

EREMOPHILA STUDY GROUP NEWSLETTER NO. 18 JULY 1980

CUTTINGS

Geoff Needham

Slowly those hard to strike plants are appearing in gardens. Once a stock plant is established it is much easier to strike a second generation plant. Factors in this are the time of taking cuttings and their freshness. We once believed the cuttings had to have a holding period of at least a week before they would strike, this being the minimum age of most cuttings when they arrived. However experience has proved otherwise. One member takes second generation cuttings at a very early stage, sometimes before the parent plant has been planted out, and gets a very high percentage of strikes. The parent plant readily throws out side shoots making a better shaped bush.

DEFOLIATION

Geoff Needham

This summer in South Australia was a particularly dry one—almost four months without rain. After the rains in March there was a major reaction by some of the more mature eremophilas in the garden; masses of foliage together with juvenile wood died out in the middle of the bushes. One E. angustifolia was so badly affected it was presumed to be dying, then amazingly new growth appeared and the bush is again growing strongly and flowering. The plants most affected were: E. angustifolia, E. dichroantha, E. duttonii, E. calorhabdos, E. clarkei, E. granitica, E. linsmithii, and to a lesser extent, E. pterocarpa, and E. sturtii. I can remember E. clarkei, E. oppositifolia, and E. ionantha, doing the same last year and of course E. maculata var. brevifolia dies off at the end of each winter then regenerates during the spring; it is almost a deciduous plant. This phenomenon is probably a natural occurrence, and depending upon rainfall, would account for that dense bush or woody-stemmed look on plants in the wild. Have any members experienced similar occurrences?

I.B.A.

Ken Warnes

The only success I have had with hormone powders was with Grevillea parallelinervis, but untreated cuttings also struck, so no positive result was achieved.

I have read with interest comparative results of using I.B.A. and SERADIX powders. Warwick Pybus in Newsletter no. 16 reported weak rooting on both E. ionantha and E. weldii. Back in the days when I could strike cuttings, I always found these two species (including 2 forms of E. weldii) produced threadlike roots. In my opinion these species are closely related, calyx and corolla and fruit being almost identical. I have not struck E. pustulata and what I call the form of E. weldii from Balladonia, so I cannot say what root system they have, but the fifth member of the group, E. parvifolia, has stronger roots.

A BEE QUESTION

Ken Warnes

During the early autumn I noticed considerable numbers of honey bees on some of the species with viscid foliage, particularly on E. pachyphylla, E. exotrachys (Kingoonya form), E. sargentii, and a form of E. glabra. Trevor Barr has told me of similar observations. No flowers were present, so presumably there was something in the foliage secretions that attracted them. As a result, the new tips have blackened off.

On reporting this to a friend who is an analytical chemist with an interest in bees, he suggested they may be collecting the raw material for production of propolis, or 'bee-glue, a red, resinous, aromatic substance collected by bees from the viscid buds of trees; used to stop up crevices and fix the combs to the hives' (Oxford Dictionary). He also told me that, among the health-food groups, there is an interest in propolis as a panacea for all ailments, much as royal jelly was reputed to be a few years ago.

NOTES ON EREMOPHILAS

Ken Warnes

Eremophila laanii

I was interested to read Bob Chinnock's report on finding *E. laanii* in the field and his opinion that the white and pink forms did not differ markedly; also his surprise on finding it grew to 3 m. I have grown the white form to over 2 m but when hardpruned, the main plant died. Profuse suckering occurred and regrowth has reached only 1-2 m. My white flowered form was purchased from Boddys Eastern Park Nursery in 1967 and many plants in this State must have been propagated from it.

There are two distinct pink forms in cultivation, one of which I agree is the same as the white; this has smaller pale pink flowers, minutely dotted in the throat. Growth of the branches, the leaves set squarely from the stem, and the presence of suckers, make this appear to be a colour form only. I have two specimens, one from Ray Nottage, the other from material brought to a meeting in the late 1960s. It is in cultivation in Perth.

However, I remain unconvinced that the deep pink form is not a variety or subspecies. A more arching habit, mature leaves larger and angled sharply back along the stem, corolla lobes in the 4:1 arrangement (compared with 5 equal in the white and pale pink), corolla tube curved (straight in the others), stamens strongly exerted, and no suckers to date, all add up to something different in my opinion. I am not certain but I think my plant came from Victoria, so probably originated from one of Ron Payne's collections.

Eremophila crassifolia

In earlier Newsletters members have reported difficulties with this species. My experience is that it is certainly slow growing but on better soils lives for several years. I have one in clay loam in semi-shade that is 12 years old, but a plant from the same batch of cuttings lasted only about 4 years on rubble. In nature it grows on limestone in the 300-380 mm rainfall belt. The best specimen I ever saw was growing near Bute at the base of a north-facing road embankment. It was a lush green ground-cover nearly 3 m wide. This is one species that likes semi-shade.

Its relative, *E. behriana*, is also slow and somewhat difficult. The form from Cummins on Eyre Peninsula is easy to grow from cuttings but is hard to hold in the ground. Perhaps it misses the 500 mm rainfall of its natural environs. It is prostrate, leaves orbicular thick and fleshy, and the flowers deep violet. It comes from Minlaton on Yorke Peninsula and is a wiry undershrub, very humble in flower and foliage.

A new species in the group, *E. "barbata"* (E.550), from Hincks National Park on Eyre Peninsula, appears to be much more vigorous.

Eremophila ericalyx

The first plant that I obtained of this species had pale lemon-pink flowers and came from Ron Schahinger in 1972. It was another of Miss Ashby's collections, and we originally called it *E. eriobotrya*. It grew strongly to about 1-2 m, but a couple of years ago developed what appeared to be a virus, characterized by bunching and distortion of the leaves towards the ends of branches. Originally this showed up on only a few tips but as it established I tried to prune it out, without success. Now the whole bush is

affected. Cuttings struck from seemingly healthy growth appear to be satisfactory so far. I wonder if anyone else has had similar symptoms appear on plants grown from mine?

SEED GERMINATION

Ken Warnes

This will update previous reports in Newsletters nos. 11 and 14.

First, the bad part. There were no survivors from those listed in Newsletter no. 14. That account was written early in May, and shortly afterwards 4 E. santalina appeared, of which 2 have survived. The continuously cold and wet winter of 1979, was I suspect, the main reason for the losses. E. santalina comes from the Flinders Ranges and was better able to withstand conditions.

Following exceptional rain in September and October 1979, the following germinated: 4 E. bignoniiflora, 1 E. glabra (western N.S.W.), 4 E. tetraptera (2 surviving), 4 E. macdonnellii (Atula Station, Simpson Desert), 2 E. macdonnellii (var. linearis?) (Glenormister Station), 1 E. macdonnellii var. glabriuscula, 2 E. obovata var. glabriuscula (Ray Isaacson No. 25), and 2 E. gilesii (Isaacson No. 23). It should be noted that these are all from summer rainfall areas and came up following exceptional winter and spring rains.

These seedlings were only separated today (23/5/1980) and the roots were interesting. Only the E. macdonnellii from Atula Station had a genuine tap-root and this had a conertina shape across the base of the container, and had finer roots. It will be interesting to see if seedlings last longer and stand wind better than cutting-grown plants. E. tetraptera had made a tap-root to the base of the container, but then had divided into a massive root system considering the size of the seedling. The roots of the other species were fine and bunched. One E. gilesii seedling at 15 cm high had a big fat bud. A pair of E. bignoniiflora seedlings were still attached to the drupe after 8 months and rather stunted.

All these seedlings came up following natural rainfall. The only seedling resulting from artificial watering was 1 E. macdonnellii (Atula Station) in February and it is still only 2 cm high. It is of interest that the seedlings of this form are still narrow-leaved at 15-20 cm high, yet the parents are broadly ovate.

With the 55 mm of rain in mid-April this year (1980) up came 2 E. fraseri, 1 E. gilesii (from Dave Gordon's batch of seed), 1 E. latrobei and 1 E. gilesii(?) (from Western Australia). Mice just love Eremophila seedlings and promptly removed all but the E. fraseri and E. latrobei, which having virtually lost their cotyledons, are brought inside at night. One E. fraseri is making its first leaves but the other died from the tip back, although below ground it was quite healthy.

The seedlings of E. tetraptera, E. gilesii, E. bignoniiflora, and E. obovata var. glabriuscula, all have longitudinal thick corky ridges at the base of the stem. I wonder what is the reason: moisture absorption, buttressing, or first protection?

CONSERVATION OF EREMOPHILA SPECIES

Bob Chinnock

Have you ever thought of the contribution we are making to the conservation of Eremophila species? As a Study Group we try to establish, grow, study, and disseminate, both information and material of various species, and quite likely, through our efforts, some species will be saved from extinction. Indeed, quite a few of the species now growing in our gardens appear to be just surviving in their natural habitat.

A classic example of this is Eremophila bicolor. Although this species is widespread in cultivation in the Adelaide region, it survives precariously in the wild and is known only from the vicinity of the Lake Cronin crossroads (east of Hyden, W.A.), where I have only seen it growing on the roadsides. Because it favours such a precarious habitat, it is quite conceivable that in time it may become extinct in its native habitat because of road widening.

Other species, which are known only from one or two localities, especially in south-western Western Australia, and in particular those in the wheat belt, are also at high risk, e.g. E. serpens and E. "verticillata". Many other species occurring outside the wheat belt in Western Australia are also extremely localized, e.g. E. microtheca, E. brevifolia, E. virens, E. "rostrata", and E. "compressa". Eremophila pentaptera and E. "barbata" are two South Australian species which are extremely localized and in danger. The latter undescribed species is known only from one small valley on the south-eastern edge of Hincks National Park. One good fire through this valley could wipe out the species.

PUBLICATION

R.J. Chinnock (1980). Five new species of Eremophila. Myoporaceae in Western Australia. J.Adel.Bot.Gard 2(3): 259-270.

In this paper I have described the last new species which are known to occur in Central Australia so that the treatment of Eremophila in the Flora of Central Australia (due out early next year) will be as up-to-date as possible.

The Central Australian region included in this flora covers South Australia and the Northern Territory between latitudes 20°S. and 30°S.; south-western Queensland; the extreme north-west of New South Wales and Western Australia bounded on the west by Laverton and Carnegie and more or less between latitudes 20°S. and 30°S.

A total of 58 Eremophila and 4 Myoporum are described.