BOTANICAL NOTES: GIBSON DESERT, *LANDSCOPE* EXPEDITION 1995

by Terry Macfarlane

We were fortunate to have a good display of everlastings and other ground flora along the great Northern Highway *en route* to the Gibson Desert. Everyone soon became familiar with the masses of pink *Velleia rosea* (Goodeniaceae) and, in dryer parts, the introduced Rosy Dock *Rumex vesicarius*. However the splendour of the floral show lessened as we travelled eastward, and in the Gibson Desert it was only moderate. Although the spectacle was less, there was nevertheless a reasonable flowering, and many species were seen.

Our combined efforts resulted in 195 collections (it would have been 196 but for the famous "Lost Grass", which fell out of my rucksack after being collected, and no more could be found). For all the collections, particularly full habitat details and notes on colour etc. were recorded. Thus this collection plus those of previous expeditions will combine to make a fine record of the flora of the Gibson Desert Nature Reserve in its present relatively undisturbed state, once the identifications are completed. There have been very few detailed collections made from defined areas in the Western Australian deserts. This collection is enhanced by the fact that the area has been visited several times in different seasonal conditions. There is also a fine collection of photographs from an earlier trip. Unquestionably, the participation of the *LANDSCOPE* volunteers have made possible the completeness of the collections and the quantity of data recorded. It would have been beyond one person to have done that quantity of spotting, snipping, tagging, bagging, recording and pressing.

Interesting aspects of this expedition included the extra information forthcoming as a result of Coralie Hortin's previous visits. For example we were able to see Sturt's Desert Pea (*Swainsona formosa*, formerly *Clianthus formosus*) at the exact place seen by earlier visitors, and to compare the extent of its growth and flowering with earlier seasons. Regrettably there were few plants to be seen this year, but there were enough to reassure us that the population still persists. Similarly, Coralie was able to revisit a particular tree next to which there was a colony of "Coralie's Creeper" (Convolvulaceae, not yet identified with certainty), which had so intrigued her previously.

Some of the more interesting plants seen during the trip included the Upside Down Plant (*Leptosema chambersii*), with its red flowers clustered around the base at ground level, the odd-looking Caustic Bush, the mallees with large, fluted fruits (*Eucalyptus youngiana* and *E. kingsmillii*), the attractive silvery inflorescences of the *Plectrachne* spinifex grass, the succulent parakeelya (*Calandrinia* species), and the brilliant flowers of the sandhill Grevilleas (*G.juncifolia* and *G.*sp. - unidentified as yet, possibly un-named). There were also the native Tobacco (*Nicotiana* sp.) from the Young Range, the Nardoo fern (*Marsilea drummondii*), with its four-leaf clover-like appearance, which we found beside the stream near Alexander Spring, the Desert Black Boy (*Xanthorrhoea thorntonii*) east of Laverton, and of course the Fringed Lily (*Thysanotus* sp.) which was found for us by the camel, who forced us to stop for lunch at that particular place.

The expedition enabled collections and observations to be made of several species that are particularly important scientifically speaking. Early in the trip, beside the Gunbarrel Highway on Carnegie Station, we collected seeds of *Neurachne minor*, a grass of special interest because it has a virtually unique means of producing sugars from the sun through a particular variant of the process of photosynthesis that is intermediate between the main two versions of the process, namely the C3 and C4 processes. Seeds were required by a researcher in Darwin who wishes to study the process further. A related species, *Neurachne lanigera*, is regarded as rare, although there is some doubt as to how rare it is because it occurs in the desert regions of Western and South Australia. A lookout was kept for this species throughout the trip but none were seen, so this tends to confirm that the species is rather rare and may require protection at the few sites where it is known. Another grass, *Monachather paradoxa*, which only occurs in the inland, was needed by some researchers in Sydney and the United States for analysis of its DNA. This was in order to help work out relationships between various grasses. We were able to find good plants at "Camel Flat" and to preserve leaves in alcohol (laboratory, not drinking grade). A Canadian researcher studying the genus *Wurmbea* was interested in material of *W. deserticola* (Desert Nancy). Although prior to the expedition I had asserted confidently that there would be no trouble getting her some material of this species, it was not so easy in practice. We found only one plant, near the water tank south of the Young Range, but this was sufficient because it had seeds. Finally, the Fringed Lily again: this was an excellent find because this particular species is un-named and we lacked information about its habitat, root system and the colours and other aspects of the flower parts, which are important features for distinguishing species in this genus. We were also able to photograph the species. Consequently a better description of the species can now be published, and we can better differentiate the three or four desert Fringed Lilies. This species is to receive a name meaning desert-loving, and many volunteers will be able to guess what I mean from the genus name of another group of plants who, like us, love deserts.

EXPEDITION ACHIEVEMENTS

Feral Animal Track counts in the area baited in 1994.

Pit trapping in the baited and unbaited areas and the new site established by *LANDSCOPE* Expedition 1994.

Photographic records again of the 11 permanent vegetation sites within the study area.

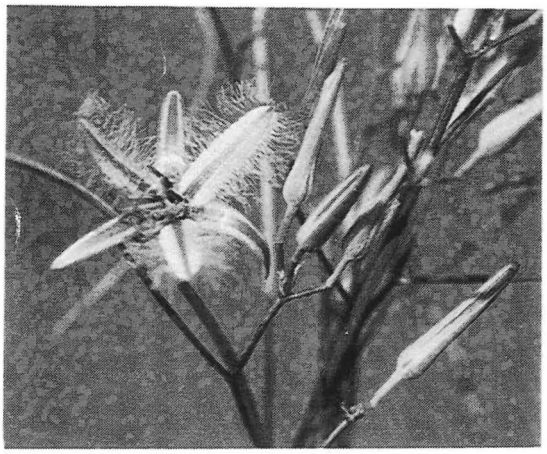
Vegetation samples collected from within the permanent sites in the study area plus opportunistic samples collected as we travelled around. It was the first time a botanist (Terry Macfarlane) had accompanied a *LANDSCOPE* Expedition to the Gibson Desert. New species (including a fringed lily) were collected.

Survey of 25 permanent sites checking on the activity of the dalgyte in the Gibson Desert.

The Air strip at Hussah was dragged to keep it serviceable not only for us but also for the Royal Flying Doctor Service in case of emergency, especially on the Gunbarrel Highway.

LIST OF PARTICIPANTS

Kellie Agar, Beth and Alfred Haines, Coralie Hortin, Gail White, Graham Wontner, Judith Bensley, Coral Stewart and Diana Whyte





Dr Terry Macfarlane holding an undescribed species of Fringed Lily (*Thysanotus* sp. - see inset) discovered at the turn-off to the Tjirrkarli Community.