a Monograph*, at the APS (SA Region) plant sale on April 14th. After the rush to purchase plants members of the Eremophila Study Group who were present, together with members of the society were invited to gather for the presentation which took place at 11.30. There were approximately thirty present. It was pleasing to welcome the Acting Manager of the State Herbarium, Dr Bill Barker and his wife, together with Bob's wife Shona and his daughter Kiri.

The introduction which I made is printed below for members, who were not present, to read what was said. After my presentation, Bob responded, thanking those members of the Eremophila Study Group who had, over many years, been of great assistance; particularly those who had made valuable collections of eremophilas, many of which were new to science. Bob acknowledged the work of the three Study Group Leaders, Ken Warnes, Geoff Needham and Colin Jennings in managing the Study Group and enabling the message about eremophilas and their cultivation to be spread via the newsletters and the activities which have been conducted from time to time.

“Welcome to the presentation of the book *Eremophila and Allied Genera a Monograph*, produced by Rosenberg Publishers, Sydney. Of most significance is that the author Dr Bob Chinnock has been working on this family for much of his working life since arriving here in Adelaide from New Zealand.

On behalf of the Australian Plants Society (SA Region) and the ASGAP Eremophila Study Group, it gives me great pleasure and it is an honour to be asked to make this presentation.

Bob has been a very staunch supporter of the Eremophila Study Group for many years and has provided us with much needed assistance in diagnosis of plants collected by our members and I am sure that he has received, in return, much valuable source material upon which he has been able to conduct his research. Bob has always made his knowledge and time available to us - for which we are extremely grateful.

Bob has been working on the publication of many *Eremophila* species for quite a few years. This publication is the culmination of those many years' work. I can recall, almost ten years ago, there was a buzz around the Eremophila Group that there was to be a new book on eremophilas 'out soon'. Since then there have been many requests such as "When is Bob's book coming out." To the point, I am sure, where Bob was becoming almost apologetic for its non-appearance.

I am sure that he is a much relieved person now that the publication is complete.

The book is much more than many imagined it was going to be – some even expected it to be a suitable field guide!! One even to be taken out on trips and used as a pocket reference! (One would need deep and large pockets.)

Without taking up a lot of time, it is with great pleasure that I commend this book to you and congratulate Bob on the excellent outcome to his many years research.

We look forward to many more years of mutual cooperation, Bob and the Eremophila Study Group.

I also thank the growers, Ken Warnes, Russell Wait, Keith Pitman & Margaret Lee, who have provided the plants and cuttings for the display of eremophilas which you see in front of you today. Thankyou to the Australian Plants Society (SA Region) for allowing the Eremophila Study Group to make this presentation at their Annual Plant Sale here today.”

Book Launch

On Friday, 27 April, the official launch of the Eremophila publication took place at the State Herbarium, Hackney Rd, Hackney. Dr Bill Barker, Acting Senior Botanist at the State Herbarium, welcomed some forty guests to the launch. It was most pleasing to see four of our members from Victoria, Norma & Keith Boschen and Maree & Graeme Goods attend: unfortunately Russell Wait and his wife were unable to attend – the drought breaking rains fell overnight on his farming property at Natya and he decided that it was too important an opportunity to miss and he spent the day on the tractor. Ray & Betty Isaacson were also able to attend, as well as Kaye Bartlett and her husband. Colin & Myrnie Jennings made up the remainder of the Study Group representatives invited to the launch. Included in the gathering were Bob's wife Shona and his daughter Kiri.

In his remarks Dr Barker commented on the work which Bob Chinnock had done at the Herbarium since his arrival in 1973. He also referred to the dedicated research conducted by Bob in the years he had been working on the Family *Myoporaceae*, and to the way in which he had involved others in his work, referring especially to the contribution which the ASGAP Eremophila Study Group had played in that work.

Bob, in his reply, acknowledged the work of the publishers Rosenbergs and especially the commitment to the publication by David Rosenberg. He was particularly pleased that every species referred to was represented by a photo representation. Bob referred to the support he had received from the botanical artists, Ludwig Dutkewitz and Gilbert Dashorst, and from the staff who had assisted him in various ways over the years. Bob commented on the high quality of the book and expressed his great pleasure and relief that it was finally 'on the shelf' and

available for sale. Bob related a number of anecdotes relating to his collecting and the significant work done in finding eremophilas in the 'wild' by a number of the Eremophila Study Group members.

It was fitting that Bob mentioned Miss Una Roberts in his response. Una has been a member of the Eremophila Study Group for many years, and had been a very dedicated volunteer in the State Herbarium for over twenty years, retiring only in recent times. She celebrated her 96th birthday recently and was unfortunately unable to be present at the book launch. Bob made a presentation of a copy of the book to Una at the nursing home where she is now living a few weeks prior. (Myrnie & I visited Una only a week or so prior to the book launch and she was very proud of her copy and said that she read parts of it regularly, stating that it would take her a long while to finish it. She was most interested in the huge list of credits published in the book.)

Tolerance of Eremophilas to heavy frosts

My garden at Gumeracha in the northern Adelaide hills experiences lower night temperatures than Adelaide and a number of stiff frost nights even in "normal" winters. My garden is a good test case for the frost hardiness of plants, perhaps more so than the gardens of most other study group members, I suspect. As some eremophilas took many months to decide whether or not to re-shoot after the big freeze of 2006, I had to wait until I could collate the outcomes.

Since I had moved here in early 2002 eremophilas had generally done very well for me – until last winter, that is. This past winter indeed provided quite a test of frost tolerance (though I would have preferred to do without the experience) and sorted the real frost-hardy species from those that are less hardy. Many died, and many others were cut back, some quite severely, and in some cases re-shooting started as late as November. By way of comparison, in the previous four winters (2002 to 2005) I had lost only a few eremophila plants each winter, and invariably those were plants less than a year old; I had never lost an established eremophila plant during the previous winters. This time, however, the deaths included a number of plants that had thrived for years, some planted in early 2002.

Likewise, many established plants of other genera were killed by frost, and the number of deaths was much greater than in previous winters. All my lechenaultias, most of the eremaeas and beaufortias, and the majority of the banksias died. In contrast, most correas, acacias, grevilleas and hakeas survived, even those less than a year old. Surprisingly, most verticordias survived with little damage.

I didn't measure temperatures where the plants are, but from readings taken on a thermometer on the house wall under the veranda roof and observing the onset of frosts, I can extrapolate that during "normal" winters the lowest temperatures here would be around -5 or 6°C, whereas the winter of 2006 provided some temperature readings that were 4-5 degrees below normal. Thus, I estimate that on some nights the temperatures went to -9 to -11°C.

Can I be sure that frost is to blame? The winter was quite dry and well-established plants were killed, which suggest that wet feet did not play a major role. On many eremophilas and other plants, the split bark – in some cases, shredded seems a better word – was obvious. On others the way the leaves and young branchlets turned a dark brown was different to what happens when the roots die from wet feet.

In addition to the intrinsic frost tolerance of a species, a number of factors can affect it either way. Location is one factor; but all my eremophilas are planted in a full-sun, exposed position on the upper slope of a gentle hill, with no uphill trees for protection. I had a few eremophila plants that I expected to be too frost sensitive (such as *E. warnesii* and *E. willsii*) in pots on a table under the roof of a north-facing veranda, and this protection was adequate. Age is another factor; the lower height and relatively less hardened lower bark of young plants makes them more frost sensitive, which probably explains why in previous winters the losses were plants less than a year old. For *E. gibbosa*; one five year old plant came back from extensive damage while a young plant, a cutting from the first, died. It may be that some of the plants listed below as killed might survive when older, but on the other hand the deaths also included many established plants. Conversely, some of the young plants might have been killed even by a milder winter. I have omitted from the table below a few species where the observations might be unreliable because the plants were still rather young and tender.

Usually when I had more than one plant of a taxon, they behaved the same. For example, all five plants of *E. splendens* were killed; they were between 6 and 3 years old and had never shown signs of frost damage in previous winters. On the other hand, one plant of the pink-flowered form of *E. racemosa* died while three cream-flowered plants of the same species all survived with tip damage only. Maybe provenance plays a role. This may also be the reason why all four plants of *E. nivea* x *E. drummondii* (identical clones, three of the plants were cuttings from the first) were killed while plants of both parents survived with minor tip damage. Perhaps the hybrid came from a less frost-prone area. Unfortunately I don't know the provenance of most of my eremophila

plants; some were grown from cuttings from the APS Para Group specimens table and other cuttings came from the gardens of Ken Warnes and Beverley Rice (thank you!).

Among the species that show great variability of forms, *E. maculata* plants showed little difference in frost tolerance apart from the more sensitive *E. maculata* var. *brevifolia*. *Eremophila glabra* forms showed more variability in frost tolerance, with some showing no damage at all whereas *E. glabra* ssp. *carnosa* and the Canning Stock Route form suffered extensive damage but recovered, while "Murchison River" died. From the small number of taxa where I have both grafted and un-grafted plants, it seems to me that grafting has a minor effect if any, especially when leaves and branchlets are vulnerable to damage rather than the bark of the trunk.

No damage: *E. abietina*, *adenotricha*, *decipiens*, *dichroantha*, *divaricata* (both ssp), *glabra* (some forms), *inflata*, "blue" *interstans*, *ionantha*, *longifolia*, *lucida*, *maculata* (some forms), *pinnatifida*, *serpens*, *serrulata*? (ex Ken Warnes), *ternifolia*.

Some tip damage but plants recovered readily: *E. bignoniiflora* x *alternifolia*, *biserrata*, *dempsteri*, *densifolia* (ssps *densifolia* and *capitata*), *denticulata* ssp. *trisulcata*, *drummondii*, *gibbifolia*, *glabra* (some forms), *lehmanniana* (though one of three plants died), *maculata* (some forms), *maculata* x *duttonii*, *maculata* x *racemosa*, *malacoides*, *nivea*, *racemosa* (cream flowered form), *resinosa*, *scaberula*, *scoparia*, *subteretifolia*, "Summertime Blue", "3-way Cross", "Warnes' Hybrid" (which Ken now calls "Nullarbor Nymph"), "Yanna Road", and sp. nov. aff. *gibbosa* (low growing, broad fleshy leaves, ex Ken Warnes)

Substantial damage, many or all leaves and branchlets dead but plant re-shooting from lower parts: *E. alternifolia*, *ericalyx*, *gibbosa*, *glabra* ssp. *carnosa*, *glabra* "Canning Stock Route", *laanii*, *maculata* var. *brevifolia*, *metallicorum*, *rugosa*, *subfloccosa*, *veneta*, *viscida* (pink flowered form), *weldii*. A few of these looked dead for quite a while until fresh shoots emerged. Don't pull them up too early!

Substantial damage, plant re-shooting quickly from lower parts but fresh shoots killed by a late September frost and plant not shooting again: *E. brevifolia*, *microtheca*, *pantonii*.

Killed: *E. arachnoides* ssp. *tenera*, *calorhabdos* (glabrous and Peak Charles forms), *christophorii*, *clarkei* x *granitica* (?), *compacta*, *complanata*, *cuneifolia* (grafted), *delisseri* (grafted), *fasciata*, *georgei*, *glabra* "Murchison River", *glandulifera*, *granitica*, *hillii*, *hygrophana*, *macdonnellii* (several forms), *macgillivrayi* (grafted), *mackinlayi*, *margarethae* (grafted), *mirabilis* (grafted), *neglecta*, *nivea* x *drummondii*, *occidens*, *oppositifolia* (several forms), *ovata*, *papillata*, *platycalyx*, *platythamnos*, *platythamnos* x *gibsonii* (grafted), *psilocalyx*, *purpurascens*, *racemosa* (pink/orange flowered form), *recurva*, *rostrata*, *splendens*, *stenophylla*, *strongylophylla*, *youngii* (both ssp), "Rainbow Gem", and a plant labeled *nivea* x *carnosa* which Ken reckons is more likely *nivea* x *christophorii*.

In summary, many eremophilas survive temperatures around -5°C, but below that, things become more difficult for many. Another lesson I learnt is not to pull up dead-looking, defoliated plants too early; some re-shot quite late in spring and were lucky that I had not got around to pulling them up yet. I may have replaced a few before they had the opportunity to show whether there was some life left in the trunk and lower branches.

Hans Griesser
Gumeracha, SA

FROM YOUR LETTERS

Jim Thomson, Dooralong, NSW

Just a little anecdote on the question raised by Beverley Rice about cuttings from plants under stress!

Many years ago when the red marauder drought had full control Wilma and I decided to enter a friend's place at Nyngan by a little used gate. We noticed that, while not a blade of grass was to be seen, there was beside the gate an old, straggly plant of *Eremophila maculata*. It was showing the effects of attacks by kangaroos, and probably emus. Despite all, however, a number of leaf shoots from old wood were to be seen. We decided to take two cuttings when we left. (Felt guilty even about that!)

We found that our hardwood cuttings from that hugely stressed plant rooted without any trouble and the *E. maculata* (Nyngan form) plants in our Parramatta garden provided attractive displays for a number of years.

It is impossible to generalize from a single example, of course, but certainly I could say that not all cuttings from all stressed plants are difficult to strike.

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