

GROWING EREMOPHILAS IN POTS

Geoff Needham

A few of us who are restricted in the room available for growing plants, have been forced to adopt some alternative to planting in the garden. City dwellers, restricted to flats or non-permanent residences, have been growing native plants in pots with good results, and many people have used pot culture to provide plants for exhibition at flower shows. Nurserymen also use pots to grow stock plants as they can readily be shifted to different positions to gain optimum growth.

Eremophilas range from spreading ground-hugging plants to small trees, with all types of growth and habit between the two extremes. All types will grow in pots; obviously those small in stature will be best suited but most seem capable of adaptation for some years. Whilst not essential, good end results are obtained by following the standard nursery procedure of using progressively larger pots as the plant grows.

Soil mixtures can be varied from a garden loam to coarse sand with additions of loam or clay but the criterion of a firm soil, which the majority of eremophilas like, still applies.

Drainage is very important. Waterlogged plants will not do well. A layer of gravel in the bottom of the pot and covered with peat moss will prevent the soil entering the gravel. Roots remain above this layer making for easier repotting and preventing clogging of the drainage holes. Depending on the type of pot used, be it clay or plastic, attention must be given to the amount and frequency of watering, as the soil volume is often small in relationship to the leaf area. Daily watering in hot weather may be necessary, particularly if the pot is in full sun.

Fertilisers can be used to some advantage, especially if the soil mix is low in nutrient, as the plant is limited in root growth and cannot search for food. Soluble type fertilisers can be used at half-strength once a fortnight, or small quantities of the slow release type can be mixed with the soil. If growth rate and health of the plant are satisfactory, then refrain from using fertiliser.

The aspect can be varied to suit climatic conditions if danger of frosts exist. A sheltered area can be chosen for that period, then the plant can be returned to a more open spot. Whatever the reason for use, pots offer complete mobility, which is impossible with the plant in the garden.

NAME CHANGES IN EREMOPHILA

Bob Chinnock

Get out your pencil, mark out E. bicolor, and replace it by E. racemosa.

Eremophila racemosa (published 1859) has always been considered another name for E. maculata and when I published E. bicolor in 1979 there seemed to be no reason to question this even though I had not seen the type specimen of E. racemosa. It was not until I was working on E. maculata late last year that I became doubtful that E. maculata and E. racemosa were the same.

E. racemosa had been originally collected by Roe in the south-west of W.A. in 1848-49, but from the distribution maps that I did for E. maculata it became obvious that Roe could not have collected E. maculata as he was too far south and west. If E. racemosa was not E. maculata, the only other possibility from the description was E. decipiens or E. bicolor. Eventually the type specimen of E. racemosa was found misfiled and this confirmed that it was the same species as E. bicolor.

The name E. woolliana must also be replaced. Recently a friend at Perth Herbarium, who is working on Halgania, drew my attention to a supposed Halgania which he thought might be an Eremophila. It turned out that Halgania lehmanniana, described in 1848, was the same species as was described (later) by Mueller in 1859 as E. woolliana. The correct name for this species, therefore, is E. lehmanniana.

PROTECTION OF RARE SPECIES

Bob Chinnock

On 14 November 1980, one hundred plant species were gazetted in the Western Australian Government Gazette as being rare. The list included two eremophilas, namely E. denticulata and E. virens, and no doubt these are the first of a number of eremophilas which will be so gazetted.

Under Section 23F of the Western Australian Wildlife Conservation Act 1950-1979 a rare plant is defined by the Minister as any class or description of protected flora (all Western Australian plants are protected), which is likely to become extinct or is otherwise in need of special protection.

Under Section 23F

4. A person shall not whether or not he is:

- (a) the holder of a licence issued under the Act to take protected flora;
- (b) the owner or occupier of private land on which rare flora exists; or
- (c) authorized by the owner or occupier of land on which rare flora exists,

take any rare flora unless:

- (d) where he is not the holder of a licence issued under the Act he first obtains the consent thereto in writing of the Minister;
- (e) where he is the holder of a licence issued under the Act, he first obtains the further consent thereto in writing of the Minister.

A person taking rare flora is liable to a fine of up to \$1,000.

Thus, a rare species, as defined under the Act cannot be 'gathered, plucked, cut, pulled up, destroyed, removed or injured', even if you have a permit to collect in Western Australia as this does not include rare flora.

I should point out that the legislation is not one-sided but also takes into consideration inconvenience and/or hardship, which might arise to the landowner/occupier.

7. Where an owner/occupier of private land who has been refused consent to take rare flora on that land satisfies the Minister that he will suffer loss of use or enjoyment of the land by reason of that refusal, the Minister shall inform the Treasurer in writing and the owner or occupier shall be paid compensation for that loss at such rate or rates per annum as:

- (a) is agreed between the owner or occupier and the Treasurer; or
- (b) in default of agreement is determined by a valuer appointed by agreement between the Treasurer and the owner or occupier or in default of agreement on such an appointment, by a valuer appointed by the Minister,

for such period, not exceeding five years, as the loss continues.

The two eremophilas listed in the schedule are very good examples of rare flora. Last December I did a trip with Dr. Steve Hopper (W.A. Wildlife Research Unit), who is directly involved in the study of rare species. I wanted to show him rare eremophilas in the south-western parts of the State.

For many years Eremophila denticulata has been in cultivation in Adelaide. It is a very vigorous species which is easily propagated and yet in the wild it is extremely rare and in danger of extinction. To give you some idea of the situation, there have only been two herbarium specimens collected other than the original one upon which Ferdinand Mueller based the species. The origin of the Adelaide plants, other than that they were grown from seed, is unknown.

Steve Hopper and I had details of one of the localities on the Phillips River W.A. where E. denticulata had been collected 15 years ago. After considerable searching one plant was found growing amongst rocks above the river and a second one was located in the dry river bed. Although we spent considerable time looking along the river no further plants were located. With permission, a small amount of cutting material was taken from each plant, and plants of the two are now well established. It would seem desirable to replant rooted cuttings at the locality and rebuild the population to a safe level. It is probable that this species will be located elsewhere, but until then it is essential to monitor the known population.

The second species E. virens is perhaps in a more critical state than E. denticulata. The species has been in cultivation at Kings Park for a number of years and I brought back field collected cuttings of it in 1976 from which we established plants. This species is known only from near Campion and although there are a number of herbarium collections I believe that they probably all represent the same population which was on the roadside. In 1977 when I revisited the locality the biggest plant (2.5 m) had been pushed over leaving only two or three smaller plants. In 1980 when Steve and I returned we found no plants. The road had obviously been widened. Whether E. virens will be located elsewhere remains to be seen.

As a Study Group I believe there are two important ways in which we can contribute to the preservation of rare species. Firstly, we can propagate and disseminate plants of the endangered species so as to make material readily available for both scientific and horticultural purposes. Secondly, we must respect the laws provided to protect such species and under no circumstances collect material unless for some reason a special licence has been granted by the Minister. Instead, we should record particulars of the population, locate it as precisely as possible, count the number of plants, and note the vegetation they are growing in.

Forward the information to Dr. S. Hopper, Western Australian Wildlife Research Centre, P.O. Box 51, Wanneroo, 6065.