

EREMOPHILA STUDY GROUP NEWSLETTER NO. 17 MARCH 1980

ROOTS
Geoff Needham

Root systems of eremophilas have often been the subject of discussion. In many cases plants which have died disclosed quite small root systems, and this could have been the reason for the death of the plant. Recently, as my daughter was moving to Melbourne in January, we decided some of her plants could possibly be transplanted into pots, as all were growing healthily. How big were the root systems?

<u>E. virens</u>	80 cm high	50 cm wide	One main root 35 cm long
<u>E. lachnocalyx</u>	40 cm	30 cm	Root ball 15 cm diam.
<u>E. rostrata</u>	45 cm	30 cm	Root ball 20 cm diam.
<u>E. tetraptera</u>	60 cm	80 cm	One main root 60 cm long

All were fitted into 25 cm pots by bending the long roots; E. virens and E. rostrata never looked back. E. tetraptera lost most of its leaves, but new shoots have appeared. E. lachnocalyx, the one with the smallest root system, does not look like it will survive.

Further comment: E. virens and E. lachnocalyx were grown from cuttings, and E. rostrata and E. tetraptera were seedlings. In both cuttings and seedlings there was a root ball and a main root which seems to indicate that seedlings do not always form a tap root and cuttings do not always form a root ball. This also tends to confirm that eremophilas do not have big root systems; once the plant obtains sufficient water, growth of roots seems to slow considerably. I would also offer an opinion that small plants pampered when young never develop an extensive root system, which would enable it to withstand long dry periods. Consequently we are forced to water the plant in the garden, whereas in nature it is quite capable of survival.

FIELD TRIP TO WESTERN AUSTRALIA, 1979
PART 2

Bob Chinnock

From Newman we followed the 1979 Car Rally route into the Hamersley Ranges but at a considerably slower pace. We drove to Marandoo to study populations of E. "magnifica", one of the two Hamersley endemics. This time E. "magnifica" was in late fruit. The other unnamed species E. "petrophila" was found in a small gully where a few plants grew in cracks amongst rocks on the upper slopes.

After leaving Marandoo we went to Tom Price and decided to drive to the top of Mt. Nameless, which overlooks the town. At the top I found a large number of plants of E. "petrophila" growing amongst rocks and also, on the way down, E. "magnifica" was located on rocky slopes.

We then drove south to Parraburdoo where we were taken around by Ken Atkins a botanist employed by the mining company. In this area we saw E. compacta, E. elderi, which previously was not known outside of Central Australia, E. "pardalota", not to mention common species such as E. fraseri, E. cuneifolia, and E. latrobei.

The next place we went to was Ashburton Downs, zigzag from Mt. Vernon to Mt. Augustus. I had been down this stretch of road two years previously but it was extremely dry with most eremophilas dormant. However, this year it was one area that had reasonable rains. E. forrestii, E. "triquetrifolia", E. "caespitosa", and E. "flaccida" were the most notable finds.

This last species is fascinating. It belongs to the *E. fraseri* complex, having viscid leaves, but the flowers hang down and face in towards the centre of the bush. The upper two lobes are very dilated and similar to rabbits' ears, and the lobes are blue. Unlike *E. fraseri* this species does not grow more than a metre high, but may be more than three metres across, forming a low inverted saucer-shaped plant.

Eremophila "caespitosa" was also a fascinating find. This was the first time I had seen it. It has linear revolute leaves like *E. eriocalyx* but grows no more than 20 cm high and wide, forming small cushions on the gibber flats. The flowers are blue.

We continued west from Mt. Augustus homestead, and on the slopes of Mt. Augustus I found *E. imbricata*. This rare and poorly known species was common on the stony slopes. It has white imbricate leaves and blue flowers. The further west we travelled the drier it became and this was also the situation as we turned south to Gascoyne Junction and then to Meekatharra.

We went south from Meekatharra to Cue and then turned west into the upper Murchison River area. Near Milly Milly I found *E. laanii* growing in the river bed. In cultivation I have never seen this species any higher than 1.5 m but here it was over 3 m high and the branches were densely divaricate. At Twin Peaks I found another population of *E. laanii* containing both the cream and pink flower forms. On the basis of the cream and pink forms in cultivation it would have been logical to distinguish two varieties: the cream form with a long pointed bud and stamens not exerted beyond the corolla, and the pink form with an obtuse bud and stamens exerted well below the corolla. However in this natural population, the differences were found to be less distinct than in cultivated material.

From Twin Peaks we drove south to Eneabba to look for *Eremophila microtheca* which had been located in this area two years ago by Judy Monks. Although I had clear instructions on where the species grew I could not locate it. We took a track down to Lake Logue to do some general collecting, and on the way back to the vehicle I found one large plant of *E. microtheca*. This species, like *E. phillipsii* and *E. sargentii*, emits a strong odour.

From Eneabba we went south to Perth and spent a few days at the Herbarium before continuing south to the non-eremophila country.

SEASONAL GROWTH

Geoff Needham

Do eremophilas have a growing season? After showing no movement since last October some cuttings have suddenly burst into growth: *E. gilesii*, *E. aff. glutinosa*, *E. fraseri*, and *E. georgei*, have all shown this new growth in March, and this seems to indicate something.