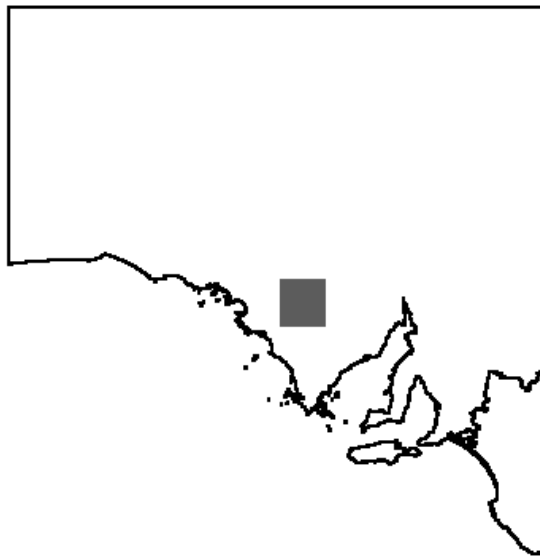

A VEGETATION MAP OF THE WESTERN GAWLER RANGES, SOUTH AUSTRALIA 2001



by
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Biodiversity Survey and Monitoring
National Parks and Wildlife, South Australia
Department for Environment and Heritage, South Australia

2001

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**Cover Photograph:
A typical Triodia covered hillslope on Thurlga Station, Gawler Ranges, South Australia.
Photo: A. C. Robinson.**

A Vegetation Map of the Western Gawler Ranges, South Australia

PREFACE

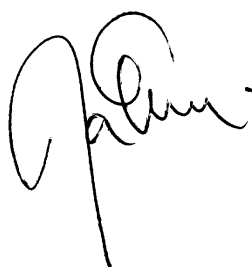
A Vegetation Map of the Western Gawler Ranges, South Australia is a further product of the Biological Survey of South Australia

The program of systematic biological surveys to cover the whole of South Australia arose out of a realisation that an effort was needed to increase our knowledge of the distribution of the vascular plants and vertebrate fauna of the state and to encourage their conservation.

Over the last fifteen years, there has been a strong commitment to the Biological Survey by Government and an impressive dedication from hundreds of volunteer biologists.

This vegetation mapping follows on from the Biological Survey of the whole Gawler Ranges in 1985 and focusses on the area covering the new Gawler Ranges National Park and its immediate surrounds. The map was produced using standard methods which are now applied to all biological surveys in the sheep pastoral country, but which were not applied as part of the original 1985 survey.

It is anticipated that the Biological Survey will achieve complete statewide coverage by 2015 and will be an achievement for which we can be very proud. Biologists in the future will be able to measure the direction of long-term ecological change, and we will have substantially improved our knowledge of the biodiversity of South Australia and our ability to adequately manage nature conservation into the future.



IAIN EVANS
Minister for Environment and Heritage
Minister for Recreation, Sport and Racing

A Vegetation Map of the Western Gawler Ranges, South Australia

ABSTRACT

This report consolidates vegetation quadrat data collected during the following four separate surveys:

- 1985 as part of a biological survey of the whole Gawler Ranges.
- 1987, 88, 92 and 93 as part of the pastoral assessment process.
- 1998 as part of the NE Eyre Peninsula agricultural lands vegetation mapping survey.
- 1999 as part of the NW Eyre Peninsula agricultural lands vegetation mapping survey.
- 2000 as part of a specific vegetation survey to fill in gaps in existing coverage.

Data from these surveys was brought up to date taxonomically and used to add to the plant species list from the 1985 biological survey to produce a new total species list for the Gawler Ranges.

Data for the perennial plants only, from these combined quadrats was analysed using PATN exploratory analysis to produce 20 groups based on floristic composition and these are illustrated and described.

Using a combination of Landsat TM imagery and aerial photography, a vegetation map was produced at a scale of 1:100 000 to cover the following standard map sheets:

5932 MINNIPA
5933 YARTOO
6032 CACUPPA
6033 YARDEA

This mapping joined the 1:50 000 agricultural area vegetation mapping and where possible, given the scale change, it has been edge-matched. Line work only for this more detailed mapping is included on the maps in this report.

Twenty vegetation types were mapped and, where possible, were equated to the groups generated by the floristic analysis.



The mint bush *Prostanthera florifera* a plant confined to the rocky hills of the western Gawler Ranges.

Photo: A. C. Robinson



Moonrise over bluebush shrubland in the new Gawler Ranges National Park.

Photo: A.C.Robinson

A Vegetation Map of the Western Gawler Ranges, South Australia

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Thanks to Lee Heard and Lyn Kajar from the Geographic Analysis and Research Group of Planning SA who assisted with vegetation sampling during the vegetation survey in August 2000.

Rangers at the newly established Gawler Ranges National Park, Craig Nixon and Tyson Barnes shared their knowledge of the area, assisted with fieldwork and provided field support to the vegetation survey teams.

Geoff Axford, the Regional Ecologist for the NPWSA northern region based at Pt Augusta supported the project in a number of ways.

Paul Gould provided the data from the Pastoral Assessment sites across the mapping area and Rob Brandle formatted all the site-based floristic data and carried out the PATN analysis.

A Vegetation Map of the Western Gawler Ranges, South Australia

INTRODUCTION

The *Biological Survey of South Australia* is systematically surveying and documenting the distribution of State's plant and animal biodiversity and mapping vegetation on a regional basis. The survey program began in the late 1970s. In October 1985 the third regional survey in the series was carried out in the Gawler Ranges. This survey (Robinson *et al.* 1988) documented the vascular plants and vertebrate fauna across the whole Gawler Ranges area and produced a series of recommendations for further conservation management of the regions characteristic plant and animal communities.

The placing of Paney Station on the market in 1999 provided an opportunity for the Government of South Australia to acquire a part of the Gawler Ranges recognised as a 'Key Biological Area' in the 1988 survey report. Purchase was negotiated with funding support from the Commonwealth Governments National Reserve System Program and the station was added to the State Conservation Reserve System as the Gawler Ranges National Park in mid 2000.

Sheep grazing began in the Gawler Ranges in 1862 (see Robinson *et al.* 1988 for an historical summary).

Following the removal of sheep from the former Paney Station, National Parks and Wildlife SA decided it was important to establish a set of baseline information against which future ecological changes, expected to occur in the new National Park, could be compared. A high priority was the production of an adequate vegetation map.

The 1988 Biological Survey Report published a series of small vegetation maps centred on the sites sampled during the field survey, but no other vegetation mapping existed. There was also a floristic analysis, based on the Biological Survey vegetation quadrats, which provided an overview of the floristic relationships across the whole Gawler Ranges area. From 1986 to 1996 the Pastoral Management Group of the Department for Environment and Heritage carried out pastoral assessments covering all the leases in the Gawler Ranges. The pastoral assessment sites provided additional site-based floristic data for the area. In 1999 the Geographic Analysis and Research Unit of Planning SA (Department for Transport, Urban Planning and the Arts) sampled a large series of vegetation sites on North West Eyre Peninsula, to the south of the Gawler Ranges, as part of their standard vegetation mapping program for the agricultural districts of the State.

After taking into account the availability of all of this vegetation data, the Biodiversity Survey and Monitoring Group of National Parks and Wildlife, South Australia agreed to undertake a special project in 2000 to produce a standard set of 1:100000 vegetation maps covering the new Gawler Ranges National Park and surrounding areas. These maps will form part of the set of baseline information required for ecological management and monitoring in the new Park.

A Vegetation Map of the Western Gawler Ranges, South Australia

METHODS

SITE SELECTION AND NOMENCLATURE

The vegetation mapping in this report covers the following 1:100000 topographic map sheets:

5932 MINNIPA
5933 YARTOO
6032 CACUPPA
6033 YARDEA

There are four sources of site based vegetation data for these four map sheets and the immediate surrounding area. This data is included in the PATN analysis as follows:

1985 Biological Survey

All quadrats from the following sites. Note that in the original Gawler Ranges Biological Survey Report (Robinson *et al.* 1988) these sites were given two rather than three letter codes. These are shown in brackets below:

Hiltaba HIL (HL)
Kolendo KOL (KL)
Koweridda KOW (KW)
Paney PAN (PA)
Pine Lodge PIN (PL)
Scrubby Peak SCR (SC)
Yardea YAR (YD)

This part of the 1985 biological survey included 105 quadrats.

1986-1996 Pastoral Lease Assessment

All assessment sites from the following pastoral leases:

Buckleboo
Hiltaba
Moonaree
Mt Ive
Paney
Scrubby Peak
Thurlga

Yardea

3757 records of 319 species at 263 quadrats.

1999 North West Eyre Peninsula Vegetation Survey

All sites on the following four 1:50000 map sheets which form part of the 1:100000 sheets mapped for this survey:

5932-IV CHILPUDDIE
5932-III MINNIPA MIN
5932-II YANINEE YAN
6032-III WUDINNA WUD
6032-II CORROBINNIE COR

2041 records of 351 species at 55 quadrats.

2000 Vegetation Mapping Survey

Additional vegetation quadrats were sampled between 14-23 August 2000. They were chosen to sample areas and vegetation communities not well sampled on previous surveys. There was a concentration of additional quadrats within the new Gawler Ranges National Park area. They included extra quadrats with the following codes:

Hiltaba HIL
Kolendo KOL
Koweridda KOW
Paney PAN
Pine Lodge PIN
Scrubby Peak SCR
Thurlga THU
Yardea YAR

Data from these 33 quadrats was added to the SURVEY database and, when combined with the 1985 survey data included a total of 3254 records of 440 species at 138 quadrats.

The locations of all these quadrats on the four map sheets and surrounding area are shown in Fig. 1. Their grid coordinates and other details are listed in Appendix I.

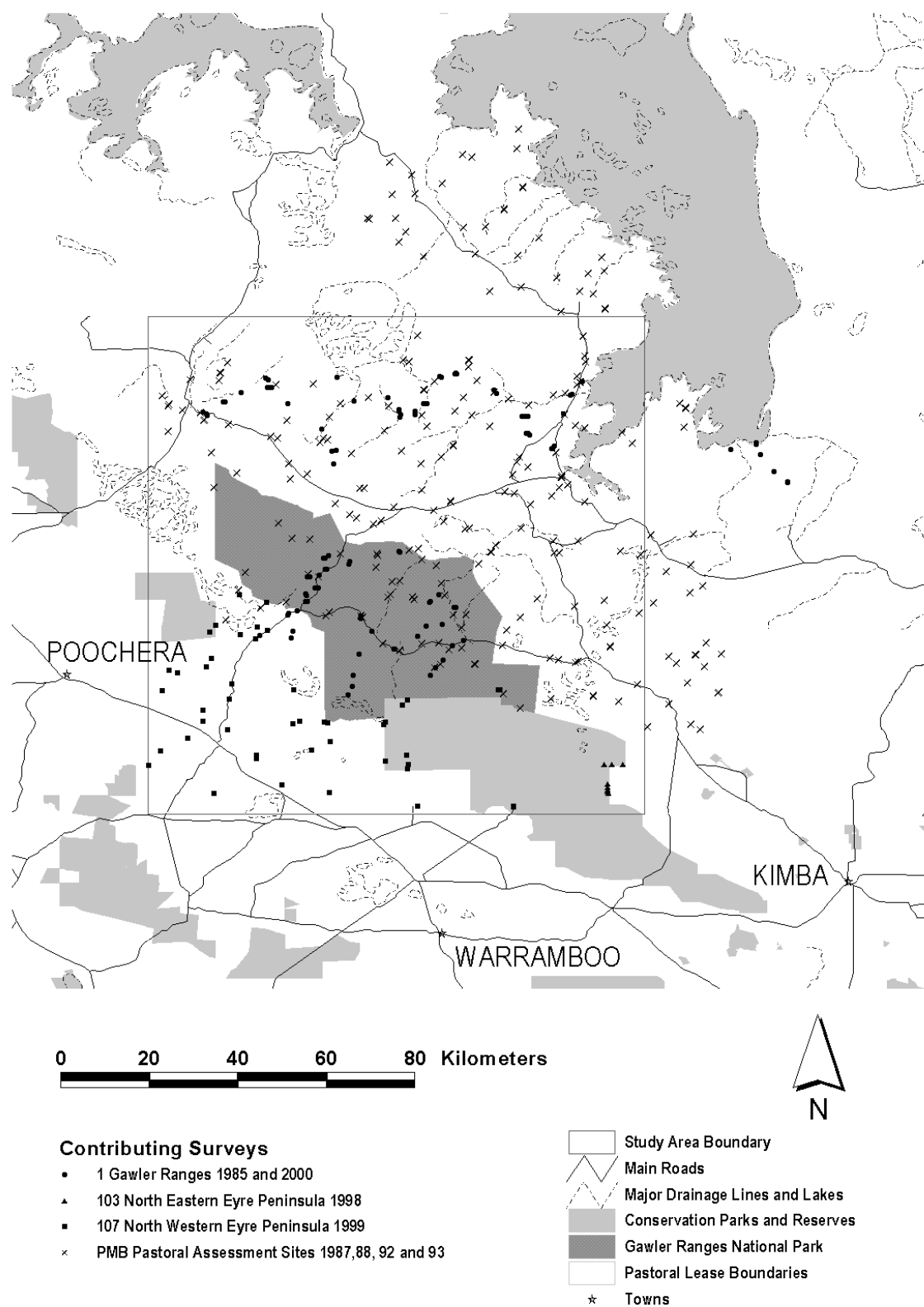


Figure 1. Gawler Ranges vegetation mapping study area showing the locations of all survey quadrats used in floristic analysis.

DATA COLLECTION

There were some differences in vegetation quadrat sampling between the four sources of vegetation quadrat data. The methods used in the 1985 Biological Survey are detailed in Robinson *et al.* (1988). This data was stored in the SURVEY database. Consequently, subsequent taxonomic changes have been made where possible.

The Pastoral Assessment site data provided information on the perennial component of the vegetation only. Details of the methods used to collect this data are in Rangeland Assessment Unit (1988). This data was stored in an ACCESS database which does not have a facility for taxonomic update. Therefore, plant species data from this source were updated to the current taxonomic understanding to match other data.

The 1999 North West Eyre Peninsula Vegetation Survey and the 2000 Vegetation Mapping Survey collected data in an almost identical fashion and included all recognisable ephemeral species in addition to the perennials. See Heard and Channon (1997) for details of the data collection methods. One significant difference was that the 1999 survey used the standard 30m x 30m quadrat size established for agricultural area vegetation surveys while the 2000 survey used 50m x 50m quadrats. Data from both surveys was stored in the SURVEY database and therefore reflects current taxonomic concepts. Both the 1985 and 2000 surveys used standard 1 square kilometre survey sites. Consequently, in many cases, particularly in hilly areas, several habitat patches were recognised and so multiple quadrats were surveyed at the same site.

PLANT SPECIES LIST

A total plant species list was compiled for the Gawler Ranges and immediate surrounds by taking the total list from Robinson *et al.* (1988), and updating it to current taxonomy. This list was then compared with the vegetation quadrat data listed above and any additional species were added to provide the consolidated list in Appendix III.

VEGETATION MAPPING

The Gawler Ranges Vegetation Mapping Survey area straddles the agricultural and pastoral zones, which complicates the vegetation mapping process when compared with other regional surveys. The Geographic Analysis and Research Unit (GAR) of the SA Department for Transport, Urban Planning and the Arts (DTUPA) usually undertake mapping in the agricultural zone. This mapping is generally based on 1:40000 scale aerial photography and 1:50000 scale topographic map data. In the pastoral zone, mapping is normally the responsibility of the Biodiversity Survey and Monitoring Group of the Department for Environment and Heritage. In southern sections of the pastoral zone,

of which the Gawler Ranges is a part, mapping is usually based on 1:100000 scale geo-rectified satellite imagery (Landsat Thematic Mapper) and 1:100000 scale topographic map data enhanced by 1:80000 scale aerial photography. In northern parts 1:250000 scale satellite imagery and map data are used. However, vegetation mapping in the pastoral zone for this survey was based on a slightly different scenario. This was due to the availability of 1:40000 aerial photography covering most of the survey area and 1:50000 topographic map data covering some of the study area. Consequently, mapping for this survey was based on 1:100000 scale imagery, 1:100000 and 1:50000 scale topographic map data and 1:40000 scale aerial photography (listed on the map in the back of this report).

The agricultural and pastoral zones meet approximately at the southern boundary of the former Paney Station. The vegetation mapping undertaken for this project, and presented in this report, covers the area to the north of this line. The GAR Unit has undertaken vegetation mapping for the area south of this line. This mapping is more detailed with extra information in relation to the differentiation of dominant over-story species. This mapping was incomplete at the publication of this report however draft line-work can be seen on the map contained in the back of this report.

All relevant literature, previous vegetation mapping, aerial photography, satellite imagery, topographic and geological maps were reviewed prior to commencing mapping. In addition, any individuals or groups with local knowledge were consulted and some fieldwork was carried out. Based on the available information, and taking into account the scale factor of the mapping, it was decided 20 distinct vegetation associations could be reasonably well identified and delineated. Furthermore, it was determined two non-vegetation mapping groups could also be identified and delineated.

It was decided to individually map vegetation for the four 1:100000 map sheets covering the western Gawler Ranges survey area. Initially, the boundaries of vegetation communities were marked onto laminated, hard copy, 1:100000 scale satellite images, using an Omni-chrome pencil. Digital topographic information was printed onto same scale transparent overlays and these were placed on top of each mapped image. The vegetation community boundaries were transferred to the overlays and then digitised as polygons using ARC/INFO GIS software. Each digitised polygon was edited and coded with a unique identifying number. Each polygon was also assigned a code representing between one and three of the vegetation or non-vegetation mapping groups. Each map sheet was produced as a standard, hard copy, 1:100000 scale vegetation map. These maps are similar in design to a 1:100000 scale topographic map. Each hard copy map was checked in the field for accuracy and later digitally edited if necessary. After final editing, the four

separate, digital vegetation polygon coverages were joined together in order to create one continuous digital vegetation layer covering the study area. This complex layer of digital information is presented as a single 1:250000 scale map in the back of this report. A second larger scale map covering the Gawler Ranges National Park is also provided. The four standardised 1:100000 vegetation map sheets, complete with grid references, drainage and infrastructure information, can be obtained from the Department for Environment and Heritage upon request. A small fee will apply.

Each community is represented on the maps by a unique colour. The colour was chosen to reflect the vegetation itself or the basic landform or soil type on which the community usually occurred.

FLORISTIC ANALYSIS

The site based data were analysed using PATN exploratory data analysis software (Belbin 1989). The analysis was conducted on the total data set based on species which are perennial or consistently detectable in all seasonal conditions. This reduced the number of species from 398 to 241 and the number of records from 9787 to 6777.

The analysis clustered the site species presence/absence data into groups based on similarity. The method of PATN analysis is similar to that used for the Flinders Ranges Survey (Brandle 2001). Once taxonomic consistency had been established for the combined data set used in the analysis, species which only occurred once and quadrats with less than four species and species with less than four records were removed. The final analysis was performed on 241 species at 424 quadrats. This included a total of 6585 records.

A Vegetation Map of the Western Gawler Ranges, South Australia

RESULTS

VEGETATION

INTRODUCTION

The vegetation of the Gawler Ranges as a whole is described in Robinson *et al.* 1988. This report also contains a species list (as Appendix II) of the 740 plant taxa then known for the total area. The plant list in this report (Appendix II) adds species recorded since the 1985 biological survey and updates the list to current taxonomy. The total number of plant taxa now known from the Gawler Ranges has been increased to 885.

Details of the plant species of particular interest are given in Robinson *et al.* (1988) and will not be repeated here. Two additional records resulting from the November 2000 survey were:

The discovery of a population of the Mallee Box (*Eucalyptus odorata*) on the lower slopes of Mt Fairview (PAN02001), which represents a significant new record for the Gawler Ranges and the northern limit for this species on Eyre Peninsula. The nearest specimen records in the Plant Biodiversity Centre are: 28 km WNW of Cowell (1979), Between Darke Peak and Carappee Hill (1980), Just N of Darke Peak (1980) and Iron Dutchess, Middleback Range (1981).

The record of the Twin-leaf Sunray (*Rhodanthe oppositifolia*) from a hill north of Paney woolshed (PAN01401) represents the third record for South Australia of this Western Australian species. The Gawler Ranges appear to support the eastern most population with the only other records in the Plant Biodiversity Centre being from: S Gawler Ranges (1939) and Second hill E of Mt St Mungo (1989).

A second population of a long-stemmed *Acacia* similar to *Acacia notabilis* was discovered on Yardea at YAR00901. It seems to occur mostly on ridgelines and is also known from the Tondulya area. The relationships of this form are currently being investigated by Martin O'Leary of the Plant Biodiversity Centre

PATN, an exploratory analysis program, was used to clump the 424 quadrats into 20 groups based on the similarity of their floristic composition (using species presence data). The dissimilarity cut off value of approximately 1, which was used to define the 20 groups, is similar to the levels used in other regional surveys (Robinson *et al.* 1988, Brandle 1998, Brandle 2001).

Detailed descriptions are provided for 19 of the 20 floristic groups defined using PATN. Note that PATN group 20 consisted of a single quadrat (PMB3244) on Mt Allalone. This vegetation was re-sampled in the 2000 vegetation survey and was classified in PATN group 18, so group 20 was deleted. The layout of each group is as follows :

- PATN group number followed by the descriptive title that includes the dominant overstorey species, the vegetation structural classification for South Australia and the dominant understorey species.
- The number of sites contributing to the group.
- The total number of perennial species recorded at sites defining the group.
- A brief description of the location, landform, soils and variation across the group. The most important indicator species are also listed.
- A table of statistics for the species that occur in the group at frequencies of greater than 40%.
- A map of the study area with the location of the sites contributing to the group.
- A picture of one of the sites comprising the group.

The sites contributing to each group are detailed in Appendix I. The number of quadrats in each floristic group which fell into a particular Landform, Land Unit and Surface Soil Texture category is given in Appendix II (Note that this data was not available for all quadrats in the data set).

SPECIES PATTERNS

Group 1. *Halosarcia indica* ssp. *leiostachya* Brown-head Samphire Low shrubland.

Number of sites in group: 11

Number of perennial species in group: 34

A Low shrubland to Low open shrubland fringing salt lakes and depressions with sandy clay or sandy clay loam soils. Important indicator species include *Halosarcia indica* ssp. *leiostachya* Brown-head Samphire and *Disphyma crassifolium* ssp. *clavellatum* Round-leaf Pigface.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Halosarcia indica</i> ssp. <i>leiostachya</i>	brown-head samphire	73	457.66	8	10	2
<i>Disphyma crassifolium</i> ssp. <i>clavellatum</i>	round-leaf pigface	45	360.01	5	5	1
<i>Atriplex vesicaria</i>	Bladder Saltbush	91	32.32	10	147	13
<i>Atriplex stipitata</i>	bitter saltbush	55	9.82	6	133	13
<i>Sclerolaena obliquicuspis</i>	oblique-spined bindyi	45	6.70	5	123	11
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	ruby saltbush	45	2.67	5	181	18

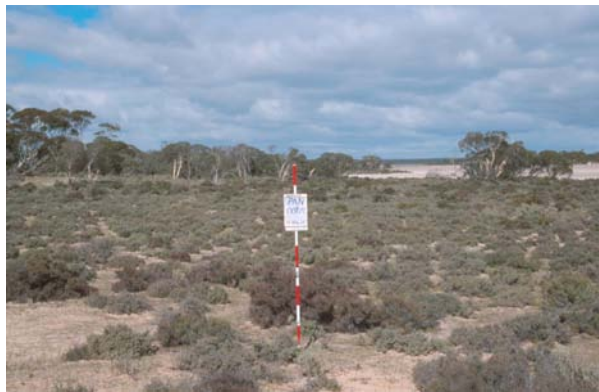
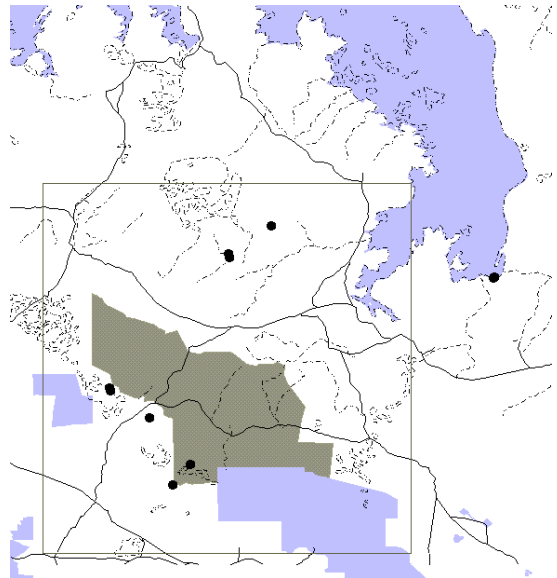


Figure 2. *Halosarcia indica* ssp. *leiostachya* Brown-head Samphire Low shrubland at quadrat PAN00701



Group 2. *Maireana sedifolia* Pearl Bluebush +/- *Atriplex vesicaria* Bladder Saltbush Low shrubland +/- an overstorey of *Alectryon oleifolius* Bullock Bush.

Number of sites in group: 22

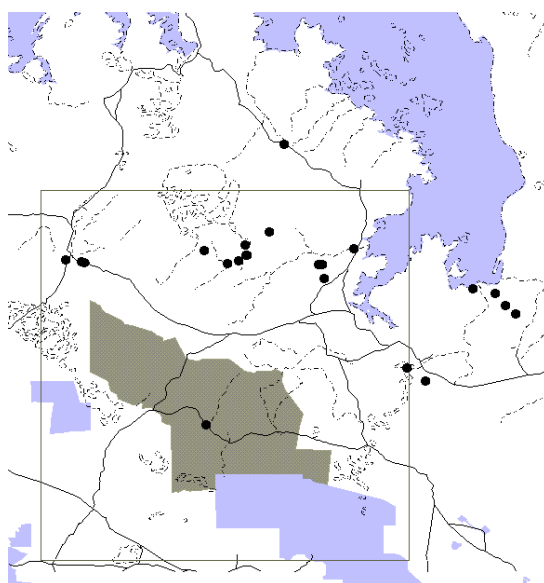
Number of perennial species in group: 78

In its purest form this group is a low shrubland of *Maireana sedifolia* Pearl Bluebush and it tends to occur on the sandy clay loams in the broad valleys and occasionally on hill footslopes. It continues as an understory into much of Group 3. There are no clearly defined indicator species for this group.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Maireana turbinata</i>	top-fruit bluebush	77	127.99	17	33	8
<i>Maireana pyramidata</i>	black bluebush	86	31.18	19	104	8
<i>Maireana sedifolia</i>	bluebush	91	25.37	20	125	9
<i>Lycium australe</i>	Australian boxthorn	59	21.42	13	71	12
<i>Stipa nitida</i>	Balcarra spear-grass	50	16.08	11	64	14
<i>Atriplex vesicaria</i>	Bladder Saltbush	82	12.35	18	147	13
<i>Myoporum platycarpum</i>	false sandalwood	45	8.22	10	76	9
<i>Danthonia caespitosa</i>	common wallaby-grass	73	8.05	16	146	16
<i>Eriochiton sclerolaenoides</i>	woolly-fruit bluebush	50	4.53	11	107	13
<i>Sclerolaena obliquicuspis</i>	oblique-spined bindyi	55	4.14	12	123	11
<i>Alectryon oleifolius ssp. canescens</i>	bullock bush	50	2.29	11	128	13
<i>Carrichtera annua</i> *	Ward's weed	77	1.95	17	222	16
<i>Acacia papyrocarpa</i>	western myall	41	0.65	9	126	11



Figure 3. *Maireana sedifolia* Pearl Bluebush +/- *Atriplex vesicaria* Bladder Saltbush Low shrubland at quadrat HIL00101



Group 3. *Acacia papyrocarpa* Western Myall Low woodland over +/- *Atriplex vesicaria* Bladder Saltbush and/or *Maireana sedifolia* Pearl Bluebush.

Number of sites in group: 78

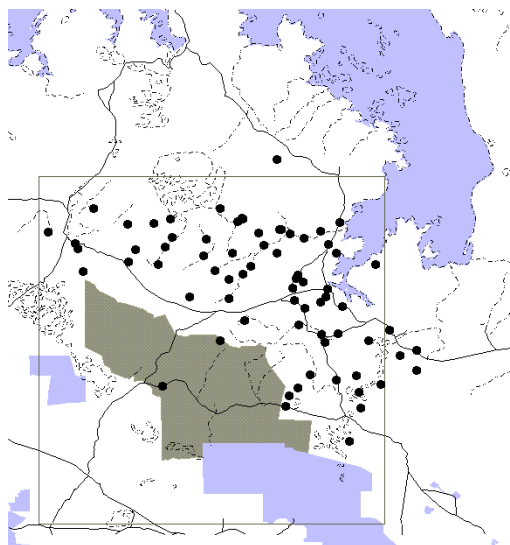
Number of perennial species in group: 79

Distinguished from Group 2 by the presence of a Low woodland of *Acacia papyrocarpa* Western Myall and also confined to the sandy clay loams of the plains and broad valley systems.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Acacia papyrocarpa</i>	western myall	88	126.12	69	126	11
<i>Atriplex stipitata</i>	bitter saltbush	78	79.69	61	133	13
<i>Maireana georgei</i>	satiny bluebush	45	57.15	35	68	7
<i>Rhagodia spinescens</i>	spiny saltbush	40	55.97	31	57	10
<i>Maireana sedifolia</i>	bluebush	65	52.04	51	125	9
<i>Atriplex vesicaria</i>	Bladder Saltbush	68	40.43	53	147	13
<i>Lycium australe</i>	Australian boxthorn	40	36.60	31	71	12
<i>Myoporum platycarpum</i>	false sandalwood	40	31.61	31	76	9
<i>Sclerolaena obliquicuspis</i>	oblique-spined bindyi	53	25.49	41	123	11
<i>Maireana pyramidata</i>	black bluebush	42	17.86	33	104	8
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	ruby saltbush	63	15.85	49	181	18
<i>Carrichtera annua</i> *	Ward's weed	73	15.05	57	222	16



Figure 4. *Acacia papyrocarpa* Western Myall Low woodland at quadrat THU00101



Group 4. *Carrichtera annua* Wards Weed Herbland +/- *Stipa* spp.+/- *Sclerolaena* spp. +/- an overstory of *Alectryon oleifolius* Bullock Bush.

Number of sites in group: 49

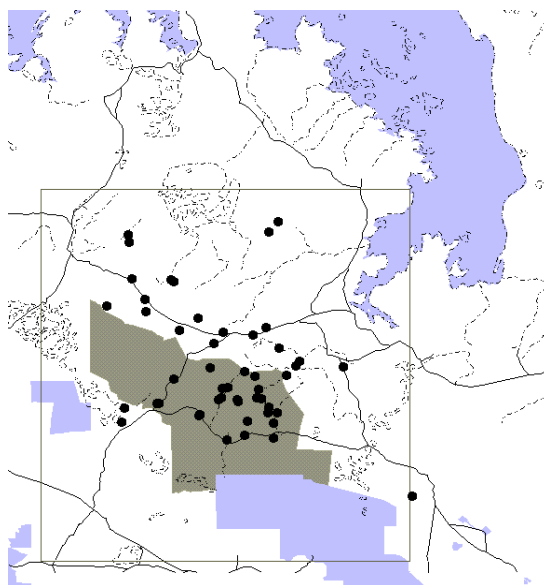
Number of perennial species in group: 84

The most extreme form of this group is illustrated where past heavy grazing has removed most of the perennial shrub component and left a herbland dominated by ephemeral species. Other variants that are more intact include the *Eucalyptus porosa* Mallee Box Open Mallee along drainage lines in the central part of the study area.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Alectryon oleifolius ssp. canescens</i>	bullock bush	80	71.70	39	128	13
<i>Acacia oswaldii</i>	umbrella wattle	49	56.72	24	68	10
<i>Eucalyptus porosa</i>	mallee box	41	51.11	20	54	9
<i>Casuarina pauper</i>	black oak	45	51.09	22	63	10
<i>Sclerolaena patentispis</i>	spear-fruit bindyi	49	31.59	24	94	10
<i>Rhagodia parabolica</i>	mealy saltbush	55	28.77	27	117	13
<i>Danthonia caespitosa</i>	common wallaby-grass	63	27.36	31	146	16
<i>Carrichtera annua</i> *	Ward's weed	78	18.96	38	222	16
<i>Atriplex stipitata</i>	bitter saltbush	49	13.96	24	133	13
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	ruby saltbush	57	10.07	28	181	18



Figure 5. *Carrichtera annua* Wards Weed Herbland at quadrat THU00701



Group 5. *Casuarina pauper* Black Oak Low open woodland.

Number of sites in group: 7

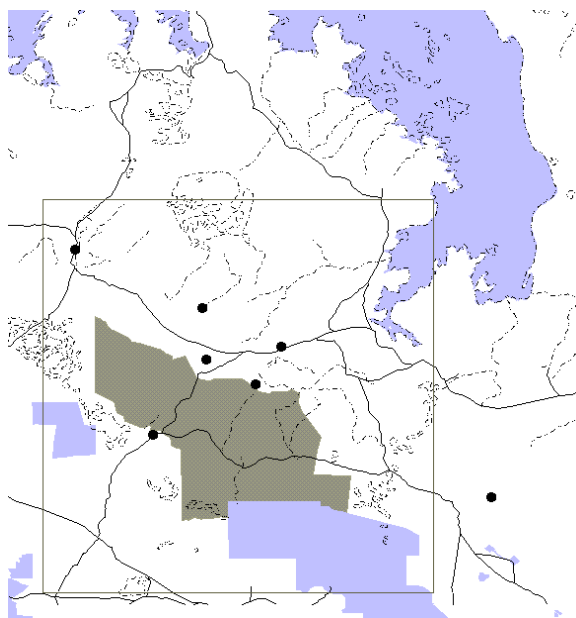
Number of perennial species in group: 32

A Low open woodland of the hill footslopes where limestone either outcrops or is close to the surface. Apart from the dominant *Casuarina pauper* Black Oak there were no other clear indicator species identified.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Casuarina pauper</i>	black oak	71	30.82	5	63	10
<i>Sclerolaena patenticuspis</i>	spear-fruit bindyi	71	17.87	5	94	10
<i>Maireana georgei</i>	satiny bluebush	57	16.51	4	68	7
<i>Atriplex stipitata</i>	bitter saltbush	71	10.36	5	133	13
<i>Lycium australe</i>	Australian boxthorn	43	7.54	3	71	12
<i>Maireana sedifolia</i>	bluebush	57	6.20	4	125	9
<i>Dodonaea viscosa ssp. angustissima</i>	narrow-leaf hop-bush	43	3.79	3	104	16
<i>Carrichtera annua</i> *	Ward's weed	71	3.60	5	222	16



Figure 6. *Casuarina pauper* Black Oak Low open woodland at quadrat HIL00501



Group 6. *Stipa* spp. Open tussock grassland +/-an overstory of *Alectryon oleifolius* Bullock Bush.

Number of sites in group: 16

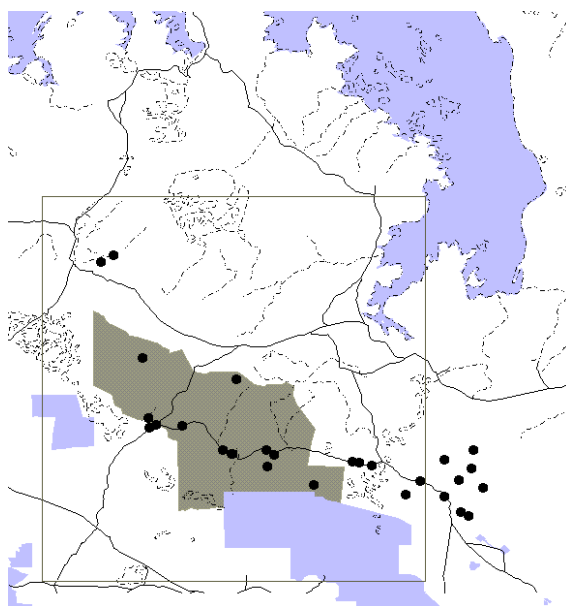
Number of perennial species in group: 98

To an extent these spear grass areas may be an atreifact of past grazing where the perrenial shrub component has been largely removed. It is possible however that there were always some areas of grassland in the southern part of the Gawler Ranges. They occur on the sandy clay loams of the plains and wide valleys and form a mosaic with Groups 4 and 5.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Rhagodia preissii</i> ssp. <i>preissii</i>	mallee saltbush	44	24.12	7	34	9
<i>Stipa nitida</i>	Balcarra spear-grass	56	16.81	9	64	14
<i>Stipa elegantissima</i>	feather spear-grass	62	13.36	10	85	15
<i>Eriochiton sclerolaenoides</i>	woolly-fruit bluebush	69	11.06	11	107	13
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	ruby saltbush	69	2.15	11	181	18
<i>Dodonaea viscosa</i> ssp. <i>angustissima</i>	narrow-leaf hop-bush	44	2.10	7	104	16
<i>Sclerolaena obliquicuspis</i>	oblique-spined bindyi	50	2.10	8	123	11
<i>Danthonia caespitosa</i>	common wallaby-grass	56	1.88	9	146	16
<i>Carrichtera annua</i> *	Ward's weed	62	0.19	10	222	16



Figure 7. *Stipa* spp. Open tussock grassland at quadrat PAN01301



Group 7. *Eucalyptus oleosa* Red Mallee +/- *Eucalyptus gracilis* Yorrell +/- *Eucalyptus brachycalyx* Gilja Tree mallee over *Geijera linearifolia* Sheep-bush, *Olearia muelleri* Muellers Daisy-bush.

Number of sites in group: 17

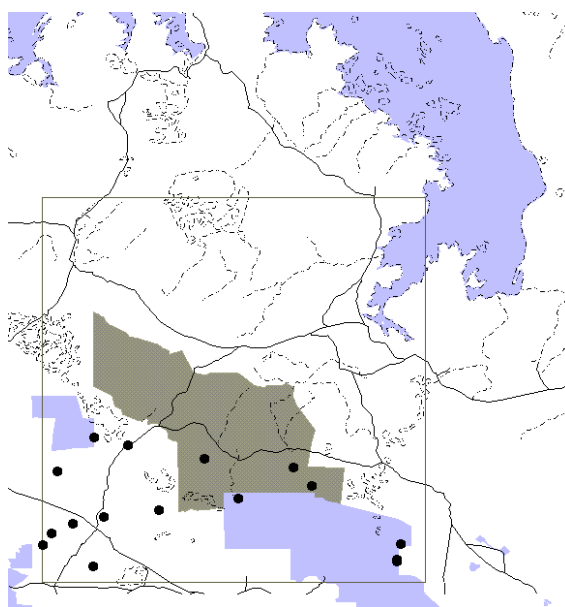
Number of perennial species in group: 80

A Tree mallee dominated by *Eucalyptus oleosa* Red Mallee and *Eucalyptus brachycalyx* Gilja with scattered patches of *Eucalyptus gracilis* Yorrell. It occurs on clay loams and sandy clay loams of the plains in the most southern Gawler Ranges. It is closely related to Group 8, but can be distinguished by the absence of Bluebush and *Cratystylis conocephala* Bluebush Daisy.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Acacia ancistrophylla</i> var. <i>lissophylla</i>	hook-leaf wattle	71	97.61	12	21	4
<i>Olearia muelleri</i>	Mueller's daisy-bush	71	62.00	12	30	5
<i>Eucalyptus oleosa</i>	red mallee	82	54.49	14	43	8
<i>Westringia rigida</i>	stiff westringia	71	48.29	12	36	8
<i>Eucalyptus brachycalyx</i>	gilja	59	46.57	10	27	7
<i>Ptilotus seminudus</i>	rabbit-tails	53	36.22	9	27	8
<i>Zygophyllum aurantiacum</i>	shrubby twinleaf	82	33.69	14	59	9
<i>Eucalyptus gracilis</i>	yorrell	76	33.01	13	53	10
<i>Geijera linearifolia</i>	sheep bush	65	21.82	11	52	8
<i>Eremophila scoparia</i>	broom emubush	53	21.59	9	38	8
<i>Rhagodia preissii</i> ssp. <i>preissii</i>	mallee saltbush	47	18.99	8	34	9
<i>Stipa elegantissima</i>	feather spear-grass	76	13.75	13	85	15
<i>Maireana trichoptera</i>	hairy-fruit bluebush	53	12.79	9	51	8
<i>Senna artemisioides</i> ssp. <i>petiolaris</i>	flat-stalk senna	47	11.05	8	46	12
<i>Sclerolaena diacantha</i>	grey bindyi	59	8.78	10	71	15
<i>Eremophila glabra</i> ssp. <i>glabra</i>	tar bush	41	5.01	7	54	13
<i>Senna artemisioides</i> nothosp. <i>coriacea</i>	broad-leaf desert senna	41	3.41	7	62	11
<i>Carrichtera annua</i> *	Ward's weed	41	2.52	7	222	16
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	ruby saltbush	53	0.17	9	181	18
<i>Eriochiton sclerolaenoides</i>	woolly-fruit bluebush	41	0.13	7	107	13
<i>Danthonia caespitosa</i>	common wallaby-grass	47	0.01	8	146	16



Figure 8. *Eucalyptus oleosa* Red Mallee +/- *Eucalyptus gracilis* Yorrell +/- *Eucalyptus brachycalyx* Gilja Tree mallee at quadrat HIL00201



Group 8. *Eucalyptus oleosa* Red Mallee Tree mallee over *Eremophila scoparia* Broom Emubush, *Cratystylis conocephala* False Bluebush.

Number of sites in group: 31

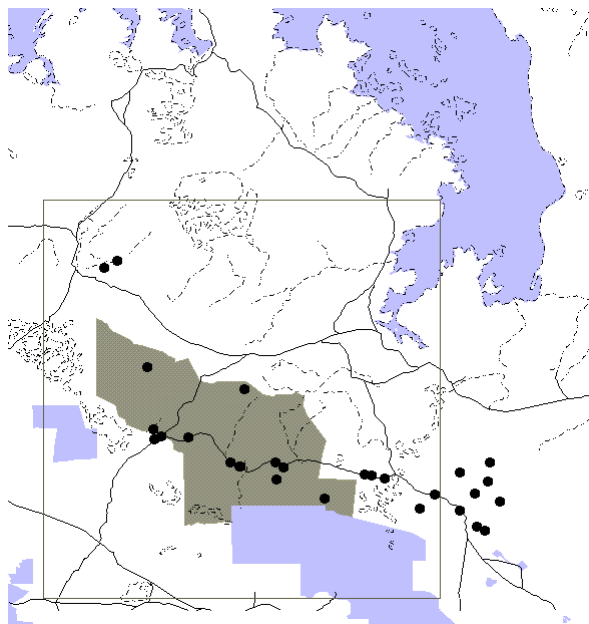
Number of perennial species in group: 117

A Tree mallee group dominated by Red Mallee, it is closely allied to Group 7 but is generally found further north in slightly drier areas. It can be characterised by Bluebush Daisy and *Rhagodia ulicina* Intricate Saltbush.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Eremophila scoparia</i>	broom emubush	65	60.04	20	38	8
<i>Cratystylis conocephala</i>	bluebush daisy	45	59.31	14	21	6
<i>Rhagodia crassifolia</i>	fleshy saltbush	42	53.16	13	20	5
<i>Geijera linearifolia</i>	sheep bush	74	52.36	23	52	8
<i>Eucalyptus oleosa</i>	red mallee	65	49.45	20	43	8
<i>Olearia muelleri</i>	Mueller's daisy-bush	45	34.80	14	30	5
<i>Eremophila glabra</i> ssp. <i>glabra</i>	tar bush	61	28.82	19	54	13
<i>Exocarpos aphyllus</i>	leafless cherry	71	27.46	22	69	12
<i>Rhagodia ulicina</i>	intricate saltbush	42	20.71	13	36	4
<i>Senna artemisioides</i> nothosp. <i>coriacea</i>	broad-leaf desert senna	58	18.40	18	62	11
<i>Maireana pentatropis</i>	erect mallee bluebush	48	12.74	15	56	10
<i>Sclerolaena diacantha</i>	grey bindyi	52	8.64	16	71	15
<i>Zygophyllum aurantiacum</i>	shrubby twinleaf	42	6.57	13	59	9
<i>Stipa elegantissima</i>	feather spear-grass	52	4.76	16	85	15
<i>Sclerolaena patentiscuspis</i>	spear-fruit bindyi	42	0.70	13	94	10
<i>Maireana sedifolia</i>	bluebush	52	0.38	16	125	9
<i>Rhagodia parabolica</i>	mealy saltbush	45	0.10	14	117	13
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	ruby saltbush	68	0.06	21	181	18
<i>Atriplex stipitata</i>	bitter saltbush	45	0.02	14	133	13



Figure 9. *Eucalyptus oleosa* Red Mallee Tree mallee over *Eremophila scoparia* Broom Emubush at quadrat THU01101



Group 9. *Callitris preisii* Southern Cypress Pine Low open woodland +/- *Callitris glaucophylla* White Cypress Pine +/- *Callitris verrucosa* Mallee Cypress Pine.

Number of sites in group: 8

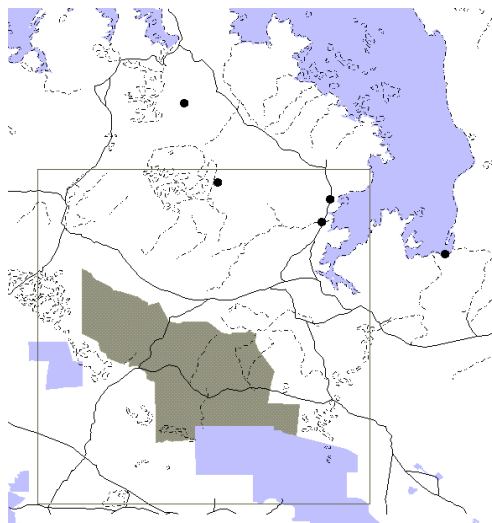
Number of perennial species in group: 37

A poorly defined floristic group which tended to be confined to sandy substrates often associated with lunette dune systems. Some quadrats, such as that illustrated supported scattered trees of *Callitris preisii* Southern Cypress Pine while others contained only *Alectryon oleifolius* ssp. *canescens* Bullock Bush.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Hakea leuconota</i> ssp. <i>leuconota</i>	silver needlewood	62	106.89	5	17	7
<i>Maireana pyramidata</i>	black bluebush	100	34.13	8	104	8
<i>Alectryon oleifolius</i> ssp. <i>canescens</i>	bullock bush	100	25.28	8	128	13
<i>Acacia ligulata</i>	umbrella bush	62	23.81	5	60	12
<i>Lycium australe</i>	Australian boxthorn	50	10.77	4	71	12
<i>Atriplex vesicaria</i>	Bladder Saltbush	62	5.35	5	147	13
<i>Sclerolaena obliquicuspis</i>	oblique-spined bindyi	50	3.87	4	123	11
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	ruby saltbush	62	3.24	5	181	18



Figure 10. *Callitris preisii* Southern Cypress Pine Low open woodland at quadrat KOL00401



Group 10. *Eucalyptus concinna* Victoria Desert Mallee *Duboisia hopwoodii* Pituri Tall open shrubland.

Number of sites in group: 7

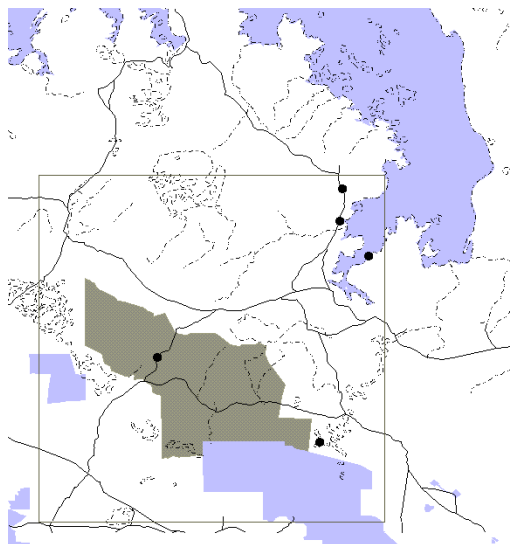
Number of perennial species in group: 28

Generally associated with the dune systems of the Yellabinna area, the quadrats here are near the south eastern limit of this association.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Eucalyptus concinna</i>	Victoria Desert mallee	57	260.84	4	7	4
<i>Duboisia hopwoodii</i>	pituri	43	205.70	3	5	3
<i>Grammosolen truncatus</i>	shrubby ray-flower	43	170.43	3	6	2
<i>Acacia tetragonophylla</i>	dead finish	43	33.43	3	27	7
<i>Acacia aneura</i>	mulga	43	30.74	3	29	7
<i>Acacia ligulata</i>	umbrella bush	57	23.87	4	60	12
<i>Dodonaea viscosa ssp. angustissima</i>	narrow-leaf hop-bush	71	19.15	5	104	16
<i>Pittosporum phylliraeoides</i> var. <i>microcarpa</i>	native apricot	43	10.60	3	66	13
<i>Acacia papyrocarpa</i>	western myall	43	3.47	3	126	11
<i>Alectryon oleifolius ssp. canescens</i>	bullock bush	43	3.36	3	128	13



Figure 11. *Eucalyptus concinna* Victoria Desert Mallee *Duboisia hopwoodii* Pituri Tall open shrubland PMB3271



Group 11. *Acacia anuera* Mulga Very low open woodland over *Ptilotus obovatus* Silver Mulla Mulla.

Number of sites in group: 26

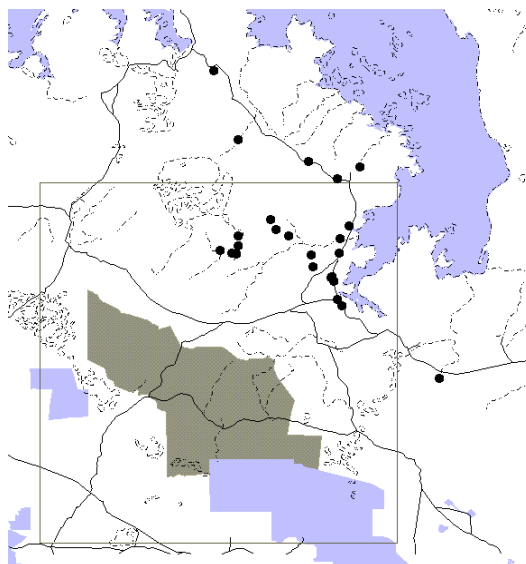
Number of perennial species in group: 77

Confined to rocky hill slopes in the northern more arid parts of the study area, it grades into Group 17 on hills to the south-west where *Triodia irritans* Spinifex is a common part of the understorey.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Acacia aneura</i>	mulga	69	184.44	18	29	7
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	silver mulla mulla	96	141.76	25	65	12
<i>Solanum ellipticum</i>	velvet potato-bush	50	119.18	13	23	6
<i>Acacia tetragonophylla</i>	dead finish	54	115.65	14	27	7
<i>Acacia tarculensis</i>	steel bush	42	78.03	11	24	5
<i>Maireana sedifolia</i>	bluebush	46	4.96	12	125	9
<i>Carrichtera annua</i> *	Ward's weed	69	3.93	18	222	16
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	ruby saltbush	42	0.34	11	181	18



Figure 12. *Acacia anuera* Mulga Very low open woodland over *Ptilotus obovatus* Silver Mulla Mulla at quadrat KOW00101



Group 12. *Maireana pyramidata* Blackbush +/- *Atriplex vesicaria* Bladder Saltbush Low shrubland.

Number of sites in group: 35

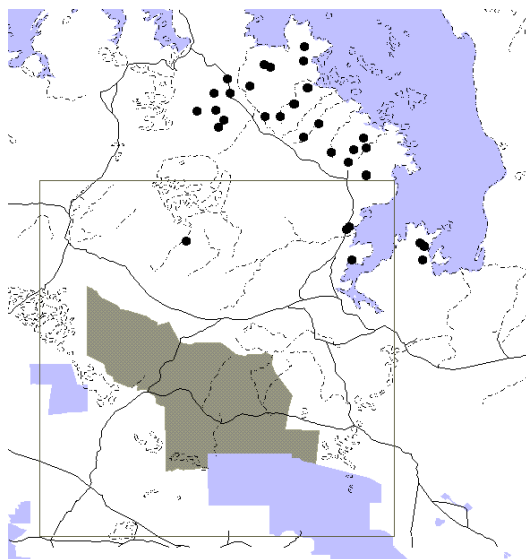
Number of perennial species in group: 45

A Low shrubland confined to the loamy floodout plains leading into Lake Gairdner with a single quadrat on a drainage line entering Lake Acraman. The best associated character species are *Sclerolaena lanicuspis* Spinach Bindyi, *Sclerolaena ventricosa* Salt Bindyi and *Maireana astrotricha* Low Bluebush.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Maireana astrotricha</i>	low bluebush	83	390.85	29	35	5
<i>Sclerolaena lanicuspis</i>	spinach bindyi	54	255.20	19	23	3
<i>Sclerolaena ventricosa</i>	salt bindyi	43	170.43	15	21	3
<i>Maireana triptera</i>	three-wing bluebush	40	113.63	14	26	8
<i>Maireana pyramidata</i>	black bluebush	86	106.57	30	104	8
<i>Atriplex vesicaria</i>	Bladder Saltbush	94	79.71	33	147	13
<i>Sclerolaena obliquicuspis</i>	oblique-spined bindyi	63	35.81	22	123	11
<i>Maireana georgei</i>	satiny bluebush	43	35.21	15	68	7
<i>Maireana sedifolia</i>	bluebush	49	15.73	17	125	9



Figure 13. *Maireana pyramidata* Blackbush +/- *Atriplex vesicaria* Bladder Saltbush Low shrubland at quadrat KOW00601



Group 13. *Eucalyptus brachycalyx* Gilja +/- *Eucalyptus socialis* Beaked Red Mallee Low woodland.

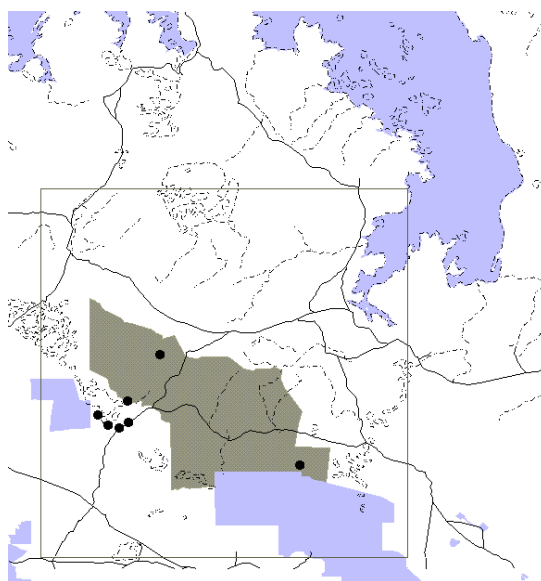
Number of sites in group: 7

Number of perennial species in group: 44

A Low woodland confined to wide sandy or sandy loam interdunes in the extreme south of the study area.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Stipa trichophylla</i>		71	131.61	5	12	6
<i>Solanum coactiliferum</i>	tomato-bush	57	82.69	4	12	7
<i>Rhagodia preissii</i> ssp. <i>preissii</i>	mallee saltbush	71	40.42	5	34	9
<i>Thysanotus patersonii</i>	twining fringe-lily	71	36.41	5	37	7
<i>Lomandra leucocephala</i> ssp. <i>robusta</i>	woolly mat-rush	43	34.95	3	15	2
<i>Eucalyptus brachycalyx</i>	gilja	57	32.63	4	27	7
<i>Lomandra collina</i>	sand mat-rush	43	32.42	3	16	4
<i>Chrysocephalum apiculatum</i>	common everlasting	43	16.23	3	28	9
<i>Eucalyptus socialis</i>	beaked red mallee	57	13.27	4	53	9
<i>Acacia ligulata</i>	umbrella bush	57	10.99	4	60	12
<i>Eucalyptus dumosa</i>	white mallee	43	8.53	3	44	11
<i>Danthonia caespitosa</i>	common wallaby-grass	86	6.89	6	146	16
<i>Stipa elegantissima</i>	feather spear-grass	57	6.03	4	85	15
<i>Dodonaea viscosa</i> ssp. <i>angustissima</i>	narrow-leaf hop-bush	57	3.98	4	104	16

No Photo Available



Group 14. *Melaleuca uncinata* Mallee Broombush Open shrubland over *Triodia irritans* Spinifex +/- an overstory of *Eucalyptus dumosa* White Mallee.

Number of sites in group: 9

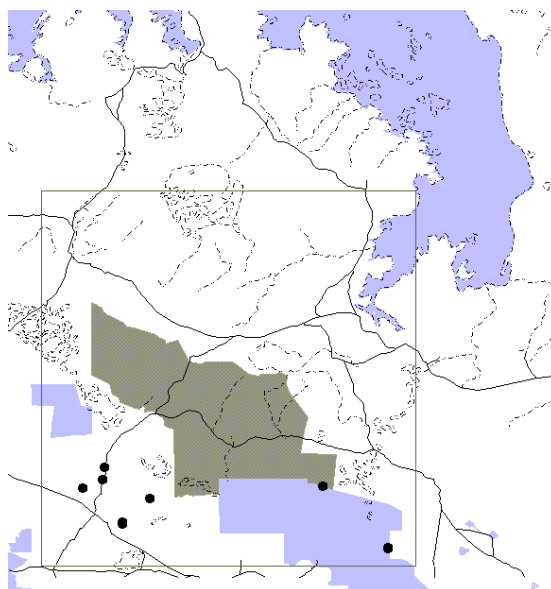
Number of perennial species in group: 68

Found on dune systems, often in areas of limestone outcrop on sandy or sandy loam soils it is an open shrubland of Mallee Broombush with patches of *Melaleuca lanceolata* ssp. *lanceolata* Dryland Tea-tree, and *Eucalyptus dumosa* White Mallee.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Melaleuca acuminata</i>	mallee honey-myrtle	56	112.69	5	7	3
<i>Comesperma volubile</i>	love creeper	67	61.12	6	17	6
<i>Thysanotus baueri</i>	mallee fringe-lily	78	59.74	7	23	9
<i>Dodonaea hexandra</i>	horned hop-bush	44	47.17	4	10	6
<i>Westringia rigida</i>	stiff westringia	89	46.02	8	36	8
<i>Gahnia lanigera</i>	black grass saw-sedge	56	44.06	5	16	4
<i>Melaleuca lanceolata</i> ssp. <i>lanceolata</i>	dryland tea-tree	78	36.42	7	34	10
<i>Melaleuca uncinata</i>	broombush	100	27.93	9	63	9
<i>Eucalyptus dumosa</i>	white mallee	78	25.48	7	44	11
<i>Eremophila glabra</i> ssp. <i>glabra</i>	tar bush	78	18.70	7	54	13
<i>Eutaxia microphylla</i> var. <i>microphylla</i>	common eutaxia	56	17.73	5	32	7
<i>Triodia irritans</i>	spinifex	89	14.42	8	78	14
<i>Thysanotus patersonii</i>	twining fringe-lily	56	14.25	5	37	7
<i>Dianella revoluta</i>	black-anther flax-lily	44	7.55	4	38	8
<i>Sclerolaena diacantha</i>	grey bindyi	44	1.80	4	71	15
<i>Stipa elegantissima</i>	feather spear-grass	44	0.93	4	85	15
<i>Danthonia caespitosa</i>	common wallaby-grass	67	0.71	6	146	16



Figure 14. *Melaleuca uncinata* Mallee Broombush Open shrubland over *Triodia irritans* Spinifex +/- an overstory of *Eucalyptus dumosa* White Mallee at quadrat MIN00301.



Group 15. *Eucalyptus incrassata* Ridge-Fruited Mallee +/- *Eucalyptus socialis* Red Mallee Open mallee over +/- *Melaleuca uncinata* Mallee Broombush, *Leptospermum coriaceum* Dune Tea-tree, *Calytrix involucrata* Cup Fringe-myrtle and/or *Triodia lanata* Woolly Spinifex.

Number of sites in group: 19

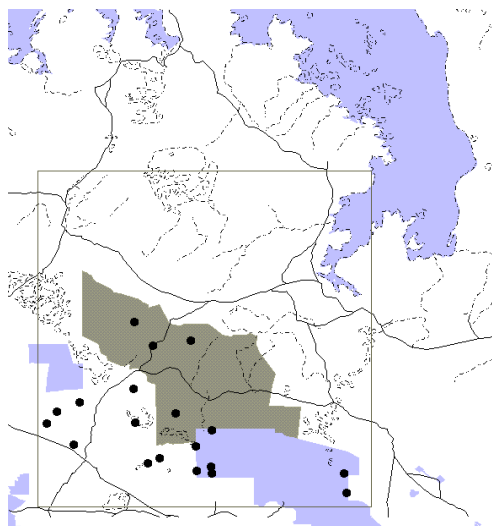
Number of perennial species in group: 87

Confined to dune crests in the extensive dune systems in the south of the study area, *Hakea francisiana* Bottle-brush Hakea and *Leptospermum coriaceum* Dune Tea-tree are good character species.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Eucalyptus incrassata</i>	ridge-fruited mallee	84	189.24	16	20	3
<i>Triodia lanata</i>	woolly spinifex	74	171.22	14	17	4
<i>Leptospermum coriaceum</i>	dune tea-tree	63	153.66	12	14	2
<i>Hakea francisiana</i>	bottle-brush hakea	53	152.51	10	10	1
<i>Lomandra leucocephala</i> ssp. <i>robusta</i>	woolly mat-rush	63	141.93	12	15	2
<i>Leucopogon cordifolius</i>	heart-leaf beard-heath	63	107.41	12	19	5
<i>Schoenus subaphyllus</i>	desert bog-rush	42	106.79	8	9	2
<i>Stipa hemipogon</i>	half-beard spear-grass	53	88.39	10	16	5
<i>Callitris verrucosa</i>	scrub cypress pine	47	82.29	9	14	6
<i>Dianella revoluta</i>	black-anther flax-lily	74	62.89	14	38	8
<i>Lomandra collina</i>	sand mat-rush	42	53.70	8	16	4
<i>Lepidosperma viscidum</i>	sticky sword-sedge	47	43.89	9	23	6
<i>Melaleuca uncinata</i>	broombush	79	35.07	15	63	9
<i>Calytrix involucrata</i>	cup fringe-myrtle	47	33.37	9	28	5
<i>Eucalyptus socialis</i>	beaked red mallee	63	25.80	12	53	9
<i>Thysanotus patersonii</i>	twining fringe-lily	47	21.79	9	37	7



Figure 15. *Eucalyptus incrassata* Ridge-Fruited Mallee +/- *Eucalyptus socialis* Red Mallee Open mallee at quadrat SCR00601



Group 16. *Triodia irritans* Spinifex Hummock grassland.

Number of sites in group: 26

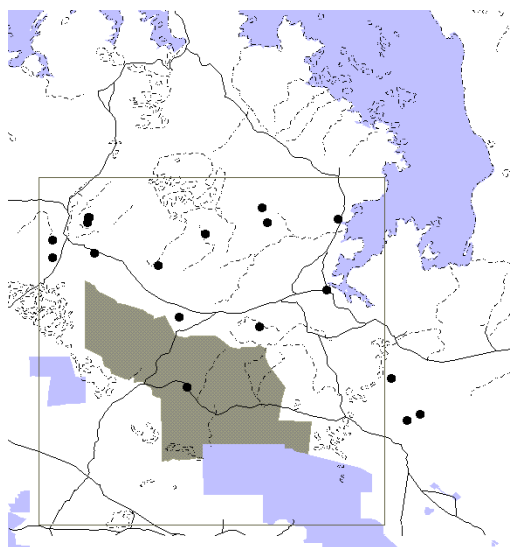
Number of perennial species in group: 145

The typical vegetation association of stony skeletal soils of the rounded hills of the Gawler Ranges. Characteristic species include *Cheilanthes lasiophylla* Woolly Cloak Fern, *Cheilanthes sieberi* ssp. *sieberi* Narrow Rock Fern and *Dampiera dysantha* Shrubby Dampiera. The most floristically diverse association in the study area.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Gonocarpus elatus</i>	hill raspwort	69	86.93	18	21	3
<i>Cheilanthes lasiophylla</i>	woolly cloak-fern	62	70.32	16	20	4
<i>Dampiera dysantha</i>	shrubby dampiera	42	65.13	11	11	1
<i>Cheilanthes sieberi</i> ssp. <i>sieberi</i>	narrow rock-fern	54	64.03	14	17	3
<i>Eutaxia microphylla</i> var. <i>microphylla</i>	common eutaxia	77	61.52	20	32	7
<i>Acacia continua</i>	thorn wattle	85	57.72	22	39	5
<i>Scaevola humilis</i>	inland fanflower	62	57.69	16	23	6
<i>Euphorbia tannensis</i> ssp. <i>eremophila</i>	desert spurge	58	43.34	15	25	6
<i>Solanum petrophilum</i>	rock nightshade	77	39.61	20	42	9
<i>Chrysocephalum apiculatum</i>	common everlasting	54	30.14	14	28	9
<i>Cryptandra amara</i> var. <i>floribunda</i>	pretty cryptandra	58	28.90	15	32	7
<i>Olearia decurrens</i>	winged daisy-bush	77	27.67	20	51	6
<i>Acacia beckleri</i>	Beckler's rock wattle	50	23.14	13	29	6
<i>Glischrocaryon flavescens</i>	yellow pennants	46	22.50	12	26	6
<i>Ptilotus spathulatus</i>	pussy-tails	62	20.89	16	42	8
<i>Eucalyptus socialis</i>	beaked red mallee	65	15.29	17	53	9
<i>Triodia irritans</i>	spinifex	77	9.97	20	78	14
<i>Dodonaea viscosa</i> ssp. <i>angustissima</i>	narrow-leaf hop-bush	85	5.61	22	104	16
<i>Stipa scabra</i> ssp. <i>scabra</i>	rough spear-grass	42	5.08	11	44	10
<i>Melaleuca uncinata</i>	broombush	50	2.99	13	63	9
<i>Carrichtera annua</i> *	Ward's weed	85	1.48	22	222	16
<i>Stipa nitida</i>	Balcarra spear-grass	42	0.95	11	64	14
<i>Rhagodia parabolica</i>	mealy saltbush	58	0.00	15	117	13



Figure 16. *Triodia irritans* Spinifex Hummock grassland at quadrat PAN00401



Group 17. *Acacia tarculensis* Tall open shrubland +/- *Triodia irritans* Spinifex.

Number of sites in group: 21

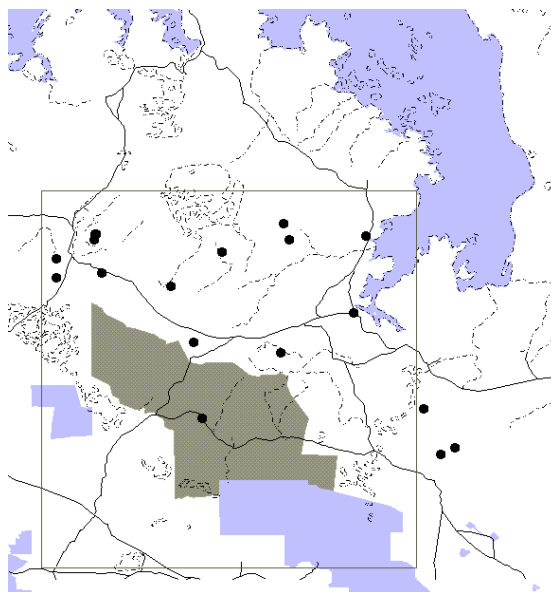
Number of perennial species in group: 62

A variant of Group 16, also found on hills, tending to be on the drier more north-easterly parts of the study area. It also grades into the Mulga Very low open woodland of Group 11.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Dodonaea lobulata</i>	lobed-leaf hop-bush	67	208.57	14	25	6
<i>Triodia irritans</i>	spinifex	86	91.49	18	78	14
<i>Dodonaea viscosa</i> ssp. <i>angustissima</i>	narrow-leaf hop-bush	43	8.88	9	104	16



Figure 17. *Acacia tarculensis* Tall open shrubland +/- *Triodia irritans* Spinifex at quadrat HIL00401



Group 18. *Melaleuca uncinata* Mallee BroombushOpen shrubland.

Number of sites in group: 9

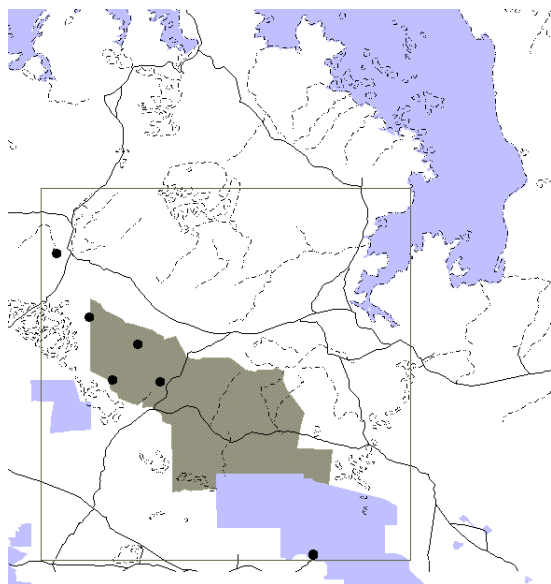
Number of perennial species in group: 53

A vegetation community on the sandy loams adjacent to rocky hills in the areas of higher rainfall of the south-west of the study area. It has considerable variation in species composition between the small number of quadrats sampled in this study.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Acacia beckleri</i>	Beckler's rock wattle	78	84.10	7	29	6
<i>Melaleuca uncinata</i>	broombush	100	57.36	9	63	9
<i>Glischrocaryon flavescens</i>	yellow pennants	56	45.99	5	26	6
<i>Calytrix involucrata</i>	cup fringe-myrtle	56	42.06	5	28	5
<i>Beyeria lechenaultii</i>	pale turpentine bush	44	22.35	4	31	10
<i>Dodonaea viscosa ssp. angustissima</i>	narrow-leaf hop-bush	89	21.35	8	104	16
<i>Acacia continua</i>	thorn wattle	44	16.37	4	39	5
<i>Triodia irritans</i>	Spinifex	56	9.86	5	78	14



Figure 18. *Melaleuca uncinata* Mallee BroombushOpen shrubland at quadrat WUD00901



Group 19. *Olearia decurrens* Winged Daisy-bush *Dodonaea viscosa* ssp. *angustissima* Narrow-leaf Hop-bush *Melaleuca uncinata* Mallee Broombush Open shrubland +/- an overstory of *Eucalyptus porosa* Mallee Box +/- *Eucalyptus dumosa* White Mallee.

Number of sites in group: 23

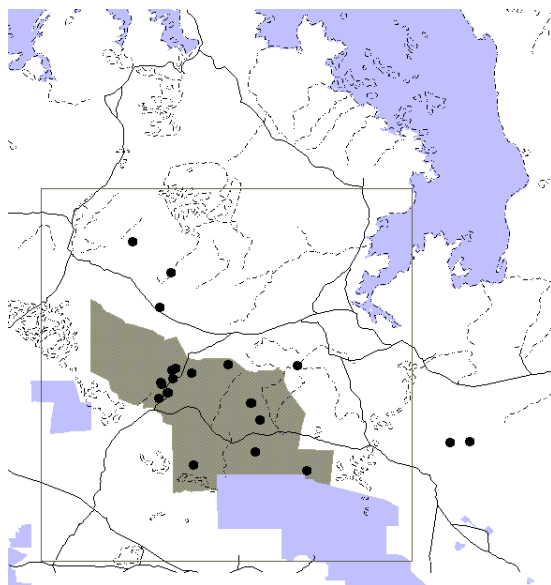
Number of perennial species in group: 116

Found on the loams and shallow skeletal soils of the lower slopes of hills in the wetter more south-westerly parts of the study area. It is essentially a shrubland with emergent patches of *Eucalyptus porosa* Mallee Box and White Mallee.

SPECIES	Common Name	% site freq.	Signif. to group (chi ²)	# sites in group	# sites in all groups	Presence in all groups
<i>Olearia decurrens</i>	winged daisy-bush	65	44.53	15	51	6
<i>Dodonaea viscosa</i> ssp. <i>angustissima</i>	narrow-leaf hop-bush	96	37.72	22	104	16
<i>Oxalis perennans</i>	native sorrel	57	36.28	13	46	8
<i>Eucalyptus dumosa</i>	white mallee	48	25.21	11	44	11
<i>Eucalyptus porosa</i>	mallee box	52	22.48	12	54	9
<i>Pittosporum phylliraeoides</i> var. <i>microcarpa</i>	native apricot	43	8.59	10	66	13
<i>Rhagodia parabolica</i>	mealy saltbush	57	4.60	13	117	13
<i>Alectryon oleifolius</i> ssp. <i>canescens</i>	bullock bush	52	2.11	12	128	13
<i>Carrichtera annua</i> *	Ward's weed	65	0.12	15	222	16



Figure 19. *Olearia decurrens* Winged Daisy-bush *Dodonaea viscosa* ssp. *angustissima* Narrow-leaf Hop-bush *Melaleuca uncinata* Mallee Broombush Open shrubland at quadrat PAN01201



A Vegetation Map of the Western Gawler Ranges, South Australia

VEGETATION MAPPING

Vegetation maps covering the whole study area and a larger scale map covering the Gawler Ranges National Park are included in the pocket at the back of this report.

On these maps, an uninterrupted block of colour represents a homogeneous area where one community is relatively dominant. If a homogeneous vegetation community was deemed too small to be mapped individually, then it was mapped as part of a mosaic. Indeed, it became necessary to map the 20 distinct vegetation communities as part of a mosaic on numerous occasions. In the case of a mosaic, cross-hatching and numbers are printed on top of the block of colour. The cross-hatching confirms the area is a mosaic of vegetation communities. The numbers (eg: 12/13/5) represent the vegetation communities constituting the mosaic. These are listed in the order of most to least dominant and can be cross-referenced to the 'vegetation communities' key for details.

KEY OF THE VEGETATION MAPPING

DRAINAGE LINES, FLOODOUTS, LAKES AND RUN-ON LANDFORMS

1: *Muehlenbeckia florulenta* Lignum Shrubland.

Confined to a small area of freshwater ephemeral swamps to the south-west of Lake Gairdner it was not specifically sampled as a quadrat.

2: *Halosarcia indica* ssp. *leiostachya* Brown-head Samphire Low shrubland.

Found fringing salt lakes and depressions with sandy clay or sandy clay loam soils it is represented by floristic group 1.

3: *Eucalyptus porosa* Mallee Box Open woodland.

Associated with drainage lines in the valleys of the southern ranges it is part of floristic group 19.

4: *Maireana pyramidata* Blackbush +/- *Atriplex vesicaria* Bladder Saltbush Low shrubland.

Confined to the loamy floodout plains leading into Lake Gairdner it is represented by floristic group 12.

5: *Acacia ligulata* Umbrella Bush Tall closed shrubland +/- *Dodonaea viscosa* ssp. *angustissima*

Narrow-leaf Hop-bush +/- *Alectryon oleifolius* Bullock Bush.

A single drainage channel flowing into Lake Gairdner from the west supported this vegetation community. The single quadrat sampling it (KOW00402) was included in floristic group 9. This community also occurred on a lunette on the eastern shore of Lake Acraman.

PLAINS AND RISES

6: *Stipa* spp. Open tussock grassland +/- an overstory of *Alectryon oleifolius* Bullock Bush.

Patchily distributed through the southern areas in broad valleys it is represented by floristic group 6.

7: *Atriplex vesicaria* Bladder Saltbush +/- *Maireana sedifolia* Pearl Bluebush Low shrubland +/- an overstory of *Alectryon oleifolius* Bullock Bush.

Found in broad valleys and the northern plains, the relative dominance of Bladder Saltbush and Pearl Bluebush characterises this and community 8. They are both included in floristic group 2.

8: *Maireana sedifolia* Pearl Bluebush +/- *Atriplex vesicaria* Bladder Saltbush Low shrubland +/- an overstory of *Alectryon oleifolius* Bullock Bush.

Found in broad valleys and the northern plains, the relative dominance of Bladder Saltbush and Pearl Bluebush characterises this and community 7. They are both included in floristic group 2.

9: *Carrichtera annua* Wards Weed Herbland +/- *Stipa* spp. +/- *Sclerolaena* spp. +/- an overstory of *Alectryon oleifolius* Bullock Bush.

This is an artifact of past grazing of communities 7 and 8 and is found in the southern parts of the study area where more reliable rainfall allowed heavier stocking rates in the past. It is represented by floristic group 4.

10: *Acacia papyrocarpa* Western Myall Low woodland over +/- *Atriplex vesicaria* Bladder Saltbush and/or *Maireana sedifolia* Pearl Bluebush.

A widespread community of the northern plains it is represented by floristic group 3.

11: *Eucalyptus odorata* Peppermint Box Mallee +/- *Eucalyptus* spp.

Confined to the lower slopes of Mt Fairview (PAN02001), this is probably the northern limit for this community on Eyre Peninsula.

SAND DUNES AND SAND PLAINS

12: *Eucalyptus oleosa* Giant Mallee +/- *Eucalyptus gracilis* Yorrell +/- *Eucalyptus brachycalyx* Gilja over *Atriplex vesicaria* Bladder Saltbush +/- *Cratystylis conocephala* False Bluebush.

This community occurs on clay loams and sandy clay loams of the plains in the most southern Gawler Ranges. It is represented by floristic groups 7 and 8.

13: *Eucalyptus incrassata* Ridge-Fruited Mallee +/- *Eucalyptus socialis* Red Mallee over +/- *Melaleuca uncinata* Mallee Broombush, *Leptospermum coriaceum* Dune Tea-tree, *Calytrix involucata* Cup Fringe-myrtle and/or *Triodia irritans* Spinifex.

Confined to the extensive dune systems in the south of the study area, it includes floristic group 15.

14: *Callitris preisii* Southern Cypress Pine Low open woodland +/- *Callitris glaucophylla* White Cypress Pine +/- *Callitris verrucosa* Mallee Cypress Pine .

Predominantly found on the lunette dunes and islands of Lake Acraman, there is a related community on sandy soils of the Pine Lodge area. It is represented in part by floristic group 9.

HILLS AND RANGES

15: *Casuarina pauper* Black Oak Low open woodland.

A Low open woodland of the hill footslopes where limestone either outcrops or is close to the surface, it is represented by floristic group 5.

16: *Acacia anuera* Mulga Very low open woodland over *Ptilotus obovatus* Silver Mulla Mulla.

Confined to rocky hill slopes in the northern more arid parts of the study area, it is represented by floristic group 11.

17: *Triodia irritans* Spinifex Hummock grassland.

Widespread on the hills of the Gawler Ranges, it is represented by floristic groups 16, 17 and 18

18: *Acacia tarculensis* Tall open shrubland +/- *Triodia irritans* Spinifex.

Found on hills in the drier northern parts of the ranges it is represented by floristic groups 11 and 17.

19: *Melaleuca uncinata* Mallee Broombush Open shrubland over *Triodia irritans* Spinifex +/- an overstory of *Eucalyptus socialis* Red Mallee. Found on hills in the wetter southern part of the ranges, it is represented by floristic groups 18 and 19.

20: *Allocasuarina verticillata* Drooping Sheoak Very low open woodland.

Not sampled as a quadrat. It is confined to south-facing hill slopes on Paney and Scrubby Peak.

Clay pans or salt lakes or water bodies are indicated in blue on the vegetation maps while agricultural, cleared or severely degraded areas are shown in pink. They may contain small patches of remnant natural vegetation below the level of resolution of this 1:100 000 scale vegetation mapping.

The pale yellow areas to the east of the mapping represent 'Vegetation associations occurring outside of study area'.

For much of the mapping of this topographically complex area the map is cross hatched indicating a mosaic of two or more vegetation associations. The components of the mosaic, in order of occurrence are indicated by the numbers on the map (refer to above key eg: 7/11/13).

The green line work to the south of the mapping represents areas being mapped at 1:50 000 scale as part of the agricultural regions vegetation mapping program. The Gawler Ranges mapping has been edge-matched and joined to this mapping where possible. However, the recognition of extra vegetation communities at this more detailed scale has meant some linework does not join across the two study areas.

A Vegetation Map of the Western Gawler Ranges, South Australia

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A Vegetation Map of the Western Gawler Ranges, South Australia

Appendix I

SITE LOCATIONS, SURVEY DATES, FLORISTIC ANALYSIS GROUP NUMBERS AND PHYSICAL DESCRIPTIONS

Survey #	SITE ID	VISIT DATE	ZONE	EASTING	NORTHING	LAND FORM PATTERN	LAND UNIT	SURFACE SOIL TEXTURE
1	HIL00101	23-Oct-85	53	510675	6438497		PLAIN	medium clay
1	HIL00102	23-Oct-85	53	511329	6438222		PLAIN	sandy clay loam
1	HIL00103	23-Oct-85	53	511429	6437772		hill slope	loam
1	HIL00201	26-Oct-85	53	514758	6440847		RIDGE	sand
1	HIL00202	24-Oct-85	53	514429	6440847		hill slope	sandy clay loam
1	HIL00301	24-Oct-85	53	517901	6442897		PLAIN	loam
1	HIL00401	25-Oct-85	53	523122	6445863		hill slope	sandy clay loam
1	HIL00402	25-Oct-85	53	522629	6446172		RIDGE	sandy clay loam
1	HIL00501	25-Oct-85	53	522881	6444081		RIDGE	sand
1	HIL00601	01-Aug-00	53	526798	6440361	HILLS	hill slope	sandy clay loam
1	HIL00701	01-Aug-00	53	523681	6444078	HILLS	hill slope	loam
1	HIL00702	01-Aug-00	53	523804	6444145	HILLS	hill slope	loam
1	KOL00101	18-Oct-85	53	622001	6422040		hill slope	sandy clay loam
1	KOL00102	18-Oct-85	53	622129	6422172		hill footslope	sandy clay loam
1	KOL00201	18-Oct-85	53	619465	6424492		PLAIN	loam
1	KOL00301	17-Oct-85	53	616999	6428305		PLAIN	sandy clay loam
1	KOL00401	18-Oct-85	53	616224	6431129		DUNE	sand
1	KOL00402	18-Oct-85	53	616129	6430672		PLAIN	sandy clay loam
1	KOL00403	18-Oct-85	53	616229	6430972		swamp	sandy clay loam
1	KOL00501	17-Oct-85	53	611323	6429638		RIDGE	sandy clay loam
1	KOW00101	18-Oct-85	53	572581	6433553		hill slope	sandy clay loam
1	KOW00102	18-Oct-85	53	572229	6433553		hill crest	sandy clay loam
1	KOW00103	18-Oct-85	53	572829	6433172		hill footslope	sandy clay loam
1	KOW00201	18-Oct-85	53	572555	6437382		PLAIN	sandy clay loam
1	KOW00202	18-Oct-85	53	571929	6437382		hill slope	sandy clay loam

1	KOW00203	18-Oct-85	53	571429	6437382		other	sandy clay loam
1	KOW00301	19-Oct-85	53	566629	6442651		PLAIN	loam
1	KOW00302	19-Oct-85	53	566129	6443272		hill slope	sandy clay loam
1	KOW00401	17-Oct-85	53	580788	6442042		PLAIN	sandy clay loam
1	KOW00402	17-Oct-85	53	581129	6442172		stream channel	sand
1	KOW00501	17-Oct-85	53	577570	6430639		hill slope	sandy clay loam
1	KOW00502	17-Oct-85	53	577129	6430172		hill footslope	sandy clay loam
1	KOW00601	01-Aug-00	53	582973	6445200	FLOODPLAIN	DEPRESSION	loamy sand
1	KOW00701	01-Aug-00	53	579471	6437910	HILLS	hill slope	clay loam
1	PAN00101	08-Oct-85	53	540675	6392714		hill slope	sandy clay loam
1	PAN00102	08-Oct-85	53	540675	6392172		PLAIN	medium clay
1	PAN00201	09-Oct-85	53	542692	6389293		PLAIN	medium clay
1	PAN00301	10-Oct-85	53	546914	6385247		RIDGE	sandy clay loam
1	PAN00302	08-Oct-85	53	547004	6385247		hill slope	sandy clay loam
1	PAN00401	10-Oct-85	53	558326	6394511		hill slope	medium clay
1	PAN00402	10-Oct-85	53	558629	6394511		PLAIN	sandy clay loam
1	PAN00501	11-Oct-85	53	555459	6397342		hill slope	medium clay
1	PAN00502	11-Oct-85	53	555459	6397422		hill footslope	sandy clay loam
1	PAN00601	01-Aug-00	53	558035	6385878	PLAIN	PLAIN	heavy clay
1	PAN00701	01-Aug-00	53	538047	6375148	PLAIN	saltlake	sandy loam
1	PAN00801	01-Aug-00	53	538907	6377114	HILLS	hill slope	sandy clay loam
1	PAN00901	01-Aug-00	53	539170	6379356	DUNEFIELD	DUNE	sand
1	PAN01001	01-Aug-00	53	540169	6384178	PLAIN	PLAIN	light clay
1	PAN01101	01-Aug-00	53	553726	6379245	PLAIN	PLAIN	sandy clay loam
1	PAN01201	01-Aug-00	53	554702	6381007	HILLS	hill slope	sandy clay loam
1	PAN01301	01-Aug-00	53	556255	6382705	PLAIN	PLAIN	sandy clay loam
1	PAN01401	01-Aug-00	53	560101	6387085	HILLS	hill slope	sandy clay loam
1	PAN01501	01-Aug-00	53	556051	6390652	HILLS	hill slope	sandy clay loam
1	PAN01601	01-Aug-00	53	553030	6390403	PLAIN	PLAIN	sandy clay loam
1	PAN01701	01-Aug-00	53	551474	6388047	HILLS	hill slope	sandy clay loam
1	PAN01801	01-Aug-00	53	553921	6395875	HILLS	hill slope	loam
1	PAN01901	01-Aug-00	53	548108	6407066	HILLS	hill footslope	sandy loam
1	PAN01902	01-Aug-00	53	547971	6407265	HILLS	hill slope	sandy loam
1	PAN01903	01-Aug-00	53	547867	6407266	HILLS	hill slope	loam
1	PAN02001	01-Aug-00	53	553664	6395684	HILLS	hill footslope	clay loam
1	PIN00201	16-Oct-85	53	530933	6401581		hill footslope	sandy clay loam
1	PIN00202	16-Oct-85	53	530429	6401581		hill slope	sandy clay loam
1	PIN00301	15-Oct-85	53	532793	6401978		DUNE	sand

1	PIN00401	15-Oct-85	53	533797	6403292		PLAIN	sand
1	PIN00402	15-Oct-85	53	534229	6403292		PLAIN	sand
1	PIN00501	13-Oct-85	53	533791	6405718		hill slope	sandy clay loam
1	PIN00502	13-Oct-85	53	533529	6405718		PLAIN	loam
1	PIN00601	13-Oct-85	53	538439	6404303		hill slope	medium clay
1	PIN00602	13-Oct-85	53	538529	6404872		hill slope	loam
1	PIN00701	01-Aug-00	53	534505	6406267	HILLS	hill slope	light clay
1	SCR00101	18-Oct-85	53	526663	6392974		DUNE	sand
1	SCR00102	18-Oct-85	53	526929	6393272		PLAIN	loam
1	SCR00201	18-Oct-85	53	528417	6393849		PLAIN	sandy clay loam
1	SCR00301	19-Oct-85	53	530052	6397716		hill slope	loam
1	SCR00302	19-Oct-85	53	530329	6397272		PLAIN	loam
1	SCR00401	19-Oct-85	53	530045	6395895		PLAIN	medium clay
1	SCR00402	19-Oct-85	53	530429	6395895		PLAIN	loam
1	SCR00501	20-Oct-85	53	532412	6399046		hill footslope	sand
1	SCR00502	20-Oct-85	53	531829	6399046		hill slope	loam
1	SCR00503	17-Jun-87	53	532529	6399046		PLAIN	loam
1	SCR00601	01-Aug-00	53	527373	6387772	DUNEFIELD	DUNE	loamy sand
1	SCR00701	01-Aug-00	53	527648	6389294	PLAIN	DEPRESSION	clayey sand
1	SCR00801	01-Aug-00	53	521408	6388420	PLAIN	PLAIN	sandy loam
1	YAR00101	22-Oct-85	53	548372	6437874		PLAIN	sandy clay loam
1	YAR00102	22-Oct-85	53	548129	6438672		PLAIN	sandy clay loam
1	YAR00103	22-Oct-85	53	548329	6437372		PLAIN	medium clay
1	YAR00104	22-Oct-85	53	548129	6438972		hill slope	sandy clay loam
1	YAR00201	23-Oct-85	53	551148	6438632		PLAIN	sandy clay loam
1	YAR00202	23-Oct-85	53	551148	6437972		hill slope	sandy clay loam
1	YAR00301	23-Oct-85	53	552853	6440340		hill slope	sandy clay loam
1	YAR00302	23-Oct-85	53	553129	6440340		hill footslope	sandy clay loam
1	YAR00303	23-Oct-85	53	553429	6440340		hill footslope	sandy clay loam
1	YAR00401	22-Oct-85	53	556253	6446259		PLAIN	sandy clay loam
1	YAR00402	22-Oct-85	53	555929	6446372		PLAIN	medium clay
1	YAR00501	23-Oct-85	53	558917	6446991		RIDGE	sandy clay loam
1	YAR00502	23-Oct-85	53	559029	6447272		PLAIN	sandy clay loam
1	YAR00503	23-Jan-85	53	559129	6447072		PLAIN	sandy clay loam
1	YAR00601	01-Aug-00	53	536110	6429887	HILLS	hill slope	clay loam
1	YAR00701	01-Aug-00	53	535265	6429746	HILLS	hill slope	loam
1	YAR00801	01-Aug-00	53	535527	6426934	HILLS	hill slope	loam
1	YAR00901	01-Aug-00	53	533326	6434695	HILLS	hill slope	clay loam

1	YAR01001	01-Aug-00	53	539494	6440890	PLAIN	PLAIN	sandy clay loam
1	YAR01101	01-Aug-00	53	545934	6441804	HILLS	hill slope	clay loam
1	YAR01201	01-Aug-00	53	536333	6446281	PLAIN	PLAIN	sandy clay loam
103	COR00101	15-Oct-98	53	590131	6359086	DUNEFIELD	swale	loamy sand
103	COR00201	15-Oct-98	53	588031	6359110	DUNEFIELD	DUNE	sand
103	COR00301	15-Oct-98	53	586486	6359127	DUNEFIELD	DUNE	sand
103	COR00401	16-Oct-98	53	587167	6354815	DUNEFIELD	swale	sand
103	COR00501	16-Oct-98	53	587180	6353999	DUNEFIELD	DUNE	clayey sand
103	COR00601	16-Oct-98	53	587152	6353567	DUNEFIELD	swale	clayey sand
103	COR00701	16-Oct-98	53	587178	6353135	PLAIN	swale	loamy sand
103	COR00801	16-Oct-98	53	587191	6352801	DUNEFIELD	DUNE	sand
107	CHI00101	21-Sep-99	53	517506	6397594	PLAIN	DEPRESSION	clayey sand
107	CHI00201	21-Sep-99	53	522670	6395815	DUNEFIELD	DUNE	sand
107	CHI00301	24-Sep-99	53	520939	6390332	PLAIN	PLAIN	light medium clay
107	CHI00401	21-Sep-99	53	511902	6389168	PLAIN	PLAIN	light clay
107	CHI00501	21-Sep-99	53	512986	6390673	DUNEFIELD	DUNE	sandy loam
107	CHI00601	24-Sep-99	53	517607	6388533	DUNEFIELD	DUNE	clayey sand
107	CHI00701	20-Sep-99	53	520511	6387683	PLAIN	hill slope	sand
107	CHI00801	24-Sep-99	53	522834	6389486	PLAIN	PLAIN	loamy sand
107	CHI00901	20-Sep-99	53	516028	6377779	PLAIN	hill slope	clayey sand
107	CHI01001	20-Sep-99	53	512123	6383248	DUNEFIELD	DUNE	sand
107	CHI01101	20-Sep-99	53	511135	6381305	DUNEFIELD	interdune corridor	clayey sand
107	CHI01201	22-Sep-99	53	504056	6380630	PLAIN	PLAIN	light clay
107	CHI02C10	22-Sep-99	53	505743	6379999	DUNEFIELD	DUNE	sand
107	MIN00101	23-Sep-99	53	502729	6376201	DUNEFIELD	DUNE	sand
107	MIN00201	20-Sep-99	53	510571	6371764	DUNEFIELD	DUNE	sandy loam
107	MIN00301	20-Sep-99	53	515616	6374225	DUNEFIELD	PLAIN	clay loam
107	MIN00501	20-Sep-99	53	515264	6367375	PLAIN	PLAIN	clay loam
107	MIN00601	22-Sep-99	53	510477	6369267	DUNEFIELD	DUNE	sand
107	MIN00701	22-Sep-99	53	507661	6365461	PLAIN	PLAIN	sandy loam
107	MIN00801	22-Sep-99	53	500278	6359375	DUNEFIELD	PLAIN	clay loam
107	MIN00901	22-Sep-99	53	502543	6362689	DUNEFIELD	DUNE	sandy loam
107	MIN01001	24-Sep-99	53	520610	6361645	DUNEFIELD	swale	sandy clay loam
107	MIN01101	24-Sep-99	53	512645	6352991	DUNEFIELD	swale	sandy loam
107	MIN02B17	24-Sep-99	53	520714	6360921	DUNEFIELD	swale	clayey sand
107	WUD00101	11-Oct-99	53	548363	6372829	PLAIN	FLAT	clay loam
107	WUD00201	11-Oct-99	53	549333	6373869	DUNEFIELD	DUNE	sand
107	WUD00301	12-Oct-99	53	566443	6376233	RISE	hill slope	loam

107	WUD00302	12-Oct-99	53	566802	6376148	PLAIN	PLAIN	clay loam
107	WUD00303	12-Oct-99	53	566561	6376134	RISE	PLAIN	clay loam
107	WUD00401	15-Oct-99	53	549180	6361618	DUNEFIELD	DUNE	loamy sand
107	WUD00501	15-Oct-99	53	549462	6359511	DUNEFIELD	DUNE	sand
107	WUD00601	15-Oct-99	53	549315	6358483	DUNEFIELD	interdune corridor	sandy clay loam
107	WUD00801	15-Oct-99	53	551188	6350189	HILLS	hill footslope	light clay
107	WUD00901	14-Oct-99	53	569155	6350007	LOW HILLS	hill slope	loamy sand
107	WUD00902	14-Oct-99	53	569222	6349798	LOW HILLS	RIDGE	sand
107	YAN00101	13-Oct-99	53	527743	6376324	DUNEFIELD	FLAT	sand
107	YAN00201	11-Oct-99	53	545168	6369106	PLAIN	saltlake	medium clay
107	YAN00301	11-Oct-99	53	544797	6368354	DUNEFIELD	DUNE	sand
107	YAN00501	13-Oct-99	53	534221	6368809	PLAIN	sandy plain	sandy loam
107	YAN00601	13-Oct-99	53	533524	6369031	PLAIN	PLAIN	silt loam
107	YAN00701	13-Oct-99	53	534690	6364700	PLAIN	sandy plain	sand
107	YAN00801	12-Oct-99	53	528933	6369343	PLAIN	PLAIN	silty light clay
107	YAN00901	12-Oct-99	53	531208	6362822	DUNEFIELD	DUNE	sand
107	YAN01001	12-Oct-99	53	545081	6360204	DUNEFIELD	DUNE	sand
107	YAN01101	22-Sep-99	53	534531	6353215	PLAIN	PLAIN	silt loam
107	YAN01201	22-Sep-99	53	525425	6355038	PLAIN	PLAIN	sandy loam
107	YAN01301	12-Oct-99	53	527614	6368642	PLAIN	PLAIN	silty clay loam
PMB	PMB1436	28-Oct-85	53	583229	6417972	PLAIN	FLAT	
PMB	PMB1641	11-May-88	53	557429	6384972	PLAIN	FLAT	loam fine sandy
PMB	PMB1824	07-Jul-87	53	550729	6396272	RISE	FLAT	sandy clay loam
PMB	PMB1825	08-Jul-87	53	548029	6400472	PLAIN	FLAT	loam fine sandy
PMB	PMB1826	08-Jul-87	53	552329	6405272	PLAIN	FLAT	light sandy clay loam
PMB	PMB1827	09-Jul-87	53	536729	6406572	PLAIN	FLAT	silt loam
PMB	PMB1828	09-Jul-87	53	546329	6397472	PLAIN	FLAT	fine sandy loam
PMB	PMB1829	09-Jul-87	53	545729	6396972	PLAIN	FLAT	loam fine sandy
PMB	PMB1830	10-Jul-87	53	540929	6392372	PLAIN	FLAT	fine sandy loam
PMB	PMB1831	10-Jul-87	53	534029	6392672	PLAIN	FLAT	light sandy clay loam
PMB	PMB1832	10-Jul-87	53	534629	6393572	PLAIN	FLAT	sandy loam
PMB	PMB1833	11-Jul-87	53	546629	6400272	PLAIN	FLAT	
PMB	PMB1834	11-Jul-87	53	543829	6406272	PLAIN	FLAT	clay loam
PMB	PMB1835	11-Jul-87	53	547929	6384872	PLAIN	HILL SLOPE	sandy clay loam
PMB	PMB1836	12-Jul-87	53	552229	6386272	PLAIN	FLAT	fine sandy loam
PMB	PMB1837	12-Jul-87	53	555429	6386472	PLAIN	FLAT	loam fine sandy
PMB	PMB1838	12-Jul-87	53	555029	6403872	RISE	HILL SLOPE	sandy clay loam
PMB	PMB1839	12-Jul-87	53	555929	6399972	PLAIN	HILL SLOPE	light sandy clay loam

PMB	PMB1840	13-Jul-87	53	560629	6392872	PLAIN	FLAT	clay loam
PMB	PMB1841	13-Jul-87	53	556629	6397172	PLAIN	HILL SLOPE	light sandy clay loam
PMB	PMB1842	13-Jul-87	53	558229	6392872	PLAIN	FLAT	fine sandy loam
PMB	PMB1843	13-Jul-87	53	559729	6389872	PLAIN	FLAT	light sandy clay loam
PMB	PMB1844	14-Jul-87	53	562029	6381772	PLAIN	FLAT	sandy clay loam
PMB	PMB1845	14-Jul-87	53	562129	6381772	PLAIN	FLAT	sandy clay loam
PMB	PMB1846	14-Jul-87	53	559729	6385272	PLAIN	FLAT	fine sandy clay loam
PMB	PMB2936	17-Jul-92	53	570829	6473472	PLAIN	HILL SLOPE	light sandy clay loam
PMB	PMB2937	17-Jul-92	53	575029	6477472	RISE	HILL SLOPE	
PMB	PMB2938	18-Jul-92	53	568429	6483872	PLAIN	FLAT	
PMB	PMB2939	18-Jul-92	53	568329	6483772	PLAIN	FLAT	
PMB	PMB2940	19-Jul-92	53	572029	6488772	PLAIN	FLAT	
PMB	PMB2941	19-Jul-92	53	571929	6488852	PLAIN	FLAT	
PMB	PMB2942	19-Jul-92	53	571229	6501872	PLAIN	FLAT	
PMB	PMB2943	19-Jul-92	53	570929	6497472	FOOTSLOPE	HILL SLOPE	
PMB	PMB2944	20-Jul-92	53	562329	6495572	PLAIN	FLAT	
PMB	PMB2945	20-Jul-92	53	560529	6496272	PLAIN	FLAT	
PMB	PMB2946	20-Jul-92	53	550729	6491772	PLAIN	FLAT	
PMB	PMB2947	20-Jul-92	53	546629	6494572	PLAIN	FLAT	
PMB	PMB2948	21-Jul-92	53	551429	6487472	PLAIN	FLAT	fine sandy loam
PMB	PMB2949	21-Jul-92	53	547029	6487372	PLAIN	FLAT	
PMB	PMB2950	21-Jul-92	53	542529	6481772	PLAIN	HILL SLOPE	
PMB	PMB2951	21-Jul-92	53	542329	6482072	PLAIN	HILL SLOPE	
PMB	PMB2952	21-Jul-92	53	547629	6481972	PLAIN	FLAT	
PMB	PMB2953	22-Jul-92	53	548229	6476672	PLAIN	FLAT	
PMB	PMB2954	22-Jul-92	53	549629	6478972	PLAIN	FLAT	
PMB	PMB2955	22-Jul-92	53	553029	6473372	PLAIN	FLAT	
PMB	PMB2956	23-Jul-92	53	565429	6465372	RISE	HILL SLOPE	
PMB	PMB2957	23-Jul-92	53	561529	6448472	RISE	HILL SLOPE	
PMB	PMB2958	23-Jul-92	53	562829	6473872	RISE	HILL SLOPE	
PMB	PMB2959	24-Jul-92	53	560729	6479872	PLAIN	HILL SLOPE	
PMB	PMB2960	24-Jul-92	53	564729	6479972	PLAIN	FLAT	
PMB	PMB2961	24-Jul-92	53	556729	6489672	LOW HILLS	HILL SLOPE	
PMB	PMB2962	25-Jul-92	53	571529	6466472	PLAIN	FLAT	
PMB	PMB2963	25-Jul-92	53	578329	6468472	PLAIN	HILL SLOPE	
PMB	PMB2964	25-Jul-92	53	582729	6465372	PLAIN	FLAT	
PMB	PMB2965	25-Jul-92	53	584329	6469272	PLAIN	HILL SLOPE	
PMB	PMB2966	26-Jul-92	53	587529	6469872	PLAIN	FLAT	

PMB	PMB2967	26-Jul-92	53	587029	6472872	PLAIN	FLAT	
PMB	PMB2968	26-Jul-92	53	585229	6464672	PLAIN	HILL SLOPE	
PMB	PMB2969	26-Jul-92	53	587529	6461472	PLAIN	FLAT	
PMB	PMB2970	03-Aug-92	53	514929	6391772	DUNEFIELD	HILL SLOPE	
PMB	PMB2971	04-Aug-92	53	521529	6394572	DUNEFIELD	HILL SLOPE	
PMB	PMB2972	04-Aug-92	53	526329	6395872	PLAIN	FLAT	
PMB	PMB2973	05-Aug-92	53	531029	6409972	PLAIN	FLAT	
PMB	PMB2974	06-Aug-92	53	517329	6398472	SAND PLAIN	FLAT	
PMB	PMB2975	24-Aug-92	53	579029	6460872	PLAIN	FLAT	
PMB	PMB2976	24-Aug-92	53	587529	6461272	PLAIN	FLAT	
PMB	PMB2993	22-Oct-92	53	577829	6429072	RISE	HILL SLOPE	
PMB	PMB2994	23-Oct-92	53	539829	6414672	PLAIN	FLAT	
PMB	PMB2995	23-Oct-93	53	535829	6417872	PLAIN	FLAT	
PMB	PMB2996	23-Oct-93	53	530529	6424572	PLAIN	FLAT	
PMB	PMB2997	26-Oct-92	53	552329	6420872	FOOTSLOPE	HILL SLOPE	clay loam
PMB	PMB2998	25-Oct-92	53	581647	6435141	PLAIN	FLAT	sandy loam
PMB	PMB2999	25-Oct-92	53	583429	6434672	PLAIN	FLAT	
PMB	PMB3084	24-Mar-92	53	594829	6367472	PLAIN	FLAT	
PMB	PMB3085	24-Mar-92	53	589329	6373372	PLAIN	FLAT	
PMB	PMB3086	24-Mar-92	53	584629	6374572	PLAYA PLAIN	HILL SLOPE	light sandy clay loam
PMB	PMB3087	24-Mar-92	53	584629	6374672	PLAIN	HILL SLOPE	light sandy clay loam
PMB	PMB3088	25-Mar-92	53	567429	6385972	PLAIN	FLAT	
PMB	PMB3089	25-Mar-92	53	578029	6382572	PLAIN	FLAT	
PMB	PMB3090	26-Mar-92	53	598929	6372672	PLAIN	FLAT	light sandy clay loam
PMB	PMB3091	26-Mar-92	53	592929	6377072	PLAIN	FLAT	
PMB	PMB3092	26-Mar-92	53	587929	6385372	PLAIN	FLAT	
PMB	PMB3093	26-Mar-92	53	587929	6385472	PLAIN	FLAT	
PMB	PMB3094	27-Mar-92	53	606129	6386072	PLAIN	FLAT	
PMB	PMB3095	27-Mar-92	53	606129	6386172	PLAIN	FLAT	
PMB	PMB3096	28-Mar-92	53	598929	6383172	PLAIN	FLAT	
PMB	PMB3097	28-Mar-92	53	602529	6377372	PLAIN	FLAT	
PMB	PMB3098	28-Mar-92	53	608429	6375172	PLAIN	HILL SLOPE	
PMB	PMB3099	28-Mar-92	53	608229	6374972	PLAIN	FLAT	
PMB	PMB3102	29-Mar-92	53	603029	6368072	PLAIN	FLAT	
PMB	PMB3103	29-Mar-92	53	604729	6366872	PLAIN	FLAT	
PMB	PMB3104	30-Mar-92	53	581629	6382072	PLAIN	FLAT	
PMB	PMB3105	30-Mar-92	53	576329	6382972	PLAIN	FLAT	fine sandy clay loam
PMB	PMB3167	06-May-86	53	578829	6423672	HILLS	RIDGE	

PMB	PMB3168	06-May-86	53	578929	6423672	HILLS	HILL SLOPE	
PMB	PMB3169	06-May-86	53	579029	6423872	PLAIN	FLAT	
PMB	PMB3170	06-May-86	53	557929	6418472	LOW HILLS	HILL SLOPE	
PMB	PMB3171	06-May-86	53	557929	6418472	HILLS	HILL SLOPE	
PMB	PMB3172	06-May-86	53	557929	6418272	HILLS	HILL SLOPE	
PMB	PMB3173	06-May-86	53	543629	6403572	DUNEFIELD	RIDGE	
PMB	PMB3174	06-May-86	53	543629	6403472	DUNEFIELD	DEPRESSION	
PMB	PMB3176	10-May-86	53	580129	6421772	ALLUVIAL PLAIN	HILL SLOPE	
PMB	PMB3178	20-Nov-86	53	515269	6449622	ALLUVIAL PLAIN	FLAT	
PMB	PMB3179	20-Nov-86	53	513929	6447272	LOW HILLS	HILL SLOPE	
PMB	PMB3180	20-Nov-86	53	513949	6447269	LOW HILLS	HILL SLOPE	
PMB	PMB3181	20-Nov-86	53	513629	6445572	LOW HILLS	HILL SLOPE	
PMB	PMB3183	21-Nov-86	53	515529	6435672	HILLS	RIDGE	
PMB	PMB3184	21-Nov-86	53	515529	6435672	HILLS	HILL SLOPE	
PMB	PMB3185	21-Nov-86	53	515529	6435672	HILLS	HILL SLOPE	
PMB	PMB3186	22-Nov-86	53	582629	6444972	PLAYA PLAIN	FLAT	
PMB	PMB3187	22-Nov-86	53	582529	6444972	PLAYA PLAIN	FLAT	
PMB	PMB3188	22-Nov-86	53	582129	6446172	HILLS	RIDGE	
PMB	PMB3189	22-Nov-86	53	582129	6446172	HILLS	HILL SLOPE	
PMB	PMB3190	22-Nov-86	53	583329	6455272	SAND PLAIN	HILL SLOPE	
PMB	PMB3191	22-Nov-86	53	583329	6455272	SAND PLAIN	FLAT	
PMB	PMB3192	22-Nov-86	53	583329	6455272	DUNEFIELD	HILL SLOPE	
PMB	PMB3193	22-Nov-86	53	583629	6450772	SAND PLAIN	FLAT	
PMB	PMB3194	22-Nov-86	53	583729	6449572	PLAIN	FLAT	
PMB	PMB3195	22-Nov-86	53	582129	6444272	PLAIN	FLAT	
PMB	PMB3196	23-Nov-86	53	562829	6445372	HILLS	HILL SLOPE	
PMB	PMB3197	23-Nov-86	53	562829	6445372	HILLS	HILL SLOPE	
PMB	PMB3198	23-Nov-86	53	561629	6449972	HILLS	HILL SLOPE	
PMB	PMB3199	23-Nov-86	53	561429	6449972	PLAIN	FLAT	
PMB	PMB3200	24-Nov-86	53	551729	6455572	PLAIN	HILL SLOPE	
PMB	PMB3201	24-Nov-86	53	551729	6455572	HILLS	HILL SLOPE	
PMB	PMB3202	24-Nov-86	53	551729	6455572	HILLS	RIDGE	
PMB	PMB3203	24-Nov-86	53	551729	6455572	HILLS	HILL SLOPE	
PMB	PMB3204	24-Nov-86	53	548929	6450172	SAND PLAIN	HILL SLOPE	
PMB	PMB3205	24-Nov-86	53	550029	6449672	SAND PLAIN	HILL SLOPE	
PMB	PMB3206	24-Nov-86	53	552929	6443472	PLAIN	FLAT	
PMB	PMB3207	25-Nov-86	53	533629	6432672	ALLUVIAL PLAIN	FLAT	
PMB	PMB3208	28-Nov-86	53	532929	6431672	LOW HILLS	RIDGE	

PMB	PMB3209	28-Nov-86	53	532929	6431672	LOW HILLS	HILL SLOPE	
PMB	PMB3210	28-Nov-86	53	532929	6431672	LOW HILLS	HILL SLOPE	
PMB	PMB3211	28-Nov-86	53	532929	6431672		HILL SLOPE	
PMB	PMB3212	25-Nov-86	53	541329	6421372	PLAYA PLAIN	DEPRESSION	
PMB	PMB3213	25-Nov-86	53	541429	6421372	PLAIN	FLAT	
PMB	PMB3214	25-Nov-86	53	538629	6415372	LOW HILLS	HILL SLOPE	
PMB	PMB3215	25-Nov-86	53	543129	6413272	PLAIN	FLAT	
PMB	PMB3216	26-Nov-86	53	503879	6439922	HILLS	HILL SLOPE	
PMB	PMB3217	26-Nov-86	53	504029	6434172	HILLS	HILL SLOPE	
PMB	PMB3218	26-Nov-86	53	504129	6440372	HILLS	RIDGE	
PMB	PMB3219	26-Nov-86	53	506729	6438972	PLAIN	FLAT	
PMB	PMB3221	27-Nov-86	53	512629	6421672	LOW HILLS	HILL SLOPE	
PMB	PMB3222	27-Nov-86	53	512629	6421672	LOW HILLS	HILL SLOPE	
PMB	PMB3229	29-Nov-86	53	518629	6402572	HILLS	HILL SLOPE	
PMB	PMB3230	29-Nov-86	53	518629	6402572	SAND PLAIN	HILL SLOPE	
PMB	PMB3231	30-Nov-86	53	530629	6402172	LOW HILLS	HILL SLOPE	
PMB	PMB3232	30-Nov-86	53	530629	6402172	HILLS	HILL SLOPE	
PMB	PMB3233	30-Nov-86	53	530629	6402172	HILLS	HILL SLOPE	
PMB	PMB3234	30-Nov-86	53	532529	6401472	SAND PLAIN	FLAT	
PMB	PMB3235	30-Nov-86	53	543729	6406572	ALLUVIAL PLAIN	FLAT	
PMB	PMB3236	30-Nov-86	53	540629	6392772	LOW HILLS	HILL SLOPE	
PMB	PMB3240	03-Mar-87	53	525029	6413472	LOW HILLS	HILL SLOPE	
PMB	PMB3241	03-Mar-87	53	525029	6413472	SAND PLAIN	FLAT	
PMB	PMB3242	03-Mar-87	53	527629	6410072	DUNEFIELD	FLAT	
PMB	PMB3244	04-Mar-87	53	554629	6380972	LOW HILLS	RIDGE	
PMB	PMB3245	04-Mar-87	53	554629	6380972	LOW HILLS	HILL SLOPE	
PMB	PMB3246	04-Mar-87	53	554629	6380972	LOW HILLS	HILL SLOPE	
PMB	PMB3247	04-Mar-87	53	555729	6381772	PLAIN	FLAT	
PMB	PMB3248	05-Mar-87	53	550529	6396772	PLAIN	FLAT	
PMB	PMB3249	05-Mar-87	53	566229	6408372	DRAINAGE LINE	DEPRESSION	
PMB	PMB3250	05-Mar-87	53	570829	6392072	ALLUVIAL PLAIN	FLAT	
PMB	PMB3251	06-Mar-87	53	567529	6375272	LOW HILLS	RIDGE	
PMB	PMB3252	06-Mar-87	53	570729	6371972	RISE	HILL SLOPE	
PMB	PMB3253	05-Mar-87	53	576529	6373972	PLAYA PLAIN	HILL SLOPE	
PMB	PMB3254	06-Mar-87	53	581229	6381872	HILLS	RIDGE	
PMB	PMB3257	07-Mar-87	53	600429	6381672	LOW HILLS	HILL SLOPE	
PMB	PMB3258	07-Mar-87	53	609029	6383672	SAND PLAIN	HILL SLOPE	
PMB	PMB3259	07-Mar-87	53	605729	6380772	FOOTSLOPE	HILL SLOPE	clay loam

PMB	PMB3260	08-Mar-87	53	604129	6383472	HILLS	HILL SLOPE	
PMB	PMB3261	08-Mar-87	53	603929	6383472	HILLS	HILL SLOPE	
PMB	PMB3262	08-Mar-87	53	587329	6390372	SAND PLAIN	HILL SLOPE	
PMB	PMB3263	08-Mar-87	53	593429	6392872	PLAIN	FLAT	
PMB	PMB3264	08-Mar-87	53	596229	6395172	HILLS	HILL SLOPE	
PMB	PMB3265	08-Mar-87	53	605629	6398972	LOW HILLS	FLAT	
PMB	PMB3271	11-Mar-87	53	590529	6433572	SAND PLAIN	FLAT	
PMB	PMB3272	12-Mar-87	53	602729	6439072	PLAIN	HILL SLOPE	
PMB	PMB3328	07-May-92	53	502839	6442172	PLAIN	HILL SLOPE	
PMB	PMB3329	09-May-92	53	510829	6436672	LOW HILLS	HILL SLOPE	
PMB	PMB3330	09-May-92	53	510979	6436922	HILLS	HILL SLOPE	
PMB	PMB3331	09-May-92	53	512289	6429372	PLAIN	FLAT	
PMB	PMB3332	09-Apr-92	53	517029	6424772	PLAIN	FLAT	
PMB	PMB3333	10-May-92	53	527279	6423472	PLAIN	FLAT	
PMB	PMB3334	10-May-92	53	526929	6426972	PLAIN	FLAT	
PMB	PMB3335	10-May-92	53	523579	6432972	PLAIN	FLAT	
PMB	PMB3336	10-May-92	53	526679	6436572	PLAIN	FLAT	
PMB	PMB3337	11-May-92	53	524629	6444572	PLAIN	HILL SLOPE	
PMB	PMB3338	10-May-92	53	510129	6438472	PLAIN	FLAT	
PMB	PMB3339	10-May-92	53	508129	6445872	PLAIN	FLAT	
PMB	PMB3394	25-May-92	53	549829	6407372	PLAIN	FLAT	
PMB	PMB3395	26-May-92	53	549929	6407372	PLAIN	FLAT	
PMB	PMB3396	27-May-92	53	544729	6386472	PLAIN	FLAT	
PMB	PMB3581	21-Oct-92	53	593946	6406037	PLAIN	FLAT	sandy clay loam
PMB	PMB3582	21-Oct-92	53	590079	6406954	PLAIN	FLAT	sandy clay loam
PMB	PMB3583	21-Oct-92	53	586865	6395850	PLAIN	FLAT	
PMB	PMB3584	22-Oct-92	53	603129	6397315	PLAIN	FLAT	
PMB	PMB3585	22-Oct-92	53	603229	6397315	PLAIN	FLAT	sandy clay loam
PMB	PMB3586	22-Oct-92	53	603329	6403784	PLAIN	FLAT	
PMB	PMB3587	22-Oct-92	53	598649	6402272	PLAIN	FLAT	
PMB	PMB3588	23-Oct-92	53	598679	6402231	PLAIN	FLAT	
PMB	PMB3589	23-Oct-92	53	603929	6410572	PLAIN	FLAT	sandy loam
PMB	PMB3590	23-Oct-92	53	595852	6410472	PLAIN	HILL SLOPE	
PMB	PMB3591	24-Oct-92	53	592409	6431172	PLAIN	HILL SLOPE	
PMB	PMB3592	24-Oct-92	53	601629	6439972	PLAIN	FLAT	sandy loam
PMB	PMB3593	24-Oct-92	53	602829	6438738	PLAIN	HILL SLOPE	
PMB	PMB3594	24-Oct-92	53	602404	6434586	PLAIN	FLAT	
PMB	PMB3951	25-Oct-92	53	570429	6427072	FOOTSLOPE	HILL SLOPE	

PMB	PMB3952	25-Oct-92	53	572529	6425872		FLAT	
PMB	PMB3953	26-Oct-92	53	556229	6428372	PLAIN	FLAT	
PMB	PMB3954	26-Oct-92	53	548529	6429672	FOOTSLOPE	HILL SLOPE	
PMB	PMB3955	26-Oct-92	53	552429	6437672	PLAIN	FLAT	
PMB	PMB3956	27-Oct-92	53	558429	6430872	PLAIN	FLAT	
PMB	PMB3957	27-Oct-92	53	558429	6430972	PLAIN	FLAT	
PMB	PMB4065	05-May-93	53	551629	6407672	PLAIN	FLAT	
PMB	PMB4066	05-May-93	53	544529	6413972	PLAIN	FLAT	
PMB	PMB4067	05-May-93	53	540629	6421372	RISE	HILL SLOPE	
PMB	PMB4068	05-May-93	53	534429	6432172	PLAIN	HILL SLOPE	
PMB	PMB4069	05-May-93	53	539029	6429172	PLAIN	FLAT	
PMB	PMB4070	06-May-93	53	569629	6424172	PLAIN	RIDGE	
PMB	PMB4071	06-May-93	53	579529	6437772	PLAIN	RIDGE	
PMB	PMB4072	06-May-93	53	579829	6442372	PLAIN	FLAT	
PMB	PMB4073	06-May-93	53	577429	6442072	PLAIN	FLAT	
PMB	PMB4074	07-May-93	53	572729	6439872	PLAIN	FLAT	
PMB	PMB4075	07-May-93	53	562029	6437572	PLAIN	FLAT	silty clay loam
PMB	PMB4076	07-May-93	53	558829	6438672	PLAIN	FLAT	
PMB	PMB4077	07-May-93	53	560429	6441572	RISE	HILL SLOPE	
PMB	PMB4078	07-May-93	53	566129	6442772	PLAIN	FLAT	
PMB	PMB4079	08-May-93	53	524829	6432572	PLAIN	FLAT	
PMB	PMB4080	08-May-93	53	546229	6439872	PLAIN	HILL SLOPE	
PMB	PMB4081	08-May-93	53	542229	6441672	PLAIN	FLAT	
PMB	PMB4082	08-May-93	53	545329	6434272	PLAIN	FLAT	
PMB	PMB4083	08-May-93	53	552829	6443372	PLAIN	FLAT	
PMB	PMB4084	09-May-93	53	547029	6417172	PLAIN	FLAT	
PMB	PMB4085	09-May-93	53	554629	6416372	PLAIN	FLAT	
PMB	PMB4086	09-May-93	53	556529	6413872	PLAIN	FLAT	
PMB	PMB4087	04-May-52	53	568129	6420372	PLAIN	FLAT	
PMB	PMB4088	11-May-93	53	572929	6417572	PLAIN	FLAT	
PMB	PMB4089	13-May-93	53	581929	6409272	PLAIN	FLAT	
PMB	PMB4090	12-May-93	53	562929	6404272	RISE	HILL SLOPE	
PMB	PMB4101	07-May-93	53	570929	6428172	PLAIN	FLAT	
PMB	PMB4102	07-May-93	53	565329	6435072	PLAIN	HILL SLOPE	
PMB	PMB4103	07-May-93	53	568829	6441172	PLAIN	FLAT	
PMB	PMB4104	08-May-93	53	534829	6437372	PLAIN	FLAT	
PMB	PMB4105	08-May-93	53	536829	6440472	PLAIN	FLAT	
PMB	PMB4106	08-May-93	53	531729	6444872	PLAIN	FLAT	

PMB	PMB4107	08-May-93	53	554929	6445372	PLAIN	FLAT	
PMB	PMB4108	08-May-93	53	553429	6435172	PLAIN	FLAT	
PMB	PMB4109	09-May-93	53	552329	6426772	PLAIN	FLAT	
PMB	PMB4110	09-May-93	53	560629	6411972	LOW HILLS	HILL SLOPE	
PMB	PMB4111	09-May-93	53	561329	6412272	PLAIN	HILL SLOPE	
PMB	PMB4112	10-May-93	53	574129	6396272	PLAIN	HILL SLOPE	
PMB	PMB4113	10-May-93	53	581229	6394572	PLAIN	FLAT	
PMB	PMB4114	11-May-93	53	578329	6406672	PLAIN	FLAT	
PMB	PMB4115	11-May-93	53	577429	6406672	PLAIN	HILL SLOPE	
PMB	PMB4116	11-May-93	53	577229	6409272	PLAIN	FLAT	
PMB	PMB4117	11-May-93	53	571129	6412272	PLAIN	FLAT	
PMB	PMB4118	11-May-93	53	569929	6420072	PLAIN	FLAT	
PMB	PMB4119	12-May-93	53	565329	6406972	PLAIN	FLAT	
PMB	PMB4120	12-May-93	53	565429	6406872	LOW HILLS	FLAT	
PMB	PMB740	05-Nov-78	53	568279	6389372	PLAIN	FLAT	
PMB	PMB741	08-Nov-78	53	577029	6419472	RISE	HILL SLOPE	
PMB	PMB742	10-May-93	53	578529	6421272	PLAIN	FLAT	

A Vegetation Map of the Western Gawler Ranges, South Australia

Appendix II

LAND FORM, LAND UNIT AND SURFACE SOIL TEXTURE FOR THE 19 GROUPS IN THE FLORISTIC ANALYSIS

Landform	PATN floristic group																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
HILLS				1	1	1		2			4					8	12	3	11
LOW HILLS			1			1					1	1					9	5	3
FOOTSLOPE			3					1				1							
RISE		1	3	4			1				2	1	1	1					
PLAIN	4	5	58	31	5	7	9	19	3		8	31	3	3	1				1
RECENT QUARTZ									3										
ALLUVIAL PLAIN			2	2							1								
FLOODPLAIN												1							
DRAINAGE LINE				1															
PLAYA PLAIN			2							2									
SAND PLAIN	1		2			1		1		4								1	1
DUNEFIELD				1		3	7			1			3	5	17				
Not recorded	5	16	5	9	1	1		6	2		8				1	12			7

Land Unit	PATN floristic group																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
RIDGE		1	2	3				3	1						1		4	2	1
HILL CREST						1													
HILL SLOPE		1	19	11	1	1	1	3	4	3	15	10	2	2		20	17	7	13
HILL FOOTSLOPE		4		1		1		1			1								3
FLAT	1	5	51	26	5	1	3	18	1	4	8	23	1		2				2
PLAIN	5	10	4	7	1	6	7	3				1	2	2					4
STREAM CHANNEL									1										
DEPRESSION	2			1								1							
SWAMP	1																		
SALT LAKE	1																		

SANDY PLAIN						1									1				
INTERDUNE						2													
SWALE						1	2							4					
DUNE							4	1	1				2	1	15				
OTHER		1																	

Surface Soil Texture	PATN floristic group																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
HEAVY CLAY						1													
MEDIUM CLAY	1	2	1	2												3			
LIGHT MEDIUM				1															
LIGHT CLAY						2	2												1
CLAY LOAM			1	1			3	2			1		1	1		1	1		2
SANDY CLAY LOAM	4	14	4	8		4	2	3			8	1		1		9			4
LIGHT SANDY CLAY			3	4				1				1							
FINE SANDY CLAY				1				1											
LOAM		1	1	1	1		1	1								7			6
FINE SANDY LOAM				4								1							
LOAM FINE SANDY				2				2											
CLAYEY SAND	2					1	1						1	3					
LOAMY SAND						1						1	1	1	2			1	
SAND				2			2	2	2				2		15			1	2
NOT RECORDED	1	5	64	23	6	2		15	6	7	15	30	2	1	2		20	7	7
SANDY LOAM	1		1			2	5	2				1		1					1
SILT LOAM	1					1													
SILTY CLAY LOAM			1											1					
SILTY LIGHT CLAY							1												

A Vegetation Map of the Western Gawler Ranges, South Australia

Appendix III

PLANT SPECIES RECORDED FROM THE GAWLER RANGES AND THEIR IMMEDIATE SURROUNDS.

Plant taxonomy follows Jessop (1993) as updated by the SAFLORA database in September 2000. It also includes some recent taxonomic changes still awaiting incorporation into SAFLORA. Common names are from Jessop and Toelken (1986) and/or the SAFLORA database. Where species names have been changed since publication of the original Gawler Ranges Biological Survey report (Robinson *et al.* 1989), the details are recorded in the footnotes. Introduced species are marked with an asterisk.

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
ADIANTACEAE						
<i>Cheilanthes austrotenuifolia</i>	annual rock-fern	+			+	
<i>Cheilanthes distans</i>	bristly cloak-fern	+				
<i>Cheilanthes lasiophylla</i>	woolly cloak-fern	+			+	
<i>Cheilanthes sieberi</i> ssp. <i>pseudovellea</i>		+			+	
<i>Cheilanthes sieberi</i> ssp. <i>sieberi</i>	narrow rock-fern	+		+	+	
AIZOACEAE						
<i>Carpobrotus rossii</i>	native pigface		+			
<i>Disphyma crassifolium</i> ssp. <i>clavellatum</i>	round-leaf pigface	+		+	+	
<i>Gunniopsis calva</i>					+	
<i>Gunniopsis quadrifida</i>	Sturt's pigface	+	+		+	
<i>Gunniopsis septifraga</i>	green pigface	+				
* <i>Mesembryanthemum crystallinum</i>	common iceplant	+		+	+	
* <i>Mesembryanthemum nodiflorum</i>	slender iceplant	+	+	+	+	
<i>Sarcozona praecox</i>	sarcozona	+			+	
<i>Tetragonia eremaea</i>	desert spinach	+	+	+	+	
<i>Tetragonia tetragonioides</i>	New Zealand spinach			+		

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
AMARANTHACEAE						
<i>Ptilotus decipiens</i>		+			+	
<i>Ptilotus exaltatus</i> var. <i>exaltatus</i>	pink mulla mulla	+			+	
<i>Ptilotus gaudichaudii</i> var. <i>gaudichaudii</i>	paper fox-tail	+			+	
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	silver mulla mulla	+	+	+	+	
<i>Ptilotus polystachyus</i> var. <i>polystachyus</i>	long-tails	+				
<i>Ptilotus seminudus</i>	rabbit-tails	+		+	+	
<i>Ptilotus sessiliflorus</i> var. <i>sessiliflorus</i>		+ ¹			+	
<i>Ptilotus spathulatus</i>	pussy-tails	+	+	+	+	+
APOCYNACEAE						
<i>Alyxia buxifolia</i>	sea box	+	+	+	+	
ASCLEPIDACEAE						
<i>Marsdenia australis</i>	native pear	+				
<i>Sarcostemma viminale</i> ssp. <i>australe</i>	caustic bush	+ ²			+	
ASPLENIACEAE						
<i>Pleurosorus rutifolius</i>	blanket fern	+			+	
<i>Pleurosorus subglandulosus</i>	clubbed blanket fern	+			+	
BORAGINACEAE						
* <i>Buglossoides arvensis</i>	sheepweed	+		+		
<i>Cynoglossum australe</i>	Australian hound's-tongue	+				
* <i>Echium plantagineum</i>	Salvation Jane	+	+		+	+
<i>Embadium uncinatum</i>	Gawler Ranges slipper-plant					
<i>Heliotropium asperum</i>	rough heliotrope	+			+	
* <i>Heliotropium europaeum</i>	common heliotrope	+	+		+	
* <i>Heliotropium supinum</i>	creeping heliotrope	+				
* <i>Neatostema apulum</i>	hairy sheepweed	+			+	
<i>Omphalolappula concava</i>	burr stickseed	+		+	+	
<i>Plagiobothrys plurisepaleus</i>	white rochelia	+				

¹ As *Ptilotus atriplicifolius* var. *atriplicifolius* in Robinson et al. (1989)

² As *Sarcostemma australe* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
CAMPANULACEAE						
<i>Isotoma petraea</i>	rock isotome	+			+	+
<i>Lobelia heterophylla</i>				+		
<i>Wahlenbergia communis</i>	tufted bluebell	+			+	
<i>Wahlenbergia gracilentia</i>	annual bluebell	+		+		
<i>Wahlenbergia stricta</i> ssp. <i>stricta</i>	tall bluebell	+	+		+	
<i>Wahlenbergia tumidifructa</i>						+
CARYOPHYLLACEAE						
* <i>Cerastium glomeratum</i>	common mouse-ear chickweed	+				
* <i>Gypsophila tubulosa</i>	annual chalkwort	+				
* <i>Herniaria cinerea</i>	rupturewort	+ ³	+	+	+	
* <i>Polycarpon tetraphyllum</i>	four-leaf allseed	+				+
* <i>Sagina maritima</i>	sea pearlwort	+				
<i>Scleranthus pungens</i>	prickly knawel	+	+		+	
<i>Scleranthus minusculus</i>	cushion knawel	+		+		
* <i>Silene apetala</i>	sand catchfly	+				
* <i>Silene gallica</i> var. <i>gallica</i>	French catchfly	+			+	
* <i>Silene nocturna</i>	Mediterranean catchfly	+		+	+	
* <i>Silene tridentata</i>				+		
* <i>Spergularia diandra</i>	lesser sand-spurrey	+		+	+	
* <i>Spergularia marina</i>	salt sand-spurrey	+	+			
* <i>Spergularia rubra</i>	red sand-spurrey	+				
<i>Stellaria filiformis</i>	thread starwort	+		+		
* <i>Stellaria media</i>	chickweed	+				
CASUARINACEAE						
<i>Allocasuarina helmsii</i>	Helm's oak-bush	+				
<i>Allocasuarina muelleriana</i> ssp. <i>muelleriana</i>	common oak-bush	+	+		+	
<i>Allocasuarina verticillata</i>	drooping sheoak	+			+	
<i>Casuarina pauper</i>	black oak	+	+	+	+	
CENTROLEPIDACEAE						
<i>Centrolepis polygyna</i>	wiry centrolepis	+				

³ As **Herniaria hirsuta* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Centrolepis strigosa</i>	hairy centrolepis	+				
CHENOPODIACEAE						
<i>Atriplex acutibractea</i>		+	+	+	+	
<i>Atriplex angulata</i>	fan saltbush	+			+	
<i>Atriplex eardleyae</i>	Eardley's saltbush	+				
<i>Atriplex holocarpa</i>	pop saltbush	+	+		+	
<i>Atriplex leptocarpa</i>	slender-fruit saltbush		+			
<i>Atriplex limbata</i>	spreading saltbush	+				
<i>Atriplex lindleyi</i>		+				
<i>Atriplex nummularia</i> ssp. <i>nummularia</i>	old-man saltbush	+				
<i>Atriplex spongiosa</i>	pop saltbush		+			
<i>Atriplex stipitata</i>	bitter saltbush	+	+	+	+	
<i>Atriplex suberecta</i>	lagoon saltbush	+				
<i>Atriplex velutinella</i>	sandhill saltbush		+			
<i>Atriplex vesicaria</i>		+	+	+	+	
<i>Chenopodium cristatum</i>	crested goosefoot	+				
<i>Chenopodium curvispicatum</i>	cottony goosefoot		+	+		
<i>Chenopodium desertorum</i> ssp. <i>anidiophyllum</i>	mallee goosefoot	+	+	+	+	
<i>Chenopodium desertorum</i> ssp. <i>desertorum</i>	frosted goosefoot	+	+	+	+	
<i>Chenopodium desertorum</i> ssp. <i>microphyllum</i>	small-leaf goosefoot		+	+		
<i>Chenopodium desertorum</i> ssp. <i>rectum</i>	erect goosefoot			+		
<i>Chenopodium gaudichaudianum</i>	scrambling goosefoot	+	+		+	
<i>Chenopodium melanocarpum</i>		+				
* <i>Chenopodium murale</i>	nettle-leaf goosefoot	+				
<i>Chenopodium nitrariaceum</i>	nitre goosefoot	+				
<i>Dissocarpus biflorus</i> var. <i>biflorus</i>	two-horn saltbush	+	+		+	
<i>Dissocarpus paradoxus</i> var. <i>paradoxus</i>		+	+		+	
<i>Einadia nutans</i>		+	+	+		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	ruby saltbush	+	+	+	+	
<i>Eriochiton sclerolaenoides</i>	woolly-fruit bluebush	+	+	+	+	
<i>Halosarcia indica</i> ssp. <i>leiostachya</i>	brown-head samphire	+		+	+	
<i>Halosarcia lylei</i>	wiry samphire	+				
<i>Halosarcia halocnemoides</i>						+

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Halosarcia pergranulata</i> ssp. <i>pergranulata</i>	black-seed samphire	+		+		
<i>Halosarcia pluriflora</i>		+				
<i>Halosarcia pruinosa</i>	bluish samphire	+				
<i>Halosarcia pterygosperma</i> ssp. <i>pterygosperma</i>	winged-seed samphire			+		
<i>Maireana aphylla</i>	cotton-bush	+				
<i>Maireana appressa</i>	pale-fruit bluebush	+	+		+	
<i>Maireana astrotricha</i>	low bluebush	+	+		+	
<i>Maireana brevifolia</i>	short-leaf bluebush	+	+	+	+	+
<i>Maireana cannonii</i>	Cannon's bluebush	+			+	
<i>Maireana coronata</i>	crown fissure-plant		+			
<i>Maireana enchylaenoides</i>	wingless fissure-plant	+		+		
<i>Maireana eriantha</i>	woolly bluebush		+			
<i>Maireana erioclada</i>	rosy bluebush	+	+	+	+	
<i>Maireana georgei</i>	satiny bluebush	+	+		+	
<i>Maireana lobiflora</i>	lobed bluebush		+			
<i>Maireana oppositifolia</i>	salt bluebush	+				
<i>Maireana pentatropis</i>	erect mallee bluebush	+	+	+		
<i>Maireana pyramidata</i>	black bluebush	+	+		+	
<i>Maireana radiata</i>	radiate bluebush	+	+	+	+	
<i>Maireana rohrlachii</i>	Rohrlach's bluebush	+				
<i>Maireana sedifolia</i>	bluebush	+	+		+	
<i>Maireana trichoptera</i>	hairy-fruit bluebush	+	+	+	+	
<i>Maireana triptera</i>	three-wing bluebush	+	+			
<i>Maireana turbinata</i>	top-fruit bluebush	+	+		+	
<i>Malacocera biflora</i>	two-flower soft-horns		+			
<i>Osteocarpum acropterum</i> var. <i>acropterum</i>	tuberculate bonefruit	+	+		+	
<i>Osteocarpum dipterocarpum</i>	two-wing bonefruit	+				
<i>Osteocarpum salsuginosum</i>	inland bonefruit	+			+	
<i>Pachycornia triandra</i>	desert glasswort	+				
<i>Rhagodia candolleana</i> ssp. <i>candolleana</i>	sea-berry saltbush	+		+		
<i>Rhagodia crassifolia</i>	fleshy saltbush	+	+	+	+	
<i>Rhagodia parabolica</i>	mealy saltbush	+	+	+	+	

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Rhagodia preissii</i> ssp. <i>preissii</i>	mallee saltbush	+	+	+	+	
<i>Rhagodia spinescens</i>	spiny saltbush	+	+	+	+	
<i>Rhagodia ulicina</i>	intricate saltbush	+	+		+	
<i>Salsola kali</i>	buckbush	+	+	+	+	
<i>Sclerolaena brachyptera</i>	short-wing bindyi	+ ⁴	+			
<i>Sclerolaena brevifolia</i>	small-leaf bindyi	+	+		+	
<i>Sclerolaena constricta</i>			+			
<i>Sclerolaena cuneata</i>	tangled bindyi	+			+	
<i>Sclerolaena decurrens</i>	green bindyi		+			
<i>Sclerolaena diacantha</i>	grey bindyi	+	+	+	+	
<i>Sclerolaena divaricata</i>	tangled bindyi	+	+			
<i>Sclerolaena eriacantha</i>	silky bindyi	+	+			
<i>Sclerolaena holtiana</i>	Holt's bindyi		+			
<i>Sclerolaena intricata</i>	tangled bindyi		+			
<i>Sclerolaena lanata</i>	wooly bindyi		+			
<i>Sclerolaena lanicuspis</i>	spinach bindyi	+	+		+	
<i>Sclerolaena obliquicuspis</i>	oblique-spined bindyi	+	+	+	+	
<i>Sclerolaena parviflora</i>	small-flower bindyi	+	+	+	+	
<i>Sclerolaena patenticuspis</i>	spear-fruit bindyi	+	+	+	+	
<i>Sclerolaena tricuspis</i>	three-spine bindyi	+			+	
<i>Sclerolaena uniflora</i>	small-spine bindyi	+	+		+	
<i>Sclerolaena ventricosa</i>	salt bindyi	+	+		+	
<i>Sclerostegia medullosa</i>			+			
<i>Sclerostegia tenuis</i>	slender samphire		+			
<i>Threlkeldia diffusa</i>	coast bonefruit			+		
CHLOANTHACEAE						
<i>Dicrastylis beveridgei</i> var. <i>beveridgei</i>	sand-sage	+				
<i>Dicrastylis verticillata</i>	whorled sand-sage	+		+		
COMPOSITAE						
<i>Actinobole uliginosum</i>	flannel cudweed	+		+	+	+
<i>Angianthus preissianus</i>	salt angianthus	+				

⁴ As *Sclerochlamys brachyptera* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Angianthus tomentosus</i>	hairy angianthus	+	+	+	+	
* <i>Arctotheca calendula</i>	Cape weed	+	+	+	+	
<i>Asteridea athrixoides</i> Forma <i>athrixoides</i>	wirewort	+		+	+	
<i>Blennospora drummondii</i>	dwarf button-flower	+		+	+	
<i>Brachycome ciliaris</i> var. <i>ciliaris</i>	variable daisy	+	+	+	+	+
<i>Brachycome dichromosomatica</i> Var. <i>dichromosomatica</i>	large hard-head daisy	+				
<i>Brachycome exilis</i>	slender daisy		+	+		
<i>Brachycome iberidifolia</i>	Swan River daisy	+				
<i>Brachycome lineariloba</i>	hard-head daisy	+		+	+	
<i>Brachycome perpusilla</i>	tiny daisy	+		+		
<i>Brachycome trachycarpa</i>	smooth daisy	+			+	
<i>Bracteantha bracteata</i>	golden everlasting	+ ⁵			+	
<i>Calotis cymbacantha</i>	showy burr-daisy	+			+	
<i>Calotis hispidula</i>	hairy burr-daisy	+	+	+	+	
<i>Calotis multicaulis</i>	woolly-headed burr-daisy	+	+		+	
* <i>Carthamus lanatus</i>	saffron thistle	+	+	+	+	+
<i>Cassinia laevis</i>	curry bush	+	+		+	
* <i>Centaurea melitensis</i>	Malta thistle	+	+	+	+	+
<i>Centipeda thespidioides</i>	desert sneezeweed	+				
<i>Ceratogyne obionoides</i>	wingwort	+		+		
<i>Chrysocephalum apiculatum</i>	common everlasting	+ ⁶	+	+	+	
<i>Chrysocephalum semicalvum</i> ssp. <i>semicalvum</i>	scented button-bush	+ ⁷			+	
<i>Chrysocephalum semipapposum</i>	clustered everlasting	+ ⁸	+			
<i>Chrysocoryne pusilla</i>	dwarf golden-tip	+	+			
* <i>Cirsium vulgare</i>	spear thistle	+				

⁵ As *Helichrysum bracteatum* in Robinson et al. (1989)

⁶ As *Helichrysum apiculatum* var *apiculatum* in Robinson et al. (1989)

⁷ As *Helichrysum ambiguum* in Robinson et al. (1989)

⁸ As *Helichrysum semipapposum* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Cotula australis</i>	common cotula	+				
<i>Cratystylis conocephala</i>	bluebush daisy	+	+	+	+	
<i>Chthonocephalus pseudevax</i>	ground-heads	+				+
* <i>Dittrichia graveolens</i>	stinkweed	+	+			
<i>Elachanthus pusillus</i>	elachanth	+		+	+	
<i>Eriochlamys behrii</i>	woolly mantle	+				
<i>Euchiton sphaericus</i>	annual cudweed	+			+	
<i>Gnephosis arachnoidea</i>	spidery button-flower	+			+	
<i>Gnephosis tenuissima</i>	dwarf golden-tip				+	
<i>Gratwickia monochaeta</i>		+ ⁹	+		+	
<i>Haeckeria cassiniaeformis</i>	dogwood haeckeria		+			
* <i>Hedypnois rhagadioloides</i>	Cretan weed	+		+	+	
<i>Helichrysum leucopsidium</i>	satin everlasting	+		+	+	
<i>Hyalosperma demissum</i>	dwarf sunray	+ ⁺⁰		+		
<i>Hyalosperma glutinosum</i> Ssp. <i>glutinosum</i>	golden sunray	+ ⁺⁺		+	+	
<i>Hyalosperma semisterile</i>	orange sunray	+ ⁺²			+	
* <i>Hypochaeris glabra</i>	smooth cat's ear	+	+	+	+	
* <i>Hypochaeris radicata</i>	rough cat's ear	+			+	
<i>Isoetopsis graminifolia</i>	grass cushion	+		+	+	
<i>Ixiolaena leptolepis</i>	narrow plover-daisy	+			+	
* <i>Lactuca serriola</i>	prickly lettuce			+		
<i>Lemooria burkittii</i>	wires-and-wool	+			+	
<i>Leptorhynchos tetrachaetus</i>	little buttons			+		
<i>Leucochrysum molle</i>	hoary sunray	+ ⁺³				
<i>Leucochrysum stipitatum</i>	salt-spoon daisy	+ ⁺⁴				
<i>Microseris lanceolata</i>	yam daisy	+ ⁺⁵		+	+	
<i>Millotia greevesii</i> ssp. <i>kempei</i> var. <i>helmsii</i>			+			
<i>Millotia macrocarpa</i>	large-fruit millotia	+				
<i>Millotia muelleri</i>	common bow-flower	+		+		
<i>Millotia perpusilla</i>	tiny bow-flower	+				

⁹ As *Helichrysum monochaetum* in Robinson et al. (1989)

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<i>Millotia myosotidifolia</i>	broad-leaf millotia	+		+	+	
<i>Millotia tenuifolia</i> var. <i>tenuifolia</i>	soft millotia	+		+		
<i>Minuria cunninghamii</i>	bush minuria	+	+		+	
<i>Minuria leptophylla</i>	minnie daisy	+	+	+	+	
<i>Myriocephalus rhizocephalus</i> var. <i>rhizocephalus</i>	woolly-heads	+				
<i>Olearia brachyphylla</i>	short-leaf daisy-bush			+		
<i>Olearia calcarea</i>	crinkle-leaf daisy-bush	+	+		+	+
<i>Olearia ciliata</i> var. <i>ciliata</i>	fringed daisy-bush	+		+		
<i>Olearia decurrens</i>	winged daisy-bush	+	+	+	+	
<i>Olearia exiguiifolia</i>	lobed-leaf daisy-bush	+				
<i>Olearia floribunda</i> var. <i>floribunda</i>	heath daisy-bush	+		+		
<i>Olearia lepidophylla</i>	clubmoss daisy-bush	+		+	+	
<i>Olearia magniflora</i>	splendid daisy-bush	+		+		
<i>Olearia muelleri</i>	Mueller's daisy-bush	+	+	+	+	
<i>Olearia passerinoides</i> ssp. <i>passerinoides</i>	feather daisy-bush	+				
<i>Olearia pimeleoides</i> ssp. <i>pimeleoides</i>	pimelea daisy-bush	+		+	+	
<i>Othonna gregorii</i>	fleshy groundsel	⁺⁶			+	
<i>Ozothamnus decurrens</i>	ridged bush-everlasting	⁺⁷	+	+		
<i>Ozothamnus retusus</i>	notched bush-everlasting	⁺⁸		+	+	
<i>Picris angustifolia</i> ssp. <i>angustifolia</i>	coast picris	+				
<i>Podolepis canescens</i>	grey copper-wire daisy	+				
<i>Podolepis capillaris</i>	wiry podolepis	+	+	+	+	
<i>Podolepis jaceoides</i>	showy copper-wire daisy	+	+	+	+	
<i>Podolepis longipedata</i>	tall copper-wire daisy	+				
<i>Podolepis rugata</i> var. <i>rugata</i>	pleated copper-wire daisy			+		
<i>Podolepis tepperi</i>	delicate copper-wire daisy	+		+		
<i>Podotheca angustifolia</i>	sticky long-heads	+		+	+	
<i>Pogonolepis muelleriana</i>	stiff cup-flower	+	+	+	+	
<i>Polycalymma stuartii</i>	poached-egg daisy	⁺⁹				
<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	+				
<i>Pycnosorus pleiocephalus</i>	soft billy-buttons	+			+	+
<i>Quinetia urvillei</i>	quinetia	+				

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<i>Rhodanthe corymbiflora</i>	paper everlasting	+ ²⁰			+	
<i>Rhodanthe floribunda</i>	white everlasting	+ ²¹	+			
<i>Rhodanthe laevis</i>	smooth daisy	+ ²²		+		
<i>Rhodanthe microglossa</i>	clustered everlasting	+ ²³	+		+	
<i>Rhodanthe moschata</i>	musk daisy	+ ²⁴	+	+	+	
<i>Rhodanthe oppositifolia</i>					+	
<i>Rhodanthe polygalifolia</i>	milkwort everlasting	+ ²⁵		+	+	
<i>Rhodanthe pygmaea</i>	pigmy daisy	+ ²⁶	+	+	+	
<i>Rutidosia multiflora</i>	small wrinklewort	+				
<i>Rhodanthe stricta</i>	slender everlasting	+ ²⁷			+	
<i>Rhodanthe stuartiana</i>	clay everlasting	+ ²⁸		+	+	
<i>Schoenia ramosissima</i>	dainty everlasting	+ ²⁹				
<i>Senecio gawlerensis</i>	Gawler Ranges groundsel	+ ³⁰	+		+	
<i>Senecio glossanthus</i>	annual groundsel	+		+	+	+
<i>Senecio lautus</i>	variable groundsel	+	+	+	+	
<i>Senecio magnificus</i>	showy groundsel	+	+		+	
<i>Senecio quadridentatus</i>	cotton groundsel	+			+	
<i>Sigesbeckia australiensis</i>	Australian sigesbeckia	+ ³¹			+	
* <i>Sonchus asper</i> ssp. <i>asper</i>	rough sow-thistle	+			+	
* <i>Sonchus asper</i> ssp. <i>glaucescens</i>	rough sow-thistle	+				

²⁰ As *Helipterum corymbiflorum* in Robinson et al. (1989)

²¹ As *Helipterum floribundum* in Robinson et al. (1989)

²² As *Helipterum laeve* in Robinson et al. (1989)

²³ As *Helipterum microglossum* in Robinson et al. (1989)

²⁴ As *Helipterum moschatum* in Robinson et al. (1989)

²⁵ As *Helipterum polygalifolium* in Robinson et al. (1989)

²⁶ As *Helipterum pygmaeum* in Robinson et al. (1989)

²⁷ As *Helipterum strictum* in Robinson et al. (1989)

²⁸ As *Helipterum stuartianum* in Robinson et al. (1989)

²⁹ As *Helichrysum semifertile* in Robinson et al. (1989)

³⁰ As *Senecio georgianus* var. *latifolius* in Robinson et al. (1989)

³¹ As *Sigesbeckia microcephala* in Robinson et al. (1989)

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* <i>Sonchus oleraceus</i>	common sow-thistle	+	+	+	+	
<i>Stuartina hamata</i>	prickly cudweed	+				
<i>Trichanthodium skirrophorum</i>	woolly yellow-heads	+ ³²		+	+	
* <i>Urospermum picroides</i>	false hawkbit	+		+	+	
<i>Vittadinia australasica</i> var. <i>australasica</i>	sticky New Holland daisy		+	+		
<i>Vittadinia cervicularis</i> var. <i>cervicularis</i>	waisted New Holland daisy	+			+	
<i>Vittadinia cuneata</i> var. <i>cuneata</i> forma <i>cuneata</i>	fuzzy New Holland daisy	+	+	+		
<i>Vittadinia dissecta</i> var. <i>hirta</i>	dissected New Holland daisy	+		+		
<i>Vittadinia eremaea</i>	desert New Holland daisy	+				
<i>Vittadinia gracilis</i>	woolly New Holland daisy	+	+	+	+	
<i>Waitzia acuminata</i> var. <i>acuminata</i>	orange immortelle	+		+	+	
CONVOLVULACEAE						
<i>Convolvulus erubescens</i>	Australian bindweed	+	+		+	
<i>Convolvulus remotus</i>	grassy bindweed	+	+		+	
CRASSULACEAE						
<i>Crassula colorata</i> var. <i>acuminata</i>	dense crassula	+		+	+	
<i>Crassula colorata</i> var. <i>colorata</i>	dense crassula	+		+		
<i>Crassula exserta</i>	large-fruit crassula			+		
<i>Crassula peduncularis</i>	purple crassula	+				
<i>Crassula sieberiana</i> ssp. <i>tetramera</i>	Australian stonecrop	+		+	+	+
CRUCIFERAE						
* <i>Alyssum linifolium</i>	flax-leaf alyssum	+		+		
<i>Arabidella trisecta</i>	shrubby cress	+				
* <i>Brassica tournefortii</i>	wild turnip	+	+	+	+	
* <i>Carrichtera annua</i>	Ward's weed	+	+	+	+	+
<i>Harmsiodoxa blennodioides</i>	hairy-pod cress	+				
<i>Harmsiodoxa brevipes</i> var. <i>brevipes</i>	short cress	+				
* <i>Hymenolobus procumbens</i>	oval purse	+				
<i>Lepidium oxytrichum</i>	green peppergrass	+			+	
<i>Lepidium papillosum</i>	warty peppergrass	+			+	
<i>Lepidium phlebopetalum</i>	Veined Peppergrass	+				

³² As *Gnephosis skirrophora* in Robinson et al. (1989)

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<i>Lepidium rotundum</i>	veined peppergrass	+				
<i>Menkea australis</i>	fairy spectacles	+				
* <i>Rapistrum rugosum</i> ssp. <i>rugosum</i>	turnip weed	+				
<i>Scambopus curvipes</i>		+				
* <i>Sisymbrium erysimoides</i>	smooth mustard	+	+	+	+	+
* <i>Sisymbrium irio</i>	London mustard	+				+
* <i>Sisymbrium orientale</i>	Indian hedge mustard	+				+
<i>Stenopetalum lineare</i>	narrow thread-petal	+		+		
<i>Stenopetalum sphaerocarpum</i>	round-fruit thread-petal	+		+		
CURCUBITACEAE						
* <i>Citrullus lanatus</i>	bitter melon	+				
* <i>Cucumis myriocarpus</i>	paddy melon	+			+	
CUPRESSACEAE						
<i>Callitris glaucophylla</i>	white cypress-pine	+	+		+	
<i>Callitris preissii</i>	southern cypress pine	+	+	+	+	
<i>Callitris verrucosa</i>	scrub cypress pine	+	+	+	+	
CYPERACEAE						
<i>Cyperus gymnocaulos</i>	spiny flat-sedge	+			+	
<i>Cyperus lhotskyanus</i>		+			+	
<i>Gahnia lanigera</i>	black grass saw-sedge	+		+	+	
<i>Isolepis australiensis</i>	southern club-rush					
<i>Isolepis congrua</i>	slender club-rush	+				
<i>Isolepis hookeriana</i>	grassy club-rush	+			+	
<i>Isolepis inundata</i>	swamp club-rush	+				
<i>Isolepis marginata</i>	little club-rush			+		
<i>Isolepis platycarpa</i>	flat-fruit club-rush	+				
<i>Lepidosperma</i> aff. <i>congestum</i>				+	+	
<i>Lepidosperma viscidum</i>	sticky sword-sedge	+		+		
<i>Schoenus racemosus</i>	sandhill bog-rush			+		
<i>Schoenus sculptus</i>	gimlet bog-rush	+				
<i>Schoenus subaphyllus</i>	desert bog-rush	+	+	+		
DILENIACEAE						
<i>Hibbertia riparia</i>	guinea-flower	+	+	+	+	

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<i>Hibbertia virgata</i>	twiggy guinea-flower	+		+	+	
DROSERACEAE						
<i>Drosera macrantha</i> ssp. <i>planchonii</i>	climbing sundew	+				
EHRETIACEAE						
<i>Halgania andromedifolia</i>	scented blue-flower			+		
<i>Halgania cyanea</i>	rough blue-flower	+	+	+	+	+
EPACRIDACEAE						
<i>Acrotriche patula</i>	prickly ground-berry			+		
<i>Astroloma conostephioides</i>	flame heath			+		
<i>Astroloma humifusum</i>	cranberry heath	+	+		+	+
<i>Leucopogon cordifolius</i>	heart-leaf beard-heath	+	+	+	+	
EUPHORBIACEAE						
<i>Adriana hookeri</i>	mallee bitter-bush	+				
<i>Adriana klotzschii</i>	coast bitter-bush	+			+	
<i>Bertya mitchellii</i>	Mitchell's bertya	+		+		
<i>Beyeria lechenaultii</i>	pale turpentine bush	+	+	+	+	
<i>Beyeria opaca</i>	dark turpentine bush		+			
<i>Euphorbia drummondii</i>	caustic weed	+	+	+	+	
<i>Euphorbia stevenii</i>	bottletree spurge		+			
<i>Euphorbia tannensis</i> ssp. <i>eremophila</i>	desert spurge	+	+	+	+	
* <i>Euphorbia terracina</i>	false caper	+				
<i>Phyllanthus fuernrohrrii</i>	sand spurge		+			
<i>Poranthera microphylla</i>	small poranthera	+		+		
FRANKENIACEAE						
<i>Frankenia pauciflora</i> var. <i>fruticulosa</i>		+	+		+	
<i>Frankenia serpyllifolia</i>	thyme sea-heath	+	+	+	+	
FUMARIACEAE						
* <i>Fumaria densiflora</i>	dense fumitory	+				
GENTIANACEAE						
* <i>Centaurium tenuiflorum</i>	branched centaury	+			+	
GERANIACEAE						
* <i>Erodium aureum</i>		+			+	
* <i>Erodium cicutarium</i>	cut-leaf heron's-bill	+		+	+	

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Erodium crinitum</i>	blue heron's-bill	+	+	+	+	
<i>Erodium cygnorum</i> ssp. <i>cygnorum</i>	blue heron's-bill	+	+		+	
<i>Erodium cygnorum</i> ssp. <i>glandulosum</i>	clammy heron's-bill	+		+	+	
<i>Geranium retrorsum</i>	grassland geranium	+			+	
<i>Geranium solanderi</i> var. <i>solanderi</i>	austral geranium	+			+	
<i>Pelargonium australe</i>	Australian pelargonium	+				
GOODENIACEAE						
<i>Dampiera dysantha</i>	shrubby dampiera	+			+	
<i>Dampiera rosmarinifolia</i>	rosemary dampiera	+	+	+		
<i>Goodenia berardiana</i>	split-end goodenia	+			+	
<i>Goodenia calcarata</i>	streaked goodenia	+				
<i>Goodenia cycloptera</i>	serrated goodenia	+			+	
<i>Goodenia fascicularis</i>	silky goodenia	+				
<i>Goodenia glabra</i>	smooth goodenia	+			+	+
<i>Goodenia havilandii</i>	hill goodenia	+			+	
<i>Goodenia heterochila</i>	serrated goodenia	+				
<i>Goodenia occidentalis</i>		+				
<i>Goodenia pinnatifida</i>	cut-leaf goodenia	+		+	+	
<i>Goodenia pusilliflora</i>	small-flower goodenia	+		+	+	
<i>Goodenia robusta</i>	woolly goodenia	+		+	+	
<i>Goodenia varia</i>	sticky goodenia	+	+	+	+	
<i>Goodenia willisiana</i>	silver goodenia			+		
<i>Lechenaultia divaricata</i>	tangled lechenaultia	+				
<i>Scaevola humilis</i>	inland fanflower	+ ³³	+	+	+	
<i>Scaevola spinescens</i>	spiny fanflower	+	+	+	+	
<i>Velleia arguta</i>	toothed velleia	+		+	+	+
<i>Velleia cynopotamica</i>		+				
<i>Velleia paradoxa</i>	spur velleia	+				
GRAMINEAE						
<i>Agrostis aemula</i>	blown-grass	+			+	

³³ As *Scaevola aemula* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Agrostis avenacea</i> var. <i>avenacea</i>	common blown-grass	+				
* <i>Aira caryophyllea</i>	silvery hair-grass	+				
<i>Aristida contorta</i>	curly wire-grass	+	+	+	+	
<i>Amphipogon caricinus</i> var. <i>caricinus</i>	long grey-beard grass		+	+		
* <i>Avellinia michelii</i>	avellinia	+		+	+	
* <i>Avena barbata</i>	bearded oat	+	+	+	+	
* <i>Avena fatua</i>	wild oat	+		+		
* <i>Briza minor</i>	lesser quaking-grass	+				
<i>Bromus arenarius</i>	sand brome	+			+	
* <i>Bromus diandrus</i>	great brome	+		+		
* <i>Bromus madritensis</i>	compact brome	+				
* <i>Bromus rubens</i>	red brome	+		+	+	
* <i>Critesion murinum</i> ssp. <i>glaucum</i>	blue barley-grass	+ ³⁴				
* <i>Critesion murinum</i> ssp. <i>leporinum</i>	wall barley-grass	+ ³⁵	+			
<i>Cymbopogon ambiguus</i>	lemon-grass	+	+			
<i>Cymbopogon oblectus</i>	silky-head lemon-grass	+			+	
<i>Danthonia caespitosa</i>	common wallaby-grass	+	+	+	+	
<i>Danthonia setacea</i> var. <i>setacea</i>	small-flower wallaby-grass	+		+	+	
<i>Digitaria brownii</i>	cotton panic-grass	+	+			
* <i>Ehrharta longiflora</i>	annual veldt grass			+		
<i>Elymus scabrus</i> var. <i>scabrus</i>	native wheat-grass	+				
<i>Enneapogon avenaceus</i>	common bottle-washers		+			
<i>Enteropogon acicularis</i>	umbrella grass	+				
<i>Eragrostis dielsii</i> var. <i>dielsii</i>	mulka	+	+	+		
<i>Eragrostis setifolia</i>	bristly love-grass		+			
* <i>Hordeum vulgare</i> ssp. <i>distichon</i>		+				
<i>Iseilema membranaceum</i>	small Flinders-grass	+				
* <i>Lamarckia aurea</i>	toothbrush grass	+			+	+
* <i>Lolium rigidum</i>	Wimmera ryegrass			+		
<i>Neurachne alopecuroidea</i>	fox-tail mulga-grass	+			+	

³⁴ As *Hordeum glaucum* in Robinson et al. (1989)

³⁵ As *Hordeum leporinum* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>*Parapholis incurva</i>	curly ryegrass	+		+		
<i>Paspalidium constrictum</i>	knotty-butt paspalidium	+			+	
<i>*Pentaschistis airoides</i>	false hair-grass	+		+	+	
<i>*Poa annua</i>	winter grass	+				
<i>Poa fordeana</i>	Forde's poa	+				
<i>*Polypogon viridis</i>	water bent	+				
<i>*Rostraria cristata</i>	annual cat's-tail	+ ³⁶	+	+	+	
<i>*Rostraria pumila</i>	tiny bristle-grass	+ ³⁷	+	+	+	
<i>*Schismus arabicus</i>	Arabian grass	+				
<i>*Schismus barbatus</i>	Arabian grass	+	+	+	+	
<i>Stipa acrociliata</i>	graceful spear-grass			+		
<i>Stipa drummondii</i>	cottony spear-grass	+	+	+	+	
<i>Stipa elegantissima</i>	feather spear-grass	+	+	+	+	
<i>Stipa eremophila</i>	rusty spear-grass	+		+	+	
<i>Stipa exilis</i>	heath spear-grass			+		
<i>Stipa flavescens</i>	coast spear-grass	+			+	
<i>Stipa hemipogon</i>	half-beard spear-grass	+		+	+	
<i>Stipa mollis</i>	soft spear-grass			+		
<i>Stipa nitida</i>	Balcarra spear-grass	+	+	+	+	
<i>Stipa nodosa</i>	tall spear-grass	+	+	+	+	
<i>Stipa nullanulla</i>	club spear-grass			+		
<i>Stipa pilata</i>	prickly spear-grass			+		
<i>Stipa platychaeta</i>	flat-awn spear-grass	+		+	+	
<i>Stipa puberula</i>	fine-hairy spear-grass	+		+		
<i>Stipa scabra</i> ssp. <i>scabra</i>	rough spear-grass	+	+	+	+	
<i>Stipa trichophylla</i>		+		+		
<i>Themeda triandra</i>	kangaroo grass	+			+	
<i>Triodia basedowii</i>	hard spinifex		+			
<i>Triodia irritans</i>	spinifex	+	+	+	+	
<i>Triodia lanata</i>	woolly spinifex	+		+	+	

³⁶ As **Lophochloa cristata* in Robinson et al. (1989)

³⁷ As **Lophochloa pumila* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Tripogon loliiformis</i>	five-minute grass	+	+		+	
<i>Thyridolepis mitchelliana</i>	window mulga-grass	+				
* <i>Vulpia bromoides</i>	squirrel-tail fescue	+				
* <i>Vulpia fasciculata</i>	sand fescue	+			+	
* <i>Vulpia myuros</i> forma <i>myuros</i>	rat's-tail fescue	+ ³⁸		+	+	
GYROSTEMONACEAE						
<i>Codonocarpus cotinifolius</i>	desert poplar	+				
<i>Gyrostemon australasicus</i>	buckbush wheel-fruit	+				
<i>Gyrostemon ramulosus</i>	bushy wheel-fruit	+			+	
HALORAGACEAE						
<i>Glischrocaryon aureum</i> var. <i>angustifolium</i>	golden pennants	+		+		
<i>Glischrocaryon behrii</i>	golden pennants	+		+		
<i>Glischrocaryon flavescens</i>	yellow pennants	+	+		+	
<i>Gonocarpus elatus</i>	hill raspwort	+	+	+	+	
<i>Haloragis gossei</i>	Gosse's raspwort	+				
<i>Myriophyllum verrucosum</i>	red milfoil	+				
* <i>Myrsiphyllum asparagoides</i>	bridal creeper			+		
HYDROCHARITACEAE						
<i>Ottelia ovalifolia</i>	swamp lily	+				
HYPOXIDACEAE						
<i>Hypoxis glabella</i> var. <i>glabella</i>	tiny star	+ ³⁹				
IRIDACEAE						
* <i>Gynandris setifolia</i>	thread iris			+		
JUNCACEAE						
<i>Juncus bufonius</i>	toad rush	+				
JUNCAGINACEAE						
<i>Triglochin calcitrapum</i>	spurred arrowgrass	+		+		
<i>Triglochin centrocarpum</i>	dwarf arrowgrass	+				
<i>Triglochin mucronatum</i>	prickly arrowgrass	+				
<i>Triglochin trichophorum</i>		+				

³⁸ As **Vulpia myuros* in Robinson et al. (1989)

³⁹ As *Hypoxis hookeri* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
LABIATEAE						
* <i>Marrubium vulgare</i>	horehound	+	+		+	+
<i>Prostanthera ammobila</i>	sand mintbush			+		
<i>Prostanthera aspalathoides</i>	scarlet mintbush	+				
<i>Prostanthera florifera</i>	Gawler Ranges mintbush	+	+		+	
<i>Prostanthera serpyllifolia</i> ssp. <i>microphylla</i>	small-leaf mintbush			+		
<i>Prostanthera serpyllifolia</i> ssp. <i>serpyllifolia</i>	thyme mintbush	+				
<i>Prostanthera striatiflora</i>	striated mintbush	+	+		+	
* <i>Salvia verbenaca</i> form A	wild sage	+			+	
<i>Teucrium corymbosum</i>	rock germander	+	+		+	+
<i>Teucrium racemosum</i>	grey germander		+			
<i>Teucrium sessiliflorum</i>	mallee germander	+		+	+	
<i>Westringia dampieri</i>	shore westringia		+			
<i>Westringia eremicola</i>	slender westringia	+				
<i>Westringia rigida</i>	stiff westringia	+	+	+	+	+
LAURACEAE						
<i>Cassytha glabella</i> forma <i>dispar</i>	slender dodder-laurel	+				
<i>Cassytha melantha</i>	coarse dodder-laurel	+		+	+	
<i>Cassytha peninsularis</i> var. <i>peninsularis</i>	peninsula dodder-laurel	+		+	+	
<i>Cassytha pubescens</i>	downy dodder-laurel	+				
LEGUMINOSEAE						
<i>Acacia ancistrophylla</i> var. <i>lissophylla</i>	hook-leaf wattle	+ ⁴⁰	+	+	+	
<i>Acacia aneura</i> var. <i>aneura</i>	mulga	+	+		+	
<i>Acacia beckleri</i>	Beckler's rock wattle	+	+	+	+	
<i>Acacia burkittii</i>	pin-bush wattle	+	+		+	
<i>Acacia calamifolia</i>	wallowa	+	+	+	+	
<i>Acacia colletioides</i>	veined wait-a-while	+	+			
<i>Acacia continua</i>	thorn wattle	+	+	+	+	+
<i>Acacia hakeoides</i>	hakea wattle	+				
<i>Acacia halliana</i>		+	+		+	
<i>Acacia havilandii</i>	needle wattle	+	+			

⁴⁰ As *Acacia sclerophylla* var *lissophylla* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Acacia iteaphylla</i>	Flinders Ranges wattle	+	+		+	+
<i>Acacia kempeana</i>	witchetty bush	+			+	
<i>Acacia ligulata</i>	umbrella bush	+	+	+	+	+
<i>Acacia merrallii</i>	Merrall's wattle	+	+	+		
<i>Acacia microcarpa</i>	manna wattle	+	+		+	
<i>Acacia notabilis</i>	notable wattle	+	+	+	+	
<i>Acacia nyssophylla</i>	spine bush	+	+	+	+	
<i>Acacia oswaldii</i>	umbrella wattle	+	+	+	+	+
<i>Acacia papyrocarpa</i>	western myall	+	+		+	+
<i>Acacia ramulosa</i>	horse mulga	+	+		+	
<i>Acacia rigens</i>	nealie	+	+	+	+	
<i>Acacia rupicola</i>	rock wattle	+			+	
<i>Acacia spinescens</i>	spiny wattle	+	+	+	+	
<i>Acacia tarculensis</i>	steel bush	+	+		+	+
<i>Acacia tetragonophylla</i>	dead finish	+	+		+	
<i>Acacia victoriae</i> ssp. <i>victoriae</i>	elegant wattle	+			+	
<i>Aotus subspinescens</i>	mallee aotus	+ ⁴¹	+	+	+	
<i>Bossiaea walkeri</i>	cactus pea	+	+			+
<i>Cullen australasicum</i>	tall scurf-pea	+ ⁴²				
<i>Cullen graveolens</i>	native lucerne		+			
<i>Daviesia ulicifolia</i> ssp. <i>aridicola</i>	gorse bitter-pea	+		+		
<i>Dillwynia uncinata</i>	silky parrot-pea		+	+		
<i>Eutaxia microphylla</i> var. <i>microphylla</i>	common eutaxia	+	+	+	+	
<i>Glycine canescens</i>	silky glycine	+			+	
<i>Glycine clandestina</i> var. <i>sericea</i>	twining glycine	+			+	
<i>Goodia medicaginea</i>	western golden-tip	+ ⁴³			+	
<i>Indigofera helmsii</i>	Helm's indigo	+ ⁴⁴	+		+	
<i>Indigofera georgei</i>	George's indigo	+				

⁴¹ As *Aotus ericoides* in Robinson et al. (1989)

⁴² As *Psoralea australasica* in Robinson et al. (1989)

⁴³ As *Goodia lotifolia* var. *lotifolia* in Robinson et al. (1989)

⁴⁴ As *Indigofera australis* var. *australis* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Kennedia prostrata</i>	Running postman				+	
<i>Lotus australis</i>	austral trefoil	+				
<i>Lotus cruentus</i>	red-flower lotus	+	+		+	
* <i>Medicago minima</i> var. <i>minima</i>	little medic	+	+	+	+	
* <i>Medicago polymorpha</i> var. <i>polymorpha</i>	burr-medic	+	+		+	+
* <i>Medicago truncatula</i>	barrel medic			+		
<i>Pultenaea elachista</i>	limestone bush-pea			+		
<i>Pultenaea largiflorens</i>	twiggy bush-pea	+				
<i>Senna artemisioides</i> nothosp. <i>coriacea</i>	broad-leaf desert senna	+ ⁴⁵	+	+	+	
<i>Senna artemisioides</i> ssp. <i>alicia</i>	desert senna		+			
<i>Senna artemisioides</i> ssp. <i>filifolia</i>	fine-leaf desert senna	+ ⁴⁶	+	+	+	
<i>Senna artemisioides</i> ssp. <i>petiolaris</i>	flat-stalk senna	+ ⁴⁷	+	+	+	
<i>Senna artemisioides</i> ssp. <i>zygophylla</i>	twin-leaf desert senna		+			
<i>Senna cardiosperma</i> ssp. <i>gawlerensis</i>	Gawler Ranges senna		+	+	+	
<i>Senna pleurocarpa</i> var. <i>pleurocarpa</i>	stripe-pod senna	+ ⁴⁸	+		+	+
<i>Swainsona canescens</i>	grey swainson-pea	+				
<i>Swainsona formosa</i>	Sturt pea	+ ⁴⁹			+	+
<i>Swainsona microcalyx</i>	wild violet	+				
<i>Swainsona microphylla</i>	small-leaf swainson-pea	+		+	+	
<i>Swainsona oliveri</i>		+			+	
<i>Swainsona oroboides</i> complex	variable swainson-pea	+			+	
<i>Swainsona phacoides</i>	dwarf swainson-pea	+				
<i>Templetonia battii</i>	spiny templetonia	+				
<i>Templetonia egena</i>	broombush templetonia	+	+		+	
<i>Templetonia sulcata</i>	flat mallee-pea	+			+	
* <i>Trifolium arvense</i> var. <i>arvense</i>	hare's-foot clover	+			+	

⁴⁵ As *Cassia nemophila* var. *coriacea* in Robinson et al. (1989)

⁴⁶ As *Cassia nemophila* var. *nemophila* in Robinson et al. (1989)

⁴⁷ As *Cassia nemophila* var. *platypoda* in Robinson et al. (1989)

⁴⁸ As *Cassia pleurocarpa* var. *pleurocarpa* in Robinson et al. (1989)

⁴⁹ As *Clianthus formosus* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
* <i>Trifolium tomentosum</i>	woolly clover	+				
LILIACEAE						
* <i>Asphodelus fistulosus</i>	onion weed		+			
<i>Arthropodium minus</i>	small vanilla-lily	+				
<i>Bulbine semibarbata</i>	small leek-lily	+	+		+	
<i>Burchardia umbellata</i>	milkmaids		+			
<i>Dianella revoluta</i>		+	+	+	+	
<i>Lomandra collina</i>	sand mat-rush	+ ⁵⁰	+	+	+	
<i>Lomandra effusa</i>	scented mat-rush	+	+	+	+	
<i>Lomandra leucocephala</i> ssp. <i>robusta</i>	woolly mat-rush	+	+	+	+	
<i>Thysanotus baueri</i>	mallee fringe-lily	+	+	+	+	
<i>Thysanotus patersonii</i>	twining fringe-lily	+	+	+	+	
<i>Tricoryne tenella</i>	tufted yellow rush-lily			+	+	
<i>Wurmbea centralis</i> ssp. <i>australis</i>	inland Nancy	+			+	
<i>Wurmbea dioica</i> ssp. <i>dioica</i>	early Nancy	+		+	+	
LIMONIACEAE						
* <i>Limonium lobatum</i>	winged sea-lavender	+				
LINACEAE						
<i>Linum marginale</i>	native flax	+		+	+	
LOGANIACEAE						
<i>Logania nuda</i>	leafless logania	+		+	+	
<i>Logania ovata</i>	oval-leaf logania	+	+			
LORANTHACEAE						
<i>Amyema melaleuca</i>	tea-tree mistletoe	+		+	+	
<i>Amyema miquelii</i>	box mistletoe	+			+	+
<i>Amyema miraculosum</i> ssp. <i>boormanii</i>	fleshy mistletoe	+	+			
<i>Amyema preissii</i>	wire-leaf mistletoe	+			+	
<i>Amyema quandang</i> var. <i>quandang</i>	grey mistletoe	+	+		+	
<i>Lysiana exocarpi</i> ssp. <i>exocarpi</i>	harlequin mistletoe	+	+		+	
<i>Lysiana murrayi</i>	mulga mistletoe	+			+	
MALVACEAE						

⁵⁰ As *Lomandra glauca* ssp. *collina* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Abutilon cryptopetalum</i>	hill lantern-bush	+			+	
<i>Abutilon fraseri</i>		+			+	
<i>Abutilon halophilum</i>	plains lantern-bush	+				
<i>Abutilon leucopetalum</i>	desert lantern-bush	+			+	
<i>Abutilon malvaefolium</i>	scrambling lantern-bush	+			+	
<i>Abutilon oxycarpum</i> var. <i>oxycarpum</i>	straggly lantern-bush	+				
<i>Alyogyne hakeifolia</i>	hakea-leaf hibiscus	+	+		+	
<i>Alyogyne huegelii</i>	native hibiscus	+			+	
<i>Gossypium sturtianum</i> var. <i>sturtianum</i>	Sturt's desert rose	+				
<i>Lavatera plebeia</i>	Australian hollyhock	+				
<i>Lawrencia glomerata</i>	clustered lawrencia	+				
<i>Lawrencia squamata</i>	thorny lawrencia	+	+		+	
* <i>Malva parviflora</i>	small-flower marshmallow	+				+
<i>Radyera farragei</i>	desert rose mallow	+				
<i>Sida ammophila</i>	sand sida		+			
<i>Sida calyxhymentia</i>	tall sida	+	+		+	
<i>Sida corrugata</i> var. <i>corrugata</i>	corrugated sida	+	+		+	
<i>Sida corrugata</i> var. A (N.N. Donner 7573)					+	
<i>Sida fibulifera</i>	pin sida	+	+		+	
<i>Sida intricata</i>	twiggy sida	+	+		+	
<i>Sida phaeotricha</i>	hill sida	+				
<i>Sida trichopoda</i>	high sida	+				
MARSILEACEAE						
<i>Marsilea drummondii</i>	common nardoo	+				
MYOPORACEAE						
<i>Eremophila alternifolia</i>	narrow-leaf emubush	+	+		+	
<i>Eremophila behriana</i>	rough emubush	+			+	
<i>Eremophila crassifolia</i>	thick-leaf emubush	+		+		
<i>Eremophila deserti</i>	turkey-bush	+	+			
<i>Eremophila glabra</i> ssp. <i>glabra</i>	tar bush	+	+	+	+	
<i>Eremophila interstans</i> var. <i>interstans</i>		+				
<i>Eremophila latrobei</i> ssp. <i>glabra</i>	crimson emubush	+			+	
<i>Eremophila longifolia</i>	weeping emubush	+			+	

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Eremophila oppositifolia</i> var. <i>oppositifolia</i>	opposite-leaved emubush	+	+		+	+
<i>Eremophila scoparia</i>	broom emubush	+	+	+	+	
<i>Eremophila serrulata</i>	green emubush	+	+		+	
<i>Eremophila subfloccosa</i> ssp. “ <i>imbricata</i> ”						+
<i>Eremophila weldii</i>	purple emubush			+		
<i>Myoporum brevipes</i>	warty boobialla	+	+		+	
<i>Myoporum platycarpum</i>	false sandalwood	+	+	+	+	
MYRTACEAE						
<i>Baeckea behrii</i>	silver broombush	+	+	+		
<i>Baeckea crassifolia</i>	desert baeckea	+	+	+	+	
<i>Calytrix involucrata</i>	cup fringe-myrtle	+	+	+	+	+
<i>Calytrix tetragona</i>	common fringe-myrtle	+		+		
<i>Darwinia salina</i>	salt darwinia	+ ⁵¹			+	
<i>Eucalyptus brachycalyx</i>	gilja	+	+	+	+	+
<i>Eucalyptus calcareana</i>	Nundroo mallee			+		
<i>Eucalyptus concinna</i>	Victoria Desert mallee	+	+		+	
<i>Eucalyptus cyanophylla</i>	blue-leaf mallee	+				
<i>Eucalyptus diversifolia</i>	coastal white mallee			+		
<i>Eucalyptus dumosa</i>	white mallee	+	+	+	+	
<i>Eucalyptus gracilis</i>	Yorrell	+	+	+	+	
<i>Eucalyptus incrassata</i>	ridge-fruited mallee	+	+	+	+	
<i>Eucalyptus lansdowneana</i> ssp. <i>lansdowneana</i>	crimson mallee	+			+	
<i>Eucalyptus leptophylla</i>	narrow-leaf red mallee	+ ⁵²	+	+		
<i>Eucalyptus odorata</i>	Peppermint box				+	
<i>Eucalyptus oleosa</i>	red mallee	+	+	+	+	
<i>Eucalyptus porosa</i>	mallee box	+	+	+	+	+
<i>Eucalyptus socialis</i>	beaked red mallee	+	+	+	+	+
<i>Eucalyptus trivalvis</i>	three-valve mallee	+			+	
<i>Eucalyptus yalataensis</i>	Yalata mallee	+				

⁵¹ As *Darwinia micropetala* in Robinson et al. (1989)

⁵² As *Eucalyptus foecunda* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Eucalyptus youngiana</i>	Ooldea mallee	+ ⁵³				
<i>Eucalyptus yumbarrana</i>	Yumbarra Mallee	+		+		
<i>Homoranthus wilhelmii</i>	Wilhelm's homoranthus	+ ⁵⁴	+	+		
<i>Leptospermum coriaceum</i>	dune tea-tree	+	+	+	+	
<i>Melaleuca acuminata</i>	mallee honey-myrtle	+		+		
<i>Melaleuca armillaris</i> ssp. <i>akineta</i>	needle-leaf honey-myrtle	+ ⁵⁵	+	+	+	+
<i>Melaleuca eleutherostachya</i>	hummock honey-myrtle	+		+	+	
<i>Melaleuca halmaturorum</i> ssp. <i>halmaturorum</i>	swamp paper-bark		+	+		
<i>Melaleuca lanceolata</i> ssp. <i>lanceolata</i>	dryland tea-tree	+	+	+	+	
<i>Melaleuca leiocarpa</i>	pungent honey-myrtle	+				
<i>Melaleuca oxyphylla</i>	pointed-leaf honey-myrtle	+			+	
<i>Melaleuca pauperiflora</i> ssp. <i>mutica</i>	boree	+		+		
<i>Melaleuca uncinata</i>	broombush	+	+	+	+	+
<i>Thryptomene maisonneuvei</i>	desert thryptomene	+				
<i>Thryptomene micrantha</i>	ribbed thryptomene			+		
OPHIOGLOSSACEAE						
<i>Ophioglossum lusitanicum</i>	austral adder's-tongue	+	+		+	
ORCHIDACEAE						
<i>Caladenia bicalliata</i>	western daddy-long-legs	+				
<i>Caladenia cardiochila</i>	heart-lip spider-orchid	+		+	+	
<i>Caladenia filamentosa</i> var. <i>tentaculata</i>	bluebeard orchid	+		+	+	
<i>Caladenia toxochila</i>	wispy spider-orchid	+			+	+
<i>Cyanicula deformis</i>	bow-lip spider-orchid	+ ⁵⁶			+	+
<i>Genoplesium nigricans</i>	black midge-orchid			+	+	
<i>Microtis unifolia</i> (complex)	Common Onion-orchid	+			+	
<i>Prasophyllum odoratum</i>	scented leek-orchid	+ ⁵⁷				
<i>Pterostylis boormanii</i>	Boorman's greenhood			+		

⁵³ As *Eucalyptus pyriformis* in Robinson et al. (1989)

⁵⁴ As *Verticordia wilhelmii* in Robinson et al. (1989)

⁵⁵ As *Melaleuca raphiophylla* in Robinson et al. (1989)

⁵⁶ As *Caladenia deformis* in Robinson et al. (1989)

⁵⁷ As *Prasophyllum patens* var. *patens* in Robinson et al. (1989)

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<i>Pterostylis biseta</i>	two-bristle greenhood	+				
<i>Pterostylis excelsa</i>	dryland greenhood			+		
<i>Pterostylis mutica</i>	midget greenhood	+		+	+	
<i>Pterostylis nana</i>	dwarf greenhood	+	+			+
<i>Pterostylis ovata</i>	Gawler Ranges greenhood	+			+	
<i>Pterostylis pusilla</i>	small rusty-hood			+		
<i>Pterostylis sanguinea</i>	blood greenhood	+ ⁵⁸				
<i>Thelymitra nuda</i>	scented sun-orchid	+		+	+	
OXALIDACEAE						
<i>Oxalis perennans</i>	native sorrel	+		+	+	
PAPAVERACEAE						
* <i>Papaver hybridum</i>	rough poppy	+			+	
* <i>Papaver somniferum</i> ssp. <i>setigerum</i>	small-flower opium poppy	+ ⁵⁹				
PITTOSPORACEAE						
<i>Billardiera cymosa</i>	sweet apple-berry	+		+	+	
<i>Bursaria spinosa</i>	sweet bursaria	+	+		+	
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	native apricot	+	+	+	+	
PLANTAGINACEAE						
<i>Plantago cunninghamii</i>	clay plantain		+			
<i>Plantago drummondii</i>	dark plantain	+	+	+	+	
<i>Plantago</i> sp. B	little plantain			+		
POLYGALACEAE						
<i>Comesperma scoparium</i>	broom milkwort	+		+	+	
<i>Comesperma volubile</i>	love creeper	+		+	+	
POLYGONACEAE						
* <i>Acetosa vesicaria</i>	rosy dock	+	+		+	
* <i>Emex australis</i>	three-corner jack	+				
<i>Muehlenbeckia adpressa</i>	climbing lignum	+			+	+
<i>Muehlenbeckia florulenta</i>	Lignum	+				+
<i>Polygonum plebeium</i>	small knotweed	+				

⁵⁸ As *Pterostylis vittata* in Robinson et al. (1989)

⁵⁹ As *Papaver setigerum* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Rumex brownii</i>	slender dock	+				
<i>Rumex crystallinus</i>	glistening dock	+				
<i>Rumex dumosus</i> var. <i>dumosus</i>	wiry dock	+			+	
PORTULACACEAE						
<i>Calandrinia calyptrata</i>	pink purslane	+		+	+	+
<i>Calandrinia corrigioloides</i>	strap purslane			+		
<i>Calandrinia disperma</i>	two-seed purslane	+			+	
<i>Calandrinia eremaea</i>	dryland purslane	+		+	+	+
<i>Calandrinia granulifera</i>	pigmy purslane	+		+		
<i>Calandrinia polyandra</i> var. <i>polyandra</i>	Parakeelya	+			+	
<i>Portulaca oleracea</i>	common purslane	+				
PRIMULACEAE						
* <i>Anagallis arvensis</i>	Pimpernel	+		+	+	+
PROTEACEAE						
<i>Grevillea anethifolia</i>		+ ⁶⁰	+		+	+
<i>Grevillea aspera</i>	rough grevillea	+	+		+	+
<i>Grevillea huegelii</i>	comb grevillea	+	+	+	+	
<i>Grevillea juncifolia</i>	honeysuckle grevillea	+	+	+	+	
<i>Grevillea nematophylla</i>	water bush	+				
<i>Grevillea parallelinervis</i>	Gawler Ranges grevillea	+	+		+	
<i>Grevillea pterosperma</i>	dune grevillea	+	+	+	+	
<i>Grevillea sarissa</i> ssp. <i>umbellifera</i>	desert comb grevillea	+ ⁶¹				
<i>Hakea cycloptera</i>	elm-seed hakea	+	+	+	+	
<i>Hakea francisiana</i>	bottlebrush hakea	+	+	+	+	
<i>Hakea leucoptera</i> ssp. <i>leucoptera</i>	silver needlewood	+			+	
<i>Hakea muelleriana</i>	heath needlebush	+	+			
RANUNCULACEAE						
<i>Clematis microphylla</i>	old man's beard				+	
<i>Myosurus minimus</i> var. <i>australis</i>	Mousetail	+				
<i>Ranunculus hamatosetosus</i>	hill buttercup	+				

⁶⁰ As *Grevillea biternata* in Robinson et al. (1989)

⁶¹ As *Grevillea umbellifera* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Ranunculus sessiliflorus</i> var. <i>sessiliflorus</i>	annual buttercup	+				
RHAMNACEAE						
<i>Cryptandra amara</i> var. <i>amara</i>	spiny cryptandra			+		
<i>Cryptandra amara</i> var. <i>floribunda</i>	pretty cryptandra	+ ⁶²	+	+		
<i>Cryptandra leucophracta</i>	white cryptandra	+		+	+	
<i>Cryptandra propinqua</i>	silky cryptandra			+		
<i>Pomaderris paniculosa</i> ssp. <i>paniculosa</i>	mallee pomaderris	+		+	+	
<i>Spyridium bifidum</i> var. <i>bifidum</i>	forked spyridium	+		+	+	
<i>Spyridium subochreatum</i> var. <i>subochreatum</i>	velvet spyridium			+		
<i>Spyridium tridentatum</i>	trident spyridium	+	+	+		
RUBIACEAE						
<i>Asperula conferta</i>	common woodruff	+				
<i>Galium australe</i>	tangled bedstraw				+	
<i>Galium binifolium</i>	reflexed bedstraw	+			+	
<i>Galium gaudichaudii</i>	rough bedstraw	+		+	+	
<i>Galium migrans</i>	loose bedstraw	+			+	
* <i>Galium murale</i>	small bedstraw	+		+		
<i>Opercularia scabrida</i>	stalked stinkweed	+				
<i>Opercularia turpis</i>	twiggy stinkweed	+		+	+	
<i>Pomax umbellata</i>	Pomax	+	+		+	
RUTACEAE						
<i>Boronia coerulescens</i> ssp. <i>coerulescens</i>	blue boronia	+			+	
<i>Boronia inornata</i> ssp. <i>leptophylla</i>	dryland boronia			+		
<i>Correa reflexa</i> var. <i>coriacea</i>	thick-leaf correa	+			+	
<i>Eriostemon linearis</i>	narrow-leaf wax-flower	+	+		+	
<i>Geijera linearifolia</i>	sheep bush	+	+	+	+	+
<i>Phebalium bullatum</i>	silvery phebalium	+		+	+	
SANTALACEAE						
<i>Exocarpos aphyllus</i>	leafless cherry	+	+	+	+	
<i>Exocarpos sparteus</i>	slender cherry	+				
<i>Leptomeria preissiana</i>		+				

⁶² As *Cryptandra tomentosa* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Santalum acuminatum</i>	Quandong	+	+	+	+	
<i>Santalum lanceolatum</i>	Plumbush		+			
<i>Santalum murrayanum</i>	bitter quandong	+	+	+	+	
<i>Santalum spicatum</i>	Sandalwood	+			+	
SAPINDACEAE						
<i>Dodonaea baueri</i>	crinkled hop-bush	+	+		+	
<i>Dodonaea bursariifolia</i>	small hop-bush	+		+	+	
<i>Dodonaea hexandra</i>	horned hop-bush	+	+	+	+	
<i>Dodonaea intricata</i>	Gawler Ranges hop-bush	+		+	+	
<i>Dodonaea lobulata</i>	lobed-leaf hop-bush	+	+		+	
<i>Dodonaea microzyga</i> var. <i>microzyga</i>	brilliant hop-bush	+				
<i>Dodonaea stenozyga</i>	desert hop-bush		+	+		
<i>Dodonaea viscosa</i> ssp. <i>angustissima</i>	narrow-leaf hop-bush	+	+	+	+	
<i>Dodonaea viscosa</i> ssp. <i>spatulata</i>	sticky hop-bush		+			
<i>Alectryon oleifolius</i> ssp. <i>canescens</i>	bullock bush	+ ⁶³			+	
SCROPHULARIACEAE						
<i>Glossostigma drummondii</i>	desert mud-mat	+				
<i>Glossostigma cleistanthum</i>	spoon mud-mat	+ ⁶⁴				
<i>Limosella australis</i>	Australian mudwort	+				
<i>Limosella curdieana</i>		+				
<i>Stemodia florulenta</i>	Bluerod	+ ⁶⁵				
* <i>Zaluzianskya divaricata</i>	spreading night-phlox	+				
SOLANACEAE						
<i>Anthocercis anisantha</i> ssp. <i>collina</i>	Gawler Ranges ray-flower	+			+	
<i>Duboisia hopwoodii</i>	Pituri	+	+		+	
<i>Grammosolen truncatus</i>	shrubby ray-flower	+	+	+		
<i>Lycium australe</i>	Australian boxthorn	+	+		+	+
* <i>Lycium ferocissimum</i>	African boxthorn	+		+		
* <i>Nicotiana glauca</i>	tree tobacco	+	+		+	

⁶³ As *Heterodendrum oleaefolium* in Robinson et al. (1989)

⁶⁴ As *Glossostigma* sp. A in Robinson et al. (1989)

⁶⁵ As *Morgania floribunda* in Robinson et al. (1989)

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<i>Nicotiana goodspeedii</i>	small-flower tobacco	+		+		
<i>Nicotiana maritima</i>	coast tobacco	+			+	
<i>Nicotiana occidentalis</i> ssp. <i>obliqua</i>	western tobacco	+				
<i>Nicotiana velutina</i>	velvet tobacco	+		+	+	
<i>Solanum capsiciforme</i>	capsicum kangaroo-apple	+				
<i>Solanum coactiliferum</i>	tomato-bush	+	+	+	+	
<i>Solanum ellipticum</i>	velvet potato-bush	+	+		+	
<i>Solanum esuriale</i>	Quena		+			
<i>Solanum hystrix</i>	Afghan thistle	+				
* <i>Solanum nigrum</i>	black nightshade	+	+		+	+
<i>Solanum petrophilum</i>	rock nightshade	+	+		+	
<i>Solanum simile</i>	Kangaroo apple	+			+	
<i>Solanum sturtianum</i>	Sturt's nightshade	+	+		+	
STACKHOUSIACEAE						
<i>Stackhousia muricata</i> ssp. "Perennial"(W.R.Barker 364+)	yellow candles	+ ⁶⁶			+	
STERCULIACEAE						
<i>Commersonia tatei</i>	trailing commersonia	+				
<i>Lasiopetalum behrii</i>	pink velvet-bush	+	+	+	+	
<i>Lasiopetalum discolor</i>	coast velvet-bush			+		
<i>Rulingia crauophylla</i>		+				
STYLIDIACEAE						
<i>Levenhookia dubia</i>	hairy stylewort	+				
THYMELEACEAE						
<i>Pimelea curviflora</i> var. <i>sericea</i>	curved riceflower	+			+	
<i>Pimelea micrantha</i>	silky riceflower	+ ⁶⁷		+	+	
<i>Pimelea microcephala</i> ssp. <i>microcephala</i>	shrubby riceflower	+	+	+	+	
<i>Pimelea imbricata</i> ssp. <i>petraea</i>		+ ⁶⁸			+	
<i>Pimelea petrophila</i>	rock riceflower	+	+		+	

⁶⁶ As *Stackhousia muricata* in Robinson et al. (1989)

⁶⁷ As *Pimelea curvifolia* ssp. *micrantha* in Robinson et al. (1989)

⁶⁸ As *Pimelea octophylla* ssp. *petraea* in Robinson et al. (1989)

Scientific Name	Common Name	Robinson <i>et al.</i> (1988)	Pastoral Assessment	NW Eyre Peninsula (1999)	Vegetation mapping (1985, 2000) quadrat	Vegetation mapping (2000) opportune
<i>Pimelea simplex</i> ssp. <i>continua</i>	desert riceflower	+				
<i>Pimelea simplex</i> ssp. <i>simplex</i>	desert riceflower	+	+	+	+	
<i>Pimelea stricta</i>	erect riceflower	+				
<i>Pimelea trichostachya</i>	spiked riceflower	+	+		+	
UMBELLIFERAE						
<i>Apium annuum</i>	annual celery	+			+	+
* <i>Bupleurum semicompositum</i>	hare's ear	+		+	+	
* <i>Conium maculatum</i>	Hemlock	+				
<i>Daucus glochidiatus</i>	native carrot	+		+	+	
<i>Hydrocotyle callicarpa</i>	tiny pennywort	+				
<i>Hydrocotyle capillaris</i>	thread pennywort	+				
<i>Hydrocotyle pilifera</i> var. <i>glabrata</i>	buttercup pennywort	+		+	+	
<i>Hydrocotyle rugulosa</i>	mallee pennywort	+		+		
<i>Hydrocotyle trachycarpa</i>	wild parsley	+			+	
<i>Trachymene cyanopetala</i>	purple trachymene	+		+		
<i>Trachymene ornata</i> var. <i>ornata</i>	sponge-fruit trachymene	+		+	+	
<i>Trachymene pilosa</i>	dwarf trachymene	+		+		
<i>Uldinia ceratocarpa</i>	creeping carrot	+		+		
URTICACEAE						
<i>Parietaria cardiostegia</i>	mallee smooth-nettle			+		
<i>Parietaria debilis</i>	smooth-nettle	+			+	
* <i>Urtica urens</i>	stinging nettle					+
VERBENACEAE						
* <i>Verbena supina</i>	trailing verbena	+				
VIOLACEAE						
<i>Hybanthus floribundus</i> ssp. <i>floribundus</i>	shrub violet	+		+		
<i>Hybanthus monopetalus</i>	slender violet	+			+	
ZANNICELLIACEAE						
<i>Lepilaena australis</i>	austral water-mat	+			+	
ZYGOPHYLLACEAE						
<i>Nitraria billardierei</i>	nitre-bush	+			+	
<i>Zygophyllum ammophilum</i>	sand twinleaf	+	+	+	+	
<i>Zygophyllum angustifolium</i>	scrambling twinleaf		+	+		

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<i>Zygophyllum apiculatum</i>	pointed twinleaf	+	+	+	+	
<i>Zygophyllum aurantiacum</i> ssp. <i>aurantiacum</i>	shrubby twinleaf	+	+	+	+	
<i>Zygophyllum aurantiacum</i> ssp. " <i>simplicifolium</i> "				+		
<i>Zygophyllum crenatum</i>	notched twinleaf	+	+		+	
<i>Zygophyllum eremaeum</i>	pale-flower twinleaf	+	+		+	
<i>Zygophyllum glaucum</i>	pale twinleaf	+	+	+		
<i>Zygophyllum howittii</i>	clasping twinleaf	+				
<i>Zygophyllum iodocarpum</i>	violet twinleaf	+	+		+	
<i>Zygophyllum ovatum</i>	dwarf twinleaf	+	+	+	+	
<i>Zygophyllum simile</i>	white twinleaf			+		