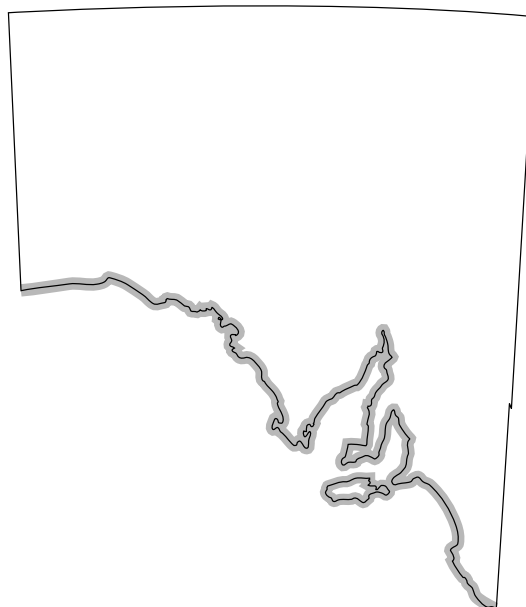

A BIOLOGICAL SURVEY OF THE SOUTH AUSTRALIAN COASTAL DUNE AND CLIFFTOP VEGETATION 1996 - 1998



Author

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1999

The Biological Survey of the South Australian Coastal Dune and Cliff-top Vegetation was carried out with the assistance of funds made available by the Commonwealth of Australia under the 1994-96 National Estate Grants Programs and the State Government of South Australia.

The views and opinions expressed in this report are those of the author and do not necessarily represent the views or policies of the Australian Heritage Commission or the State Government of South Australia.

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Leucopogon parviflorus shrubland on quadrant DES00204 (KIS16716) Kangaroo Island

Foreword

The survey was in response to considerable demand for information by local government state government and the community, particularly for rehabilitating degraded plant communities. This report provides information that will help ensure that South Australia's coastal dune and clifftop plant communities can be restored and maintained in their natural state.

The report also identifies some of the threats to our coastal plant communities from introduced plants and animals. Government and the community have a shared responsibility to manage these threats.

The *Coastal Dune and Clifftop Vegetation Survey* is a component 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 remaining vascular plants and vertebrate fauna of the State and to encourage their conservation.

Over the last 15 years there has been a strong commitment to the Biological Survey by government and an impressive dedication from hundreds of volunteer biologists.

It is anticipated that the Biological Survey will achieve complete statewide coverage by 2015 and will be an achievement of 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.



HON. DOROTHY KOTZ MP
MINISTER FOR ENVIRONMENT AND HERITAGE

Abstract

The Coastal Dune and Clifftop Survey was undertaken over 3 years along the coast of South Australia. The survey was funded by the National Estate Grants Program and conducted and supported by the Coast and Marine Section of the Department for Environment, Heritage and Aboriginal Affairs.

A total of 849 quadrats were established between October 1995 and November 1997 of which 845 were included in the analysis.

Over 22 316 plant records were added to the Environmental Data Base of South Australia (EDBSA) and 6741 specimens lodged with the State Herbarium of South Australia.

A total of 1492 plant species were recorded of which 224 were rated as of conservation significance or possible conservation significance and of which 30 have Australian ratings.

The survey data were incorporated into the Biological Survey Database which is a compilation of numerous surveys conducted by South Australian government departments and other organisations and is one of the databases in the EDBSA. All surveys used standardised survey methodology and techniques.

The analysis resulted in the description of 52 floristically distinct plant communities which were both ecologically and geographically meaningful and reflected both ecological gradients and environmental differences.

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1 Introduction

BACKGROUND

In 1994 a priority for South Australian heritage was the identification, assessment and documentation of significant natural places in coastal and in-shore marine areas. The Coastal Management Branch (now Coast and Marine Section) of the South Australian Department of Environment and Natural Resources (now Department for Environment, Heritage and Aboriginal Affairs (DEHAA)) applied for and received a grant from the Australian Heritage Commission's National Estate Grant Program (NEGP) to finance the Coastal Dune and Clifftop Vegetation Survey. The NEGP was the Commonwealth's main program of financial assistance for Australia's natural areas and cultural places that have heritage significance, and helped to identify, document and conserve the National Estate, and educate people about its value.

The information gathered by this project will be used to provide better advice to the government and local communities on conservation, education, rehabilitation and management of the coastal dune and clifftop plant communities and to provide conservation and protection guidelines.

This survey was conducted as part of the Biological Survey of South Australia which was established under the auspices of the Biological Survey Coordinating Committee. Since 1971 the Government has been conducting systematic biological surveys of the vegetation and vertebrate fauna of large regions of the State. These surveys are providing a broad baseline inventory of the range of biological variation across the State. The information collated will improve long-term natural resource management including revegetation programs along the coast.

Biological surveys which included sites within the coastal area are: South East Coast (1982–1983), Nullarbor (1984), Mount Lofty Ranges (1985), Kangaroo Island (1989–1990), Murray Mallee (1990–1991), Yorke Peninsula (1994), Southern Eyre Peninsula (1995), Northern Spencer Gulf (1996) and Northern Adelaide Plains (1996). A number of smaller scale surveys using the same methods have also been conducted by various government and non-government organisations

The South Australian Biological Survey Coordinating Committee comprises representatives from the South Australian Museum, Planning SA, DEHAA and Primary Industries and Resources South Australia. These surveys are producing a comprehensive Biological Survey Database with information from a large area of the State.

The Coastal Dune and Clifftop Vegetation Survey was conducted over a period of three years with two progress reports produced in 1996 and 1997. The objectives of the survey and the extent of information gathered are introduced in this chapter (Chapter 1). This, the final report on the project, includes all vegetation information gathered within an area delineated as the coastal zone (Figure 1).

The coast of South Australia comprises rocky clifftops, sandy coastal dunes and dunefields, tidal and salt flats and freshwater swamps. Coastal types included in this survey are the clifftops and dunefields. The physical environmental parameters effecting habitat variations within clifftop and dunefield plant communities which occur along the coast are discussed in part 1 of Chapter 2.

The vegetation of the coastal area shows considerable diversity across the State but there are plant species that are common throughout. The commonality of coastal plant species is due to the unique environmental parameters of coastal areas as well as general establishment factors such as soil nutrient levels and degree of slope. These interrelating parameters limit the establishment of plant species and influence structure of plant communities in the coastal area, and are discussed in part 2 of Chapter 2.

Chapter 3 discusses the methodology of the survey and analyses.

Chapter 4 documents the results of both the survey and the analyses and includes a discussion of disturbance threats to coastal vegetation.

The conclusions of the survey and analyses and recommendations for future study are outlined in Chapter 5.

All definition of terms not in everyday use are included in Appendix 1 and all local names may be found on the relevant 1:100 000 and 1:50 000 topographical maps series.

OBJECTIVES

The aim of the survey was to describe and measure the structure and composition of coastal dune and clifftop plant communities and their relationship to regional and environmental factors.

The specific objectives of the project were to:

1. conduct a systematic, site-based survey of coastal dune and clifftop vegetation throughout South Australia

2. contribute new information to the State's Biological Survey Database, one of the databases within the Environmental Data Base of South Australia
3. survey and document flora and physical aspects of individual areas of coastal vegetation
4. describe and measure the structure and composition of coastal dune and clifftop plant communities and their relationship to regional and environmental factors
5. identify sites, plants and communities of conservation significance
6. identify long term monitoring sites
7. identify disturbance threats to coastal plant communities
8. comply with standard procedures of methodology adopted by the Biological Survey of South Australia.

THE SURVEY AREA

The South Australian mainland coastline is 3700 km in length (Coast and Marine Section) and Kangaroo Island's coastline is 457 km long (Short and Fotheringham 1986). The survey area extends along the entire length of the coastline but excludes tidal and salt flats. The distance inland from the coastline to be included in the survey was defined by the extent of coastal influences. That distance varies considerably, but is generally considered to be within one kilometre of the coast. The distance within which quadrats were located was determined for each mapsheet (Appendix 4). Quadrats were generally located within one km of the coastline but local coastal factors determined the final location.

The coastline has been divided into Coast Protection Districts which include: Eyre, Spencer, Yorke, Fleurieu, Metropolitan, South East and Kangaroo Island. Initially it was intended to use these boundaries for analyses but the boundaries of the 14 geomorphic regions as defined by Fotheringham (1998) proved to be of more use (Figure 3).

PREVIOUS STUDIES AND SURVEYS

Existing information on the relevant coastal areas of the South Australian coastline was collated at each stage of the survey. There were numerous reports for both small and large regional areas of the coast. The contents varied in both detail and direction. All reports discussed below and those with relevant information are included in the References and Bibliography.

South Australian Coast Protection Board

Coast Protection District Study Reports

Metropolitan	(PG Pak-Poy And Associates, 1974)
Fleurieu	(Llewelyn-Davies Kinhill Pty Ltd et al 1977)
Yorke	(Wynne A.W. 1980)
South-East	(Urban and Environmental Planning Group 1982)
Kangaroo Island	(G.E.Edwards 1987)

Coast Protection District Management Plans

Metropolitan	1985
Yorke	1985
South-East	1986
Fleurieu	1988

General reports

Numerous reports (see References and Bibliography) preceding the study reports and management plans were commissioned by the Coast Protection Board or undertaken by the Coastal and Marine Section of DEHAA.

National Parks and Wildlife Service management plans

There are few reserves which do not have management plans for their areas.

Other

Laut et al (1977) mapped the whole of South Australia into environmental associations using satellite imagery. Appendix 2 summarises the relevant environmental regions and associations along the length of the coastline of this survey. The vegetation formations that Laut et al (1977) defined on coastal land units are:

- plain – major chenopod shrubland with minor open scrub and low woodland
- dune – open heath, open scrub
- cliff – low open shrubland.

Specht (1972) described a complex of small ecosystems for coastal areas which show a recurring pattern of topography, soils and vegetation and grouped them under dune, cliff, marine–meadow and salt-marsh land systems. An environmental gradient inland is related to decreasing tolerance to salt and wind shear.

Vegetation surveys

Vegetation surveys of the different areas of the State differentiated many landforms in the coastal complex. Those relevant to the present study include:

- calcrete, limestone and granite cliffs
- clifftops (extending into plains) overlain by shallow to skeletal calcareous sands
- calcareous aeolian dune-ridges and/or fields.

Within these landforms there were generally:

- frontal dune grasslands and low open shrublands
- hind dune shrublands
- interdune depressions grass, sedge and herblands
- inland tall shrublands
- inland sand–heath shrubland
- coastal cliffs shrublands, grass, sedge and herblands.

Biological surveys

Biological surveys which have been undertaken since 1971 as part of the Biological Survey of South Australia and which have quadrats within the coastal area as defined for this study (Figure 1) are listed in Table 1. Further information is included in Chapter 4.

Figure
Insert
P 3

Table 1 Previous surveys

Sur no.	Survey name	Dates (if known)	Survey type
4	South East Coast	Feb 82 – Jul 87	B
5	Mt Lofty	Mar 86	V
13	Innes National Park	Oct 76 – July 77	B
14	Nullarbor	84	B
15	Kangaroo Island	Nov 89–90	B
16	Murray Mallee	1990 –91	B
27	Lake Newland Conservation Park	Sep–Oct 91	B
29	South East Coast	1982–83, 1994?	V
30	Eyre Peninsula	Jan 78 – Jan 80	V
42	Mount Lofty Ranges	1985	
46	Temperate Grasslands		V
49	Mid North		V
52	Mt Lofty Emu-Wren		B
63	Yorke Peninsula	Oct 94	V
65	Noarlunga Christie Crk		V
70	Noarlunga Field Crk		V
71	Venus Bay	?	B
72	Sooty Dunnart		
	Kangaroo Island		B
79	Lincoln National Park		V
80	Southern Eyre Penin.	Oct 95	V
87	Northern Spencer Gulf	Oct 96	V
88	Northern Adelaide Plains	Oct 96	V
93	Fleurieu Roadside		V

(Sur = survey, V = vegetation, B = biological includes both vertebrate and vegetation)

A previously published survey of the South Australia and Western Australia Nullarbor region (McKenzie and Robinson 1987) was undertaken in 1984 by the South Australian National Parks and Wildlife Service (in the then Department of Environment and Planning) and the Western Australian Department of Conservation and Land Management.

The report differentiated between coastal shrublands, coastal dunes, coastal woodlands and cliffs. Only three sites are within the area of the current survey of the South Australian coastline. These are Merdayerrah, Koonalda and Yalata. Both Koonalda and Yalata sites were differentiated as cliff vegetation association with a distance of 1–4 km from the coastline. The Merdayerrah site at 2 km from the coast is classified as coastal woodland.

2 Habitat

PHYSICAL

The coast is a complex combination of individual landforms which are part of a pattern producing rocky, sandy or muddy parts of the coastline. The origin of the rocks, how they were created and the shapes they combine into give us the many variations of clifftops along the coast. The direction and strength of wind and waves together with the surface being overblown determines the depth, width and shape of the dunefield.

GEOLOGY AND GEOMORPHOLOGY

Geologically, South Australia can be divided into two broad areas. Spencer Gulf, along the Torrens Lineament, separates the eastern Adelaide Geosyncline and Murrumbidgee gulf from the western Stuart Shelf, part of the Gawler Block (Gostin et al 1984). These two broad areas have either continued to erode or marine transgressions have deposited subsequent strata on top of them.

Geomorphologically, Taylor (1994) divides Australia into two broad areas with the Tasman line separating the older western side (west of Gulf St Vincent and through the centre of Kangaroo Island) from the younger higher relief eastern (includes Mt Lofty east and south Kangaroo Island). He then divides the South Australian coast into four major landscape elements, the Nullarbor Plain, Eyre Peninsula, Gulfs and Ranges, and the Murray Lowlands with tectonic provinces of Eucla, Gawler (includes Yorke Peninsula), Adelaide and Otway.

A simplified map of the geology of part of South Australia is shown in Figure 2. The geology of the coast includes the rock strata discussed below (and see Table 2).

Precambrian — crystalline rocks (metasediments)
> 575 mega-anna (Ma)

The Precambrian metasediments are the oldest rock strata recorded along the South Australian coastline. They are part of the Gawler Craton or block and the Adelaide Geosyncline which is the backbone to the Mt Lofty Ranges. These rocks underlay and are the base for all subsequent strata. They are very resistant to erosion and form the high steep cliffs of northern Kangaroo Island (eg west of Cape Forbin) and the Fleurieu Peninsula and are the basis of most of the headlands of the Eyre Peninsula.

Late Cambrian — granite
570–500 Ma

Intrusions of plutonic granites are exposed at various

locations along the coast eg Cape Willoughby and Kirkpatrick Point on Kangaroo Island and Granite Island off the Fleurieu coast.

Cambrian — sandstone
570–500 Ma

Sedimentary rocks deposited in a shallow sea and subsequently metamorphosed are exposed in cliffs eg Cape Cassini. Palaeozoic rocks are on the surface in the more exposed southern parts of Gulf St Vincent and of Spencer Gulf.

Permian — till
280–225 Ma

Glaciers from the direction of Bass Strait and Tasmania left a clayey till over southern Yorke Peninsula which is the base of the swamps and lakes that abound in this area.

The surface of part of eastern Eyre Peninsula, Yorke Peninsula and Mt Lofty has been exposed since the Permian with no further depositions.

Tertiary — limestones
65–1.8 Ma

During the Tertiary (Oligocene–Middle Miocene) the Murray Basin encompassed the South East and Eucla (Officer) Basin the Nullarbor (Quilty 1994). The Tertiary limestones extend from the Western Australian border to Twin Rocks at the Head of the Bight forming the Nullarbor cliffs which have a uniform height and no beaches and are precipitous. Similar cliffs are formed as headlands in the Mt Gambier limestones in the South East south of Cape Banks (Environmental Research and Planning Group 1980). Tertiary sediments are also on Kangaroo Island, eg Kingscote and Vivonne Bay, and are exposed in the cliffs south of Ardrossan on Yorke Peninsula.

Cainozoic outwash cliffs of uncertain age on Eyre and Yorke peninsulas are fluvial deposits from inland areas during the Tertiary and Quaternary (Short et al 1986).

Pleistocene — dune calcarenite
1.8 Ma – 10 000 years

During the Pleistocene, varying depths of marine sediments were deposited as barriers by rising sea levels on the older geological surfaces creating sand ramps, thin veneers of calcarenite cappings and dunefields. The fluctuating sea levels of the glacial/interglacial cycles

during this epoch resulted in many periods of barrier formation. In the South East, due to concurrent uplift, the barriers created at each stillstand have formed a sequence from far inland in the Murravian Gulf to the existing coastline (and on the current sea floor). However, on Eyre Peninsula the subsequent barriers have accumulated on top of Precambrian metasediments and then on top of each other to form a complex of calcarenite resulting in steep cliffs with sand ramps still in evidence in some areas and areas of stranded cliff-top dune fields.

In the Pleistocene these extensive coastal dunes were formed during the high sea level events and stratified during low sea levels. These have since consolidated, with varying degrees of cementation, into dune calcarenite (dunerock or aeolianite). The dune calcarenite where it is exposed to wave action has eroded into varying types of cliffs which in some areas has exposed the more resistant crystalline base of granite or gneiss, forming shore platforms. These cliffs are now being either deflated or are stable according to the degree of wave action on the coast, and may be currently eroding or have formed stranded cliff-lines protected by beaches or prograding shorelines.

The calcarenite cliffs with or without Holocene cliff-top dunes are located in:

- Head of Bight area
- the southern and western coasts of Eyre Peninsula
- the south coast of Kangaroo Island
- the South East coast south of Robe.

Many headlands along these sections of the coast are Pleistocene calcarenite underlain by Precambrian metasediments. They also form barriers which have been overlain by Holocene barriers and are located in embayments bordered by pre-Quaternary bedrock headlands.

Yorke Peninsula and the western side of Spencer Gulf were remote from the low sea level shorelines of the glacial periods and the longitudinal dunes at right angles to the coastline are of continental origin. Pleistocene–Holocene inland longitudinal dunes are truncated on the eastern Eyre Peninsula and Yorke Peninsula (Parker et al 1985).

Holocene or Recent — sediments

10 000 year – present

The rising sea levels during the Holocene from the last glacial of the Pleistocene created the extensive shifting dunefields along much of the South Australian coastline. In the early Holocene during sea level fluctuations areas of the existing calcarenite cliffs were partially buried by sand to varying depths. Some of these sand ramps and dunefields were later eroded leaving remnant cliff-top dunes. Others remain as the extensive dunefields in areas along the coast. Sand supply to many of these is now negligible resulting in deflation and erosion. However, some dunefields, including the Merdayerrah sandpatch near the border and the Yalata sandhills at the Head of the Bight, are still being supplied by marine sediment. The beaches, beach ridges, unconsolidated sand dunes and

tidal muds found along the coast today are composed of Holocene sediments.

Sandy shorelines are formed from Holocene sediments and may be currently eroding or prograding depending on the location along the coast and such factors as breaker wave height, beach type and orientation to onshore winds.

Table 2 Simplified geological time scale
(adapted from Short et al 1986)

Era	Period	Epoch	Age of base
Cainozoic	Quaternary	Recent or Holocene	10 000 years
		Pleistocene	1.8 Ma
	Tertiary	Pliocene	5 Ma
		Miocene	23.5 Ma
		Oligocene	38.5 Ma
		Eocene	53.5 Ma
Mesozoic	Cretaceous	Palaeocene	65 Ma
			135 Ma
		Jurassic	190 Ma
		Triassic	225 Ma
Palaeozoic	Permian		280 Ma
		Carboniferous	345 Ma
		Devonian	395 Ma
		Silurian	430 Ma
		Ordovician	500 Ma
		Cambrian	570 Ma
		Adelaidean	?800–1100 Ma
Proterozoic	(Precambrian)	Carpentarian	1800 Ma
		Early Proterozoic	2500 Ma
Archaean			

Formation of earth’s crust about 4600 Ma

Ma (mega-anna) = age in millions of years

GEOMORPHIC REGIONS

Fotheringham (1998) divided the South Australian coastline into 14 distinct geomorphic regions (Figure 3). These regions were used as the basis for further analysis of the survey data. The regions are presented here in the same order as the analysis utilised, from west to east along the coast (Figures 4–17).

Nullarbor: WA–SA border to Twin Rocks (Figure 4)

Length	209 km
Wave energy	high
Geological province	Eucla Basin
Description	This region is dominated by the Nullarbor cliffs, which extend unbroken for 179 km. The cliffs which are composed of Tertiary limestone, average 70 m in height. They are fronted by a beach and dune calcarenite ramp mantled by drifting sand sheets known as the Merdayerrah Sandpatch 30 km from the SA–WA border.

Head of the Bight: Twin Rocks to Fowlers Bay (Figure 5)

Length	122 km
Wave energy	high
Geological province	Eucla Basin
Description	This curving, very uniform region is dominated by beach and semi-stable to unstable dune barrier deposits regularly interrupted by dune calcarenite cliffs, shore platforms and reefs. A major feature of the region is the large sand drifts in particular the Yalata dunes which extend 13 km inland.

Western Eyre Peninsula: Cape Adieu to Pt Drummond (Figure 6)

Length	695 km
Wave energy	generally high, low in bays and between Point Brown (Streaky Bay) and Pt Peter (Tourville Bay)
Geological province	Polda Basin, Gawler Block
Description	This generally crenulate region is dominated by dune calcarenite overlying granite, forming cliffs, headlands, reefs and shore platforms. Holocene beaches and dunes alternate with Pleistocene calcarenite cliffs throughout the region. Numerous bays and embayments occur and some of these provide extensive tidal habitat for mangrove and saltmarsh communities. The most western mangroves in SA occur at Tourville Bay. Major features of the region are the almost straight 81 km sections of cliffs on either side of Elliston, the 38 km beach, dune barrier and Lake Newland complex at Anxious Bay, the two enclosed bays, Venus and Baird Bay, and the prominent headlands between Pt Peter and Cape Adieu.

Southern Eyre Peninsula: Pt Drummond to Northern Tumby Bay (Figure 7)

Length	431 km
Wave energy	mainly high but moderate and low in the gulf and deep embayments
Geological province	Gawler Block
Description	This variable region has sections of coast oriented to all points of the compass. Three subregions can be identified. (1) Overall orientation of the coast from Tumby Bay to Cape Catastrophe is easterly and is therefore sheltered. Two headlands and five embayments occur along this subregion and a number of creek outlets including the Tod River. Beaches and foredunes occupy the embayments, hard crystalline bedrock is exposed at the base of low cliffs at the headlands. Extensive tidal flats occur within Tumby Bay. Low cliffs and shore platforms form the shoreline from Cape Donington to Cape Catastrophe. (2) Overall orientation of the coast from Cape Catastrophe to Point Sir Isaac is south west and therefore exposed. High calcarenite cliffs overlying crystalline basement rock and massive dune transgressions and high energy beaches characterise this coastal section. (3) Within Coffin Bay low calcarenite cliffs, shore platforms, recurved spits and multiple foredune ridges form the coast. North of the Coffin Bay cliffs, low to moderate energy beaches and unstable dunes are characteristic.

Eastern Eyre Peninsula: Northern Tumby Bay to Cowell (Figure 8).

Length	110 km
Wave energy	moderate
Geological province	Gawler Block
Description	At Franklin Harbour the bay is enclosed by foredune ridge barriers and recurved spits. Extensive outwash sediments capped in places by linear dunes form low cliffs and provide material for shingle ridges. Beaches and foredune ridges occupy each of the ten embayments along this region. A number of creeks discharge along the coast. Tidal flats form significant habitat for saltmarshes and mangroves in Franklin Harbour and Arno Bay

Upper Spencer Gulf: Cowell to Pt Broughton (Figure 9).

Length	380 km
Wave energy	low
Geological province	Stuart Shelf, Pirie – Torrens Basin, Gawler Block
Description	Large intertidal mudflats, extensive mangrove, saltmarsh, beach ridge and chenier complex are found on the eastern side of the region. River Broughton and Mambay Creek discharge onto coast. There is a significant estuary at Port Pirie. From Port Augusta to Stony Point there are extensive cobble beaches, shell grit beach ridge systems within embayments, and in places cobble storm ridges. From Whyalla to Cowell extensive tidal flats, often rocky, linear dunes transverse to the coast reworked into shore parallel beach ridges, recurved spits and small saltmarsh complexes nested within spits, beaches, ridges, and the east–west trending linear dunes

Yorke Peninsula: Port Broughton to Edithburg (Figure 10)

Length	415 km
Wave energy	high between Cape Spencer and Corny Pt elsewhere moderate
Geological province	Gawler Block
Description	From Cape Spencer to Corny Point there are high dune calcarenite cliffs over granite, shore platforms and reefs, unstable dune transgressions, and headland controlled beaches. Elsewhere there are large open embayments, extensive beaches, generally backed by stable foredune systems, low cliffs and shore platforms.

Gulf St Vincent: Edithburg to Sellicks Beach (Figure 11)

Length	295 km
Wave energy	moderate to Outer Harbor low for the rest of the region
Geological province	St Vincent Basin, Adelaide fold belt
Description	This variable region comprises low cliffs (eroding in places), rocky coves, shore platforms, pocket beaches, and extensive beach ridge, mangrove and saltmarsh systems in the upper portions of the gulf. The 30 km Adelaide beach dune system and the associated Pt River estuary are major features of the region. A number of creek and river outlets also occur along the eastern side of the gulf.

KI South and West Coasts: Cape Borda to Cape Willoughby (Figure 12)

Length 232 km
Wave energy high
Geological province Kanmantoo Trough
Description This region is unified by exposure to Southern Ocean swell. Dune calcarenite and modern dunes blanket Kanmantoo Trough quartzite and granite rock formations. The region is characterised by bedrock headlands, extensive bedrock and/or calcarenite cliffs and shore platforms, with a few beach deposits. Most of the beaches and many of the cliffs are backed by dunes. A number of embayments occur along the region, and creeks and rivers discharge into most of these.

KI North East Coast: Cape Willoughby to North Cape (Figure 13).

Length 114 km
Wave energy low
Geological province St Vincent Basin
Description This region is a leeward coast protected from SW winds and swell. Wind waves and strong currents are influential in the morphology of the region. Shallow marine and dunes deposits occur along most of the region with the exception of a high bedrock cliffed section along Dudley Peninsula. Most of the sediment deposits occur within three large embayments. The Cygnet River and Chapman River discharge within the region. An extensive saltmarsh complex exists within the Cygnet River and within Pelican Lagoon.

KI North Coast: North Cape to Cape Borda (Figure 14)

Length 111 km
Wave energy moderate
Geological province Kanmantoo trough, St Vincent Basin
Description High metasediment cliffs dominate this region. The cliffs average 80 metres in height. Very little dune calcarenite is present. Nearshore gradients are particularly steep at the western end. Well developed shore platforms occur in places. A number of creeks discharge along the region. Sand, shingle and boulder beaches are scattered along the coast. Dune development is minimal. These are often transgressive due to overgrazing.

Fleurieu Peninsula: Sellicks Beach to Goolwa (Figure 15)

Length 120 km
Wave energy high along the south coast, moderate within the gulf
Geological province Adelaide fold belt
Description The region has mainly a rocky coast with steep high metasediment cliffs, shore platforms, reefs and a number of creek outlets. There are eroding outwash plains and high energy carbonate/silica beaches along the south coast and moderate energy silica beaches on the gulf side. Beaches are generally backed by foredunes, which are unstable in places due to poor land management. A particularly significant foredune system at Normanville comprises almost pure silica sand.

Coorong: Goolwa to Cape Jaffa (Figure 16)

Length 190 km
Wave energy high
Geological province Murray Basin (Pleistocene Sediments)

Description This gradational, gently curving sandy coast has considerable variation in beach and dune morphology. This is due to an increase in breaker wave energy from low at Cape Jaffa to high at Goolwa in line with the change in the offshore gradient. A transition south to north from stable foredune ridge systems to massive unstable dune transgressions occurs along the region. Beach morphology similarly changes from reflective at Cape Jaffa to dissipative at Goolwa. Major features are the Coorong lagoons, the barrier dune systems of Sir Richard and Younghusband peninsulas and the Murray Mouth estuary.

South East: Cape Jaffa to Vic-SA border (Figure 17)

Length 200 km
Wave energy high
Geological province Otway Basin (Tertiary and Pleistocene sediments)

Description The region comprises numerous Pleistocene dune calcarenite cliffs, shore platforms, offshore reefs and compartmentalised beaches backed by extensive Holocene dune transgressions. South of Cape Banks occasional Gambier limestone outcrops and scattered shingle beaches also occur. The surf zone is generally high energy and dissipative. Beach sands are 80–90% carbonate. Two large embayments (Rivoli and Guichen Bays) are partly infilled by extensive foredune ridge systems.

Figure 3 Geomorphic Regions

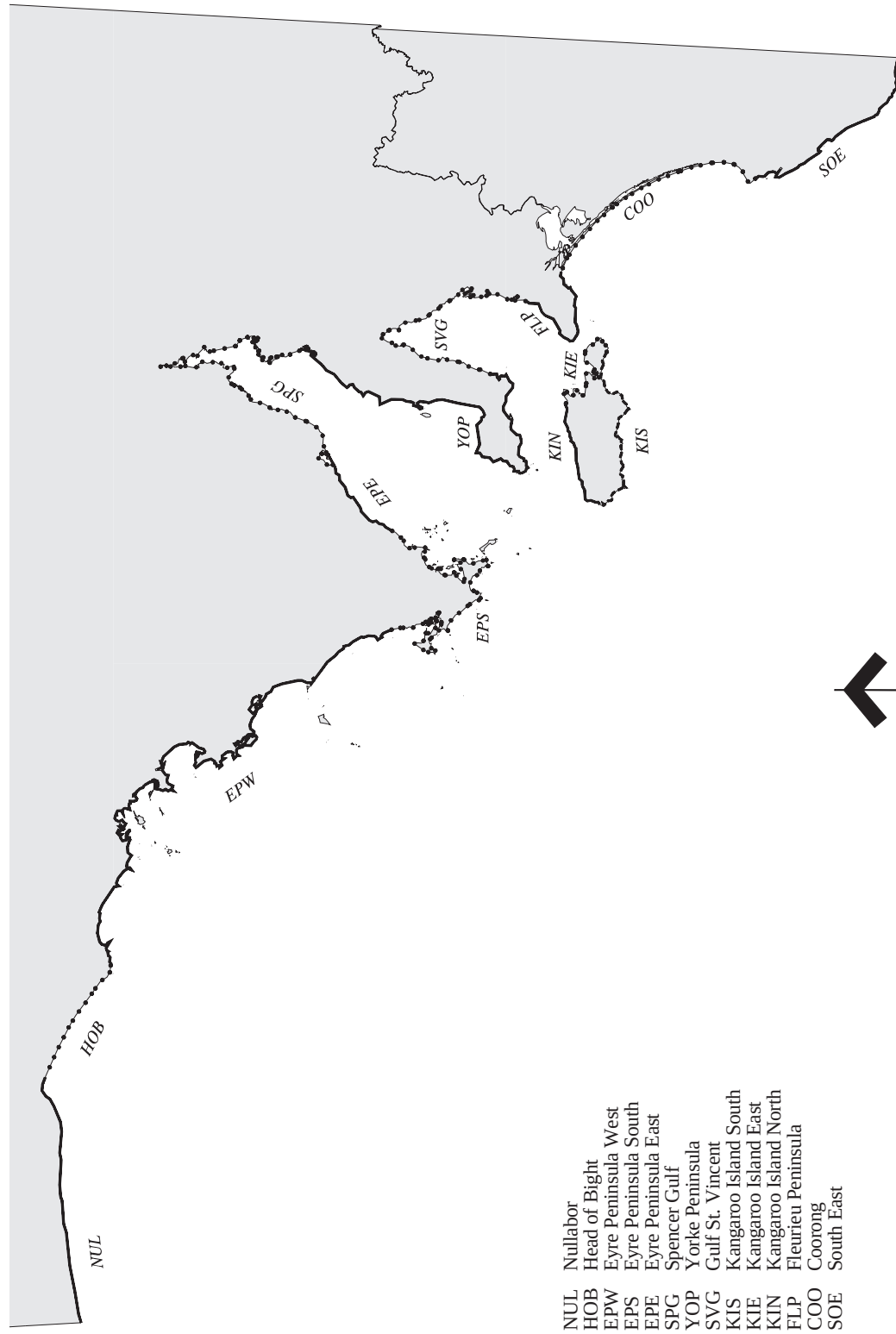




Figure 4 Nullarbor: Tertiary limestone of the Nullarbor Plain eroded to form high cliffs.



Figure 5 Head of the Bight: Fringing calcarenite reefs, small embayments and dune transgressions at Coymbra, Yalata Aboriginal Lands Trust



Figure 6 Western Eyre Peninsula: Pt Sinclair showing a thin calcarenite capping overlying hard crystalline basement rock



Figure 7 Southern Eyre Peninsula: Dune calcarenite overlying crystalline basement rock, Thistle Island



Figure 8 Eastern Eyre Peninsula: Cliffs comprising outwash sediments, capped by a calcrete layer at Pt Gibbon



Figure 9 Upper Spencer Gulf: Shallow intertidal flats and saltmarshes near Franklin Harbour



Figure 10 Yorke Peninsula: Crystalline basement rock forming shore platforms and promontories near Foul Hill



Figure 11 Gulf St Vincent: Mangrove fringed tidal creek and extensive supratidal flats near Port Prime



Figure 12 Kangaroo Island South: Dune calcarenite forming cliffs at Cape Gantheaume



Figure 13 Kangaroo Island East: Shallow waters and sheltered coast along Nepean Bay



Figure 14 Kangaroo Island North: Metasediment cliffs near Cape Cassini



Figure 15 Fleurieu Peninsula: Metasediment cliffs at Second Valley



Figure 16 Coorong: High to moderate energy surf zone, barrier dune and back barrier lagoon



Figure 17 South East: Canunda National Park showing dune calarenite headlands and reefs, beaches and dunes

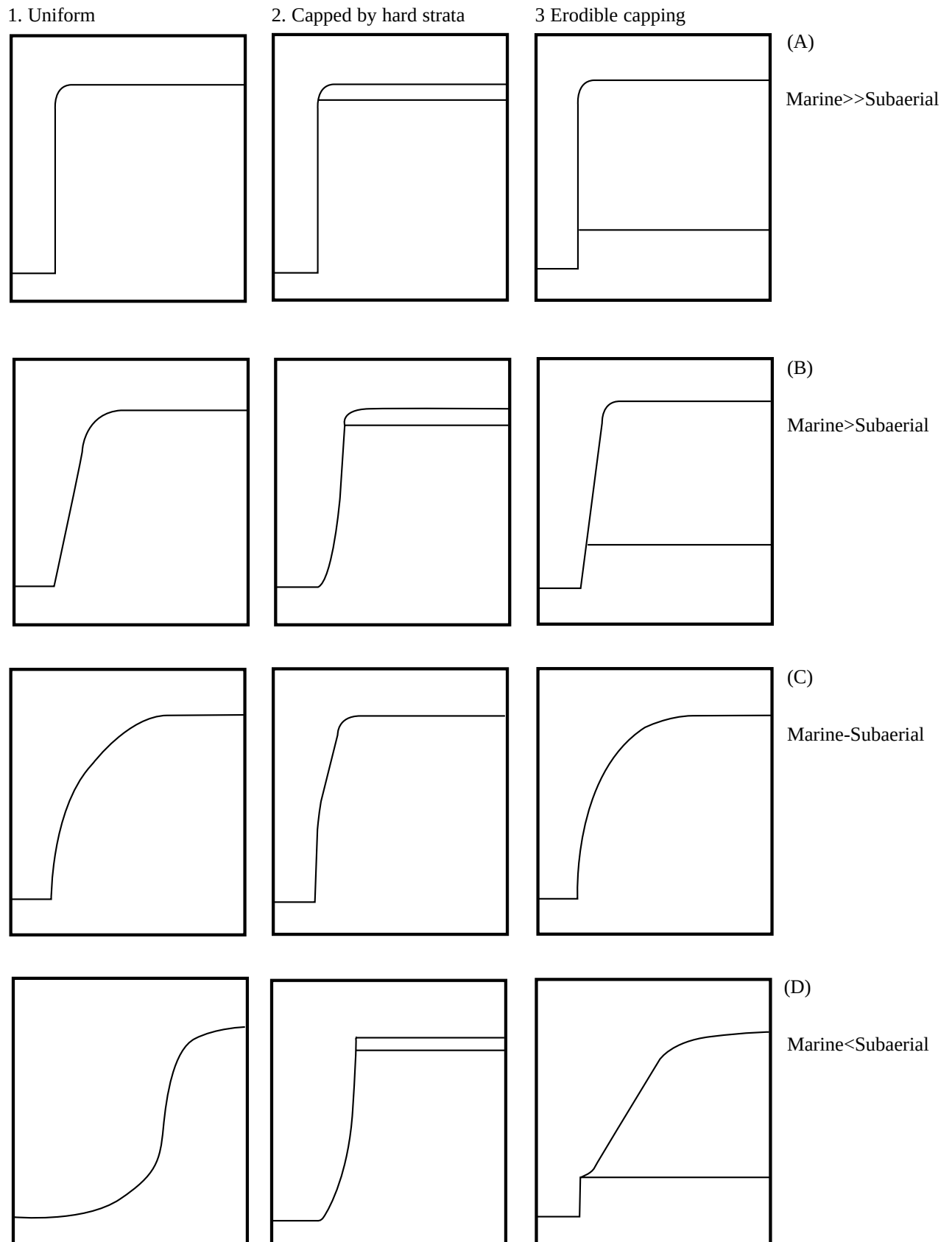


Figure 18 Matrix of active sea-cliff profiles

These are the profiles to be expected from bedrock of three different limiting degrees of homogeneity (1-3) with respect to relative erodibility at bottom and top, and of four different major degrees of relative effectiveness of marine versus subaerial erosion (A-D). It assumes that sea cliffs are cut into plateaus and are near steady state equilibrium. Diagonal lines denote resistant beds.
Source: Emery and Kuhn (1982).



Figure 19 Nullarbor



Figure 20 Calcarene sandramps in front of the Nullarbor cliffs at Merdayerrah

LANDFORMS

Cliff tops and dunefields are found along 80% of the coast (Table 3).

Table 3 Coastal landforms of South Australia
(Source Cullen and Bird 1980)

Type of coastline	Length of coastline (km)	%
Cliff	760	23
Bedrock	298	9
Mud, mangrove	266	9
Sand	1940	59
Total	3264	

Each of these landform types is made up of elements which combine into the many different sections of the coastline.

Cliff tops

The coastal cliffs of South Australia have been formed in a variety of rock types resulting in considerable differences in morphology. Three elements of a cliff can be distinguished, the base, the cliff face and the clifftop. Emery and Kuhn (1982) developed a cliff shape model incorporating each of these elements and based on the relative resistance of the strata and the resulting balance between marine and subaerial erosion. This is shown in Figure 18. Figure 19 shows the marine active high vertical cliffs of the Nullarbor formed within homogenous Tertiary limestone.

Sea cliffs may no longer be subject to marine erosion due to mantling by sand ramps, or by dune fields such as at Merdayerrah (Figure 20), or being protected by talus.

The different cliff tops along the coast include:

- stable clifftop
- deflated clifftop
- stable clifftop dune
- semistable clifftop dune
- unstable clifftop dune.

Dunefields

Variation in sand supply, coastal orientation to the prevailing winds, vegetation cover and shoreline stability is reflected in the considerable differences in the distribution, extent and morphology of dunes along the South Australian coast. Single and multiple foredune ridges parallel to the shoreline occur along most of the coast. Where the stabilising vegetation has been disturbed other more complex dune forms have resulted. In addition to the wind formed dunes, wave formed chenier and shingle ridges also occur along the coast.

The process of foredune ridge formation is shown in Figure 21. Multiple ridges have developed in a number of locations due to past shoreline progradation. However, Cullen and Bird (1980) found that progradation is now uncommon and that most beaches are stable or erosional.

Four habitats/landform elements can be delineated in dune systems:

- seaward slope
- crest
- leeward slope
- swale.

Figure 22 shows the extensive dunefield formed at Lake Newland. In contrast Figure 23 shows relict clifftop dunes on the Nullarbor cliffs.

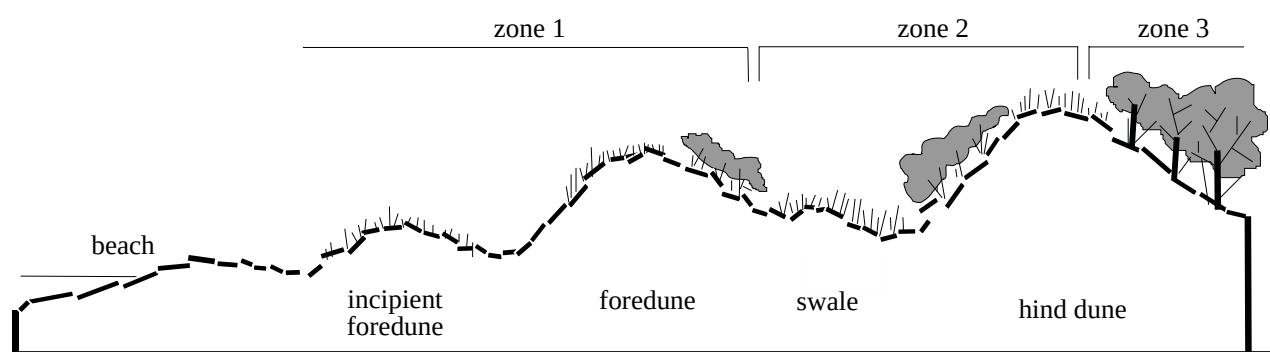


Figure 21 Profile of dunefield

Zone 1: unstable area of colonising grasses and herbs contains primary dune plants

Zone 2: semi-stable area of shrubs and ground plants contains secondary species

Zone 3: stable area dominated by trees with a mixed understorey contains tertiary species



Figure 22 Dunefield at Lake Newland, Eyre Peninsula (photo Peter Canty)

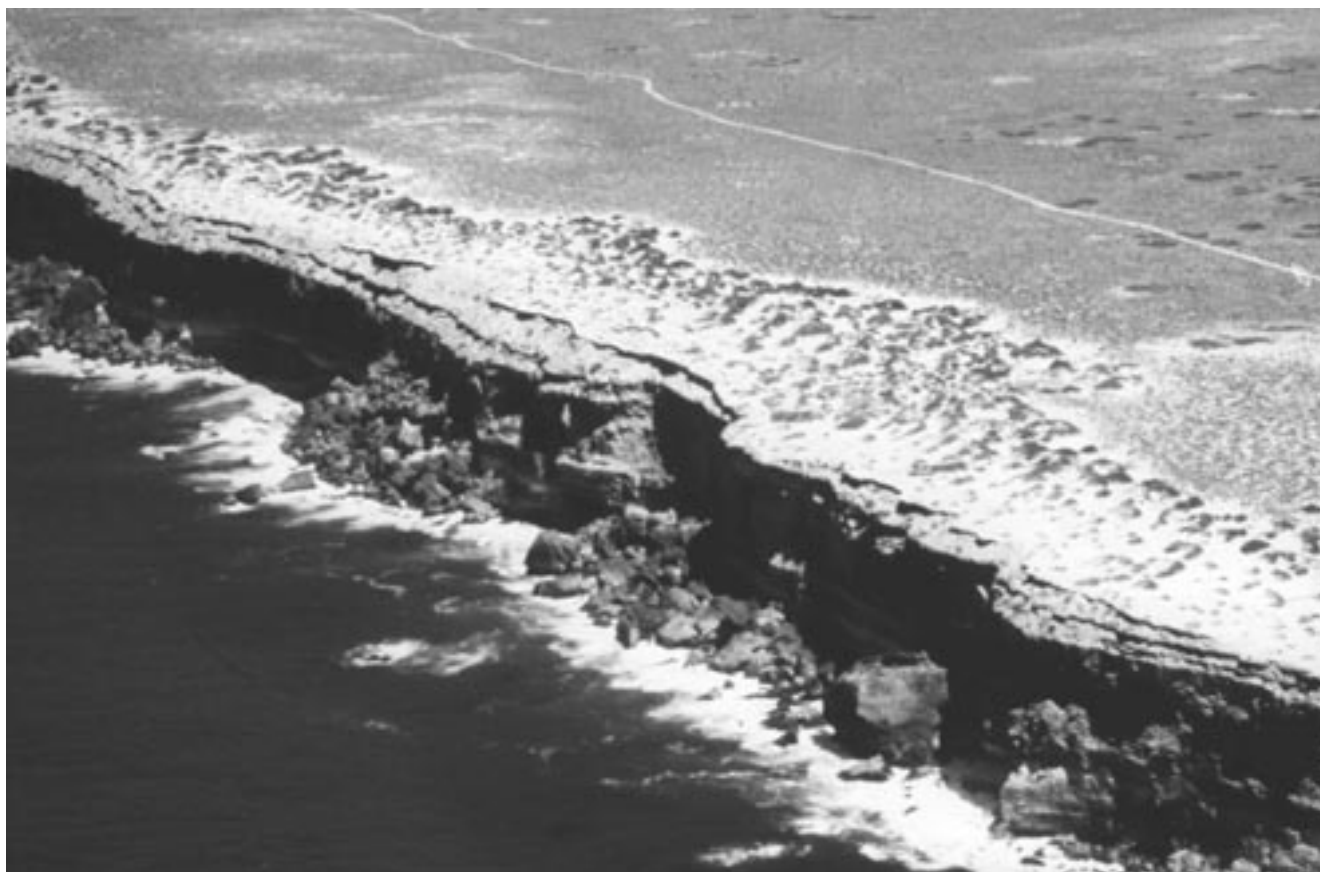


Figure 23 Clifftop dunes on Nullarbor cliff

ENVIRONMENTAL PARAMETERS

The South Australian coastline has many variations in the complex of factors which support its plant communities from the Western Australian to the Victorian border. The coastline goes through over 10° of longitudinal changes, through three AMG zones and a latitudinal variation of over 6°. The overall climate is of cool wet winters and warm to hot dry summers. The moderating influence of the ocean gives the coast milder climatic conditions than the hinterlands.

Environmental factors influencing plant establishment and growth are interrelated and affect plant species distribution, composition, abundance and growth habit. They include the geomorphological history of the area together with the conditions which control the development of vegetation.

HISTORY

‘Australia, in all its aspects, is a product of its past. This is especially true of its flora and, unless the fossil record is properly considered, all attempts to explain vegetation patterns will be incomplete’ (Hill 1994). All extant vegetation is a reflection of floristic history combined with past climatic and geomorphological conditions. For example, before the Quaternary when the climate was warmer *Eucalyptus* was widespread along the current coastline of South Australia (Kershaw et al 1994).

‘The Quaternary is the period of modern life in which all the kinds of plants and animals still living have evolved, or have continued from the Tertiary unaffected by new environments’ (Hope 1994). The Quaternary includes the Pleistocene (~1.6 Ma) and the Holocene or Recent (~10 000 yrs before present). Prior to the Quaternary there were widespread evolutionary changes (Hope 1994), however during the Quaternary change has been initiated by climatic factors. During the Pleistocene glacial advances were interspersed with interglacials. The concurrent climate fluctuations resulted in extensive changes in sea levels and rainfall regimes. ‘The Pleistocene represents the period of establishment of our present landscapes, climatic patterns and types of variability, and the adaptation of the Tertiary biota to these new environments’ (Hope 1994). The Holocene has been a time of ‘changes to populations and particularly to plant and animal communities’ (Hope 1994).

A restricted but widespread coastal zone was created by the extreme fluctuations of the sea levels from 120–140 m below present sea level to 5–8 m above present sea level (although a higher sea level is disputed). The zone was dominated by ‘continuous change and seral responses’ (Hope 1994). At its lowest the sea level approximated the edge of the continental shelf along the

South Australian coastline, joining Kangaroo Island to the mainland and eliminating the gulfs completely. There is evidence of a wetter climate in the early Holocene which correlates with the higher sea level of 7000–1400 years ago (Lampert 1979).

The history of the formation of the current coast determines the degree to which coastal processes have affected the composition of the vegetation. During the Pleistocene when sea levels varied considerably with glacial and interglacials, alternating ‘thick coastal sand dunes were blown up as the shoreline advanced across the continental shelf’ (Robinson et al 1996). These dunes consolidated into the extensive calcarenite masses which extend along the coast. The last major ice age stillstand was from around 17 000–20 000 years ago with a sea level of over 150 m below present level. The sea level then rose steadily to its current level about 6500 years ago. It is only in the last 10 000–12 000 years that the sea levels have risen above 50 m below present sea level flooding the gulfs and separating Kangaroo Island from the mainland.

Large areas of the Gulf St Vincent and Backstairs Passage were part of Kangaroo Island and the mainland with a sea level of less than 35 m below present sea level. These areas of the coastline which were inland at the last glacial and fluctuating sea levels of the Holocene and were not covered by Pleistocene and Holocene coastal dunefields have only recently (geologically) been exposed to coastal processes. Therefore the vegetation which established when the sea level was lower under these inland conditions is relict inland vegetation not established under coastal conditions. The northern coast of Kangaroo Island and the southern coast of the Fleurieu Peninsula both have high cliffs which are truncated hill slopes. Across both the gulfs, Eyre Peninsula and Yorke Peninsula, inland siliceous longitudinal dunes created under arid conditions have been truncated by the existing coastline and in places covered by calcareous Pleistocene and Holocene dunefields.

Similarly, the vegetation on the longitudinal dunes of the eastern Eyre Peninsula and western Yorke Peninsula which have subsequently been truncated by coastal processes were formed during the lower sea levels described above under continental conditions. The extent of coastal influence of the edges of the gulf are limited by the low wave energy of the coastline together with the recent exposure of this coastline to coastal processes.

The consequence of the overall stability of most of the coastline rock strata to vegetation establishment and growth was discussed by Hope (1994).

Long exposure to leaching has provided poor siliceous sands that support only specialised heaths or woodlands. The resulting mosaic of communities developing on cliffs, in marshes or on sand combines with a strong zonation in substrate stability and salt to provide complex vegetation, with many locally endemic communities. The coastal flora is derived from pre-adapted genera of swamps, sand heaths and river edges. As is true of other new habitats, immigrant groups are well represented because new environments provide vacant niches and unstable habitats regard migratory ability that will be a characteristic of immigrants. Migratory ability means that in general, the least stable communities, such as strandline or saltmarsh, have the most widespread species.

Vegetation on Holocene dunefields is not related to past history but was established under coastal influences and limited to plant species adapted to coastal conditions of salt, wind and calcareous substrate. Thus widespread adventive migratory plant species dominate communities close to the coast and succession occurs inland with other species. Many such plant species are found along the length of the coastline eg *Cakile maritima* ssp *maritima*, *Euphorbia paralias*.

The result is a variation of vegetation along the coast which has either established under coastal processes, comprising all vegetation on Holocene sands or is vegetation established under non-coastal conditions and which has been subsequently exposed to coastal processes. Calcareous substrate limits the establishment of vegetation to carbonate tolerant plant species. There are limited areas of coastline which provide siliceous substrate.

Changes in vegetation due to human disturbance include the changes from the firing techniques of Aborigines over the last 50 000 years. However, in the last 150 years wholesale clearance of vegetation and grazing has changed much of the coastal vegetation adjacent to the agriculture areas.

SOILS

A very generalised map of the soils along the coast is shown in Figure 24. The type of substrate and landform age together with biotic activity determines the degree of soil development. Predominantly the soils in the coastal area are calcareous sands and range in depth from shallow skeletal soils on calcrete to deep sands with no organic material on coastal dunes. There is little or no pedogenic development with minimal or no profiles but there may be shallow organic staining and some weak structure development (Buckley and Fotheringham 1987). All such soils are highly erodable without vegetation cover. There are parts of the coast where soils are developed on the older crystalline (Precambrian) rocks which have deep soils with highly developed horizons.

RAINFALL

Total amount

Mean annual rainfall generally increases from west to east along the coastline as the latitude increases, varying from under 250 mm across the Nullarbor to over 750 mm in the South East (Figure 25). However, within this north-south trend there are variations of rainfall totals along the coast which differentiate areas of the same latitude. The western side of Spencer Gulf on the eastern side of Eyre Peninsula is in a rain shadow area with lower rainfall than the equivalent latitude on the west coast but the eastern coastline of the gulf has higher rainfall totals (cf Ceduna and Whyalla, Table 4). Yorke Peninsula in contrast, due to lack of the orographic effect, has equivalent rainfall along the coast on both sides of the peninsula. Due to their elevation the north and west coast of Kangaroo Island have higher rainfall than the south and east coast.

Table 4 Rainfall — Selected coastal stations
(adapted from Cullen and Bird 1980)

Station	Rainfall (mm/a)	Rainy days	% of yr
Ceduna	321	94	25.8
Elliston	428	100	27.4
Port Lincoln	608	108	29.6
Edithburgh	418	103	28.2
Whyalla	274	63	17.3
Adelaide	533	120	32.9
Cape du Couedic	639	148	40.5
Victor Harbor	538	122	33.4
Robe	632	149	40.8
Cape Northumberland	706	171	46.8

Frequency

An increase in the amount of rainfall does not correlate directly with an equivalent increase in frequency of rainy days. For example, although Ceduna has only half the total rainfall of Robe it has more than half the frequency of rainy days. The percentage of rainy days in the year is a more useful measure for correlating rainfall with the growing period of plants.

The two major effects that rainfall has on the coastline are on sand mobility and plant establishment (Cullen and Bird 1980). Firstly, the frequency of rain rather than the total amount is of greater importance to the movement of sand particles as wet sand requires a greater wind velocity for movement. Secondly, the amount of rainfall in conjunction with evapotranspiration rates is the determining factor in plant establishment.

Comparisons of total rainfall and the frequency of days need to take account of the differing conditions under which rehabilitation of similar landform areas varies with the location. There are considerable differences in rainfall totals of different areas with the same landforms even within apparently similar areas of the coastline. The dunefields on the Coorong part of the coast have over 200 mm less rainfall than the Canunda dunefields. In contrast the dunefields of the Coorong and Coffin Bay have similar rainfall totals but have different temperature and wind regimes.

Effective rainfall

Effective rainfall is a measure of the amount of rainfall in conjunction with evaporation loss. This measure (although pertaining to agricultural crops not native plants) is an indicator of the availability of moisture to promote plant growth. On Kangaroo Island effective rainfall occurs for six to seven months whereas in Mt Gambier in the South East effective rainfall occurs for eight months. On Eyre Peninsula where the potential evaporation exceeds the mean annual rainfall along the length of the coastline such a measure is problematical.

There is a general trend of increasing percentages of rainy days with increasing latitude but this trend is reversed in the case of Ceduna which, though north of Whyalla, has a higher percentage of rainy days than Whyalla (Table 4). However, the higher rainfall in Ceduna is received on proportionally fewer days. The ratios of number of rainy days and total amounts for Ceduna with Whyalla show there is a lower proportion of rainy days (0.67) than the proportion for total rainfall (0.85), indicating that even with higher rainfall Ceduna has proportionally less useful rainfall.

Drought

A further important effect is the lack of rainfall, particularly in semi-arid areas where the total amount of rainfall is already low. Reduced amounts and frequency of rainfall events affect the establishment of plants in unstable dune areas. Not only does lack of rainfall inhibit the establishment of pioneer plants on the mobile sand, drought results in the loss of the established plant cover. A further contributing factor to the establishment of plants in limited rainfall areas with reduced frequencies and amounts is the total porosity of such sand with no moisture retention capability. Drought particularly over a number of years can cause irreversible damage. Cullen and Bird (1980) consider that such semi-arid areas may not restabilise.

TEMPERATURE

There is not a wide variation in the minimum and maximum monthly temperature along the coast of South Australia with less than a six degree annual variation of the maximum and only a few degrees difference in the annual minimum temperatures (Table 5).

Table 5 Temperature — Selected coastal stations (Source: Bureau of Meteorology 1998)

Location	Temperature (°C)					
	Max annual	Min annual	Max	Min	Days >30	Days >35
Ceduna	23.3	10.3	47.9	-4.7	59.4	28.1
Port Lincoln	20.6	11.9	44.4	1.5	21.1	5.9
Cape Borda	18.0	11.3	39.0	2.2	9.4	0.5
Adelaide	22.0	12.1	44.2	-0.4	52.2	17.6
Robe	18.4	11.1	39.6	-2.8	7.2	0.4
Cape Northumberland	17.7	10.2	43.2	-2.4	13.0	4.0

(NB Adelaide = Kent Town, inland of the coast)

However the number of days over 30°C varies considerably and is an indication of the variation of stress levels that vegetation on similar landforms are subject to. This stress is augmented by the correlation of the areas of higher temperatures with areas of lower rainfall, compounding establishment and mobility problems.

WIND

The prevailing winds in South Australia are generally south to south-westerly. High and low pressure systems vary the winds from the south to south-easterly moving to the north to north-westerly winds of the highs, to the south-westerly winds of the low pressure systems. Wind data from selected coastal stations are shown in Figures 26 and 27. Winds stronger than 16 km/hr are capable of shifting dune sand.

The wind direction is therefore predominantly onshore with the exception of the eastern coasts of Eyre and Yorke peninsulas and northern Kangaroo Island. Cullen and Bird (1980) attribute the poorly developed coastal dune systems to the lack of wind on these easterly facing coastlines.

In addition to the prevailing winds coastal areas have a sea breeze. Such winds are strongest from spring to autumn when the land/sea differential is greatest. This wind adds to the ameliorating effect of the ocean with cooler winds in the heat of the day. It further ameliorates the drying effect of the offshore winds during the higher daily temperatures.

Dune development is related to the strength, direction, frequency and duration of wind action (Cullen and Bird 1980). Cliff deflation is related to the same wind factors.

Wind affects vegetation establishment and growth both in the distribution of salt and the degree of wind shear. The velocity, duration and direction of wind along the coast determines the quantity and area of salt distribution.

SALT

The major limiting factor in the complex of interrelated components which varies the effect of coastal processes (wind, wave, rainfall, temperature) along the coast is the amount of salt which is both in the soil and is deposited on the surface by wind-blown sea spray.

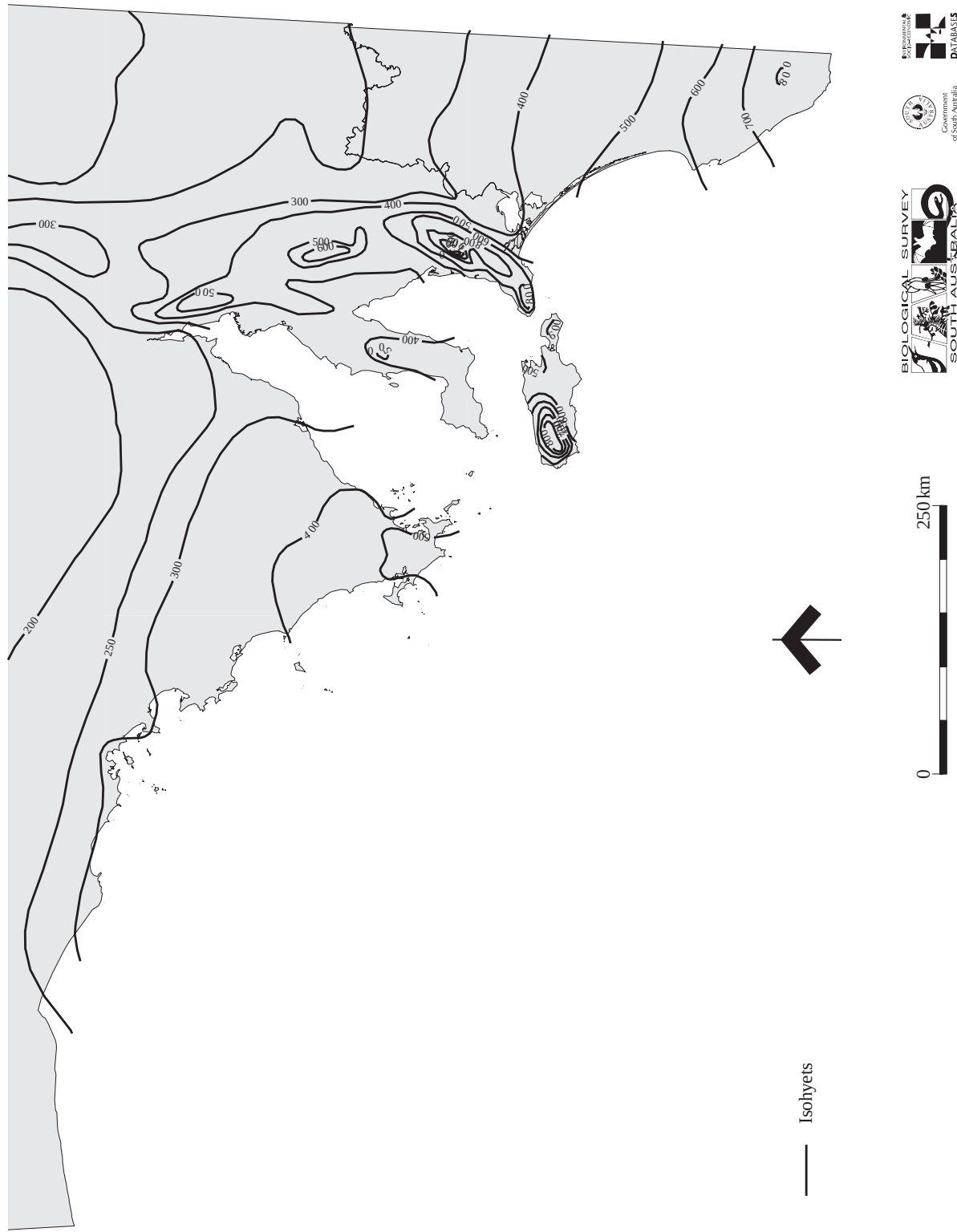
Substrate

The dominant substrate of soils along the coast of South Australia is of calcareous material because of its predominantly marine origin.

Sea spray

The fronting surf zone, orientation into the prevailing winds, distance and elevation from the waterline, and degree of shelter are all factors that result in varying exposure to salt spray at the local scale. At a State level variation in exposure to the prevailing south-west swell results in considerable regional differences in salt spray production. Womersley and Edmund (1958) broadly mapped this variation in wave exposure which is shown in Table 6.

Figure 25 Rainfall



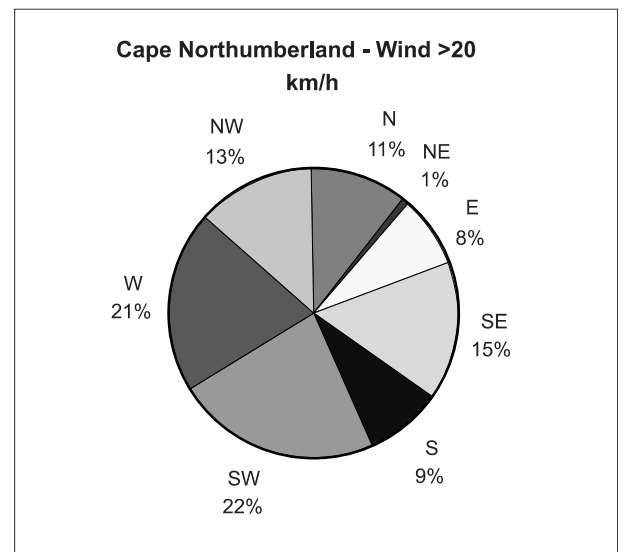
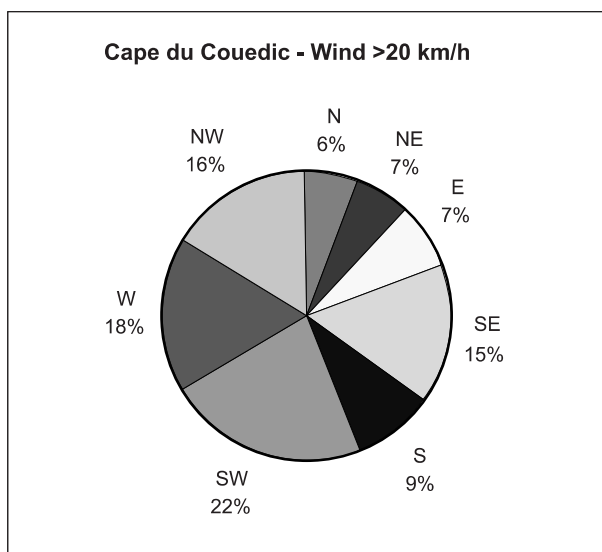
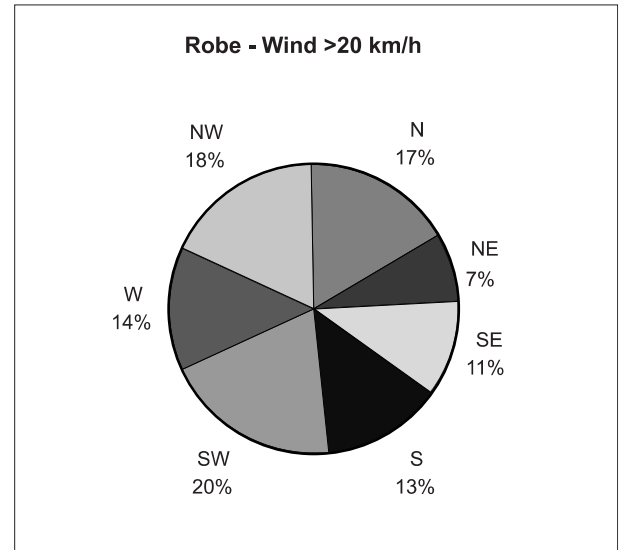
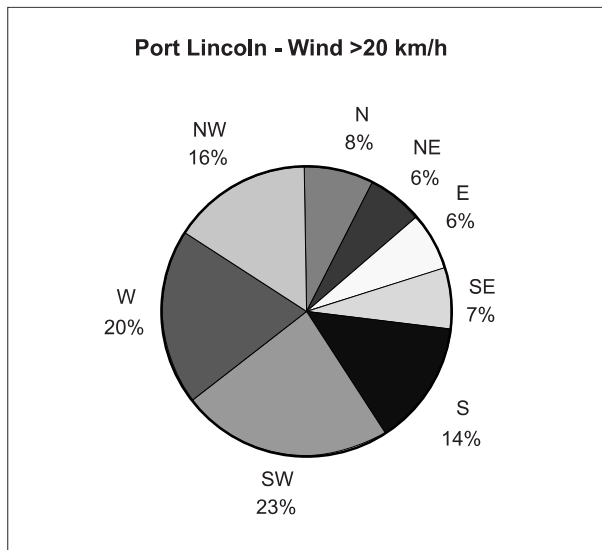
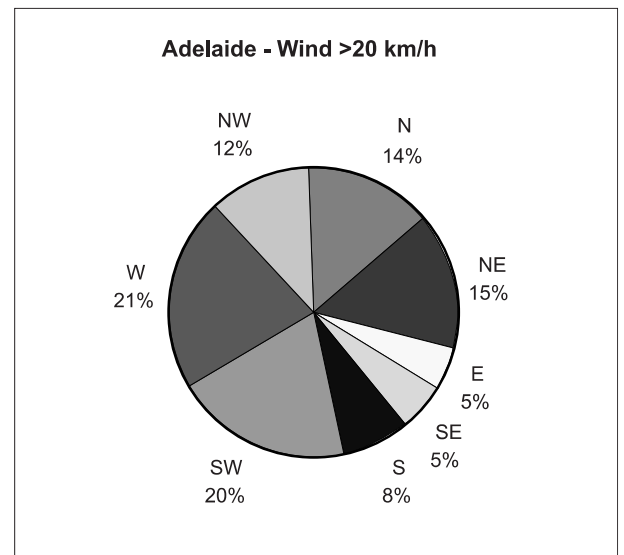
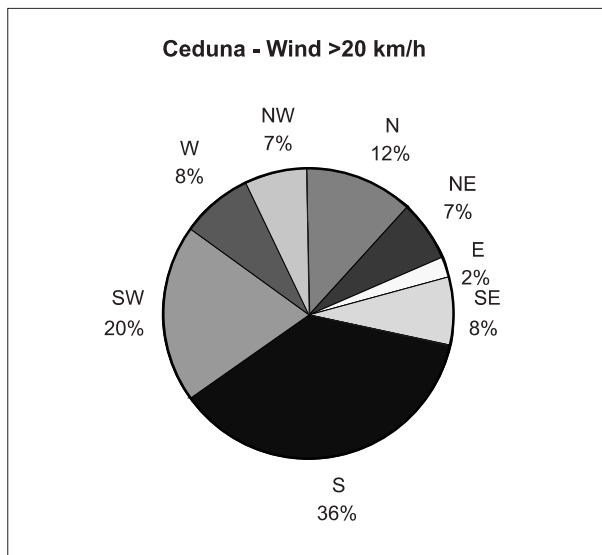
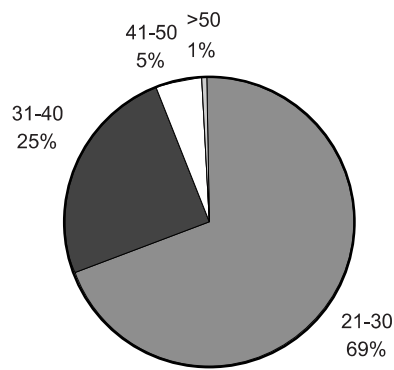
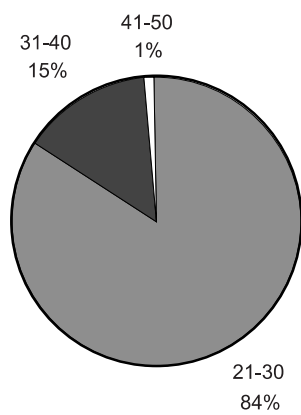


Figure 26 Wind direction of selected coastal ststions (adapted from Cullen and Bird 1980)

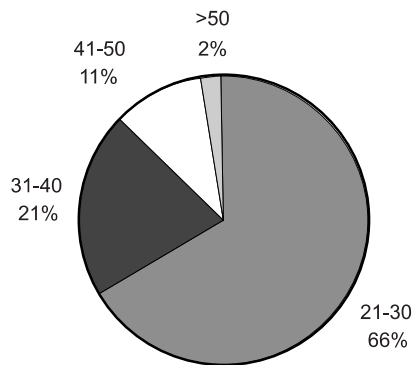
Ceduna - Wind strength (km/h)



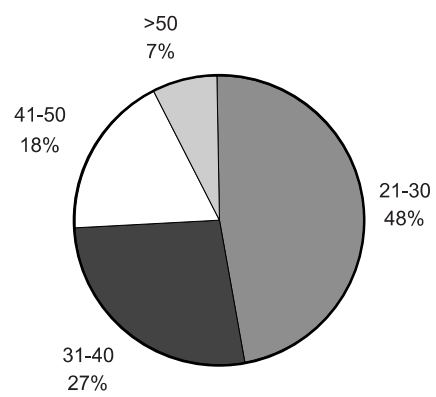
Adelaide - Wind strength (km/h)



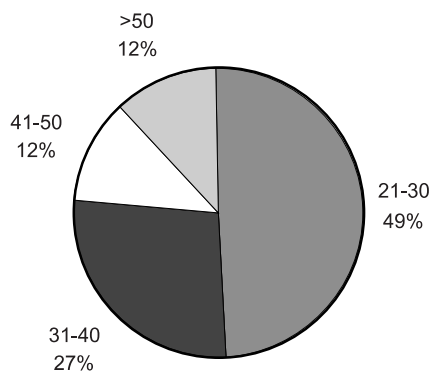
Port Lincoln - Wind strength (km/h)



Robe - Wind strength (km/h)



Cape du Couedic - Wind strength (km/h)



Cape Northumberland - Wind strength (km/h)

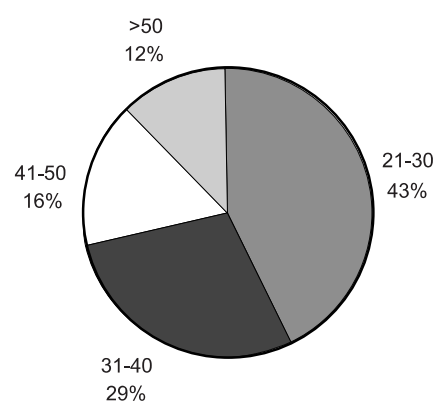


Figure 27 Wind strength

Table 6 Degree of wave action along the coast (Womersley and Edmonds 1958).

Area of coast	Wave energy	Coastal edge
Western and Central Coasts	extreme to strong	steeply sloping Palaeozoic rock horizontal rock platforms sand beaches
	moderate slight	sheltered coast sandy or muddy flats
South-Eastern Coast	extreme to strong	horizontal rock platform

In relation to the beach surf zone (Short et al 1986), three main beach types can be identified depending on sand grain size and wave energy:

- reflective with foredune ridges inland
- intermediate with foredune ridges with blowouts and with increasing wind and swell, parabolics to long walled parabolics
- dissipative with transverse dune sheets.

LAND-USE

Table 7 indicates the area and proportions of different land uses along the coast of South Australia. However, it does not indicate the intensity of usage. There is a concentration of usage of coastal lands near the major urban centres, particularly at easy travelling distance from Adelaide and in the South East (also used by Victorians).

Table 7 Land uses of coastal land in South Australia (Cullen and Bird 1980)

Land use	Area (km ²)	%
Grain and fodder crops	2424	19
Cattle grazing	1434	11
Sheep grazing	5980	47
Miscellaneous grazing	1305	10
Urban and recreation	414	3
Other	1163	10
Total coastal land	12 680	

Table 8 Vegetation on coastal sand dunes within 0.5 km of coastline (Cullen and Bird 1980)

Vegetation	Area (sq km)					
	Dune types					Totals
	Transverse	Parabolic	Irregular	Beach ridges	Sand mantle	
Bare	141	186	135	9	78	549
Agriculture (crops)	0	0	0	24	0	24
Pasture	3	3	9	63	18	96
Grass	9	0	9	63	6	87
Shrub	129	273	252	147	165	966
Total	282	462	405	306	267	1722

Cullen and Bird (1980) document vegetation on coastal sand bodies within 0.5 km of the coast. The data in Table 8 give some idea of the types of vegetation on dunefields along the coastline.

Crown Land

A 30 m coastal reserve exists along many parts of the South Australian coast with the exception of where erosion has reduced the original surveyed boundaries. Originally this was surveyed as 30 m from high water mark (HWM) at the boundaries of the sections with the intermediary coastline reserve marked as an unsurveyed dotted line on the map. However, any subsequent subdivisions are now surveyed 30 m from the median HWM and are marked on maps as a solid line. Where this area is dedicated as a reserve it is the responsibility of local government but if unallocated Crown Land it is the responsibility of the State Government, presently DEHAA.

Heritage Agreement areas

Figure 28 shows the Heritage Agreement areas located along the coastal areas. The vegetation of these areas is dedicated to be conserved under the Native Vegetation Act 1991.

Protected reserves under the NPWS Act 1981

There are 36 reserved areas along the coast (Figure 28, Table 9) in conditions ranging from good to badly degraded. In addition there are some areas which are under Heritage Agreement which have been assessed as of conservation value. In general, remnant coastal vegetation areas outside the reserved or heritage areas are often degraded.

Table 9 Conservation reserves with coastlines

Type	Name	Region	Dunes/cliffs
National parks			
	Lincoln	EPS	Dunes, cliffs
	Innes	YOP	Dunes, cliffs
	Coorong	COO	Dunes, saltmarsh
	Canunda	SOE	Dunes
	Flinders Chase	KIN/	
KIS	Dunes, cliffs		
	Nullarbor	NUL	Cliffs, dunes
	Coffin Bay	EPS	Dunes, cliffs
Game reserves			
	Coorong	COO	Dunes
Conservation parks			
	Guichen Bay	SOE	Beach ridges
	Beachport	SOE	Dunes
	Piccaninnie Ponds	SOE	Dunes, saltmarsh
	Sleaford Mere	EPS	Saltmarsh
	Cape Torrens	KIN	Cliffs
	Cape Hart	KIE	Cliffs
	Cape Gantheaume	KIS	Cliffs
	Western River	KIN	Cliffs
	Vivonne Bay	KIS	Dunes, cliffs
	Kelly Hill	KIS	Dunes, cliffs
	Deep Creek	FLP	Cliffs
	Seal Bay	KIS	Dunes, cliffs
	Nene Valley	SOE	Dunes
	Laura Bay	EPW	Dunes
	Point Labatt	EPW	Cliffs
	Nepean Bay	KIE	Dunes, saltmarsh
	Little Dip	SOE	Dunes, cliffs
	Franklin Harbor	EPE	Dunes
	Venus Bay	EPW	Dunes
	Hallett Cove	SVG	Cliffs
	Munyaroo	SPG	Dunes, saltmarsh
	Moana Sands	SVG	Cliffs
	Newland Head	FLP	Dunes, cliffs
	Aldinga Scrub	SVG	Cliffs, dunes
	Point Davenport	YOP	Dunes, saltmarsh
	Leven Beach	YOP	Dunes
	Marino	SVG	Cliffs
	Winninowie	SPG	Dunes, saltmarsh
	Lake Newland	EPW	Dunes, saltmarsh
	Douglas Point	SOE	Cliffs

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3 Methods

SURVEY DESIGN

The survey was conducted according to Biological Survey of South Australia guidelines utilising the Environmental Datasheets (Heard and Channon 1997). This ensured that the data was comparable with similar surveys conducted in the past with standardised data collection, storage and plant identification procedures. The survey had been allocated the identifying number 82 in the Biological Survey Database. The information collected at each quadrat included indicators for the physical environment, all plant species present and their cover abundance, the structural composition of the vegetation, disturbance and vertebrate evidence and a surface soil assessment (Appendix 2).

SITE SELECTION

Criteria for site selection

All available existing information was collated and studied providing both an overview of the section of coast to be surveyed and a basis for site selection. The distance of coastal influences was the determinant of the survey area and it was decided that it was necessary to locate some sites in areas without coastal influences to provide information on the actual extent of coastal influences.

The criteria were established as:

- within 5 km of coast (majority within 1 km)
- representative of environmental differences
- representative of regional differences
- accessible
- not in locations with previous survey sites to avoid duplication.

All sites were within a 30 minutes walk from the closest vehicle access.

Sampling procedure

The 1:50 000 and 1:100 000 topographical maps of the coastline included in the survey were obtained and relevant aerial photographs located. These were studied together with oblique aerial photographs of the coast firstly for reconnaissance purposes and then in detail for site selection. It was not possible given the distances involved to conduct on-site reconnaissance for the length of the coastline. Stereo pairs of aerial photographs were used to select possible sites from visible vegetation patches and these were recorded on the maps. Since one of the objectives of the survey was to ascertain regional and environmental differences, coastal vegetation sites were selected:

- at intervals along the coast
- on transects inland from the coast including

quadrats in foredunes, hind dunes and interdunes with a selection of landform elements of crests, seaward and leeward slopes and flats

- in areas of different texture and colour.

Sites included a selection of quadrats in coastlines with:

- cliffs
- clifftop dunes
- dunefields.

All quadrats were marked on aerial photographs.

Site information

The Hundred and Section were determined for each site and, where relevant, landowners were contacted by letter and phone to gain permission for access to sites. At this time site information details were collated together with any information concerning access problems and disturbance, including fire history.

Site identification

Each quadrat was identified by:

- a code of the first three letters of the mapsheet name (unless another mapsheet had the same identifier when the next letter was allocated)
- a number for the area on the mapsheet, generally sequentially west to east
- another number denoting the number of quadrats in that area, generally inland from coast.

For example GOO00203 = GOO (Goolwa) 002 (second area) 03 (third quadrat of the area).

Once entered into the database each quadrat was given a PID (individual identification number). For the purposes of analysis all PIDs were allocated to regions by the mapsheet and three letters denoting that region were added to the number (Appendix 5).

The final location of each quadrat was decided by the survey team on the day as being representative of the vegetation of that particular area and/or landform as selected on the aerial photograph.

FIELD SURVEY

Previous surveys have completed approx 5–6 quadrats per day so this provided an upper limit on the number of sites able to be completed within the time frame of the survey. The many stages of the survey were conducted during the spring months from August to early November with the exception of the Head of the Bight which was surveyed in May (Table 10). This was to maximise the information of each site to include as many of the annual species as possible. It was estimated that 675 sites would be surveyed within the Coastal Protection Districts. However, the actual number of sites completed in each

part of the survey depended on the time available and team members' availability which were both constrained by the amount of money allocated in the various stages for accommodation, transport etc. Teams of survey staff and volunteers, which included a physical and a botanical surveyor, surveyed 849 quadrats in the periods of the survey (Table 10).

Table 10 Coastal dune and clifftop survey — Number 82

Area of coast	Dates of survey	No of quad
Nullarbor and Far West	12–25 Nov 95	211
North Western Eyre Peninsula		
Head of Bight	28 April – 4 May 96	38
North-eastern Eyre & western Spencer	4–10 August 96	47
Kangaroo Island	1–7 Sept 96	117
Coorong	22–28 Sept 96	78
South East	27 Oct – 2 Nov 96	104
Yorke Peninsula	14–20 Sept 97	133
Southern Eyre Peninsula	21–27 Sept 97	51
Fleurieu/ Metropolitan	13–24 Oct 97	
	plus individual days	70
Total coastline		849

(quad = quadrats)

An extensive survey of Southern Eyre Peninsula was conducted by Planning SA in 9–20 October 1995 and the Coastal Dune and Clifftop survey provided two team members for two weeks and one team for one week. The eastern Upper Spencer Gulf was included in the Upper Mid North and Northern Spencer Gulf (East) vegetation survey, 13–26 October, conducted by Planning SA and the Coastal Dune and Clifftop survey provided a team for one week.

There were from one to six quadrats located in an area. Each quadrat was 30 x 30 m (900 m²) with the exception of linear land elements for which the dimensions were flexible but the 900 m² area was maintained (eg 10 x 90 m).

Appendix 3 summarises the field information collected for each quadrat on the survey. At each quadrat a photograph provided a record of the area.

DATA MANAGEMENT

All data were stored and maintained in a relational database (ORACLE), the Biological Survey Database, as a part of the Environmental Data Base of South Australia. This database stores both spatial and textual data. The data are held and maintained under joint custodianships by both the Information and Data Analysis Branch, Planning SA, and DEHAA.

TAXONOMY

A total of 6741 voucher specimens were collected, processed and lodged with the State Herbarium. A standard system of voucher number usage on data sheets enabled later updating with correct identifications. All

voucher specimens were identified by Ron Taylor using the facilities at the State Herbarium. The taxonomy used was basically according to Jessop (1993) with other identifications where appropriate (Table 11).

Table 11 Authorities for plant identification (Ron Taylor, pers comm)

Families/Species	Authority
All species	Lang and Kraehenbuehl (1998), McCann (1989)
Chenopodiaceae	Wilson (1984)
<i>Acacia</i> sp	Whibley and Symon (1992)
Gramineae	Bryan (1993), Walsh and Entwistle (1994)
Plantaginaceae	Briggs (1992)
<i>Cerastium</i> sp	Walsh and Entwistle (1994)
<i>Cassia</i> sp	Randell (1989)
<i>Dianella</i> sp	Carr and Horsfall (1995)
<i>Melaleuca</i> sp	Barlow and Cowley (1988)
<i>Hibbertia</i> sp	Toelken (1995)
<i>Picris</i> sp	Holzappel (1995)
<i>Wurmbea</i> sp	Bates (1995)

Errors in field identification involved separation of similar species including:

- *Atriplex vesicaria* and *Atriplex paludosa* ssp *cordata* which were found on the same quadrats on the far west coast
- *Acacia anceps* with longer more linear leaves and coastal form of *A. notabilis*
- *Melaleuca pauperiflora* ssp *mutica* and *M. lanceolata* ssp *thaeroides* near the WA border
- Vegetative form of *Nitraria billardiarei*, *Lycium australe* and *L. ferocissimum*
- *Threlkeldia diffusa*, *Osteocarpum* sp, *Maireana erioclada*, *Sclerolaena uniflora*, *S. diacantha*, *S. patenticuspis* and *Enchylaena tomentosa* all with similar vegetative appearance
- Small leaved forms of *Myoporum insulare* and *Eremophila deserti* or both for depauperate *Pittosporum phylliraeoides*
- *Halosarcia* sp, *Sclerostegia* sp and *Sarcocornia* sp
- *Pomaderris halmaturina* ssp *halmaturina* and *Pomaderris paniculosa* ssp *paralia*
- *Acacia cyclops* and *A. longifolia* var *sophorae* or *A. oswaldii*
- *Myoporum montanum* and small acute-tipped leaf versions of *Myoporum insulare*
- *Poa poiformis* in stunted clifftop form and *P. halmaturina*.

Difficulties in identifying vouchered specimens included:

- *Stipa* sp (two vouchered specimens), *S. mollis*? (three vouchered specimens) and *S. echinata*? (two vouchered specimens)
- *Danthonia* sp along Gulf St Vincent

Some of the data included species which were identified in earlier surveys. In some cases taxonomic research has split species into several species and it was not possible to determine which was the current designation. These species were designated not current (NC).

DATA

Apart from data collected in this survey, data were included from all quadrats (Table 12, Figure 1) located within varying distances of the coast as defined by Doug Fotheringham (Appendix 4) from a number of surveys.

Table 12 Surveys with quadrats in coastal areas

Survey	Survey no.	Quad size (m)	No. quadrats
South East Coast	4	10x10	148
Mt Lofty	5	10x10	17
Innes NP	13	30x30	22
Nullarbor	14	2kmx2km	20
Kangaroo Island	15	30x30	157
Murray Mallee	16	30x30	7
Lake Newland	27	30x30	7
Conservation Park			
South East Coast	29	30x30	30
Eyre Peninsula	30 (77)	30x30?	8
South East	42		23
Temperate Grasslands	46	10x10	2
Mid North	49	30x30	4
Yorke Peninsula*	63	10x10	83
Noarlunga	65	30x30	1
Christie Creek			
Noarlunga Field Creek	70	30x30	1
Venus Bay	71	100x100	9
Conservation Park			
Sooty Dunnart	72		6
Kangaroo Island			
Lincoln National Park	79		35
Southern Eyre Peninsula*	80	30x30	129
Coastal Dune & Clifftop*	82	30x30	845
Northern Spencer Gulf*	87	30x30	6
Northern Adelaide Plains*	88	30x30	9
Fleurieu Roadside	93	20x30	2
		7x50	

(* surveys included in PATN classification)

Representativeness of data

Regional

An assessment of the regional representativeness of the data can be determined by the distribution of quadrats along the length of the coastline. The number of quadrats in each geomorphic region is listed in Table 13 together with the length of coastline. This table shows that although the distribution of quadrats is relatively even across the state there are some regions with a higher or lower number of quadrats overall. The regions with the shortest distance between quadrats are the Coorong and the South East reflecting the ease of access and the length of the coastline in reserves. The regions with the longest distances between quadrats are the gulfs which have mangroves fringing long lengths of the coast and Eyre Peninsula east which has inaccessible parts of the coast.

Table 13 Distribution of quadrats

Region	Number of quadrats	Length of coastline	Km/ quadrat
Nullarbor	64	209	3.27
Head of Bight	54	122	2.26
Eyre Peninsula west	194	695	3.58
Eyre Peninsula south	186	431	2.32
Eyre Peninsula east	23	110	4.78
Spencer Gulf	48	380	7.92
Yorke Peninsula	208	415	2.00
Gulf St Vincent	54	295	5.46
Kangaroo Island south	139	232	1.67
Kangaroo Island east	81	114	1.41
Kangaroo Island north	60	111	1.85
Fleurieu Peninsula	84	120	1.43
Coorong	175	190	1.09
South East	203	200	0.99
Total	1573	3624	2.30

Environmental

The South Australian coast includes sandy, muddy, cliff, and bedrock landforms with 59% of the coast being sandy and 23 % cliff (Cullen and Bird 1980). The level of sampling should reflect this ratio. Tables 14 and 15 list the landform patterns and elements in the data. However, environmental representativeness was difficult to determine as data did not differentiate between clifftop dunefields and dunefields and other landforms which were near to cliffs.

Table 14 Frequency of landform patterns sampled

Landform pattern	Frequency
Alluvial fan	1
Alluvial plain	1
Chenier plain	1
Flood plain	1
Tidal flat	19
Marine plain	2
Plain	148
Sand plain	3
Beach ridge plain	86
Consolidated dunefield	242
Dunefield	334
Longitudinal dunefield	12
Parabolic dunefield	29
Rises	59
Low hills	65
Hills	27
Escarpment	117
Plateau	5
Total	1152

Table 15 Frequency of landform elements sampled

Landform element	Frequency
Plain	202
Sandy plain	11
Limestone plain	30
Open depression	11
Closed depression	17
Flat	19
Playa/pan	2
Rock outcrop (on plain)	3
Drainage depression	1
Beach	3
Beach ridge	41
Foredune	89
Dune/consolidated dune	228
Dune crest	77
Dune slope	153
Dune footslope	65
Swale	65
Interdune corridor	23
Interdune low	38
Hill crest	23
Hill slope	169
Hill footslope	14
Ridge	23
Gully	9
Cliff	66
Cliff footslope	13
Scarp	1
Rock outcrop (on plain)	8
Stream channel	4
Estuary	1
Lake	6
Saltlake	5
Swamp	54
Lagoon	1
Other	22
Total	1497

Data to be analysed were extracted from the Biological Survey Database and manipulated in Access and Excel software programs.

A tag or elimination file for all the species was prepared. Each taxon in the data was designated with an N if identified only to family or generic level, + if an annual species (excluding easily detectable species), and P if perennial (including easily detectable species).

The following annuals which are considered easily detectable were included in all analyses:

- *Cakile maritima* ssp *maritima*
- *Cakile edentula*
- *Carrichtera annua*
- *Salsola kali*.

Some plant species, particularly those with low numbers which were similar, or subspecies or varieties of the species (Table 16), were combined for the purpose of the classification analysis to increase robustness of the data (confirmed by P Lang).

Table 16 Plant species combined for PATN

Species	Species combined with
<i>Acacia anceps</i> (NC)	<i>Acacia aff anceps</i>
<i>Acacia anceps</i> x <i>nematophylla</i>	<i>Acacia anceps</i>
<i>Acacia paradoxa</i> hybrid	<i>Acacia paradoxa</i>
<i>Apium prostratum</i> ssp <i>prostratum</i> var <i>filiforme</i>	<i>Apium prostratum</i> ssp <i>prostratum</i>
<i>Apium prostratum</i> ssp <i>prostratum</i> var <i>prostratum</i>	<i>Apium prostratum</i> ssp <i>prostratum</i>
<i>Atriplex paludosa</i> ssp <i>cordata</i>	<i>Atriplex paludosa</i> ssp
<i>Atriplex paludosa</i> ssp <i>paludosa</i>	<i>Atriplex paludosa</i> ssp
<i>Cakile edentula</i> (only one record)	<i>Cakile maritima</i> ssp <i>maritima</i>
<i>Choretrum glomeratum</i> var <i>glomeratum</i>	<i>Choretrum glomeratum</i> var
<i>Correa reflexa</i> var <i>coriacea</i>	<i>Correa reflexa</i>
<i>Correa reflexa</i> var <i>reflexa</i>	<i>Correa reflexa</i>
<i>Dianella revoluta</i> var	<i>Dianella revoluta</i> var <i>revoluta</i>
<i>Eucalyptus dumosa</i>	<i>Eucalyptus dumosa</i> complex
<i>Glycine clandestina</i> var	<i>Glycine clandestina</i> var <i>sericea</i>
<i>Grevillea lavandulacea</i> var <i>sericea</i>	<i>Grevillea lavandulacea</i> var
<i>Grevillea pauciflora</i> ssp	<i>Grevillea pauciflora</i> ssp <i>pauciflora</i>
<i>Halosarcia indica</i> ssp <i>leiostachya</i>	<i>Halosarcia indica</i> ssp
<i>Xanthorrhoea semiplana</i> ssp	<i>Xanthorrhoea semiplana</i> ssp <i>tateana</i>
' <i>Zygophyllum billardierei</i> (NC)'	<i>Zygophyllum billardierei</i>

(NC = not current)

DATA ANALYSIS

Vegetation analysis

The data were analysed using Access and Excel and the results are discussed in the Analysis section of Chapter 4. Information collated included:

- the total number of species
- numbers of native and introduced species
- number of species recorded for each quadrat
- distribution of species in geomorphic regions
- species lifeform frequency
- structural description of quadrats
- the conservation ratings of sites, species and plant communities.

The amount of information involved is so large that only edited versions of the data are reproduced in the appendices of this report. Taxa were not combined for vegetation analysis. Since consistent data were not available for all quadrats the data used for each part of the analysis are specified. For example, since species information was collected at different times of the year and in seasonally different years, only perennial species

and easily detectable species were used when quadrats were compared. However, totals may include annuals and plant records with only genus or family levels as the intention is to give some measure of diversity.

Species lifeform

Lifeform data and/or the abundance of each species was not available for all the surveys. Quadrats included in the selected surveys used in the PATN classification which had the relevant data were used for structural analysis purposes (1072 quadrats). Lifeform frequency data only includes perennial or easily detectable species.

Vegetation structural summary

All quadrats which recorded assemblage information (lifeform height class and canopy cover estimate) were included in the structural analysis providing a total of 7956 recordings on 1465 quadrats. The median of the canopy cover (Table 17) was included in the estimate for lifeform structural abundances for analysis purposes. This measure is a combination of a lifeform height class and canopy cover measure in the vegetation association description and applies to the whole quadrat. The assemblage information (vegetation structural summary) is a strata or structural measure of canopy cover and may not include all the lifeforms which are assigned to individual species but includes all annuals (not easily detectable) in the estimate.

Table 17 Values assigned to assemblage cover range information (Muir code)

Canopy cover rating %	Assigned value
70–100	85
30–70	50
10–30	20
1–10	5

Floristic classification

The plant species presence and absence data and abundance data from quadrats was analysed using PATN, a CSIRO exploratory pattern analysis software program (Belbin 1993). This program is a tool for explaining the relationships shown in any data set and manipulates, analyses and displays patterns in data defined in a matrix of objects (rows) by attribute (columns). The survey data provide a matrix of quadrats (row) by plant species (column) which, after analysis, can be related to environmental and lifeform data available for each quadrat. The results of this analysis are provided in the Classification section of Chapter 4.

The analysis pathway adapted from Belbin (1991) is outlined in Table 18. A comprehensive explanation of the analysis is provided in Belbin (1991).

Table 18 Analysis pathway (adapted from Belbin 1991)

Preprocessing	
PRAM	sets up parameters
DATN	converts data to PATN format for analysis of quadrats (objects) in terms of plant species / lifeforms / environmental variables (attributes)
LABN	reads row and column labels
MASK	masks in selected records
Analysis	
<i>Quadrat classification</i>	
ASO	measures association between the quadrats using the Bray–Curtis coefficient of dissimilarity
FUSE	hierarchically classifies the quadrats (by species) an agglomerative hierarchal fusion of objects (quadrats) on associations using the flexible UPGMA (unweighted pair group arithmetic averaging) option; a beta value of –0.1 was used to cause a slight dilation in the clustering
DEND	creates a dendrogram from classification by FUSE summarising the results of the hierarchical clustering, showing the relationship of all quadrats to each other; the dendrogram can be cut at any level of dissimilarity to produce groupings (the default number of group is of the square root of the number of objects)
GDEF	lists the composition of the groups of quadrats from FUSE
Species classification	
DATN	transposes the data file for analysis of plant species (objects) in terms of quadrats (attributes)
ASO	measure association between the species
FUSE	hierarchically classify the species by location
DEND	draws a dendrogram of the classification
GDEF	defines a set of groups from the hierarchy
Post-processing	
<i>Evaluate classification</i>	
PRAM	uses original quadrats by species data
TWAY	reorganises (two-way) the data matrix using row (quadrats) and column (plant species) output groupings from UPGMA
Post-processing 2	
PRAM	uses environmental data
GSTA	interprets quadrats classification by environment
Post-processing 3	
PRAM	uses lifeform data
GSTA	interprets quadrat classification by environment

Since abundance data were to be used in the analysis it was necessary to convert the field estimation of percentage of cover for each plant species on the site into a form that could be used for the analysis. The adapted Braun–Blanquet cover/abundance scores for each species were assigned to the ranked numeric values which are used on the data sheets as shorthand notations for per cent cover/ abundance with the exception of N and T (see the Classification section of Chapter 4). For the purpose of the analysis N was converted to 0.1 and T to 0.5.

Two main pattern analyses were conducted. Initially all the survey data were run through PATN using absence/presence of species. Subsequently, surveys which provided abundance information, had the standard size quadrat of 30 x 30 m or 900 m² and had consistent physical information available, were included in a selected surveys analysis and these data were run through PATN using the abundances of species.

The initial data matrix comprised all records including taxa that had only generic or family designations. Subsequently the data matrix included perennial and annual species with finally only perennial species being included. Each of these runs masked in all sites with a frequency of species >one and species recorded on more than one site. These succeeding sets of data matrix were run through PATN in order to detect changing patterns and the resulting dendograms were studied.

As a result of the analysis of all survey data it was decided that the data matrix for the selected surveys consist of only perennial (easily detectable) species. Three masks were run through the data eliminating species with a frequency of from one to three. The intention was to reduce the statistical ‘noise’ of infrequent species.

The final data matrix comprised 1072 rows (quadrats) and 523 columns (species). The quadrat classification included in this report was run with a mask which included all species with a frequency >one. Species classification was also run using a mask which included all species with a frequency >one.

Group selection

The final dendogram was studied and various levels of cuts were tried until the maximum number of meaningful groups appeared to be robust. (The dendogram itself is too long to be reproduced in the report.) This resulted in 52 ecologically meaningful groups.

Environmental variables

Subsequently the groups defined by the site classification were related to the environmental factors of landform pattern, landform element, surface soil texture, outcrop lithology, outcrop cover, strew lithology, strew cover,

altitude, slope, aspect, estimate of bare earth, estimate of litter. Codes (eg DUN for dunefield) were assigned numbers. Estimates of average rainfall and wave energy were assigned to each quadrat. Average rainfall was estimated from the average isohyet contours (Figure 20) for each map sheet and assigned to all quadrats within that map sheet. A similar estimate of the wave energy of the coast was applied to each quadrat, by the map sheet, using information from Womersley and Edmonds (1958).

The groups defined by the quadrat classification were related to the structural description of the quadrat. The abundance for each lifeform layer was assigned a value which was the median (Table 17).

The GSTA (group statistics) step of the analysis, using environmental variables, provided both a summary of statistical measures and a graphical representation of the relationship between the environmental variables and structural composition of the groups, further clarifying the relationships between the quadrats within the groups. Those environmental variables with numeric measurements were used in the summary of the groups. These included the minimum, maximum, mean and standard deviation values of the following:

- altitude
- slope
- aspect
- per cent bare earth
- per cent litter
- estimated average rainfall.

The regional distribution of quadrats within the group was calculated using Access and a map of location prepared by Planning SA.

A summary of the other variables was collated using Access. A frequency of occurrence of each was calculated using Excel and included the following variables:

- structural description
- landform pattern
- landform element
- surface soil texture
- wave energy
- outcrop lithology and cover
- strew lithology and cover.

The relative importance of these variables to the group was determined by a value based on a chi-square estimate (Belbin, 1993 referred to as modified chi-square) of Observed–Expected/Expected (O–E/E) (Expected is row total x column total/grand total). This value provides a measure of the frequency of that variable in the group (Observed) in relation to the frequency of the variable if it was randomly distributed throughout all groups (Expected). All common codes have a negative value with codes which are unique to the group with very high positive values.

The structural dominance of the group was indicated by the frequency of recorded lifeforms of the dominant species. The total frequency of the range of lifeforms in

¹ 0.1: not many, 1–10 individuals; 0.5: sparsely or very sparsely present, cover very small (less than 5%); 1.0: plentiful but of small cover (less than 5%); 2.0: any number of individuals covering 5–25% of the area; 3.0: any number of individuals covering 25–50% of the area; 4.0: any number of individuals covering 50–75% of the area; 5.0: covering more than 75% of the area

the group was graphed as a percentage of all lifeforms in the group providing further information on the structure of the group membership.

Plant species which were in over 30% of the quadrats in the group are listed together with frequency, total frequency of species, number of groups that the species occurs in (constancy), the distribution of the abundance values within the group, total abundance of that species in that group, total abundance of that species for all groups. Calculated values include O–E/E (based on chi-square) and Indicator.

Floristic description uses a range of values for the individual species within the group. These include in-group constancy values, modified chi-square values and in-group cover/abundance values. The floristic description comprises a list of dominant and subdominant plant species and indicator plant species. Overstorey and understorey was assigned when it was apparent that there was a distinct height difference in the dominant species. Indicator species occur in less than 1/3 of the groups and have an in-group occurrence greater than 50%. The O–E/E or modified chi-square value is an indication of the importance of that species in comparison to the other groups. The bias the modified chi-square value gives to infrequently occurring species was reduced by incorporating a measure of the importance of that species to the group (O–E/E x freq of species/total frequency of species of that group as per cent measure). This was designated as the Indicator value.

Limitations of the survey methodology

Physical

Limitations of the standardised survey methodology in relation to coastal conditions became obvious during data analysis. There were problems with consistency of definition of some physical attributes of sites which depended on understanding of the geology and geomorphological processes.

Particular difficulties encountered included the definitions of the site landform pattern and element, and the definition of a clifftop dune. The Biological Survey Database did not permit allocation of physical variables other than those assigned, although extra information could be attached to the datasheets. The selection of options for the datasheets is a compromise and it is difficult to estimate specialty requirements until after the analysis is completed. An attempt was made to introduce further differentiation of coastal landforms such as seaward and leeward slopes but this was not consistently allocated by survey team members and, since not allocated by the other surveys, was not used. Therefore it was not possible to assess the numbers of quadrats surveyed on the different landform types of cliffs, dunefields and clifftop dunes and an individual assessment of each quadrat was not possible within the time constraints.

Since the Biological Survey Database started in 1971 the data collected has evolved with procedures gradually becoming standardised. Consequently, data from all the

surveys were not consistent: the most problematical differences were lack of abundance data and different sizes of quadrats. In addition, variations in the timing and amount of preceding rainfall in different survey periods would have influenced species composition and abundance. A further problem encountered was the lack of, or inconsistency of, variables of the physical data.

The distance inland that the study should include was difficult to define. Mowling (1979) described the coastal complex as comprising a narrow strip which rarely extended greater than 1 km inland from high tide mark. However, the distance of coastal influence on vegetation varies with the height above sea level, the strength and direction of the wind and the exposure of the coastline. Therefore, on the Nullarbor, where cliffs are 60–90 m above sea level the effect of salt spray is minimal. On sand dunes which are just above sea level and exposed to the full southern ocean, salt spray extends many km inland. Considering this, some areas may have been insufficiently sampled.

Botanical

Survey teams can introduce errors in field identification of plant species: incorrect identification of a species early in the survey and subsequent lack of revouchering can cascade through the data sheets. These problems can result in the statistical clustering process in PATN assigning quadrats to inappropriate groups. In addition, information collected includes the subjective estimation of cover abundances for each species present which will vary from team to team and result in biases in assigning cover/abundance scores. More detailed information requires substantially more time.

Limitations of the PATN analysis

The groups associated by PATN were variable in their strength of definition. Some areas, such as the limestone cliffs of the Nullarbor Plain, clustered well. However, the more subtle differentiation between environmental differences such as leeward and seaward slopes and swales did not occur, although there was one group which included some swale vegetation. Dunefield quadrats in the Coorong and South East were clumped into large groups. Perhaps it was difficult to differentiate these quadrats as many common coastal plant species occurred on the same quadrats. In addition, other common plant species occur throughout all habitats and are not specifically 'coastal'. These cloud the expected differences. Further analysis eliminating these common non-coastal plants may facilitate further division of groups.

A common problem encountered in PATN analysis with the elimination of not easily detectable species, is the loss of this information if the quadrat is dominated by such species. However, in coastal vegetation the incidence of these species did not appear to be of concern. An additional difficulty is that clustering may not be robust as PATN may group sites together with no apparently meaningful connections such as those with unusual species composition and with low plant species number. *Enchylaena tomentosa* var *tomentosa* Low shrubland (Floristic group 4) is one such group which was loosely connected.

4 Results

INTRODUCTION

The species composition of the vegetation of the State's coastal areas varies across the regions, however some plant species are common throughout. The common species form a core of 'coastal' plants which are not related to other environmental parameters such as rainfall or latitude. However, some species are only recorded in some regions of the State and there is a definite trend from the west to the east reflecting both the rainfall gradient and latitudinal variation.

The commonality of plant species in the coastal area is due to limiting factors unique to the coastal area that are additional to general establishment limitations such as soil nutrient levels and degree of slope. Limitations affecting the establishment of coastal plants include:

- calcareous substrate with some siliceous substrate
- recent or no soil development
- salt tolerance
- wind shear
- unstable substrate.

The successions of plant associations on the different substrata as determined by Specht (1972) are listed in Table 19.

Coastal vegetation includes primary stabilisers which are adapted either to the mobile substrate of the unstable dune and the cut and fill of the incipient foredunes and foredunes, or to the bare rock of the cliffs. The vegetation reflects the succession outlined in Figure 21 for dunefields. Many of the vegetation associations located on sand dunes along the coast are common but there are only a few common associations located on cliffs.

The vegetation associations related to dunefields change with the stability of the substrate and soil development. The vegetation associations related to cliffs change with the relationship between marine and subaerial erosion. Cliffs which have sand ramps and/or clifftop dunes have a mixture of vegetation associations.

The result is a diverse coastal vegetation with differences due to varying combinations of the limiting environmental parameters outlined in Chapter 2. The different plant communities which establish because of environmental differences are shown in the classification of the vegetation into plant community groups

Vegetation structure also is controlled by changes to these limiting factors. There is a recurring pattern in the structure of the vegetation inland from the coast on the different landform types of clifftops, dunefields and clifftop dunes. On cliffs the strength of wave action and the exposure to wind action determines the extent of coastal influences in the hinterland. Exposed locations support dwarf shrubs and hummock grassland formations; sheltered locations with sufficient soil support low shrubs and heath. Woodlands and mallees are supported in areas further inland of exposed locations.

The processes which affect clifftop dunefields combine the factors influencing dunefield establishment with cliff limitations.

Appendix 5 provides information on all the quadrats used in the analysis including location, landform pattern, group number and name if applicable, number of rated species, number of all species, number of all native species and number of all introduced species.

Table 19 **Primary succession** (adapted from Specht 1972)

Calcareous coastal sand dunes	Cliffs
Bare calcareous sand	Bare rock
Tussock grassland/ herbland/ sedgeland/ low shrubland formations	Algae, lichens and moss
Olearia axillaris–Leucopogon parviflorus associates Open-heath formations	Mat plants
Acacia sp–Leucopogon parviflorus associates Open-heath formation	Low shrubs
Melaleuca lanceolata associates Open-heath formation	Tall shrubs
Allocasuarina verticillata–Melaleuca lanceolata associates Low woodland formation	Trees
Eucalyptus sp associates Mallee formation	

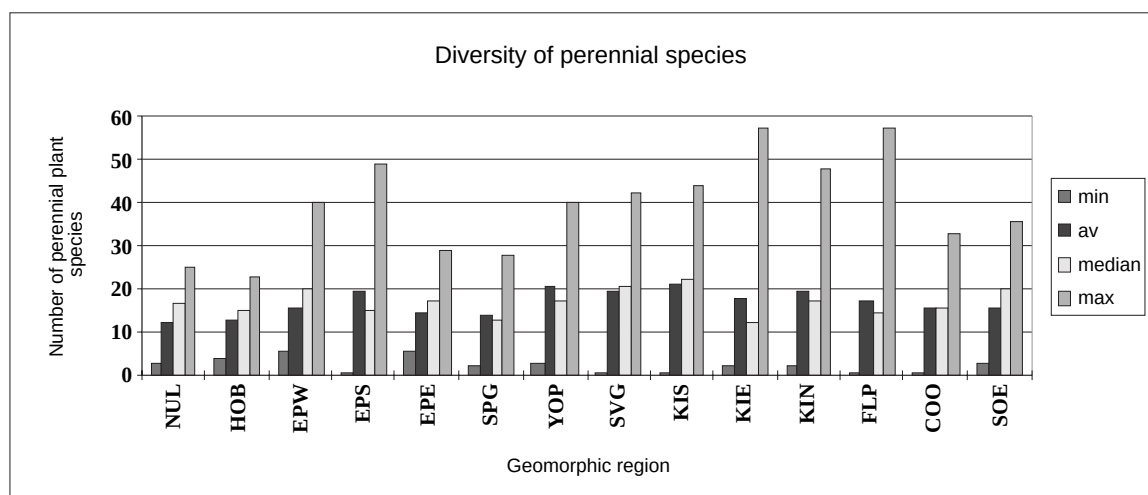


Figure 29a Total numbers of perennial (easily detectable) plant species recorded for all quadrats in each geomorphic region

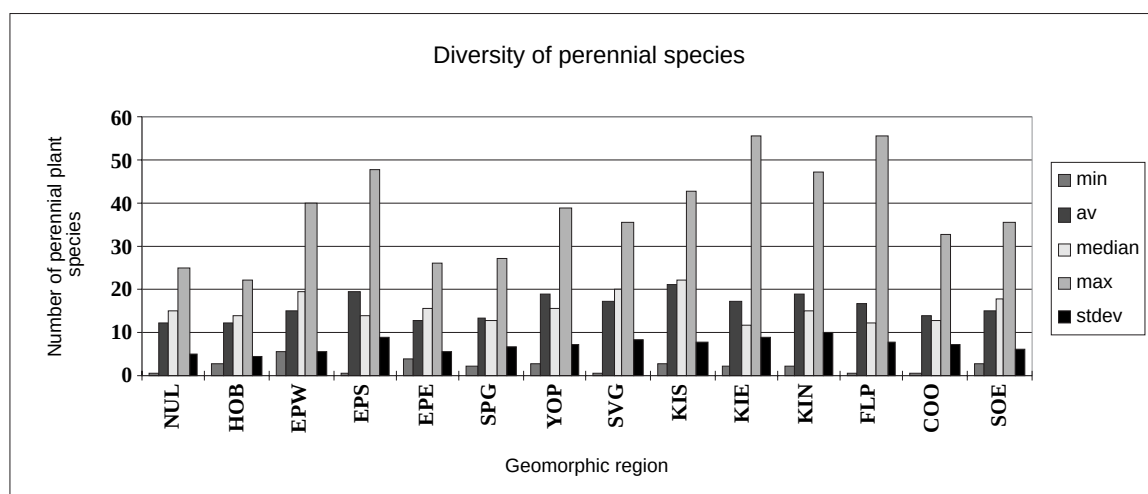


Figure 29b Total numbers of perennial (easily detectable) native plant species recorded for all quadrats in each geomorphic region

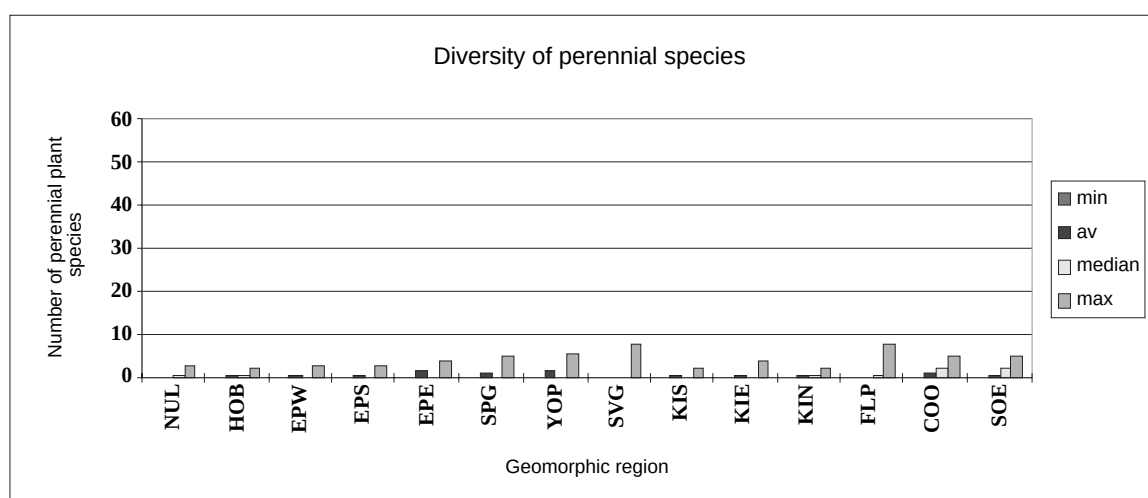


Figure 29c Total numbers of perennial (easily detectable) introduced plant species recorded for all quadrats in each geomorphic region

NUL: Nullarbor, HOB: Head of Bight, EPW: Eyre Peninsula west, EPS: Eyre Peninsula south, EPE: Eyre Peninsula east, SPG: Spencer Gulf, YOP: Yorke Peninsula, SVG: Gulf St Vincent, KIS: Kangaroo Island east, KIN: Kangaroo Island north, FLP: Fleurieu Peninsula, COO: Coorong, SOE: South East

ANALYSIS

PLANT SPECIES

Total plant species

Appendix 6 provides a list of all perennial plant species recorded for all the surveys together with the assigned rating of species which are considered to be of conservation significance.

A total of 1592 plant species were recorded for all the surveys (including species identified to genus or family level). The number of species excluding those identified only to genus or family levels is 1348 (828 native and 520 introduced) which is 31% of the total number of plant species for South Australia of 4275 (3109 native species and 1166 introduced species). In the coastal areas of South Australia the percentage of introduced species (38%) is higher than for the rest of the state (27%). However, the total perennial (easily detectable) native plant species was 841 with 78 introduced plant species, (9.3% of introduced perennial species).

There are 12 very common plants in coastal areas of South Australia (Table 20) none of which are introduced. Lifeforms include shrubs, herbs, mat plant, vines and sedges.

Table 20 Plant species recorded for >25% of all quadrats (total no. quadrats: 1573)

Plant species	F	%
<i>Olearia axillaris</i>	742	47
<i>Carpobrotus rossii</i>	699	44
<i>Tetragonia implexicoma</i>	677	43
<i>Senecio lautus</i>	657	42
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	646	41
<i>Leucopogon parviflorus</i>	596	38
<i>Threlkeldia diffusa</i>	524	33
<i>Clematis microphylla</i>	494	31
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	488	31
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	485	31
<i>Isolepis nodosa</i>	455	29
<i>Dianella brevicaulis</i>	431	27

(F = number of quadrats, % = percentage of quadrats)

Numbers of species

The number of plants recorded for each quadrat varied with the region (Figure 29). The maximum number of species (including all annual and species to genus or family level) recorded on any quadrat was 98 and the minimum was one. The average number of species recorded at each quadrat (including all annual and species to genus or family level) was 25. The average number of

perennial (easily detectable) plant species in quadrats along the coastline was a relatively low 17.6 (median 17) with a maximum of 57 and a minimum of one. There were low numbers of introduced perennial species with an average of 0.9 per quadrat (average of 5%).

There are distinct regional differences in the maximum number of species recorded for quadrats with the highest maxima recorded for Kangaroo Island east and Fleurieu Peninsula and the lowest maxima (of less than half the number of the highest maxima) for the Nullarbor and the Head of Bight (Figure 29). This difference could be correlated with rainfall (apart from the lower maxima in the Coorong and South East). However, the average number of species per quadrat only increased slightly along the length of the coastline. This remarkable consistency reflects the uniformity of the environmental influences of physical attributes and environmental parameters.

Distribution of species

Appendix 7 presents a summary of the distribution of perennial plant species recorded in >24 % of all quadrats. Distribution of plant species between regions
There are eight perennial plant species (easily detectable) which are located in all geomorphic regions along the extent of the coastline from the Western Australian border to the Victorian border (Table 21).

Table 21 Perennial plant species recorded in all geomorphic regions

Plant species	TF	%F
<i>Carpobrotus rossii</i>	699	44.4
<i>Tetragonia implexicoma</i>	677	43.0
<i>Senecio lautus</i>	657	41.8
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	646	41.1
<i>Threlkeldia diffusa</i>	524	33.3
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	488	31.0
* <i>Euphorbia paralias</i>	144	9.2
<i>Atriplex cinerea</i>	86	5.5

(TF = total frequency of quadrats, %F = percentage of total quadrats, * introduced species)

A further 25 perennial plant species (easily detectable) are recorded in more than 75% of the geomorphic regions (Table 22).

Table 22 Numbers of the most common perennial plant species recorded in all geomorphic regions

Plant species	TF	%F
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	155	9.9
<i>Comesperma volubile</i>	151	9.6
<i>Beyeria lechenaultii</i>	301	19.1
<i>Danthonia setacea</i> var <i>setacea</i>	128	8.1
* <i>Cakile maritima</i> ssp <i>maritima</i>	137	8.7
<i>Exocarpos aphyllus</i>	223	14.2
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	163	10.4
<i>Eucalyptus oleosa</i>	49	3.1
<i>Acrotriche patula</i>	292	18.6
<i>Eutaxia microphylla</i> var <i>microphylla</i>	135	8.6
<i>Olearia axillaris</i>	742	47.2
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	485	30.8
<i>Myoporum insulare</i>	268	17.0
<i>Scaevola crassifolia</i>	124	7.9
* <i>Lycium ferocissimum</i>	241	15.3
<i>Dianella revoluta</i> var <i>revoluta</i>	100	6.4
<i>Leucophyta brownii</i>	170	10.8
<i>Isolepis nodosa</i>	455	28.9
<i>Helichrysum leucopsidium</i>	236	15.0
<i>Alyxia buxifolia</i>	155	9.9
<i>Dianella brevicaulis</i>	431	27.4
<i>Clematis microphylla</i>	494	31.4
<i>Kennedia prostrata</i>	61	3.9
<i>Isolepis marginata</i>	104	6.6
<i>Poa poiformis</i>	191	12.1

(TF = total frequency of quadrats, %F = percentage of total quadrats, * introduced species)

Some species are cosmopolitan and are common throughout South Australia. These species grow the length of the coastline in both cliffed areas and dunefields. Such species are *Senecio lautus* and *Dianella* sp. In contrast, *Spinifex sericeus* and *Spinifex hirsutus* are highly specialised plant species which only grow vigorously in mobile sand in high salt spray areas. Individual plant species which are localised in the substrate or location relative to degree of salt spray include *Poa poiformis*.

Distribution of plant species within regions

Although there are many species which occur in all regions or are scattered throughout most of the regions, the number of sites in which the species was recorded and the relative importance of that species to that region varies. Appendix 8 presents a list of perennial species (easily detectable) which were recorded for each region (>24%) and the percentage of quadrats in which the species was located.

There are many plants which were only recorded in one region (Appendix 9). Table 23 gives an indication of the number of low frequency plants included in the analysis which are unique to each region in the coastal area. The Fleurieu Peninsula, Kangaroo Island north and the South East have the highest proportion of unique species. Reasons for differences between regions are complex but may include: landform type, amount of rainfall, history of grazing and the extent of vegetation clearance.

Table 23 Numbers of species only recorded in one region in the survey quadrats

Region	Sites	Length coastline (km)	Number of species	Ratio
Nullarbor	64	209	14	14.93
Head of Bight	54	122	3	40.67
Eyre Peninsula west	194	695	22	31.59
Eyre Peninsula south	186	431	38	11.34
Eyre Peninsula east	23	110	3	36.67
Spencer Gulf	48	380	26	14.62
Yorke Peninsula	208	415	20	20.75
Gulf St Vincent	54	295	26	11.35
Kangaroo Island south	139	232	32	7.25
Kangaroo Island east	81	114	8	14.25
Kangaroo Island north	60	111	30	3.70
Fleurieu Peninsula	84	120	55	2.18
Coorong	175	190	12	15.83
South East	203	200	50	4.00

(Ratio: length of coastline/number of species)

VEGETATION STRUCTURE

Information relating to vegetation structure in quadrats is available in two areas of the datasheets: an individual designation of lifeform for each recorded species; and an overall estimate of canopy cover for strata levels as a structural description. These two measures provide different information on the distribution of lifeform: by type frequency; and by abundance perceived as a part of the vegetation structure (see Chapter 3 for detailed explanations). Only subjective comparisons can be made since these two measures do not include the same quadrats, include different measures for assessment of cover abundance, and may not include all the same lifeforms for each quadrat. Further, lifeform information of grasses, herbs and vines may be seasonal and although included in the canopy cover estimate is not included in the frequency of individual species.

Total lifeforms

The relative proportions of frequency and abundance of lifeforms is shown in Figure 30 indicating the importance of the various lifeforms within coastal vegetation.

The total frequency for each lifeform as a percentage of all lifeforms shows that there is a very high proportion (over 30%) of shrubs <0.5 m (Figure 30). In comparison, the abundance of shrubs <0.5 m as a percentage of the abundance of all lifeforms (over 15%) is comparatively low. The abundance of shrubs reduces as the height increases with a slight increase for shrubs over 2 m. The relative importance of herbs, vines, low grasses and low sedges is also shown by the graph in contrast to the low values for mallees, trees, tall grasses, hummock grasses, ferns and mistletoe.

Lifeform frequency and abundance

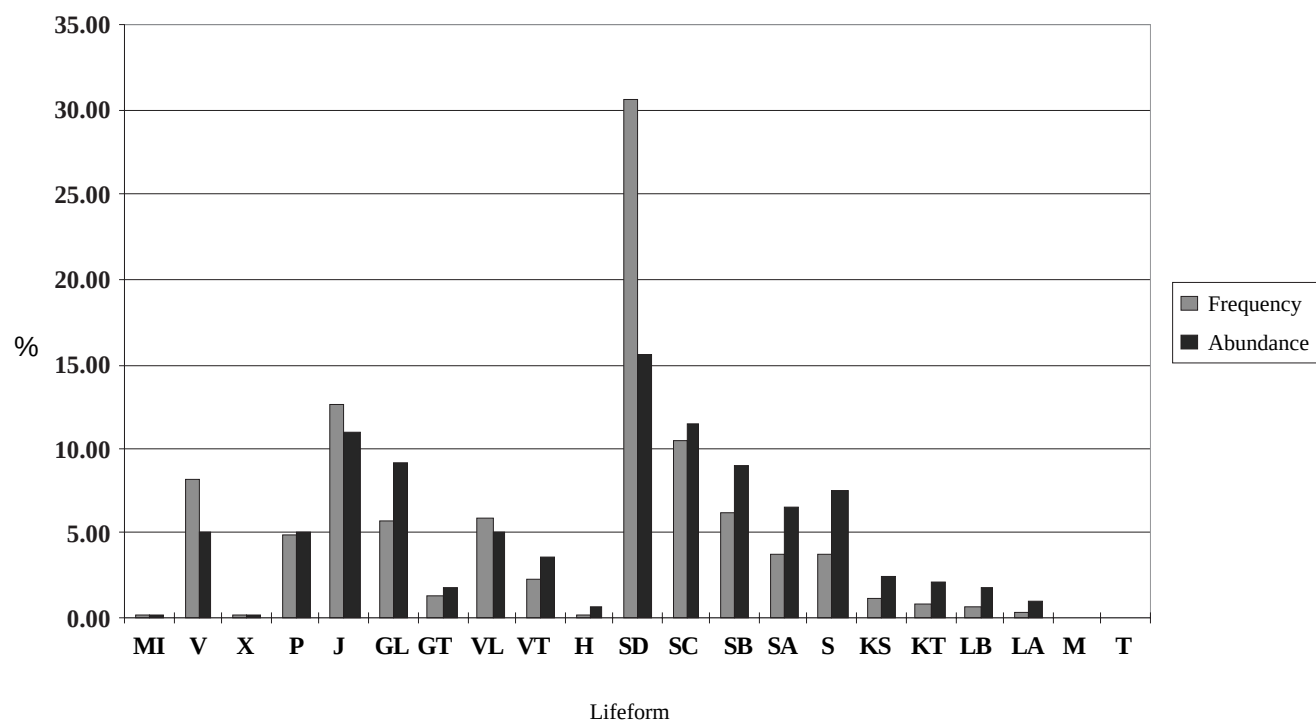


Figure 30 Distribution of lifeform types throughout the coastal areas of the State
(Trees 10–30 m and trees >30 m were recorded for Kangaroo Island but frequency and abundance were too low to be graphed)

Distribution of lifeforms between regions

An indication of the importance of individual lifeforms in regions along the coastline is shown by Figure 31. The value of the lifeform frequency and the canopy cover (only the abundance of the obvious strata are recorded) for each region as a percentage of the total lifeforms for that region was graphed.

There is an overall variation between regions with the lowest frequency and canopy cover in the Nullarbor and Head of Bight regions. Mistletoe was not recorded on Kangaroo Island, Fleurieu Peninsula and the Coorong. Some classes of species such as ferns are localised. Over 60% of all fern species were recorded for Eyre Peninsula south and Kangaroo Island north, with lesser frequencies for Fleurieu Peninsula and very low frequencies for Gulf St Vincent, Kangaroo Island east and the South East. This represents only 42% of the geomorphic regions. Grasses >0.5 m were higher in proportion in Eyre Peninsula east, Gulf St Vincent, Kangaroo Island east and the Coorong.

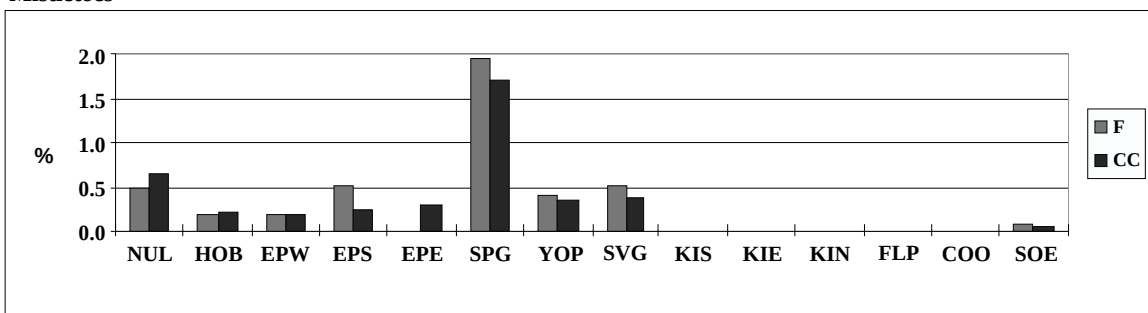
The region with the highest percentage of sedges >0.5 m was the South East. Hummock grasses were highly concentrated in Eyre Peninsula west and east. Yorke Peninsula dominated all levels of the shrubs. Tree >10 m were only recorded on Kangaroo Island with the tallest trees >30 m on the north coast.

Distribution of lifeforms within regions

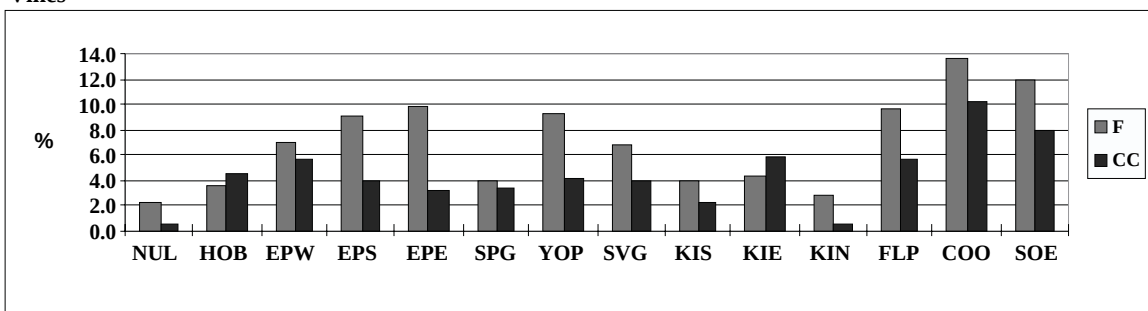
An indication of the distribution of lifeforms within each geomorphic region is shown by Figure 32. The value of the lifeform frequency and canopy cover for each region as a percentage of all lifeforms within that region was graphed. The variation of the structural foliage cover along the coast is indicated by use of the mean of the classes designated in the field for each lifeform structure. Regional information derived from the graph can be used to indicate the structural mix of a revegetation area. Overall the distribution of the lifeforms recorded during the survey indicates the extremely high proportion of shrubs of less than 0.5 m (Figure 30). This relates to the exposed nature of the sites.

¹ MI: mistletoes, V: vines(twiners), X: ferns, P: mat planes(single plant), J: herbaceous spp, GL: grass<0.5 m, GT: grass>0.5 m, VL: sedges <0.5 m, VT: sedges >0.5 m, H: hummock grass, SD: shrubs 0–0.5 m, SC: shrubs 0.5–1 m, SB: shrubs 1–1.5 m, SA: shrubs 1.5–2 m, S: shrubs >2 m, KS: low mallee <3 m, KT: mallee >3 m, LB: trees <5 m, LA: trees 5–10 m, M: trees 10–30 m, T: trees >30 m

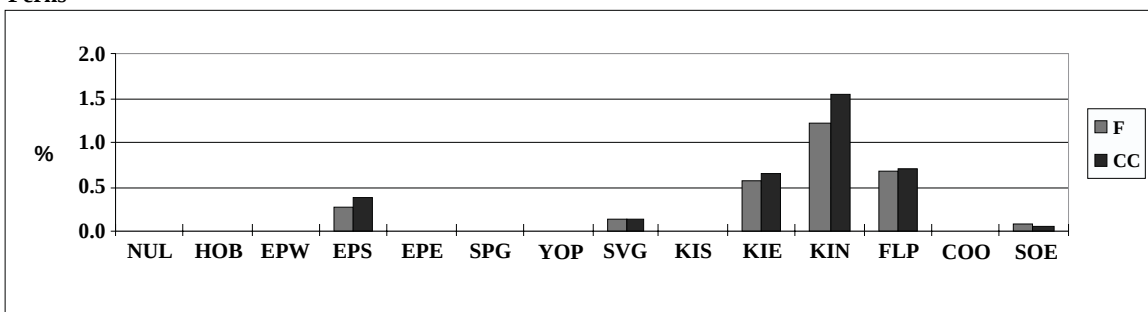
Mistletoes



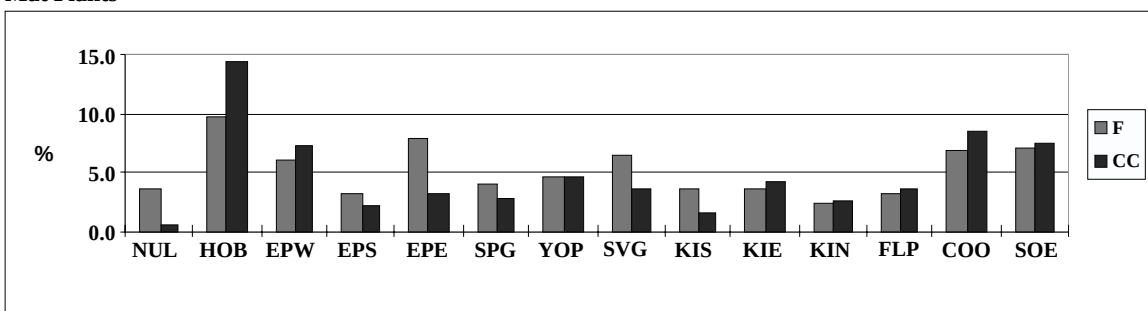
Vines



Ferns



Mat Plants



Herbs

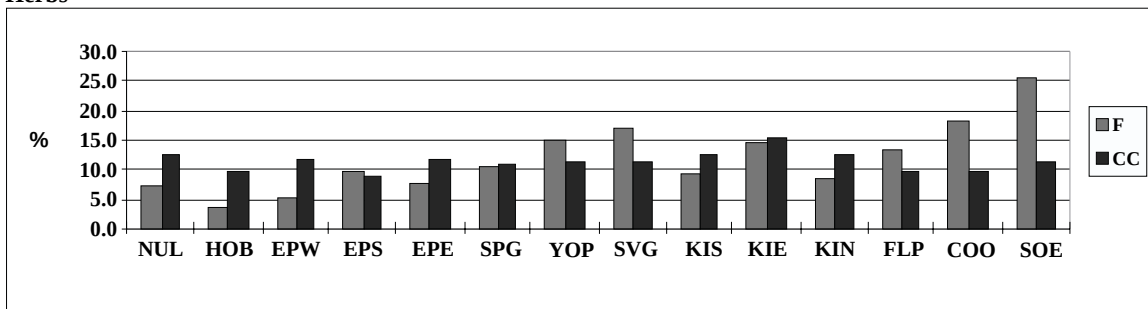
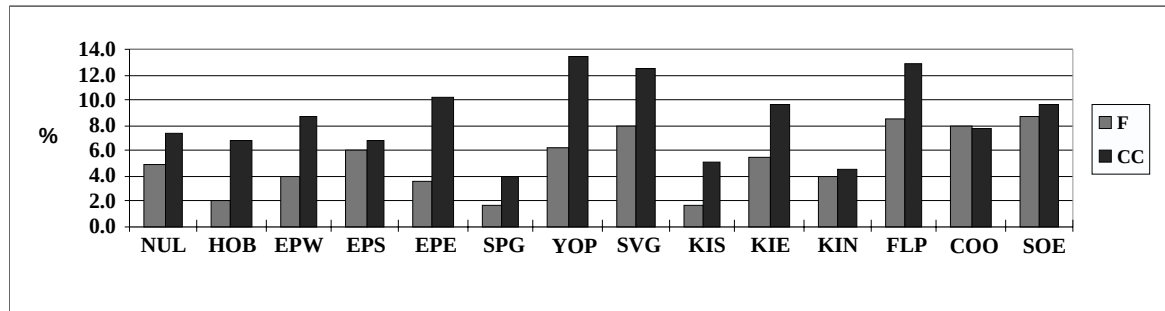


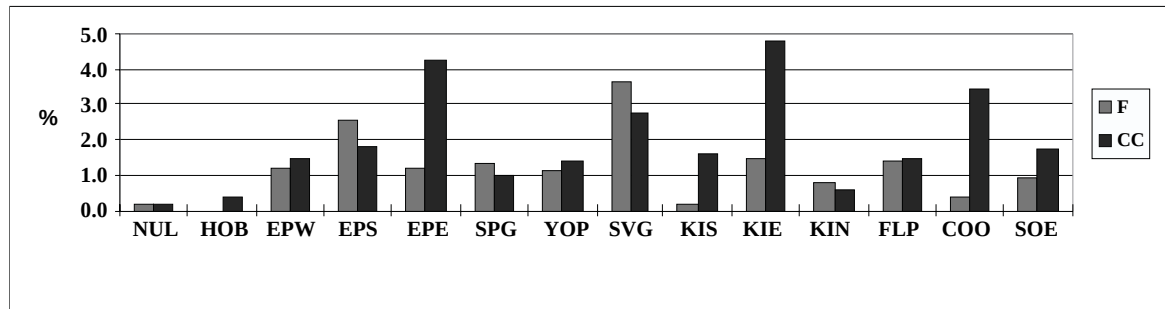
Figure 31 Importance of lifeform types between geomorphic regions (pages 50 - 53)

NUL: Nullarbor, HOB: Head of Bight, EPW: Eyre Peninsula west, EPS: Eyre Peninsula south, EPE: Eyre Peninsula east, SPG: Spencer Gulf, YOP: Yorke Peninsula, SVG: Gulf St Vincent, KIS: Kangaroo Island east, KIN: Kangaroo Island north, FLP: Fleurieu Peninsula, COO: Coorong, SOE: South East

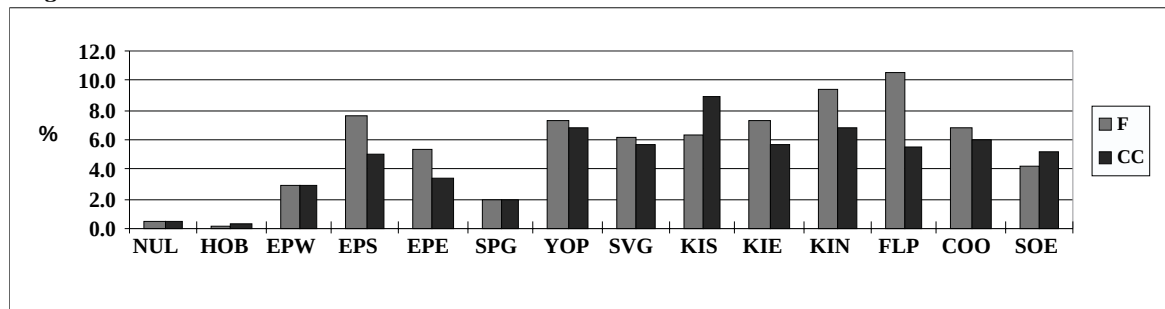
Grasses <0.5m



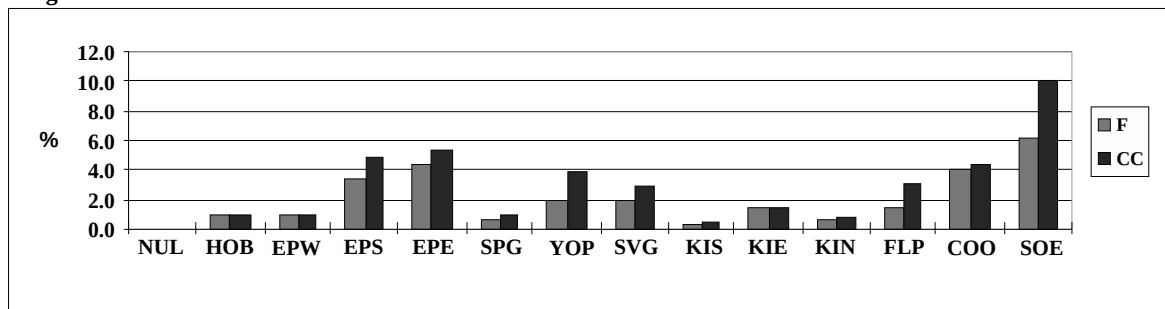
Grasses >0.5m



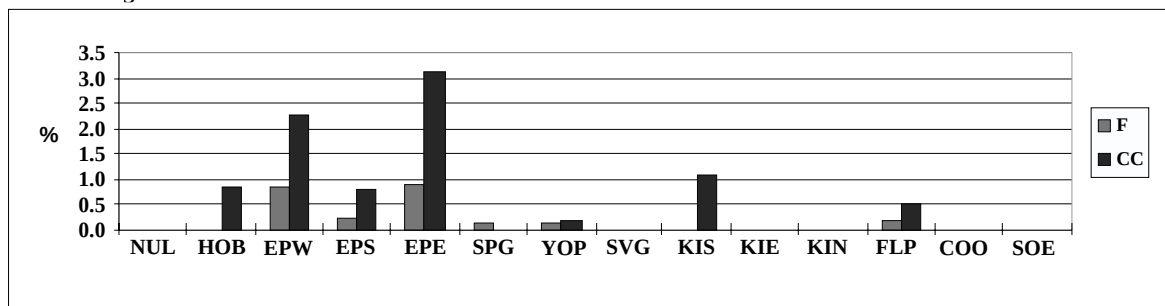
Sedges <0.5m



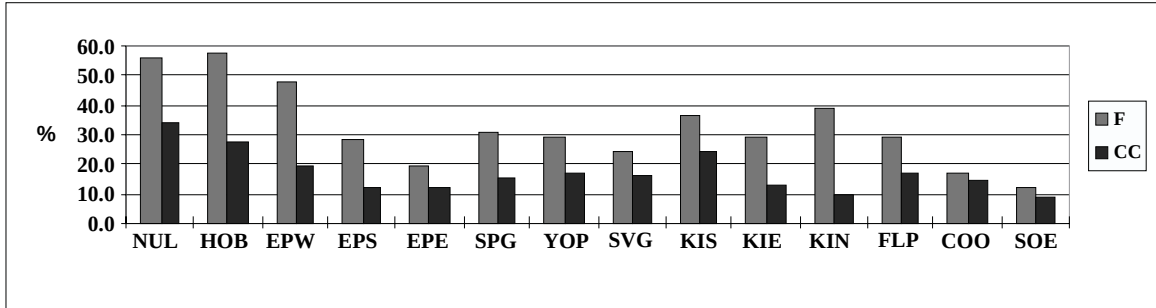
Sedges >0.5m



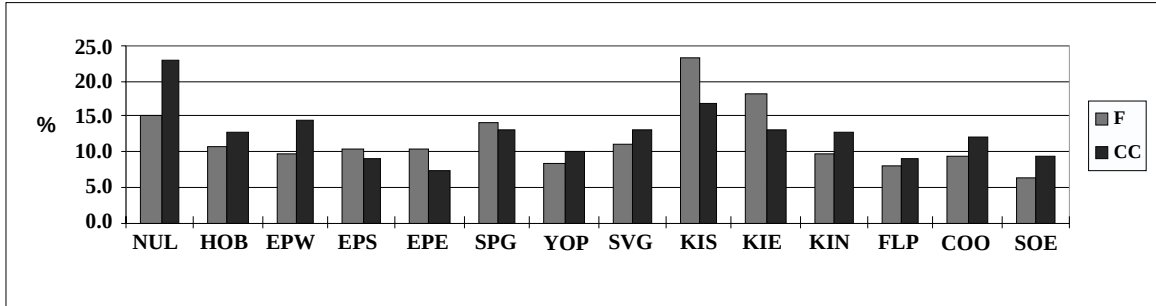
Hummock grasses



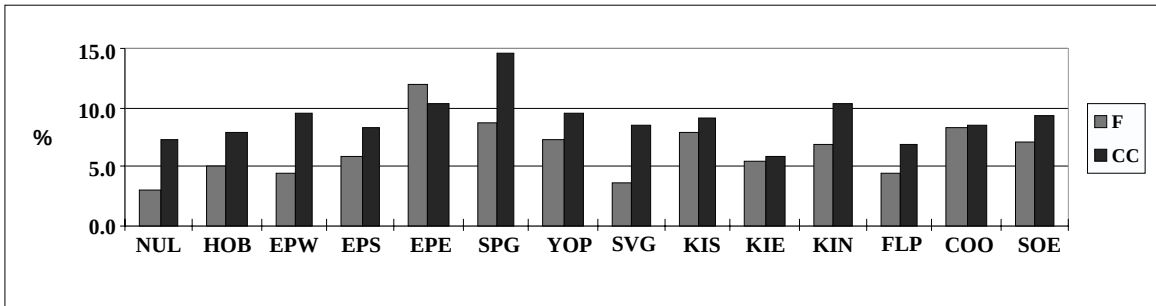
Shrubs<0.5m



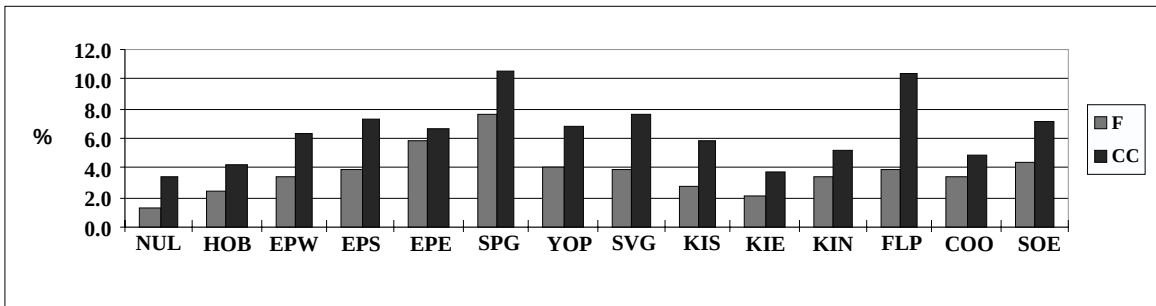
Shrubs 0.5-1m



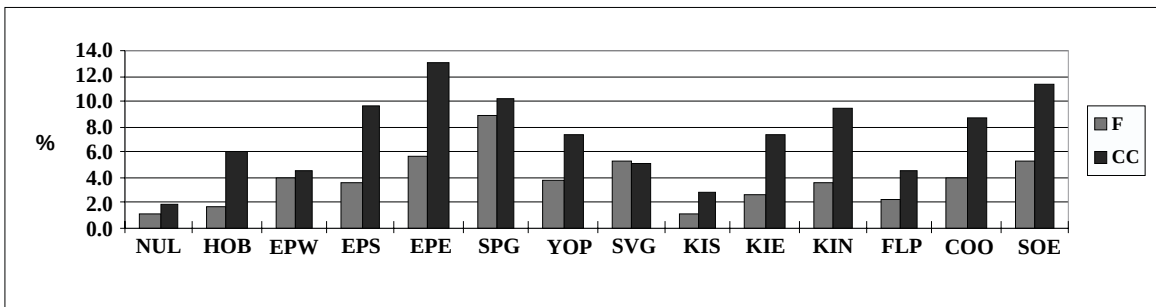
Shrubs 1-1.5m



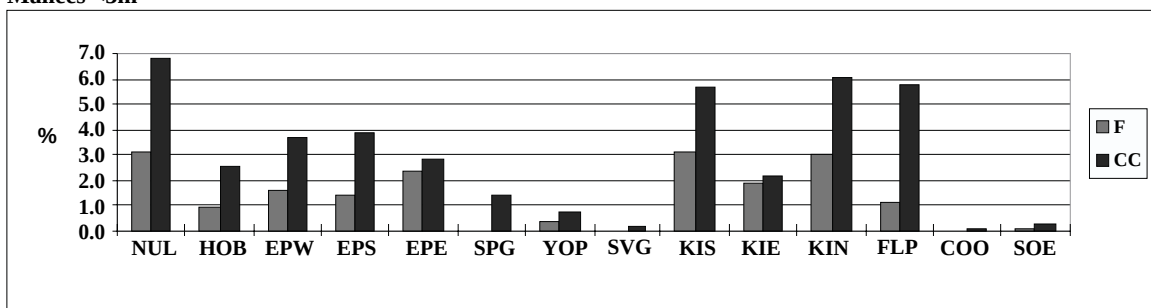
Shrubs 1.5-2m



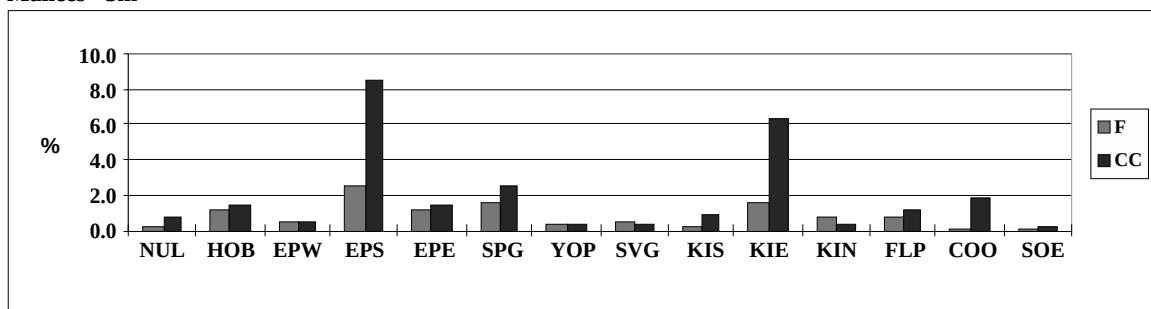
Shrubs >2m



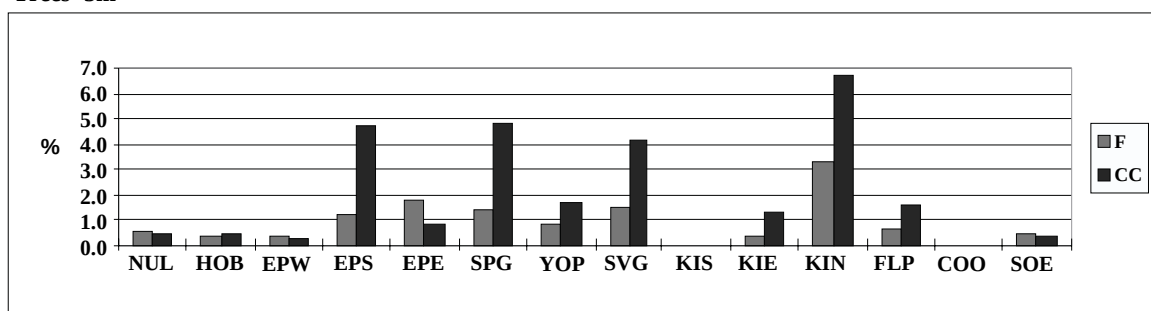
Mallees <3m



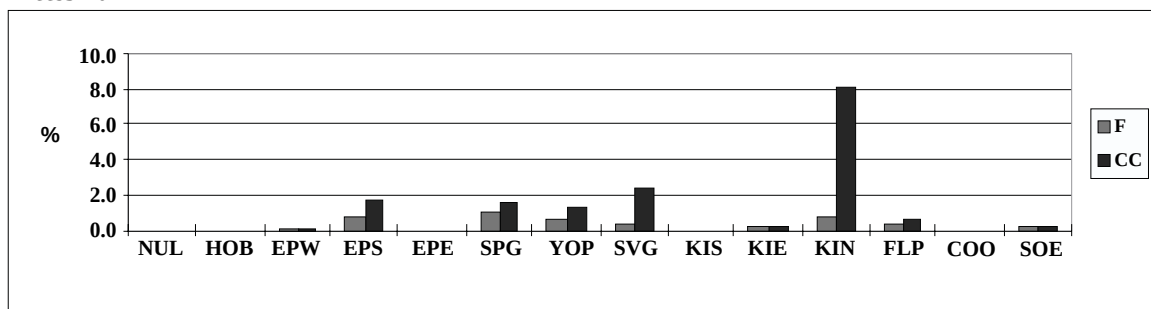
Mallees >3m



Trees<5m

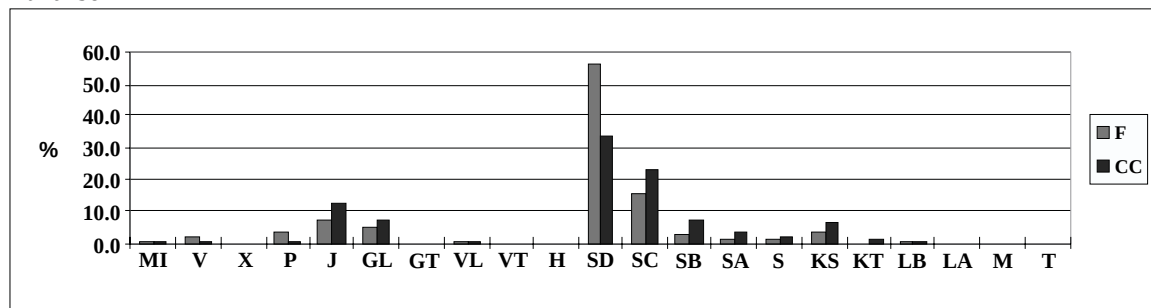


Trees5-10m

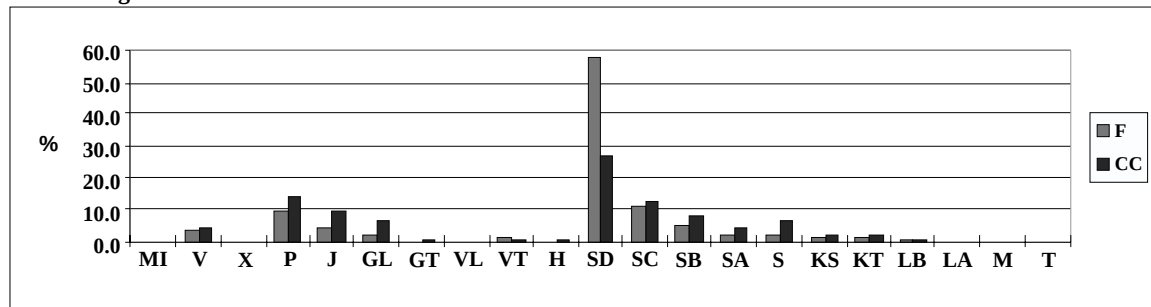


(The lifeform types Trees 10-30m and > 30m were only recorded for Kangaroo Island and not included in this figure)

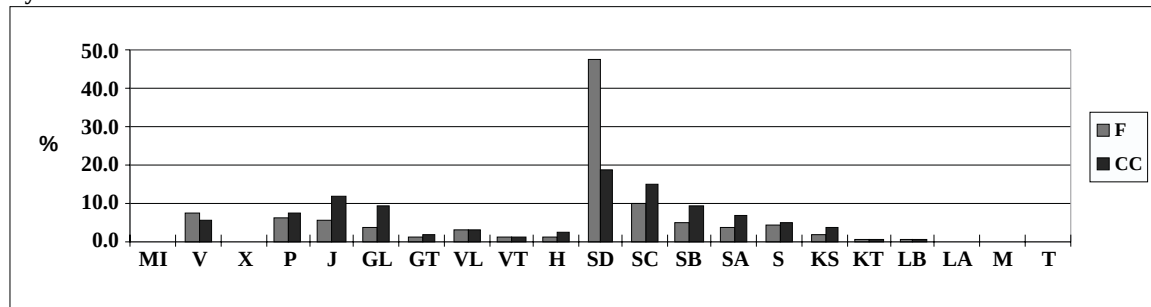
Nullarbor



Head of Bight



Eyre Peninsula west



Eyre Peninsula south

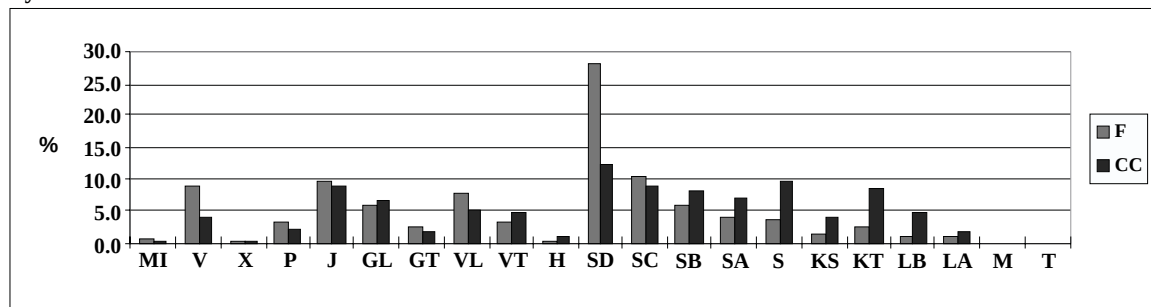
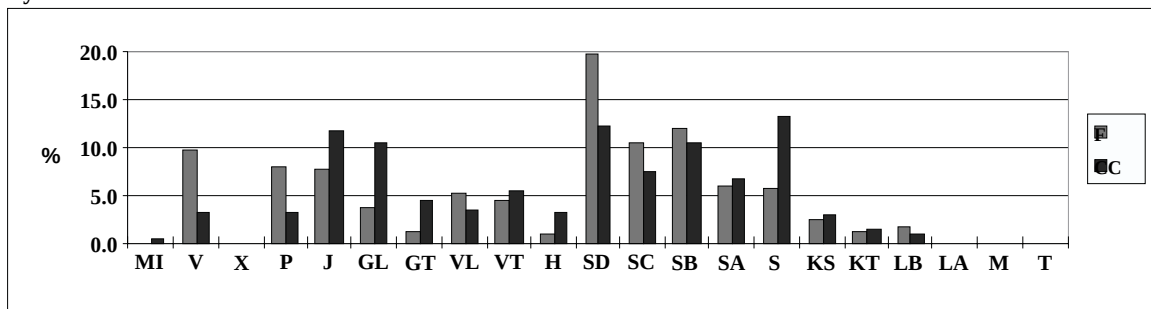


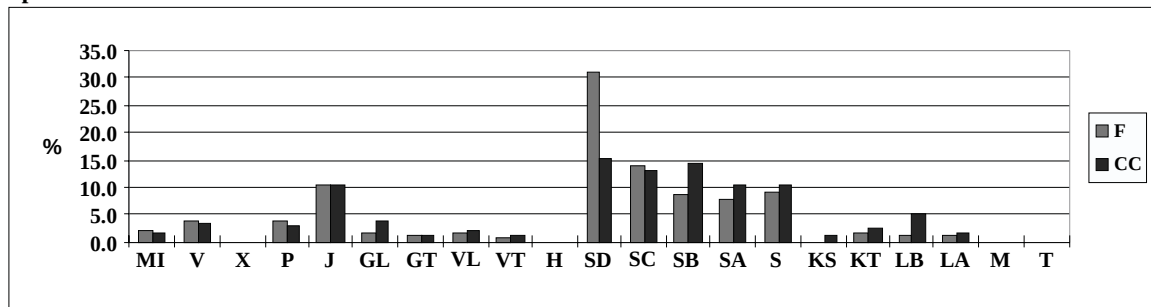
Figure 32 Distribution of lifeform types within geomorphic regions (pages 54 - 57)

MI: mistletoes, V: vines(twiners), X: ferns, P: mat planes(single plant), J: herbaceous spp, GL: grass<0.5 m, GT: grass>0.5 m, VL: sedges <0.5 m, VT: sedges >0.5 m, H: hummock grass, SD: shrubs 0–0.5 m, SC: shrubs 0.5–1 m, SB: shrubs 1–1.5 m, SA: shrubs 1.5–2 m, S: shrubs >2 m, KS: low mallee <3 m, KT: mallee >3 m, LB: trees <5 m, LA: trees 5–10 m, M: trees 10–30 m, T: trees >30 m

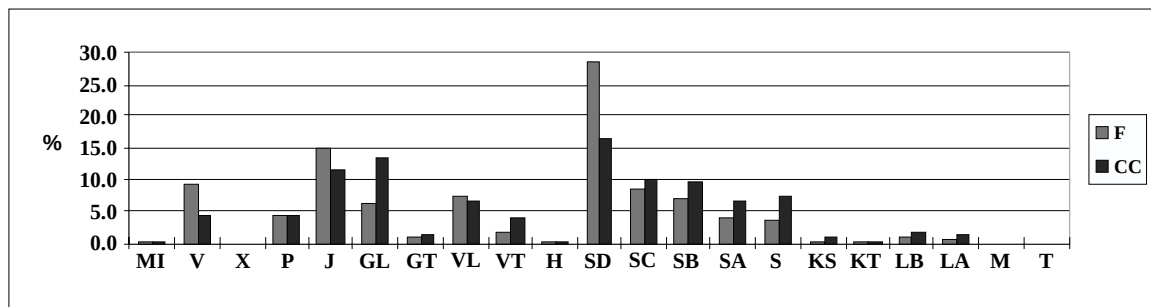
Eyre Peninsula east



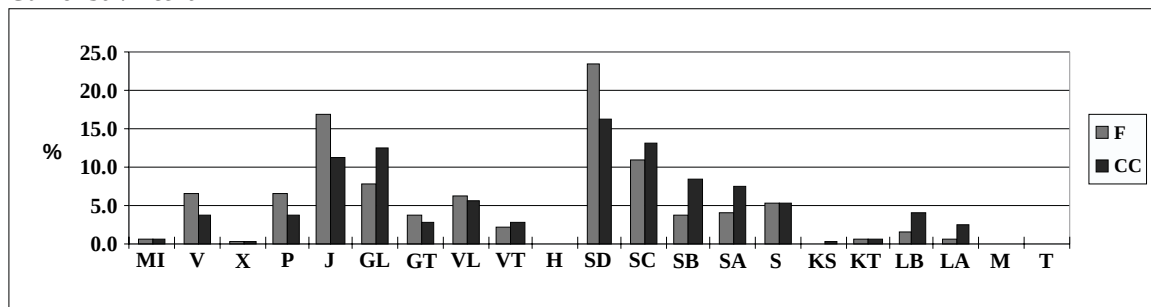
Spencer Gulf



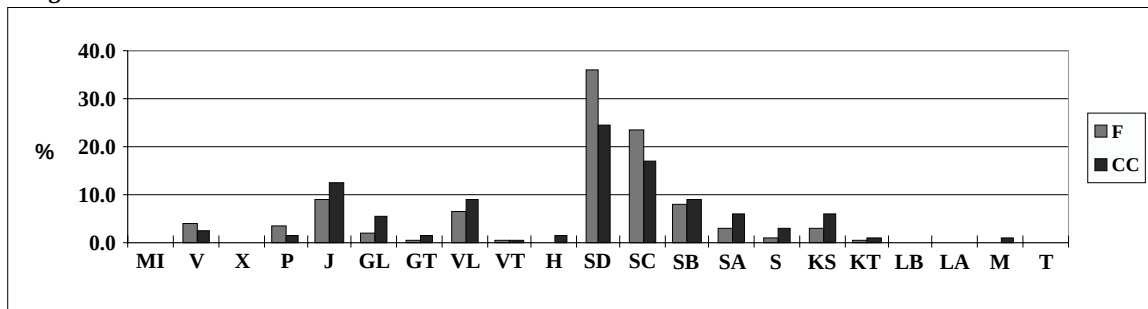
Yorke Peninsula



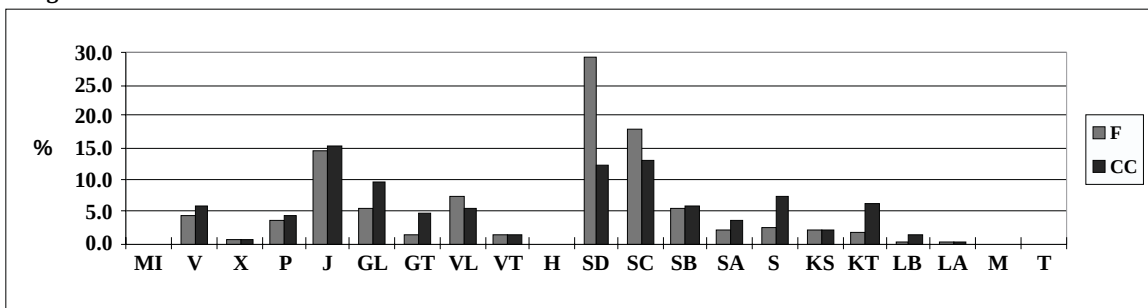
Gulf of St Vincent



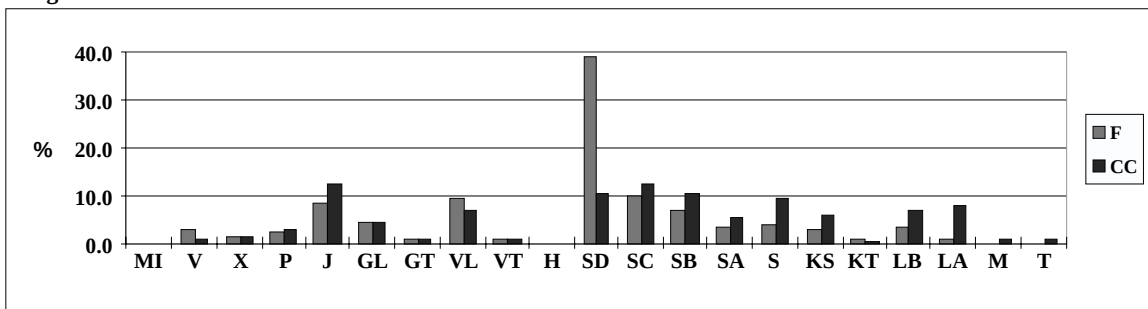
Kangaroo Island south



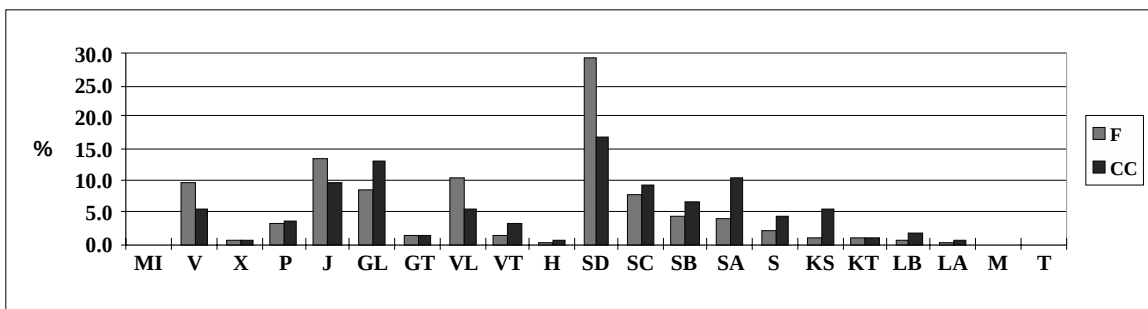
Kangaroo Island east



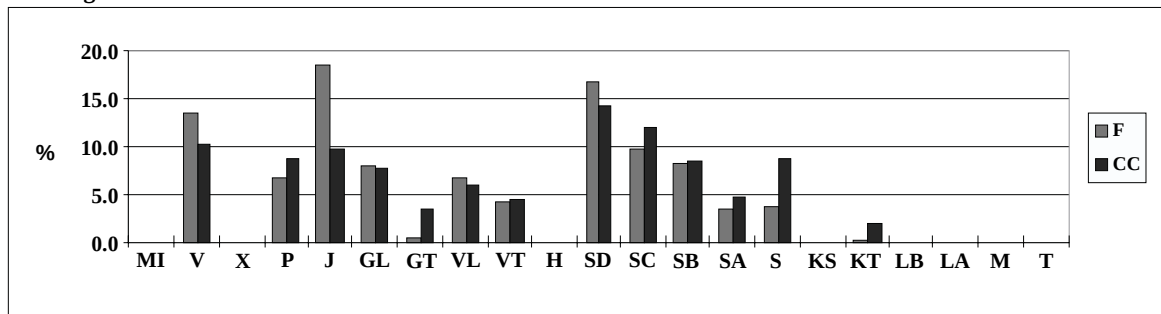
Kangaroo Island north



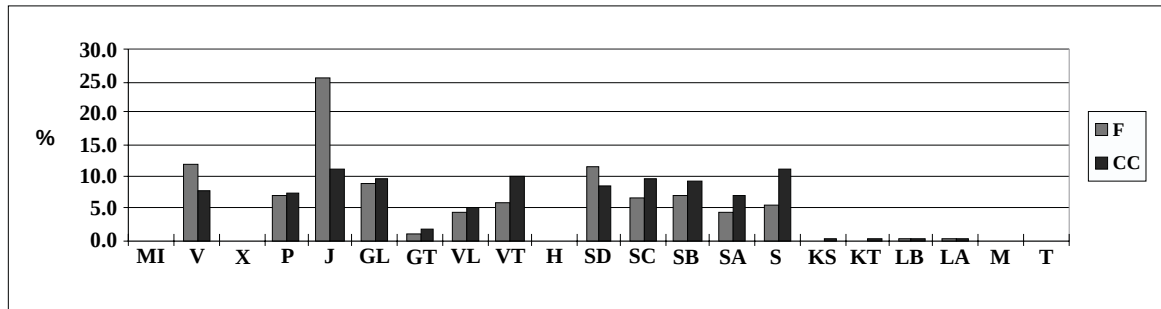
Fleurieu Peninsula



Coorong



South East



CONSERVATION SIGNIFICANCE

Plant species of conservation significance

Information for all plant species with conservation ratings is included in Appendix 6. Plant species with ratings Endangered or Vulnerable at all rating levels should be given priority for monitoring purposes and protective measures. Appendix 10 provides detailed information for quadrats with these species recorded. Although there are many plant species rated at the rare level, which should also be given priority for monitoring purposes and protective measures, these are not listed separately but can be found in Appendix 6.

National significance

There are 30 plant species with national significance in South Australia as shown in Table 24.

South Australian significance

There are 71 plant species which have conservation ratings on the state level with 3 Endangered, 12 Vulnerable, 43 Rare, 8 Uncertain and 5 of possible significance. Appendices VI and X list these species.

Regional significance

There are 224 plant species which have conservation ratings on the regional level for South Australia although they may be rated in one region but not another. Appendix 6 lists these species. In some geomorphic regions there were several regions of South Australia as defined by the State Herbarium and these were combined to give precedence to the geomorphic regional rating with the highest rating.

Table 25 provides a summary of all species with rating by geomorphic regions. Appendix 6 lists all the rated species together with the conservation rating for each region.

Table 24 Plant species with Australian conservation ratings

Plant species	Australian rating
<i>Acacia alcockii</i>	2RCa
<i>Acacia dodonaeifolia</i>	3RCa
<i>Brachycome tatei</i>	3KC-
<i>Calytrix smeatoniana</i>	2RC-
<i>Choretrum spicatum</i>	R
<i>Daviesia pectinata</i>	3RC-
<i>Euphrasia collina</i> ssp <i>osbornii</i>	3EC-
<i>Gahnia hystrix</i>	2RCa
<i>Grevillea rogersii</i>	2RC-
<i>Ixiolaena pluriseta</i>	3R
<i>Logania insularis</i>	2VCa
<i>Olearia microdisca</i>	2ECa
<i>Olearia pannosa</i> ssp <i>pannosa</i>	3VCa
<i>Platysace heterophylla</i> var <i>heterophylla</i>	2RCa
<i>Poa drummondiana</i>	Q
<i>Poa halmaturina</i>	3RC-
<i>Pomaderris halmaturina</i> ssp <i>halmaturina</i>	3VC-
<i>Prostanthera calycina</i>	2VCi
<i>Prostanthera chlorantha</i>	R
<i>Pseudanthus micranthus</i>	2RCa
<i>Pultenaea teretifolia</i> var <i>brachyphylla</i>	2RC-
<i>Pultenaea villifera</i> var <i>glabrescens</i>	2VCi
<i>Spyridium coactilifolium</i>	2VCa
<i>Spyridium halmaturinum</i> var <i>scabridum</i>	2KC-
<i>Spyridium leucopogon</i>	3KC-
<i>Spyridium spathulatum</i>	3RCa
<i>Stipa breviglumis</i>	3RC-
<i>Stipa echinata</i>	3RC-
<i>Stipa multispiculis</i>	3RC-
<i>Stylidium tepperianum</i>	2RCa

See Appendix 1 for explanation of ratings

Table 25 Regional totals of species with conservation ratings (see Appendix I for definitions of ratings)

	Australia				South Australia					Region				
	E	V	R	KQ	E	V	R	KQ	UN	E	V	R	T	KQ
Nullarbor				1			1	2				1		2
Head of Bight									2			1		1
Eyre Peninsula west		1	3	1							1	7		7
Eyre Peninsula south		1	8	2		2	16	4	39	1	4	39	4	14
Eyre Peninsula east				1			1					1		
Spencer Gulf			1				2	7				5		4
Yorke Peninsula		1	2	1	1	1	7	2	37	3	2	22	2	19
Gulf St Vincent	1		1		1		2	5	35	6	5	22	1	9
Kangaroo Island south		1	8	2		2	21	2	32	4	2	35	1	15
Kangaroo Island east	1		3	1	1		5		38	7	2	25	1	9
Kangaroo Island north	1	2	9	2	1	2	15		33	1	3	30	2	15
Fleurieu Peninsula	1	2	6		1	4	9		65	4	14	47	1	13
Coorong	1				1	1	3		11	1	1	8		6
South East		1				5	7	2	12		5	14		7

Plant communities of conservation significance

Two plant communities along the coast recorded by Davies (1982) and Neagle (1995) have a current conservation rating of less than Reasonable (see Neagle, 1995 for definitions). *Eucalyptus diversifolia* Low open forest with heath understorey is poorly conserved on Kangaroo Island but the open-scrub is excellently conserved in other regions. *Eucalyptus cosmophylla* – *M. uncinata* is poorly conserved on Kangaroo Island. Buckley and Fotheringham (1987) identified four coastal plant communities which are not adequately conserved in the Eyre region of which *Atriplex paludosa* Low shrubland is relevant to the survey.

The following coastal plant communities were described by Davies (1982) and Neagle (1995). Other plant communities which may be coastal but not differentiated as such or not differentiated as a plant community with PATN are not included. Although these plant communities are now adequately conserved they are representative of plant communities which are located along the coast and could be the basis of selection for monitoring purposes.

Low open forest with heath understorey

Eucalyptus diversifolia – poor KI

Low woodland with grassy understorey

Allocasuarina verticillata ± *Melaleuca lanceolata* – reasonable SE, MLB, YP, EP

Melaleuca lanceolata – moderate SE, MLB, EP, YP

Open-scrub with heath understorey

Eucalyptus diversifolia, *Eucalyptus rugosa* – reasonable KI, EP, YP

Eucalyptus rugosa – reasonable KI, EP

Eucalyptus diversifolia – excellent SE, MLB, EP, YP

Eucalyptus cneorifolia, *E. rugosa* – moderate KI

Eucalyptus diversifolia *E. incrassata* or *E. angulosa* – reasonable EP, YP

Open-scrub with frequent sclerophyllous shrubs (including *M. uncinata* and/or *Callitris verrucosa*)

Eucalyptus cneorifolia – moderate KI

Eucalyptus cosmophylla – *M. uncinata* – poor KI

Open-scrub with sparse sclerophyllous shrubs

Eucalyptus yalatensis ± *E. dumosa* ± *E. gracilis* – moderate EP

Open heath

B) Wet heath (saline sites)

Melaleuca gibbosa – reasonable SE, KI

Melaleuca brevifolia – reasonable SE, EP

D) Broombush

Melaleuca uncinata – excellent MLB, EP

E) Coastal complex (dunes)

1) *Olearia axillaris* ± *Leucopogon parviflorus* – reasonable SE, MLB, EP, YP

2) *Olearia axillaris*, *Acacia anceps* ± *A. ligulata* – moderate EP, YP

3) *Acacia longifolia* var *sophorae*, *Leucopogon parviflorus* – reasonable SE, MLB, EP, YP

4) *Melaleuca lanceolata* – reasonable KI, EP, YP

Low shrubland

A) Salt bush – blue bush communities

Atriplex vesicaria – reasonable EP

C) Coastal complex and inland salt marshes

1) *Atriplex paludosa* – reasonable SE?, EP, YP

2) *Nitraria billardiarei* – reasonable all provinces

D) Coastal complex (cliffs)

1) *Leucophyta brownii* – reasonable SE, EP, YP

2) *Beyeria lechenaultii*, *Eutaxia microphylla* var *microphylla* etc – moderate SE, EP, YPS

Herbland

A) Tussock grassland/sedgeland

Gahnia lanigera – reasonable EP

Gahnia trifida – reasonable SE, EP

B) Coastal complex (dunes)

Spinifex hirsutus – reasonable EP

Spinifex sericeus – reasonable YP, SE

Isolepis nodosa – reasonable all provinces

C) Coastal complex (cliffs and salt marshes)

Disphyma crassifolium ssp *clavellatum* – reasonable SE, MLB, EP, YP

Open herbland

B) Coastal complex (dunes)

Spinifex hirsutus – reasonable EP

Spinifex sericeus – reasonable YP, SE

Isolepis nodosa – reasonable all provinces

Sites of conservation significance

The 92 quadrats located in 10 regions with 36 species (102 recordings) of Endangered or Vulnerable conservation significance are shown in Figure 33 and listed in Appendix 9. All these quadrats should be included in a monitoring program, however, only 40% are in reserves. Altogether there are 297 rated species recorded from 583 quadrats. Appendix V lists all the quadrats with the number of species with conservation ratings.

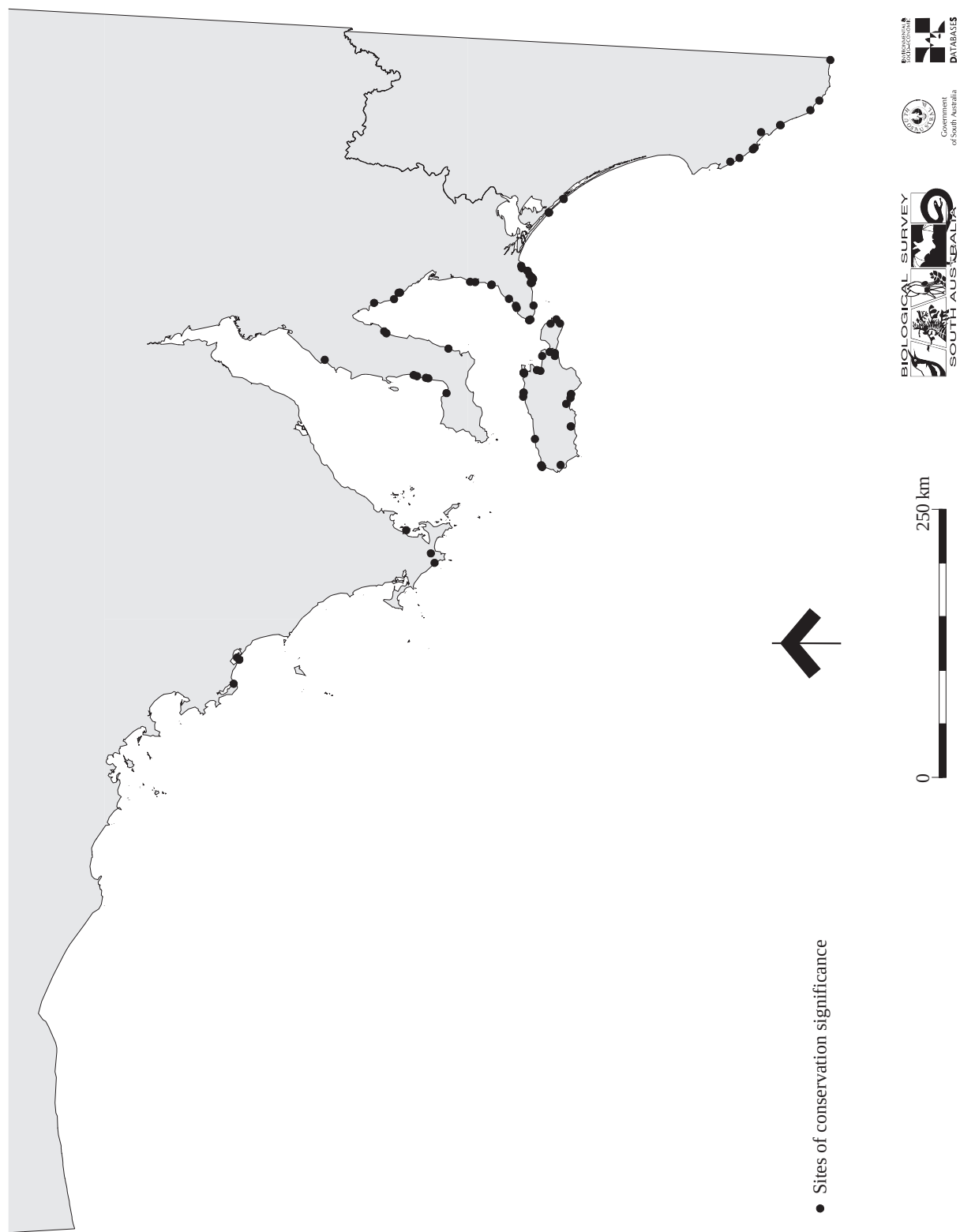
Regional ratings for species of conservation significance are related to that region and may not reflect the State as a whole. However, the species has a status in that region (note regions which are not on the coast are not included). One example is the distribution of *Poa halmaturina* which has an Australian rating. It was recorded on 18 quadrats in four regions in the survey and is only endangered in the Fleurieu Peninsula where it was recorded in three quadrats. Another example is *Correa* sp aff *calycina* which is rated rare in South Australia and rare in Fleurieu Peninsula but is not rated on Kangaroo Island where it was recorded in 71 quadrats.

INTRODUCED SPECIES

Pest plants

Table 26 lists all the introduced plant species recorded in more than 10 quadrats. This shows that there are only three introduced plant species *Anagallis arvensis*, *Sonchus oleraceus* and *Lagurus ovatus* which were recorded in more than 20% of the quadrats. These species are very common in South Australia and are not confined to the coastal areas. The only plant species listed on the Schedule of the *Animal and Plant Control (Agriculture*

Figure 33 Sites of conservation significance



Protection and Other Purposes) Act 1986 which is widely distributed along the coast is *Lycium ferocissimum*. Another listed plant species, *Asparagus asparagoides*, recorded in 9% (147) of the quadrats and in nine of the 14 regions, is of concern locally in many areas, particularly in the South East.

Cosmopolitan species

The tolerance of cosmopolitan plants for a range of extreme conditions means some plant species are found along the length of the coastline. There are two cosmopolitan introduced plants along the coast, *Cakile maritima* ssp *maritima* and *Euphorbia paralias*, which were recorded on foredunes and incipient foredunes. Neither appears to be preventing the establishment of native species.

Table 26 Introduced plant species recorded on >10 quadrats

Introduced species	Tag	Qd	%	Introduced species	Tag	Qd	%
<i>Anagallis arvensis</i>	+	493	31.3	<i>Centaureum spicatum</i>	+	35	2.2
<i>Sonchus oleraceus</i>	+	437	27.8	<i>Senecio pterophorus</i> var <i>pterophorus</i>	P	34	2.2
<i>Lagurus ovatus</i>	P	324	20.6	<i>Hypochaeris</i> sp	N	33	2.1
<i>Galium murale</i>	+	313	19.9	<i>Medicago minima</i> var <i>minima</i>	+	32	2.0
<i>Lycium ferocissimum</i>	P	242	15.4	<i>Schismus barbatus</i>	+	32	2.0
<i>Rostraria cristata</i>	+	223	14.2	<i>Ammophila arenaria</i>	P	30	1.9
<i>Desmazeria rigida</i>	+	181	11.5	<i>Vulpia</i> sp	N	30	1.9
<i>Stellaria media</i>	+	179	11.4	<i>Briza maxima</i>	+	29	1.8
<i>Minuartia mediterranea</i>	+	177	11.3	<i>Vulpia myuros</i> forma <i>megalura</i>	+	29	1.8
<i>Avena barbata</i>	+	156	9.9	<i>Cerastium pumilum</i>	+	26	1.7
<i>Asparagus asparagoides</i>	+	147	9.3	<i>Polypogon maritimus</i>	+	25	1.6
<i>Euphorbia paralias</i>	P	144	9.2	<i>Urospermum picroides</i>	+	25	1.6
<i>Brassica tournefortii</i>	+	139	8.8	<i>Buglossoides arvensis</i>	+	24	1.5
<i>Cakile maritima</i> ssp <i>maritima</i>	P	137	8.7	<i>Holcus lanatus</i>	+	23	1.5
<i>Sagina maritima</i>	+	131	8.3	<i>Lolium rigidum</i>	+	23	1.5
<i>Avellinia michelii</i>	+	123	7.8	<i>Euphorbia peplus</i>	+	22	1.4
<i>Cerastium balearicum</i>	+	121	7.7	<i>Rostraria pumila</i>	+	22	1.4
<i>Melilotus indica</i>	+	121	7.7	<i>Trifolium scabrum</i>	+	22	1.4
<i>Hypochaeris glabra</i>	+	113	7.2	<i>Centaurea melitensis</i>	+	21	1.3
<i>Silene nocturna</i>	+	113	7.2	<i>Sisymbrium erysimoides</i>	+	21	1.3
<i>Vulpia myuros</i> forma <i>myuros</i>	+	110	7.0	<i>Limonium companyonis</i>	P	20	1.3
<i>Cerastium glomeratum</i>	+	106	6.7	<i>Lolium perenne</i> x <i>rigidum</i>	+	20	1.3
<i>Senecio elegans</i>	+	106	6.7	<i>Vulpia muralis</i>	+	19	1.2
<i>Bromus rubens</i>	+	99	6.3	<i>Centaureum tenuiflorum</i>	+	17	1.1
<i>Ehrharta longiflora</i>	+	99	6.3	<i>Trifolium arvense</i> var <i>arvense</i>	+	17	1.1
<i>Parapholis incurva</i>	+	99	6.3	<i>Dischisma arenarium</i>	+	16	1.0
<i>Bromus diandrus</i>	+	97	6.2	<i>Elymus farctus</i>	P	16	1.0
<i>Erodium cicutarium</i>	+	84	5.3	<i>Vulpia fasciculata</i>	+	16	1.0
<i>Bupleurum semicompositum</i>	+	71	4.5	<i>Asclepias rotundifolia</i>	P	15	1.0
<i>Briza minor</i>	+	70	4.5	<i>Plantago lanceolata</i> var <i>lanceolata</i>	P	15	1.0
<i>Hypochaeris radicata</i>	P	69	4.4	<i>Diplotaxis tenuifolia</i>	P	14	0.9
<i>Mesembryanthemum crystallinum</i>	P	66	4.2	<i>Poa annua</i>	+	14	0.9
<i>Oxalis pes-caprae</i>	N	65	4.1	<i>Medicago truncatula</i>	+	13	0.8
<i>Reichardia tingitana</i>	+	65	4.1	<i>Vulpia bromoides</i>	+	13	0.8
<i>Euphorbia terracina</i>	P	64	4.1	<i>Aira caryophylla</i>	+	12	0.8
<i>Aira cupaniana</i>	+	63	4.0	<i>Brachypodium distachyon</i>	+	12	0.8
<i>Medicago polymorpha</i> var <i>polymorpha</i>	+	54	3.4	<i>Cerastium</i> sp	N	12	0.8
<i>Trifolium campestre</i>	+	52	3.3	<i>Echium plantagineum</i>	+	12	0.8
<i>Arctotheca calendula</i>	+	49	3.1	<i>Parentucellia latifolia</i>	+	12	0.8
<i>Hymenolobus procumbens</i>	+	48	3.1	<i>Trifolium dubium</i>	+	12	0.8
<i>Asphodelus fistulosus</i>	+	44	2.8	<i>Urtica urens</i>	+	12	0.8
<i>Bromus madritensis</i>	+	44	2.8	<i>Aira elegantissima</i> ssp <i>elegantissima</i>	+	11	0.7
<i>Carduus tenuiflorus</i>	+	44	2.8	<i>Bromus hordeaceus</i> ssp <i>hordeaceus</i>	+	11	0.7
<i>Critesion murinum</i> ssp <i>glaucum</i>	+	42	2.7	<i>Cerastium semidecandrum</i> (NC)	+	11	0.7
<i>Linum strictum</i> ssp <i>strictum</i>	P	42	2.7	<i>Dittrichia graveolens</i>	+	11	0.7
<i>Carrichtera annua</i>	P	38	2.4	<i>Hedypnois rhagadioloides</i>	+	11	0.7
<i>Geranium molle</i> var <i>molle</i>	+	38	2.4	<i>Marrubium vulgare</i>	P	11	0.7
<i>Gynandris setifolia</i>	+	38	2.4	<i>Mesembryanthemum nodiflorum</i>	P	11	0.7

Tag: P = perennial or easily detectable, + = annual, N = family taxa only, Qd = number of quadrats, % = percentage of quadrats

FLORISTIC ANALYSIS

The floristic analysis was completed using the data matrix of 1072 quadrats and 523 species (mask of frequency >1). The most ecologically meaningful grouping of these quadrats from the resulting dendrogram was into 52 floristic vegetation types. The dendrogram is too long to be presented here but Table 27 lists the 52 vegetation types and groups them into structural vegetation types. The floristic vegetation type for each site included in the PATN analysis is listed in Appendix 5.

All sites within the buffer areas along the coast were extracted from the database and quadrats of samphire swamps and mangroves were included in the analysis. These floristic vegetation types have not been included in the descriptions of each group since they are not relevant to this report.

Explanation of information provided for each plant community

Each floristic assemblage is described as follows:

Group floristic name with a typical structural descriptor.

Floristic group number and the number of quadrats in the group.

Description including comments on the strength of the group, diversity of plant species and lifeforms, location, lifeform and other relevant environmental variables.

Distribution of quadrats in geomorphic regions.

Map of South Australian coastline with location of quadrats marked.

Number of plant species with minimum, maximum and average number of plant species located in the quadrats of the group.

Dominant species (overstorey where applicable) including those with:

- greater than 80% constancy rate
- high O–E/E
- medium to high cover/abundance value
- generally more than half sites in group with 1 or greater.

Subdominant species (overstorey/ understorey where applicable) including those with:

- greater than 50% constancy rate and less than 80%
- relatively high O–E/E
- not too low cover/abundance value.

Indicator species including those with:

- less than 30% occurrence in all groups
- high O–E/E
- over 50% constancy rate.

Dominant lifeform/s listing frequency of occurrence in quadrats in the group.

Structural description providing a summary of the frequency of vegetation structural formation descriptions using the adapted Forward and Robinson (1996) table (Appendix 1).

Environmental parameters (altitude, slope, aspect, per cent estimate of bare earth, per cent estimate of litter, assigned rainfall for that mapsheet) providing the minimum, maximum, mean and standard deviation (SD) for the quadrats in the group.

Landform pattern including the frequency of and O–E/E for each variable recorded for the group.

Landform element including the frequency of and O–E/E for each variable recorded for the group.

Surface soil texture including the frequency of and O–E/E for each variable recorded for the group.

Wave energy of the coastline including the frequency of and O–E/E for each variable recorded for the group.

Outcrop lithology and cover including the frequency of and O–E/E for each variable recorded for the group.

Strew lithology and cover including the frequency of and O–E/E for each variable recorded for the group.

Distribution of lifeforms graph of percentage of frequency of lifeforms of each species within the group providing an indication of the structural formation of the group (both axes of the graph are standardised to permit comparisons between groups).

Plant species listing of all plant species in >30% of quadrats of the group, column headings include: Species species scientific names are listed in order of % of group or constancy, * before the name indicates an introduced species

%	presents the percentage of the quadrats of the group at which the species was recorded
F	number of quadrats in the group in which the species was recorded
TF	total number of quadrats in which the species was recorded
GT	total number of groups in which the species was recorded
N	number of quadrats in the group where this cover abundance value was recorded (not many, 1–10 individuals)
T	number of quadrats in the group where this cover abundance value was recorded (sparsely or very sparsely present; cover very small (less than 5%))
1	number of quadrats in the group where this cover abundance value was recorded (plentiful, but of small cover (less than 5%))
2	number of quadrats in the group where this cover abundance value was recorded (any number of individuals covering 5–25% of the area)
3	number of quadrats in the group where this cover abundance value was recorded (any number of individuals covering 25–50% of the area)
4	number of quadrats in the group where this cover

	abundance value was recorded (any number of individuals covering 50–75% of the area)
5	number of quadrats in the group where this cover abundance value was recorded (covering more than 75% of the area)
GAB	total ranked abundances of that species in the group
TAB	total ranked abundances of that species in all groups
O-E/E	Observed–Expected/Expected
Indic	O–E/E value multiplied by ratio of species frequency within the group to the total frequency of all species within the group as a percentage

Quadrat photo/s for each group were chosen as representative of the vegetation community (Figures 34–111). All photos are from survey 82 (Coastal Dune and Clifftops) unless otherwise specified.

Comments on groups

Due to the wide range of climatic conditions the ranges of structural formations varied considerably in a number of floristic groups with the resulting difficulty in assigning a structural description to that group.

In many groups the allocation of an overstorey was problematical as many species were of equivalent height. Consequently it was decided to allocate an overstorey where applicable and to leave as dominant species where no overstorey was obvious.

The allocation of dominant and subdominant species is usually defined as those with high abundance. However, as the coastal vegetation tends to be low in abundance in many areas due to the severe stress conditions, species with low abundances were included as dominant and subdominant species where there was not a high abundance of any species.

The groups vary considerably in both the number and abundances of species. Some groups have very high integrity with all quadrats having similar species composition and abundances. However, there are large groups connected by common coastal species which show great variability, with other species of high abundances in individual quadrats that are not high in group proportions. These groups may have been divided into subgroups relating to the accompanying species. One such group is *Olearia axillaris/Leucopogon parviflorus* Shrublands (Group 50). There is an example of the *Olearia axillaris/Leucopogon parviflorus* Shrublands plant community on a foredune ridge (Figure 87), with *Myoporum insulare* on a leeward slope (Figure 88) and with *Acacia longifolia* ssp *sophorae* on a seaward slope (Figure 89). The abundance of *Olearia axillaris* remains at 25–50% but the proportion of *Leucopogon parviflorus* reduces with the higher abundance of the accompanying species. There are other groups, such as the *Enchylaena tomentosa* var *tomentosa* Shrubland (Group 4), which are loosely connected by low abundances of the species and with no other dominant species.

Indicator species on their own do not necessarily indicate a specific vegetation type; it is the presence of the

indicator species in association with the other significant species that suggests the presence of a particular vegetation type. Many groups have no indicator species and this highlights the prevalence of common species in many coastal plant communities.

Use of the information

The information included for each group provides the basis for further understanding of the location, physical aspects, environmental parameters, lifeform structure and the plant species composition of a range of plant communities along the coast.

The O–E/E and Indicator values can be used in the assessment of the importance of that species between groups and to the group. The common plant species generally had a negative value with the species which were important or rare in the survey having very high Indicator values of well over 1000. In some cases, for example *Cakile maritima* ssp *maritima* in floristic group 6, the O–E/E value of 85.1 was not obviously of relative importance but the Indicator value of 1418.1 emphasised the importance of that species to that group. In comparison, *Juncus kraussii* in floristic group 3, the O–E/E value of 218.8 appeared to be of greater importance but the Indicator value of 1886.2 is similar to the previous value for *Cakile maritima* ssp. *maritima* with a much lower O–E/E.

Further information which can be derived from the lists of plant species is the presence of species which are unique to that group where the frequency of quadrats is equal to the total frequency of quadrats (if the species has an in group occurrence of greater than 30%). Cross referencing with Appendix 6 can determine whether the species has conservation significance.

PLANT COMMUNITIES

Table 27 Floristic vegetation groups associated by PATN

			Page
HERBLAND		<i>Cakile maritima</i> ssp <i>maritima</i>	65
GRASSLAND		<i>Spinifex sericeus</i> / <i>Euphorbia paralias</i>	67
HUMMOCK GRASSLAND		<i>Triodia compacta</i>	70
SEDGELANDS		<i>Juncus kraussii</i>	73
		<i>Gahnia lanigera</i> / <i>Lepidosperma congestum</i>	75
		<i>Gahnia trifida</i>	78
		<i>Lepidosperma gladiatum</i>	81
SHRUBLANDS	Low (chenopods)	<i>Atriplex cinerea</i>	84
		<i>Atriplex vesicaria</i> ssp	87
		<i>Atriplex vesicaria</i> ssp./ <i>Nitraria billardierei</i> / <i>Threlkeldia diffusa</i>	90
		<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	93
		(<i>Halosarcia halocnemoides</i> ssp)	
		<i>Halosarcia indica</i> ssp	96
		<i>Maireana erioclada</i>	98
		<i>Maireana oppositifolia</i>	101
		(<i>Sarcocornia quinqueflora</i>)	
		<i>Threlkeldia diffusa</i>	104
	Low	<i>Leuophyta brownii</i>	107
	Low to medium	<i>Beyeria lechenaultii</i> / <i>Acrotriche patula</i>	110
	Medium	<i>Alyxia buxifolia</i>	113
	Variable	<i>Leucopogon parviflorus</i>	116
		<i>Leucopogon parviflorus</i> / <i>Acrotriche patula</i>	119
		<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	122
	Variable	<i>Melaleuca gibbosa</i>	126
	Low	<i>Melaleuca lanceolata</i> / <i>Senecio lautus</i>	129
	Medium	<i>Melaleuca lanceolata</i> / <i>Olearia exiguifolia</i>	132
	Variable	<i>Melaleuca lanceolata</i> / <i>Acrotriche patula</i> / <i>Lasiopetalum discolor</i>	135
		<i>Melaleuca lanceolata</i> / <i>Atriplex paludosa</i> ssp	138
		<i>Melaleuca lanceolata</i> / <i>Atriplex vesicaria</i> ssp	141
		<i>Melaleuca lanceolata</i> / <i>Melaleuca gibbosa</i>	144
	Tall	<i>Melaleuca lanceolata</i> / <i>Tetragonia implexicoma</i>	147
	Tall	<i>Melaleuca uncinata</i>	150
	Variable	<i>Nitraria billardierei</i>	153
	Low to medium	<i>Olearia ramulosa</i> / <i>Calytrix tetragona</i>	156
	Variable	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	159
		<i>Olearia axillaris</i> / <i>Leucopogon parviflorus</i>	162
		<i>Olearia axillaris</i> / <i>Tetragonia implexicoma</i>	166
	Medium to tall	<i>Olearia axillaris</i> /* <i>Lycium ferocissimum</i>	169
		<i>Olearia axillaris</i> / <i>Rhagodia candolleana</i> ssp <i>candolleana</i>	172
	Tall	<i>Acacia ligulata</i>	175
		<i>Acacia paradoxa</i>	178
MALLEE	Low	<i>Eucalyptus cosmophylla</i>	181
		<i>Eucalyptus rugosa</i> / <i>Melaleuca lanceolata</i>	184
		<i>Eucalyptus</i> sp/ <i>Melaleuca lanceolata</i> / <i>Melaleuca uncinata</i>	187
	Variable	<i>Eucalyptus incrassata</i>	190
		<i>Eucalyptus diversifolia</i> / <i>Clematis microphylla</i>	192
	Tall	<i>Eucalyptus diversifolia</i> / <i>Gonocarpus mezianus</i>	195
		<i>Eucalyptus cneorifolia</i> / <i>Orthrosanthus multiflorus</i>	199
TREES	Low	(<i>Melaleuca halmaturorum</i>)	
	Variable	(<i>Avicennia marina</i> var <i>resinifera</i>)	
		<i>Meleleuca brevifolia</i> / <i>Gahnia filum</i>	202
	Tall	<i>Allocasuarina verticillata</i>	205

(groups in brackets have not been included as they are not located in coastal dunes or clifftops)

Cakile maritima ssp *maritima* Herbland

Floristic group 6: 4 quadrats

Description:

A weak group with quadrats scattered along the coast. There are few species with low coverage abundances located on predominantly foredunes. However, this is a representative community of species which establishes in the unstable environment of shifting sand.

Distribution of sites in geomorphic regions:

NUL	EPW	KIS
2	1	1



Number of plant species:

Min	Max	Average
1	9	4.50

Dominant species:

Cakile maritima ssp *maritima*

Dominant lifeform/s:

	J
* <i>Cakile maritima</i> ssp <i>maritima</i>	3

Structural description:

	Freq	O-E/E
Low open shrubland	1	1.73
Low very open shrubland	1	13.89
Very open low mallee	1	25.80
Very open mat plants	1	267.00

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	1	0.12
Dunefield	3	1.54

Surface soil texture:

	Freq	O-E/E
Sand	3	0.16
Loamy sand	1	0.63

Outcrop lithology and cover:

None

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	70	20.0	29.0
Slope	0	35	10.3	14.4
Aspect	0	210	112.5	85.8
Bare earth	15	80	43.8	24.3
Litter	1	30	9.3	12.1
Rainfall	275	500	350.0	91.9

Landform element:

	Freq	O-E/E
Foredune	3	8.23
Swale	1	3.87

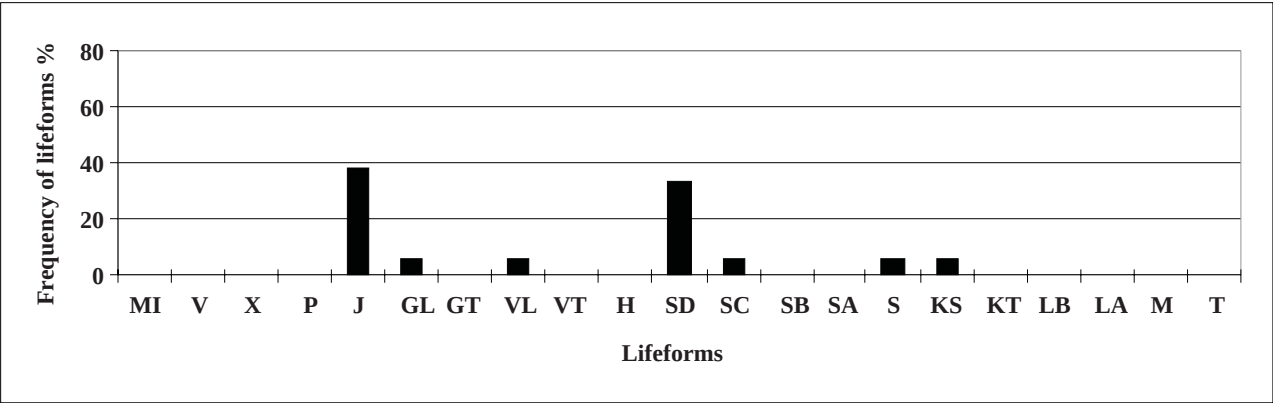
Wave energy:

	Freq	O-E/E
H	4	0.4

Strew lithology size and cover:

	Freq	O-E/E
None	3	0.11
Calcareous <10% pebble (5-50 mm)	1	2.94

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
* <i>Cakile maritima</i> ssp <i>maritima</i>	75.0	3	112	16			2	1				4.0	100.6	85.1	1418.1
* <i>Arctotheca populifolia</i>	50.0	2	5	3	1	1						0.6	0.9	1442.4	16026.6
<i>Atriplex cinerea</i>	50.0	2	78	19	1	1						0.6	79.8	15.3	169.8
* <i>Euphorbia paralias</i>	50.0	2	127	18	1	1						0.6	131.3	8.9	98.8



Figure 34 *Cakile maritima* ssp *maritima* Herbland at quadrat SED00202 (KIS14709)

Spinifex sericeus/ Euphorbia paralias Grasslands (Shrublands)

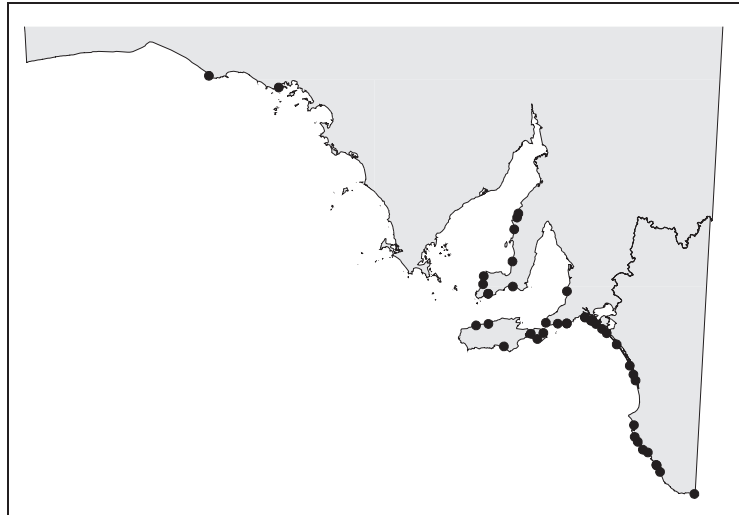
Floristic group 51: 42 quadrats

Description:

A strong group located mainly on foredunes, predominantly in the eastern part of the coastline. The average number of species is moderately low with an unusually high proportion of herbs and grasses. (Note that the HOB and EPW quadrats have low abundances of *Spinifex hirsutus* present with high abundances of *Euphorbia paralias*.)

Distribution of sites in geomorphic regions:

HOB	EPW	YOP	SVG	KIN	KIS	KIE	FLP	COO	SOE
1	1	9	1	2	1	3	4	11	9



Number of plant species:

Min	Max	Average
3	19	10.52

Dominant species:

Euphorbia paralias
Spinifex sericeus

Indicator species:

**Cakile maritima* ssp *maritima*

Dominant lifeform/s:

	J	GL	GT
<i>Euphorbia paralias</i>	40		
<i>Spinifex sericeus</i>		38	1

Structural description:

	Freq	O-E/E
Open (tussock) grassland	9	16.67
Low open shrubland	7	0.82
(Tussock) grassland	6	20.88
Low very open shrubland	6	7.51
Open shrubland	4	0.33
Herbland	3	24.52
Very open shrubland	2	1.43
Closed (tussock) grassland	1	11.76
Low shrubland	1	-0.81
Open mat plants	1	24.52
Tall open shrubland	1	-0.53
Very open herbland	1	24.52

Landform pattern:

	Freq	O-E/E
Dunefield	33	1.67
Beach ridge plain	4	0.19
Consolidated dunefield	4	-0.57
Parabolic dunefield	1	-0.12

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	30	5.4	5.4
Slope	0	49	9.0	11.6
Aspect	0	360	140.4	111.3
Bare earth	1	95	30.2	24.4
Litter	0	90	17.3	19.2
Rainfall	350	750	525.6	118.2

Landform element:

	Freq	O-E/E
Foredune	32	8.38
Dune footslope	3	0.18
Dune slope	3	-0.48
Beach ridge	2	0.31
Dune crest	2	-0.27

Surface soil texture:

	Freq	O-E/E
Sand	25	-0.08
Sandy loam	7	0.09
Loam	3	2.19
Loamy sand	3	-0.53
Clayey sand	1	0.16
Light clay	1	1.13
Medium clay	1	0.82
Sandy clay loam	1	0.42

Wave energy:

	Freq	O-E/E
H	29	0.0
M	10	0.2
L	3	-0.4

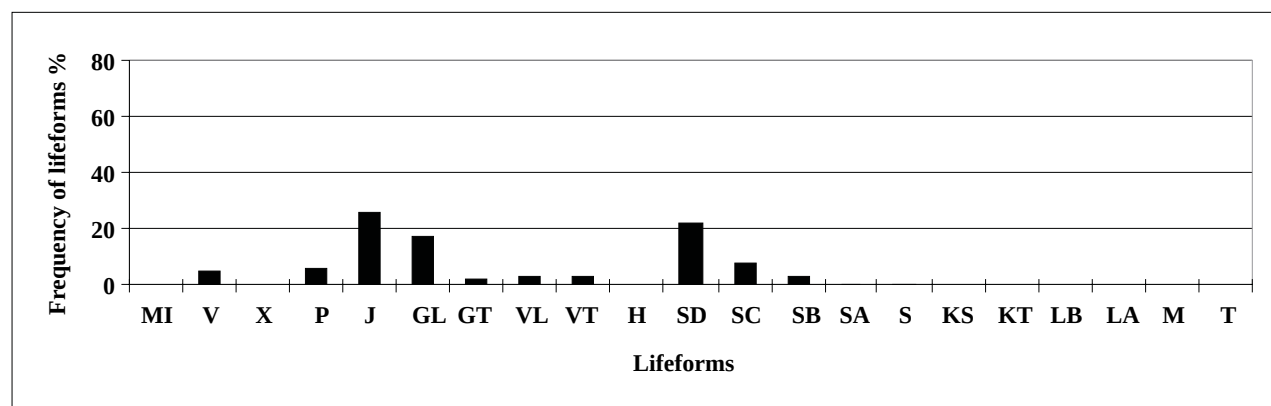
Outcrop lithology and cover:

	Freq	O-E/E
O-E/E		
None	40	0.22
Calcareous 10–50%	1	-0.54
Quartzite <10%	1	4.10

Strew lithology size and cover:

	Freq	
None	40	0.41
Quartzite 3–70% cobble (51–250 mm)	1	7.51
Schist <10% boulder (gt 250 mm)	1	7.51

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
* <i>Euphorbia paralias</i>	95.2	40	127	18		5	18	10	7			61.5	131.3	18.3	165.7
<i>Spinifex sericeus</i>	92.9	39	105	8		5	6	20	8			72.5	127.4	22.5	198.1
* <i>Cakile maritima</i> ssp <i>maritima</i>	78.6	33	112	16	1	6	18	6	2			39.1	100.6	15.0	112.1
<i>Isolepis nodosa</i>	71.4	30	317	22	3	13	11	3				23.8	291.1	2.4	16.1
<i>Olearia axillaris</i>	69.0	29	578	34	8	10	2	9				25.8	829.0	0.3	1.9
<i>Carpobrotus rossii</i>	61.9	26	540	38	6	16	4					12.6	378.2	0.4	2.2
<i>Atriplex cinerea</i>	35.7	15	78	19	8	6	1					4.8	79.8	1.5	5.0
<i>Austrofestuca littoralis</i>	33.3	14	23	3	1	4	5	3	1			16.1	21.7	29.6	93.7
<i>Leucophyta brownii</i>	33.3	14	138	22	5	5	2	2				9.0	157.4	1.4	4.3
<i>Ozothamnus turbinatus</i>	33.3	14	54	4		4	2	7	1			21.0	90.6	8.6	27.1
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	31.0	13	359	30	1	8	3	1				9.1	268.2	0.4	1.2
<i>Tetragonia implexicoma</i>	31.0	13	542	35	2	7	2	1	1			10.7	444.0	0.0	0.0



Figure 35 *Spinifex sericeus/ Euphorbia paralias* Grasslands (Shrublands) at quadrat KUR00201 (HOB14290)



Figure 36 *Spinifex sericeus/ Euphorbia paralias* Grasslands (Shrublands) at quadrat GOO00401 (COO14814)

Triodia compacta Hummock grasslands (Shrublands)

Floristic group 31: 13 quadrats

Description:

A moderately strong group located in the western coast of Eyre Peninsula on both dunefields and cliffs. There is a very high proportion of shrubs under 0.5 m. Dominant species are sparse.

Distribution of sites in geomorphic regions:

EPW	EPS
12	1



Number of plant species:

Min	Max	Average
11	24	17.92

Dominant species:

Triodia compacta

Subdominant species:

Melaleuca lanceolata

Dominant lifeform/s:

	H
<i>Triodia compacta</i>	11

Structural description:

	Freq	O-E/E
Low open shrubland	4	2.37
Closed (tussock) grassland	1	40.23
Closed Hummock grassland	1	40.23
Hummock grassland	1	19.62
Low mallee	1	0.62
Low shrubland	1	-0.38
Low very open shrubland	1	3.58
Open low mallee	1	0.92
Open shrubland	1	0.07
Very open shrubland	1	2.93

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	6	1.06
Escarpment	3	1.11
Dunefield	2	-0.48
Plain	2	0.20

Environmental parameters:

	Min	Max	Mean	St.Dev.
Altitude	0	55	23.5	16.0
Slope	0	45	9.7	12.3
Aspect	0	360	236.5	109.2
Bare earth	5	70	36.2	22.5
Litter	0	20	9.5	6.4
Rainfall	350	450	373.1	42.1

Landform element:

	Freq	O-E/E
Dune footslope	4	4.07
Plain	3	1.04
Dune/consolidated dune	2	0.24
Cliff	1	0.79
Dune crest	1	0.18
Dune slope	1	-0.44
Scarp	1	81.38

Surface soil texture:

	Freq	O-E/E
Sand	8	-0.05
Loamy sand	2	0.01
Sandy loam	2	0.01
Clayey sand	1	2.75

Wave energy:

	Freq	O-E/E
H	13	0.4

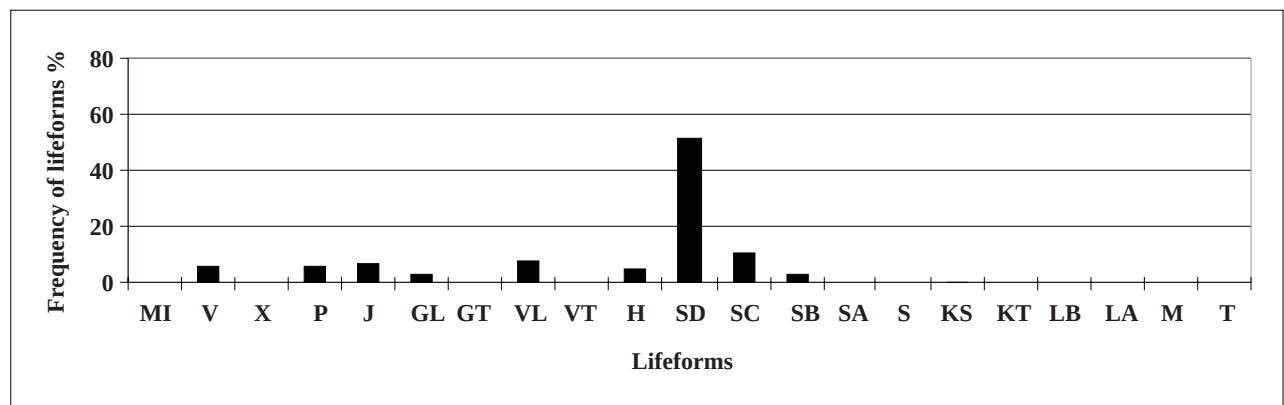
Outcrop lithology and cover:

	Freq	O-E/E
None	6	-0.41
Calcareous 10–50%	3	3.42
Calcareous <10%	1	-0.05
Calcareous >50%	1	2.93
none	1	81.46
Sandstone 10–50%	1	15.49

Strew lithology size and cover:

	Freq	O-E/E
None	6	-0.32
Calcareous <10% cobble (51–250mm)	2	1.50
Calcareous <10% pebble (5–50mm)	1	0.21
Calcareous 10–30% cobble (51–250mm)	1	1.43
Calcareous 30–70% cobble (51–250mm)	1	3.85
Calcareous 30–70% pebble (5–50mm)	1	4.89
Sandstone 10–30% cobble (51–250mm)	1	15.49

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Triodia compacta</i>	84.6	11	28	8	1	1	1		6	3		31.1	54.7	58.4	275.7
<i>Acrotriche patula</i>	61.5	8	227	33	5	2	1					2.5	186.8	0.4	1.4
<i>Exocarpos aphyllus</i>	61.5	8	179	34	5	2	1					2.5	77.3	2.4	8.2
<i>Gahnia lanigera</i>	61.5	8	89	15	3	5						2.8	112.2	1.6	5.5
<i>Melaleuca lanceolata</i>	61.5	8	348	37	2	1	1	3	1			10.7	572.1	1.0	3.3
<i>Olearia axillaris</i>	61.5	8	578	34	3	3	1	1				4.8	829.0	-0.4	-1.4
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	61.5	8	359	30	1	5	1	1				5.6	268.2	1.2	4.1
<i>Carpobrotus rossii</i>	53.8	7	540	38		7						3.5	378.2	0.0	-0.1
<i>Acacia anceps</i> (NC)	46.2	6	75	20	3	1	1	1				3.8	64.6	5.1	13.3
<i>Eutaxia microphylla</i> var <i>microphylla</i>	46.2	6	100	28	2	3		1				3.7	65.0	4.9	12.7
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	46.2	6	134	25	2	1	1	2				5.7	101.1	4.9	12.6
<i>Helichrysum leucopsidium</i>	46.2	6	196	32	4	2						1.4	123.7	0.2	0.5
<i>Lasiopetalum discolor</i>	46.2	6	213	23	2	2	2					3.2	266.9	0.3	0.7
<i>Spyridium phyllicoides</i>	46.2	6	68	15		2	2	2				7.0	52.0	13.1	33.6
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	38.5	5	140	24	1	3	1					2.6	101.8	1.7	3.6
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	38.5	5	546	41	2	2	1					2.2	495.5	-0.5	-1.2
<i>Sclerolaena uniflora</i>	38.5	5	86	18		3	2					3.5	55.5	5.6	12.0
<i>Senecio lautus</i>	38.5	5	542	40	2	2	1					2.2	396.6	-0.4	-0.9
<i>Cassytha peninsularis</i> var <i>peninsularis</i>	30.8	4	92	24	1	1	1	1				3.6	62.4	5.0	8.6
<i>Geijera linearifolia</i>	30.8	4	135	19			3		1			6.0	128.6	3.9	6.7
<i>Lawrenia squamata</i>	30.8	4	54	12		2	2					3.0	61.2	4.1	7.1
<i>Samolus repens</i>	30.8	4	56	17		1	3					3.5	42.0	7.7	13.2
<i>Tetragonia implexicoma</i>	30.8	4	542	35		3	1					2.5	444.0	-0.4	-0.7
<i>Threlkeldia diffusa</i>	30.8	4	453	37	2	2						1.2	321.7	-0.6	-1.0
<i>Zygophyllum billardiarei</i> (NC)	30.8	4	136	22		4						2.0	68.8	2.0	3.5



Figure 37 *Triodia compacta* Hummock grasslands (Shrublands) at quadrat KIA00101 (EPW15908)



Figure 38 *Triodia compacta* Hummock grasslands (Shrublands) at quadrat SEA00102 (EPW13942)

Juncus kraussii Sedgeland

Floristic group 3: 5 quadrats

Description:

A very strong group located predominantly in the South East. A tall sedgeland which is found in flat, relatively low lying wet areas of dunefields. There are moderate to low numbers of perennial species.

Distribution of quadrats in geomorphic regions:

YOP SOE

1 4



Number of plant species:

Min	Max	Average
6	15	11.60

Dominant species:

Juncus kraussii

Subdominant species:

Isolepis nodosa

Indicator species:

Acaena novae-zelandiae
Epilobium billardierianum
 ssp x *intermedium*
Sporobolus virginicus

Dominant lifeform/s:

	VT
<i>Isolepis nodosa</i>	4
<i>Juncus kraussii</i>	5

Structural description:

	Freq	O-E/E
Sedgeland	2	60.26
Low mallee	1	3.20
Low open shrubland	1	1.19
Tall open shrubland	1	2.97

Landform pattern:

	Freq	O-E/E
Dunefield	3	1.04
Beach ridge plain	1	1.49
Consolidated dunefield	1	-0.11

Surface soil texture:

	Freq	O-E/E
Sand	3	-0.07
Clay loam, sandy	1	52.60
Sandy loam	1	0.31

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	10	5.6	3.9
Slope	0	0	0.0	0.0
Aspect	0	0	0.0	0.0
Bare earth	5	90	35.0	30.3
Rainfall	350	750	660.0	156.2

Landform element:

	Freq	O-E/E
Interdune low	3	20.42
Interdune corridor	1	8.31
Swale	1	2.89

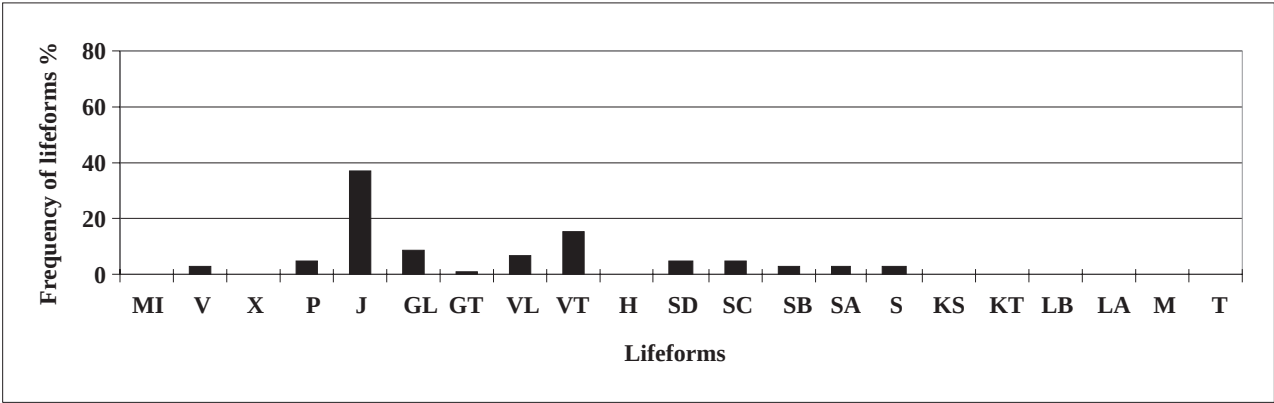
Wave energy:

	Freq	O-E/E
H	4	0.2
M	1	0.0

Outcrop lithology and cover:
none

Strew lithology size and cover:
none

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O–E/E	Indic
<i>Juncus kraussii</i>	100.0	5	7	3				2	1	1	1	16.0	18.5	218.8	1886.2
<i>Isolepis nodosa</i>	80.0	4	317	22		1		3				6.5	291.1	4.7	32.2
<i>Acaena novae-zelandiae</i>	60.0	3	51	6		2		1				3.0	36.2	20.1	103.8
<i>Epilobium billardierianum</i> ssp x intermedium	60.0	3	16	5		1	2					2.5	8.3	75.6	390.8
<i>Sporobolus virginicus</i>	60.0	3	16	9		1		2				4.5	13.6	83.1	429.8
<i>Carpobrotus rossii</i>	40.0	2	540	38	1	1						0.6	378.2	-0.6	-2.1
<i>Dianella brevicaulis</i>	40.0	2	362	35		1		1				2.5	228.2	1.8	6.2
<i>Hydrocotyle laxiflora</i>	40.0	2	50	6		2						1.0	46.5	4.5	15.4
<i>Leucopogon parviflorus</i>	40.0	2	392	26	2							0.2	662.8	-0.9	-3.2
<i>Olearia axillaris</i>	40.0	2	578	34	1	1						0.6	829.0	-0.8	-2.8
<i>Selliera radicans</i>	40.0	2	4	3			2					2.0	3.5	144.2	497.3



Figure 39 *Juncus kraussii* Sedgeland at quadrat BUF00303 (SOE14925)

Gahnia lanigera/*Lepidosperma congestum* Low sedgeland

Floristic group 39: 18 quadrats

Description:

A moderately strong group located in the central part of the coastline predominantly on dunefields.

Distribution of sites in geomorphic regions:

EPW	EPS	YOP	SVG	FLP
1	1	12	2	2



Number of plant species:

Min	Max	Average
15	40	26.89

Dominant species:

Gahnia lanigera
Helichrysum leucopsidium
Lepidosperma congestum

Subdominant species:

Lomandra effusa

Dominant lifeform/s:

	J	VL
<i>Gahnia lanigera</i>		15
<i>Helichrysum leucopsidium</i>	15	
<i>Lepidosperma congestum</i>		15

Structural description:

	Freq	O-E/E
Hummock grassland	3	43.67
Sedgeland	3	24.52
Open hummock grassland	2	38.70
Closed sedgeland	1	18.85
Closed shrubland	1	1.13
Low open shrubland	1	-0.39
Low shrubland	1	-0.55
Low woodland	1	3.25
Open (tussock) grassland	1	3.58
Open low mallee	1	0.39
Open sedgeland	1	18.85
Tall open shrubland	1	0.10
Very low open woodland	1	3.96

Environmental parameters:

	Min	Max	Mean	SD
Altitude	5	35	13.5	7.5
Slope	0	15	3.4	4.5
Aspect	0	360	159.1	131.8
Bare earth	0	50	16.1	13.4
Litter	2	100	24.5	31.0
Rainfall	350	550	415.3	60.8

Landform pattern:

	Freq	O-E/E
Dunefield	5	-0.06
Plain	5	1.16
Consolidated dunefield	4	-0.01
Rises	2	1.65
Escarpment	1	-0.49
Hills	1	1.59

Landform element:

	Freq	O-E/E
Plain	6	1.95
Dune/consolidated dune	3	0.34
Cliff	2	1.59
Closed depression	2	6.00
Dune slope	2	-0.20
Flat	1	2.13

	Freq	O-E/E
Hill footslope	1	7.50
Swale	1	0.08

Surface soil texture:

	Freq	O-E/E
Sand	10	-0.14
Clay loam	4	6.01
Sandy loam	2	-0.27
Clay loam, sandy	1	13.89
Light clay	1	3.96
Loam	1	1.48
Medium clay	1	3.25

Wave energy:

	Freq	O-E/E
M	10	1.8
H	6	-0.5
L	2	0.0

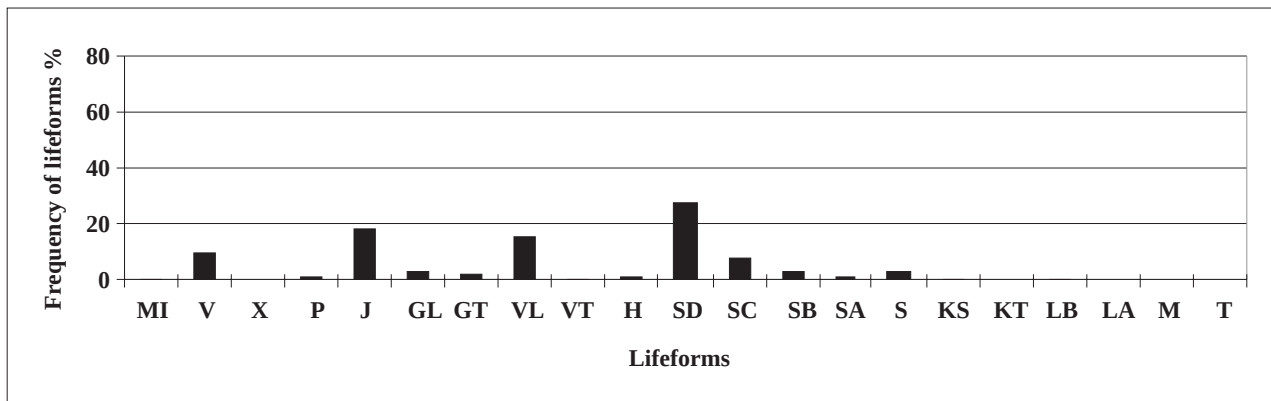
Outcrop lithology and cover:

O-E/E	Freq	O-E/E
None	11	-0.21
Calcareous <10%	4	1.74
Calcareous 10–50%	2	1.13
Calcareousnone	1	58.56

Strew lithology size and cover:

	Freq	
none	10	-0.18
Calcareous 10–30% pebble (5–50 mm)	3	7.12
Calcareous <10% pebble (5–50 mm)	2	0.75
Calcareous <10% cobble (51–250 mm)	1	-0.10
Calcareous>70% cobble (51–250 mm)	1	4.41
Calcareous10–30% cobble (51–250 mm)	1	0.75

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Clematis microphylla</i>	83.3	15	350	31	1	13	1					7.6	235.3	0.5	1.4
<i>Gahnia lanigera</i>	83.3	15	89	15			6	7	1	1		27.0	112.2	9.9	30.6
<i>Helichrysum leucopsidium</i>	83.3	15	196	32	1	5	9					11.6	123.7	3.3	10.0
<i>Lepidosperma congestum</i>	83.3	15	56	11			8	6	1			23.0	52.1	19.0	58.7
<i>Lomandra effusa</i>	77.8	14	69	17		6	3	4		1		18.0	52.7	14.5	41.8
<i>Acrotriche patula</i>	72.2	13	227	33	2	2	7	2				12.2	186.8	2.0	5.3
* <i>Linum strictum</i> ssp <i>strictum</i>	61.1	11	41	11		4	7					9.0	33.1	11.3	25.7
* <i>Lagurus ovatus</i>	55.6	10	250	28		5	3	2				9.5	282.2	0.5	1.1
<i>Lomandra collina</i>	55.6	10	47	11	1	6	2	1				7.1	27.6	10.7	22.0
<i>Pimelea serpyllifolia</i>															
ssp <i>serpyllifolia</i>	55.6	10	359	30		7	3					6.5	268.2	0.1	0.2
<i>Rhagodia candolleana</i>															
ssp <i>candolleana</i>	50.0	9	546	41	3	6						3.3	495.5	-0.7	-1.3
<i>Eutaxia microphylla</i>															
var <i>microphylla</i>	44.4	8	100	28	1	5	1	1				5.6	65.0	2.9	4.8
<i>Exocarpos aphyllus</i>	44.4	8	179	34	2	4	2					4.2	77.3	1.5	2.4
<i>Acacia spinescens</i>	38.9	7	66	17	1	2	3	1				6.1	32.4	7.5	10.9
<i>Goodenia willisiana</i>	38.9	7	18	7	1	1	2	3				8.6	16.2	23.1	33.2

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Melaleuca lanceolata</i>	38.9	7	348	37	4			3				6.4	572.1	-0.5	-0.7
<i>Pultenaea tenuifolia</i>	38.9	7	59	15	2	4	1					3.2	45.9	2.2	3.1
<i>Tetragonia implexicoma</i>	38.9	7	542	35	1	4	2					4.1	444.0	-0.6	-0.8
<i>Acacia ligulata</i>	33.3	6	82	11	1	2	3					4.1	108.3	0.7	0.9
<i>Acrotriche cordata</i>	33.3	6	118	15	1	3	2					3.6	116.8	0.4	0.5
<i>Beyeria lechenaultii</i>	33.3	6	229	33	1	2	2	1				5.1	271.2	-0.1	-0.2
<i>Cassytha glabella</i> forma <i>dispar</i>	33.3	6	60	17		3	3					4.5	38.6	4.3	5.3
<i>Chrysocephalum apiculatum</i>	33.3	6	35	10	2	2	1	1				4.2	19.8	8.6	10.6
<i>Dianella brevicaulis</i>	33.3	6	362	35	3	1	2					2.8	228.2	-0.4	-0.5
<i>Dianella revoluta</i> var <i>revoluta</i>	33.3	6	61	25	1	4	1					3.1	36.7	2.8	3.5
* <i>Lycium ferocissimum</i>	33.3	6	209	32	3	3						1.8	94.2	-0.1	-0.2
<i>Olearia axillaris</i>	33.3	6	578	34	1	4		1				4.1	829.0	-0.8	-1.0



Figure 40 *Gahnia lanigera/ Lepidosperma congestum* Low sedgeland at quadrat COU01101 (EPS13281), photo Planning SA, Survey 80

Gahnia trifida Sedgeland

Floristic group 8: 2 quadrats

Description:

A very small strong group located in flat, very low lying swampy areas. A mixture of the dominant species with sparse herbs, grasses and shrubs.

Distribution of sites in geomorphic regions:

EPS	SOE
1	1



Number of plant species:

Min	Max	Average
5	21	13.00

Dominant species:

Gahnia trifida
Samolus repens

Dominant lifeform/s:

	J	VT
<i>Gahnia trifida</i>		2
<i>Samolus repens</i>	2	

Structural description:

	Freq	O-E/E
Closed sedgeland	1	43.67
Open shrubland	1	0.74

Landform pattern:

	Freq	O-E/E
Dunefield	1	0.70
Plain	1	2.88

Surface soil texture:

	Freq	O-E/E
Sand	2	0.55

Outcrop lithology and cover:

None

Environmental parameters:

	Min	Max	Mean	SD
Slope	0	0	0.0	0.0
Aspect	0	0	0.0	0.0
Bare earth	15	20	17.5	2.5
Litter	15	20	17.5	2.5
Rainfall	450	750	600.0	150.0

Landform element:

	Freq	O-E/E
Closed depression	1	30.50
Swamp	1	88.25

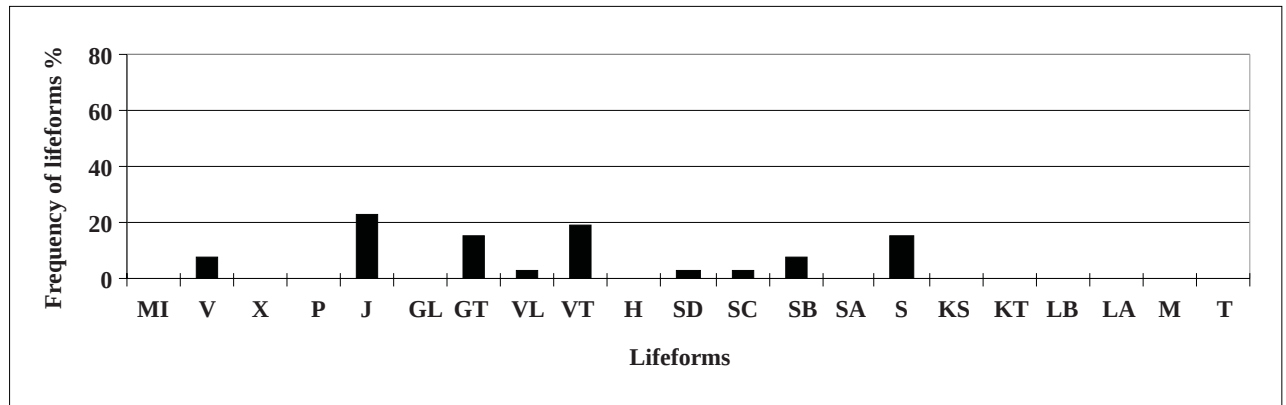
Wave energy:

	Freq	O-E/E
H	2	0.4

Strew lithology size and cover:

None

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Gahnia trifida</i>	100.0	2	4	3							2	10.0	13.1	639.0	4915.6
<i>Samolus repens</i>	100.0	2	56	17	1	1						0.6	42.0	11.0	84.4
<i>Baumea juncea</i>	50.0	1	7	6		1						0.5	6.1	67.7	260.5
<i>Cassytha glabella forma dispar</i>	50.0	1	60	17		1						0.5	38.6	9.9	37.9
<i>Clematis microphylla</i>	50.0	1	350	31	1							0.1	235.3	-0.6	-2.5
<i>Epilobium billardierianum</i>															
<i>ssp billardierianum</i>	50.0	1	2	2		1						0.5	1.0	418.2	1608.5
<i>Leptocarpus brownii</i>	50.0	1	3	3		1						0.5	3.5	118.8	456.8
<i>Leucopogon parviflorus</i>	50.0	1	392	26	1							0.1	662.8	-0.9	-3.4
<i>Melaleuca brevifolia</i>	50.0	1	8	6	1							0.1	22.1	2.8	10.7
<i>Melaleuca halmaturorum</i>	50.0	1	12	5	1							0.1	34.8	1.4	5.4
<i>Melaleuca lanceolata</i>	50.0	1	348	37	1							0.1	572.1	-0.9	-3.3
<i>Pimelea glauca</i>	50.0	1	50	14	1							0.1	28.8	1.9	7.4
<i>Poa labillardieri</i>															
<i>var labillardieri</i>	50.0	1	13	6		1						0.5	7.9	52.1	200.3
<i>Selliera radicans</i>	50.0	1	4	3		1						0.5	3.5	118.8	456.8
* <i>Senecio pterophorus</i>															
<i>var pterophorus</i>	50.0	1	33	11	1							0.1	7.8	9.7	37.5
<i>Sporobolus virginicus</i>	50.0	1	16	9		1						0.5	13.6	29.8	114.7
<i>Stipa flavescent</i>	50.0	1	186	30		1						0.5	114.4	2.7	10.2



Figure 41 *Gahnia trifida* Sedgeland at quadrat GAM00303 (SOE15259)

Lepidosperma gladiatum Sedgeland

Floristic group 41: 8 quadrats

Description:

A very strong group located in the eastern part of the coastline on dunefields. There are low proportions of many of the lifeforms in the plant communities

Distribution of sites in geomorphic regions:

YOP	KIN	FLP	SOE
5	1	1	1



Number of plant species:

Min	Max	Average
8	25	16.63

Dominant species:

Lepidosperma gladiatum

Indicator species:

Acacia nematophylla

Dominant lifeform/s:

	VL	VT
<i>Lepidosperma gladiatum</i>	1	7

Structural description:

	Freq	O-E/E
Open shrubland	2	-0.66
Closed sedgeland	1	3.41
Closed shrubland	1	-0.53
Low mallee	1	-0.74
Open sedgeland	1	3.41
Shrubland	1	-0.91
Tall closed shrubland	1	-0.60

Landform pattern:

	Freq	O-E/E
Dunefield	4	0.70
Consolidated dunefield	2	0.12
Beach ridge plain	1	0.56
Hills	1	4.83

Surface soil texture:

	Freq	O-E/E
Sand	6	0.16
Light medium clay	1	66.00
Sandy loam	1	-0.18

Environmental parameters:

	Min	Max	Mean	SD
Altitude	5	40	13.9	10.7
Slope	0	24	13.1	9.7
Aspect	0	348	136.0	114.7
Bare earth	0	30	16.0	11.1
Litter	1	80	29.4	25.7
Rainfall	450	650	506.2	76.8

Landform element:

	Freq	O-E/E
Dune slope	4	2.62
Dune/consolidated dune	2	1.01
Hill slope	1	0.52
Swale	1	1.43

Wave energy:

	Freq	O-E/E
M	6	2.8
H	2	-0.6

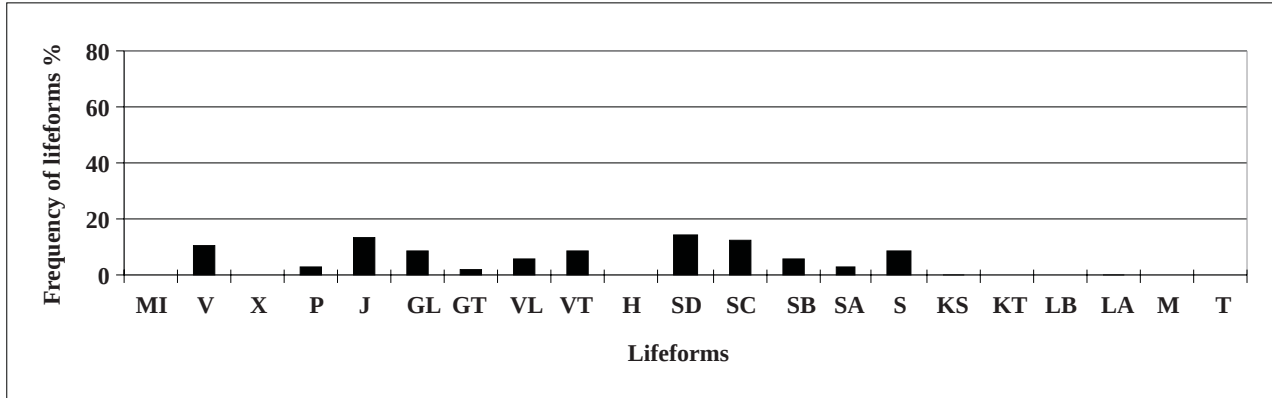
Outcrop lithology and cover:

	Freq	O-E/E
None	7	0.12
Schist <10%	1	12.40

Strew lithology size and cover:

	Freq	O-E/E
None	8	0.48

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Lepidosperma gladiatum</i>	100.0	8	147	14			1	4	1	1	1	21.0	190.5	15.0	90.1
* <i>Lagurus ovatus</i>	75.0	6	250	28			5	1				7.0	282.2	2.6	11.7
<i>Olearia axillaris</i>	75.0	6	578	34	1	2	1	2				6.1	829.0	0.1	0.3
<i>Acacia nematophylla</i>	62.5	5	76	14				2	1	2		15.0	86.7	24.1	90.5
<i>Isolepis nodosa</i>	62.5	5	317	22	1	2	2					3.1	291.1	0.5	2.0
<i>Leucopogon parviflorus</i>	62.5	5	392	26	3	1				1		4.8	662.8	0.0	0.2
<i>Clematis microphylla</i>	50.0	4	350	31	3	1						0.8	235.3	-0.5	-1.5
<i>Muehlenbeckia gunnii</i>	50.0	4	189	18	1	3						1.6	136.3	0.7	2.1
<i>Pimelea serpyllifolia</i>															
<i>ssp serpyllifolia</i>	50.0	4	359	30	3		1					1.3	268.2	-0.3	-0.9
<i>Acrotriche patula</i>	37.5	3	227	33	1	2						1.1	186.8	-0.1	-0.3
<i>Beyeria lechenaultii</i>	37.5	3	229	33	3							0.3	271.2	-0.8	-1.9
<i>Dianella brevicaulis</i>	37.5	3	362	35		2	1					2.0	228.2	0.3	0.6
<i>Geranium potentilloides</i>															
<i>var potentilloides</i>	37.5	3	81	11		2	1					2.0	74.2	2.9	6.6
<i>Geranium retrorsum</i>	37.5	3	74	15	1	2						1.1	51.7	2.1	4.7
<i>Helichrysum leucopsidium</i>	37.5	3	196	32		2	1					2.0	123.7	1.3	3.0
<i>Lasiopetalum discolor</i>	37.5	3	213	23			1	2				5.0	266.9	1.7	3.9
<i>Muehlenbeckia adpressa</i>	37.5	3	43	13		2	1					2.0	25.0	10.6	23.9
<i>Poa poiformis</i>	37.5	3	139	22		1	2					2.5	119.8	2.0	4.6
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	37.5	3	546	41	2	1						0.7	495.5	-0.8	-1.8
<i>Senecio lautus</i>	37.5	3	542	40	1	2						1.1	396.6	-0.6	-1.3
<i>Tetragonia implexicoma</i>	37.5	3	542	35	1	1				1		4.6	444.0	0.5	1.1



Figure 42 *Lepidosperma gladiatum* Sedgeland at quadrat TOR00201 (FLP15952)



Figure 43 *Lepidosperma gladiatum* Sedgeland at quadrat ROB00102 (SOE14934)

Atriplex cinerea Shrublands

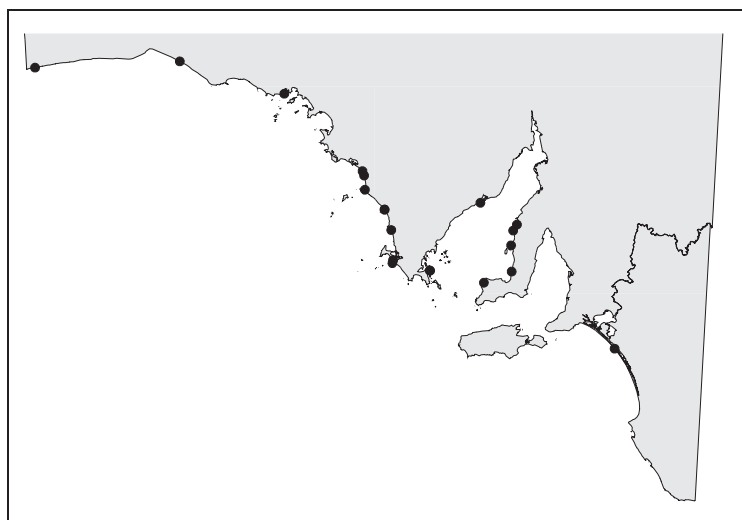
Floristic group 48: 20 quadrats

Description:

A strong group scattered along the coastline predominantly on foredunes of dunefields. There is a distinctive overstorey.

Distribution of sites in geomorphic regions:

NUL	HOB	EPW	EPS	EPE	YOP	COO
1	1	7	4	1	5	1



Number of plant species:

Min	Max	Average
4	27	14.25

Dominant overstorey species:

Atriplex cinerea
Olearia axillaris

Dominant understorey species:

**Cakile maritima* ssp *maritima*

Subdominant species:

Leucophyta brownii

Indicator species:

Spinifex hirsutus

Dominant lifeform/s:

	J	SD	SC	SB	SA	S
<i>Atriplex cinerea</i>		5	6	6		1
<i>Cakile maritima</i> ssp <i>maritima</i>	18					
<i>Olearia axillaris</i>		5	4	6	1	1

Structural description:

	Freq	O-E/E
Low open shrubland	7	2.83
Low shrubland	5	1.03
Shrubland	3	0.05
(Tussock) grassland	1	6.66
Open sedgeland	1	16.87
Open shrubland	1	-0.30
Tall shrubland	1	-0.40
Very open shrubland	1	1.55

Landform pattern:

	Freq	O-E/E
Dunefield	18	2.05
Beach ridge plain	1	-0.38
Consolidated dunefield	1	-0.78

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	20	6.0	5.7
Slope	0	25	10.4	8.8
Aspect	0	360	199.5	127.2
Bare earth	0	60	28.5	19.6
Litter	2	95	18.4	20.0
Rainfall	275	500	400.0	72.0

Landform element:

	Freq	O-E/E
Foredune	14	7.62
Dune slope	2	-0.28
Dune crest	1	-0.24
Dune footslope	1	-0.18
Interdune low	1	0.79
Swale	1	-0.03

Surface soil texture:

	Freq	O-E/E
Sand	15	0.16
Clayey sand	2	3.87
Sandy loam	2	-0.35
Loamy sand	1	-0.67

Wave energy:

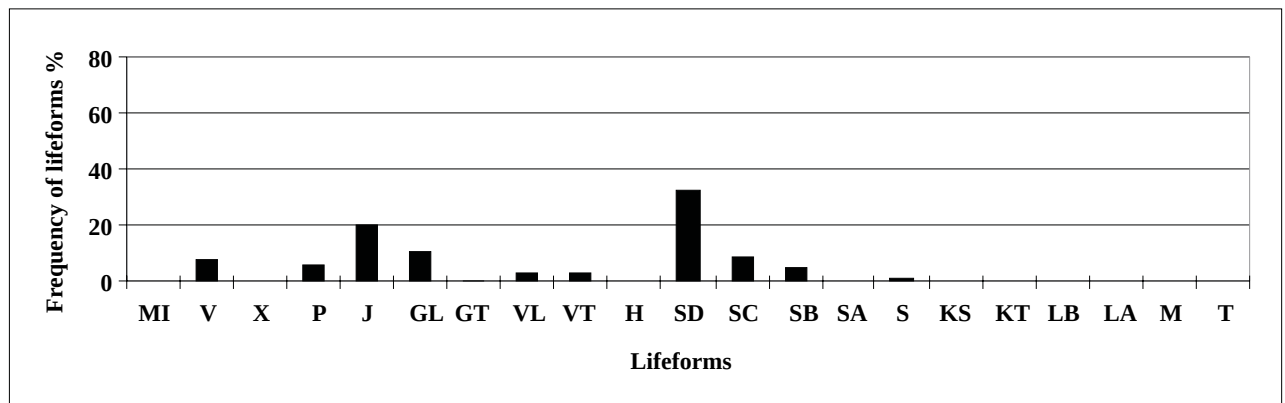
	Freq	O-E/E
H	15	0.1
M	5	0.3

Outcrop lithology and cover:

	Freq	O-E/E
None	19	0.22
Calcareous 10–50%	1	-0.04

Strew lithology size and cover:

	Freq	O-E/E
None	19	0.40
Calcareous <10% pebble (5–50 mm)	1	-0.21

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Atriplex cinerea</i>	90.0	18	78	19	1	2	2	11	1	1		32.1	79.8	24.5	154.9
* <i>Cakile maritima</i>															
<i>ssp maritima</i>	90.0	18	112	16		1	13	3	1			22.5	100.6	13.2	83.3
<i>Olearia axillaris</i>	85.0	17	578	34	1	6	4	3	3			22.1	829.0	0.7	4.1
<i>Carpobrotus rossii</i>	75.0	15	540	38	1	5	9					11.6	378.2	0.9	5.0
<i>Tetragonia implexicoma</i>	75.0	15	542	35	1	6	7	1				12.1	444.0	0.7	3.8
<i>Threlkeldia diffusa</i>	75.0	15	453	37		6	9					12.0	321.7	1.4	7.2
<i>Isolepis nodosa</i>	70.0	14	317	22	2	4	5	3				13.2	291.1	1.9	9.2
<i>Spinifex hirsutus</i>	70.0	14	32	11		3	1	6	4			26.5	42.2	38.9	190.9
* <i>Euphorbia paralias</i>	60.0	12	127	18		5	6	1				10.5	131.3	4.1	17.2
<i>Leucophyta brownii</i>	60.0	12	138	22	1	1	3	4	3			20.6	157.4	7.3	30.8
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	60.0	12	546	41		8	4					8.0	495.5	0.0	0.1
<i>Senecio lautus</i>	60.0	12	542	40	1	4	7					9.1	396.6	0.5	1.9
<i>Salsola kali</i>	40.0	8	34	13	2	4	2					4.2	16.3	15.4	43.1
<i>Exocarpos syrticola</i>	35.0	7	225	25	2	4	1					3.2	152.3	0.3	0.8
<i>Pimelea serpyllifolia</i>															
<i>ssp serpyllifolia</i>	35.0	7	359	30		3	1	3				8.5	268.2	1.0	2.5
<i>Poa poiformis</i>	30.0	6	139	22		5	1					3.5	119.8	0.9	1.8



Figure 44 *Atriplex cinerea* Shrublands at quadrat PIL00102 (HOB14326)



Figure 45 *Atriplex cinerea* Shrublands at quadrat GIB00203 (EPE14584)

Atriplex vesicaria ssp Low shrublands

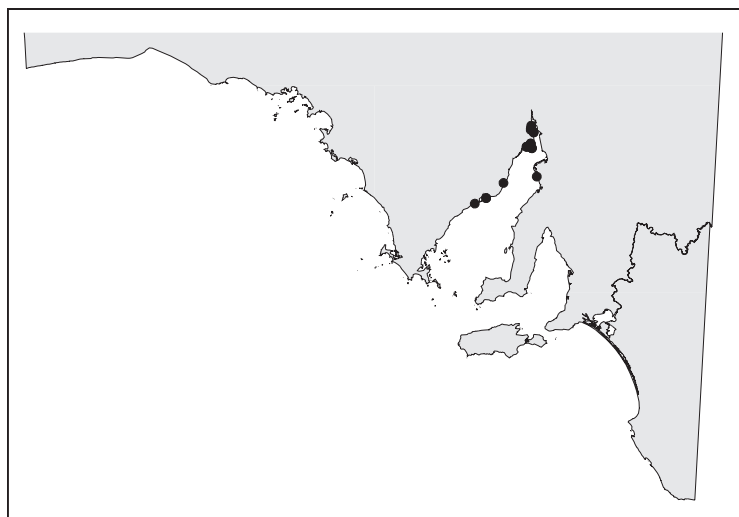
Floristic group 28: 21 quadrats

Description:

A moderately strong group located along the coast of Spencer Gulf. The outcrop and strew are siliceous when found on the quadrat.

Distribution of sites in geomorphic regions:

EPE	SPG
1	20



Number of plant species:

Min	Max	Average
6	28	17.33

Dominant species:

Atriplex vesicaria ssp

Subdominant species:

Geijera linearifolia

Indicator species:

Rhagodia parabolica

Dominant lifeform/s:

	SD	SC
<i>Atriplex vesicaria</i> ssp	13	4

Structural description:

	Freq	O-E/E
Tall open shrubland	3	1.84
Low shrubland	2	-0.23
Low woodland	2	6.29
Mallee	2	4.67
Open mallee	2	10.34
Shrubland	2	-0.33
Tall shrubland	2	0.13
Very low open forest	2	1.00
Very low woodland	2	19.42
Very low open woodland	1	3.25
Very open low mallee	1	4.10

Environmental parameters:

	Min	Max	Mean	SD
Altitude	2	30	9.4	7.2
Slope	0	14	3.8	4.1
Aspect	0	354	107.1	105.1
Bare earth	1	50	19.6	15.0
Litter	0	80	16.8	21.0
Rainfall	275	350	292.9	22.0

Landform pattern:

	Freq	O-E/E
Beach ridge plain	8	3.75
Escarpment	5	1.18
Consolidated dunefield	3	-0.36
Plain	3	0.11
Low hills	2	1.92

Landform element:

	Freq	O-E/E
Beach ridge	5	5.54
Plain	5	1.11
Hill slope	3	0.74
Dune crest	2	0.46
Cliff	1	0.11
Cliff footslope	1	2.92
Dune footslope	1	-0.22
Dune slope	1	-0.66
Hill footslope	1	6.29
Swale	1	-0.07

Surface soil texture:

	Freq	O-E/E
Sand	14	0.03
Sandy loam	4	0.25
Clayey sand	1	1.32
Loam	1	1.13
Sandy clay loam	1	1.84

Wave energy:

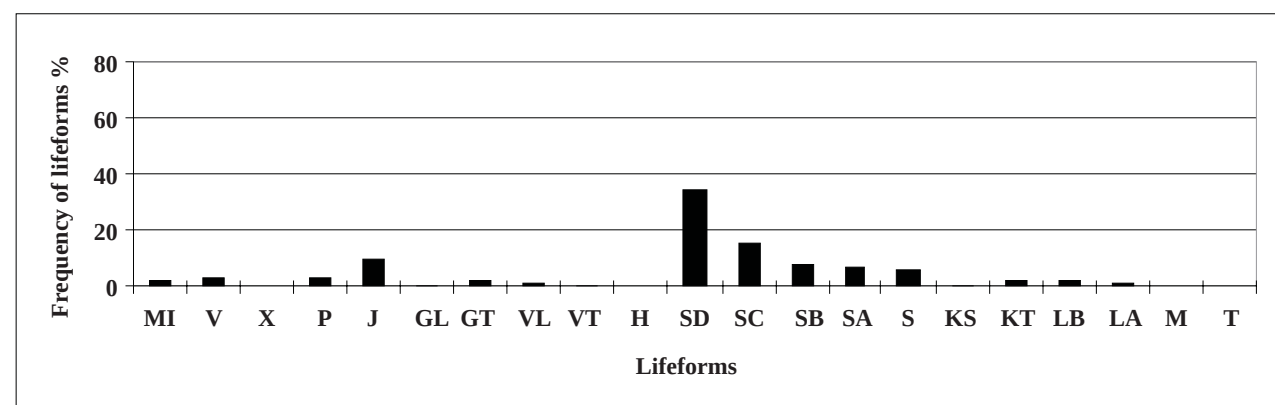
	Freq	O-E/E
L	20	7.7
M	1	-0.8

Outcrop lithology and cover:

	Freq	O-E/E
None	19	0.16
Sandstone <10%	2	13.59

Strew lithology size and cover:

	Freq	O-E/E
None	12	-0.16
Laterite (Ironstone) 30–70% cobble (51–250 mm)	3	29.63
Laterite (Ironstone) <10% cobble (51–250 mm)	1	50.05
Laterite (Ironstone) >70% cobble (51–250 mm)	1	50.05
Quartzite >70% cobble (51–250 mm)	1	24.52
Quartzite 10–30% cobble (51–250 mm)	1	16.02
Sandstone <10% cobble (51–250 mm)	1	11.76
Sandstone <10% pebble (5–50 mm)	1	16.02

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Atriplex vesicaria</i> ssp	81.0	17	89	13			2	8	7			39.0	121.2	16.0	74.7
* <i>Carrichtera annua</i>	76.2	16	38	10	1		14	1				16.1	33.6	24.3	106.9
<i>Enchylaena tomentosa</i>															
var <i>tomentosa</i>	76.2	16	128	29	4	7	1	4				12.9	71.4	8.5	37.6
<i>Geijera linearifolia</i>	71.4	15	135	19	2	2		8	3			26.2	128.6	9.8	40.2
<i>Rhagodia parabolica</i>	61.9	13	33	10	5	1		7				15.0	22.6	34.1	121.6
<i>Lycium australe</i>	52.4	11	50	16	3	8						4.3	20.2	10.2	31.0
<i>Pittosporum phylliraeoides</i>															
var <i>microcarpa</i>	52.4	11	139	27	5	4		2				6.5	63.0	4.5	13.4

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Threlkeldia diffusa</i>	47.6	10	453	37	2	7	1					4.7	321.7	-0.2	-0.6
<i>Alectryon oleifolius</i> <i>ssp canescens</i>	42.9	9	9	1	5			3	1			9.5	9.5	51.8	128.1
<i>Tetragonia implexicoma</i>	42.9	9	542	35	1	6	2					5.1	444.0	-0.4	-1.0
<i>Solanum ellipticum</i>	33.3	7	7	1	1	5	1					3.6	3.6	51.8	99.7



Figure 46 *Atriplex vesicaria* ssp Low shrublands at quadrat MAM00202 (SPG14600)

Atriplex vesicaria ssp/ *Nitraria billardiarei*/ *Threlkeldia diffusa* Low shrublands

Floristic group 36: 10 quadrats

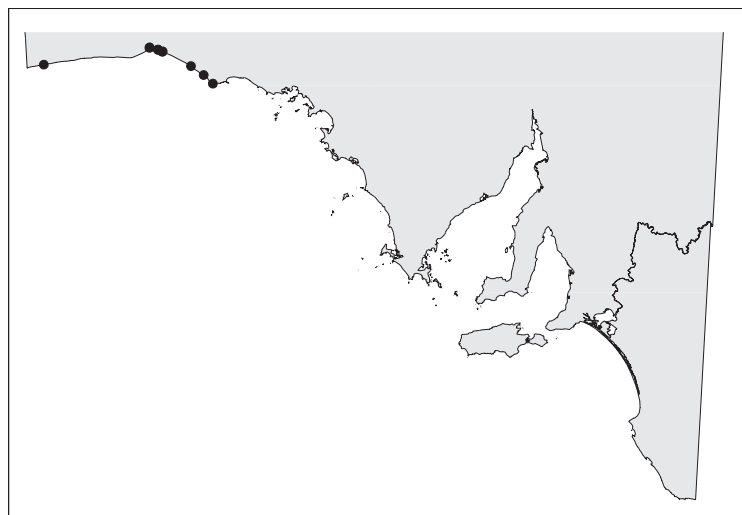
Description:

A strong group located predominantly in dunefields along the Head of the Bight. A very high proportion of shrubs under 1 m.

Distribution of sites in geomorphic regions:

NUL HOB

1 9



Number of plant species:

Min	Max	Average
6	18	11.40

Dominant species:

Atriplex vesicaria ssp
Nitraria billardiarei
Threlkeldia diffusa

Subdominant species:

Frankenia pauciflora var *fruticulosa*

Dominant lifeform/s:

	SD	SC	SB	SA
<i>Atriplex vesicaria</i> ssp	9			
<i>Nitraria billardiarei</i>	3	3	1	1
<i>Threlkeldia diffusa</i>	8			

Structural description:

	Freq	O-E/E
Low open shrubland	4	3.38
Low shrubland	2	0.62
Open shrubland	2	1.78
Low closed shrubland	1	2.83
Very open shrubland	1	4.10

Landform pattern:

	Freq	O-E/E
Dunefield	4	0.36
Consolidated dunefield	3	0.34
Escarpment	2	0.83
Plain	1	-0.22

Surface soil texture:

	Freq	O-E/E
Sand	9	0.39
Sandy loam	1	-0.35

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	90	26.5	24.4
Slope	0	22	6.6	6.8
Aspect	0	360	106.6	122.6
Bare earth	10	60	38.0	17.8
Litter	2	30	12.2	9.0
Rainfall	225	350	287.5	45.1

Landform element:

	Freq	O-E/E
Dune slope	6	3.34
Dune/consolidated dune	2	0.61
Dune crest	1	0.53
Plain	1	-0.11

Wave energy:

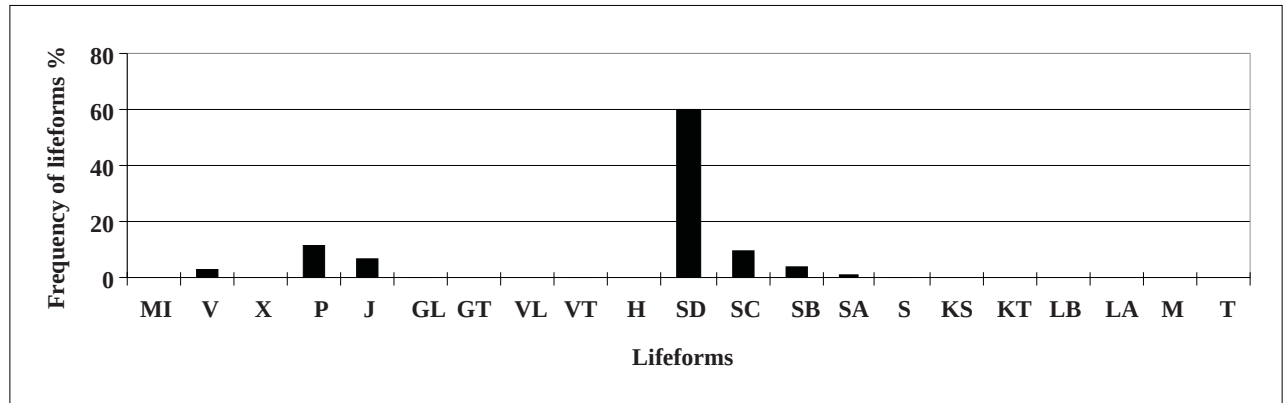
	Freq	O-E/E
H	10	0.4

Outcrop lithology and cover:

	Freq	O-E/E
None	7	-0.10
Calcareous <10%	2	1.46
Calcareous 10–50%	1	0.91

Strew lithology size and cover:

	Freq	O-E/E
None	6	-0.11
Calcareous <10% cobble (51–250 mm)	1	0.62
Calcareous <10% pebble (5–50 mm)	1	0.58
Calcareous 30–70% cobble (51–250 mm)	1	5.31
Calcareous 30–70% pebble (5–50 mm)	1	6.66

Distribution of lifeforms:

Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Atriplex vesicaria</i> ssp	90.0	9	89	13	3		1	3	2			13.3	121.2	15.6	123.4
<i>Nitraria billardierei</i>	80.0	8	104	21	2	1		4	1			11.7	122.4	13.5	94.6
<i>Threlkeldia diffusa</i>	80.0	8	453	37	2	4		2				6.2	321.7	1.9	13.5
<i>Frankenia pauciflora</i>															
var <i>fruticulosa</i>	60.0	6	134	25			2	3	1			11.0	101.1	15.5	81.5
<i>Rhagodia crassifolia</i>	60.0	6	93	19	2	1	2		1			5.7	57.1	14.1	74.3
<i>Frankenia sessilis</i>	50.0	5	89	17		1		4				8.5	112.4	10.5	45.9
<i>Senecio lautus</i>	50.0	5	542	40	1	1	3					3.6	396.6	0.4	1.6
<i>Carpobrotus rossii</i>	40.0	4	540	38	1	2	1					2.1	378.2	-0.2	-0.6
<i>Disphyma crassifolium</i>															
ssp <i>clavellatum</i>	40.0	4	140	24	1	1	1	1				3.6	101.8	4.4	15.3
<i>Maireana oppositifolia</i>	40.0	4	87	21	4							0.4	101.4	-0.4	-1.4
<i>Tetragonia implexicoma</i>	40.0	4	542	35	3	1						0.8	444.0	-0.7	-2.6
<i>Zygophyllum billardierei</i> (NC)	40.0	4	136	22		2	2					3.0	68.8	5.6	19.7
<i>Goodenia varia</i>	30.0	3	110	25				2	1			7.0	89.1	10.9	28.7
<i>Myoporum insulare</i>	30.0	3	202	31		1		2				4.5	203.4	2.4	6.2
<i>Nicotiana goodspeedii</i>	30.0	3	17	8	1	1	1					1.6	11.4	20.3	53.3
<i>Templetonia retusa</i>	30.0	3	85	20	1	1		1				2.6	86.1	3.6	9.4



Figure 47 *Atriplex vesicaria* ssp/ *Nitraria billardierei*/ *Threlkeldia diffusa* Low shrublands at quadrat COY00103 (HOB14306)



Figure 48 *Atriplex vesicaria* ssp/ *Nitraria billardierei*/ *Threlkeldia diffusa* Low shrublands at quadrat WIL00601 (NUL13801)

Enchylaena tomentosa var *tomentosa* Low shrubland

Floristic group 4: 6 quadrats

Description:

A very weak group connected by a low shrub with distribution in the lower rainfall areas. There is not a distinctive overstorey and all the species are in low abundances. The average species number is moderate.

Distribution of quadrats in geomorphic regions:

NUL	HOB	EPE	YOP
3	1	1	1



Number of plant species:

Min	Max	Average
4	21	12.67

Dominant species:

Enchylaena tomentosa var *tomentosa*

Subdominant species:

Maireana erioclada

Dominant lifeform/s:

	SD
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	5

Structural description:

	Freq	O-E/E
Low open shrubland	2	2.65
Low shrubland	1	0.35
Low very open shrubland	1	8.93
Open (tussock) grassland	1	12.74
Very low open woodland	1	13.89

Landform pattern:

	Freq	O-E/E
Plain	3	2.88
Low hills	2	9.21
Rises	1	2.97

Surface soil texture:

	Freq	O-E/E
Sand	4	0.03
Loamy sand	1	0.09
Sandy clay loam	1	8.93

Environmental parameters:

	Min	Max	Mean	SD
Altitude	10	80	30.0	23.1
Slope	0	6	2.2	2.2
Aspect	0	360	173.3	133.9
Bare earth	0	80	42.5	25.1
Litter	0	75	17.3	27.2
Rainfall	275	350	312.5	37.5

Landform element:

	Freq	O-E/E
Plain	3	3.43
Cliff	1	2.88
Hill slope	1	1.03

Wave energy:

	Freq	O-E/E
H	4	0.0
M	2	0.7

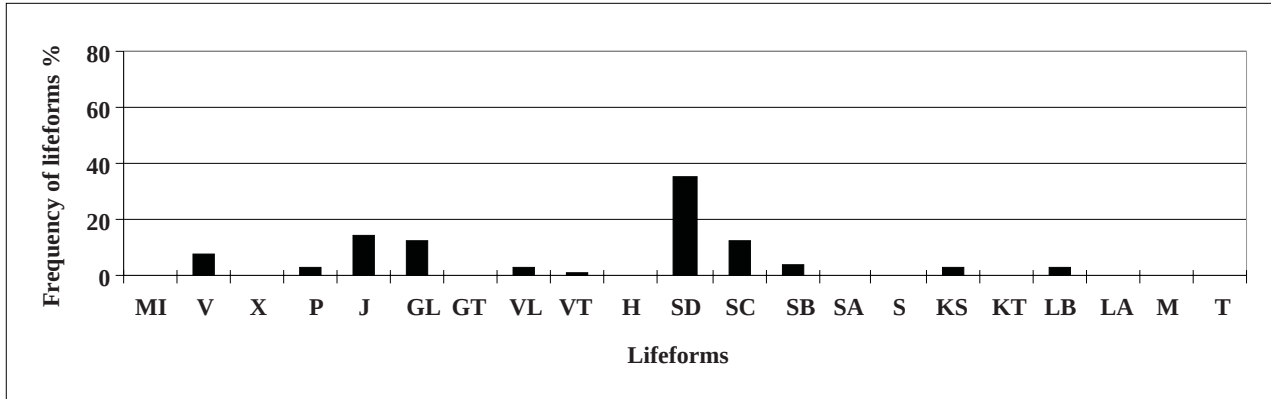
Outcrop lithology and cover:

	Freq	O-E/E
None	3	-0.36
Calcareous <10%	1	1.05
Granite <10%	2	70.47

Strew lithology size and cover:

	Freq	O-E/E
None	4	-0.01
Granite 10–30% pebble (5–50 mm)	1	177.67
Calcareous <10% boulder (gt 250 mm)	1	43.67

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Enchylaena tomentosa</i>															
var <i>tomentosa</i>	83.3	5	128	29		4	1					3.0	71.4	12.8	84.3
<i>Maireana erioclada</i>	66.7	4	94	20		3	1					2.5	49.0	15.8	83.1
<i>Atriplex paludosa</i> ssp	50.0	3	119	22		1	2					2.5	140.4	4.9	19.2
<i>Salsola kali</i>	50.0	3	34	13	1	1		1				2.6	16.3	51.5	203.2
<i>Stipa eremophila</i>	50.0	3	13	4	1		1	1				3.1	7.8	129.7	512.1
<i>Atriplex nummularia</i>															
ssp <i>spathulata</i>	33.3	2	9	3	1		1					1.1	2.2	163.5	430.2
<i>Danthonia setacea</i>															
var <i>setacea</i>	33.3	2	92	30			2					2.0	57.2	10.5	27.6
<i>Eucalyptus yalataensis</i>	33.3	2	18	7	2							0.2	16.1	3.1	8.1
<i>Glycine clandestina</i>															
var <i>sericea</i>	33.3	2	6	4	1	1						0.6	3.1	62.7	164.9
<i>Maireana brevifolia</i>	33.3	2	2	1		1	1					1.5	1.5	327.9	863.0
<i>Nicotiana goodspeedii</i>	33.3	2	17	8		1	1					1.5	11.4	42.3	111.3
<i>Sclerolaena diacantha</i>	33.3	2	27	10		2						1.0	12.2	26.0	68.3
<i>Tetragonia implexicoma</i>	33.3	2	542	35		2						1.0	444.0	-0.3	-0.7



Figure 49 *Enchylaena tomentosa* var *tomentosa* Low shrubland at quadrat WIL00102 (NUL13961)



Figure 50 *Enchylaena tomentosa* var *tomentosa* Low shrubland at quadrat WIL01002 (NUL13972)

Halosarcia indica ssp Low shrublands

Floristic group 26: 6 quadrats

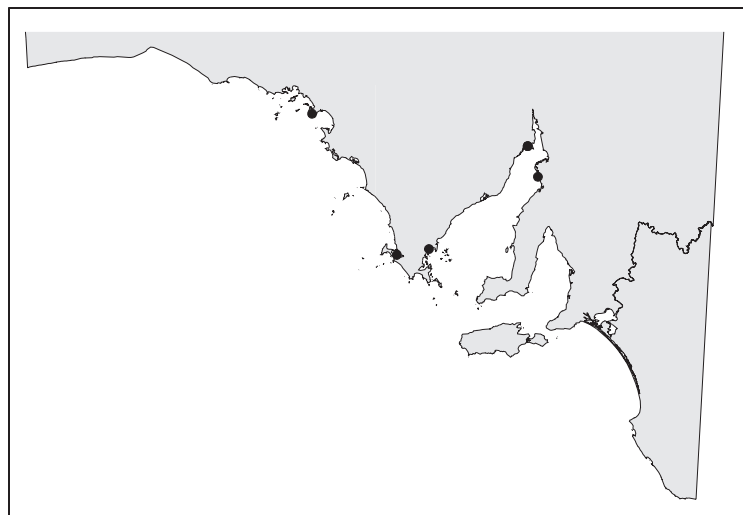
Description:

A moderately strong group located along the coastline in flat relatively low lying areas. There is a very high proportion of low shrubs within the plant communities with few subdominant species in common.

Distribution of sites in geomorphic regions:

EPW EPS SPG

1 2 3



Number of plant species:

Min	Max	Average
5	14	8.50

Dominant species:

Frankenia pauciflora var *gunnii*
Halosarcia indica ssp

Dominant lifeform/s:

	SD	SC
<i>Frankenia pauciflora</i> var <i>gunnii</i>		5
<i>Halosarcia indica</i> ssp	3	2

Structural description:

	Freq	O-E/E
Low shrubland	4	4.41
Low closed shrubland	1	5.38
Low open shrubland	1	0.82

Landform pattern:

	Freq	O-E/E
Beach ridge plain	3	5.23
Plain	2	1.59
Tidal flat	1	8.93

Surface soil texture:

	Freq	O-E/E
Sandy clay loam	2	18.85
Sandy loam	2	1.18
Loamy sand	1	0.09
Sand	1	-0.74

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	10	4.5	4.0
Slope	0	2	0.5	0.8
Aspect	0	360	90.0	137.5
Bare earth	0	60	19.2	19.7
Litter	5	95	33.3	29.8
Rainfall	275	500	366.7	83.8

Landform element:

	Freq	O-E/E
Beach ridge	3	12.73
Swamp	2	58.50
Plain	1	0.48

Wave energy:

	Freq	O-E/E
H	3	-0.3
L	3	3.5

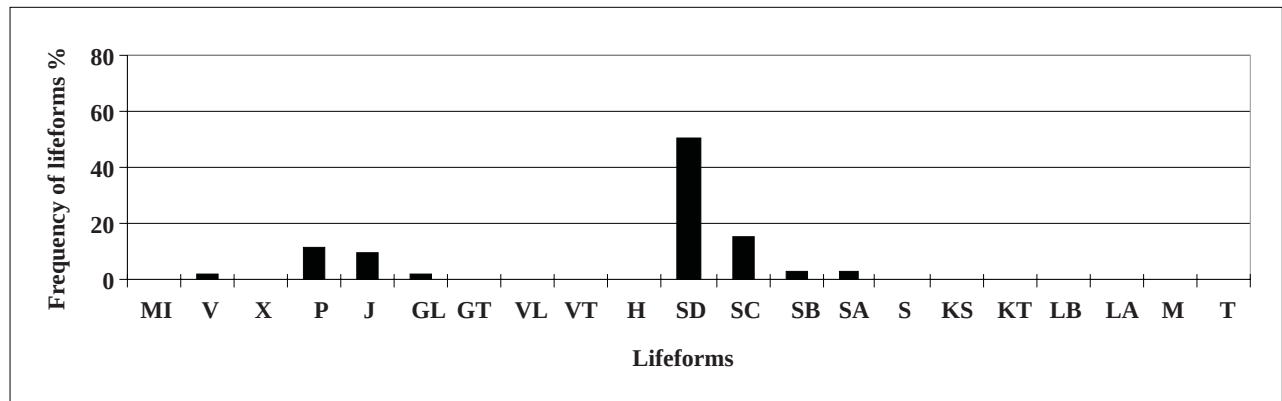
Outcrop lithology and cover:

None

Strew lithology size and cover:

None

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Frankenia pauciflora</i>															
var <i>gunnii</i>	83.3	5	26	12			4		1			7.0	23.1	97.0	950.8
<i>Halosarcia indica</i> ssp	83.3	5	15	8			1		3	1		14.0	22.3	202.0	1980.3
<i>Lawrencia squamata</i>	66.7	4	54	12	1	1		2				4.6	61.2	23.3	182.8
<i>Senecio lautus</i>	66.7	4	542	40		1	3					3.5	396.6	1.9	14.5
<i>Atriplex paludosa</i> ssp	50.0	3	119	22				2	1			7.0	140.4	15.1	88.9
<i>Disphyma crassifolium</i>															
ssp <i>clavellatum</i>	50.0	3	140	24	2			1				2.2	101.8	6.0	35.2
<i>Nitraria billardiarei</i>	50.0	3	104	21	1	2						1.1	122.4	1.9	11.2
<i>Myoporum insulare</i>	33.3	2	202	31	2							0.2	203.4	-0.7	-2.7
<i>Threlkeldia diffusa</i>	33.3	2	453	37	1	1						0.6	321.7	-0.4	-1.6



Figure 51 *Halosarcia indica* ssp Low shrublands at quadrat CUL00101 (SPG14597)

Maireana eriolada Low shrublands

Floristic group 35: 29 quadrats

Description:

A moderately strong group located predominantly on the Nullarbor Plain and at Merdayerrah. A very high proportion of shrubs under 1 m.

Distribution of sites in geomorphic regions:

NUL **EPW**

28 1



Number of plant species:

Min	Max	Average
3	22	13.07

Dominant understorey species:

Maireana eriolada

Subdominant species:

Melaleuca lanceolata

Indicator species:

Frankenia sessilis

Dominant lifeform/s:

	SD	SC
<i>Maireana eriolada</i>	24	1

Structural description:

	Freq	O-E/E
Low open shrubland	9	2.39
Low shrubland	8	1.24
Open low mallee	4	2.44
Open shrubland	2	-0.04
Low mallee	1	-0.28
Tall open shrubland	1	-0.32
Tall very open shrubland	1	2.36
Very low open woodland	1	2.08
Very open low mallee	1	2.70
Very open shrubland	1	0.76

Landform pattern:

	Freq	O-E/E
Plain	25	5.70
Consolidated dunefield	2	-0.69
Escarpment	2	-0.37

Environmental parameters:

	Min	Max	Mean	SD
Altitude	10	100	71.4	19.2
Slope	0	18	1.1	3.4
Aspect	0	270	36.8	81.8
Bare earth	10	70	42.2	16.5
Litter	0	70	9.9	14.9
Rainfall	225	350	243.1	30.0

Landform element:

	Freq	O-E/E
Plain	24	6.33
Dune footslope	2	0.14
Cliff footslope	1	1.84
Gully	1	3.10
Limestone plain	1	0.23

Surface soil texture:

	Freq	O-E/E
Sand	18	-0.04
Clayey sand	4	5.72
Sandy loam	4	-0.10
Loamy sand	3	-0.32

Wave energy:

	Freq	O-E/E
H	29	0.4

Outcrop lithology and cover:

	Freq	O-E/E
None	17	-0.25
Calcareous <10%	10	3.25
Calcareous >50%	1	0.76
Calcareous 10–50%	1	-0.34

Strew lithology size and cover:

	Freq	O-E/E
None	5	-0.75
Calcareous <10% pebble (5–50 mm)	13	6.07
Calcareous <10% cobble (51–250 mm)	5	1.80
Calcareous 10–30% pebble (5–50 mm)	2	2.36
Calcareous 10–30% cobble (51–250 mm)	1	0.09
Calcareous 30–70% boulder (gt 250 mm)	1	6.39
Calcareous 30–70% cobble (51–250 mm)	1	1.17
Calcareous 30–70% pebble (5–50 mm)	1	1.64

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Maireana erioclada</i>	86.2	25	94	20	3	13	8	1				16.8	49.0	17.7	116.8
<i>Atriplex vesicaria</i> ssp	79.3	23	89	13	1	10	11	1				18.1	121.2	7.1	43.4
<i>Frankenia sessilis</i>	79.3	23	89	17		1	7	13	2			39.5	112.4	18.2	110.3
<i>Melaleuca lanceolata</i>	79.3	23	348	37	1		4	13	5			45.1	572.1	3.3	20.0
<i>Threlkeldia diffusa</i>	62.1	18	453	37	3	6	9					12.3	321.7	1.1	5.2
<i>Geijera linearifolia</i>	48.3	14	135	19	7	3	2	2				8.2	128.6	2.5	9.2
<i>Zygophyllum billardieri</i> (NC)	48.3	14	136	22	6	2	6					7.6	68.8	5.0	18.6
<i>Disphyma crassifolium</i>															
ssp <i>clavellatum</i>	41.4	12	140	24		4	8					10.0	101.8	4.4	13.8
<i>Eucalyptus yalatensis</i>	37.9	11	18	7	2	3	2	3	1			12.7	16.1	42.0	
122.0 <i>Exocarpos aphyllus</i>	37.9	11	179	34	8	3						2.3	77.3	0.6	1.8
<i>Rhagodia crassifolia</i>	37.9	11	93	19	2	8	1					5.2	57.1	4.0	11.5
<i>Rhagodia candolleana</i>															
ssp <i>candolleana</i>	31.0	9	546	41	1		6	2				10.1	495.5	0.1	0.3
<i>Westringia rigida</i>	31.0	9	24	9	1	2	5	1				8.1	18.2	23.3	55.3



Figure 52 *Maireana erioclada* Low shrublands at quadrat WIL00203 (NUL13804)



Figure 53 *Maireana erioclada* Low shrublands at quadrat WIL00402 (NUL13807)

Maireana oppositifolia Low shrublands

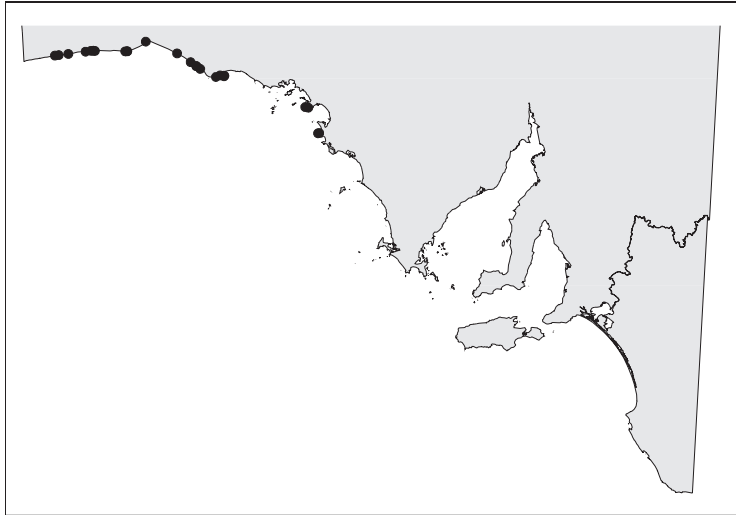
Floristic group 27: 24 quadrats

Description:

A strong group located west of Streaky Bay on both cliffs and dunefields. There is a very high proportion of low shrubs in the plant communities.

Distribution of sites in geomorphic regions:

NUL	HOB	EPW
10	6	8



Number of plant species:

Min	Max	Average
8	24	13.79

Dominant species:

Disphyma crassifolium ssp *clavellatum*
Hemichroa diandra
Maireana oppositifolia

Subdominant species:

Atriplex paludosa ssp

Indicator species:

Frankenia sessilis

Dominant lifeform/s:

	P	SD	SC	SB
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	22			
<i>Hemichroa diandra</i>		20	1	
<i>Maireana oppositifolia</i>		19	3	1

Structural description:

	Freq	O-E/E
Low shrubland	12	3.06
Low open shrubland	7	2.19
Low very open shrubland	3	6.44
Open shrubland	2	0.16

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	80	36.5	24.6
Slope	0	29	5.0	8.0
Aspect	0	350	107.1	125.4
Bare earth	0	80	44.6	20.3
Litter	0	50	7.9	10.7
Rainfall	225	350	289.6	61.2

Landform pattern:

	Freq	O-E/E
Plain	9	1.91
Consolidated dunefield	8	0.49
Escarpment	4	0.53
Dunefield	3	-0.58

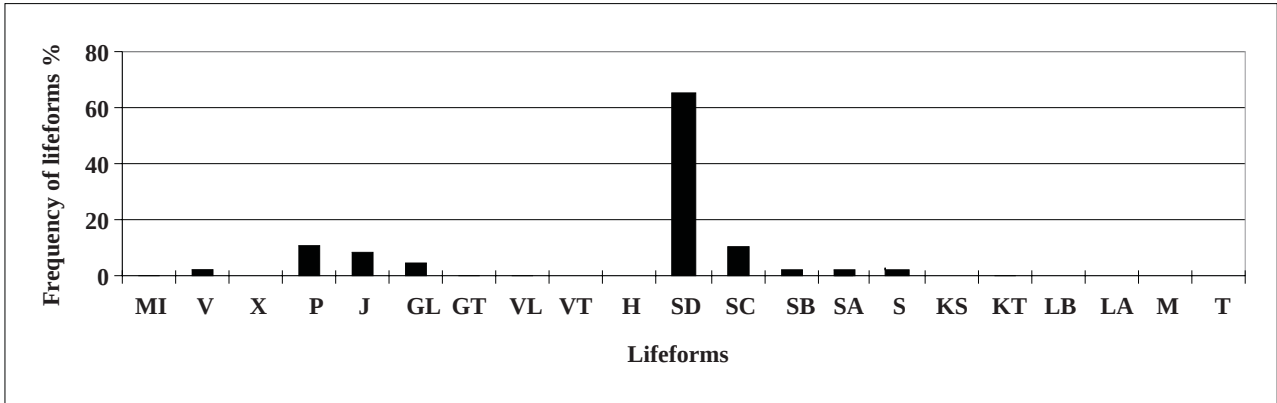
Landform element:

	Freq	O-E/E
Plain	8	1.95
Dune/consolidated dune	6	1.01
Dune slope	5	0.51
Interdune low	2	1.98
Flat	1	1.35
Interdune corridor	1	0.94
Limestone plain	1	0.49

Surface soil texture:			Wave energy:		
	Freq	O-E/E		Freq	O-E/E
Sand	22	0.42	H	24	0.4
Clayey sand	1	1.03			
Loamy sand	1	-0.73			

Outcrop lithology and cover:			Strew lithology size and cover:		
	Freq	O-E/E		Freq	O-E/E
None	20	0.07	None	14	-0.14
Calcareous 10–50%	3	1.39	Calcareous <10% pebble (5–50 mm)	7	3.60
Calcareous <10%	1	-0.49	Calcareous 10–30% cobble (51–250 mm)	2	1.63
			Calcareous <10% cobble (51–250 mm)	1	-0.32

Distribution of lifeforms:



Plant species:															
	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Maireana oppositifolia</i>	95.8	23	87	21	2	1	7	12		1		35.7	101.4	17.9	124.2
<i>Disphyma crassifolium</i>															
<i>ssp clavellatum</i>	91.7	22	140	24	1	6	13	2				20.1	101.8	9.6	63.7
<i>Hemichroa diandra</i>	87.5	21	49	13	1	4	6	9	1			29.1	41.7	36.4	231.0
<i>Frankenia sessilis</i>	79.2	19	89	17		2	5	10	2			32.0	112.4	14.3	81.9
<i>Senecio lautus</i>	79.2	19	542	40	1	6	11		1			17.1	396.6	1.3	7.5
<i>Sclerolaena uniflora</i>	75.0	18	86	18	4	5	8	1				12.9	55.5	11.5	62.3
<i>Nitraria billardierei</i>	62.5	15	104	21	6	3	4	2				10.1	122.4	3.4	15.5
<i>Atriplex paludosa</i> ssp	58.3	14	119	22		1	4	9				22.5	140.4	7.6	32.1
<i>Lawrencia squamata</i>	50.0	12	54	12	2	3	1	5	1			15.7	61.2	12.8	46.2
<i>Zygophyllum billardierei</i> (NC)	50.0	12	136	22	10	2						2.0	68.8	0.6	2.0
<i>Lycium australe</i>	45.8	11	50	16	6	5						3.1	20.2	7.2	24.0
<i>Atriplex vesicaria</i> ssp	41.7	10	89	13	1	1	2	6				14.6	121.2	5.5	16.5



Figure 54 *Maireana oppositifolia* Low shrublands at quadrat PIL00101 (HOB14325)



Figure 55 *Maireana oppositifolia* Low shrublands at quadrat RUS00402 (HOB14297)

Threlkeldia diffusa Low shrublands

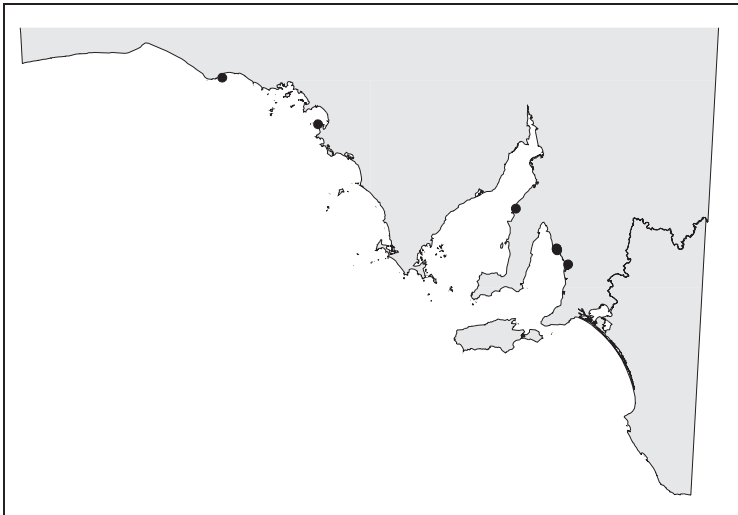
Floristic group 25: 8 quadrats

Description:

A moderately strong group located in flat low lying areas scattered along the coastline in a very narrow rainfall range. There is a high proportion of low shrubs.

Distribution of sites in geomorphic regions:

EPW	YOP	SVG
2	1	5



Number of plant species:

Min	Max	Average
6	20	12.75

Dominant species:

Disphyma crassifolium ssp *clavellatum*

* *Mesembryanthemum crystallinum*

Threlkeldia diffusa

Subdominant species:

Atriplex paludosa ssp

Indicator species:

**Mesembryanthemum nodiflorum*

Dominant lifeform/s:

	P	SD	SC
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	7		
* <i>Mesembryanthemum crystallinum</i>	7		
<i>Threlkeldia diffusa</i>		6	1

Structural description:

	Freq	O-E/E
Low open shrubland	3	3.10
Low closed shrubland	2	8.57
Mallee	1	6.44
Tall shrubland	1	0.49
Very low open woodland	1	10.17

Landform pattern:

	Freq	O-E/E
Beach ridge plain	3	3.67
Plain	2	0.94
Tidal flat	2	13.89
Sand plain	1	43.67

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	10	2.1	3.1
Slope	0	0	0.0	0.0
Aspect	0	0	0.0	0.0
Bare earth	5	70	28.8	22.0
Litter	0	50	14.9	18.1
Rainfall	350	400	375.0	25.0

Landform element:

	Freq	O-E/E
Plain	3	2.32
Beach	1	65.94
Beach ridge	1	2.43
Closed depression	1	6.88
Flat	1	6.05
Sandy plain	1	12.39

Surface soil texture:

	Freq	O-E/E
Sand	6	0.16
Medium clay	1	8.57
Sandy loam	1	-0.18

Wave energy:

	Freq	O-E/E
L	5	4.7
H	2	-0.6
M	1	-0.4

Outcrop lithology and cover:

None

Strew lithology size and cover:

None

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Disphyma crassifolium</i>															
<i>ssp clavellatum</i>	87.5	7	140	24		5	2					4.5	101.8	8.3	56.7
* <i>Mesembryanthemum</i>															
<i>crystallinum</i>	87.5	7	59	17	1	4	1	1				5.1	38.2	27.0	185.2
<i>Threlkeldia diffusa</i>	87.5	7	453	37		3	3	1				6.5	321.7	3.2	22.2
<i>Tetragonia implexicoma</i>	75.0	6	542	35	2	2	1	1				4.2	444.0	1.0	5.8
<i>Atriplex paludosa</i> ssp	62.5	5	119	22		2		2		1		9.0	140.4	12.4	61.0
<i>Maireana oppositifolia</i>	62.5	5	87	21	2		3					3.2	101.4	5.6	27.5
* <i>Mesembryanthemum</i>															
<i>nodiflorum</i>	62.5	5	11	5		3	1	1				4.5	8.6	108.7	532.7
* <i>Lycium ferocissimum</i>	50.0	4	209	32	4							0.4	94.2	-0.1	-0.4
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	50.0	4	546	41	1	2	1					2.1	495.5	-0.1	-0.4
<i>Frankenia pauciflora</i>															
<i>var fruticulosa</i>	37.5	3	134	25		3						1.5	101.1	2.1	6.2
<i>Halosarcia pergranulata</i> ssp	37.5	3	6	4		1		1		1		6.5	7.2	188.2	553.6
* <i>Lagurus ovatus</i>	37.5	3	250	28		3						1.5	282.2	0.1	0.3
<i>Melaleuca lanceolata</i>	37.5	3	348	37			2		1			5.0	572.1	0.8	2.4
<i>Nitraria billardiarei</i>	37.5	3	104	21	2	1						0.7	122.4	0.2	0.6
<i>Stipa drummondii</i>	37.5	3	20	11		3						1.5	11.3	26.8	78.9
<i>Stipa elegantissima</i>	37.5	3	82	25	2	1						0.7	43.0	2.4	7.1
<i>Suaeda australis</i>	37.5	3	16	7				3				6.0	17.3	71.7	210.9



Figure 56 *Threlkeldia diffusa* Low shrublands at quadrat COO00505 (EPW13770)



Figure 57 *Threlkeldia diffusa* Low shrublands at quadrat HAS00101 (EPW13729)

Leucophyta brownii Low shrublands

Floristic group 47: 25 quadrats

Description:

A strong group located on cliffs and dunefields west of Adelaide. A very high proportion of shrubs under 0.5 m

Distribution of sites in geomorphic regions:

HOB	EPW	EPS	YOP	KIS
2	9	4	7	3



Number of plant species:

Min	Max	Average
3	26	16.16

Dominant species:

Leucophyta brownii

Dominant lifeform/s:

	SD	SC	SB
<i>Leucophyta brownii</i>	21	1	1

Structural description:

	25	O-E/E
Low shrubland	15	3.87
Low open shrubland	6	1.63
Low very open shrubland	2	3.76
Open (tussock) grassland	1	2.30
Open shrubland	1	-0.44

Landform pattern:

	Freq	O-E/E
Escarpment	11	3.03
Consolidated dunefield	6	0.07
Dunefield	4	-0.46
Plain	2	-0.38
Longitudinal dunefield	1	2.57
Rises	1	-0.05

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	50	25.5	17.5
Slope	0	50	11.6	13.5
Aspect	0	360	184.6	115.0
Bare earth	2	80	30.2	24.2
Litter	0	75	17.5	22.2
Rainfall	275	625	427.0	83.9

Landform element:

	Freq	O-E/E
Cliff	8	6.45
Dune slope	6	0.74
Dune/consolidated dune	2	-0.36
Limestone plain	2	1.86
Rock outcrop (on hill)	2	9.71
Cliff footslope	1	2.30
Dune footslope	1	-0.34
Open depression	1	3.76
Saltlake	1	9.71
Swale	1	-0.22

Surface soil texture:

	Freq	O-E/E
Sand	17	0.05
Sandy loam	6	0.57
Loamy sand	1	-0.74
Medium clay	1	2.06

Wave energy:

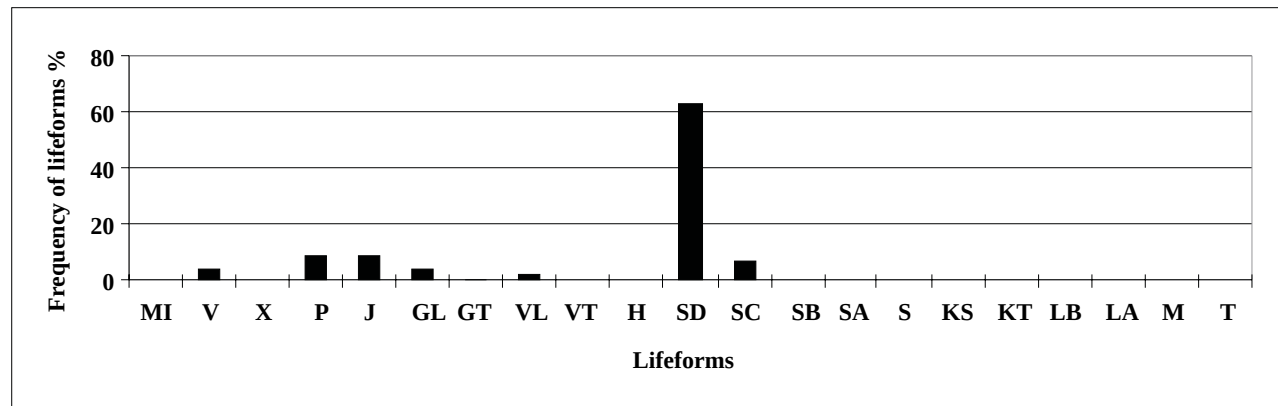
	Freq	O-E/E
H	23	0.3
M	2	-0.6

Outcrop lithology and cover:

	Freq	O-E/E
None	8	-0.59
Calcareous 10–50%	8	5.13
Calcareous >50%	4	7.17
Calcareous <10%	2	87

Strew lithology size and cover:

	Freq	O-E/E
None	7	-0.59
Calcareous 10–30% pebble (5–50 mm)	4	6.80
Calcareous 30–70% cobble (51–250 mm)	4	9.09
Calcareous <10% pebble (5–50 mm)	2	0.26
Calcareous 10–30% cobble (51–250 mm)	2	1.52
Calcareous 30–70% boulder (gt 250 mm)	2	16.15
Calcareous <10%cobble (51–250 mm)	1	-0.35
Calcareous 30–70% pebble (5–50 mm)	1	2.06
Sandstone <10% cobble (51–250 mm)	1	9.72
Sandstone <10% pebble (5–50 mm)	1	13.29

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Leucophyta brownii</i>	92.0	23	138	22	1	5	2	7	7	1		43.6	157.4	14.0	79.6
<i>Senecio lautus</i>	76.0	19	542	40	3	4	12					14.3	396.6	0.9	4.5
<i>Olearia axillaris</i>	68.0	17	578	34	9	7	1					5.4	829.0	-0.6	-2.7
<i>Threlkeldia diffusa</i>	68.0	17	453	37	3	10	3	1				10.3	321.7	0.7	3.1
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	64.0	16	140	24	3	6	6	1				11.3	101.8	5.0	19.8
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	64.0	16	134	25	1	8	6		1			13.1	101.1	6.0	23.8
<i>Carpobrotus rossii</i>	60.0	15	540	38	4	8	2	1				8.4	378.2	0.2	0.7
<i>Tetragonia implexicoma</i>	56.0	14	542	35	2	9	3					7.7	444.0	-0.1	-0.2
<i>Lawrencina squamata</i>	48.0	12	54	12	1	2	4	3	1	1		18.1	61.2	15.0	44.5
<i>Samolus repens</i>	44.0	11	56	17		3	7	1				10.5	42.0	12.5	34.1
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	40.0	10	359	30	2	3	3	2				8.7	268.2	0.8	1.9
<i>Zygophyllum billardieri</i> (NC)	40.0	10	136	22	2	4	4					6.2	68.8	3.9	9.6
<i>Leucopogon parviflorus</i>	36.0	9	392	26	3	6						3.3	662.8	-0.7	-1.6
<i>Maireana oppositifolia</i>	36.0	9	87	21		2	1	5	1			15.0	101.4	7.0	15.6
<i>Nitraria billardieri</i>	36.0	9	104	21	4	1	1	2	1			8.9	122.4	2.9	6.5
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	36.0	9	546	41	3	2	2	2				7.3	495.5	-0.2	-0.5
<i>Goodenia varia</i>	32.0	8	110	25	1	1	3	3				9.6	89.1	4.8	9.6
<i>Scaevola crassifolia</i>	32.0	8	99	19	1	2	1	4				10.1	102.5	4.3	8.6



Figure 58 *Leucophyta brownii* Low shrublands at quadrat SED00201 (KIS14708)



Figure 59 *Leucophyta brownii* Low shrublands at quadrat PON01201 (YOP15816)

Beyeria lechenaultii/ Acrotriche patula Shrublands

Floristic group 11: 11 quadrats

Description:

A moderately strong group located predominantly on cliffs of the adjacent mapsheets of Yankallila and Noarlunga. A structurally diverse plant community with a moderately high number of species.

Distribution of sites in geomorphic regions:

EPS	SVG	FLP
3	5	3



Number of plant species:

Min	Max	Average
20	42	26.82

Dominant species:

Acrotriche patula
Beyeria lechenaultii
Comesperma volubile

Subdominant species:

Danthonia caespitosa
Olearia ramulosa
Pomaderris paniculosa ssp
paniculosa

Indicator species:

Calytrix tetragona
Gahnia lanigera
Lepidosperma viscidum
Maireana enchylaenoides

Dominant lifeform/s:

	V	SD	SC	SB	SA
<i>Acrotriche patula</i>		7	3		
<i>Beyeria lechenaultii</i>		5	2	1	1
<i>Comesperma volubile</i>	9				

Structural description:

	Freq	O–E/E
Low shrubland	4	1.95
Shrubland	3	0.91
Low closed shrubland	2	5.96
Closed hummock grassland	1	47.73
Very low open woodland	1	7.12

Landform pattern:

	Freq	O–E/E
Escarpment	6	4.00
Hills	3	11.71
Consolidated dunefield	1	-0.59
Dunefield	1	-0.69

Surface soil texture:

	Freq	O–E/E
Sand	8	0.13
Clay loam	2	4.73
Light clay	1	7.12
Sandy loam	1	-0.41

Environmental parameters:

	Min	Max	Mean	SD
Altitude	20	140	57.2	33.8
Slope	6	30	15.4	8.2
Aspect	10	296	228.5	83.8
Bare earth	0	75	26.4	21.4
Litter	0	85	31.9	34.7
Rainfall	400	550	527.3	44.5

Landform element:

	Freq	O–E/E
Hill slope	5	4.53
Dune slope	2	0.32
Plain	2	0.61
Gully	1	9.82
Ridge	1	11.17

Wave energy:

	Freq	O–E/E
H	3	-0.6
M	8	2.6

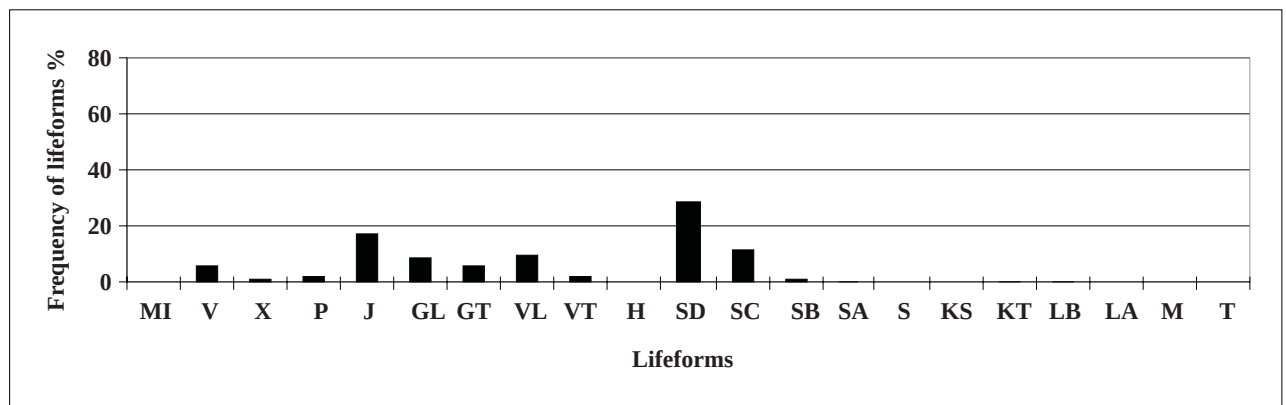
Outcrop lithology and cover:

	Freq	O-E/E
None	5	-0.42
Calcareous <10%	2	1.24
Granite <10%	1	18.49
Granite >50%	1	31.48
Granite 10–50%	1	31.48
Sandstone <10%	1	12.92

Strew lithology size and cover:

	Freq	O-E/E
None	2	-0.73
Calcareous <10% cobble (51–250 mm)	1	0.48
Calcareous <10% pebble (5–50 mm)	1	0.43
Calcareous 10–30% pebble (5–50 mm)	1	3.43
Granite <10% cobble (51–250 mm)	1	31.48
Granite 30–70% boulder (gt 250 mm)	1	96.45
Quartzite >70% pebble (5–50 mm)	1	96.45
Quartzite 10–30% cobble (51–250 mm)	1	31.48
Quartzite 30–70% boulder (gt 250 mm)	1	96.45
Sandstone 10–30% cobble (51–250 mm)	1	18.49

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Acrotriche patula</i>	90.9	10	227	33	1	2	1	5	1			15.1	186.8	5.0	16.8
<i>Beyeria lechenaultii</i>	81.8	9	229	33				2	6	1		26.0	271.2	6.1	18.5
<i>Comesperma volubile</i>	81.8	9	114	25	2	5	2					4.7	46.3	6.5	19.8
<i>Danthonia caespitosa</i>	72.7	8	56	19		4	3	1				7.0	38.8	12.3	33.4
<i>Eutaxia microphylla</i>															
var <i>microphylla</i>	72.7	8	100	28	2	3	3					4.7	65.0	4.3	11.8
<i>Olearia ramulosa</i>	72.7	8	84	21	1	4	1	1	1			8.1	85.8	6.0	16.2
<i>Pomaderris paniculosa</i>															
ssp <i>paniculosa</i>	63.6	7	93	20	2	1		3	1			9.7	79.0	8.1	19.1
<i>Calytrix tetragona</i>	54.5	6	80	16	4		1	1				3.4	77.6	2.2	4.5
<i>Gahnia lanigera</i>	54.5	6	89	15			1	4	1			12.0	112.2	6.9	14.0
<i>Lepidosperma viscidum</i>	54.5	6	57	17	2	1	1	1	1			6.7	55.7	7.9	16.0
<i>Lomandra collina</i>	54.5	6	47	11	1	1	4					4.6	27.6	11.3	23.0
<i>Maireana enchylaenoides</i>	54.5	6	10	4	2	2	2					3.2	4.8	48.2	98.1
<i>Dampiera rosmarinifolia</i>	45.5	5	9	5		1	4					4.5	7.0	46.5	78.8
<i>Dianella brevicaulis</i>	45.5	5	362	35	2	3						1.7	228.2	-0.4	-0.8
<i>Enchylaena tomentosa</i>															
var <i>tomentosa</i>	45.5	5	128	29	2	3						1.7	71.4	0.8	1.3
<i>Goodenia pinnatifida</i>	45.5	5	6	2		3	2					3.5	5.5	46.0	78.0
<i>Stipa elegantissima</i>	45.5	5	82	25		5						2.5	43.0	3.3	5.6
<i>Stipa exilis</i>	45.5	5	75	25		4	1					3.0	49.5	3.5	5.9
<i>Stipa mollis</i>	45.5	5	10	3		1	4					4.5	6.7	48.6	82.4
<i>Acacia spinescens</i>	36.4	4	66	17	1	3						1.6	32.4	2.6	3.6
<i>Cheilanthes austrotenuifolia</i>	36.4	4	28	10	1		3					3.1	21.2	9.8	13.3
<i>Gonocarpus meianus</i>	36.4	4	42	12			1	3				7.0	35.8	13.4	18.2
<i>Helichrysum leucopsidium</i>	36.4	4	196	32	1	2	1					2.1	123.7	0.3	0.3
<i>Melaleuca lanceolata</i>	36.4	4	348	37	3			1				2.3	572.1	-0.7	-1.0
<i>Opercularia turpis</i>	36.4	4	49	15	1	3						1.6	25.5	3.6	4.9
<i>Senecio lautus</i>	36.4	4	542	40	2	1	1					1.7	396.6	-0.7	-0.9



Figure 60 *Beyeria lechenaultii*/ *Acrotriche patula* Shrublands at quadrat NOA00401(SVG15971)

Alyxia buxifolia Shrublands

Floristic group 40: 22 quadrats

Description:

A moderately strong group on cliffs and dunefields located across the central part of the coastline.

Distribution of sites in geomorphic regions:

EPW	EPS	YOP	KIN	KIE	SVG
1	3	13	2	2	1



Number of plant species:

Min	Max	Average
17	36	26.64

Dominant overstorey species:

Alyxia buxifolia

Dominant understorey species:

Acrotriche patula

**Lagurus ovatus*

Rhagodia candolleana ssp *candolleana*

Dominant lifeform/s:

	GL	SD	SC	SB	SA
<i>Acrotriche patula</i>		17	2		
<i>Alyxia buxifolia</i>		2	4	6	6
* <i>Lagurus ovatus</i>	19				
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>		10	8		

Structural description:

	Freq	O-E/E
Shrubland	7	1.23
Low shrubland	5	0.85
Open shrubland	4	1.53
Low closed shrubland	1	0.74
Low open shrubland	1	-0.50
Low woodland	1	2.48
Tall open shrubland	1	-0.10
Tall shrubland	1	-0.46
Woodland	1	23.36

Environmental parameters:

	Min	Max	Mean	SD
Altitude	3	50	18.5	11.6
Slope	0	19	4.5	5.5
Aspect	0	360	117.3	116.5
Bare earth	1	70	22.8	18.3
Litter	0	40	14.6	13.2
Rainfall	350	675	462.5	55.8

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	7	0.42
Dunefield	7	0.08
Escarpment	4	0.67
Beach ridge plain	1	-0.43
Low hills	1	0.39
Parabolic dunefield	1	0.68
Plain	1	-0.65

Landform element:

	Freq	O-E/E
Limestone plain	4	5.49
Swale	4	2.54
Dune slope	3	-0.01
Interdune low	3	3.87
Dune crest	2	0.39
Dune/consolidated dune	2	-0.27
Beach ridge	1	0.25
Cliff	1	0.06
Dune footslope	1	-0.25
Hill crest	1	3.06

Surface soil texture:

	Freq	O-E/E
Sand	13	-0.09
Sandy loam	8	1.38
Light clay	1	3.06

Wave energy:

	Freq	O-E/E
M	11	1.5
H	8	-0.5
L	3	0.2

Outcrop lithology and cover:

	Freq	O-E/E
None	16	-0.07
Calcareous <10%	3	0.68
Calcareous 10–50%	3	1.61

Strew lithology size and cover:

	Freq	O-E/E
None	14	-0.06
Calcareous <10% pebble (5–50 mm)	3	1.15
Calcareous <10% cobble (51–250 mm)	2	0.48
Calcareous >70% cobble (51–250 mm)	1	3.43
Calcareous 10–30% pebble (5–50 mm)	1	1.21
Calcareous 30–70% pebble (5–50 mm)	1	2.48

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Acrotriche patula</i>	86.4	19	227	33	2	7	5	5				18.7	186.8	2.7	8.7
* <i>Lagurus ovatus</i>	86.4	19	250	28		4	8	3	2	2		30.0	282.2	2.9	9.5
<i>Alyxia buxifolia</i>	81.8	18	127	26	2			8	8			40.2	122.8	11.1	34.0
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	81.8	18	546	41	2	14		2				11.2	495.5	-0.2	-0.5
<i>Carpobrotus rossii</i>	77.3	17	540	38	2	10	4	1				11.2	378.2	0.1	0.3
<i>Helichrysum leucopsidium</i>	77.3	17	196	32		4	13					15.0	123.7	3.5	10.1
<i>Pimelea serpyllifolia</i>															
<i>ssp serpyllifolia</i>	77.3	17	359	30	6	10	1					6.6	268.2	-0.1	-0.3
<i>Dianella brevicaulis</i>	72.7	16	362	35	2	10	4					9.2	228.2	0.5	1.3
<i>Tetragonia implexicoma</i>	68.2	15	542	35		9	2	4				14.5	444.0	0.2	0.5
<i>Acacia anceps</i>	63.6	14	49	13	3	6	3	2				10.3	28.0	12.6	30.0

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Olearia axillaris</i>	63.6	14	578	34	1	10		3				11.1	829.0	-0.5	-1.2
<i>Threlkeldia diffusa</i>	59.1	13	453	37		10	3					8.0	321.7	-0.1	-0.2
<i>Senecio lautus</i>	54.5	12	542	40		4	8					10.0	396.6	-0.1	-0.1
<i>Beyeria lechenaultii</i>	50.0	11	229	33	3	4		1	3			13.3	271.2	0.8	1.5
<i>Geranium retrorsum</i>	50.0	11	74	15		5	6					8.5	51.7	5.1	9.5
* <i>Linum strictum</i> ssp <i>strictum</i>	50.0	11	41	11		4	7					9.0	33.1	9.0	16.9
<i>Myoporum insulare</i>	50.0	11	202	31	5	3	2	1				6.0	203.4	0.1	0.2
<i>Leucopogon parviflorus</i>	45.5	10	392	26	1	2		4	3			18.1	662.8	0.0	0.0
<i>Poa poiformis</i>	45.5	10	139	22		7	3					6.5	119.8	3.2	5.5
<i>Cassytha peninsularis</i>															
var <i>peninsularis</i>	40.9	9	92	24		2	5	2				10.0	62.4	4.9	7.5
<i>Clematis microphylla</i>	40.9	9	350	31	1	7	1					4.6	235.3	-0.3	-0.4
<i>Exocarpos aphyllus</i>	40.9	9	179	34	2	6		1				5.2	77.3	1.5	2.3
<i>Lepidosperma congestum</i>	40.9	9	56	11		6	3					6.0	52.1	3.2	5.0
<i>Melaleuca lanceolata</i>	40.9	9	348	37	3	2	1	2	1			9.3	572.1	-0.4	-0.6
<i>Scaevola crassifolia</i>	40.9	9	99	19	6	2		1				3.6	102.5	0.3	0.5
<i>Stipa flavescens</i>	40.9	9	186	30	2	6	1					4.2	114.4	0.4	0.5
* <i>Lycium ferocissimum</i>	36.4	8	209	32	4	2		2				5.4	94.2	1.1	1.5
<i>Eutaxia microphylla</i>															
var <i>microphylla</i>	31.8	7	100	28	1	1	1	4				9.6	65.0	4.4	5.3
<i>Hydrocotyle capillaris</i>	31.8	7	87	25		4	3					5.0	55.7	2.3	2.8
<i>Lasiopetalum discolor</i>	31.8	7	213	23	1	1	2	3				8.6	266.9	0.2	0.2
<i>Muehlenbeckia gunnii</i>	31.8	7	189	18		7						3.5	136.3	-0.1	-0.1



Figure 61 *Alyxia buxifolia* Shrublands at quadrat TAL00406 (EPW15880)

Leucopogon parviflorus Shrublands

Floristic group 37: 16 quadrats

Description:

A very strong group located on cliffs and dunefields along the eastern part of the coastline. There is a distinctive overstorey with very high abundances on all quadrats and with very common species as part of the plant communities.

Distribution of sites in geomorphic regions:

YOP	KIE	KIS	FLP	SOE
1	3	6	3	3



Number of plant species:

Min	Max	Average
9	39	22.13

Dominant overstorey species:

Leucopogon parviflorus

Dominant lifeform/s:

	SD	SC	SB	SA	S
<i>Leucopogon parviflorus</i>	5	2	4	1	4

Structural description:

	Freq	O-E/E
Low shrubland	6	2.05
Shrubland	4	0.75
Low open forest	2	6.05
Closed shrubland	1	1.39
Open low mallee	1	0.56
Tall closed shrubland	1	1.03
Tall shrubland	1	-0.26

Environmental parameters:

	Min	Max	Mean	SD
Altitude	8	90	40.8	25.2
Slope	0	30	9.6	9.8
Aspect	0	350	150.8	90.1
Bare earth	0	60	17.3	15.1
Litter	0	95	25.5	30.4
Rainfall	450	750	521.9	88.3

Landform pattern:

	Freq	O-E/E
Escarpment	7	3.01
Consolidated dunefield	4	0.12
Dunefield	2	-0.58
Plain	2	-0.03
Hills	1	1.91

Landform element:

	Freq	O-E/E
Cliff	7	9.19
Dune slope	4	0.81
Flat	1	2.52
Foredune	1	-0.23
Gully	1	6.44
Limestone plain	1	1.23
Swale	1	0.22

Surface soil texture:

	Freq	O-E/E
Sand	11	0.06
Sandy loam	4	0.63
Loamy sand	1	-0.59

Wave energy:

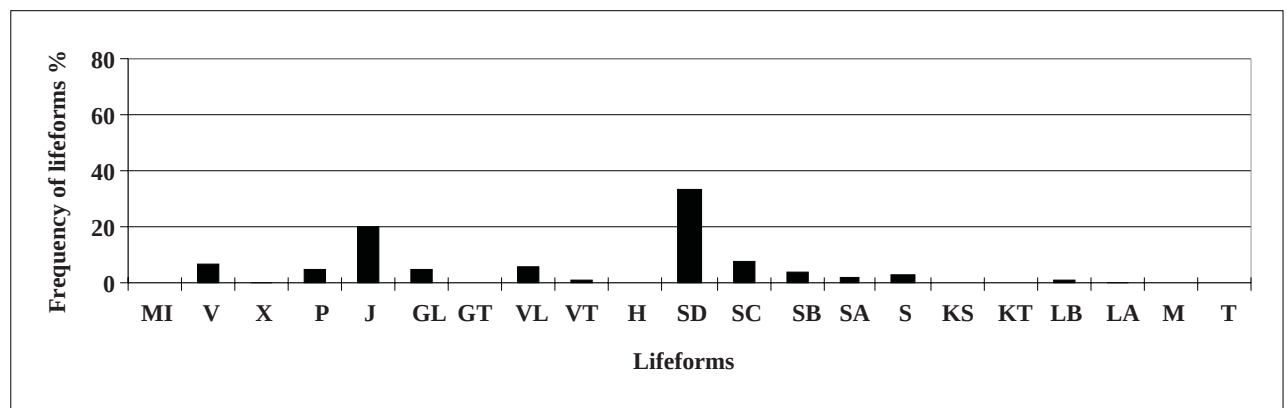
	Freq	O-E/E
H	12	0.1
L	3	0.7
M	1	-0.7

Outcrop lithology and cover:

	Freq	O-E/E
None	8	-0.36
Calcareous 10–50%	4	3.79
Calcareous <10%	1	-0.23
Calcareous >50%	1	2.19

Strew lithology size and cover:

	Freq	O-E/E
None	7	-0.35
Calcareous 10–30% cobble (51–250 mm)	3	4.91
Calcareous <10% cobble (51–250 mm)	2	1.03
Calcareous 30–70% cobble (51–250 mm)	1	2.94
Calcareous 30–70% pebble (5–50 mm)	1	3.79
Schist 10–30% cobble (51–250 mm)	1	21.33
Schist <10% boulder (gt 250 mm)	1	21.33

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Leucopogon parviflorus</i>	100.0	16	392	26	1			7	5	2	1	42.1	662.8	2.2	9.8
<i>Rhagodia candolleana</i>															
ssp <i>candolleana</i>	68.8	11	546	41	3	5	2	1				6.8	495.5	-0.3	-1.0
<i>Carpobrotus rossii</i>	62.5	10	540	38	1	3	6					7.6	378.2	0.0	0.0
<i>Dianella brevicaulis</i>	62.5	10	362	35	2	4	3		1			8.2	228.2	0.8	2.3
<i>Olearia axillaris</i>	62.5	10	578	34	4	5	1					3.9	829.0	-0.8	-2.2
<i>Senecio lautus</i>	56.3	9	542	40		3	6					7.5	396.6	-0.1	-0.1
<i>Tetragonia implexicoma</i>	56.3	9	542	35	1	6	2					5.1	444.0	-0.4	-1.1
<i>Pimelea serpyllifolia</i>															
ssp <i>serpyllifolia</i>	50.0	8	359	30		3	5					6.5	268.2	0.2	0.5
<i>Senecio odoratus</i>															
var <i>odoratus</i>	50.0	8	37	12	1	4	2	1				6.1	27.1	10.3	23.2
<i>Correa reflexa</i>	43.8	7	80	22			2	5				12.0	66.3	8.0	15.9
<i>Goodenia varia</i>	43.8	7	110	25	1	3	3					4.6	89.1	1.6	3.1
<i>Isolepis nodosa</i>	43.8	7	317	22		1	4	2				8.5	291.1	0.5	0.9
* <i>Lagurus ovatus</i>	43.8	7	250	28	1	2	4					5.1	282.2	-0.1	-0.2
<i>Myoporum insulare</i>	43.8	7	202	31	2	2		3				7.2	203.4	0.8	1.5
<i>Hydrocotyle capillaris</i>	37.5	6	87	25		5	1					3.5	55.7	2.1	3.6
<i>Podolepis rugata</i> var	37.5	6	19	6		2	4					5.0	14.1	16.7	28.4
<i>Swainsona lessertiifolia</i>	37.5	6	66	10		2	4					5.0	50.3	4.0	6.7
<i>Acacia longifolia</i>															
var <i>sophorae</i>	31.3	5	199	17	1	3		1				3.6	236.5	-0.2	-0.3
<i>Lasiopetalum discolor</i>	31.3	5	213	23	1			1	3			11.1	266.9	1.1	1.5
<i>Leucophyta brownii</i>	31.3	5	138	22	1		2	2				6.1	157.4	0.9	1.3
<i>Muehlenbeckia gunnii</i>	31.3	5	189	18	3	2						1.3	136.3	-0.5	-0.7
<i>Olearia ramulosa</i>	31.3	5	84	21	2	1	1	1				3.7	85.8	1.2	1.6
<i>Pimelea glauca</i>	31.3	5	50	14		2	2		1			6.0	28.8	9.4	13.3
<i>Spyridium phyllicoides</i>	31.3	5	68	15	1	1	3					3.6	52.0	2.5	3.5
<i>Stipa stipoides</i>	31.3	5	28	10		1	1	3				7.5	33.6	10.2	14.4



Figure 62 *Leucopogon parviflorus* Shrublands at quadrat PEN00501 (KIE14734)



Figure 63 *Leucopogon parviflorus* Shrublands at quadrat TOR00104 (FLP15951)

Leucopogon parviflorus/ Acrotriche patula Shrublands

Floristic group 20: 13 quadrats

Description:

A moderately strong group located on predominantly calcareous substrates in southern Eyre Peninsula. The structure of the plant communities is variable.

Distribution of sites in geomorphic regions:

EPS

13



Number of plant species:

Min	Max	Average
10	40	22.46

Dominant overstorey species:

Leucopogon parviflorus

Dominant understorey species:

Acrotriche patula
Clematis microphylla
Dianella brevicaulis

Subdominant species:

Lasiopetalum discolor
Melaleuca lanceolata
Gahnia deusta

Dominant lifeform/s:

	V	VL	VT	SD	SC	SB	SA	S
<i>Acrotriche patula</i>				7	4			
<i>Clematis microphylla</i>	11							
<i>Dianella brevicaulis</i>		3	8					
<i>Leucopogon parviflorus</i>				1	4	1	3	2

Structural description:

	Freq	O-E/E
Low open forest	4	16.36
Low shrubland	2	0.25
Low closed shrubland	1	1.95
Low open shrubland	1	-0.16
Low open woodland	1	9.31
Low woodland	1	4.89
Sedgeland	1	10.78
Shrubland	1	-0.46
Very low open forest	1	0.62

Environmental parameters:

	Min	Max	Mean	SD
Altitude	10	60	20.8	14.3
Slope	0	9	2.5	2.2
Aspect	0	282	92.2	89.7
Bare earth	0	60	13.7	18.1
Litter	2	100	31.7	30.6
Rainfall	450	500	457.7	18.0

Landform pattern:

	Freq	O-E/E
Rises	4	6.33
Consolidated dunefield	3	0.03
Low hills	3	6.07
Plain	3	0.79

Landform element:

	Freq	O-E/E
Hill slope	8	6.49
Plain	2	0.36
Dune/consolidated dune	1	-0.38
Open depression	1	8.15
Swale	1	0.50

Surface soil texture:

	Freq	O-E/E
Sand	6	-0.29
Loamy sand	4	1.01
Clayey sand	1	2.75
Sandy clay loam	1	3.58
Sandy loam	1	-0.50

Wave energy:

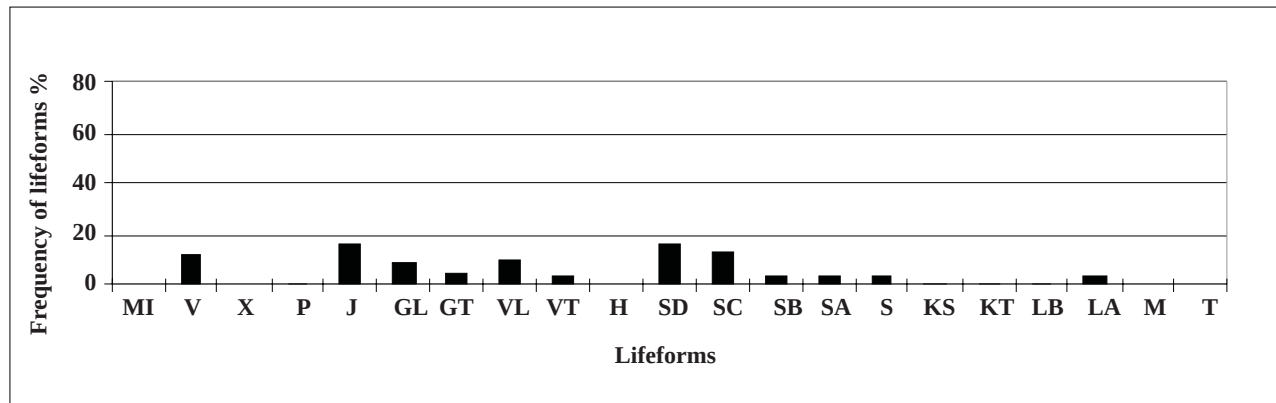
	Freq	O-E/E
H	13	0.4

Outcrop lithology and cover:

	Freq	O-E/E
None	7	-0.31
Calcareous <10%	3	1.84
Calcareous 10–50%	3	3.42

Strew lithology size and cover:

	Freq	O-E/E
None	4	-0.55
Calcareous <10% cobble (51–250 mm)	2	1.50
Calcareous <10% pebble (5–50 mm)	2	1.43
Limestone <10% cobble (51–250 mm)	2	26.49
Calcareous <10% boulder (gt 250 mm)	1	19.62
Calcareous 10–30% pebble (5–50 mm)	1	2.75
Calcareous 30–70% cobble (51–250 mm)	1	3.85

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Acrotriche patula</i>	84.6	11	227	33		2	3	3	2	1		20.0	186.8	8.2	30.7
<i>Clematis microphylla</i>	84.6	11	350	31	1	6	4					7.1	235.3	1.6	5.9
<i>Dianella brevicaulis</i>	84.6	11	362	35	1	5	4	1				8.6	228.2	2.2	8.4
<i>Leucopogon parviflorus</i>	84.6	11	392	26	5	1	2	2	1			10.0	662.8	0.3	1.1
<i>Lasiopetalum discolor</i>	76.9	10	213	23	1	1	4	2	2			14.6	266.9	3.7	12.6
<i>Melaleuca lanceolata</i>	76.9	10	348	37	3		1	2	2	2		19.3	572.1	1.9	6.5
<i>Stipa exilis</i>	69.2	9	75	25		3	6					7.5	49.5	12.0	36.8
<i>Vittadinia australasica</i>															
var <i>australasica</i>	69.2	9	28	10	2	6	1					4.2	12.4	28.0	86.2
<i>Pittosporum phylliraeoides</i>															
var <i>microcarpa</i>	61.5	8	139	27	2	4	2					4.2	63.0	4.7	12.9
<i>Stipa flavescens</i>	61.5	8	186	30	2	2	4					5.2	114.4	2.9	7.9
<i>Gahnia deusta</i>	53.8	7	61	12	1	1	1	3		1		11.6	62.2	14.9	35.8
<i>Hardenbergia violacea</i>	53.8	7	42	9	6	1						1.1	12.4	6.6	15.8
<i>Allocasuarina verticillata</i>	46.2	6	88	21	1	2		1	2			9.1	122.3	5.4	11.0
<i>Cassytha peninsularis</i>															
var <i>peninsularis</i>	46.2	6	92	24		3	3					4.5	62.4	5.2	10.6
<i>Comesperma volubile</i>	46.2	6	114	25	3	3						1.8	46.3	2.3	4.8
<i>Gahnia lanigera</i>	46.2	6	89	15		3		2	1			8.5	112.2	5.5	11.3
<i>Danthonia caespitosa</i>	38.5	5	56	19	2	3						1.7	38.8	2.7	4.7
<i>Helichrysum leucopsidium</i>	38.5	5	196	32	2	3						1.7	123.7	0.2	0.3
<i>Lepidosperma congestum</i>	38.5	5	56	11		2	2	1				5.0	52.1	7.2	12.3
<i>Acacia longifolia</i>															
var <i>sophorae</i>	30.8	4	199	17	2	2						1.2	236.5	-0.6	-0.8

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Eucalyptus diversifolia</i>	30.8	4	143	19	2	1	1					1.7	323.3	-0.6	-0.8
<i>Linum marginale</i>	30.8	4	10	4	1	1	2					2.6	5.6	38.7	53.0
<i>Lomandra effusa</i>	30.8	4	69	17	2	1	1					1.7	52.7	1.8	2.4
<i>Olearia axillaris</i>	30.8	4	578	34	3	1						0.8	829.0	-0.9	-1.3
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	30.8	4	93	20	1	1		2				4.6	79.0	4.0	5.4



Figure 64 *Leucopogon parviflorus/ Acrotriche patula* Shrublands at quadrat WHI00201 (EPS13507), photo Planning SA, Survey 80

Leucopogon parviflorus/ Olearia axillaris Shrublands

Floristic group 49: 150 quadrats

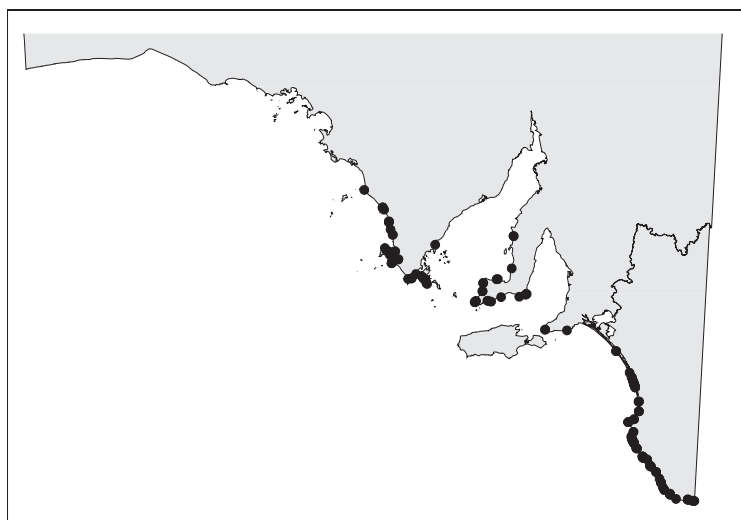
Description:

A strong group located predominantly on dunefields along the eastern part of the coastline. This is the largest group and includes very common coastal species. There is a distinctive overstorey with a wide distribution of lifeforms in the understorey.

Distribution of sites in geomorphic regions:

EPW EPS YOP FLP COO SOE

9 30 22 3 24 62



Number of plant species:

Min	Max	Average
8	36	20.59

Dominant overstorey species:

Leucopogon parviflorus
Olearia axillaris

Dominant overstorey species:

Carpobrotus rossii
Clematis microphylla
Rhagodia candolleana ssp
candolleana

Subdominant species:

Acacia longifolia var *sophorae*
Lepidosperma gladiatum

Dominant lifeform/s:

	V	P	SD	SC	SB	SA	S
<i>Carpobrotus rossii</i>		124					
<i>Clematis microphylla</i>	129						
<i>Leucopogon parviflorus</i>			2	13	34	31	63
<i>Olearia axillaris</i>			7	17	47	50	23
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>				46	55	27	4

Structural description:

	Freq	O-E/E
Shrubland	37	0.73
Tall shrubland	37	1.94
Tall closed shrubland	17	2.68
Closed shrubland	11	1.81
Tall open shrubland	11	0.46
Open shrubland	9	-0.16
Low shrubland	8	-0.57
Very low open forest	5	-0.30
Low open shrubland	3	-0.78
Low open woodland	2	0.79
Open low mallee	2	-0.67
Tall very open shrubland	2	0.30
Low closed shrubland	1	-0.74
Low open forest	1	-0.62
Low woodland	1	-0.49
Open mallee	1	-0.21
Very low woodland	1	0.43
Very open shrubland	1	-0.66

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	80	16.0	15.6
Slope	0	45	6.9	7.7
Aspect	0	360	155.5	119.9
Bare earth	0	85	18.8	19.8
Litter	0	100	23.0	27.0
Rainfall	350	750	575.3	120.2

Landform pattern:

	Freq	O-E/E
Dunefield	59	0.33
Consolidated dunefield	47	0.40
Beach ridge plain	19	0.58
Plain	11	-0.43
Parabolic dunefield	6	0.48
Escarpment	3	-0.82
Longitudinal dunefield	2	0.19
Hills	1	-0.69
Low hills	1	-0.80
Rises	1	-0.84

Landform element:

	Freq	O-E/E
Dune/consolidated dune	35	0.88
Dune slope	25	0.21
Dune crest	19	0.94
Swale	15	0.43
Dune footslope	11	0.21
Interdune corridor	10	2.10
Foredune	7	-0.43
Beach ridge	6	0.10
Interdune low	5	0.19
Plain	4	-0.76
Limestone plain	3	-0.29
Closed depression	2	-0.16
Sandy plain	2	0.43
Cliff	1	-0.84
Flat	1	-0.62
Gully	1	-0.21
Hill crest	1	-0.41
Hill slope	1	-0.92
Open depression	1	-0.21

Surface soil texture:

	Freq	O-E/E
Sand	112	0.16
Loamy sand	12	-0.48
Sandy loam	12	-0.48
Loam	6	0.79
Clay loam	4	-0.16
Medium clay	4	1.04
Clayey sand	1	-0.68
Light clay	1	-0.40

Wave energy:

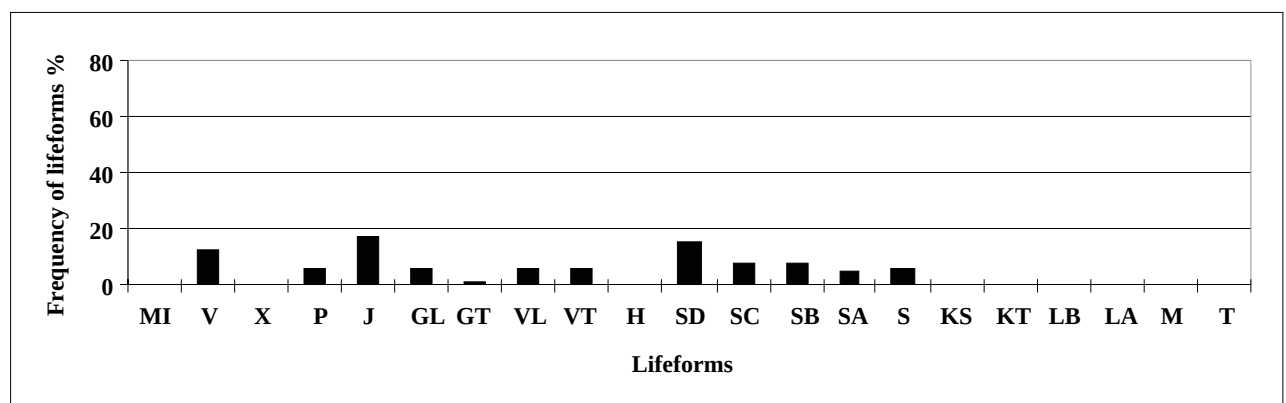
	Freq	O-E/E
H	137	0.3
M	13	-0.6

Outcrop lithology and cover:

	Freq	O-E/E
None	140	0.20
Calcareous <10%	9	-0.26
Calcareous 10–50%	1	-0.87

Strew lithology size and cover:

	Freq	O-E/E
None	137	0.35
Calcareous <10% cobble (51–250 mm)	10	0.08
Calcareous <10% pebble (5–50 mm)	3	-0.68

Distribution of lifeforms:

Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Olearia axillaris</i>	96.0	144	578	34	5	26	17	80	16			238.5	829.0	0.6	3.0
<i>Leucopogon parviflorus</i>	95.3	143	392	26	2	2	5	56	45	30	3	388.2	662.8	2.3	10.8
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	88.0	132	546	41	13	50	33	33	2	1		135.3	495.5	0.6	2.4
<i>Clematis microphylla</i>	86.0	129	350	31	1	59	53	14	2			116.6	235.3	1.8	7.6
<i>Carpobrotus rossii</i>	82.7	124	540	38	3	55	60	6				99.8	378.2	0.5	2.0
<i>Isolepis nodosa</i>	77.3	116	317	22	1	40	61	12	2			111.1	291.1	1.2	4.4
<i>Tetragonia implexicoma</i>	77.3	116	542	35	1	52	42	19	2			112.1	444.0	0.4	1.6
<i>Senecio lautus</i>	76.0	114	542	40	2	52	57	3				89.2	396.6	0.3	1.0
<i>Acacia longifolia</i> var <i>sophorae</i>	68.7	103	199	17	20	26	4	31	16	6		153.0	236.5	2.7	8.9
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	67.3	101	359	30	9	44	38	9	1			81.9	268.2	0.7	2.4
<i>Lepidosperma gladiatum</i>	58.7	88	147	14	1	23	25	26	12	1		128.6	190.5	2.8	8.1
<i>Dianella brevicaulis</i>	54.0	81	362	35	8	42	27	4				56.8	228.2	0.4	1.1
<i>Exocarpos syrticola</i>	50.0	75	225	25	21	34	7	13				52.1	152.3	0.9	2.3
* <i>Lagurus ovatus</i>	48.7	73	250	28	1	25	37	7	3			72.6	282.2	0.5	1.1
<i>Threlkeldia diffusa</i>	36.7	55	453	37	3	25	25	2				41.8	321.7	-0.3	-0.5
<i>Stipa flavescens</i>	34.0	51	186	30	4	30	16	1				33.4	114.4	0.7	1.1
<i>Dichondra repens</i>	33.3	50	84	14	1	25	24					36.6	60.8	2.4	3.9
<i>Helichrysum leucopsidium</i>	32.7	49	196	32	5	26	17	1				32.5	123.7	0.5	0.8
<i>Poa poiformis</i>	31.3	47	139	22	3	20	16	7	1			43.3	119.8	1.1	1.6
<i>Muehlenbeckia gunnii</i>	30.7	46	189	18	2	22	15	7				40.2	136.3	0.7	1.0



Figure 65 *Leucopogon parviflorus*/ *Olearia axillaris* Shrublands at quadrat WAN00104 (EPS15916)



Figure 66 *Leucopogon parviflorus/ Olearia axillaris* Shrublands at quadrat PON00403 (YOP15832)



Figure 67 *Leucopogon parviflorus/ Olearia axillaris* Shrublands at quadrat JAF00101 (SOE14895)

Melaleuca gibbosa Shrubland

Floristic group 16: 6 quadrats

Description:

A very strong group located along the northern coastline of Kangaroo Island on metasediment cliffs. The predominantly low plant community has few plants above 1 m.

Distribution of sites in geomorphic regions:

KIN

6



Number of plant species:

Min	Max	Average
9	25	18.33

Dominant species:

Acacia paradoxa
Melaleuca gibbosa

Subdominant species:

Calytrix tetragona

Indicator species:

Hibbertia riparia

Dominant lifeform/s:

	SD	SC	SB	SA	S
<i>Acacia paradoxa</i>	2	1	1	1	
<i>Melaleuca gibbosa</i>	1	3	1		1

Structural description:

	Freq	O-E/E
Open low mallee	2	7.31
Low closed shrubland	1	5.38
Low shrubland	1	0.35
Tall shrubland	1	0.99
Very low open forest	1	2.50

Landform pattern:

	Freq	O-E/E
Escarpment	2	2.05
Plateau	2	70.47
Low hills	1	4.10
Plain	1	0.29

Surface soil texture:

	Freq	O-E/E
Sand	2	-0.48
Sandy loam	2	1.18
Light medium clay	1	88.33
Loam	1	6.44

Environmental parameters:

	Min	Max	Mean	SD
Altitude	40	70	55.8	11.7
Slope	2	22	9.5	6.2
Aspect	230	360	298.3	41.4
Bare earth	2	90	27.0	30.8
Litter	1	30	7.5	10.2
Rainfall	500	675	612.5	59.1

Landform element:

	Freq	O-E/E
Cliff	3	10.64
Plain	2	1.95
Hill slope	1	1.03

Wave energy:

	Freq	O-E/E
M	6	4.0

Outcrop lithology and cover:

	Freq	O-E/E
None	3.00	-0.36
Calcareous 10–50%	2	5.38
Schist <10%	1	16.87

Strew lithology size and cover:

	Freq	O-E/E
Calcareous 10–30% cobble (51–250 mm)	2	9.51
None	1	-0.75
Laterite (ironstone) 30–70% cobble (51–250 mm)	1	34.73
Quartz <10% cobble (51–250 mm)	1	177.67
Schist <10% cobble (51–250 mm)	1	18.85

Distribution of lifeforms:

Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Melaleuca gibbosa</i>	100.0	6	67	14					4	2		20.0	112.8	36.1	196.8
<i>Acacia paradoxa</i>	83.3	5	45	15		2		3				7.0	67.4	20.7	94.2
<i>Calytrix tetragona</i>	66.7	4	80	16	2	1		1				2.7	77.6	6.3	22.8
<i>Hibbertia riparia</i>	66.7	4	32	14	1			3				6.1	28.6	43.6	158.5
<i>Orthrosanthus multiflorus</i>	66.7	4	36	14	2	2						1.2	18.0	12.9	47.1
<i>Acrotriche patula</i>	50.0	3	227	33	3							0.3	186.8	-0.7	-1.8
<i>Eutaxia microphylla</i>															
var <i>microphylla</i>	50.0	3	100	28	1			1	1			5.1	65.0	15.4	42.0
<i>Exocarpos aphyllus</i>	50.0	3	179	34	3							0.3	77.3	-0.2	-0.5
<i>Isolepis marginata</i>	50.0	3	95	22		3						1.5	62.3	4.0	11.0
<i>Lepidosperma viscidum</i>	50.0	3	57	17			2	1				4.0	55.7	14.0	38.2
<i>Melaleuca lanceolata</i>	50.0	3	348	37	3							0.3	572.1	-0.9	-2.4
<i>Senecio lautus</i>	50.0	3	542	40	2	1						0.7	396.6	-0.6	-1.7
<i>Acrotriche cordata</i>	33.3	2	118	15	1	1						0.6	116.8	0.1	0.1
<i>Allocasuarina verticillata</i>	33.3	2	88	21	2							0.2	122.3	-0.7	-1.2
<i>Astroloma conostephioides</i>	33.3	2	24	9	2							0.2	18.5	1.3	2.3
<i>Beyeria lechenaultii</i>	33.3	2	229	33		2						1.0	271.2	-0.2	-0.4
<i>Carpobrotus rossii</i>	33.3	2	540	38	2							0.2	378.2	-0.9	-1.6
<i>Correa pulchella</i>	33.3	2	87	17		1		1				2.5	50.1	9.4	17.2
<i>Dianella brevicaulis</i>	33.3	2	362	35	2							0.2	228.2	-0.8	-1.5
<i>Eucalyptus diversifolia</i>	33.3	2	143	19				2				4.0	323.3	1.6	2.9
<i>Gahnia hystrix</i>	33.3	2	22	5		1		1				2.5	29.2	16.9	30.7
<i>Goodenia amplexans</i>	33.3	2	22	9		2						1.0	16.1	12.0	21.8
* <i>Hypochaeris radicata</i>	33.3	2	49	19		2						1.0	30.4	5.9	10.7
<i>Lasiopetalum discolor</i>	33.3	2	213	23	2							0.2	266.9	-0.8	-1.5
<i>Olearia ramulosa</i>	33.3	2	84	21		2						1.0	85.8	1.4	2.6
<i>Pimelea flava</i> ssp <i>dichotoma</i>	33.3	2	19	11	2							0.2	10.0	3.2	5.8
<i>Pomaderris paniculosa</i>															
ssp <i>paniculosa</i>	33.3	2	93	20	2							0.2	79.0	-0.5	-0.9
<i>Prostanthera serpyllifolia</i>															
ssp <i>microphylla</i>	33.3	2	7	6	2							0.2	3.4	11.3	20.5
<i>Prostanthera spinosa</i>	33.3	2	8	6		1		1				2.5	7.0	73.7	134.0



Figure 68 *Melaleuca gibbosa* Shrubland at quadrat SNU00103 (KIN14614)



Figure 69 *Melaleuca gibbosa* Shrubland at quadrat BOR00201 (KIN14607)

Melaleuca lanceolata/ *Senecio lautus* Shrublands

Floristic group 32: 29 quadrats

Description:

A weak group located predominantly in the north-western coast of Eyre Peninsula on both dunefields and low cliffs. Plant communities are predominantly sparse with a very high proportion of shrubs under 0.5 m.

Distribution of sites in geomorphic regions:

NUL	EPW
1	28



Number of plant species:

Min	Max	Average
8	24	16.31

Subdominant species (over 70%):

Melaleuca lanceolata
Senecio lautus

Subdominant species:

Beyeria lechenaultii
Geijera linearifolia

Subdominant lifeform/s (over 70%):

	SD	SC	SB	SA
<i>Melaleuca lanceolata</i>	17	2	1	1
<i>Senecio lautus</i>	21			

Structural description:

	Freq	O-E/E
Low shrubland	9	1.52
Low open shrubland	8	2.02
Very open low mallee	3	10.09
Low mallee	2	0.45
Low very open shrubland	2	3.11
Open low mallee	2	0.72
Open shrubland	2	-0.04
Tall open shrubland	1	-0.32

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	11	0.69
Beach ridge plain	7	2.01
Plain	5	0.34
Escarpment	4	0.26
Dunefield	2	-0.77

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	30	15.7	7.7
Slope	0	65	16.3	17.8
Aspect	0	360	206.9	147.8
Bare earth	10	80	35.0	18.8
Litter	0	60	15.7	13.9
Rainfall	275	350	347.4	13.7

Landform element:

	Freq	O-E/E
Plain	6	0.83
Dune/consolidated dune	5	0.39
Dune footslope	4	1.27
Cliff	3	1.41
Ridge	3	12.85
Beach ridge	2	0.89
Foredune	2	-0.15
Open depression	2	7.21
Interdune corridor	1	0.61
Swale	1	-0.33

Surface soil texture:

	Freq	O-E/E
Sand	22	0.17
Loamy sand	3	-0.32
Sandy loam	3	-0.32
Clayey sand	1	0.68

Wave energy:

	Freq	O-E/E
H	29	0.4

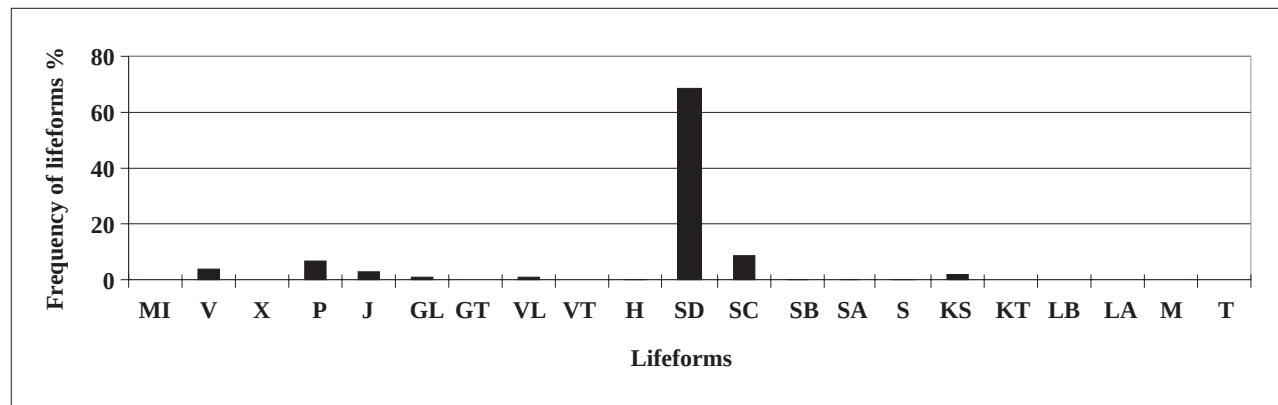
Outcrop lithology and cover:

	Freq	O-E/E
None	24	0.06
Granite >50%	1	11.32
Sandstone >50%	1	11.32
Sandstone 10–50%	1	6.39
Siltstone <10%	1	35.97
Siltstone 10–50%	1	35.97

Strew lithology size and cover:

	Freq	O-E/E
None	19	-0.03
Sandstone 30–70% pebble (5–50 mm)	3	35.97
Siltstone <10% pebble (5–50 mm)	3	35.97
Calcareous <10% pebble (5–50 mm)	1	-0.46
Calcareous 10–30% cobble (51–250 mm)	1	0.09
Sandstone 30–70% boulder (gt 250 mm)	1	17.48
Sandstone 30–70% cobble (51–250 mm)	1	35.97

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Melaleuca lanceolata</i>	72.4	21	348	37		10	9	2				18.0	572.1	0.9	4.0
<i>Senecio lautus</i>	72.4	21	542	40	2	18	1					10.2	396.6	0.6	2.5
<i>Carpobrotus rossii</i>	69.0	20	540	38	1	18	1					10.1	378.2	0.6	2.6
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	65.5	19	134	25	1	15	3					10.6	101.1	5.4	21.5
<i>Zygophyllum</i> <i>billardierei</i> (NC)	62.1	18	136	22	4	14						7.4	68.8	5.5	21.0
<i>Beyeria lechenaultii</i>	55.2	16	229	33	1	7	5	3				14.6	271.2	2.3	7.7
<i>Exocarpos aphyllus</i>	51.7	15	179	34	3	11	1					6.8	77.3	4.3	13.8
<i>Geijera linearifolia</i>	51.7	15	135	19		11	2	2				11.5	128.6	4.4	14.0
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	51.7	15	546	41	1	10	4					9.1	495.5	0.1	0.4
<i>Threlkeldia diffusa</i>	48.3	14	453	37		13	1					7.5	321.7	0.4	1.2
<i>Atriplex paludosa</i> ssp	41.4	12	119	22		5	6	1				10.5	140.4	3.5	9.0
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	41.4	12	140	24	2	10						5.2	101.8	2.1	5.3
* <i>Lycium ferocissimum</i>	41.4	12	209	32	2	10						5.2	94.2	2.4	6.0
<i>Sclerolaena uniflora</i>	41.4	12	86	18	1	11						5.6	55.5	5.1	13.0
<i>Helichrysum leucopsidium</i>	37.9	11	196	32	3	8						4.3	123.7	1.1	2.6
<i>Olearia axillaris</i>	37.9	11	578	34	1	6	4					7.1	829.0	-0.5	-1.1
<i>Acacia anceps</i> (NC)	34.5	10	75	20		10						5.0	64.6	3.7	7.8
<i>Eremophila deserti</i>	34.5	10	66	15	1	7	2					5.6	34.1	9.0	19.0
<i>Tetragonia implexicoma</i>	34.5	10	542	35	1	9						4.6	444.0	-0.4	-0.8
<i>Maireana erioclada</i>	31.0	9	94	20		8	1					5.0	49.0	5.2	9.9



Figure 70 *Melaleuca lanceolata/ Senecio lautus* Shrublands at quadrat WIL00101 (EPW13964)



Figure 71 *Melaleuca lanceolata/ Senecio lautus* Shrublands at quadrat CHA00304 (NUL13925)

Melaleuca lanceolata/ Olearia exiguifolia Shrublands

Floristic group 33: 5 quadrats

Description:

A very strong group of understorey species located on cliffs near the Western Australian border. The plant communities have a low abundance of all species with a high proportion of shrubs under 0.5 m, very high areas of bare earth and very low litter.

Distribution of sites in geomorphic regions:

NUL

5



Number of plant species:

Min	Max	Average
12	18	15.40

Dominant overstorey species:

Melaleuca lanceolata

Dominant understorey species:

Olearia exiguifolia

Rhagodia crassifolia

Indicator species:

Eremophila weldii

Frankenia sessilis

Ptilotus obovatus var *obovatus*

Dominant lifeform/s:

	SD	SC	SB
<i>Melaleuca lanceolata</i>		2	2
<i>Olearia exiguifolia</i>	5		
<i>Rhagodia crassifolia</i>	3	2	

Structural description:

	Freq	O-E/E
Low open shrubland	2	3.38
Low mallee	1	3.20
Open low mallee	1	3.99
Very open low mallee	1	20.44

Landform pattern:

	Freq	O-E/E
Escarpment	4	6.33
Plain	1	0.55

Surface soil texture:

	Freq	O-E/E
Sand	5	0.55

Environmental parameters:

	Min	Max	Mean	SD
Altitude	40	80	66.0	13.6
Slope	0	50	17.0	18.9
Aspect	0	360	109.0	132.2
Bare earth	40	97	57.4	20.2
Litter	0	3	1.8	1.2
Rainfall	275	275	275.0	0.0

Landform element:

	Freq	O-E/E
Cliff	2	8.31
Gully	2	46.60
Plain	1	0.77

Wave energy:

	Freq	O-E/E
H	5	0.4

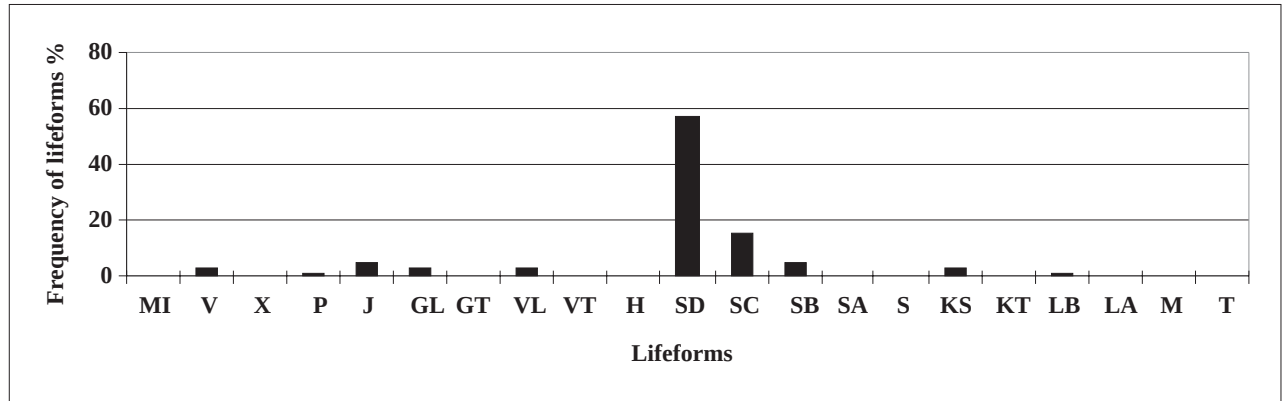
Outcrop lithology and cover:

	Freq	O-E/E
Calcareous <10%	2	3.93
Onone	1	-0.74
Calcareous >50%	1	9.21
Calcareous 10–50%	1	2.83

Strew lithology size and cover:

	Freq	O-E/E
none	1	-0.70
Calcareous <10% cobble (51–250 mm)	1	2.25
Calcareous >70% boulder (gt 250 mm)	1	106.20
Calcareous >70% cobble (51–250 mm)	1	18.49
Calcareous 30–70% pebble (5–50 mm)	1	14.31

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Olearia exiguiifolia</i>	100.0	5	32	8			5					5.0	21.7	85.4	554.7
<i>Rhagodia crassifolia</i>	100.0	5	93	19		4	1					3.0	57.1	18.7	121.5
<i>Melaleuca lanceolata</i>	80.0	4	348	37			4					4.0	572.1	1.6	8.4
<i>Acrotriche patula</i>	60.0	3	227	33		2	1					2.0	186.8	3.0	11.8
<i>Beyeria lechenaultii</i>	60.0	3	229	33		1	2					2.5	271.2	2.5	9.6
<i>Eremophila weldii</i>	60.0	3	18	5		1	2					2.5	17.1	53.8	209.8
<i>Frankenia sessilis</i>	60.0	3	89	17		1	2					2.5	112.4	7.3	28.6
<i>Ptilotus obovatus</i>															
var <i>obovatus</i>	60.0	3	26	9		3						1.5	12.0	45.9	178.8
<i>Senecio lautus</i>	60.0	3	542	40		3						1.5	396.6	0.4	1.6
<i>Correa reflexa</i>	40.0	2	80	22			2					2.0	66.3	10.3	26.8
<i>Dianella revoluta</i>															
var <i>divaricata</i>	40.0	2	2	1	2							0.2	0.2	374.1	971.7
<i>Eucalyptus diversifolia</i>	40.0	2	143	19				2				4.0	323.3	3.6	9.5
<i>Goodenia varia</i>	40.0	2	110	25		2						1.0	89.1	3.2	8.3
<i>Lycium australe</i>	40.0	2	50	16		2						1.0	20.2	17.6	45.6
<i>Maireana oppositifolia</i>	40.0	2	87	21		1	1					1.5	101.4	4.5	11.8
<i>Pomaderris forrestiana</i>	40.0	2	6	2		2						1.0	2.2	169.5	440.3
<i>Prostanthera serpyllifolia</i>															
ssp <i>serpyllifolia</i>	40.0	2	6	3	1	1						0.6	5.2	42.3	109.8
<i>Sclerolaena diacantha</i>	40.0	2	27	10		2						1.0	12.2	29.7	77.3
<i>Stipa velutina</i>	40.0	2	21	6		2						1.0	16.5	21.7	56.4
<i>Templetonia retusa</i>	40.0	2	85	20	2							0.2	86.1	-0.1	-0.3
<i>Tetragonia implexicoma</i>	40.0	2	542	35		2						1.0	444.0	-0.2	-0.4
<i>Zygophyllum billardiieri</i> (NC)	40.0	2	136	22		2						1.0	68.8	4.5	11.6



Figure 72 *Melaleuca lanceolata/ Olearia exiguifolia* Shrublands at quadrat WIL01003 (NUL13971)



Figure 73 *Melaleuca lanceolata/ Olearia exiguifolia* Shrublands at quadrat WIL01401 (NUL13966)

Melaleuca lanceolata/ *Acrotriche patula*/ *Lasiopetalum discolor* Shrublands/Mallees

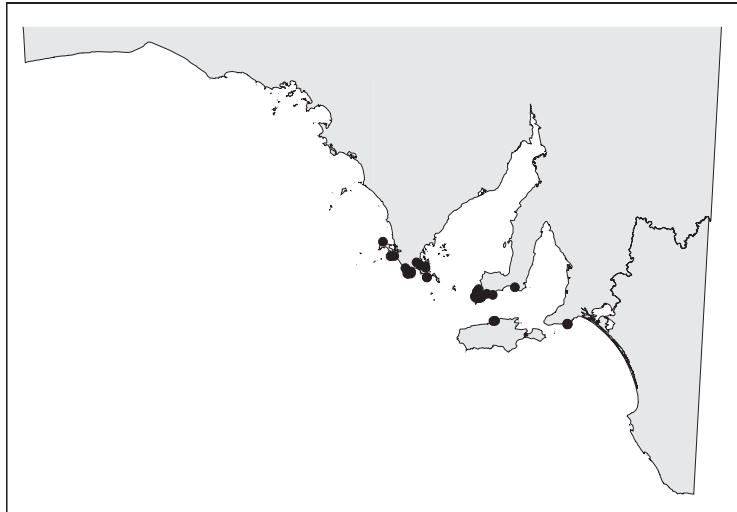
Floristic group 19: 37 quadrats

Description:

A moderately strong group located on dunefields and cliffs. There is a high number of species in a variable plant community with a predominantly low shrub understorey.

Distribution of sites in geomorphic regions:

EPS	YOP	KIN	FLP
18	13	2	4



Number of plant species:

Min	Max	Average
18	49	30.81

Dominant overstorey species:

Melaleuca lanceolata

Dominant understorey species:

Acrotriche patula
Lasiopetalum discolor

Subdominant species:

Beyeria lechenaultii
Eucalyptus diversifolia
Gahnia lanigera

Indicator species:

Acrotriche cordata

Dominant lifeform/s:

	SD	SC	SB	SA	S	LB
<i>Acrotriche patula</i>		29	4			
<i>Lasiopetalum discolor</i>	25	8				
<i>Melaleuca lanceolata</i>	16	3	5	6	1	2

Structural description:

	Freq	O-E/E
Low open shrubland	2	3.38

Structural description:

	Freq	O-E/E
Low mallee	9	4.11
Low closed shrubland	8	7.28
Low shrubland	5	0.10
Very low open forest	4	1.27
Open low mallee	2	0.35
Shrubland	2	-0.62
Very open low mallee	2	4.79
Closed low mallee	1	4.79
Low very open shrubland	1	0.61
Mat plants	1	27.97
Open shrubland	1	-0.62
Tall shrubland	1	-0.68

Environmental parameters:

	Min	Max	Mean	SD
Altitude	40	80	66.0	13.6

Environmental parameters:

	Min	Max	Mean	SD
Altitude	7	125	41.9	27.4
Slope	0	33	7.3	8.5
Aspect	0	360	146.0	111.1
Bare earth	0	80	25.2	23.8
Litter	0	100	22.8	30.3
Rainfall	450	600	506.8	57.1

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	11	0.33
Escarpment	9	1.23
Dunefield	7	-0.36
Plain	6	0.26
Low hills	2	0.66
Rises	2	0.29

Landform element:

	Freq	O-E/E
Dune slope	8	0.56
Limestone plain	6	4.79
Plain	6	0.44
Hill slope	5	0.64
Dune/consolidated dune	4	-0.13
Swale	3	0.58
Cliff	2	0.26
Cliff footslope	1	1.23
Dune crest	1	-0.59
Interdune corridor	1	0.26

Surface soil texture:

	Freq	O-E/E
Sand	24	0.00
Sandy loam	7	0.24
Loamy sand	2	-0.65
Heavy clay	1	13.49
Loam	1	0.21
Peat	1	8.66
Sandy clay loam	1	0.61

Wave energy:

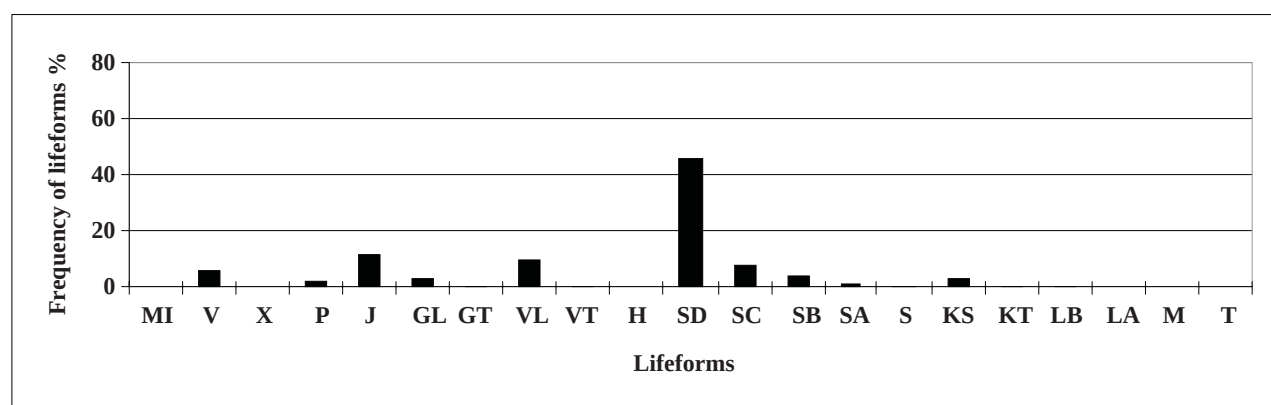
	Freq	O-E/E
H	24	-0.1
M	13	0.8

Outcrop lithology and cover:

	Freq	O-E/E
None	20	-0.31
Calcareous <10%	8	1.66
Calcareous >50%	3	3.14
Calcareous 10–50%	5	1.59
Limestone <10%	1	2.62

Strew lithology size and cover:

	Freq	O-E/E
None	15	-0.40
Calcareous <10% cobble (51–250 mm)	5	1.19
Calcareous 10–30% cobble (51–250 mm)	5	3.26
Calcareous >70% cobble (51–250 mm)	3	6.90
Calcareous 30–70% cobble (51–250 mm)	3	4.11
Calcareous <10% pebble (5–50 mm)	2	-0.15
Calcareous >70% pebble (5–50 mm)	1	13.49
Calcareous 10–30% pebble (5–50 mm)	1	0.32
Calcareous 30–70% pebble (5–50 mm)	1	1.07
Limestone 30–70% pebble (5–50 mm)	1	27.97

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Acrotriche patula</i>	89.2	33	227	33		16	5	9	3			40.0	186.8	3.0	8.8
<i>Lasiopetalum discolor</i>	89.2	33	213	23	1	12		17	3			49.1	266.9	2.5	7.1
<i>Melaleuca lanceolata</i>	89.2	33	348	37	1	14	4	12	2			41.1	572.1	0.4	1.0
<i>Beyeria lechenaultii</i>	78.4	29	229	33		8	3	18				43.0	271.2	-0.7	-1.8
<i>Acrotriche cordata</i>	75.7	28	118	15	2	8	3	13	2			39.2	116.8	5.3	13.0

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Correa pulchella</i>	75.7	28	87	17	7	14	6	1				15.7	50.1	4.9	12.0
<i>Eucalyptus diversifolia</i>	73.0	27	143	19	6	4		7	8	2		48.6	323.3	1.8	4.3
<i>Gahnia lanigera</i>	67.6	25	89	15	2	4	9	8	2			33.2	112.2	4.6	10.0
<i>Acacia spinescens</i>	64.9	24	66	17	3	17	4					12.8	32.4	6.5	13.5
<i>Senecio lautus</i>	62.2	23	542	40	2	13	8					14.7	396.6	-0.3	-0.6
<i>Carpobrotus rossii</i>	56.8	21	540	38	2	16	3					11.2	378.2	-1.0	-1.8
<i>Lomandra effusa</i>	56.8	21	69	17	2	6	8	5				21.2	52.7	6.6	12.1
<i>Calytrix tetragona</i>	54.1	20	80	16	1	13	3	2	1			16.6	77.6	-0.4	-0.8
<i>Cassytha glabella forma dispar</i>	51.4	19	60	17	1	11	7					12.6	38.6	5.2	8.6
<i>Leucopogon parviflorus</i>	48.6	18	392	26	5	10		3				11.5	662.8	-0.7	-1.1
<i>Logania crassifolia</i>	48.6	18	64	13	2	9	1	6				17.7	47.5	6.0	9.5
<i>Veronica hillebrandii</i>	48.6	18	43	8	2	11	4	1				11.7	22.9	8.6	13.6
<i>Hydrocotyle capillaris</i>	45.9	17	87	25		6	11					14.0	55.7	3.7	5.6
<i>Stipa flavescens</i>	45.9	17	186	30	1	12	4					10.1	114.4	0.7	1.0
<i>Chrysocephalum apiculatum</i>	43.2	16	35	10	2	11	3					8.7	19.8	7.3	10.2
<i>Gahnia deusta</i>	43.2	16	61	12		9	6	1				12.5	62.2	2.8	3.9
<i>Pomaderris obcordata</i>	43.2	16	54	11	2	6	2	6				17.2	38.3	7.5	10.5
<i>Spyridium phylicoides</i>	43.2	16	68	15	1	11		4				13.6	52.0	3.9	5.5
<i>Lepidosperma congestum</i>	40.5	15	56	11	1	3	11					12.6	52.1	3.6	4.7
<i>Opercularia turpis</i>	40.5	15	49	15	2	8	3	2				11.2	25.5	7.3	9.6
<i>Pimelea serpyllifolia</i>															
ssp <i>serpyllifolia</i>	40.5	15	359	30		13	2					8.5	268.2	-0.4	-0.5
<i>Pultenaea tenuifolia</i>	40.5	15	59	15	1	6	1	6	1			19.1	45.9	6.9	9.0
<i>Dodonaea humilis</i>	37.8	14	46	8	6	6	1	1				6.6	28.9	3.3	4.0
<i>Dianella brevicaulis</i>	35.1	13	362	35	4	7	2					5.9	228.2	-0.5	-0.6
<i>Goodenia varia</i>	35.1	13	110	25	3	6	3	1				8.3	89.1	0.8	0.9
<i>Pimelea glauca</i>	35.1	13	50	14	2	9	2					6.7	28.8	3.4	3.9
<i>Templetonia retusa</i>	35.1	13	85	20	2	7		4				11.7	86.1	1.6	1.8
<i>Lomandra collina</i>	32.4	12	47	11	2	8	1	1				7.2	27.6	3.9	4.1



Figure 74 *Melaleuca lanceolata/ Acrotriche patula/ Lasiopetalum discolor* Shrublands/Mallees at quadrat JUS00101 (EPS15898)

Melaleuca lanceolata/ *Atriplex paludosa* ssp Shrublands

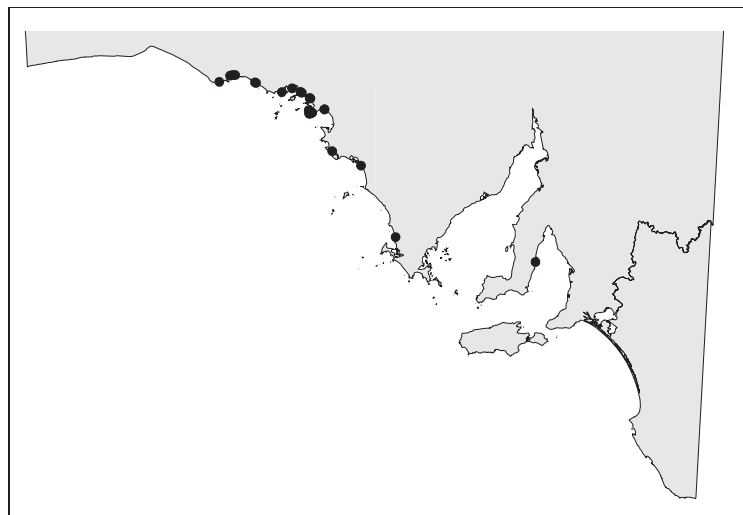
Floristic group 30: 26 quadrats

Description:

A strong group located predominantly in western Eyre Peninsula on dunefields. There is a distinctive overstorey with a high proportion of low (<0.5 m) shrubs as understorey and low litter. It is located within a narrow rainfall range.

Distribution of sites in geomorphic regions:

EPW	EPS	SVG
24	1	1



Number of plant species:

Min	Max	Average
8	19	14.88

Dominant overstorey species:

Melaleuca lanceolata

Dominant understorey species:

Atriplex paludosa ssp

Subdominant species:

Geijera linearifolia

Dominant lifeform/s:

	SD	SC	SB	SA	S	LB
<i>Atriplex paludosa</i> ssp	21	1				
<i>Melaleuca lanceolata</i>		6	7	5	5	1

Structural description:

	Freq	O-E/E
Open low mallee	8	6.67
Very low open forest	4	2.23
Low open shrubland	3	0.26
Shrubland	3	-0.19
Open shrubland	2	0.07
Tall open shrubland	2	0.53
Low mallee	1	-0.19
Low open forest	1	1.17
Tall shrubland	1	-0.54
Very low open woodland	1	2.44

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	120	21.0	23.2
Slope	0	35	5.7	7.8
Aspect	0	360	111.0	119.9
Bare earth	1	75	36.0	17.7
Litter	0	30	14.4	9.2
Rainfall	350	450	354.8	19.6

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	11	0.89
Plain	8	1.39
Dunefield	3	-0.61
Beach ridge plain	2	-0.04
Hills	2	2.59

Landform element:

	Freq	O-E/E
Dune footslope	7	3.44
Plain	7	1.38
Dune/consolidated dune	4	0.24
Hill slope	2	-0.06
Beach	1	19.60
Dune crest	1	-0.41
Dune slope	1	-0.72
Foredune	1	-0.53
Ridge	1	4.15
Sandy plain	1	3.12

Surface soil texture:

	Freq	O-E/E
Sand	13	-0.23
Loamy sand	9	1.26
Sandy loam	4	0.01

Wave energy:

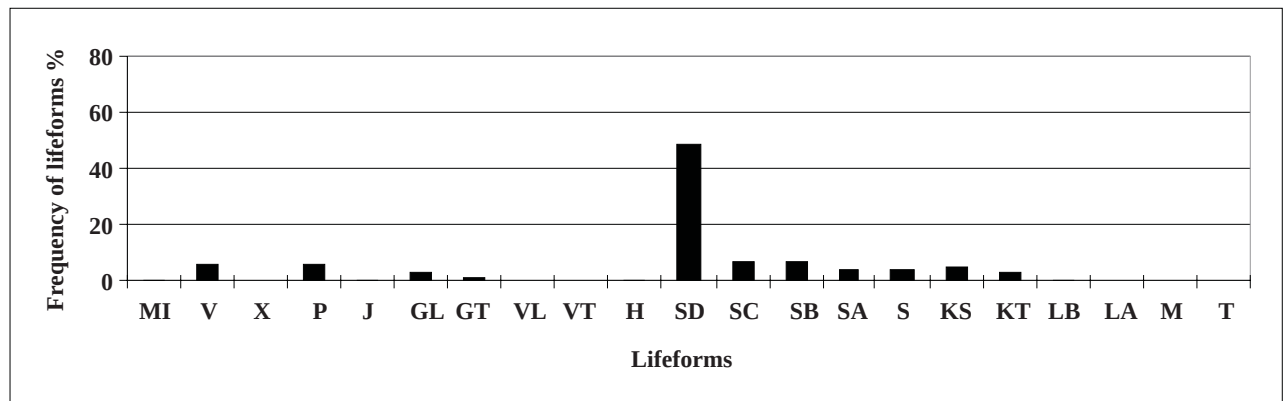
	Freq	O-E/E
H	25	0.4
L	1	-0.7

Outcrop lithology and cover:

	Freq	O-E/E
None	23	0.14
Calcareous <10%	1	-0.53
Quartzite <10%	1	7.25
Sandstone 10–50%	1	7.25

Strew lithology size and cover:

	Freq	O-E/E
None	18	0.02
Calcareous <10% pebble (5–50 mm)	3	0.82
Calcareous <10% cobble (51–250 mm)	1	-0.38
Calcareous 10–30% pebble (5–50 mm)	1	0.87
Calcareous 30–70% boulder (gt 250 mm)	1	7.25
Quartzite <10% pebble (5–50 mm)	1	19.62
Sandstone 10–30% cobble (51–250 mm)	1	7.25

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Melaleuca lanceolata</i>	92.3	24	348	37	1		1	10	12			57.1	572.1	4.5	28.1
<i>Atriplex paludosa</i> ssp	84.6	22	119	22	1	1	7	11	2			35.6	140.4	13.0	74.1
<i>Geijera linearifolia</i>	76.9	20	135	19	3	4	3	9	1			26.3	128.6	10.3	53.4
<i>Threlkeldia diffusa</i>	69.2	18	453	37	3	10	2	3				13.3	321.7	1.3	6.0
<i>Tetragonia implexicoma</i>	65.4	17	542	35	8	7	1	1				7.3	444.0	-0.1	-0.4
<i>Sclerolaena uniflora</i>	61.5	16	86	18	1	13	1	1				9.6	55.5	8.6	35.5
<i>Senecio lautus</i>	61.5	16	542	40	2	10	4					9.2	396.6	0.3	1.2
<i>Carpobrotus rossii</i>	57.7	15	540	38	1	9	5					9.6	378.2	0.4	1.6
<i>Eremophila deserti</i>	53.8	14	66	15	2	12						6.2	34.1	9.1	32.8
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	46.2	12	139	27	8	3	1					3.3	63.0	1.9	5.9

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Eucalyptus dumosa</i> complex	42.3	11	26	7	2	2	1	6				14.2	29.2	25.9	73.7
<i>Eucalyptus oleosa</i>	42.3	11	29	8	1	1	1	7	1			18.6	42.1	23.5	66.7
<i>Rhagodia crassifolia</i>	42.3	11	93	19	4	7						3.9	57.1	2.8	7.9
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	38.5	10	128	29	3	6	1					4.3	71.4	2.3	6.0
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	38.5	10	134	25	1	6	3					6.1	101.1	2.3	6.0
<i>Exocarpos aphyllus</i>	34.6	9	179	34	8			1				2.8	77.3	1.0	2.3
<i>Maireana eriolada</i>	34.6	9	94	20	2	6	1					4.2	49.0	3.7	8.7
<i>Olearia minor</i>	34.6	9	24	9	5	3		1				4.0	15.4	13.4	31.1
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	34.6	9	546	41	1	6	2					5.1	495.5	-0.4	-1.0
<i>Exocarpos syrticola</i>	30.8	8	225	25	6	2						1.6	152.3	-0.4	-0.9



Figure 75 *Melaleuca lanceolata*/ *Atriplex paludosa* ssp Shrublands at quadrat COL00102 (EPW13738)

Melaleuca lanceolata/ *Atriplex vesicaria* ssp Shrublands

Floristic group 34: 17 quadrats

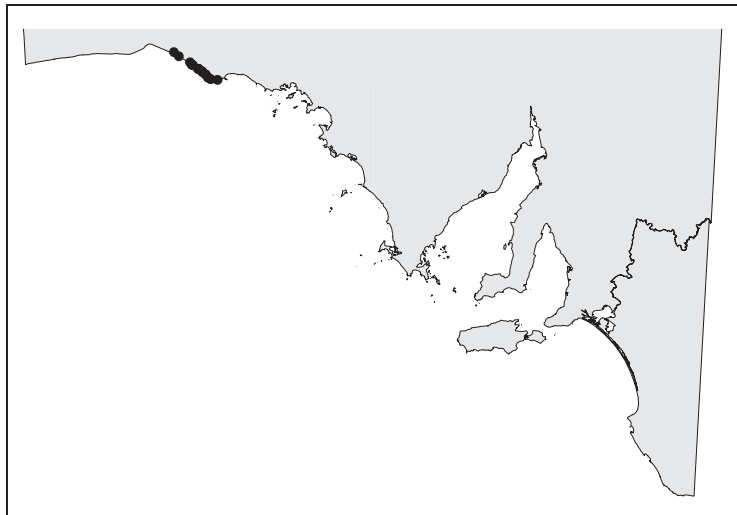
Description:

A strong group located in dunefields along adjacent mapsheets east of the Head of the Bight. There is a distinctive overstorey with a high proportion of low shrubs under 1 m.

Distribution of sites in geomorphic regions:

HOB EPW

16 1



Number of plant species:

Min	Max	Average
7	19	14.59

Dominant overstorey species:

Melaleuca lanceolata

Dominant understorey species:

Atriplex vesicaria ssp

Rhagodia crassifolia

Subdominant species:

Beyeria lechenaultii

Geijera linearifolia

Dominant lifeform/s:

	SD	SC	SB	SA	S
<i>Atriplex vesicaria</i> ssp	14	2			
<i>Melaleuca lanceolata</i>	4	5	1	4	2
<i>Rhagodia crassifolia</i>	13	1			

Structural description:

	Freq	O-E/E
Low shrubland	8	2.82
Very low open forest	3	2.71
Low open shrubland	2	0.29
Open low mallee	2	1.93
Open shrubland	1	-0.18
Very low open woodland	1	4.25

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	7	0.84
Dunefield	5	0.00
Longitudinal dunefield	2	9.51
Plain	2	-0.09
Rises	1	0.40

Surface soil texture:

	Freq	O-E/E
Sand	15	0.36
Loamy sand	2	-0.23

Environmental parameters:

	Min	Max	Mean	SD
Altitude	10	70	34.7	15.3
Slope	0	55	6.1	12.6
Aspect	0	360	219.2	107.4
Bare earth	5	80	40.6	19.6
Litter	1	50	13.9	12.7
Rainfall	275	350	341.2	24.2

Landform element:

	Freq	O-E/E
Dune slope	7	1.98
Interdune low	5	9.50
Dune crest	2	0.80
Plain	2	0.04
Hill slope	1	-0.28

Wave energy:

	Freq	O-E/E
H	17	0.4

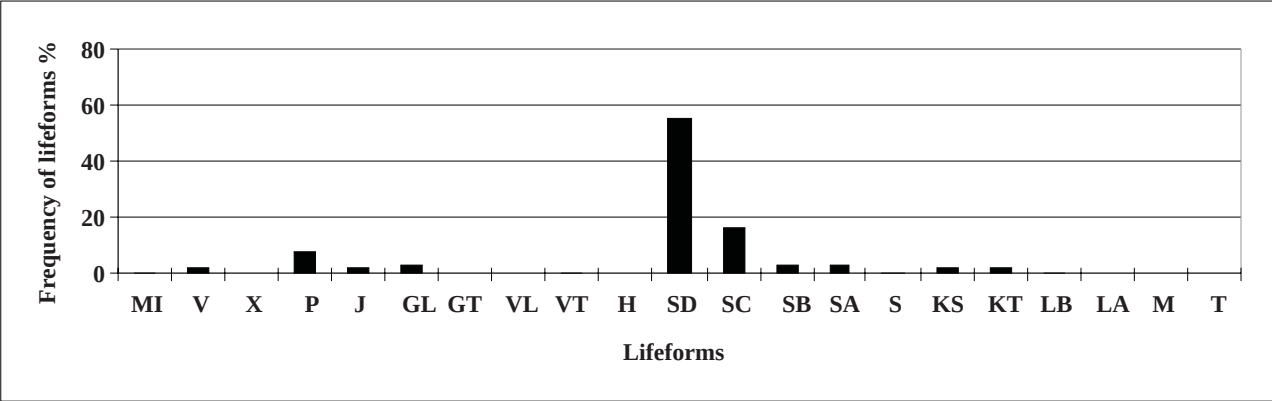
Outcrop lithology and cover:

None

Strew lithology size and cover:

	Freq	O-E/E
None	9	-0.22
Calcareous <10% pebble (5–50 mm)	7	5.49
Calcareous 10–30% pebble (5–50 mm)	1	1.87

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Atriplex vesicaria</i> ssp	94.1	16	89	13		2	3	10	1			27.0	121.2	15.9	102.3
<i>Melaleuca lanceolata</i>	94.1	16	348	37	1	3	1	6	5			29.6	572.1	2.9	18.8
<i>Rhagodia crassifolia</i>	82.4	14	93	19	3	9	2					6.8	57.1	8.0	45.2
<i>Beyeria lechenaultii</i>	76.5	13	229	33	1	1		6	5			27.6	271.2	6.7	35.1
<i>Carpobrotus rossii</i>	76.5	13	540	38		7	5	1				10.5	378.2	1.1	5.8
<i>Geijera linearifolia</i>	76.5	13	135	19	3	6		4				11.3	128.6	5.6	29.6
<i>Frankenia sessilis</i>	64.7	11	89	17	1	4	4	2				10.1	112.4	5.8	25.7
<i>Eremophila deserti</i>	58.8	10	66	15	4	4	1	1				5.4	34.1	11.0	44.3
<i>Exocarpos aphyllus</i>	52.9	9	179	34	3	6						3.3	77.3	2.2	8.1
<i>Frankenia pauciflora</i>															
var <i>fruticulosa</i>	52.9	9	134	25	2	4	3					5.2	101.1	2.9	10.5
<i>Olearia exiguiifolia</i>	52.9	9	32	8	1	8						4.1	21.7	13.3	48.2
<i>Threlkeldia diffusa</i>	52.9	9	453	37	1	7	1					4.6	321.7	0.1	0.3
<i>Zygophyllum billardierei</i> (NC)	47.1	8	136	22	4	4						2.4	68.8	1.6	5.3
<i>Disphyma crassifolium</i>															
ssp <i>clavellatum</i>	41.2	7	140	24		5	2					4.5	101.8	2.3	6.6
<i>Maireana erioclada</i>	41.2	7	94	20	2	4	1					3.2	49.0	3.9	11.1
<i>Senecio lautus</i>	41.2	7	542	40		2	5					6.0	396.6	0.1	0.4
<i>Eucalyptus calcareana</i>	35.3	6	6	1				2	4			16.0	16.0	74.6	180.6
<i>Pittosporum phylliraeoides</i>															
var <i>microcarpa</i>	35.3	6	139	27	1	2	2	1				5.1	63.0	5.1	12.4
<i>Stipa velutina</i>	35.3	6	21	6	2	2	2					3.2	16.5	13.7	33.1



Figure 76 *Melaleuca lanceolata/ Atriplex vesicaria* ssp Shrublands at quadrat RUS00303 (HOB14301)



Figure 77 *Melaleuca lanceolata/ Atriplex vesicaria* ssp Shrublands at quadrat KUR00105 (HOB14316)

Melaleuca lanceolata/ Melaleuca gibbosa Shrublands

Floristic group 22: 33 quadrats

Description:

A moderately strong group located in Kangaroo Island predominantly on cliffs. There is a distinctive overstorey with many low understory plants in common.

Distribution of sites in geomorphic regions:

KIN	KIS	KIE
2	26	5



Number of plant species:

Min	Max	Average
19	35	25.09

Dominant species:

Acrotriche cordata
Beyeria lechenaultii
Melaleuca gibbosa
Melaleuca lanceolata

Subdominant species:

Correa reflexa
Eucalyptus diversifolia
Lasiopetalum discolor

Indicator species:

Pultenaea rigida var *rigida*

Dominant lifeform/s:

	SD	SC	SB	SA	S
<i>Acrotriche cordata</i>	12	14	2		
<i>Beyeria lechenaultii</i>	12	9	9		
<i>Melaleuca gibbosa</i>	9	10	8		1
<i>Melaleuca lanceolata</i>	5	11	5	7	

Structural description:

	Freq	O-E/E
Low mallee	10	5.37
Low shrubland	6	0.48
Open low mallee	6	3.53
Low open shrubland	3	-0.01
Shrubland	3	-0.36
Low closed shrubland	1	0.16
Mallee	1	0.80
Open shrubland	1	-0.58
Sedgeland	1	3.64
Tall shrubland	1	-0.64

Environmental parameters:

	Min	Max	Mean	SD
Altitude	35	155	63.4	26.6
Slope	0	25	6.0	6.0
Aspect	0	360	156.9	97.8
Bare earth	0	70	19.5	17.9
Litter	1	90	26.9	26.9
Rainfall	450	625	559.8	56.7

Landform pattern:

	Freq	O-E/E
Escarpment	17	3.72
Rises	7	4.05
Consolidated dunefield	5	-0.32
Low hills	3	1.78
Dunefield	1	-0.90

Landform element:

	Freq	O-E/E
Cliff	6	3.23
Rock outcrop (on hill)	6	23.34
Cliff footslope	5	11.48
Hill slope	4	0.48
Limestone plain	4	3.33
Dune slope	3	-0.34
Rock outcrop (on plain)	2	20.64
Dune/consolidated dune	1	-0.76
Interdune low	1	0.08
Other	1	5.49

Surface soil texture:

	Freq	O-E/E
Sand	17	-0.20
Clay loam	2	0.91
Clayey sand	1	0.48
Loamy sand	1	-0.80
Sandy loam	13	1.58

Wave energy:

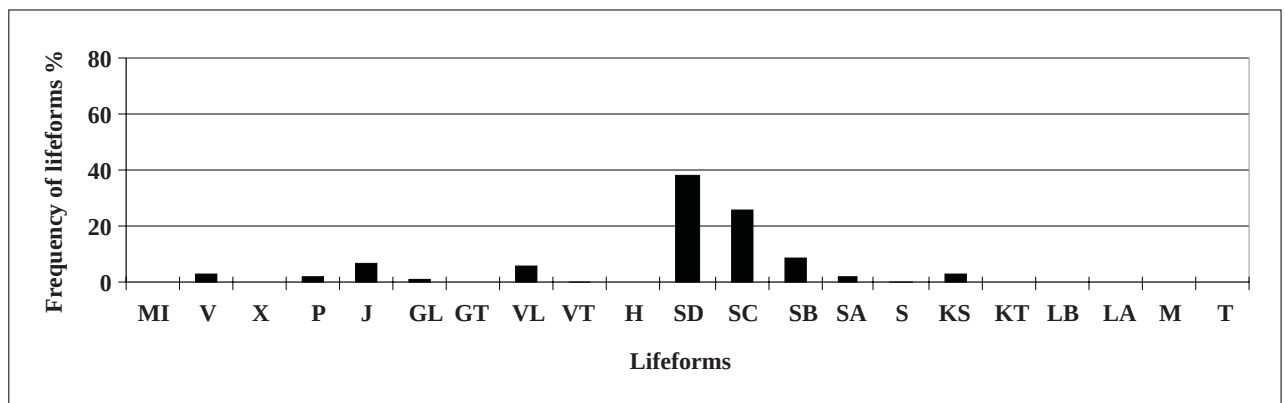
	Freq	O-E/E
H	26	0.1
L	5	0.4
M	2	-0.7

Outcrop lithology and cover:

	Freq	O-E/E
None	12	-0.53
Calcareous 10–50%	8	3.64
Calcareous <10%	7	1.61
Calcareous >50%	6	8.28

Strew lithology size and cover:

	Freq	O-E/E
None	10	-0.55
Calcareous <10% cobble (51–250 mm)	10	3.92
Calcareous 10–30% cobble (51–250 mm)	5	3.78
Calcareous 30–70% cobble (51–250 mm)	3	4.73
Calcareous <10% pebble (5–50 mm)	2	-0.04
Calcareous >70% cobble (51–250 mm)	1	1.95
Calcareous 10–30% pebble (5–50 mm)	1	0.48
Calcareous 30–70% boulder (gt 250 mm)	1	5.50

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Beyeria lechenaultii</i>	90.9	30	229	33		5	18	7				34.5	271.2	1.9	6.7
<i>Acrotriche cordata</i>	84.8	28	118	15	1	5	14	8				32.6	116.8	5.3	17.8
<i>Melaleuca gibbosa</i>	84.8	28	67	14		1	10	14	3			47.5	112.8	8.5	28.6
<i>Melaleuca lanceolata</i>	84.8	28	348	37	3	5	9	10	1			34.8	572.1	0.4	1.2
<i>Correa reflexa</i>	72.7	24	80	22		5	13	6				27.5	66.3	8.3	24.1
<i>Leucopogon parviflorus</i>	72.7	24	392	26		6	12	6				27.0	662.8	-0.1	-0.2
<i>Goodenia varia</i>	69.7	23	110	25		12	11					17.0	89.1	3.3	9.1
<i>Lasiopetalum discolor</i>	66.7	22	213	23		3	9	10				30.5	266.9	1.6	4.2

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Eucalyptus diversifolia</i>	63.6	21	143	19		1	5	8	7			42.5	323.3	2.0	5.0
<i>Pultenaea rigida</i> var <i>rigida</i>	60.6	20	26	5		2	11	7				26.0	31.6	17.5	42.3
<i>Cassytha pubescens</i>	51.5	17	44	9	1	9	7					11.6	32.6	7.0	14.4
<i>Grevillea pauciflora</i> ssp <i>pauciflora</i>	51.5	17	20	4	1	9	7					11.6	12.8	19.4	39.8
<i>Calytrix tetragona</i>	48.5	16	80	16	1	4	7	4				17.1	77.6	4.0	7.6
<i>Lasiopetalum schulzenii</i>	48.5	16	32	12		4	11	1				15.0	26.0	12.0	23.1
<i>Olearia ramulosa</i>	48.5	16	84	21		5	9	1	1			16.5	85.8	3.3	6.4
<i>Spyridium halmaturinum</i> var <i>halmaturinum</i>	48.5	16	17	2		4	8	4				18.0	19.0	20.3	39.2
<i>Gahnia hystrix</i>	45.5	15	22	5	2	2	6	4	1			18.2	29.2	13.0	23.6
<i>Ixodia achillaeoides</i> ssp <i>alata</i>	45.5	15	25	8	1	8	6					10.1	19.6	10.6	19.2
<i>Pomaderris obcordata</i>	45.5	15	54	11	1	6	8					11.1	38.3	5.5	10.0
<i>Carpobrotus rossii</i>	42.4	14	540	38	3	10	1					6.3	378.2	-0.6	-1.1
<i>Dodonaea humilis</i>	42.4	14	46	8	2	4	8					10.2	28.9	6.9	11.7
<i>Hakea vittata</i>	42.4	14	26	8	2	7	5					8.7	10.7	17.3	29.2
<i>Dianella brevicaulis</i>	39.4	13	362	35	7	3	3					5.2	228.2	-0.5	-0.8
<i>Olearia axillaris</i>	39.4	13	578	34	1	3	6	3				13.6	829.0	-0.6	-1.0
<i>Senecio lautus</i>	39.4	13	542	40	2	6	5					8.2	396.6	-0.5	-0.8
<i>Correa pulchella</i>	36.4	12	87	17		4	7	1				11.0	50.1	3.9	5.7
<i>Lepidosperma viscidum</i>	36.4	12	57	17	1	5	4	2				10.6	55.7	3.3	4.7
<i>Spyridium phyllicoides</i>	36.4	12	68	15		4	7	1				11.0	52.0	3.8	5.4
<i>Zygophyllum billardieri</i> (NC)	36.4	12	136	22		10		2				9.0	68.8	1.9	2.8
<i>Acrotriche patula</i>	33.3	11	227	33	3	4	3	1				7.3	186.8	-0.1	-0.2
<i>Hakea muelleriana</i>	33.3	11	14	4		2	5	4				14.0	16.2	18.4	24.5
<i>Hibbertia</i> sp C	30.3	10	13	4	1	5	4					6.6	8.2	17.1	20.6
<i>Hydrocotyle capillaris</i>	30.3	10	87	25	3	7						3.8	55.7	0.5	0.6



Figure 78 *Melaleuca lanceolata*/ *Melaleuca gibbosa* Shrublands at quadrat WIO00403 (KIE14747)

Melaleuca lanceolata/ *Tetragonia implexicoma* Shrublands

Floristic group 29: 39 quadrats

Description:

A very strong group located along the central part of the coastline on dunefields. There is a distinctive, predominantly tall (over 2 m) overstorey with a wide range of lifeforms as understorey.

Distribution of sites in geomorphic regions:

HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIE
2	6	6	6	8	6	2	3



Number of plant species:

Min	Max	Average
3	23	14.44

Dominant overstorey species:

Melaleuca lanceolata

Dominant understorey species:

Tetragonia implexicoma

Subdominant species:

Threlkeldia diffusa

Rhagodia candolleana ssp *candolleana*

Exocarpos aphyllus

Dominant lifeform/s:

	V	SC	SB	SA	S	LB
<i>Melaleuca lanceolata</i>		2	1	6	27	3
<i>Tetragonia implexicoma</i>	34					

Structural description:

	Freq	O-E/E
Tall shrubland	14	3.28
Shrubland	5	-0.10
Very low open forest	4	1.16
Low mallee	3	0.62
Open mallee	3	8.16
Tall open shrubland	3	0.53
Closed shrubland	1	-0.02
Low open shrubland	1	-0.72
Low woodland	1	0.96
Tall closed shrubland	1	-0.17
Tall very open shrubland	1	1.50
Very low open woodland	1	1.29
Very open low mallee	1	1.75

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	12	0.37
Dunefield	11	-0.04
Beach ridge plain	7	1.24
Longitudinal dunefield	3	5.87
Plain	3	-0.40

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	70	15.4	17.6
Slope	0	24	4.6	5.9
Aspect	0	340	148.8	132.8
Bare earth	0	80	27.2	21.1
Litter	0	95	16.9	18.7
Rainfall	275	500	370.5	78.0

Landform element:

	Freq	O-E/E
Dune crest	6	1.42
Dune/consolidated dune	6	0.27
Dune slope	5	-0.05
Beach ridge	4	1.89
Dune footslope	4	0.73

	Freq	O-E/E		Freq	O-E/E
Hills	1	0.20	Flat	2	1.97
Plateau	1	4.50	Plain	2	-0.53
Rises	1	-0.39	Swale	2	0.02

Fore dune	1	-0.68
Hill footslope	1	3.03
Hill slope	1	-0.68
Interdune corridor	1	0.23
Interdune low	1	-0.06
Limestone plain	1	-0.06
Sandy plain	1	1.82

Surface soil texture:

	Freq	O-E/E
Sand	21	-0.17
Sandy loam	6	0.01
Loamy sand	5	-0.16
Loam	3	2.44
Clay loam	2	0.62
Heavy clay	1	12.74
Light clay	1	1.29
Sandy clay loam	1	0.53

Wave energy:

	Freq	O-E/E
H	16	-0.4
L	13	2.0
M	10	0.3

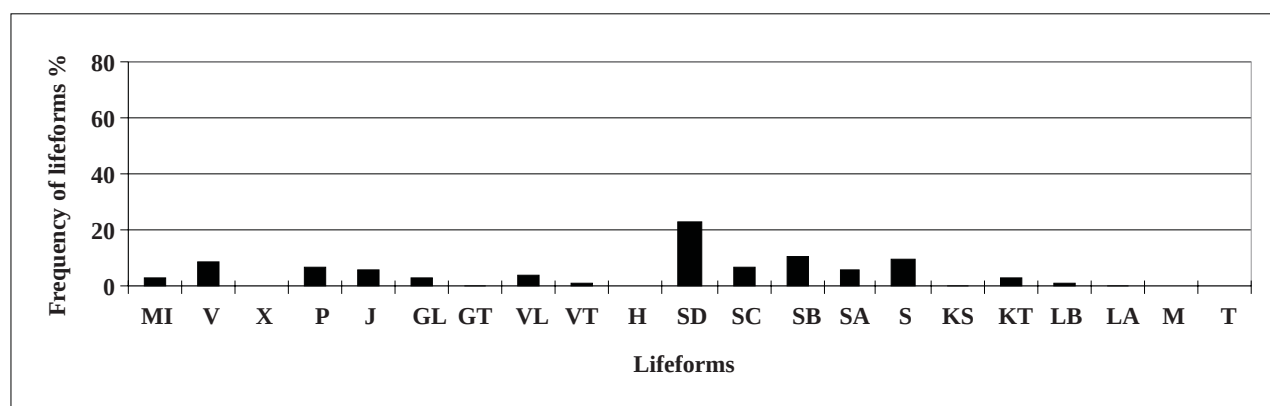
Outcrop lithology and cover:

	Freq	O-E/E
None	36	0.19
Calcareous <10%	2	-0.37
Sandstone <10%	1	2.93

Strew lithology size and cover:

	Freq	O-E/E
None	30	0.14
Calcareous <10% cobble (51–250 mm)	3	0.25
Calcareous >70% cobble (51–250 mm)	1	1.50
Calcareous 10–30% cobble (51–250 mm)	1	-0.19
Calcareous 10–30% pebble (5–50 mm)	1	0.25
Granite <10% cobble (51–250 mm)	1	8.16
Limestone <10% cobble (51–250 mm)	1	3.58
Sandstone <10% pebble (5–50 mm)	1	8.16

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Melaleuca lanceolata</i>	100.0	39	348	37				13	18	7	1	113.0	572.1	6.1	42.1
<i>Tetragonia implexicoma</i>	87.2	34	542	35	2	17	14	1				24.7	444.0	1.0	6.0
<i>Threlkeldia diffusa</i>	71.8	28	453	37	7	12	5	4				19.7	321.7	1.2	5.9
<i>Rhagodia candolleana</i>															
ssp <i>candolleana</i>	64.1	25	546	41	2	11	3	9				26.7	495.5	0.9	4.1
<i>Exocarpos aphyllus</i>	53.8	21	179	34	10	5	2	4				13.5	77.3	5.3	19.6

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Carpobrotus rossii</i>	46.2	18	540	38	4	4	9	1				13.4	378.2	0.3	0.9
<i>Senecio lautus</i>	46.2	18	542	40	2	9	7					11.7	396.6	0.1	0.2
<i>Pittosporum phylliraeoides</i>															
var <i>microcarpa</i>	43.6	17	139	27	10	7						4.5	63.0	1.6	4.7
* <i>Lycium ferocissimum</i>	41.0	16	209	32	10	4	1	1				6.0	94.2	1.3	3.6
<i>Olearia axillaris</i>	41.0	16	578	34	2	3	2	8	1			22.7	829.0	0.0	-0.1
<i>Enchylaena tomentosa</i>															
var <i>tomentosa</i>	38.5	15	128	29	7	4	4					6.7	71.4	2.4	6.3
<i>Amyema melaleucae</i>	33.3	13	42	15	3	6	3	1				8.3	19.5	14.2	32.9
<i>Geijera linearifolia</i>	33.3	13	135	19	6	3		4				10.1	128.6	1.8	4.2
<i>Dianella brevicaulis</i>	30.8	12	362	35	2	8	1	1				7.2	228.2	0.1	0.3



Figure 79 *Melaleuca lanceolata*/ *Tetragonia implexicoma* Shrublands at quadrat CUN00104 (EPW13766)

Melaleuca uncinata Shrubland

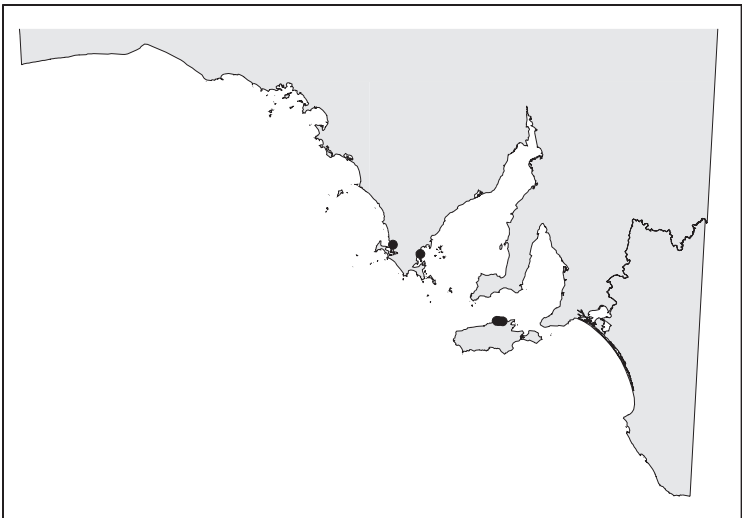
Floristic group 10: 9 quadrats

Description:

A very strong group occurring on low hills of siliceous metasediment. There is a distinctive dominant overstorey with many understorey species.

Distribution of sites in geomorphic regions:

EPS	KIN
2	3



Number of plant species:

Min	Max	Average
6	32	19.60

Dominant overstorey species:

Melaleuca uncinata

Dominant understorey species:

Hibbertia sericea var major

Indicator species:

Astroloma conostephioides
Eucalyptus odorata
Gonocarpus mezianus
Lepidosperma viscidum

Dominant lifeform/s:

	SB	SA	S
Melaleuca uncinata	1	1	3

Structural description:

	Freq	O–E/E
Closed shrubland	1	6.66
Low shrubland	1	0.62
Shrubland	1	0.40
Tall closed shrubland	1	5.50
Very low open forest	1	3.20

Landform pattern:

	Freq	O–E/E
Low hills	5	29.63

Surface soil texture:

	Freq	O–E/E
Sand	2	-0.38
Sandy loam	2	1.61
Loamy sand	1	0.31

Environmental parameters:

	Min	Max	Mean	SD
Altitude	20	160	76.0	46.3
Slope	3	24	10.8	7.2
Aspect	10	289	113.8	98.6
Bare earth	0	70	18.4	26.1
Litter	2	50	17.8	19.2
Rainfall	450	500	490.0	20.0

Landform element:

	Freq	O–E/E
Hill slope	4	8.74
Hill footslope	1	29.60

Wave energy:

	Freq	O–E/E
M	3	2.0
H	2	-0.4

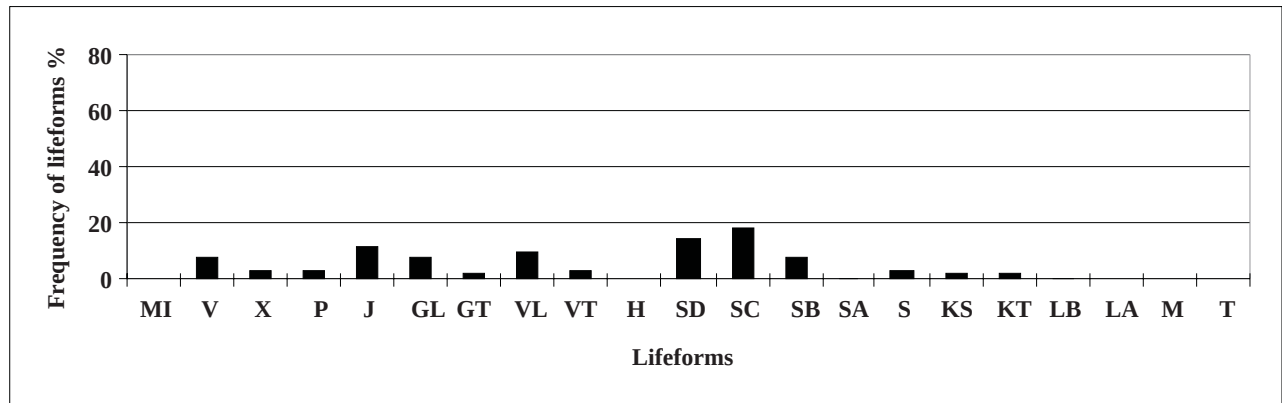
Outcrop lithology and cover:

	Freq	O-E/E
None	2	-0.49
Granite 10–50%	2	141.93
Sandstone <10%	1	29.63

Strew lithology size and cover:

	Freq	O-E/E
Granite <10%boulder (gt 250 mm)	1	213.40
Granite <10%cobble (51–250 mm)	1	70.47
Laterite (ironstone) 10–30% cobble (51–250 mm)	1	213.40
Sandstone <10%cobble (51–250 mm)	1	52.60
Sandstone10–30%cobble (51–250 mm)	1	41.88

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Melaleuca uncinata</i>	100.0	5	18	6				1		2	2	20.0	40.2	101.0	515.5
<i>Hibbertia sericea</i> var <i>major</i>	80.0	4	13	9		1		3				6.5	16.2	81.3	331.8
<i>Astroloma conostephioides</i>	60.0	3	24	9		1		2				4.5	18.5	48.9	149.7
<i>Astroloma humifusum</i>	60.0	3	35	12	3							0.3	17.7	2.5	7.6
<i>Danthonia setacea</i>															
var <i>setacea</i>	60.0	3	92	30		2	1					2.0	57.2	6.2	18.9
<i>Eucalyptus odorata</i>	60.0	3	3	1	3							0.3	0.3	204.1	624.8
<i>Gonocarpus mezianus</i>	60.0	3	42	12		2		1				3.0	35.8	16.2	49.5
<i>Lepidosperma viscidum</i>	60.0	3	57	17			1	2				5.0	55.7	17.4	53.3
<i>Acacia paradoxa</i>	40.0	2	45	15	1			1				2.1	67.4	5.4	11.0
<i>Baeckea behrii</i>	40.0	2	7	3		1		1				2.5	5.1	99.5	203.1
<i>Calytrix tetragona</i>	40.0	2	80	16				2				4.0	77.6	9.6	19.5
<i>Cassytha glabella</i>															
forma <i>dispar</i>	40.0	2	60	17	1	1						0.6	38.6	2.2	4.5
<i>Cassytha peninsularis</i>															
var <i>peninsularis</i>	40.0	2	92	24	1	1						0.6	62.4	1.0	2.0
<i>Cheilanthes austrotenuifolia</i>	40.0	2	28	10		2						1.0	21.2	8.7	17.7
<i>Dianella brevicaulis</i>	40.0	2	362	35	1		1					1.1	228.2	0.0	0.0
<i>Dianella revoluta</i>															
var <i>revoluta</i>	40.0	2	61	25	1		1					1.1	36.7	5.1	10.5
<i>Dillwynia hispida</i>	40.0	2	12	5	1	1						0.6	6.7	17.4	35.4
<i>Dodonaea hexandra</i>	40.0	2	6	5	1			1				2.1	5.2	81.8	167.0
<i>Eriostemon angustifolius</i>															
ssp <i>angustifolius</i>	40.0	2	2	1	1	1						0.6	0.6	204.1	416.5
<i>Eutaxia microphylla</i>															
var <i>microphylla</i>	40.0	2	100	28	2							0.2	65.0	-0.4	-0.8
<i>Hydrocotyle capillaris</i>	40.0	2	87	25		2						1.0	55.7	2.7	5.5
* <i>Hypochaeris radicata</i>	40.0	2	49	19		2						1.0	30.4	5.7	11.7
<i>Neurachne alopecuroidea</i>	40.0	2	6	3	1		1					1.1	1.9	117.7	240.3
<i>Schoenus nanus</i>	40.0	2	5	4		1	1					1.5	2.6	117.3	239.4



Figure 80 *Melaleuca uncinata* Shrubland at quadrat CAS00302 (KIN14680)



Figure 81 *Melaleuca uncinata* Shrubland at quadrat CAS00103 (KIN14686)

Nitraria billardierei Shrublands

Floristic group 46: 24 quadrats

Description:

A strong group located west of Adelaide on dunefields. There is a distinctive overstorey which is uniformly abundant in all quadrats with an understorey of predominantly low shrubs.

Distribution of sites in geomorphic regions:

NUL	HOB	EPW	SPG	YOP	SVG
1	1	9	4	5	4



Number of plant species:

Min	Max	Average
4	19	11.38

Dominant overstorey species:

Nitraria billardierei

Dominant understorey species:

Tetragonia implexicoma

Subdominant and Indicator species:

Olearia axillaris

Threlkeldia diffusa

Dominant lifeform/s:

	V	SD	SC	SB	SA	S
<i>Nitraria billardierei</i>		2	3	8	7	3
<i>Tetragonia implexicoma</i>	20					

Structural description:

	Freq	O-E/E
Shrubland	7	1.04
Low shrubland	4	0.35
Tall open shrubland	4	2.31
Closed shrubland	3	3.79
Open shrubland	3	0.74
Low closed shrubland	1	0.60
Tall very open shrubland	1	3.06
Very open shrubland	1	1.13

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	10	0.86
Beach ridge plain	7	2.64
Dunefield	6	-0.15
Plain	1	-0.68

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	40	8.8	11.1
Slope	0	50	7.3	13.2
Aspect	0	360	109.1	126.0
Bare earth	1	60	26.3	18.5
Litter	0	60	11.5	13.0
Rainfall	275	450	353.1	49.6

Landform element:

	Freq	O-E/E
Beach ridge	6	5.87
Foredune	5	1.56
Dune crest	4	1.55
Dune footslope	4	1.75
Dune/consolidated dune	2	-0.33
Dune slope	1	-0.70
Interdune low	1	0.49
Plain	1	-0.63

Surface soil texture:

	Freq	O-E/E
Sand	12	-0.23
Sandy loam	7	0.91
Loamy sand	3	-0.18
Clayey sand	2	3.06

Wave energy:

	Freq	O-E/E
H	12	-0.3
L	8	2.0
M	4	-0.2

Outcrop lithology and cover:

	Freq	O-E/E
None	21	0.12
Calcareous <10%	3	0.54

Strew lithology size and cover:

	Freq	O-E/E
None	19	0.17
Calcareous 30–70% pebble (5–50 mm)	2	5.38
Calcareous <10% pebble (5–50 mm)	1	-0.34
Calcareous 10–30% cobble (51–250 mm)	1	0.31
Calcareous 10–30% pebble (5–50 mm)	1	1.03

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Nitraria billardierei</i>	95.8	23	104	21				10	6	6	1	67.0	122.4	32.3	272.4
<i>Tetragonia implexicoma</i>	83.3	20	542	35	4	4	1	9	2			27.4	444.0	2.8	20.2
<i>Threlkeldia diffusa</i>	79.2	19	453	37	3	5	3	6	2			23.8	321.7	3.5	24.4
<i>Olearia axillaris</i>	70.8	17	578	34	1	5		9	2			26.6	829.0	1.0	5.9
<i>Senecio lautus</i>	58.3	14	542	40	1	8	5					9.1	396.6	0.4	2.0
<i>Atriplex cinerea</i>	45.8	11	78	19		4	2	4	1			15.0	79.8	10.4	42.1
<i>Atriplex paludosa</i> ssp	45.8	11	119	22	3	4	1	2	1			10.3	140.4	3.5	14.0
* <i>Lycium ferocissimum</i>	45.8	11	209	32	8	2		1				3.8	94.2	1.5	5.9
* <i>Mesembryanthemum crystallinum</i>	41.7	10	59	17	1	5	4					6.6	38.2	9.5	34.9
* <i>Cakile maritima</i> ssp <i>maritima</i>	37.5	9	112	16	1	2	6					7.1	100.6	3.3	10.9
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	37.5	9	546	41		2	2	5				13.0	495.5	0.6	2.0
<i>Carpobrotus rossii</i>	33.3	8	540	38		6	2					5.0	378.2	-0.2	-0.6



Figure 82 *Nitraria billardierei* Shrublands at quadrat WIL00201 (NUL13805)



Figure 83 *Nitraria billardierei* Shrublands at quadrat COR00301 (YOP15796)

Olearia ramulosa/ Calytrix tetragona Shrubland

Floristic group 12: 5 quadrats

Description:

A moderately strong group in the Cape Jervis area on moderate to steep slopes of Precambrian metasediment cliffs. There is a mixture of mainly low shrubs with grasses and vines

Distribution of sites in geomorphic regions:

FLP

5



Number of plant species:

Min	Max	Average
7	27	18.80

Dominant overstorey species:

Olearia ramulosa

Dominant understorey species:

- Calytrix tetragona*
- Danthonia caespitosa*
- **Lagurus ovatus*
- Muehlenbeckia gunnii*
- Senecio lautus*

Indicator species:

Ptilotus spathulatus forma *spathulatus*

Dominant lifeform/s:

	V	J	GL	SD	SC	SB
<i>Calytrix tetragona</i>				3	1	
<i>Danthonia caespitosa</i>			4			
<i>Lagurus ovatus</i>				4		
<i>Muehlenbeckia gunnii</i>	5					
<i>Olearia ramulosa</i>					3	1
<i>Senecio lautus</i>		5				

Structural description:

	Freq	O–E/E
Low shrubland	1	0.62
Open shrubland	1	1.78
Shrubland	1	0.40
Very open shrubland	1	9.21

Landform pattern:

	Freq	O–E/E
Escarpment	4	6.33
Hills	1	8.32

Surface soil texture:

	Freq	O–E/E
Sand	5	0.55

Environmental parameters:

	Min	Max	Mean	SD
Altitude	20	100	59.0	31.4
Slope	13	28	21.0	4.9
Aspect	90	360	259.6	93.9
Bare earth	15	45	31.0	10.7
Litter	5	70	26.0	23.5
Rainfall	550	550	550.0	0.0

Landform element:

	Freq	O–E/E
Hill slope	4	8.74
Cliff footslope	1	15.48

Wave energy:

	Freq	O–E/E
H	5	0.4

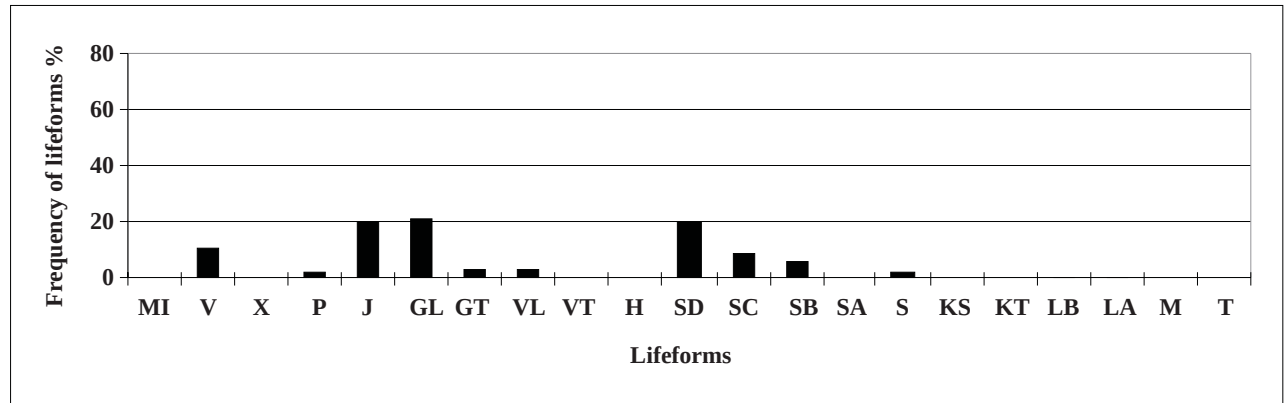
Outcrop lithology and cover:

	Freq	O-E/E
None	3	-0.23
Shale <10%	2	213.40

Strew lithology size and cover:

	Freq	O-E/E
Quartzite >70% pebble (5–50 mm)	1	106.20
Sandstone <10% pebble (5–50 mm)	1	70.47
Shale 30–70% cobble (51–250 mm)	1	213.40
Siltstone <10% pebble (5–50 mm)	1	213.40
Siltstone 10–30% boulder (gt 250 mm)	1	213.40

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Muehlenbeckia gunnii</i>	100.0	5	189	18		5						2.5	136.3	3.4	18.3
<i>Senecio lautus</i>	100.0	5	542	40		5						2.5	396.6	0.5	2.8
<i>Calytrix tetragona</i>	80.0	4	80	16			1	1	2			9.0	77.6	27.1	115.3
<i>Danthonia caespitosa</i>	80.0	4	56	19		3	1					2.5	38.8	14.6	62.2
* <i>Lagurus ovatus</i>	80.0	4	250	28		2	2					3.0	282.2	1.6	6.7
<i>Olearia ramulosa</i>	80.0	4	84	21		1	1	1	1			6.5	85.8	17.4	73.8
* <i>Hypochaeris radicata</i>	60.0	3	49	19		1	2					2.5	30.4	18.9	60.4
<i>Ptilotus spathulatus</i>															
<i>forma spathulatus</i>	60.0	3	9	6	1	2						1.1	3.9	67.3	214.9
<i>Stipa exilis</i>	60.0	3	75	25		3						1.5	49.5	6.3	20.2
<i>Stipa flavescens</i>	60.0	3	186	30		2	1					2.0	114.4	3.2	10.3
<i>Acacia cupularis</i>	40.0	2	53	16	2							0.2	25.7	0.9	1.9
* <i>Asclepias rotundifolia</i>	40.0	2	7	6		2						1.0	3.2	74.7	159.0
<i>Astroloma humifusum</i>	40.0	2	35	12		1	1					1.5	17.7	19.5	41.6
<i>Danthonia setacea</i>															
<i>var setacea</i>	40.0	2	92	30		1	1					1.5	57.2	5.4	11.4
<i>Dodonaea viscosa</i>															
<i>ssp spatulata</i>	40.0	2	25	15	1	1						0.6	24.3	5.0	10.6
<i>Einadia nutans ssp nutans</i>	40.0	2	5	4	2							0.2	0.5	95.9	204.1
<i>Enchylaena tomentosa</i>															
<i>var tomentosa</i>	40.0	2	128	29		2						1.0	71.4	2.4	5.1
* <i>Linum strictum ssp strictum</i>	40.0	2	41	11			1	1				3.0	33.1	21.0	44.6
<i>Maireana enchylaenoides</i>	40.0	2	10	4	1	1						0.6	4.8	29.3	62.3
<i>Scleranthus pungens</i>	40.0	2	4	3		2						1.0	2.5	95.9	204.1
<i>Stipa scabra ssp falcata</i>	40.0	2	14	11		2						1.0	10.6	21.9	46.5



Figure 84 *Olearia ramulosa/ Calytrix tetragona* Shrubland at quadrat CAP00201 (FLP15986)



Figure 85 *Olearia ramulosa/ Calytrix tetragona* Shrubland at CAP 00301 (FLP15937)

Olearia axillaris/ Lasiopetalum discolor Shrublands

Floristic group 38: 33 quadrats

Description:

A moderately strong group located along the central part of the coastline. There is a relatively tall overstorey with predominantly common species throughout the plant communities.

Distribution of sites in geomorphic regions:

EPW	EPS	EPE	YOP	KIS
12	4	1	15	1



Number of plant species:

Min	Max	Average
11	32	20.76

Dominant overstorey species:

Olearia axillaris

Dominant understorey species:

Lasiopetalum discolor

Senecio lautus

Subdominant and Indicator species:

Leucopogon parviflorus

Melaleuca lanceolata

Dominant lifeform/s:

	J	SD	SC	SB	SA	S
<i>Lasiopetalum discolor</i>		17	11	1		
<i>Olearia axillaris</i>			10	13	4	2
<i>Senecio lautus</i>	6	2	1			

Structural description:

	Freq	O-E/E
Shrubland	7	0.49
Low open shrubland	6	0.99
Open shrubland	5	1.11
Low shrubland	3	-0.26
Tall shrubland	3	0.08
Very low open forest	3	0.91
Mallee	2	2.61
Closed mat plants	1	31.48
Tall open shrubland	1	-0.40
Very low woodland	1	5.50
Very open shrubland	1	0.55

Environmental parameters:

	Min	Max	Mean	SD
Altitude	6	50	22.0	14.4
Slope	0	20	4.2	5.3
Aspect	0	360	133.4	116.4
Bare earth	0	80	22.9	23.1
Litter	0	90	17.9	25.9
Rainfall	350	525	428.0	44.3

Landform pattern:

	Freq	O-E/E
Dunefield	14	0.44
Consolidated dunefield	11	0.49
Rises	3	1.17
Parabolic dunefield	2	1.24
Plain	2	-0.53
Escarpment	1	-0.72

Landform element:

	Freq	O-E/E
Dune slope	11	1.41
Dune/consolidated dune	6	0.46
Dune footslope	4	1.00
Plain	2	-0.46
Swale	2	0.18
Cliff	1	-0.29
Dune crest	1	-0.54

	Freq	O-E/E
Foredune	1	-0.63
Hill crest	1	1.70
Hill footslope	1	3.64
Hill slope	1	-0.63
Limestone plain	1	0.08
Other	1	5.49

Surface soil texture:

	Freq	O-E/E
Sand	13	-0.39
Sandy loam	9	0.78
Loamy sand	6	0.19
Clay loam	4	2.82
Clayey sand	1	0.48
Light clay	1	1.71
Loam	1	0.35

Wave energy:

	Freq	O-E/E
H	27	0.2
M	6	-0.1

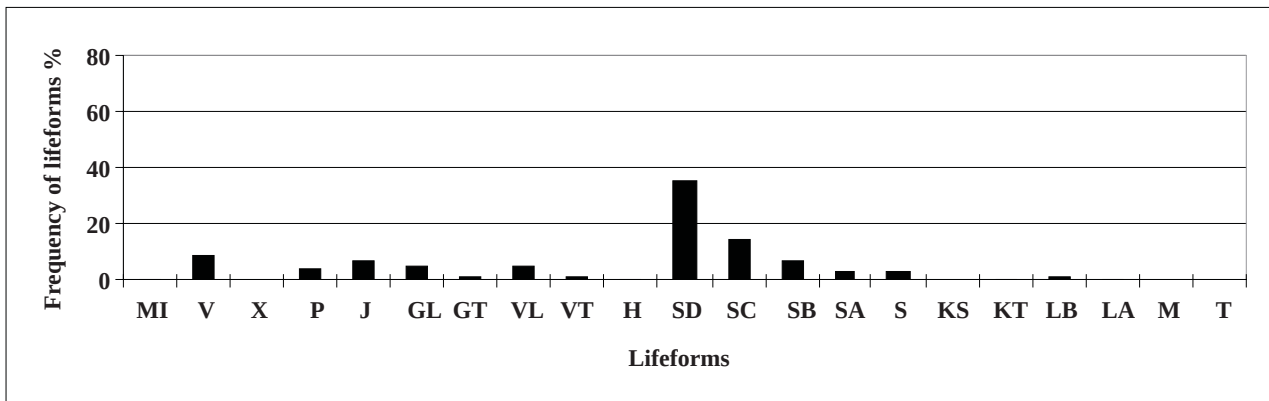
Outcrop lithology and cover:

	Freq	O-E/E
None	27	0.05
Calcareous <10%	5	0.87
Calcareous 10–50%	1	-0.42

Strew lithology size and cover:

	Freq	O-E/E
None	20	-0.10
Calcareous <10% pebble (5–50 mm)	7	2.34
Calcareous <10% cobble (51–250 mm)	4	0.97
Calcareous 10–30% cobble (51–250 mm)	1	-0.04
Calcareous 10–30% pebble (5–50 mm)	1	0.48

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Lasiopetalum discolor</i>	87.9	29	213	23	1	4	4	14	5	1		53.1	266.9	4.4	18.6
<i>Olearia axillaris</i>	87.9	29	578	34	1	9	5	11	3			40.6	829.0	0.3	1.4
<i>Senecio lautus</i>	81.8	27	542	40	1	7	17	2				24.6	396.6	0.7	2.7
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	78.8	26	546	41	2	11	9	4				22.7	495.5	0.2	0.9
<i>Tetragonia implexicoma</i>	72.7	24	542	35	1	9	14					18.6	444.0	0.1	0.5
<i>Carpobrotus rossii</i>	66.7	22	540	38	1	9	12					16.6	378.2	0.2	0.6
<i>Clematis microphylla</i>	63.6	21	350	31		10	11					16.0	235.3	0.8	2.6
<i>Leucopogon parviflorus</i>	63.6	21	392	26	2	8	2	6	3			27.2	662.8	0.1	0.4
<i>Threlkeldia diffusa</i>	63.6	21	453	37	2	9	10					14.7	321.7	0.2	0.7
<i>Acrotriche patula</i>	57.6	19	227	33	3	11	5					10.8	186.8	0.6	1.6
<i>Melaleuca lanceolata</i>	54.5	18	348	37	2	5	2	7	2			24.7	572.1	0.2	0.5
<i>Pimelea serpyllifolia</i>															
<i>ssp serpyllifolia</i>	54.5	18	359	30	1	11	5	1				12.6	268.2	0.3	0.7

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Templetonia retusa</i>	45.5	15	85	20		2	1	11	1			27.0	86.1	7.5	16.5
<i>Stipa flavescens</i>	42.4	14	186	30		4	10					12.0	114.4	1.9	3.8
<i>Dianella brevicaulis</i>	39.4	13	362	35	2	3	7	1				10.7	228.2	0.3	0.5
<i>Beyeria lechenaultii</i>	36.4	12	229	33	1	2	2	6	1			18.1	271.2	0.8	1.4
<i>Isolepis nodosa</i>	36.4	12	317	22		7	5					8.5	291.1	-0.2	-0.4
<i>Pittosporum phylliraeoides</i>															
var <i>microcarpa</i>	36.4	12	139	27	4	4	2	2				8.4	63.0	2.6	4.6
<i>Acacia anceps</i> (NC)	33.3	11	75	20	1	1	2	4	2	1		20.6	64.6	7.7	12.3
<i>Logania crassifolia</i>	30.3	10	64	13		6	2	2				9.0	47.5	4.2	6.1
<i>Zygophyllum billardierei</i>	30.3	10	35	9		7	3					6.5	23.6	6.5	9.5



Figure 86 *Olearia axillaris/ Lasiopetalum discolor* Shrublands at quadrat TAL00103 (EPW13775)

Olearia axillaris/ Leucopogon parviflorus Shrublands

Floristic group 50: 65 quadrats

Description:

A strong group located on dunefields predominantly in the south-east of the coastline with higher rainfall. There is a distinctive overstorey with common species as understorey.

Distribution of sites in geomorphic regions:

KIS	KIE	COO	SOE
2	1	47	15



Number of plant species:

Min	Max	Average
5	28	19.02

Dominant overstorey species:

Leucopogon parviflorus
Olearia axillaris

Dominant understorey species:

Carpobrotus rossii
Exocarpos syrticola
Isolepis nodosa
Pimelea serpyllifolia ssp *serpyllifolia*
Rhagodia candolleana ssp *candolleana*

Subdominant species:

Acacia longifolia var *sophorae*
Myoporum insulare

Dominant lifeform/s:

	P	VL	VT	SD	SC	SB	SA	S
<i>Carpobrotus rossii</i>	63							
<i>Exocarpos syrticola</i>				20	23	11	1	
<i>Isolepis nodosa</i>		27	33					
<i>Leucopogon parviflorus</i>				5	19	17	11	5
<i>Olearia axillaris</i>				6	20	24	9	3
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>				50	4			
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>				30	21	9	1	

Structural description:

	Freq	O-E/E
Shrubland	29	2.13
Tall shrubland	9	0.65
Open shrubland	7	0.50
Low shrubland	5	-0.38
Tall closed shrubland	4	1.00
Closed shrubland	3	0.77
Low open shrubland	3	-0.50
Low closed shrubland	1	-0.41
Low very open shrubland	1	-0.08
Open (tussock) grassland	1	0.27
Tall open shrubland	1	-0.69
Very open shrubland	1	-0.21

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	60	13.1	12.2
Slope	0	40	8.0	9.0
Aspect	0	360	130.1	108.9
Bare earth	0	99	34.1	28.7
Litter	0	100	17.2	24.9
Rainfall	450	750	550.4	104.7

Landform pattern:

	Freq	O-E/E
Dunefield	47	1.45
Parabolic dunefield	11	5.26
Beach ridge plain	3	-0.42
Consolidated dunefield	3	-0.79
Longitudinal dunefield	1	0.37

Landform element:

	Freq	O-E/E
Dune crest	15	2.53
Foredune	12	1.27
Dune slope	11	0.22
Closed depression	8	6.75
Dune/consolidated dune	7	-0.13
Dune footslope	3	-0.24
Interdune corridor	3	1.15
Interdune low	3	0.65
Swale	2	-0.40
Beach ridge	1	-0.58

Surface soil texture:

	Freq	O-E/E
Sand	61	0.45
Sandy loam	2	-0.80
Loamy sand	1	-0.90
Sandy clay loam	1	-0.08

Wave energy:

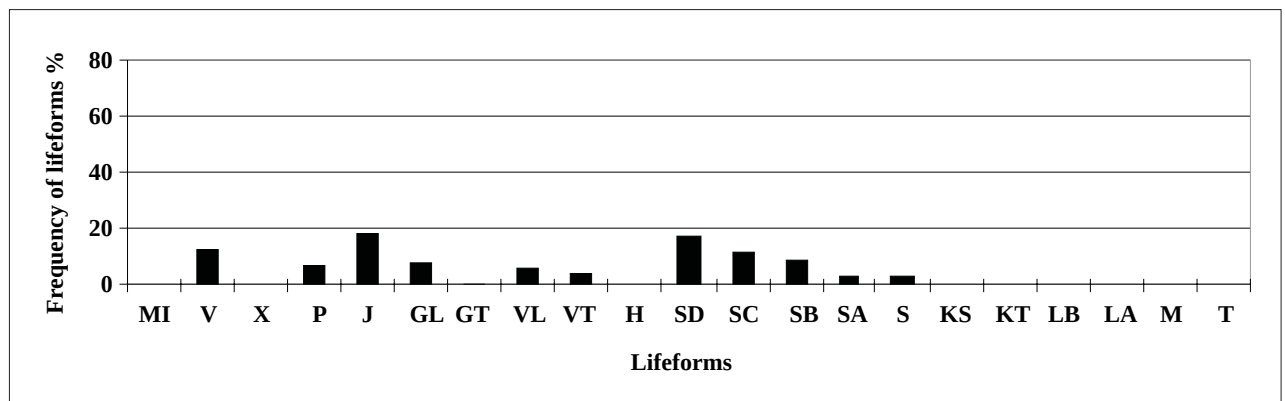
	Freq	O-E/E
H	64	0.4
L	1	-0.9

Outcrop lithology and cover:

None

Strew lithology size and cover:

None

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Carpobrotus rossii</i>	96.9	63	540	38		16	45	2				57.0	378.2	1.0	5.2
<i>Olearia axillaris</i>	95.4	62	578	34		17	5	30	10			103.5	829.0	0.7	3.4
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	93.8	61	546	41	4	23	7	26	1			73.9	495.5	1.0	4.9
<i>Isolepis nodosa</i>	92.3	60	317	22	1	6	42	11				67.1	291.1	2.1	10.2
<i>Leucopogon parviflorus</i>	87.7	57	392	26	6	19	3	19	9	1		82.1	662.8	0.7	3.1
<i>Exocarpos syrticola</i>	84.6	55	225	25	3	19	10	23				65.8	152.3	4.8	21.4
<i>Pimelea serpyllifolia</i>															
<i>ssp serpyllifolia</i>	83.1	54	359	30	1	23	15	15				56.6	268.2	1.8	8.0
<i>Tetragonia implexicoma</i>	78.5	51	542	35	3	26	13	9				44.3	444.0	0.3	1.4
<i>Muehlenbeckia gunnii</i>	73.8	48	189	18		22	21	4	1			43.0	136.3	3.2	12.6
<i>Myoporum insulare</i>	73.8	48	202	31	4	5		23	15	1		97.9	203.4	5.5	21.2
<i>Acacia longifolia</i>															
<i>var sophorae</i>	72.3	47	199	17	10	10	1	19	6	1		67.0	236.5	2.8	10.7
<i>Senecio lautus</i>	67.7	44	542	40		13	29	2				39.5	396.6	0.3	1.2
<i>Pelargonium australe</i>	66.2	43	122	13	3	14	26					33.3	82.6	4.4	15.3

Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Dianella brevicaulis</i>	64.6	42	362	35	2	29	11					25.7	228.2	0.5	1.7
<i>Spinifex sericeus</i>	60.0	39	105	8	2	17	11	9				37.7	127.4	3.0	9.4
<i>Clematis microphylla</i>	49.2	32	350	31	2	24	6					18.2	235.3	0.0	0.1
<i>Threlkeldia diffusa</i>	46.2	30	453	37	4	14	8	4				23.4	321.7	0.0	-0.1
<i>Ozothamnus turbinatus</i>	43.1	28	54	4	1	4		15	7	1		57.1	90.6	7.5	16.9
<i>Stackhousia spathulata</i>	43.1	28	65	11		18	10					19.0	36.2	6.0	13.7
<i>Billardiera cymosa</i>	40.0	26	54	13		15	7	4				22.5	38.6	6.8	14.4
* <i>Euphorbia paralias</i>	36.9	24	127	18		9	13	1		1		23.5	131.3	1.4	2.7
<i>Geranium potentilloides</i>															
var <i>potentilloides</i>	35.4	23	81	11		5	18					20.5	74.2	2.7	5.0
<i>Lotus australis</i>	30.8	20	51	7	4	14	1	1				10.4	24.3	4.7	7.7



Figure 87 *Olearia axillaris/ Leucopogon parviflorus* Shrublands at quadrat BEN00701 (SOE15246)



Figure 88 *Olearia axillaris/ Leucopogon parviflorus* Shrublands at quadrat SAN00102 (COO14793)



Figure 89 *Olearia axillaris/ Leucopogon parviflorus* Shrublands at quadrat TIL00204 (SOE14776)

Olearia axillaris/ Tetragonia implexicoma Shrublands

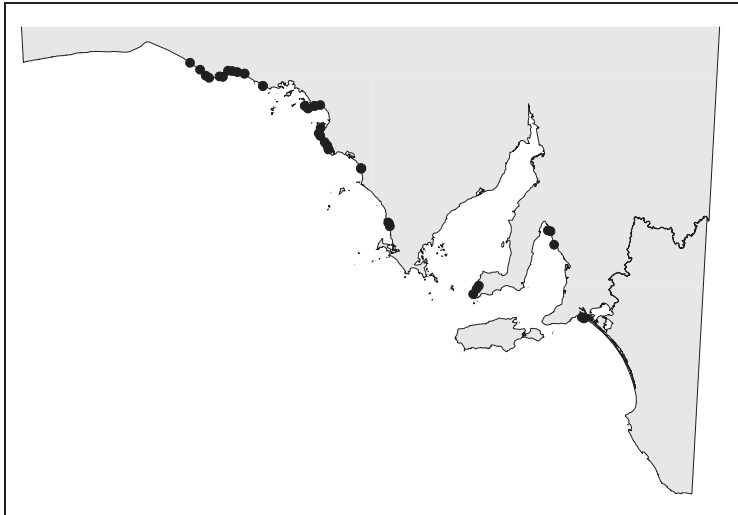
Floristic group 45: 42 quadrats

Description:

A very strong group located in dunefields from the Head of the Bight to the Coorong. There is a distinctive overstorey with a distribution of other lifeforms of common species. There is no outcrop or strew.

Distribution of sites in geomorphic regions:

HOB	EPW	YOP	SVG	COO
4	28	3	3	4



Number of plant species:

Min	Max	Average
6	22	13.50

Dominant overstorey species:

Olearia axillaris

Dominant understorey species:

Tetragonia implexicoma

Dominant lifeform/s:

	V	P	SC	SB	SA	S
<i>Olearia axillaris</i>			5	11	17	9
<i>Tetragonia implexicoma</i>	34	2				

Structural description:

	Freq	O-E/E
Shrubland	12	1.00
Open shrubland	9	1.98
Tall open shrubland	7	2.31
Low open shrubland	5	0.30
Tall shrubland	5	0.42
Very open shrubland	3	2.65
Low shrubland	1	-0.81

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	25	1.66
Dunefield	9	-0.27
Parabolic dunefield	3	1.64
Plain	2	-0.63
Beach ridge plain	1	-0.70
Chenier plain	1	24.52
Longitudinal dunefield	1	1.13

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	50	15.5	10.2
Slope	0	45	6.8	10.0
Aspect	0	360	146.2	132.3
Bare earth	0	70	31.2	17.9
Litter	0	80	14.5	15.5
Rainfall	350	450	376.2	42.2

Landform element:

	Freq	O-E/E
Dune slope	13	1.24
Dune/consolidated dune	8	0.53
Dune footslope	5	0.96
Swale	5	1.32
Dune crest	4	0.46
Interdune low	2	0.70
Beach ridge	1	-0.35
Interdune corridor	1	0.11
Open depression	1	1.83
Plain	1	-0.79
Ridge	1	2.19

Surface soil texture:

	Freq	O-E/E
Sand	26	-0.04
Loamy sand	5	-0.22
Sandy loam	5	-0.22
Clay loam	4	2.00
Sandy clay loam	2	1.84
Clayey sand	1	0.16
Loam	1	0.06

Wave energy:

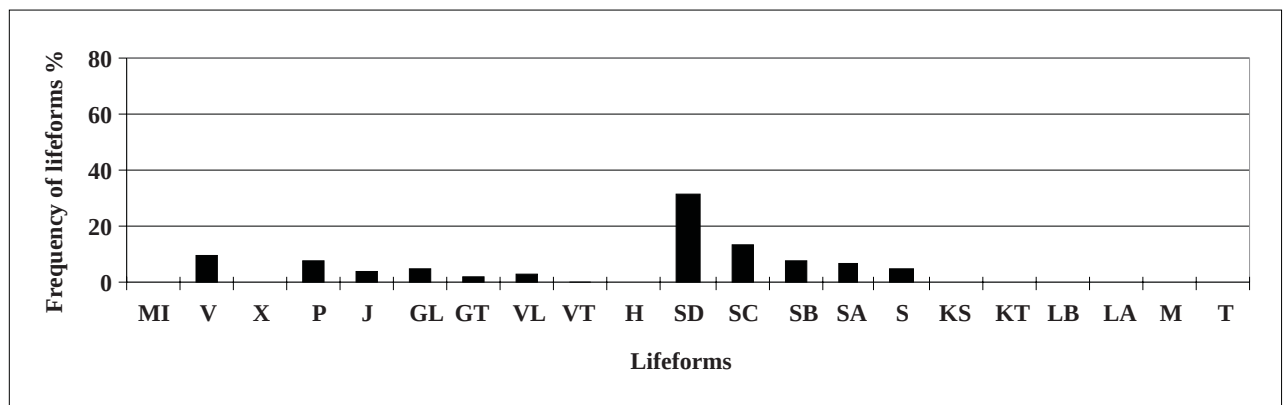
	Freq	O-E/E
H	39	0.3
L	3	-0.4

Outcrop lithology and cover:

None

Strew lithology size and cover:

None

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Olearia axillaris</i>	100.0	42	578	34			2	22	15	3		103.0	829.0	3.5	26.2
<i>Tetragonia implexicoma</i>	85.7	36	542	35	6	16	8	6				28.6	444.0	1.4	8.6
<i>Carpobrotus rossii</i>	73.8	31	540	38	1	14	13	3				26.1	378.2	1.5	8.3
<i>Threlkeldia diffusa</i>	73.8	31	453	37	3	14	12	2				23.3	321.7	1.6	9.0
<i>Senecio lautus</i>	54.8	23	542	40	1	10	12					17.1	396.6	0.6	2.3
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	47.6	20	546	41	1	14	3	2				14.1	495.5	0.0	0.1
<i>Rhagodia crassifolia</i>	38.1	16	93	19	3	4	1	8				19.3	57.1	11.3	32.0
<i>Acacia anceps</i> (NC)	35.7	15	75	20	4	4	1	3	3			18.4	64.6	9.4	24.9
<i>Geijera linearifolia</i>	31.0	13	135	19	8		3	2				7.8	128.6	1.2	2.8



Figure 90 *Olearia axillaris/ Tetragonia implexicoma* Shrublands at quadrat KUR00102 (HOB14294)



Figure 91 *Olearia axillaris/ Tetragonia implexicoma* Shrublands at quadrat PON00701 (YOP15829)

Olearia axillaris/ **Lycium ferocissimum* Shrublands

Floristic group 42: 12 quadrats

Description:

A moderately strong group located on cliffs and dunefields along the central part of the coastline. There is a distinctive overstorey with a broad distribution of understorey plant lifeforms.

Distribution of sites in geomorphic regions:

EPE	YOP	KIN	KIE	SVG
1	6	2	2	1



Number of plant species:

Min	Max	Average
6	26	14.75

Dominant overstorey species:

**Lycium ferocissimum*
Olearia axillaris

Dominant understorey species:

**Lagurus ovatus*

Subdominant overstorey species:

Allocasuarina verticillata

Dominant lifeform/s:

	GL	SD	SC	SB	SA	S
<i>*Lagurus ovatus</i>	11					
<i>*Lycium ferocissimum</i>		1			3	6
<i>Olearia axillaris</i>		1	3	3	3	

Structural description:

	Freq	O-E/E
Low open forest	2	8.40
Low open woodland	2	21.33
Low woodland	2	11.76
Shrubland	2	0.17
Tall shrubland	2	0.99
Open shrubland	1	0.16
Tall open shrubland	1	0.65

Landform pattern:

	Freq	O-E/E
Dunefield	5	0.41
Beach ridge plain	2	1.08
Escarpment	2	0.53
Rises	2	2.97
Consolidated dunefield	1	-0.63

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	260	50.8	92.2
Slope	0	27	9.4	10.1
Aspect	0	340	175.7	123.9
Bare earth	2	50	21.8	13.2
Litter	2	90	20.3	22.9
Rainfall	350	675	462.5	105.8

Landform element:

	Freq	O-E/E
Dune/consolidated dune	4	1.68
Hill slope	3	2.04
Beach ridge	1	1.29
Cliff footslope	1	5.87
Dune crest	1	0.28
Dune slope	1	-0.40
Swale	1	0.62

Surface soil texture:

	Freq	O-E/E
Sand	8	0.03
Sandy loam	3	0.63
Clayey sand	1	3.06

Wave energy:

	Freq	O-E/E
M	7	1.9
L	3	1.3
H	2	-0.8

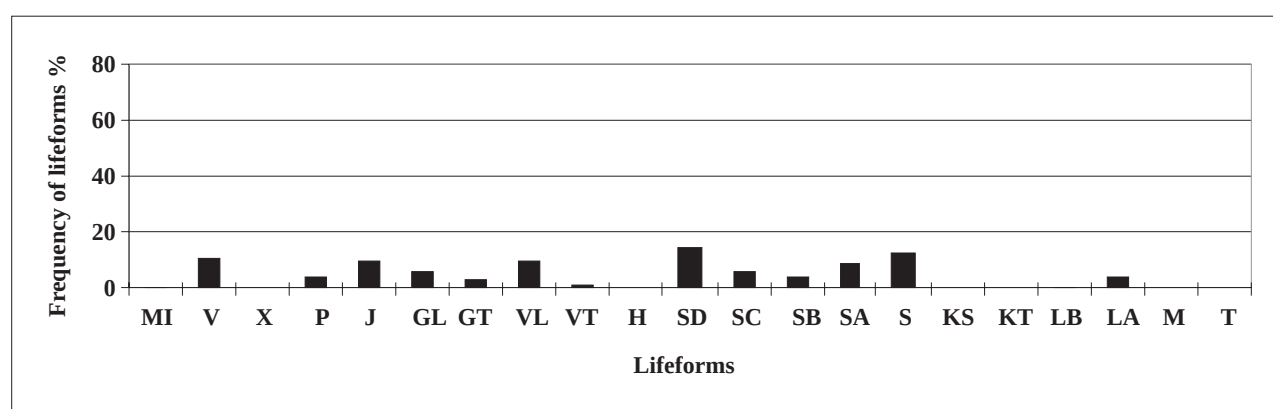
Outcrop lithology and cover:

	Freq	O-E/E
None	11	0.18
Calcareous >50%	1	3.25

Strew lithology size and cover:

	Freq	O-E/E
None	7	-0.14
Calcareous >70% boulder (gt 250 mm)	1	43.67
Calcareous 10–30% cobble (51–250 mm)	1	1.63
Calcareous 10–30% pebble (5–50 mm)	1	3.06
Gneiss <10% cobble (51–250 mm)	1	88.33
Schist <10% cobble (51–250 mm)	1	8.93

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
* <i>Lagurus ovatus</i>	91.7	11	250	28			1	3	3	3	1	33.0	282.2	10.6	66.0
* <i>Lycium ferocissimum</i>	83.3	10	209	32	2	1	1	6				13.7	94.2	13.4	76.0
<i>Olearia axillaris</i>	83.3	10	578	34		2	1	3	4			20.0	829.0	1.4	7.9
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	75.0	9	546	41	3	5	1					3.8	495.5	-0.2	-1.2
<i>Allocasuarina verticillata</i>	58.3	7	88	21				5	2			16.0	122.3	12.0	47.4
<i>Tetragonia implexicoma</i>	58.3	7	542	35	1	6						3.1	444.0	-0.3	-1.2
<i>Acacia nematophylla</i>	41.7	5	76	14			1	4				9.0	86.7	9.3	26.3
<i>Clematis microphylla</i>	41.7	5	350	31		3	1	1				4.5	235.3	0.9	2.5
<i>Myoporum insulare</i>	41.7	5	202	31	2	1	1	1				3.7	203.4	0.8	2.3
<i>Threlkeldia diffusa</i>	41.7	5	453	37		4	1					3.0	321.7	-0.1	-0.2
<i>Geranium retrorsum</i>	33.3	4	74	15		3	1					2.5	51.7	3.8	8.6
<i>Lepidosperma gladiatum</i>	33.3	4	147	14		2	2					3.0	190.5	0.6	1.3



Figure 92 *Olearia axillaris*/ **Lycium ferocissimum* Shrublands at quadrat ARN00104 (EPE14580)



Figure 93 *Olearia axillaris*/ **Lycium ferocissimum* Shrublands at quadrat KIN00201 (KIE14677)

Olearia axillaris/ Rhagodia candolleana ssp candolleana Shrublands

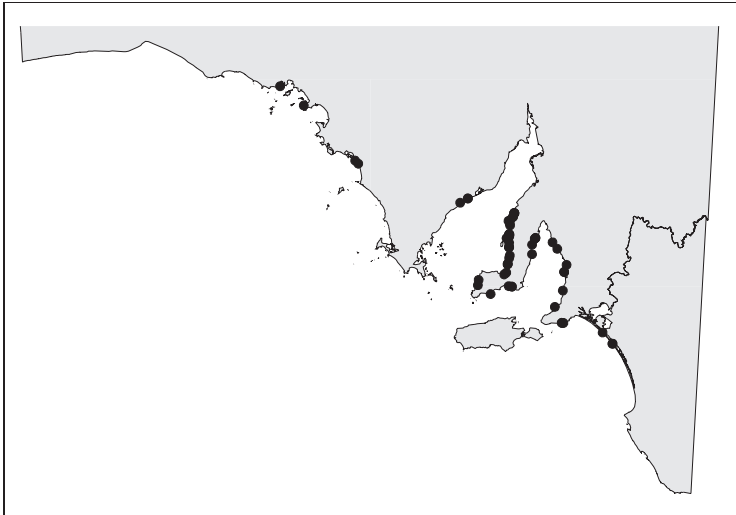
Floristic group 43: 64 quadrats

Description:

A large moderately strong group located along the coastline predominantly on dunefields.

Distribution of sites in geomorphic regions:

EPW	EPE	YOP	SVG	FLP	COO
4	3	39	11	4	3



Number of plant species:

Min	Max	Average
9	31	19.50

Dominant overstorey species:

Olearia axillaris

Dominant understorey species:

Rhagodia candolleana ssp candolleana

Tetragonia implexicoma

Threlkeldia diffusa

Subdominant species:

**Lagurus ovatus*

Indicator species:

Acacia ligulata

Dominant lifeform/s:

	V	SD	SC	SB	SA	S
<i>Olearia axillaris</i>		5	5	17	19	8
<i>Rhagodia candolleana ssp candolleana</i>		32	24	4	1	
<i>Tetragonia implexicoma</i>	54					
<i>Threlkeldia diffusa</i>		57	1			

Structural description:

	Freq	O-E/E
Shrubland	14	0.53
Open shrubland	11	1.39
Tall open shrubland	7	1.17
Very open shrubland	6	3.79
Low open shrubland	5	-0.15
Tall very open shrubland	4	5.09
Low shrubland	3	-0.62
Low woodland	3	2.59
Tall shrubland	3	-0.44
Low closed shrubland	2	0.20
Closed shrubland	1	-0.40
Low open woodland	1	1.09
Open hummock grassland	1	4.58
Tall closed shrubland	1	-0.49
Very low open woodland	1	0.40
Very low woodland	1	2.35

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	50	11.7	9.5
Slope	0	45	8.0	11.4
Aspect	0	360	123.2	118.5
Bare earth	0	95	21.6	23.1
Litter	0	90	24.0	25.9
Rainfall	350	550	394.1	62.9

Landform pattern:

	Freq	O-E/E
Dunefield	36	0.91
Consolidated dunefield	13	-0.09
Beach ridge plain	5	-0.03
Escarpment	5	-0.28
Parabolic dunefield	5	1.89

Landform element:

	Freq	O-E/E
Dune slope	13	0.47
Swale	11	2.35
Dune/consolidated dune	10	0.26
Dune footslope	6	0.54
Dune crest	5	0.20
Foredune	5	-0.04
Beach ridge	2	-0.14
Cliff footslope	2	1.57
Closed depression	2	0.97
Interdune corridor	2	0.46
Interdune low	2	0.12
Cliff	1	-0.64
Flat	1	-0.12
Hill crest	1	0.39
Hill slope	1	-0.81

Surface soil texture:

	Freq	O-E/E
Sand	46	0.11
Sandy loam	8	-0.18
Loam	2	0.40
Loamy sand	2	-0.80
Medium clay	2	1.39
Sandy clay loam	2	0.86
Light clay	1	0.40
Peat	1	4.58

Wave energy:

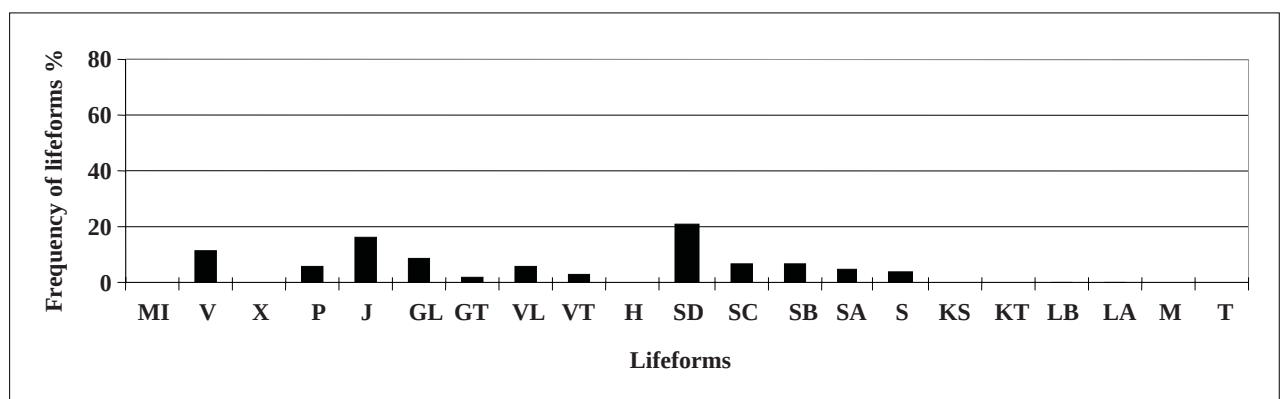
	Freq	O-E/E
M	45	2.5
H	12	-0.7
L	7	0.0

Outcrop lithology and cover:

	Freq	O-E/E
None	58	0.16
Calcareous <10%	3	-0.42
Schist <10%	2	2.35
Quartzite >50%	1	15.75

Strew lithology size and cover:

	Freq	O-E/E
None	58	0.34
Schist <10% cobble (51–250 mm)	2	2.72
Calcareous <10% cobble (51–250 mm)	1	-0.75
Calcareous <10% pebble (5–50 mm)	1	-0.75
Calcareous 10–30% cobble (51–250 mm)	1	-0.51
Quartzite 30–70% cobble (51–250 mm)	1	4.58

Distribution of lifeforms:

Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	95.3	61	546	41	2	24	9	25	1			74.2	495.5	1.4	6.7
<i>Threlkeldia diffusa</i>	90.6	58	453	37	1	37	11	9				47.6	321.7	1.3	6.2
<i>Olearia axillaris</i>	84.4	54	578	34	3	5	1	32	12	1		107.8	829.0	1.1	4.5
<i>Tetragonia implexicoma</i>	84.4	54	542	35		29	14	9	2			52.5	444.0	0.9	3.7
<i>Senecio lautus</i>	78.1	50	542	40	3	21	21	5				41.8	396.6	0.7	2.7
<i>Carpobrotus rossii</i>	76.6	49	540	38	3	31	14	1				31.8	378.2	0.3	1.3
* <i>Lycium ferocissimum</i>	68.8	44	209	32	16	20	2	6				25.6	94.2	3.3	11.6
* <i>Lagurus ovatus</i>	67.2	43	250	28		12	17	9	4	1		57.0	282.2	2.2	7.5
<i>Dianella brevicaulis</i>	64.1	41	362	35		19	17	4	1			37.5	228.2	1.6	5.2
<i>Muehlenbeckia gunnii</i>	64.1	41	189	18	4	22	13	2				28.4	136.3	2.3	7.5
<i>Clematis microphylla</i>	57.8	37	350	31	6	28	2	1				18.6	235.3	0.2	0.7
<i>Isolepis nodosa</i>	54.7	35	317	22	1	18	15	1				26.1	291.1	0.4	1.2
<i>Acacia ligulata</i>	53.1	34	82	11	3	8	3	14	5	1		54.3	108.3	6.9	18.8
* <i>Euphorbia terracina</i>	48.4	31	54	10		13	12	2	3	1		35.5	54.5	9.3	23.0
<i>Pimelea serpyllifolia</i>															
<i>ssp serpyllifolia</i>	48.4	31	359	30	5	19	5	2				19.0	268.2	0.1	0.3
<i>Poa poiformis</i>	42.2	27	139	22		12	8	5	2			30.0	119.8	3.0	6.4
<i>Exocarpos syrticola</i>	34.4	22	225	25	5	14	2	1				11.5	152.3	0.2	0.3



Figure 94 *Olearia axillaris/ Rhagodia candolleana ssp candolleana* Shrublands at quadrat MAG00103 (COO14760)

Acacia ligulata Shrublands

Floristic group 44: 27 quadrats

Description:

A weak group located predominantly in the central part of the coast on dunefields. There is a mixture of tall (>2 m) overstorey species connected by an understorey species.

Distribution of sites in geomorphic regions:

HOB	EPW	EPE	SPG	YOP	SVG	KIN
1	2	4	6	9	3	2



Number of plant species:

Min	Max	Average
4	31	18.15

Dominant understorey species:

Threlkeldia diffusa

Subdominant overstorey species:

Acacia ligulata
Myoporum insulare
Olearia axillaris

Dominant lifeform/s:

	SD	SC
<i>Threlkeldia diffusa</i>	21	1

Structural description:

	Freq	O-E/E
Tall open shrubland	8	4.88
Tall shrubland	6	1.65
Shrubland	3	-0.22
Open shrubland	2	0.03
Tall very open shrubland	2	6.22
Low open woodland	1	3.96
Low shrubland	1	-0.70
Low woodland	1	1.84
Tall closed shrubland	1	0.20
Very low open forest	1	-0.22
Very open shrubland	1	0.89

Environmental parameters:

	Min	Max	Mean	SD
Altitude	0	45	7.9	10.3
Slope	0	33	4.9	8.6
Aspect	0	360	142.9	134.7
Bare earth	0	75	26.8	20.5
Litter	0	80	22.9	22.3
Rainfall	225	500	355.6	63.2

Landform pattern:

	Freq	O-E/E
Beach ridge plain	10	3.62
Dunefield	8	0.01
Consolidated dunefield	4	-0.34
Escarpment	2	-0.32
Longitudinal dunefield	2	5.62
Low hills	1	0.13

Landform element:

	Freq	O-E/E
Dune/consolidated dune	5	0.49
Beach ridge	4	3.07
Dune slope	4	0.07
Dune footslope	3	0.83
Foredune	3	0.37
Interdune corridor	2	2.45
Plain	2	-0.34
Cliff	1	-0.14
Flat	1	1.09
Gully	1	3.41
Hill slope	1	-0.55

Surface soil texture:

	Freq	O-E/E
Sand	18	0.03
Loamy sand	2	-0.52
Sandy clay loam	2	3.41
Clay loam, sandy	1	8.93
Clayey sand	1	0.80
Medium clay	1	1.84
Peat	1	12.23
Silty clay loam	1	38.70

Wave energy:

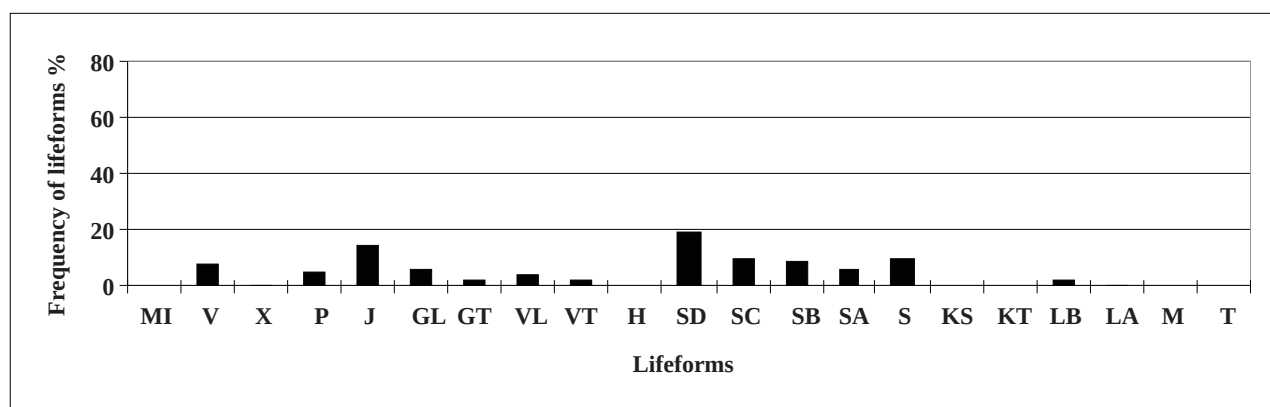
	Freq	O-E/E
M	15	1.8
L	9	2.0
H	3	-0.8

Outcrop lithology and cover:

	Freq	O-E/E
None	23	0.09
Calcareous >50%	1	0.89
Calcareous 10–50%	1	-0.29
Sandstone >50%	1	12.23

Strew lithology size and cover:

	Freq	O-E/E
None	23	0.26
Calcareous 10–30% cobble (51–250 mm)	1	0.17
Quartz <10% pebble (5–50 mm)	1	18.85
Sandstone >70% boulder (gt 250 mm)	1	38.70
Sandstone 30–70% boulder (gt 250 mm)	1	18.85

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Threlkeldia diffusa</i>	81.5	22	453	37	5	11	6					12.0	321.7	0.7	3.2
<i>Acacia ligulata</i>	77.8	21	82	11	2	1	4	9	5			37.7	108.3	14.9	63.8
<i>Tetragonia implexicoma</i>	77.8	21	542	35	2	10	9					14.2	444.0	0.5	2.0
<i>Senecio lautus</i>	70.4	19	542	40	2	10	7					12.2	396.6	0.4	1.6
<i>Olearia axillaris</i>	66.7	18	578	34	4	3	1	7	3			25.9	829.0	0.4	1.6
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	66.7	18	546	41	4	6	5	3				14.4	495.5	0.3	1.2

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
* <i>Lycium ferocissimum</i>	63.0	17	209	32	11	5		1				5.6	94.2	1.7	5.9
<i>Myoporum insulare</i>	63.0	17	202	31	5	3	1	7	1			20.0	203.4	3.5	12.1
<i>Dianella brevicaulis</i>	59.3	16	362	35	5	9	2					7.0	228.2	0.4	1.3
<i>Pittosporum phylliraeoides</i>															
var <i>microcarpa</i>	48.1	13	139	27	8	4		1				4.8	63.0	2.5	6.6
<i>Stipa elegantissima</i>	48.1	13	82	25	1	9	3					7.6	43.0	7.1	18.7
* <i>Carrichtera annua</i>	44.4	12	38	10		4	7	1				11.0	33.6	13.9	34.1
<i>Carpobrotus rossii</i>	33.3	9	540	38	2	4	1	2				7.2	378.2	-0.1	-0.2
<i>Geijera linearifolia</i>	33.3	9	135	19	2	5		1	1			7.7	128.6	1.7	3.2



Figure 95 *Acacia ligulata* Shrublands at quadrat ARN00202 (EPE14591)

Acacia paradoxa Shrublands

Floristic group 17: 13 quadrats

Description:

A very strong group located predominantly on slopes of metasediments. There is a distinctive overstorey with few understorey plants.

Distribution of sites in geomorphic regions:

KIN	KIS	KIE	FLP
1	1	3	8



Number of plant species:

Min	Max	Average
8	31	17.69

Dominant species:

Acacia paradoxa

Indicator species:

Astroloma humifusum

Dominant lifeform/s:

	SC	SB	SA	S
<i>Acacia paradoxa</i>	4	1	5	3

Structural description:

	Freq	O-E/E
Closed shrubland	3	7.84
Mallee	2	8.16
Shrubland	2	0.08
Tall closed shrubland	2	4.00
Low open forest	1	3.34
Low shrubland	1	-0.38
Open shrubland	1	0.07
Tall shrubland	1	-0.08

Landform pattern:

	Freq	O-E/E
Escarpment	5	2.52
Hills	3	9.76
Dunefield	2	-0.48
Low hills	2	3.71
Rises	1	0.83

Surface soil texture:

	Freq	O-E/E
Sandy loam	7	2.52
Sand	6	-0.29

Environmental parameters:

	Min	Max	Mean	SD
Altitude	10	130	57.6	34.0
Slope	1	36	13.1	10.3
Aspect	20	348	157.5	99.6
Bare earth	1	50	13.1	13.8
Litter	2	99	31.6	29.9
Rainfall	500	625	548.1	28.5

Landform element:

	Freq	O-E/E
Hill slope	9	7.43
Cliff	1	0.79
Dune slope	1	-0.44
Dune/consolidated dune	1	-0.38
Hill footslope	1	10.77

Wave energy:

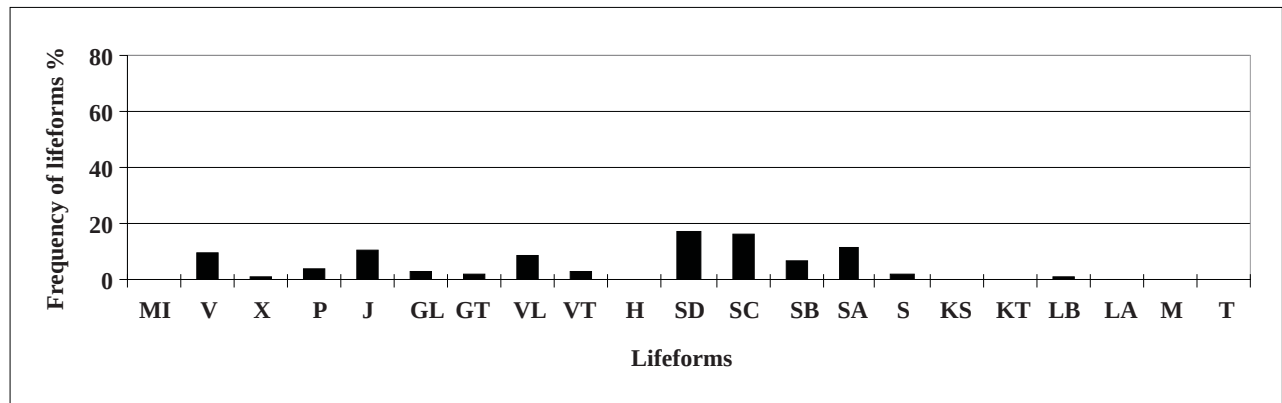
	Freq	O-E/E
H	9	0.0
L	3	1.1
M	1	-0.6

Outcrop lithology and cover:

	Freq	O-E/E
None	3	-0.70
Schist 10–50%	3	34.34
Schist <10%	2	15.49
Calcareous <10%	3	1.84
Granite <10%	1	15.49
Sandstone <10%	1	10.78

Strew lithology size and cover:

	Freq	O-E/E
None	4	-0.55
Schist <10% cobble (51–250 mm)	2	17.32
Schist 10–30% cobble (51–250 mm)	2	53.97
Calcareous <10% cobble (51–250 mm)	1	0.25
Calcareous <10% pebble (5–50 mm)	1	0.21
Calcareous 10–30% cobble (51–250 mm)	1	1.43
Granite <10% pebble (5–50 mm)	1	81.46
Laterite (ironstone) 30–70% cobble (51–250 mm)	1	15.49

Distribution of lifeforms:

Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Acacia paradoxa</i>	100.0	13	45	15		1		5	5	2		33.5	67.4	41.0	231.6
<i>Astroloma humifusum</i>	53.8	7	35	12		6		1				5.0	17.7	22.9	69.6
<i>Gonocarpus meizianus</i>	53.8	7	42	12		4	3					5.0	35.8	10.8	32.9
<i>Dichondra repens</i>	46.2	6	84	14		2	4					5.0	60.8	5.9	15.5
<i>Goodenia amplexans</i>	46.2	6	22	9		6						3.0	16.1	14.7	38.4
<i>Spyridium spathulatum</i>	46.2	6	12	4	1	4		1				4.1	10.7	31.4	81.8
<i>Dianella brevicaulis</i>	38.5	5	362	35	1	3	1					2.6	228.2	0.0	-0.1
<i>Leucopogon parviflorus</i>	38.5	5	392	26		4		1				4.0	662.8	-0.5	-1.1
<i>Olearia ramulosa</i>	38.5	5	84	21	1	2	1	1				4.1	85.8	3.0	6.6
<i>Pultenaea daphnoides</i>	38.5	5	6	2	1	3		1				3.6	4.1	73.2	159.1
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	38.5	5	546	41	1	3	1					2.6	495.5	-0.6	-1.2
<i>Cheilanthes austrotenuifolia</i>	30.8	4	28	10		2	2					3.0	21.2	11.0	19.0
<i>Isolepis marginata</i>	30.8	4	95	22		3	1					2.5	62.3	2.4	4.2
<i>Melaleuca decussata</i>	30.8	4	21	7				1	1	1	1	14.0	22.8	50.9	88.5
<i>Olearia axillaris</i>	30.8	4	578	34		2	1	1				4.0	829.0	-0.6	-1.0



Figure 96 *Acacia paradoxa* Shrublands at quadrat CAP00502 (FLP15982)



Figure 97 *Acacia paradoxa* Shrublands at quadrat KIN14679 (FLP15982)

Eucalyptus cosmophylla Mallee

Floristic group 14: 8 quadrats

Description:

A very strong group located in the north-west of Kangaroo Island from Cape Borda to Snug Cove on very high cliffs of metasediments. An unusual plant community with two species only located in the group and all dominant and subdominant species in less than 1/3 of the groups.

Distribution of sites in geomorphic regions:

KIN

8



Number of plant species:

Min	Max	Average
12	27	22.38

Dominant overstorey species:

Eucalyptus cosmophylla

Dominant understorey species:

Acrotriche depressa

Astroloma conostephioides

Hakea rostrata

Lepidosperma viscidum

Xanthorrhoea semiplana ssp

Indicator species:

Isopogon ceratophyllus

Dominant lifeform/s:

	VL	SD	SC	SB	SA	S	KS	KT	LB
<i>Acrotriche depressa</i>		6	1						
<i>Astroloma conostephioides</i>		8							
<i>Baeckea ramosissima</i> ssp <i>ramosissima</i>		7							
<i>Eucalyptus cosmophylla</i>							6	1	1
<i>Hakea rostrata</i>			2	2	1	3			
<i>Lepidosperma viscidum</i>	7								
<i>Xanthorrhoea semiplana</i> ssp			1	1	5	1			

Structural description:

	Freq	O-E/E
Low mallee	2	4.25
Mallee	2	13.89
Open low mallee	2	5.23
Low open woodland	1	15.75
Open shrubland	1	0.74
Open hummock grassland	0	-1.00

Landform pattern:

	Freq	O-E/E
Escarpment	7	7.02
Plain	1	-0.03

Environmental parameters:

	Min	Max	Mean	SD
Altitude	200	280	236.9	26.3
Slope	0	30	10.6	10.2
Aspect	0	341	200.5	126.5
Bare earth	0	15	5.8	5.0
Litter	5	90	32.5	30.8
Rainfall	625	675	656.2	24.2

Landform element:

	Freq	O-E/E
Hill slope	3	3.56
Cliff	2	4.82
Hill crest	2	21.31
Plain	1	0.11

Surface soil texture:

	Freq	O-E/E
Sandy loam	7	4.72
Sand	1	-0.81

Wave energy:

	Freq	O-E/E
M	8	4.0

Outcrop lithology and cover:

	Freq	O-E/E
None	4	-0.36
Gneiss <10%	2	133.00
Laterite (ironstone) <10%	1	133.00
Quartzite <10%	1	25.80

Strew lithology size and cover:

	Freq	O-E/E
Laterite (ironstone) 10–30% pebble (5–50 mm)	2	66.00
Basalt 30–70% none	1	133.00
Gneiss 30–70% cobble (51–250 mm)	1	133.00
Laterite (Ironstone) >70% pebble (5–50 mm)	1	133.00
Quartz 10–30% pebble (5–50 mm)	1	133.00
Quartzite 10–30% cobble (51–250 mm)	1	43.67
Sandstone 10–30% cobble (51–250 mm)	1	25.80

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Astroloma conostephioides</i>	100.0	8	24	9		6	1		1			7.0	18.5	37.4	167.3
<i>Eucalyptus cosmophylla</i>	100.0	8	15	5		3		2	3			14.5	27.5	52.6	234.9
<i>Hakea rostrata</i>	100.0	8	12	4		4		2	2			12.0	12.8	94.2	421.1
<i>Xanthorrhoea semiplana</i> ssp	100.0	8	28	9				7	1			17.0	43.9	38.3	171.3
<i>Acrotriche depressa</i>	87.5	7	12	5		5	2					4.5	9.0	49.8	194.7
<i>Baeckea ramosissima</i>															
ssp <i>ramosissima</i>	87.5	7	7	1	1	6						3.1	3.1	100.6	393.3
<i>Lepidosperma viscidum</i>	87.5	7	57	17			7					7.0	55.7	11.8	46.0
<i>Acacia spinescens</i>	75.0	6	66	17		5	1					3.5	32.4	10.0	33.4
<i>Isopogon ceratophyllus</i>	75.0	6	8	3	1	4		1				4.1	4.3	95.8	321.3
<i>Melaleuca gibbosa</i>	75.0	6	67	14		3		3				7.5	112.8	5.8	19.3
<i>Daviesia asperula</i>															
ssp <i>asperula</i>	62.5	5	5	1		5						2.5	2.5	100.6	280.9
<i>Allocasuarina verticillata</i>	50.0	4	88	21	1	2		1				3.1	122.3	1.6	3.5
<i>Eucalyptus diversifolia</i>	50.0	4	143	19				4				8.0	323.3	1.5	3.4
<i>Gonocarpus mezeianus</i>	50.0	4	42	12		4						2.0	35.8	4.7	10.4
<i>Petrophile multisecta</i>	50.0	4	9	4		1		2	1			7.5	12.2	61.4	137.3
<i>Pimelea flava</i> ssp <i>dichotoma</i>	50.0	4	19	11		3	1					2.5	10.0	24.4	54.5
<i>Spyridium spathulatum</i>	50.0	4	12	4		2		1	1			6.0	10.7	56.0	125.0
<i>Adenanthos terminalis</i>	37.5	3	8	4	2	1						0.7	2.4	28.6	48.0
<i>Allocasuarina striata</i>	37.5	3	8	3		2		1				3.0	4.3	69.9	117.1
<i>Astroloma humifusum</i>	37.5	3	35	12	1	2						1.1	17.7	5.3	8.9
<i>Banksia marginata</i>	37.5	3	16	7		3						1.5	4.4	33.6	56.4
<i>Calytrix glaberrima</i>	37.5	3	4	2		3						1.5	2.0	75.2	126.0
<i>Dillwynia hispida</i>	37.5	3	12	5		2	1					2.0	6.7	29.3	49.1
<i>Dodonaea viscosa</i>															
ssp <i>spatulata</i>	37.5	3	25	15	1	2						1.1	24.3	3.6	6.0
<i>Hibbertia riparia</i>	37.5	3	32	14		2	1					2.0	28.6	6.1	10.2
<i>Hibbertia</i> sp B	37.5	3	7	4		2	1					2.0	5.0	39.6	66.4
<i>Schoenus breviculmis</i>	37.5	3	17	6		3						1.5	12.6	11.1	18.6



Figure 98 *Eucalyptus cosmophylla* Mallee at quadrat SNU00403 (KIN14639)



Figure 99 *Eucalyptus cosmophylla* Mallee at quadrat SNU00402 (KIN14638)

Eucalyptus rugosa/ Melaleuca lanceolata Mallees

Floristic group 21: 21 quadrats

Description:

A moderately strong to strong group located across the central area of the coastline. There is a distinctive overstorey with few common species of understorey plants.

Distribution of sites in geomorphic regions:

EPS	YOP	KIN	KIS	KIE
10	2	1	3	5



Number of plant species:

Min	Max	Average
7	35	20.81

Dominant overstorey species:

Eucalyptus rugosa

Dominant understorey species:

Acrotriche patula

Melaleuca lanceolata

Subdominant overstorey species:

Eucalyptus diversifolia

Subdominant understorey species:

Lasiopetalum discolor

Dominant lifeform/s:

	SD	SC	SB	SA	S	KS	KT	LB
<i>Acrotriche patula</i>	12	6	1					
<i>Eucalyptus rugosa</i>						10	8	
<i>Melaleuca lanceolata</i>		1	8	6	4			2

Structural description:

	Freq	O-E/E
Low mallee	8	7.01
Very low open forest	6	5.01
Mallee	2	4.67
Open low mallee	2	1.37
Closed low mallee	1	9.21
Open mallee	1	4.67
Very low open woodland	1	3.25

Environmental parameters:

	Min	Max	Mean	SD
Altitude	10	190	66.2	46.4
Slope	0	25	6.5	5.8
Aspect	0	320	130.6	88.7
Bare earth	2	80	25.8	22.8
Litter	0	70	20.8	21.7
Rainfall	450	625	503.6	48.4

Landform pattern:

	Freq	O-E/E
Consolidated dunefield	6	0.28
Hills	4	7.88
Dunefield	3	-0.52
Low hills	3	3.38
Plain	3	0.11
Rises	2	1.27

Landform element:

	Freq	O-E/E
Hill slope	8	3.64
Dune/consolidated dune	5	0.92
Dune slope	4	0.38
Limestone plain	2	2.40
Plain	2	-0.16

Surface soil texture:

	Freq	O-E/E
Sand	15	0.10
Sandy loam	3	-0.07
Sandy clay loam	2	4.67
Loamy sand	1	-0.69

Wave energy:

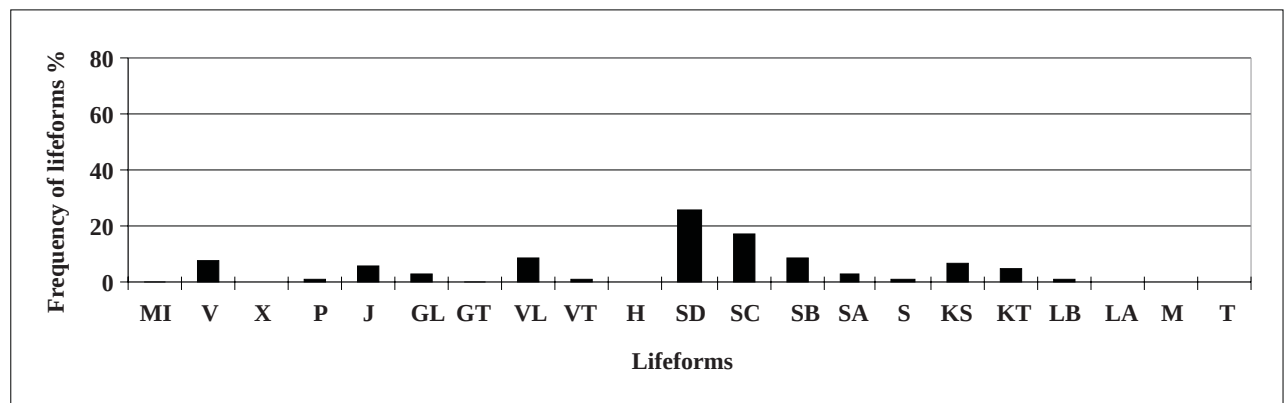
	Freq	O-E/E
H	14	0.0
L	5	1.2
M	2	-0.5

Outcrop lithology and cover:

	Freq	O-E/E
None	11	-0.33
Calcareous <10%	5	1.93
Calcareous >50%	1	1.43
Calcareous 10–50%	1	-0.09
Limestone <10%	1	5.38
Limestone 10–50%	1	9.21
Quartzite <10%	1	9.21

Strew lithology size and cover:

	Freq	O-E/E
None	4	-0.72
Calcareous <10% pebble (5–50 mm)	3	1.25
Calcareous >70% cobble (51–250 mm)	3	12.92
Calcareous 30–70% pebble (5–50 mm)	3	9.94
Calcareous 30–70% cobble (51–250 mm)	2	5.01
Calcareous <10% cobble (51–250 mm)	1	-0.23
Calcareous >70% pebble (5–50 mm)	1	24.52
Calcareous 10–30% pebble (5–50 mm)	1	1.32
Laterite (ironstone) 10–30% pebble (5–50 mm)	1	11.76
Limestone 10–30% cobble (51–250 mm)	1	7.51
Quartzite >70% cobble (51–250 mm)	1	24.52

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Melaleuca lanceolata</i>	100.0	21	348	37			1	9	9	2		54.0	572.1	3.2	15.2
<i>Acrotriche patula</i>	90.5	19	227	33	2	8	4	4	1			19.2	186.8	3.6	15.4
<i>Eucalyptus rugosa</i>	85.7	18	38	9				7	11			47.0	68.3	29.6	120.6
<i>Eucalyptus diversifolia</i>	71.4	15	143	19	1	2	1	5	6			30.1	323.3	3.1	10.7
<i>Lasiopetalum discolor</i>	66.7	14	213	23	1	6	4	1	2			15.1	266.9	1.5	4.8
<i>Acacia triquetra</i>	47.6	10	24	8	3	1	3	2	1			10.8	18.5	24.9	56.5
<i>Dodonaea humilis</i>	47.6	10	46	8	2	5		2	1			9.7	28.9	13.9	31.5
<i>Gahnia deusta</i>	42.9	9	61	12	2	2	2	3				9.2	62.2	5.6	11.4
<i>Eutaxia microphylla</i>															
var <i>microphylla</i>	38.1	8	100	28	3	5						2.8	65.0	0.9	1.7
<i>Pimelea serpyllifolia</i>															
ssp <i>serpyllifolia</i>	38.1	8	359	30	5	3						2.0	268.2	-0.7	-1.2
<i>Pomaderris obcordata</i>	38.1	8	54	11	1	5	1	1				5.6	38.3	5.5	10.0
<i>Templetonia retusa</i>	38.1	8	85	20	1	3	3	1				6.6	86.1	2.4	4.4
<i>Acacia spinescens</i>	33.3	7	66	17	3	3	1					2.8	32.4	2.8	4.5
<i>Acrotriche cordata</i>	33.3	7	118	15		5	2					4.5	116.8	0.7	1.1
<i>Cassytha peninsularis</i>															
var <i>peninsularis</i>	33.3	7	92	24	2	5						2.7	62.4	0.9	1.5
<i>Correa pulchella</i>	33.3	7	87	17	6	1						1.1	50.1	0.0	0.0
<i>Dianella brevicaulis</i>	33.3	7	362	35	4	2	1					2.4	228.2	-0.5	-0.8
<i>Eucalyptus oleosa</i>	33.3	7	29	8	3	1	1	1	1			6.8	42.1	6.2	9.8
<i>Exocarpos aphyllus</i>	33.3	7	179	34	3		3	1				5.3	77.3	2.0	3.2
<i>Hydrocotyle capillaris</i>	33.3	7	87	25	1	5	1					3.6	55.7	1.9	3.0



Figure 100 *Eucalyptus rugosa*/ *Melaleuca lanceolata* Mallees at quadrat DES00304 (KIS14727)



Figure 101 *Eucalyptus rugosa*/ *Melaleuca lanceolata* Mallees at quadrat PEN00303 (KIE14751)

Eucalyptus sp/ *Melaleuca lanceolata*/ *Melaleuca uncinata* Low mallee

Floristic group 9: 9 quadrats

Description:

A weak group located in adjacent mapsheets on the eastern coast of Eyre Peninsula. All groups have either or both of the subdominant *Melaleuca* species with eight quadrats having high abundances of *Eucalyptus* species. All quadrats are in flat to nearly flat areas with a moderately high number of perennial species.

Distribution of sites in geomorphic regions:

EPS	EPE
6	3



Number of plant species:

Min	Max	Average
14	38	27.22

Dominant understorey species:

Tetragonia implexicoma

Subdominant overstorey:

Melaleuca lanceolata

Melaleuca uncinata

Indicator species:

Leptospermum coriaceum

Triodia scariosa ssp *scariosa*

Structural description:

	Freq	O-E/E
Open low mallee	4	10.08
Low mallee	3	6.01
Tall closed shrubland	1	2.61
Very low open forest	1	1.34

Environmental parameters:

	Min	Max	Mean	SD
Altitude	5	28	15.9	7.0
Slope	0	2	0.7	0.9
Aspect	0	310	63.3	102.2
Bare earth	0	60	13.0	18.3
Litter	5	95	56.7	29.6
Rainfall	350	500	438.9	69.8

Dominant lifeform/s:

	V	P	SD	SC	SB	SA	S	LB
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>		7						
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>			6	1				
<i>Melaleuca lanceolata</i>				1		2		4
<i>Melaleuca uncinata</i>					2	1	4	
<i>Tetragonia implexicoma</i>	8							

Landform pattern:

	Freq	O-E/E
Plain	4	2.45
Rises	3	6.94
Sand plain	2	78.41

Landform element:

	Freq	O-E/E
Sandy plain	5	58.50
Hill slope	2	1.70
Limestone plain	1	2.97
Plain	1	-0.02

Surface soil texture:

	Freq	O-E/E
Loamy sand	4	1.91
Clay loam	2	6.01
Medium clay	1	7.51
Sand	1	-0.83
Sandy clay loam	1	5.62

Wave energy:

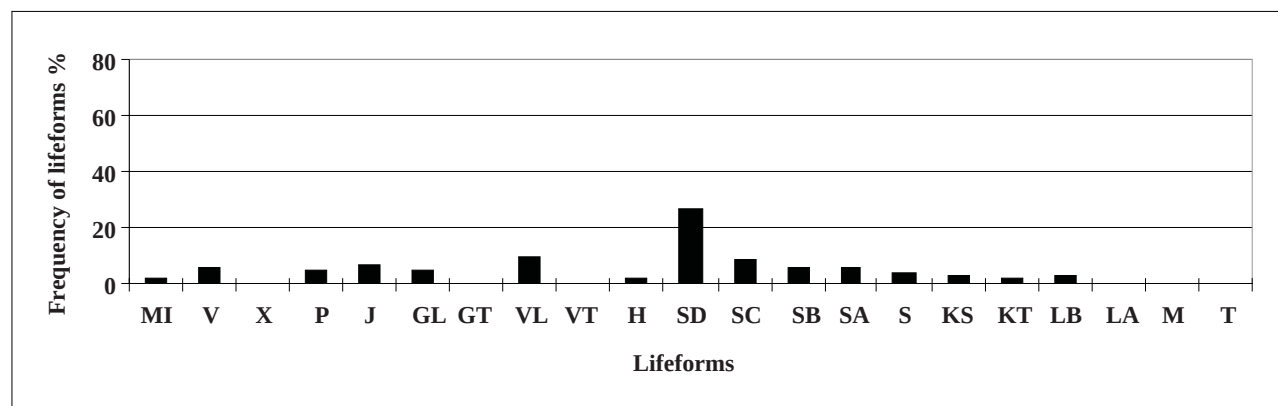
	Freq	O-E/E
H	6	0.0
M	3	0.7

Outcrop lithology and cover:

	Freq	O-E/E
None	7.00	0.00
Granite <10%	1	22.82
Limestone <10%	1	13.89

Strew lithology size and cover:

	Freq	O-E/E
None	5	-0.18
Calcareous <10% cobble (51–250 mm)	2	2.61
Limestone <10% pebble (5–50 mm)	1	118.11
Limestone 10–30% boulder (gt 250 mm)	1	118.11

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Tetragonia implexicoma</i>	88.9	8	542	35			8					8.0	444.0	0.2	0.7
<i>Disphyma crassifolium</i>															
<i>ssp clavellatum</i>	77.8	7	140	24		1	6					6.5	101.8	3.3	9.3
<i>Enchylaena tomentosa</i>															
<i>var tomentosa</i>	77.8	7	128	29		1	6					6.5	71.4	5.1	14.5
<i>Melaleuca lanceolata</i>	77.8	7	348	37			3	3	1			12.0	572.1	0.4	1.2
<i>Melaleuca uncinata</i>	77.8	7	18	6			3	2	1		1	15.0	40.2	23.9	68.4
<i>Amyema melaleucaae</i>	55.6	5	42	15	5							0.5	19.5	0.7	1.5
<i>Dianella revoluta</i>															
<i>var revoluta</i>	55.6	5	61	25			5					5.0	36.7	8.1	16.6
<i>Leptospermum coriaceum</i>	55.6	5	10	3			1	4				9.0	18.1	32.2	65.8
<i>Pimelea stricta</i>	55.6	5	23	11			5					5.0	13.3	24.1	49.3
<i>Stipa elegantissima</i>	55.6	5	82	25	1	1	3					3.6	43.0	4.6	9.4
<i>Triodia scariosa</i>															
<i>ssp scariosa</i>	55.6	5	10	3	1		2	2				6.1	16.2	24.2	49.3
<i>Calytrix involucrata</i>	44.4	4	5	2			4					4.0	4.5	58.4	95.4
<i>Correa reflexa</i>	44.4	4	80	22			4					4.0	66.3	3.0	5.0
<i>Dianella brevicaulis</i>	44.4	4	362	35			3	1				5.0	228.2	0.5	0.8
<i>Eucalyptus angulosa</i>	44.4	4	21	9				1	3			11.0	41.8	16.6	27.1
<i>Eucalyptus dumosa</i> complex	44.4	4	26	7	1			2		1		8.1	29.2	17.5	28.7
<i>Gahnia deusta</i>	44.4	4	61	12			2	2				6.0	62.2	5.5	8.9
<i>Hakea cycloptera</i>	44.4	4	15	9	1		3					3.1	6.6	30.4	49.6
<i>Hibbertia riparia</i>	44.4	4	32	14			3	1				5.0	28.6	10.7	17.5
<i>Hybanthus floribundus</i>															
<i>ssp floribundus</i>	44.4	4	5	2	1		3					3.1	3.2	63.8	104.1

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Leucopogon cordifolius</i>	44.4	4	4	1			4					4.0	4.0	65.9	107.5
<i>Phebalium bullatum</i>	44.4	4	4	1		1	3					3.5	3.5	65.9	107.5
<i>Astroloma conostephioides</i>	33.3	3	24	9			3					3.0	18.5	9.8	12.1
<i>Baeckea crassifolia</i>	33.3	3	5	3			3					3.0	4.1	47.9	58.7
<i>Eucalyptus gracilis</i>	33.3	3	27	11			1	1	1			6.0	36.2	10.1	12.3
<i>Exocarpos aphyllus</i>	33.3	3	179	34	2		1					1.2	77.3	0.0	0.0
<i>Gonocarpus mezianus</i>	33.3	3	42	12			3					3.0	35.8	4.6	5.6
<i>Helichrysum leucopsidium</i>	33.3	3	196	32		1	2					2.5	123.7	0.4	0.4
<i>Lasiopetalum behrii</i>	33.3	3	7	4	2		1					1.2	2.4	32.4	39.7
<i>Lasiopetalum discolor</i>	33.3	3	213	23			3					3.0	266.9	-0.2	-0.3
<i>Lepidosperma viscidum</i>	33.3	3	57	17			2	1				4.0	55.7	3.8	4.7
<i>Lomandra leucocephala</i>															
ssp <i>robusta</i>	33.3	3	6	3			3					3.0	4.1	47.9	58.7
<i>Melaleuca acuminata</i>	33.3	3	12	6	1			2				4.1	12.4	21.1	25.8
* <i>Mesembryanthemum</i>															
<i>crystallinum</i>	33.3	3	59	17		2	1					2.0	38.2	2.5	3.1
<i>Pimelea serpyllifolia</i>															
ssp <i>serpyllifolia</i>	33.3	3	359	30	1		2					2.1	268.2	-0.5	-0.6
<i>Santalum acuminatum</i>	33.3	3	45	19			2	1				4.0	31.0	7.6	9.3
<i>Schoenus racemosus</i>	33.3	3	3	1			1	1	1			6.0	6.0	65.9	80.7
<i>Senecio lautus</i>	33.3	3	542	40		1	2					2.5	396.6	-0.6	-0.7
<i>Spyridium leucopogon</i>	33.3	3	3	1			3					3.0	3.0	65.9	80.7
<i>Stipa exilis</i>	33.3	3	75	25			3					3.0	49.5	3.1	3.7
<i>Stipa hemipogon</i>	33.3	3	11	5			3					3.0	7.2	26.9	32.9
<i>Templetonia retusa</i>	33.3	3	85	20	1		2					2.1	86.1	0.6	0.8



Figure 102 *Eucalyptus* sp/ *Melaleuca lanceolata*/ *Melaleuca uncinata* Low mallee
at quadrat BAN00201 (EPS13232), photo Planning SA, Survey 80

Eucalyptus incrassata Mallee

Floristic group 5: 2 quadrats

Description:

A small but distinctive group which has a combination of high abundance of the overstorey species with an understorey of the three other dominant or indicator species. Both quadrats are in one site of the Arno mapsheet.

Distribution of sites in geomorphic regions:

EPE

2



Number of plant species:

Min	Max	Average
7	11	9.00

Dominant overstorey species:

Eucalyptus incrassata

Dominant understorey species:

*Lycium ferocissimum
Pittosporum phylliraeoides var microcarpa

Indicator species

Rhagodia preissii ssp preissii

Dominant lifeform/s:

	SB	SC	SA	KS	KT	LB
Eucalyptus incrassata				1	1	
*Lycium ferocissimum	2					
Pittosporum phylliraeoides var microcarpa			1			1
Rhagodia preissii ssp preissii	1	1				

Structural description:

	Freq	O–E/E
Low mallee	1	9.51
Mallee	1	28.78

Environmental parameters:

	Min	Max	Mean	SD
Altitude	5	10	7.5	2.5
Slope	1	2	1.5	0.5
Aspect	10	110	60.0	50.0
Bare earth	25	70	47.5	22.5
Litter	0	5	2.5	2.5
Rainfall	350	350	350.0	0.0

Landform pattern:

	Freq	O–E/E
Consolidated dunefield	2	3.47

Landform element:

	Freq	O–E/E
Cliff	1	10.64
Dune/consolidated dune	1	3.03

Surface soil texture:

	Freq	O–E/E
Sand	2	0.55

Wave energy:

	Freq	O–E/E
M	2	4.0

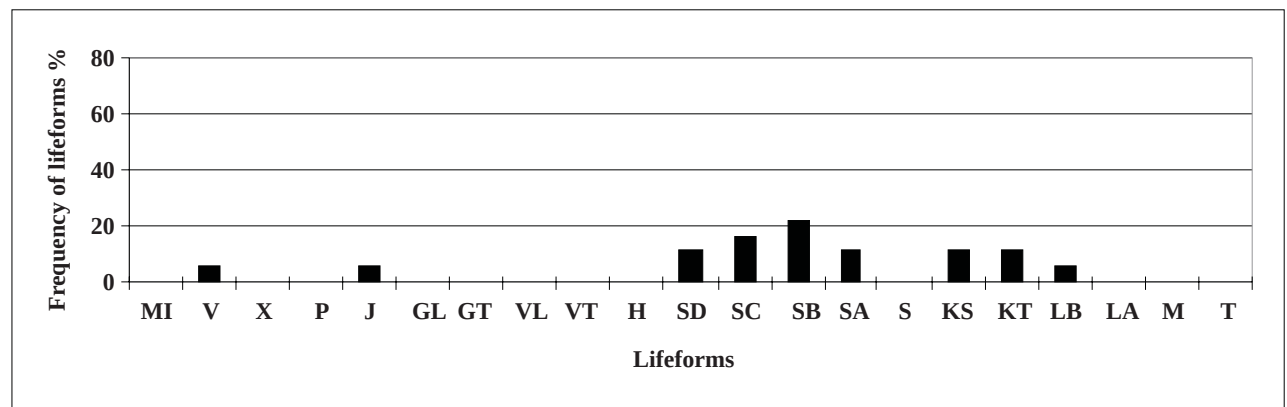
Outcrop lithology and cover:

None

Strew lithology size and cover:

None

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Eucalyptus incrassata</i>	100.0	2	8	5					1	1		7.0	15.6	437.6	4861.9
* <i>Lycium ferocissimum</i>	100.0	2	209	32	1	1						0.6	94.2	5.2	58.1
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	100.0	2	139	27	1	1						0.6	63.0	8.3	92.3
<i>Rhagodia preissii</i> ssp <i>preissii</i>	100.0	2	18	6		2						1.0	8.9	108.8	1209.1
<i>Eucalyptus gracilis</i>	50.0	1	27	11					1			3.0	36.2	80.0	444.4
<i>Eucalyptus socialis</i>	50.0	1	2	2				1				2.0	3.0	650.6	3614.4
<i>Geijera linearifolia</i>	50.0	1	135	19		1						0.5	128.6	2.8	15.6
<i>Helichrysum leucopsidium</i>	50.0	1	196	32			1					1.0	123.7	6.9	38.3
<i>Melaleuca lanceolata</i>	50.0	1	348	37	1							0.1	572.1	-0.8	-4.6
<i>Melaleuca uncinata</i>	50.0	1	18	6	1							0.1	40.2	1.4	8.0
<i>Olearia axillaris</i>	50.0	1	578	34		1						0.5	829.0	-0.4	-2.3
<i>Tetragonia implexicoma</i>	50.0	1	542	35		1						0.5	444.0	0.1	0.6
<i>Threlkeldia diffusa</i>	50.0	1	453	37		1						0.5	321.7	0.5	2.9
<i>Thryptomene micrantha</i>	50.0	1	3	3	1							0.1	4.1	22.8	126.9



Figure 103 *Eucalyptus incrassata* Mallee at quadrat ARN00102 (EPE14577)

Eucalyptus diversifolia/ Clematis microphylla Mallees

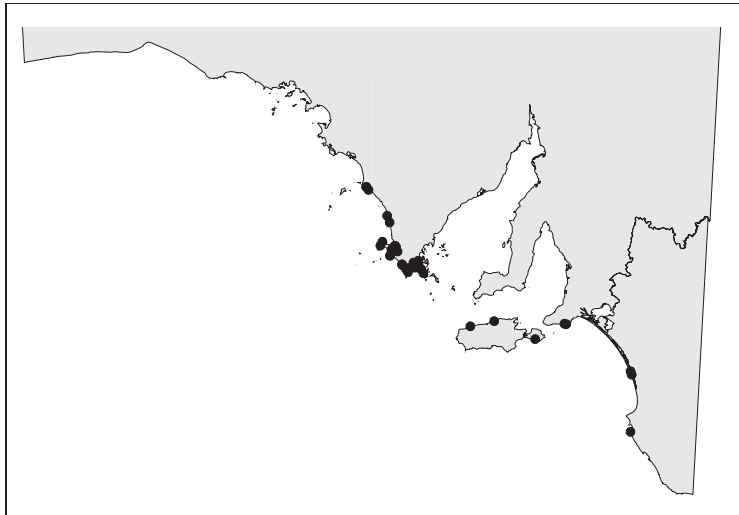
Floristic group 23: 37 quadrats

Description:

A very strong group scattered along the eastern part of the coastline on predominantly Quaternary dunefields. There is a distinctive overstorey with few understorey species in common

Distribution of sites in geomorphic regions:

EPW	EPS	KIN	KIE	FLP	COO	SOE
5	24	2	1	2	2	1



Number of plant species:

Min	Max	Average
4	38	17.89

Dominant overstorey species:

Eucalyptus diversifolia

Dominant understorey species:

Clematis microphylla

Subdominant species:

Melaleuca lanceolata

Dominant lifeform/s:

	V	KS	KT
<i>Clematis microphylla</i>	33		
<i>Eucalyptus diversifolia</i>		8	29

Structural description:

	Freq	O-E/E
Very low closed forest	12	17.30
Very low open forest	9	4.11
Low mallee	6	2.41
Mallee	4	5.44
Closed low mallee	3	16.38
Closed mallee	2	18.32
Open mallee	1	2.22

Landform pattern:

	Freq	O-E/E
Dunefield	8	-0.27
Plain	7	0.47
Rises	7	3.51
Low hills	6	3.97
Consolidated dunefield	5	-0.40
Hills	3	2.78
Plateau	1	4.79

Environmental parameters:

	Min	Max	Mean	SD
Altitude	10	132	41.2	26.9
Slope	0	40	5.2	7.1
Aspect	0	360	154.9	118.1
Bare earth	0	90	21.7	25.6
Litter	0	95	25.5	29.0
Rainfall	450	675	506.8	61.4

Landform element:

	Freq	O-E/E
Dune/consolidated dune	9	0.96
Hill slope	9	1.96
Hill crest	5	11.06
Plain	4	-0.04
Dune crest	2	-0.17
Limestone plain	2	0.93
Dune footslope	1	-0.55
Dune slope	1	-0.80
Hill footslope	1	3.14
Interdune low	1	-0.04
Other	1	4.79
Rock outcrop (on plain)	1	8.65

Surface soil texture:

	Freq	O-E/E
Sand	19	-0.21
Loamy sand	7	0.24
Sandy loam	5	-0.12
Loam	3	2.62
Clay loam	2	0.70
Clay loam, sandy	1	6.24
Medium clay	1	1.07

Wave energy:

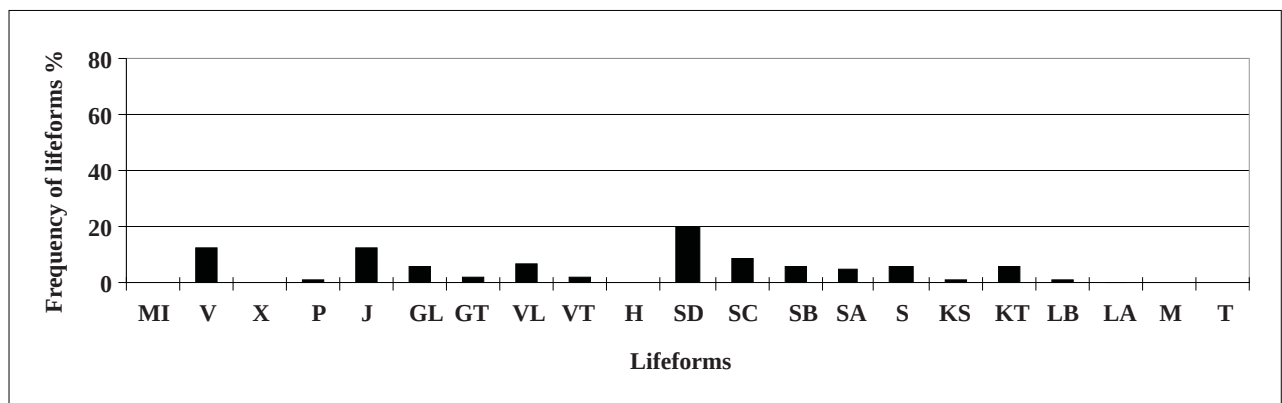
	Freq	O-E/E
H	34	0.3
M	2	-0.7
L	1	-0.8

Outcrop lithology and cover:

	Freq	O-E/E
None	18	-0.37
Calcareous <10%	6	1.00
Calcareous 10–50%	5	1.59
Limestone 10–50%	4	22.18
Limestone <10%	3	9.86
Calcareous >50%	1	0.38

Strew lithology size and cover:

	Freq	O-E/E
None	13	-0.48
Calcareous <10% cobble (51–250 mm)	6	1.63
Limestone 10–30% cobble (51–250 mm)	4	18.32
Calcareous 10–30% cobble (51–250 mm)	3	1.56
Calcareous <10% pebble (5–50 mm)	2	-0.15
Limestone <10% cobble (51–250 mm)	2	8.66
Calcareous <10% boulder (gt 250 mm)	1	6.24
Calcareous 10–30% boulder (gt 250 mm)	1	27.97
Calcareous 10–30% pebble (5–50 mm)	1	0.32
Calcareous 30–70% pebble (5–50 mm)	1	1.07
Laterite (ironstone) <10% pebble (5–50 mm)	1	27.97
Limestone <10% boulder (gt 250 mm)	1	27.97
Schist <10% cobble (51–250 mm)	1	2.22

Distribution of lifeforms:**Plant species:**

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Eucalyptus diversifolia</i>	100.0	37	143	19				3	10	17	7	139.0	323.3	12.5	69.8
<i>Clematis microphylla</i>	89.2	33	350	31	9	14	9	1				18.9	235.3	1.5	7.6
<i>Leucopogon parviflorus</i>	70.3	26	392	26	7	9	5	5				20.2	662.8	0.0	-0.2
<i>Melaleuca lanceolata</i>	67.6	25	348	37	4	6		9	3	3		42.4	572.1	1.3	5.0
<i>Dianella brevicaulis</i>	51.4	19	362	35	5	8	6					10.5	228.2	0.4	1.3
<i>Acrotriche patula</i>	48.6	18	227	33	9	2	5	2				10.9	186.8	0.8	2.3
<i>Olearia axillaris</i>	48.6	18	578	34	8	1	1	7	1			19.3	829.0	-0.3	-0.7
<i>Hardenbergia violacea</i>	40.5	15	42	9	8	5	2					5.3	12.4	12.4	28.1
<i>Lasiopetalum discolor</i>	40.5	15	213	23	5	1	2	5	2			19.0	266.9	1.2	2.8
<i>Stipa flavescens</i>	40.5	15	186	30	4	6	5					8.4	114.4	1.3	3.0
<i>Rhagodia candolleana</i>															
<i>ssp candolleana</i>	37.8	14	546	41	1	6	4	3				13.1	495.5	-0.2	-0.4
<i>Gahnia deusta</i>	32.4	12	61	12	6	1	2	3				9.1	62.2	3.6	6.5



Figure 104 *Eucalyptus diversifolia/ Clematis microphylla* Mallees at quadrat WAN00202 (EPS15887)

Eucalyptus diversifolia/ Gonocarpus mezianus Mallee

Floristic group 13: 9 quadrats

Description:

A moderately strong group located predominantly on cliffs. The connecting species is a herb but there are high abundances of eucalypts throughout the group with a high number of understorey plant species

Distribution of sites in geomorphic regions:

EPS FLP

4 5



Number of plant species:

Min	Max	Average
21	62	41.78

Dominant overstorey species:

Eucalyptus diversifolia

Dominant understorey species:

Danthonia setacea var *setacea*
Gonocarpus mezianus
Schoenus breviculmis

Subdominant species:

Acacia pycnantha
Acrotriche cordata
Hibbertia riparia (glabriuscula)
Xanthorrhoea semiplana ssp

Indicator species:

Brachyloma ericoides ssp *ericoides*

Dominant lifeform/s:

	GL	VL	J	KS	KT
<i>Danthonia setacea</i> var <i>setacea</i>	8				
<i>Eucalyptus diversifolia</i>				3	5
<i>Gonocarpus mezianus</i>			9		
<i>Schoenus breviculmis</i>		8			

Structural description:

	Freq	O-E/E
Very low open forest	3	6.01
Open low mallee	2	4.54
Low mallee	1	1.34
Mallee	1	5.62
Open mallee	1	12.23
Very low open woodland	1	8.93

Landform pattern:

	Freq	O-E/E
Plain	5	3.32
Escarpment	4	3.07

Environmental parameters:

	Min	Max	Mean	SD
Altitude	10	110	70.6	29.3
Slope	0	16	6.4	5.7
Aspect	0	314	107.1	95.8
Bare earth	0	50	25.0	17.2
Litter	8	90	25.3	25.9
Rainfall	500	600	572.2	34.3

Landform element:

	Freq	O-E/E
Plain	5	3.92
Hill slope	3	3.06
Limestone plain	1	2.97

Surface soil texture:

	Freq	O-E/E
Sand	6	0.03
Light clay	1	8.93
Sandy loam	1	-0.27
Silty loam	1	38.70

Wave energy:

	Freq	O-E/E
H	9	0.4

Outcrop lithology and cover:

	Freq	O-E/E
None	2	-0.71
Calcareous <10%	2	1.74
Schist 10–50%	2	33.03
Limestone <10%	1	13.89
Limestone >50%	1	118.11
Schist <10%	1	10.91

Strew lithology size and cover:

	Freq	O-E/E
None	3	-0.51
Calcareous <10% boulder (gt 250 mm)	1	28.78
Calcareous <10% cobble (51–250 mm)	1	0.80
Limestone 10–30% cobble (51–250 mm)	1	18.85
Quartz <10% pebble (5–50 mm)	1	58.56
Schist <10% boulder (gt 250 mm)	1	38.70
Schist 10–30% boulder (gt 250 mm)	1	58.56

Distribution of lifeforms:

Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Gonocarpus mezeianus</i>	100.0	9	42	12		3	4	2				9.5	35.8	15.9	37.8
<i>Danthonia setacea</i> var <i>setacea</i>	88.9	8	92	30	2	5	1					3.7	57.2	3.1	6.6
<i>Eucalyptus diversifolia</i>	88.9	8	143	19				5	3			19.0	323.3	2.7	5.8
<i>Schoenus breviculmis</i>	88.9	8	17	6		3	4	1				7.5	12.6	36.9	78.1
<i>Astroloma humifusum</i>	77.8	7	35	12	3	4						2.3	17.7	7.3	13.5
<i>Hibbertia riparia</i> (glabriuscula)	77.8	7	21	9	1	1		3	2			12.6	20.0	39.1	72.4
<i>Calytrix tetragona</i>	66.7	6	80	16	1	5						2.6	77.6	1.1	1.8
<i>Xanthorrhoea semiplana</i> ssp	66.7	6	28	9		3		1	2			9.5	43.9	12.8	20.3
<i>Acacia pycnantha</i>	55.6	5	16	10	1	3		1				3.6	13.1	16.5	21.8
<i>Acrotriche cordata</i>	55.6	5	118	15	1	2		2				5.1	116.8	1.8	2.4
<i>Brachyloma ericoides</i>															
ssp <i>ericoides</i>	55.6	5	5	1		2		2	1			8.0	8.0	62.7	82.9
<i>Cassytha glabella</i> forma <i>dispar</i>	55.6	5	60	17	2	2	1					2.2	38.6	2.6	3.5
<i>Correa pulchella</i>	55.6	5	87	17		5						2.5	50.1	2.2	2.9
<i>Goodenia amplexans</i>	55.6	5	22	9	1	3	1					2.6	16.1	9.3	12.3
<i>Goodenia blackiana</i>	55.6	5	24	5	1	3	1					2.6	12.5	12.2	16.2
<i>Grevillea ilicifolia</i>															
var <i>ilicifolia</i>	55.6	5	10	5	3	2						1.3	3.1	25.7	34.0
<i>Lepidosperma carphoides</i>	55.6	5	11	6	1	2	2					3.1	6.3	30.3	40.1
<i>Lepidosperma viscidum</i>	55.6	5	57	17		3	2					3.5	55.7	3.0	4.0
<i>Olearia ramulosa</i>	55.6	5	84	21		3		2				5.5	85.8	3.1	4.1
<i>Pultenaea trinervis</i>	55.6	5	5	1	1	4						2.1	2.1	62.7	82.9

Plant species cont.:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Acacia myrtifolia</i>															
var <i>myrtifolia</i>	44.4	4	13	5	1	3						1.6	7.0	13.5	14.3
<i>Acacia spinescens</i>	44.4	4	66	17	1	3						1.6	32.4	2.1	2.3
<i>Allocasuarina muelleriana</i>															
ssp <i>muelleriana</i>	44.4	4	9	3	3	1						0.8	5.8	7.8	8.2
<i>Baeckea behrii</i>	44.4	4	7	3		3	1					2.5	5.1	30.2	32.0
<i>Cryptandra leucophracta</i>	44.4	4	5	2	3	1						0.8	1.8	27.3	28.9
<i>Dampiera dysantha</i>	44.4	4	5	2		3	1					2.5	2.6	60.2	63.7
<i>Dianella brevicaulis</i>	44.4	4	362	35	1	3						1.6	228.2	-0.6	-0.6
<i>Dillwynia hispida</i>	44.4	4	12	5		4						2.0	6.7	18.0	19.0
<i>Eucalyptus cosmophylla</i>	44.4	4	15	5		1		3				6.5	27.5	14.0	14.9
<i>Eutaxia microphylla</i>															
var <i>microphylla</i>	44.4	4	100	28		2	1	1				4.0	65.0	2.9	3.1
<i>Hakea cycloptera</i>	44.4	4	15	9	1	3						1.6	6.6	14.4	15.3
<i>Hakea rugosa</i>	44.4	4	13	6		4						2.0	5.0	24.5	25.9
<i>Lasiopetalum baueri</i>	44.4	4	17	7		3		1				3.5	6.9	31.3	33.1
<i>Leucopogon parviflorus</i>	44.4	4	392	26		4						2.0	662.8	-0.8	-0.9
<i>Lomandra collina</i>	44.4	4	47	11	1	3						1.6	27.6	2.7	2.8
<i>Melaleuca decussata</i>	44.4	4	21	7	1	2		1				3.1	22.8	7.7	8.1
<i>Melaleuca lanceolata</i>	44.4	4	348	37		2		2				5.0	572.1	-0.4	-0.5
<i>Opercularia turpis</i>	44.4	4	49	15	1	3						1.6	25.5	3.0	3.2
<i>Poa poiformis</i>	44.4	4	139	22			4					4.0	119.8	1.1	1.2
<i>Pultenaea canaliculata</i>															
var <i>latifolia</i>	44.4	4	8	3		1		2	1			7.5	11.5	40.5	42.9
<i>Spyridium coactilifolium</i>	44.4	4	8	3		3		1				3.5	7.5	28.7	30.4
<i>Stipa mollis</i>	44.4	4	10	3	2	1	1					1.7	6.7	15.2	16.0
<i>Allocasuarina striata</i>	33.3	3	8	3	1	2						1.1	4.3	15.3	12.1
<i>Chrysocephalum apiculatum</i>	33.3	3	35	10	1	1	1					1.6	19.8	4.1	3.3
<i>Correa reflexa</i>	33.3	3	80	22	3							0.3	66.3	-0.7	-0.6
<i>Daviesia brevifolia</i>	33.3	3	4	2	1	2						1.1	1.6	42.8	33.9
<i>Dianella revoluta</i> var <i>revoluta</i>	33.3	3	61	25		2	1					2.0	36.7	2.5	2.0
<i>Grevillea lavandulacea</i> var	33.3	3	7	3	1	2						1.1	2.8	24.0	19.1
<i>Homoranthus homoranthoides</i>	33.3	3	4	2		2	1					2.0	2.1	59.6	47.3
<i>Isolepis marginata</i>	33.3	3	95	22		2	1					2.0	62.3	1.0	0.8
<i>Lomandra multiflora</i> ssp <i>dura</i>	33.3	3	4	2		1	2					2.5	3.5	44.5	35.3
<i>Lomandra sororia</i>	33.3	3	3	1	1	1	1					1.6	1.6	62.7	49.7
<i>Melaleuca uncinata</i>	33.3	3	18	6	1	1		1				2.6	40.2	3.1	2.5
<i>Prostanthera chlorantha</i>	33.3	3	4	2		2		1				3.0	3.1	60.6	48.1
<i>Senecio lautus</i>	33.3	3	542	40		2	1					2.0	396.6	-0.7	-0.5
<i>Senecio odoratus</i>															
var <i>obtusifolius</i>	33.3	3	4	2		3						1.5	2.0	46.7	37.1



Figure 105 *Eucalyptus diversifolia/ Gonocarpus mezeianus* Mallee at quadrat ENC00201 (FLP15932)



Figure 106 *Eucalyptus diversifolia/ Gonocarpus mezeianus* Mallee at quadrat ENC00106 (FLP15931)

Eucalyptus cneorifolia/ Orthrosanthus multiflorus Mallee

Floristic group 15: 5 quadrats

Description:

A weak group connected by a sedge species located predominantly on the metasediments of the northern coast of Kangaroo Island. Eucalypt species are found in abundance on all quadrats with an understorey of other species.

Distribution of sites in geomorphic regions:

KIN	KIS	KIE
1	1	3



Number of plant species:

Min	Max	Average
7	23	14.20

Dominant species:

Orthrosanthus multiflorus

Subdominant species:

Correa reflexa
Eucalyptus cneorifolia
Melaleuca lanceolata

Dominant lifeform/s:

	VL
<i>Orthrosanthus multiflorus</i>	5

Structural description:

	Freq	O-E/E
Closed mallee	1	70.47
Open low mallee	1	3.99
Shrubland	1	0.40
Tall open forest	1	213.40
Woodland	1	106.20

Environmental parameters:

	Min	Max	Mean	SD
Altitude	20	90	54.0	22.5
Slope	0	5	2.8	2.3
Aspect	0	360	96.0	137.1
Bare earth	0	50	21.0	18.0
Litter	2	70	29.4	26.5
Rainfall	500	625	560.0	56.1

Landform pattern:

	Freq	O-E/E
Rises	3	13.29
Low hills	1	5.13
Plain	1	0.55

Landform element:

	Freq	O-E/E
Hill slope	2	3.87
Drainage depression	1	213.20
Hill crest	1	16.85
Plain	1	0.77

Surface soil texture:

	Freq	O-E/E
Sandy loam	3	2.92
Sand	2	-0.38

Wave energy:

	Freq	O-E/E
L	3	4.5
H	1	-0.7
M	1	0.0

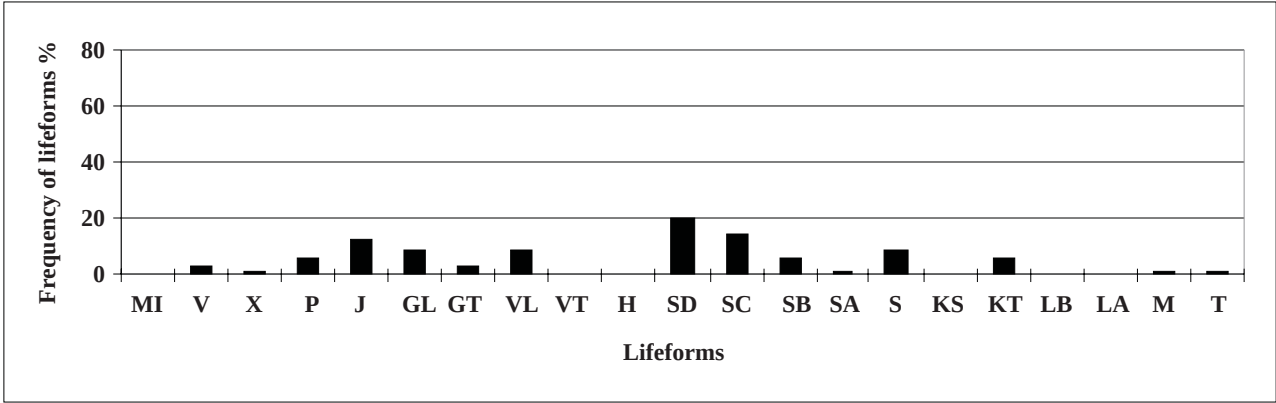
Outcrop lithology and cover:

None

Strew lithology size and cover:

	Freq	O-E/E
None	4	0.18
Laterite (ironstone) 10–30% pebble (5–50 mm)	1	52.60

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Orthrosanthus multiflorus</i>	100.0	5	36	14		4		1				4.0	18.0	66.2	465.9
<i>Choretrum glomeratum</i> var	60.0	3	8	4	2	1						0.7	1.2	175.3	740.6
<i>Correa reflexa</i>	60.0	3	80	22	1	1		1				2.6	66.3	10.9	45.8
<i>Eucalyptus cneorifolia</i>	60.0	3	4	2		1			1	1		7.5	8.0	282.3	1192.8
<i>Melaleuca lanceolata</i>	60.0	3	348	37	1		1	1				3.1	572.1	0.6	2.7
<i>Acacia paradoxa</i>	40.0	2	45	15		1		1				2.5	67.4	10.2	28.8
<i>Acrotriche depressa</i>	40.0	2	12	5		1		1				2.5	9.0	82.9	233.6
<i>Astroloma humifusum</i>	40.0	2	35	12		1		1				2.5	17.7	41.7	117.4
<i>Dichondra repens</i>	40.0	2	84	14		2						1.0	60.8	4.0	11.2
<i>Eucalyptus cladocalyx</i>	40.0	2	4	3					2			6.0	8.1	222.8	627.7
<i>Galium australe</i>	40.0	2	4	3			2					2.0	3.5	171.7	483.6
<i>Lasiopetalum schulzenii</i>	40.0	2	32	12	1		1					1.1	26.0	11.8	33.2
<i>Stipa elegantissima</i>	40.0	2	82	25	2							0.2	43.0	0.4	1.1
<i>Thryptomene ericaea</i>	40.0	2	3	2		1				1		4.5	5.0	271.0	763.3



Figure 107 *Eucalyptus cneorifolia*/ *Orthrosanthus multiflorus* Mallee at quadrat KIN00401 (KIE14675)



Figure 108 *Eucalyptus cneorifolia*/ *Orthrosanthus multiflorus* Mallee at quadrat WIO00204 (KIE14733)

Melaleuca brevifolia/ Gahnia filum Forest

Floristic group 7: 3 quadrats

Description:

A small strong group located in swampy, relatively high flat areas of southern Eyre Peninsula. There are high abundances of the dominant overstorey species with many other species in common between the few quadrats.

Distribution of sites in geomorphic regions:

EPS

3



Number of plant species:

Min	Max	Average
5	20	11.00

Dominant overstorey species:

Melaleuca brevifolia

Dominant understorey species:

Gahnia filum

Subdominant species:

Leucopogon parviflorus

Indicator species:

Samolus repens

Dominant lifeform/s:

	VT	S	LB	LA
<i>Gahnia filum</i>	3			
<i>Melaleuca brevifolia</i>		1	1	1

Structural description:

	Freq	O-E/E
Low open forest	1	17.81
Tall closed shrubland	1	9.83
Very low closed forest	1	17.81

Landform pattern:

	Freq	O-E/E
Plain	2	4.18
Rises	1	6.94

Surface soil texture:

	Freq	O-E/E
Sandy loam	2	3.36
Loamy sand	1	1.18

Outcrop lithology and cover:

None

Environmental parameters:

	Min	Max	Mean	SD
Altitude	10	20	13.3	4.7
Slope	0	0	0.0	0.0
Aspect	0	0	0.0	0.0
Bare earth	0	40	15.0	17.8
Litter	5	99	38.0	43.2
Rainfall	450	500	466.7	23.6

Landform element:

	Freq	O-E/E
Flat	2	36.58
Saltlake	1	88.25

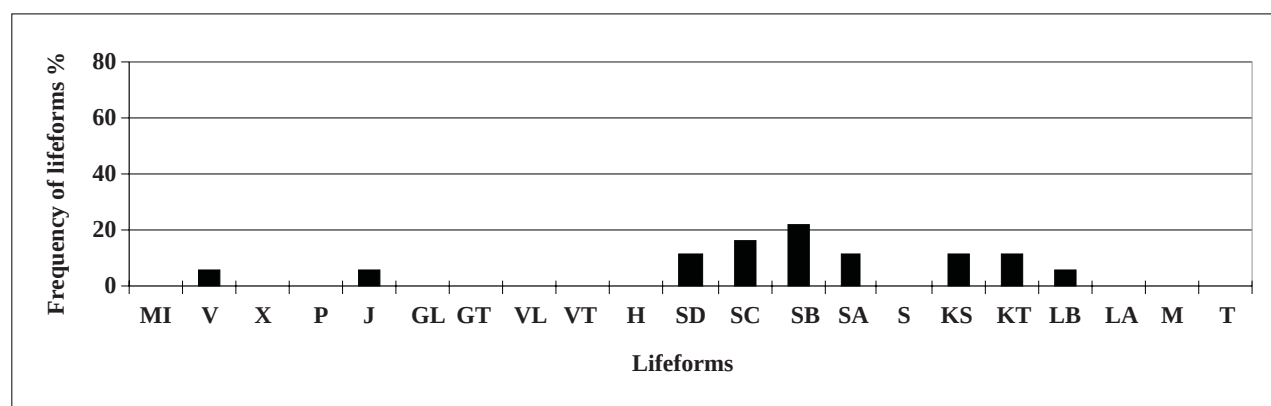
Wave energy:

	Freq	O-E/E
H	3	0.4

Strew lithology size and cover:

None

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Gahnia filum</i>	100.0	3	7	3	1	2						1.1	9.2	67.4	612.7
<i>Melaleuca brevifolia</i>	100.0	3	8	6						1	2	14.0	22.1	361.4	3285.3
<i>Leucopogon parviflorus</i>	66.7	2	392	26		2						1.0	662.8	-0.1	-0.8
<i>Samolus repens</i>	66.7	2	56	17		2						1.0	42.0	12.6	76.5
<i>Acrotriche patula</i>	33.3	1	227	33	1							0.1	186.8	-0.7	-2.1
<i>Baumea juncea</i>	33.3	1	7	6		1						0.5	6.1	45.9	139.1
<i>Carpobrotus rossii</i>	33.3	1	540	38	1							0.1	378.2	-0.8	-2.6
<i>Cassytha peninsularis</i>															
var <i>peninsularis</i>	33.3	1	92	24			1					1.0	62.4	8.2	24.7
<i>Clematis microphylla</i>	33.3	1	350	31	1							0.1	235.3	-0.8	-2.3
<i>Danthonia setacea</i>															
var <i>setacea</i>	33.3	1	92	30		1						0.5	57.2	4.0	12.1
<i>Dianella brevicaulis</i>	33.3	1	362	35	1							0.1	228.2	-0.7	-2.3
<i>Eutaxia microphylla</i>															
var <i>microphylla</i>	33.3	1	100	28	1							0.1	65.0	-0.1	-0.4
<i>Gahnia trifida</i>	33.3	1	4	3	1							0.1	13.1	3.4	10.2
<i>Hydrocotyle capillaris</i>	33.3	1	87	25	1							0.1	55.7	0.0	0.1
<i>Lasiopetalum discolor</i>	33.3	1	213	23	1							0.1	266.9	-0.8	-2.4
<i>Melaleuca lanceolata</i>	33.3	1	348	37	1							0.1	572.1	-0.9	-2.7
<i>Pittosporum phylliraeoides</i>															
var <i>microcarpa</i>	33.3	1	139	27	1							0.1	63.0	-0.1	-0.3
<i>Pomaderris paniculosa</i>															
ssp <i>paniculosa</i>	33.3	1	93	20	1							0.1	79.0	-0.3	-0.8
<i>Rhagodia candolleana</i>															
ssp <i>candolleana</i>	33.3	1	546	41					1			3.0	495.5	2.5	7.5
<i>Sarcocornia blackiana</i>	33.3	1	10	7		1						0.5	12.1	22.6	68.6
<i>Schoenus nitens</i>	33.3	1	7	6		1						0.5	6.0	46.7	141.4
<i>Selliera radicans</i>	33.3	1	4	3			1					1.0	3.5	162.4	492.2
* <i>Senecio pterophorus</i>															
var <i>pterophorus</i>	33.3	1	33	11	1							0.1	7.8	6.3	19.2
<i>Stipa exilis</i>	33.3	1	75	25		1						0.5	49.5	4.8	14.5
<i>Stipa flavescens</i>	33.3	1	186	30	1							0.1	114.4	-0.5	-1.5
<i>Tetragonia implexicoma</i>	33.3	1	542	35				1				2.0	444.0	1.6	4.8
<i>Threlkeldia diffusa</i>	33.3	1	453	37				1				2.0	321.7	2.6	7.7



Figure 109 *Melaleuca brevifolia/ Gahnia filum* Forest at quadrat JUS00201 (EPS13330), photo Planning SA, Survey 80

Allocasuarina verticillata Forests

Floristic group 18: 11 quadrats

Description:

A very strong group which is located on cliffs and hills of metasediments across the central coastline. There is a distinctive overstorey with few common understorey species.

Distribution of sites in geomorphic regions:

EPS	KIN	KIE	FLP
4	5	1	1



Number of plant species:

Min	Max	Average
2	29	12.55

Dominant overstorey species:

Allocasuarina verticillata

Indicator species:

Cheilanthes austrotenuifolia

Dominant lifeform/s:

	LB	LA
<i>Allocasuarina verticillata</i>	2	9

Structural description:

	Freq	O-E/E
Low open forest	6	29.78
Low closed forest	4	63.97
Very low closed forest	1	4.13

Environmental parameters:

	Min	Max	Mean	SD
Altitude	20	140	63.2	29.6
Slope	0	40	10.5	11.5
Aspect	0	360	218.2	103.7
Bare earth	1	30	13.9	9.9
Litter	2	80	42.0	31.7
Rainfall	450	675	577.3	77.9

Landform pattern:

	Freq	O-E/E
Escarpment	3	1.50
Hills	2	7.47
Low hills	2	4.57
Plain	2	0.41
Plateau	1	18.49
Rises	1	1.17

Landform element:

	Freq	O-E/E
Hill slope	5	4.53
Gully	2	20.64
Plain	2	0.61
Cliff	1	1.12
Ridge	1	11.17

Surface soil texture:

	Freq	O-E/E
Sandy loam	4	1.38
Clay loam	2	4.73
Light clay	2	15.24
Loamy sand	2	0.19
Loam	1	3.06
Sand	1	-0.86

Wave energy:

	Freq	O-E/E
H	5	-0.3
M	5	1.3
L	1	-0.2

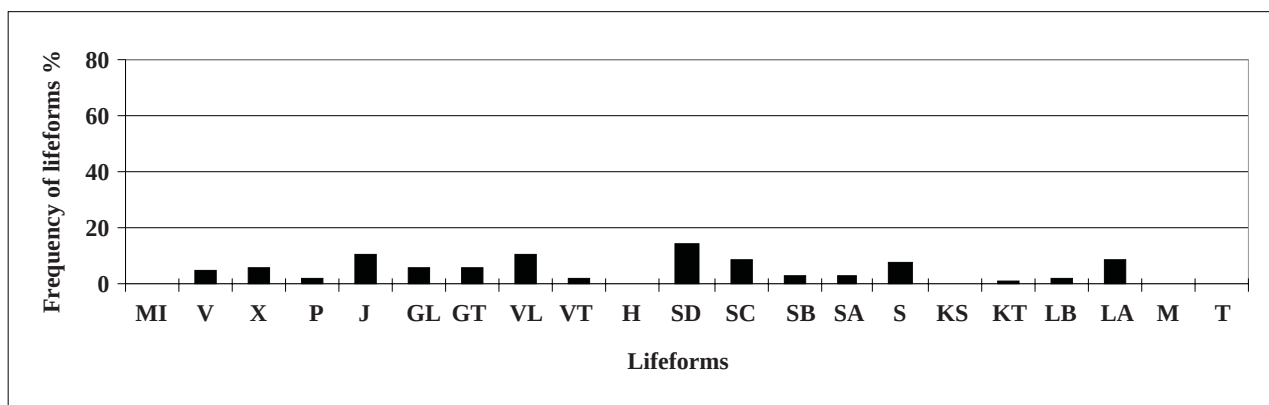
Outcrop lithology and cover:

	Freq	O-E/E
none	2	-0.77
Schist <10%	3	28.24
Calcareous 10–50%	1	0.74
Limestone <10%	1	11.18
Quartzite <10%	1	18.49
Sandstone <10%	1	12.92
Schist 10–50%	1	12.92
Siltstone >50%	1	96.45

Strew lithology size and cover:

	Freq	O-E/E
none	3	-0.60
Schist <10% cobble (51–250 mm)	2	20.66
Calcareous 10–30% cobble (51–250 mm)	1	1.87
Limestone <10% cobble (51–250 mm)	1	15.24
Quartzite <10% cobble (51–250 mm)	1	96.45
Sandstone <10% cobble (51–250 mm)	1	23.36
Schist 10–30% boulder (gt 250 mm)	1	47.73
Siltstone 10–30% boulder (gt 250 mm)	1	96.45

Distribution of lifeforms:



Plant species:

	%	F	TF	GT	N	T	1	2	3	4	5	GAB	TAB	O-E/E	Indic
<i>Allocasuarina verticillata</i>	100.0	11	88	21					2	7	2	44.0	122.3	46.4	369.6
<i>Cheilanthes austrotenuifolia</i>	72.7	8	28	10	1	5		2				6.6	21.2	40.0	231.8
<i>Acacia paradoxa</i>	45.5	5	45	15	3	1		1				2.8	67.4	4.5	16.2
<i>Gonocarpus mezianus</i>	45.5	5	42	12	1	1	3					3.6	35.8	12.2	44.4
<i>Dianella brevicaulis</i>	36.4	4	362	35	2	2						1.2	228.2	-0.3	-0.9



Figure 110 *Allocasuarina verticillata* Forests at quadrat STO00203 (KIN14672)



Figure 111 *Allocasuarina verticillata* Forests at quadrat CAP00602 (FLP15942)

DISTURBANCE THREATS

INTRODUCTION

The linearity of the coast along with the proliferation of responsibility under numerous councils and agencies makes the recognition of total disturbance to coastal vegetation problematical. However, information on disturbance in specific coastal areas is found in some of the reports for individual Coast Protection Districts. A general report on the management of coastal sand dunes has been undertaken by Cullen and Bird (1980) and an honours thesis on management of mangroves by Letch (1985) but there are no reports on the management of coastal cliffs. There is also no comprehensive report documenting disturbance threats to coastal vegetation in South Australia. Since disturbance threat data were not collected as part of the survey this section is essentially a literature review of the available information together with observations by field staff.

Physical impacts

Blow outs, deflation and dune transgression are extensive in some areas of the coastal districts (Figures 112–116). The causes of dune instability and cliff-top deflation are interrelated and occur at the conjunction of several natural processes including storm activity which may be preceded by years of drought and/or fire. Some of the unstable dunes are the result of natural processes, however, natural processes are often initiated and/or augmented by human activity. The degree of human impact is difficult to assess although it is evident in Canunda National Park where blowouts have been initiated inland from the backshore zone, and have developed sporadically within otherwise well-vegetated coastal dune terrain (Cullen and Bird 1980). Other unstable dunes are directly attributable to human activities. Erosion of the foredune or frontal dune occurs naturally in some areas but may be augmented by human activity (Figure 117).

Biological impacts

Viability

The viability of coastline vegetation decreases closer to urban areas and with increased recreational use. There were some areas observed near urban centres where vegetation had been removed by the proliferation of tracks made by off-road vehicle usage and where the remaining vegetation was badly degraded. In many areas there was a high litter problem. Impacts are significantly less where agriculture land is adjacent to coastal vegetation and access is limited or even more so when native vegetation is continuous and access limited as in the Yalata area (Head of Bight). Human impact, particularly indiscriminate off-road vehicular activity and overgrazing are extremely detrimental to coastal vegetation.

Changes in plant species composition

The extent of changes in plant species composition of coastal vegetation has not been systematically documented. However, it is known that *Allocasuarina* woodland which once occurred along the west coast of Eyre Peninsula and widely on Coffin Bay Peninsula are now only found in pockets (Buckley and Fotheringham 1987; Robinson et al 1996). The grasses, seedlings of *Allocasuarina* and semi-succulent shrubs in the understorey were grazed by sheep and rabbits which, together with deliberate firing to promote regrowth, prevented regeneration of *Allocasuarina* (Robinson et al 1996). These areas have been replaced by mixed shrublands. Remnant patches of *Allocasuarina* were encountered along the Adelaide coastline in cliffed areas.

INTRODUCED ANIMALS

Feral animals including rabbits, mice, rats, cats, red foxes, horses, deer and camels may cause considerable damage except where numbers are low or areas are inaccessible (Figure 118). With the exception of clearance of vegetation, rabbits (Figure 119) have caused the most severe and continuing damage. 'Rabbits are widespread throughout the coastal zone, especially where sandy soils occur, and their grazing has been associated with several types of environmental damage: competing with native grazing species for food resources; changing vegetation composition by selective feeding; and contributing to soil erosion by denuding stabilising vegetation and by burrowing' (Environmental Research and Planning Group 1980). Initial burrowing may appear to be minor but in effect the impact of mobilising sand expanded from the point source of erosion develops into blowouts and inundates surrounding vegetation. Selective rabbit feeding has been associated in the Coorong area with a gross structural change in vegetation composition from open woodland with abundant *Allocasuarina* sp to shrublands dominated by *Acacia longifolia* var *sophorae*.

However, rabbits, were noticeably absent from some areas surveyed in 1996 and 1997, particularly in comparison with areas surveyed in 1995. In other areas numbers of rabbits had noticeably been reduced. The growth of vegetation at Winninowie Conservation Park and its surrounding areas, where rabbits had been absent for a period of a year, was commented on by local landholders.

Overall the coastal vegetation has been changed substantially by grazing. Remnants of vegetation which once occurred more extensively along the coast are found on nearby islands, such as Pearson Island, where 60 years of records document vegetation changes in the absence of introduced grazing animals (Robinson et al 1996).



Figure 112 Holocene dunefield on Yorke Peninsula being blown inland over agricultural land



Figure 113 Holocene clifftop dunes in South East (deflation basin on right to calcrete level)



Figure 114 Deflation occurs when vegetation is removed, Eyre Peninsula south



Figure 115 Deflation removes the soil and sand underlying the vegetation



Figure 116 Remnants of vegetation at the Head of the Bight



Figure 117 Erosion of foredune (and subsequently hind dune) vegetation can be initiated by damage to foredune by off-road vehicles



Figure 118 Camels in the Head of Bight area



Figure 119 Rabbits on Eyre Peninsula initiate loss of vegetation

INTRODUCED PLANTS

'The coastal strip is particularly vulnerable and accessible to invasion by weeds because of its proximity to agricultural land, heavy recreational use and soil erosion. Such a situation is conducive to the establishment of alien weedy species rather than native plants' (Environmental Research and Planning Group 1980). However, weeds were only noticeably prevalent in areas where human impact was obvious. Further, the number of introduced plant species on coastal quadrats was overall very low along the whole extent of the coastline. This could be a biased view because quadrats were selected in 'good' remnants of native vegetation or it may be because of high environmental stresses.

Plants that have been proclaimed under the *Animal and Plant Control (Agriculture Protection and Other Purposes) Act 1986* and which were recorded in the surveys are as follows:

Asparagus asparagoides (was *Myrsiphyllum asparagoides*)
Carduus tenuiflorus
Chrysanthemoides monilifera (not recorded on the survey but found along the coast)
Cirsium vulgare
Cuscuta campestris
Cynara cardunculus
Diploaxis tenuifolia
Echium plantagineum
Emex australis
Euphorbia terracina
Hirschfeldia incana
Lycium ferocissimum
Marrubium vulgare
Oxalis pes-caprae
Olea europaea ssp europaea
Pinus halepensis
Rosa canina

Introduced species which are invasive and considered to be a problem in coastal areas are:

Arctotheca populifolia — foredunes along coast
Argyranthemum frutescens ssp foeniculaceum
Ehrharta villosa var maxima
Gazania rigens
Lagarus ovatus — throughout all landforms
Melianthus comosus — Cape Jervis area
Polygala myrtifolia — South East
Rhamnus alaternus — south Eyre Peninsula all landforms.

Introduced plant species which are found in abundance along the coast include:

Anagallis arvensis.

Plants which are introduced but are considered cosmopolitan include:

Cakile maritima ssp maritima
Elymus farctus
Euphorbia paralias.

An introduced species which has been used for dune stabilisation purposes and which is not considered a

problem in South Australia as it does not extend beyond planted areas is *Ammophila arenaria*.

The dominant pest plant along the whole of the coastline is *Lycium ferocissimum* whereas *Asparagus asparagoides* is a major problem mainly in the South East (Figure 120). A potential problem plant which colonises the foredune is *Arctotheca populifolia* (Figure 121).

AGRICULTURE

Past clearing for agricultural purposes has removed areas of coastal vegetation particularly in Eyre Peninsula, northern Kangaroo Island, Yorke Peninsula and the South East. In 1980, 68% of coastal landforms were grazed and 19% cropped (Cullen and Bird 1980). Clearing has resulted in increased pressure on the remaining remnants of vegetation. Further, burning in the past of vegetation particularly in dunefields has reduced the viability of some of these remnants (Cullen and Bird 1980). The main impact of agriculture on the remaining vegetated coastal areas is from grazing, however, it is difficult to differentiate between the impact of rabbits and stock. The Younghusband Peninsula was well vegetated before the introduction of grazing in the mid to late 1850s and 'Grazing appears to have been particularly damaging on the Eyre Peninsula where the aridity makes plant growth much poorer than in wetter parts of the State' (Cullen and Bird 1980).

There are many uses and problems associated with vegetation along the coast. Existing coastal vegetation:

- is subject to pressure of invasion by weed species from adjacent cleared land and in some cases weed seed is distributed by stock
- can be used as emergency fodder during times of drought
- can be grazed indiscriminately in some areas as there is either poor fencing or none (cost of fencing-off dune or clifftop areas is seen as prohibitively expensive (Buckley and Fotheringham 1987)
- in some areas is sown with clover species to augment feed for grazing purposes.

On Eyre Peninsula 'Overgrazing has caused a significant change in the floristic composition of the vegetation in some areas and has also resulted in clifftop soil deflation and dune instability' (Buckley and Fotheringham 1987). The decline of *Allocasuarina verticillata* woodland is attributed largely to overgrazing, although rabbits must also be considered an important factor. Overgrazing of areas has changed the plant species composition by selective grazing of particular plant species and the introduction of weeds.



Figure 120 *Asparagus asparagoides* (bridal creeper) in South East



Figure 121 *Arctotheca populifolia* an introduced plant which has the potential to become a severe problem

RESIDENTIAL

Approximately 1.5% of the coastal zone is urbanised with over 80% of the population living near the coast. Remnants of coastal vegetation within urban areas are subject to high recreational usage. Dunefield vegetation at Tennyson, Normanville and Noarlunga, and cliff vegetation in a few remaining localities along the Metropolitan coast are under severe pressure (Figures 122–123). There are plant species of conservation significance in these areas as they are remnants of the past vegetation. However, none of the plant communities would be viable and require intensive management to maintain species diversity.

There were 4200 shack sites along the coast in 1983 of which 257 have been resumed or surrendered. All past or existing shacks have an impact on coastal vegetation. Shacks are generally located in low lying areas close to the waters edge either in foredune areas or cliff edges. Directly and indirectly shacks have a high degrading influence on surrounding remnant vegetation. Shacks are not only found near to the major urban centre of Adelaide (Figure 124) but also in apparently remote locations (Figure 125).

Disturbance issues of shack development along the coast are:

- clearance of vegetation for and around buildings and tracks
- vehicular access, particularly in the unstable terrain of coastal areas
- walking tracks to beaches
- rubbish dumping in nearby areas
- lack of public access in shack areas focusing public access in other areas
- wind erosion from clearing and trampling
- wave erosion from clearing
- weed invasion from planting of introduced plant species
- visual impact
- disturbance extending beyond the borders of the shack development because of wind erosion of the destabilised sand and swamping of surrounding remnant vegetation.

RECREATION

The coast is a major recreational destination for a wide range of users and has impacts from:

Pedestrians

- trampling of vegetation
- indiscriminate access
- removal of plants and material

Off-road vehicles

- mechanical impact on designated tracks with resulting erosion, particularly wind deflation
- mechanical impact off designated tracks because of uncontrolled vehicle access with proliferation of tracks resulting in loss of vegetation and subsequent erosion, particularly wind deflation (Figure 126–127)
- inhibition of colonisation of unstable sand by primary stabilisers
- loss of vegetation from surrounding areas due to swamping by wind-borne sand

Camping in areas outside designated sites

- firewood collection
- trampling by tent sites
- toilet/rubbish dumps

Boating

- indiscriminate access of vehicles outside designated boat launch areas with the same impact as off-road vehicles

Hang gliding

- trampling of fragile cliff edge vegetation
- same impacts as for off-road vehicles.

Litter pollution is associated with all forms of human impact. Although individual littering may be minor, it accumulates into a major concern. Off-road vehicles were common in many areas with the impact being significant in some areas, particularly at the Head of the Bight, on the west coast of Eyre Peninsula, along Yorke Peninsula, in the South East and in some areas adjacent to the beach in the Coorong National Park. These areas contrasted with east of the Head of the Bight, in Yalata lands and Munyaroo Conservation Park, Eyre Peninsula where impact was minimal. Camping impact, in conjunction with the vehicular impact, was noticeable in the Coorong National Park.

Short et al (1986) considered that indiscriminate camping and uncontrolled vehicle access were major coastal disturbances. 'Although at individual sites the damage is often small, when considered as a whole the accumulated effects of these two impacts makes land degradation the most important environmental issue on the Eyre coast. Damage (by pedestrian, vehicle and camping) is most evident on clifftop and headland areas especially along headlands between Ceduna and Fowlers Bay.'

MINING AND EXPLORATION

There are no major large scale mining sites along the coast of South Australia. There has been mining in the past in local areas eg Coffin Bay National Park and Normanville dunes but this is not considered of current concern although potentially it may become so in the future (Fotheringham, pers com). Buckley and Fotheringham (1987) considered that at the time of their report 'exploration activities have not been an obvious threat to vegetation conservation' on Eyre Peninsula. However, shellgrit mining has been a minor problem in both the gulfs and the west coast of Eyre Peninsula (Fotheringham, pers com).



Figure 122 Marino Conservation Park, remnant vegetation conserved as part of lighthouse reserve



Figure 123 Hallett Cove Conservation Park, remnant vegetation surrounding quarry



Figure 124 Shack development in the South East



Figure 125 Shack development in the far west of Eyre Peninsula



Figure 126 Proliferation of tracks



Figure 127 Off-road vehicles

5 Conclusions and Recommendations

CONCLUSIONS

In South Australia, all coastal areas already subject to stringent environmental conditions are also subject to high human impact. The only areas which have limited usage are those to which access is inhibited by large areas of mobile sand and therefore are inaccessible by land. In South Australia people have the 'right' to drive on most beaches. This means they potentially have access to any part of areas adjoining the beaches and subsequently can drive through any vegetation attempting to establish under severe conditions.

Human impact

It is apparent from personal observation that many areas closest to centres of urban population such as the Adelaide area, including all of the South East, Yorke Peninsula and Spencer Gulf, and the areas surrounding the smaller urban centres of Pt Lincoln and Ceduna, including western Eyre Peninsula, are degraded and in some areas badly degraded. In these areas human impact varies from total removal of the vegetation to relatively intact viable plant communities remaining.

In all urban centres located along the coast, vegetation has been replaced by residential areas. However, there is also extensive loss of coastal vegetation in the ribbon development of holiday shacks with concurrent degradation of surrounding vegetation.

The long-term effects of varying levels of recreational usage are not known.

Coastal vegetation has also been replaced by agriculture in many areas along clifftops and the edges of dunefields.

Grazing (both domestic and rabbit) with subsequent changes to vegetation composition has been ubiquitous throughout the coastal areas of South Australia and only a few coastal areas have not been grazed in the past. On all parts of the coast both large and smaller areas of remnant vegetation that had been grazed are now included in reserves. There are remaining smaller areas outside reserves in which the vegetation may still be lightly grazed. There are also areas along the coast which are still under heavy grazing. However, Kangaroo Island has long lengths of the coast, which have not been grazed and are now in reserves.

Few areas are not under some pressure from human impact.

Importance of vegetation

It is essential that coastal vegetation is given priority for future studies to facilitate management. The vegetation is

both fragile and persistent. Unique plant communities are both the constructors and protectors of coastal landforms. Plant species of conservation significance, areas of habitat value, plant species diversity, specialised plant communities, soil and dune stabilisation, amenity and landscape value are all reasons for careful management of coastal vegetation. Without the vegetation, the mobile strata of coastal landforms erodes and the hinterland loses the protection of the coastal area. Coastal vegetation is essential to retaining dunal sand and dunal and clifftop soils on the coast (which would otherwise blow inland). There is no point in only conserving a part of the whole dunal or cliff system; the remaining part is highly mobile and affects the conserved part and the adjacent areas. Erosion at the seaward side of all coastal landforms is natural and must be factored into management requirements but erosion of stabilised dunefields and clifftops is unnecessary. Since there are so many naturally occurring unstable dunefields it is poor management practice to increase this area.

Management

Since widescale clearance of vegetation is no longer occurring due to legislative actions, the major issue concerning management of coastal vegetation is to minimise the effects of past and existing human impact, including clearance, grazing and recreational use. Local groups are undertaking the rehabilitation and revegetation of the resulting areas of unstable mobile sands and deflated clifftops utilising Coastcare grants. Now that sites of conservation significance have been identified it is the responsibility of individual groups, councils and government bodies to assess the management of such sites and to implement any required changes to management techniques.

Importance of areas

Sites of conservation significance are not considered to have priority over other areas since all sites are considered of equal importance to the ongoing viability of coastal vegetation. Therefore a site with species rated as of national conservation significance cannot be given priority over the surrounding area of vegetation which is vital to the viability of the vegetation as a whole. The habitat of the species must be conserved, not the individual species alone. However, it is of concern that over 60% of species which are endangered or vulnerable, and therefore considered at risk, are not in reserves.

An assessment of biodiversity importance is commonly made using the number of plant species per area, however, in the coastal area the most important areas are those most commonly with low species numbers. These communities are essential if coastal landforms are to be kept stable. Preventing damage to the foredune area,

which may have only three or four very common species in low abundances, protects the hind dune areas which may have species of conservation significance in the vegetation. It is evident that all plant communities of the coastal vegetation are interrelated and essential to the survival of the others. Management of the plant communities which stabilise the extensive dunefields and cliff-top dunes is critical because of its own intrinsic value and the protection of the mainly agricultural hinterlands.

Another measure of the importance of sites for conservation is the number of introduced species — a measure of the degradation of the plant community. There is a low overall percentage of introduced species in plant communities of the coastal vegetation, particularly perennial species, although there are individual areas where introduced species are of major concern. These areas may be the subject of future concentrated management by local group and councils.

The survey and analysis

The survey established more than 849 quadrats along the length of the coastline. The subsequent analysis established which species were located along the length of the coast irrespective of landform or climatic differences and showed the regional variations in plant species. Many plant species were only recorded in specific geomorphic regions of the coast.

The PATN analysis established many regional variations in plant communities and some macro-environmental differences between cliff-top and dunefield plant communities. Some large groups which were defined in the classification by their common plant species were recorded on both cliff-tops and dunefields. Further analysis of the data might determine differences within these plant communities. Micro-environmental differences between plant communities, such as those on leeward and seaward slopes and crests were not clearly established although there was a definite swale plant community.

Overall the survey data provide the basis for further more detailed analysis and a resource for local areas to use for management purposes. Species, sites and plant communities of conservation significance have been established in this report. This information can be used to further conservation efforts along the coast. Species lists for individual quadrats and the more general regional lists from the survey can be used as references for vegetation rehabilitation and revegetation as well as a basis for further studies and monitoring.

The lists of plant species provided for each plant community grouped by PATN can be used for revegetation purposes. In particular those species with high indicator values for that group can be targeted.

Monitoring

The plant communities in the 36 reserves and many Heritage Agreement Areas along the coast are subject to management for conservation purposes. Although some of these areas have problems due to past land use and pressure from recreational use there are areas of 'good'

vegetation within them which need to be monitored to ensure that further degradation does not occur. Environmental impacts of disturbance to the coastal areas are the loss of individual species and plant communities, and the loss of habitat and increased fauna vulnerability. Further studies and monitoring need to provide data which will establish any changes in the plant communities.

Monitoring is the ongoing assessment of the vegetation in order to facilitate management decisions. The intention of monitoring is to:

- provide long term information which will provide a basis for ongoing management decisions
- audit the integrity of a representative range of vegetation communities
- record information on specific plant species of conservation significance.

RECOMMENDATIONS

General

1. Establish a range of permanent monitoring sites and transects of areas along the coast.
2. Undertake, where necessary, further studies in areas with insufficient information, to provide further data as a basis for monitoring surveys.
3. Collect these data at a range of levels of detail to provide comprehensive information to enable informed management decisions.
4. Establish permanent monitoring transect sites on public land or government reserves.
5. Establish permanent monitoring sites for species of conservation significance on public land or government reserves.
6. Establish permanent sites on Heritage Agreement Areas that have species of conservation significance and with owners permission.
7. Establish temporary sites on sites with species of conservation significance which are on private land with landholders permission.

Long-term monitoring

8. Conduct long-term monitoring surveys every 10 years.
9. Establish control transect sites in areas of minimal disturbance to compare with similar sites with increasing levels of disturbance with a minimum of three levels.
10. Locate all sites within reserves.
11. Include representative transect sites in each geomorphic region of the State.
12. Include cliff, cliff-top dune and dunefield landforms, where present, in transects.
13. Include representative plant communities within the area, in the transects.
14. Use a monitoring technique that can be replicated.

Monitoring could be conducted every 10 years. In four weeks in spring, four teams could maximise the species records, or the State could be divided into five areas and surveyed every ten years. Suggested quadrats for long-term monitoring, which are representative of each plant community, are listed in Table 28 below.

Short term monitoring

15. Survey the control representative transect/s of the permanent monitoring sites for each geomorphic region twice yearly in the wettest and driest periods to determine seasonal variations in species composition and abundances.

Sites of conservation significance

16. Survey sites of conservation significance every five years.
17. Include in the survey all sites in reserves which recorded plant species of endangered or vulnerable and National conservation significance with priority given to those with Australian ratings (Figure 28, Appendix 9).
18. Request that owners of Heritage Agreement Areas with species of conservation significance permit permanent monitoring sites to be established.
19. Request that owners of sites with species of conservation significance permit temporary monitoring sites to be established.

Further recommendations

20. Assess the management of all sites of conservation significance under private ownership which is not under Heritage Agreement and encourage the owner to undertake this form of protection.
21. Assess all past studies, collate the information from this report with all the existing information and incorporate the information into one generally available information area.
22. Include in more detailed surveys with mapping, areas where the information available from this and past studies is insufficient to form a basis for informed management decisions.

Protected areas suitable for consideration as permanent monitoring transects include:

Nullarbor cliffs	Nullarbor National Park — Merdayerrah dunefield Nullarbor National Park — Merdayerrah sand ramp Nullarbor National Park — cliffs, one transect
Head of Bight	Yalata Aboriginal Community area South of Dog fence
Eyre Peninsula	Lincoln National Park Coffin Bay National Park Whalers Way (HAA)
Spencer Gulf	Munyaroo Conservation Park Winninowie Conservation Park
Yorke Peninsula	Leven Beach Conservation Park Innes Conservation Park
Gulf St Vincent	Marino Conservation Park Noarlunga Dunefield
Kangaroo Island	Cape Gantheaume Conservation Park Flinders Chase National Park Black Point (HAA area)
Fleurieu Peninsula	Newland Head Conservation Park
South East	Coorong National Park — two transects Little Dip Conservation Park Canunda National Park Picinninnie Ponds Conservation Park

Table 28 Possible long-term monitoring quadrats

Plant community	Potential quadrat
<i>Cakile maritima</i> ssp <i>maritima</i> Herbland	SED00202 (KIS14709)
<i>Spinifex sericeus</i> / <i>Euphorbia paralias</i> Grasslands (Shrublands)	KUR00201 (HOB14290) GOO00401 (COO14814)
<i>Triodia compacta</i> Hummock grasslands (Shrublands)	KIA00101 (EPW15908) SEA00102 (EPW13942)
<i>Juncus kraussii</i> Sedgeland	BUF00303 (SOE14925)
<i>Gahnia lanigera</i> / <i>Lepidosperma congestum</i> Low sedgelands	COU01101 (EPS13281)
<i>Gahnia trifida</i> Sedgeland	GAM00303 (SOE15259)
<i>Lepidosperma gladiatum</i> Sedgelands	TOR00201 (FLP15952) ROB00102 (SOE14934)
<i>Atriplex cinerea</i> Shrublands	PIL00102 (HOB14326) GIB00203 (EPE14584)
<i>Atriplex vesicaria</i> ssp Low shrublands	MAM00202 (SPG14600)
<i>Atriplex vesicaria</i> ssp / <i>Nitraria billardierei</i> / <i>Threlkeldia diffusa</i> Low shrublands	COY00103 (HOB14306)
<i>Atriplex vesicaria</i> ssp / <i>Nitraria billardierei</i> / <i>Threlkeldia diffusa</i> Low shrublands	WIL00601 (NUL13801)
<i>Enchylaena tomentosa</i> var <i>tomentosa</i> Low shrubland	WIL00102 (NUL13961) WIL01002 (NUL13972)
<i>Halosarcia indica</i> ssp Low shrublands	CUL00101 (SPG14597)
<i>Maireana erioclada</i> Low shrublands	WIL00203 (NUL13804) WIL00402 (NUL13807)

Plant community	Potential quadrat
<i>Maireana oppositifolia</i> Low shrublands	PIL00101 (HOB14325 RUS00402 (HOB14297)
<i>Threlkeldia diffusa</i> Low shrublands	COO00505 (EPW13770) HAS00101 (EPW13729)
<i>Leucophyta brownii</i> Low shrublands	SED00201 (KIS14708) PON01201 (YOP15816)
<i>Beyeria lechenaultii/ Acrotriche patula</i> Shrublands	NOA00401(SVG15971)
<i>Alyxia buxifolia</i> Shrublands	TAL00406 (EPW15880)
<i>Leucopogon parviflorus</i> Shrublands	PEN00501 (KIE14734) TOR00104 (FLP15951)
<i>Leucopogon parviflorus / Acrotriche patula</i> Shrublands	WHI00201 (EPS13507)
<i>Leucopogon parviflorus / Olearia axillaris</i> Shrublands	WAN00104 (EPS15916) PON00403 (YOP15832) JAF00101 (SOE14895)
<i>Melaleuca gibbosa</i> Shrubland	SNU00103 (KIN14614)
<i>Melaleuca gibbosa</i> Shrubland	BOR00201 (KIN14607)
<i>Melaleuca lanceolata / Senecio lautus</i> Shrublands	WIL00101 (EPW13964) CHA00304 (NUL13925)
<i>Melaleuca lanceolata / Olearia exiguifolia</i> Shrublands	WIL01003 (NUL13971) WIL01401 (NUL13966)
<i>Melaleuca lanceolata/Acrotriche patula/Lasiopetalum discolor</i> Shrublands/Mallees	JUS00101 (EPS15898)
<i>Melaleuca lanceolata/ Atriplex paludosa</i> ssp Shrublands	COL00102 (EPW13738)
<i>Melaleuca lanceolata/ Atriplex vesicaria</i> ssp Shrublands	RUS00303 (HOB14301) KUR00105 (HOB14316)
<i>Melaleuca lanceolata/ Melaleuca gibbosa</i> Shrublands	WIO00403 (KIE14747)
<i>Melaleuca lanceolata/ Tetragonia implexicoma</i> Shrublands	CUN00104 (EPW13766)
<i>Melaleuca uncinata</i> Shrubland	CAS00302 (KIN14680) CAS00103 (KIN14686)
<i>Nitraria billardierei</i> Shrublands	WIL00201 (NUL13805)
<i>Nitraria billardierei</i> Shrublands	COR00301 (YOP15796)
<i>Olearia ramulosa / Calytrix tetragona</i> Shrubland	CAP00201 (FLP15986)
<i>Olearia ramulosa/ Calytrix tetragona</i> Shrubland at	CAP 00301 (FLP15937)
<i>Olearia axillaris/ Lasiopetalum discolor</i> Shrublands	TAL00103 (EPW13775)
<i>Olearia axillaris/ Leucopogon parviflorus</i> Shrublands	BEN00701 (SOE15246) SAN00102 (COO14793)
<i>Olearia axillaris/ Tetragonia implexicoma</i> Shrublands	TIL00204 (SOE14776) KUR00102 (HOB14294)
<i>Olearia axillaris/ *Lycium ferocissimum</i> Shrublands	PON00701 (YOP15829) ARN00104 (EPE14580)
<i>Olearia axillaris/ Rhagodia candolleana</i> ssp <i>candolleana</i> Shrublands	KIN00201 (KIE14677) MAG00103(COO14760)
<i>Acacia ligulata</i> Shrublands	ARN00202 (EPE14591)
<i>Acacia paradoxa</i> Shrublands	CAP00502 (FLP15982) KIN14679 (FLP15982)
<i>Eucalyptus cosmophylla</i> Mallee	SNU00403 (KIN14639) SNU00402 (KIN14638)
<i>Eucalyptus rugosa/ Melaleuca lanceolata</i> Mallees	DES00304 (KIS14727)
<i>Eucalyptus rugosa/ Melaleuca lanceolata</i> Mallees	PEN00303 (KIE14751)
<i>Eucalyptus</i> ssp/ <i>Melaleuca lanceolata / Melaleuca uncinata</i> Low mallee	BAN00201(EPS13232)
<i>Eucalyptus incrassata</i> Mallee	ARN00102 (EPE14577)
<i>Eucalyptus diversifolia/ Clematis microphylla</i> Mallees	WAN00202 (EPS15887)
<i>Eucalyptus diversifolia/ Gonocarpus mezianus</i> Mallee	ENC00201 (FLP15932) ENC00106 (FLP15931)
<i>Eucalyptus cneorifolia/Orthrosanthus multiflorus</i> Mallee	KIN00401 (KIE14675) WIO00204 (KIE14733)
<i>Melaleuca brevifolia/Gahnia filum</i> Forests	JUS00201 (EPS13330)
<i>Allocasuarina verticillata</i> Forests	STO00203 (KIN14672) CAP00602 (FLP15942)

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Appendix 1 Glossary of Terms

Local names can be found on the relevant 1:100 000 and 1:50 000 series topographical maps.

BEACH (600)

short, low, very wide slope, gently or moderately inclined, built up or eroded by waves, forming the shore of a lake or sea (McDonald et al 1990), over which the swash and beachwater operate (Short and Fotheringham 1986)

BEACH RIDGE (610)

very long, nearly straight low ridge, built up by waves and usually modified by wind; often a relict feature remote from the beach (McDonald et al 1990), formed of shingle or shell debris, (Short and Fotheringham 1986) see foredune ridge

BEACH RIDGE SHINGLE (611)

linear, symmetric or asymmetric, convex ridges formed of shingle debris (Short and Fotheringham 1986), deposited by storm wave

BEACH RIDGE SHELL (612)

linear, symmetric or asymmetric, convex ridges formed of shell debris (Short and Fotheringham 1986), deposited by storm wave, biogenic in origin

BEACH RIDGE PLAIN (BEA)

level to gently undulating landform pattern of extremely low relief on which stream channels are absent or very rare: consists of relict parallel beach ridges (McDonald et al 1990), linear, symmetric or asymmetric, convex ridges formed of shingle or shell debris, storm or swash wave derived (Short and Fotheringham 1986)

BLOWOUT

erosional trough generally initiated within a foredune by wave erosion, locally increased wind velocities through topographic lows or between vegetated regions, or animal and human tracks and pathways (modified Short and Fotheringham, 1986)

CLIFF (330)

very wide cliffed (>72 degrees) maximal slope usually eroded by gravitational fall as a result of erosion of the base by various agencies; sometimes built up by marine organisms (McDonald et al 1990)

CONSOLIDATED DUNEFIELD (CON)

level or rolling landform pattern of very low or extremely low relief without stream channels, built up or locally excavated, eroded or aggraded by wind and consolidated by stabilising effects of vegetation (modified McDonald et al 1990), not lithified

DEFLATION BASIN

if adjacent blowouts coalesce by erosion of the lateral walls and the formerly discrete erosional funnels coalesce to form a semi-continuous erosional basin (Short and Fotheringham 1986); remnant dune knobs may be surrounded by deflation areas

DUNE/CONSOLIDATED DUNE (200)

moderately inclined to very steep ridge or hillock built up by wind; may comprise dunecrest and duneslope; may also be consolidated due to stabilising effects of vegetation (modified McDonald et al 1990); includes hind dunes

DUNE CREST (201)

crest on a moderately inclined to very steep ridge or hillock, built up or eroded by the wind (modified McDonald et al 1990)

DUNEFIELD (DUN)

level to rolling landform pattern of very low or extremely low relief without stream channels, built up or locally excavated, eroded or aggraded by wind (McDonald et al 1990), not lithified

DUNEFIELD LITHIFIED; DUNE CALCARENITE/DUNEROCK

whole or portion of a sand dune that has been lithified to some degree; lithification usually associated with partial solution and reprecipitation of calcium carbonate which cements the sand grains (Short and Fotheringham 1986)

DUNE FOOTSLOPE (203)

gently inclined waning lower slope of a moderately inclined to very steep ridge or hillock, built up by the wind (modified McDonald et al 1990)

DUNE SLOPE (202)

slope on a moderately inclined to very steep ridge or hillock, built up or eroded by the wind (modified McDonald et al 1990)

ESCARPMENT (ESC)

steep to precipitous landform pattern forming a linearly extensive, straight or sinuous inclined surface, which separates terrains at different altitudes, that above the escarpment commonly being a plateau; relief within the landform pattern may be high (hilly) or low (planar); upper margin often marked by an included cliff or scarp (McDonald et al 1990)

FOREDUNE (620)

very long, nearly straight, moderately inclined to very steep ridge built up by the wind from material from an

adjacent beach (McDonald et al 1990); formed by vegetation trapping aeolian sand on the backshore zone, above the tide line; range from quite small (approximately 2 m) to very large (over 30 m), very stable to very unstable (ie vegetation cover may display great variation) and may be morphologically diverse; generally comprise a frontal or stoss slope, crest and lee or landward slope (Short and Fotheringham 1986)

FOREDUNE RIDGE (621)

dune ridges initiated as foredunes and later removed from the influence of beach processes by seaward secretion, and the formation of a new foredune (Short and Fotheringham 1986); aeolian in origin in contrast to beach ridges which are wave derived

FOREDUNE RIDGE PLAIN (FOR)

landform pattern derived from multiple parallel foredune ridges extending inland from the coast

GULLY (321)

open depression with short, precipitous walls and moderately inclined to very gently inclined floor or small stream channel, eroded by channelled stream flow and consequent collapse and water-aided mass movement (McDonald et al 1990)

HIND DUNE

any dune or dune system lying landwards of the foredune (Short and Fotheringham 1986)

INCIPIENT FOREDUNE (621)

newly forming foredunes occupying a primary beach location behind the spring tide swash limit, and vegetated by pioneer colonisers, semi-erect and erect grasses and prostrate herbaceous plants; formed by vegetation trapping aeolian sand on the backshore zone, above the tide line; once secondary (woody) plant species colonise the incipient foredune, termed foredune (Short and Fotheringham 1986)

INTERDUNE CORRIDOR (211)

generally wide, linear, level floored open depression between parallel dunes (modified McDonald et al 1990)

INTERDUNE LOW (212)

low area between parallel dunes (McDonald et al 1990), wind derived

LIMESTONE PLAIN (104)

large, very gently inclined or level element of hard almost horizontally bedded limestone (a class of rock which contains at least 80% carbonates of calcium or magnesium)

LONGITUDINAL DUNEFIELD (LON)

dunefield characterised by long narrow sand dunes and wide flat swales; dunes orientated parallel to direction of the prevailing wind and, in cross section, one slope is typically steeper than the other (McDonald et al 1990)

PARABOLIC DUNEFIELD (PAR)

dunefield characterised by sand dunes with a long scoop-

shaped form, convex in the downwind direction so its trailing arms point upwind (McDonald et al 1990)

PLAIN (PLA)

level to undulating or, rarely, rolling landform pattern of extremely low relief (less than 9 m) (McDonald et al 1990)

PLAIN (100)

large very gently inclined or level element, of unspecified geomorphological agent or mode of activity (McDonald et al 1990)

PLATEAU (PLT)

level to rolling landform pattern of plains, rises or low hills standing above a cliff, scarp or escarpment that extends around a large part of its perimeter; bounding scarp or cliff landform element may be included or excluded, a bounding escarpment would be an adjacent landform pattern (McDonald et al 1990)

REMNANT DUNE KNOB

remnant of dune of which the slopes of the dune have been eroded leaving the vegetated crest surrounded by deflation surface (not specified as a separate landform under the data sheets)

SCARP (340)

very wide steep to precipitous maximal slope eroded by gravity, water-aided mass movement or sheet flow (McDonald et al 1990)

SWALE (210)

linear, level-floored open depression excavated by wind, or left relict between ridges built up by wind or waves, or built up to a lesser height than them (McDonald et al 1990)

Geological time

HOLOCENE

10 000 years before present to present — predominantly un lithified

PLEISTOCENE

1.6–1.8 million years before present — lithified

TERTIARY

5–65 million years before present — limestones

PRECAMBRIAN

2600 million years before present — metasediments, granites etc

DEFINITIONS

Definitions of all environmental variables are included in Heard and Channon (1997). Conservation status codes are according to Briggs and Leigh (1995) and Lang and Kraehenbuehl (1998)

Distribution categories

2	species with a very restricted distribution in Australia and with a maximum geographic range of less than 100 km
3	species with a range of at least 100 km but occurring only in small populations (often restricted to highly specific and localised habitats)

Conservation categories

E	Endangered: in danger of disappearing from the wild state within one or two decades if present land use and other causal factors continue to operate
V	Vulnerable: rare and at risk from potential threats or long term threats which could cause the species to become endangered in the future
R	Rare: has a low overall frequency of occurrence (may be locally common with a very restricted distribution or may be scattered sparsely over a

	wider area). Not currently exposed to significant threats, but warrants monitoring and protective measures to prevent reduction of population size
T	Threatened: likely to be either Endangered or Vulnerable but insufficient data for a more precise assessment
K	Uncertain: likely to be either Threatened or Rare but insufficient data for a more precise assessment
Q	Not yet assessed but flagged as being of possible significance
U	Uncommon: less common species of interest but not rare enough to warrant special protective measures
N	Not of particular significance/Common

Reservation categories

C	known to be present within a national park or other conservation reserve
a	adequately reserved with a total of at least 1000 plants known to occur in reserves
I	inadequately reserved with a total of less than 1000 plants in reserves

South Australian vegetation structural formations (adapted from Forward and Robinson 1996).

Projective Foliage Cover of Tallest Stratum

Lifeform/ Height class	Dense 70–100%	Mid-dense 30–70%	Sparse 10–30%	Very sparse 1–10%
Trees > 30 m	tall closed forest	tall open forest	tall woodland	tall open woodland
Trees 10–30 m	closed forest	open forest	woodland	open woodland
Trees 5–10 m	low closed forest	low open forest	low woodland	low open woodland
Trees < 5 m	very low closed forest	very low open forest	very low woodland	very low open woodland
Mallee (>3 m)	closed mallee	mallee	open mallee	very open mallee
Low Mallee (<3 m)	closed low mallee	low mallee	open low mallee	very open low mallee
Shrubs > 2 m	tall closed shrubland	tall shrubland	tall open shrubland	tall very open shrubland
Shrubs 1–2 m	closed shrubland	shrubland	open shrubland	very open shrubland
Shrubs <1 m	low closed shrubland	low shrubland	low open shrubland	low very open shrubland
Mat plants	closed mat plants	mat plants	open mat plants	very open mat plants
Hummock grass	closed hummock grassland	hummock grassland	open hummock grassland	very open hummock grassland
Tussock grasses	closed tussock grassland	tussock grassland	open tussock grassland	very open tussock grassland
Herbs	closed hermland			
Sedges	closed sedgeland	sedgeland	open sedgeland	very open sedgeland
Ferns	closed fernland	fernland	open fernland	very open fernland

(Source: Adapted from Specht 1972 and Muir 1977).

Appendix 2 Landforms of the Coast

Source: (Lauterbach 1977)			
PROVINCE/Region/Association	Landform		Native vegetation (if remaining)
7 WESTERN PASTORAL			
7 6 Nullarbor Plain	featureless limestone plain with prominent cliffs (Merdeyarrah dunefield 30 km to border)	plain - limestone cliff - limestone	low chenopod shrubland and open mallee scrub with chenopod shrub understorey
7 6.5 Nullarbor	coastal complex with dunes, lagoons, cliffs and tidal flats, long sandy beaches occasional cliffed headlands	plain - sand/limestone dune - sand cliff - limestone	low chenopod shrubland and open mallee scrub with mixed chenopod-grass understorey
7 6.3 Biglitt			
7 1 Gawler Uplands			
7 1.1 Simpsons	plateau with steep escarpments and long footslopes partly mantled by aeolian sand	footslope - colluvium plain - alluvium dune - sand	low chenopod shrubland and low open woodland with chenopod shrub understorey
7 1.2 Tregollana	undulating plain with occasional low dunes, pans and tidal flats	plain - sand, gravel dune - sand	low chenopod shrubland, low woodland with chenopod shrub understorey and samphire or mangrove flats
7 1.10 Douglas	granite hills with long footslopes	footslope - colluvium cliff - granite	low chenopod shrubland and low open woodland with chenopod shrub understorey
7 2 Torrens Depression			
7 2.1 Arcen	plains with dunes, lakes with mangrove or samphire flats along the coast	plain - alluvium dune - sand	low chenopod shrubland and tall open shrubland with chenopod shrub understorey
4 EYRE AND YORKE PENINSULA			
4 1 Southern Highland and Plains			
4 1.1 Coffin Bay	undulating plain with cliffs and cunes along coast	undulating plain - calcarenite cliff calcarenite/metasediment cune sand	low woodland, open scrub and some heath on the cunes

plain - open scrub, dune - open heath, cliff - low open shrubland

PROVINCE/Region/Association	Landform		Native vegetation (if remaining)
4.1.2 Avoid Bay	sandy plain with numerous dunes, and cliffs along the coast	dune - sand undulating plain - sand/calcarenite swale - sand/calcarenite cliff - metasediments	heath and low shrubland
4.1.3 Mungerowie	undulating calcarenite plain overlain by easterly trending dunes and with coastal dunes and cliffs	undulating plain - calcarenite cliff - calcarenite/metasediments dune - sand	low woodlands, shrublands and heath
4.1.4 Cobbler Hill	undulating limestone plain with low laterite capped hills	undulating plain - limestone cliff - calcarenite/metasediments	degraded coastal mallee woodland
4.1.5 Jussieu	undulating calcrete plain with extensive coastal dunes and cliffs	plain - calcrete dune - sand cliff - calcrete/metasediments	coastal mallee scrub and heathland (open scrub, open heath and low open shrubland)
4.1.6 Lincoln	undulating calcarenite plain with widespread sanddunes and coastal cliffs	undulating plain - calcarenite cliff - calcarenite/metasediments dune - sand	tall teatree shrubland, low woodland and coastal mallee
4.1.7 Peake Bay	plain with coastal dunes, tidal mudflats and low cliffed headlands	plain - alluvium/metasediments dune - sand cliff - alluvium/metasediments	open scrub
4.1.8 Mt Gawler	rounded hills and low ranges on metasediments	crest and slope - metasediments floor - alluvium	
4.1.17 Waretta	undulating plain with coastal cliffs	cliff and plain - metasediments	
4.1.18 Butler	undulating plain on partly calcreted alluvium and low coastal cliffs	plain - alluvium, calcrete cliff - metasediments	
4.2 West Coast Region			
4.2.1 Drummond	undulating to hilly calcarenite plain with occasional steep quartzite hills -	plain and rise - calcarenite cliff - calcarenite, quartzite dune - sand hill - quartzite	open heath
4.2.4 Poldia	extensive plain on calcreted sand with isolated hills and coastal dunes, lakes and lagoons -	plain - calcrete dune - sand cliff - calcarenite	open heath
4.2.5 Newland	high mobile dunes, swampy depressions and occasional consolidated dunes	dune - sand consolidated dune - calcarenite	open heath

PROVINCE/Region/Association	Landform		Native vegetation (if remaining)
4.2.8 Streaky Bay	undulating calcarenite plain with coastal cliffs, or high dunes, lagoons and mangrove flats	undulating plain - calcarenite dune - sand cliff - calcarenite, granite	low mallee woodland and open heathland and shrubland
4.3 Central Mallee Plains and Dunes			
4.3.26 Bookabie	undulating calcarenite plain and low hills with coastal dunes and lagoons or low cliffs	undulating plain - calcarenite dune - sand cliff - calcarenite	open heath and low open shrubland
4.3.25 Ceduna	undulating calcarenite plain overlain by dunes and coastal cliffs lagoons and tidal flats -	undulating plain - calcarenite dune - sand cliff calcarenite	open heath and low open shrubland
4.3.5 Wharminda	undulating plain with sandsheets, dunes	plain - sand, calcrete dune - sand cliff calcarenite	low shrubland
4.3.7 Hambidge	extensive undulating plain with dunes and occasional inselbergs and tidal flats and coastal dunes	undulating plain - sand/calcrete dune - sand cliff - metamorphics	
4.3.9 Cleve	gently sloping sandy plains and footslopes with some coastal dunes and low cliffs	plain and footslope - sand dune - sand cliffs - metasediments	open heath
4.3.12 Midgee	mangrove flats or low coastal cliffs	plain - sand. calcrete dune - sand cliff - metasediments	open scrub
4.4 Northern Myall Plains			
4.4.6 Whyalla	easterly sloping calcreted plain with tidal flats	plain - calcrete	low open woodland and mangroves
4.5 Southern Yorke Peninsula			
4.5.1 Innes	undulating sandy plain with dunes and salt lakes or low coastal cliffs	undulating plain - sand/calcrete dune - sand cliff - calcarenite	low mallee woodland
4.5.2 Corny	undulating to hilly plain with coastal dunes, low cliffs and swamps	undulating plain - calcarenite dune - sand cliff - calcarenite	
4.5.3 Yorketown	undulating to hilly tillite and calcrete plain with numerous salt lakes and dunes	undulating plain - calcrete, tillite dune - sand	

PROVINCE/Region/Association	Landform			Native vegetation (if remaining)
4.5.4 Urania	calcreted plain with low rises and areas of dunes, and low coastal cliffs or high dunes and salt lakes	undulating plain - sand dune - sand cliff - metasediments		
4.6 Gulf Plains				
4.6.1 Weetulla	gently undulating plain with low dunes, and active coastal dunes	undulating plain - sand dune - sand		
4.6.2 Artherton	gently undulating plain with gentle rises on metasediments discontinuously overlain with sand sheets, and with low coastal cliffs	undulating plain - sand/metasediments cliff - metasediments		
4.6.3 Boor Plains	undulating calcreted plain with coastal dunes, salt lakes and tidal flats	undulating plain - calcrete, sandstone dune - sand		heath and low shrubland
4.6.4 Parham dune - sand	tidal flats, coastal dunes, swamps and sandy beaches low shrubland	plain - sand		
4.6.12 Wokurna	undulating calcreted plain with dunes, and coastal cliffs or tidal flats	plain - calcrete dune - sand cliff - calcrete		
4.6.15 Port Pirie	coastal plains, tidal flats and mobile dunes	plain - sand dune - sand		
4.6.16 Glendella	coalescing alluvial fans from low hills onto narrow sandy plain with tidal flats	plain - sand		
3.MT LOFTY BLOCK				
3.1 Kangaroo Island				
3.1.1 Gantheaume	undulating calcarenite plain with overlying dunes; coastal cliffs, lakes and beaches	plain - calcarenite dune - sand cliff - sandstone		mallee
3.1.2 Parndana	undulating to low laterite hills with shallow lakes and coastal cliffs	undulating plain - laterite cliff - metamorphic		low open mallee forest and woodland
3.1.3 Stokes Bay	dissected margin of a laterite surface	slope and crest - laterite/metamorphics cliff - metamorphic		coastal mallee
3.1.4 Mt Marsden	undulating calcarenite and limestone plain with coastal cliffs and tidal flats	plain - calcarenite cliff - calcarenite		coastal mallee open scrub

PROVINCE/Region/Association	Landform			Native vegetation (if remaining)
3.1.5 Amberley	plains and hills with coastal cliffs		undulating plain - laterite cliff - metamorphics	remnants of open shrubland
3.1.6 Cygnet	gently undulating alluvial plain		plain - alluvium dune - sand	remnants of woodland
3.1.8 Coranda	undulating to hilly laterite surface with coastal lakes and low cliffs		undulating plain and hill - laterite cliff - metamorphic	remnants of open scrub
3.2 Peninsula Uplands				
3.2.1 Mt Rapid	hills and ridges on interbedded shale and arkose locally overlain by tillite with relict fans and coastal cliffs		hill, ridge - shale arkose fan - sand, gravel floodplain - alluvium cliff - shale, arkose	
3.2.2 Deep Creek	dissected ridge of phyllite and greywacke with coastal cliffs or beaches and dunes		ridge - phyllite, greywacke cliff - phyllite, greywacke	remnants of woodland and forest dune - sand
3.2.4 Inman Valley	low dissected ridges and spurs on tillite and arkose with dunes and beaches or cliffs		coastal plain - alluvium dune - sand cliff - arkose	
3.2.11 Mt Wilson	steep ridges and hills on metasediments and limestone with coastal cliffs or beaches		slope, crest - metasediments, limestone cliff - limestone floodplain - alluvium	
3.2.12 Aldinga	fans with areas of calcrete merging into a gently undulating plain with occasional laterite-capped tableland remnants, cliff alternate with beaches and dunes		undulating plain, fan - old alluvium alluvial plain - alluvium cliff - tillite, limestone dune - sand	
2 MURRAY MALLEE				
2.1 Murray Lakes				
2.1.5 Coorong	complex of high active dunes, beaches and small mudflats		dune - sand	heath lands on stabilised sections of dunes
1 South East				
1.1 South Coast				
1.1.1 Beachport	coastal dune system with an active foredune and occasional blowouts, older consolidated dunes discontinuously underlie the active foredune with low cliff where these are exposed		dune - sand consolidated dune - calcarenite cliff - calcarenite	coastal heath with rushes in swales

PROVINCE/Region/Association	Landform		Native vegetation (if remaining)
1.1.2 Lake George	coastal plains and lagoons with small areas of calcarenite dunes	coastal plain - calcareous sand consolidated dune - calcarenite	
1.1.3 Nene	unconsolidated dunes to 30 m high separated by narrow swales over calcarenite	dune - sand cliff - calcarenite swale - sand	open heath low shrubland closed sedgeland
1.1.4 Port Macdonnell	gently sloping sandy beach backed by dunes and coastal plains	dune - sand coastal plain - dune consolidated dune - calcarenite	open heath closed scrub, closed sedgeland open heath
1.1.5 Coolaroo	extensive high sand dunes along the coastline with numerous elongated lagoons behind the dunes	dune - sand coastal plain - clay	open heath tussock sedgeland
1.2 Southern Coastal Plains			
1.2.5 Allendale	isolated calcarenite dune ridges on a broad stony limestone plain	plain - limestone consolidated dune - calcarenite	

plain - open scrub, dune - open heath, cliff - low open shrubland

Appendix 3 Field Information

Section of datasheet	Information collected
1 Site description	Site number Observers Survey date Field sequence Hundred and Section Property and owner Mapsheet number and mapsheet name AMG zone Easting and Northing Altitude Reliability including manual/GPS
2 Location details	Aerial photo survey number and photo number East - measurement to pin prick in photo from western edge North - measurement to pin prick in photo from southern edge Site photo number and direction Location map and description - sketch of location Location comments - description of local directions to site
3 Physical description	General landscape description Site landform pattern Site landform element include seaward/leeward Site slope (degrees) Site aspect (degrees) Outcrop cover and lithology Fire scars include year of last fire Bare earth estimate Litter estimate
4 Disturbance	Erosion comments Disturbance impacts eg access tracks Disturbance comments
5 Vertebrate presence	Vertebrate presence/absence Vertebrate presence comments
6 Soils	Surface soil texture class Soil comments include structureless, horizon developed, organic staining, calcareous
7 Vegetation description	Plant species name Voucher number Association - dominant/codominant overstorey, understorey and emergent Lifeform (Muir's table) Cover/abundance Life stages (flowering fruiting etc)/comments

Section of datasheet	Information collected
8 Vegetation association description	Assemblage information: vegetation structural summary including life form class/canopy cover Structural code Upper stratum age class - presence/absence of seedling, sapling etc for tree layer
9 Overstorey measurements	Canopy type (per cent) Overstorey height (five estimates) Canopy depth (five estimates) Canopy diameter (five estimates) Gap (five estimates)
10 Overall comments	

Appendix 4 Buffers

Buffers (km) defined for selection of quadrats for analysis purposes.

Maps are in geographical order from the Western Australian border to the Victorian border with Kangaroo Island following from east to north, west and south.

Doug Fotheringham selected the distances.

Map name	Map code	Buffer (km)
Nullarbor (NUL)		
WILSON	4734	2
ALBA KAROO	4834	2
YANGOONABIE	4934	2
WIGUNDA	5034	2
ILLCUMBA	5135	5
Head of Bight (HOB)		
COYMBRA	5134	5
PILPUPIE	5234-04	5
RUSSELL	5234-02	5
KURAGI	5334-03	5
Eyre Peninsula west (EPW)		
COORABIE	5334-02	5
BOOKABIE	5434-03	3
CUNDILIPPY	5434-02	3
SINCLAIR	5433-01	3
NUNONG	5533-04	3
CHARRA	5533-01	2
THEVENARD	5633-04	2
MALTEE	5633-01	2
WALLANIPPIE	5632-01	2
COLLINSON	5632-01	2
CARAWA	5733-03	2
HASLAM	5732-04	2
STREAKY	5732-03	3
SEARCY	5731-04	3
CALCA	5731-01	3
VENUS	5831-04	3
TALIA	5831-02	3

Map name	Map code	Buffer (km)
ELLISTON	5830-01	3
HUDD	5930-04	3
SHERINGA	5930-03	2
KIANA	5929-01	2
Eyre Peninsula south (EPS)		
COULTA	5929-02	2
WANILLA	6028-04	2
WHIDBEY	5928-04	5
WANGARY	5928-01	5
SLEAFORD	6028-02	5
JUSSIEU	6028-02	5
THISTLE	6028-02	5
LINCOLN	6028-01	5
BANKS	6028-01	1
TUMBY	6129-03	1
Eyre Peninsula east (EPE)		
NEILL	6129-01	1
ARNO	6230-03	1
GIBBON	6230-02	1
COWELL	6230-01	1
Spencer Gulf (SPG)		
WILTON	6330-04	1
MCGREGOR	6330-04	1
CULTANA	6432-02	1
MAMBRAY	6432-02	1
LINCOLN GAP	6432-04	1
DAVENPORT	6432-01	1
PIRIE	6531-04	1
GAWLER	6628-04	1
WANDEARAH	6431-02	1
Yorke Peninsula (YOP)		
BROUGHTON	6430-01	1
WALLAROO	6430-03	1
MOONTA	6429-04	1.5
TIPARRA	6329-01	1.5
MAITLAND	6429-03	1.5

Map name	Map code	Buffer (km)
WARDANG	6329-02	1.5
CURRAMULKA	6428-04	1.5
TURTON	6328-02	1.5
CORNY POINT	6328-03	1.5
PONDALOWIE	6227-01	1.5
ALTHORPE	6227-02	1.5
HILLOCK	6327-04	1.5
COONARIE	6327-01	1.5
EDITHBURGH	6427-04	1
Gulf St Vincent (SVG)		
STANSBURY	6428-02	1
PORT JULIA	6428-01	1
ARDROSSAN	6429-02	1
INKERMAN	6529-03	1
WAKEFIELD	6529-04	1
DUBLIN	6529-02	1
VINCENT	6528-01	1
ADELAIDE	6628-03	1
NOARLUNGA	6627-04	1
Fleurieu Peninsula (FLP)		
YANKALILLA	6527-02	1
CAPE JERVIS	6526-04	1
TORRENS VALE	6526-01	1
ENCOUNTER	6626-04	1
Coorong (COO)		
GOOLWA	6626-01	3
NARRUNG	6726-04	5
MAGRATH FLAT	6726-02	5
SANTO	6825-04	5
CANTARA	6825-03	5
TILLEY SWAMP	6825-02	5
DUFFIELD	6824-01	5
KINGSTON	6824-02	5
JAFFA	6824-03	5
South East (SOE)		
ROBE	6823-01	5
BEACHPORT	6823-02	5
HATHERLEIGH	6923-03	5
BUFFON	6922-04	5
MILLICENT	6922-01	5
BENARA	6922-02	1
SCHANK	6922-02	1

Map name	Map code	Buffer (km)
GAMBIER	7022-02	1
Kangaroo Island east (KIE)		
WILLOUGHBY	6526-03	4
PENNESHAW	6426-01	1
KINGSCOTE	6426-04	1
CASSINI	6326-01	1
Kangaroo Island north (KIN)		
STOKES BAY	6326-04	1
SNUG COVE	6226-01	1
BORDA	6226-02	4
Kangaroo Island south (KIS)		
VENNACHAR	6226-02	4
GRAINGER	6226-02	4
VIVONNE	6326-03	4
SEDDON	6226-02	4
DESTREES	6426-03	4

Appendix 5 Information for Quadrats in All Surveys

Reg - geomorphic region: NUL - Nullarbor, HOB - Head of Bight, EPW - Eyre Peninsula west, EPS - Eyre Peninsula south, EPE - Eyre Peninsula east, SPG - Spencer Gulf, YOP - Yorke Peninsula, SVG - Gulf St Vincent, KIS - Kangaroo Island south, KIE - Kangaroo Island east, KIN - Kangaroo Island north, FLP - Fleurieu Peninsula, COO - Coorong, SOE - South East, **Sur** - Survey number, **PID** - personal identification number, **A** - Australian Map Grid number,

East - easting from topographical map, **North** - northing from topographical map, **Pat** - landform pattern, **G** - floristic group number, **Floristic community** - as designated by PATN analysis, **R** - number of species with conservation ratings recorded for the quadrat, **Sp** - total number of species recorded for each quadrat, **N** - number of native plant species **I** - number of introduced plant species.

NB A floristic community is only available for quadrats included in the PATN analysis

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
NUL	14	06058	52	631750	6504720				1	30	30	0
NUL	14	06059	52	631750	6504720				0	25	24	1
NUL	14	06060	52	631750	6504720				0	26	23	3
NUL	14	06061	52	631324	6506365				0	54	54	0
NUL	14	06062	52	631324	6506365				0	27	27	0
NUL	14	06063	52	631324	6506365				0	21	20	1
NUL	14	06095	52	507643	6497247				0	33	33	0
NUL	14	06096	52	507693	6497247				1	46	46	0
NUL	14	06097	52	507693	6497247				1	61	55	6
NUL	14	06098	52	507693	6497247				1	31	31	0
NUL	14	06099	52	507693	6497247				0	22	20	2
NUL	14	06100	52	507693	6497247				0	3	2	1
NUL	82	13801	52	527750	6498300	PLA	36	<i>Atriplex vesicaria</i> ssp	0	19	20	0
NUL	82	13802	52	527050	6498100	ESC	35	<i>Maireana eriolada</i>	0	22	21	2
NUL	82	13803	52	513950	6496950	PLA	35	<i>Maireana eriolada</i>	1	22	22	0
NUL	82	13804	52	513800	6496500	ESC	35	<i>Maireana eriolada</i>	0	14	14	0
NUL	82	13805	52	513950	6496450	DUN	46	<i>Nitraria billardiarei</i>	0	9	6	3
NUL	82	13806	52	513950	6496400	DUN	48	<i>Atriplex cinerea</i>	0	10	6	4
NUL	82	13807	52	533250	6499150	PLA	35	<i>Maireana eriolada</i>	0	17	18	0
NUL	82	13808	52	533200	6498900	PLA	35	<i>Maireana eriolada</i>	1	22	23	0
NUL	82	13809	52	541550	6499750	PLA	35	<i>Maireana eriolada</i>	1	16	15	1
NUL	82	13810	52	541500	6500050	PLA	35	<i>Maireana eriolada</i>	0	17	18	0
NUL	82	13811	52	610500	6505700	PLA	27	<i>Maireana oppositifolia</i>	1	18	17	1
NUL	82	13812	52	598500	6505750	PLA	35	<i>Maireana eriolada</i>	0	10	10	0
NUL	82	13813	52	598600	6505250	PLA	35	<i>Maireana eriolada</i>	0	4	4	0
NUL	82	13814	52	598200	6506350	PLA	35	<i>Maireana eriolada</i>	0	11	11	0
NUL	82	13815	52	601500	6504950	PLA	35	<i>Maireana eriolada</i>	0	9	9	0
NUL	82	13816	52	601750	6504750	PLA	27	<i>Maireana oppositifolia</i>	0	10	10	0
NUL	82	13817	52	617100	6506700	PLA	35	<i>Maireana eriolada</i>	0	12	11	1
NUL	82	13818	52	614550	6505550	DUN	27	<i>Maireana oppositifolia</i>	1	14	13	1
NUL	82	13867	52	617100	6505200	PLA	27	<i>Maireana oppositifolia</i>	0	13	13	0
NUL	82	13960	52	510350	6497100	ESC	33	<i>Melaleuca lanceolata/Olearia exiguiifolia</i>	1	19	17	2

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
NUL	82	13961	52	509700	6497000	PLA	4	<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	0	19	17	2
NUL	82	13962	52	510450	6496900	PLA	4	<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	1	14	12	2
NUL	82	13964	52	510800	6496550	CON	32	<i>Melaleuca lanceolata</i> / <i>Senecio lautus</i>	0	14	15	0
NUL	82	13965	52	510400	6497300	PLA	35	<i>Maireana eriolada</i>	0	17	18	0
NUL	82	13966	52	511600	6497100	ESC	33	<i>Melaleuca lanceolata</i> / <i>Olearia exiguiifolia</i>	1	17	17	0
NUL	82	13967	52	509450	6496800	ESC	33	<i>Melaleuca lanceolata</i> / <i>Olearia exiguiifolia</i>	0	13	12	1
NUL	82	13968	52	509050	6496000	DUN	6	<i>Cakile maritima</i> ssp <i>maritima</i>	0	4	1	3
NUL	82	13969	52	507250	6496500	DUN	6	<i>Cakile maritima</i> ssp <i>maritima</i>	0	4	3	1
NUL	82	13970	52	504800	6495550	ESC	33	<i>Melaleuca lanceolata</i> / <i>Olearia exiguiifolia</i>	1	19	18	2
NUL	82	13971	52	500800	6494250	PLA	33	<i>Melaleuca lanceolata</i> / <i>Olearia exiguiifolia</i>	0	15	15	0
NUL	82	13972	52	500000	6495600	PLA	4	<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	0	11	11	0
NUL	82	13974	52	551250	6501350	PLA	35	<i>Maireana eriolada</i>	0	16	17	0
NUL	82	13975	52	551200	6501200	PLA	27	<i>Maireana oppositifolia</i>	0	10	10	0
NUL	82	13976	52	550950	6501600	PLA	35	<i>Maireana eriolada</i>	0	10	10	0
NUL	82	13977	52	557300	6502150	PLA	35	<i>Maireana eriolada</i>	1	13	13	0
NUL	82	13978	52	557400	6502600	PLA	35	<i>Maireana eriolada</i>	0	11	11	0
NUL	82	13979	52	557500	6501600	PLA	27	<i>Maireana oppositifolia</i>	1	11	11	0
NUL	82	13980	52	557450	6501800	PLA	35	<i>Maireana eriolada</i>	0	9	9	0
NUL	82	13981	52	560150	6502400	PLA	35	<i>Maireana eriolada</i>	0	11	11	0
NUL	82	13982	52	560450	6501850	PLA	35	<i>Maireana eriolada</i>	0	11	11	0
NUL	82	13983	52	560500	6502550	PLA	35	<i>Maireana eriolada</i>	1	18	19	0
NUL	82	13984	52	573300	6502900	PLA	35	<i>Maireana eriolada</i>	0	10	10	0
NUL	82	13985	52	573300	6502650	PLA	27	<i>Maireana oppositifolia</i>	0	9	9	0
NUL	82	13986	52	582500	6503400	PLA	35	<i>Maireana eriolada</i>	0	13	13	0
NUL	82	13987	52	583600	6504050	PLA	35	<i>Maireana eriolada</i>	0	13	13	0
NUL	82	13988	52	583600	6505550	PLA	35	<i>Maireana eriolada</i>	1	19	19	0
NUL	82	13990	52	666750	6503100	PLA	35	<i>Maireana eriolada</i>	0	11	11	0
NUL	82	13991	52	666400	6502200	PLA	35	<i>Maireana eriolada</i>	0	10	10	0
NUL	82	13992	52	664900	6502250	CON	35	<i>Maireana eriolada</i>	0	13	13	0
NUL	82	13993	52	666600	6501700	PLA	27	<i>Maireana oppositifolia</i>	0	11	11	0
NUL	82	13995	52	669600	6501650	PLA	27	<i>Maireana oppositifolia</i>	0	14	13	1
NUL	82	13996	52	669900	6501600	CON	27	<i>Maireana oppositifolia</i>	0	15	14	1
HOB	14	06132	52	715196	6514546				1	28	25	3
HOB	14	06133	52	715196	6514546				1	51	44	7
HOB	14	06134	52	715196	6514546				1	40	32	8
HOB	14	06135	52	715196	6514546				0	35	28	7
HOB	14	06136	52	715196	6514546				0	26	22	4
HOB	14	06137	52	715196	6514546				0	22	22	0
HOB	14	06138	52	715196	6514546				0	21	18	3
HOB	14	06139	52	715196	6514546				0	41	36	5
HOB	30	09389	53	227500	6466500				0	5	5	0
HOB	30	09390	53	227500	6466500				0	7	7	0
HOB	82	14057	52	743740	6501380	LON	34	<i>Melaleuca lanceolata</i> / <i>Atriplex vesicaria</i> ssp	0	7	7	0
HOB	82	14059	53	226130	6462890	PLA	34	<i>Melaleuca lanceolata</i> / <i>Atriplex vesicaria</i> ssp	0	18	17	1
HOB	82	14061	53	226350	6462560	RIS	34	<i>Melaleuca lanceolata</i> / <i>Atriplex vesicaria</i> ssp	0	13	13	0
HOB	82	14062	52	771530	6479910	RIS	4	<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	0	9	6	3
HOB	82	14063	52	723300	6509070	DUN	36	<i>Atriplex vesicaria</i> ssp	0	7	7	0
HOB	82	14064	52	722490	6508870	DUN	36	<i>Atriplex vesicaria</i> ssp	0	6	6	0
HOB	82	14283	53	235670	6452970	ESC	36	<i>Atriplex vesicaria</i> ssp	0	18	17	1
HOB	82	14289	53	235700	6453300	DUN	45	<i>Olearia axillaris</i> / <i>Tetragonia implexicoma</i>	0	13	8	5
HOB	82	14290	53	230010	6456800	DUN	51	<i>Spinifex sericeus</i> / <i>Euphorbia paralias</i>	0	11	10	1
HOB	82	14291	53	230130	6456890	DUN	45	<i>Olearia axillaris</i> / <i>Tetragonia implexicoma</i>	0	11	8	3

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
HOB	82	14292	53	230320	6457000	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	12	10	2
HOB	82	14293	53	220220	6466480	DUN	27	<i>Maireana oppositifolia</i>	1	22	22	1
HOB	82	14294	53	220850	6466680	DUN	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	14	15	0
HOB	82	14295	53	220860	6466500	DUN	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	23	23	1
HOB	82	14296	52	781600	6471120	ESC	27	<i>Maireana oppositifolia</i>	1	13	13	0
HOB	82	14297	52	781680	6471180	ESC	27	<i>Maireana oppositifolia</i>	0	17	17	0
HOB	82	14298	52	772550	6478120	DUN	47	<i>Leucophyta brownii</i>	0	15	15	1
HOB	82	14299	52	772540	6478080	CON	27	<i>Maireana oppositifolia</i>	0	17	18	0
HOB	82	14300	52	773620	6478660	PLA	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	22	22	0
HOB	82	14301	52	772780	6478480	CON	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	22	23	0
HOB	82	14302	52	772500	6478710	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i> ssp	0	17	18	0
HOB	82	14303	52	715670	6512170	DUN	47	<i>Leucophyta brownii</i>	0	13	13	1
HOB	82	14304	52	715610	6512290	CON	36	<i>Atriplex vesicaria</i> ssp	0	9	9	0
HOB	82	14306	52	715990	6512600	CON	36	<i>Atriplex vesicaria</i> ssp	1	14	13	1
HOB	82	14307	52	701850	6516480	ESC	36	<i>Atriplex vesicaria</i> ssp	1	13	13	0
HOB	82	14308	52	701050	6515770	ESC	27	<i>Maireana oppositifolia</i>	1	13	12	1
HOB	82	14309	52	702460	6516770	DUN	36	<i>Atriplex vesicaria</i> ssp	0	9	9	0
HOB	82	14310	53	236730	6453270	DUN	46	<i>Nitraria billardiarei</i>	0	9	8	1
HOB	82	14311	53	234670	6454780	DUN	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	19	19	0
HOB	82	14312	53	230900	6457220	DUN	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	20	20	0
HOB	82	14313	53	230310	6457440	CON	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	18	18	0
HOB	82	14314	53	220630	6467110	DUN	36	<i>Atriplex vesicaria</i> ssp	0	11	10	1
HOB	82	14316	53	220680	6467770	DUN	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	18	18	0
HOB	82	14317	52	782890	6471830	CON	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	17	17	0
HOB	82	14318	52	782460	6471610	CON	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	15	14	1
HOB	82	14319	52	781720	6471490	CON	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	18	18	0
HOB	82	14320	52	771270	6479770	CON	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	16	15	2
HOB	82	14322	52	769220	6483190	DUN	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	16	16	0
HOB	82	14323	52	768810	6483000	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	15	15	0
HOB	82	14324	52	768240	6482570	CON	36	<i>Atriplex vesicaria</i> ssp	0	20	20	1
HOB	82	14325	52	751190	6493650	CON	27	<i>Maireana oppositifolia</i>	0	12	12	0
HOB	82	14326	52	751210	6493520	DUN	48	<i>Atriplex cinerea</i>	0	4	3	1
HOB	82	14327	52	751520	6494040	CON	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	0	15	16	0
HOB	82	14328	52	707030	6518550	CON	44	<i>Acacia ligulata</i>	0	4	4	0
EPW	30	09328	53	426000	6349000				0	17	15	2
EPW	30	09339	53	305400	6455000				0	12	12	0
EPW	30	09378	53	324500	6443000				0	10	9	1
EPW	30	09379	53	324500	6443000				0	12	11	1
EPW	30	09381	53	389600	6431800				0	15	14	1
EPW	30	09382	53	396100	6426000				0	15	14	1
EPW	27	10440	53	486566	6305577	DUN			0	20	17	3
EPW	27	10441	53	486309	6304037	DUN			0	20	17	3
EPW	27	10442	53	486049	6305268	FLO			0	17	14	3
EPW	27	10444	53	488645	6295109	DUN			1	26	20	6
EPW	27	10445	53	488387	6294800	DUN			0	23	17	6
EPW	27	10446	53	487300	6294200	DUN			0	17	16	1
EPW	27	10447	53	486800	6294000	DUN			0	17	14	3
EPW	71	12416	53	465550	6326800	LOW			2	61	48	14
EPW	71	12426	53	462900	6326350	LOW			0	39	32	8
EPW	71	12427	53	463500	6324700	LOW			1	49	41	7
EPW	71	12428	53	464200	6323650	LOW			0	44	39	6
EPW	71	12429	53	464550	6323650	LOW			0	51	43	8

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EPW	71	12430	53	462600	6326200	PLA			0	22	22	0
EPW	71	12431	53	462400	6325200	RIS			0	37	38	0
EPW	71	12432	53	462600	6326200	DUN			0	69	68	2
EPW	71	12434	53	466850	6323900	DUN			0	18	19	0
EPW	80	13350	53	524765	6236932	RIS	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	23	15	8
EPW	80	13351	53	525251	6233351	RIS	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	27	23	4
EPW	80	13353	53	524971	6223477	DUN	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	0	27	25	2
EPW	80	13358	53	524638	6218690	PLA	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	22	16	6
EPW	80	13361	53	530363	6214783	DUN	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	22	16	7
EPW	80	13362	53	531552	6210455	DUN	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	1	33	19	14
EPW	82	13723	53	477930	6316710	PLA	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	10	10	0
EPW	82	13725	53	474090	6319130	ESC	31	<i>Triodia compacta</i>	0	18	16	2
EPW	82	13726	53	474880	6318590	ESC	47	<i>Leucophyta brownii</i>	1	22	16	6
EPW	82	13727	53	418100	6370690	ESC	47	<i>Leucophyta brownii</i>	0	21	20	2
EPW	82	13728	53	411970	6378860	ESC	47	<i>Leucophyta brownii</i>	1	25	20	5
EPW	82	13729	53	415720	6379290	TID	25	<i>Threlkeldia diffusa</i>	0	12	9	3
EPW	82	13730	53	408010	6407450	PLA	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	20	17	3
EPW	82	13731	53	407430	6407230	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	14	13	1
EPW	82	13732	53	407970	6407210	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	22	18	4
EPW	82	13733	53	417640	6408760	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	23	21	3
EPW	82	13734	53	417820	6408840	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	30	23	7
EPW	82	13735	53	418260	6408850	PLA	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	28	22	6
EPW	82	13736	53	392120	6403930	DUN	27	<i>Maireana oppositifolia</i>	0	28	21	8
EPW	82	13737	53	392280	6403230	CON	46	<i>Nitraria billardieri</i>	0	18	15	3
EPW	82	13738	53	392700	6402910	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	23	21	2
EPW	82	13739	53	393450	6401580	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	22	20	2
EPW	82	13740	53	396060	6402970	PLA	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	22	21	1
EPW	82	13741	53	397280	6402910	PLA	27	<i>Maireana oppositifolia</i>	0	34	27	7
EPW	82	13742	53	397390	6403060	PLA	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	24	21	3
EPW	82	13743	53	397490	6403210	PLA	26	<i>Halosarcia indica</i> ssp	0	17	13	4
EPW	82	13744	53	397620	6402970	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	16	17	0
EPW	82	13745	53	397670	6403490	PLA	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	30	26	4
EPW	82	13746	53	259140	6454310	CON	27	<i>Maireana oppositifolia</i>	1	19	17	2
EPW	82	13747	53	258310	6454970	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	29	23	6
EPW	82	13748	53	260970	6453970	CON	46	<i>Nitraria billardieri</i>	0	14	11	3
EPW	82	13749	53	260900	6453990	CON	46	<i>Nitraria billardieri</i>	0	10	9	1
EPW	82	13750	53	263440	6464000	DUN	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	24	22	2
EPW	82	13751	53	263880	6463460	CON	46	<i>Nitraria billardieri</i> is	0	16	7	9
EPW	82	13752	53	263910	6463320	CON	46	<i>Nitraria billardieri</i>	0	19	14	5
EPW	82	13753	53	251020	6456460	DUN	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	21	21	0
EPW	82	13754	53	245820	6453910	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	20	20	0
EPW	82	13755	53	246000	6453660	LON	34	<i>Melaleuca lanceolata/Atriplex vesicaria</i> ssp	1	20	19	1
EPW	82	13756	53	245950	6453210	CON	27	<i>Maireana oppositifolia</i>	1	25	25	1
EPW	82	13758	53	247840	6454280	CON	35	<i>Maireana erioclada</i>	0	23	23	0
EPW	82	13759	53	267150	6465130	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	18	17	1
EPW	82	13760	53	266670	6465130	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	19	18	1
EPW	82	13761	53	271770	6465120	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	14	13	1
EPW	82	13762	53	279130	6462420	CON	46	<i>Nitraria billardieri</i>	0	13	11	2
EPW	82	13763	53	281740	6462820	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	21	15	6
EPW	82	13764	53	273650	6464470	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	17	12	5
EPW	82	13765	53	293700	6460410	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	11	12	0
EPW	82	13766	53	293820	6460390	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	12	12	0

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EPW	82	13767	53	293500	6460200	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	10	10	0
EPW	82	13768	53	293540	6459970	CON	47	<i>Leucophyta brownii</i>	0	11	11	1
EPW	82	13769	53	259770	6455380	ESC	27	<i>Maireana oppositifolia</i>	1	21	16	5
EPW	82	13770	53	258920	6455500	TID	25	<i>Threlkeldia diffusa</i>	0	11	10	1
EPW	82	13771	53	252790	6455810	CON	27	<i>Maireana oppositifolia</i>	0	22	17	5
EPW	82	13772	53	252740	6455790	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	1	21	17	4
EPW	82	13773	53	476350	6317100	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	16	14	2
EPW	82	13774	53	476400	6317250	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	17	13	4
EPW	82	13775	53	476750	6317350	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	28	24	4
EPW	82	13776	53	476950	6317500	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	23	22	1
EPW	82	13777	53	481550	6312050	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	19	17	2
EPW	82	13778	53	481600	6312000	DUN	48	<i>Atriplex cinerea</i>	0	13	11	2
EPW	82	13780	53	491500	6275500	DUN	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	10	8	2
EPW	82	13781	53	491250	6275250	DUN	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	22	13	9
EPW	82	13782	53	490500	6274900	DUN	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	23	19	4
EPW	82	13783	53	490550	6274650	DUN	31	<i>Triodia compacta</i>	1	25	19	6
EPW	82	13784	53	485050	6279050	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	26	22	4
EPW	82	13786	53	485250	6279400	DUN	47	<i>Leucophyta brownii</i>	0	22	22	1
EPW	82	13787	53	485600	6281350	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	14	11	3
EPW	82	13788	53	485650	6281500	DUN	44	<i>Acacia ligulata</i>	0	10	9	1
EPW	82	13789	53	485450	6281500	DUN	48	<i>Atriplex cinerea</i>	0	12	9	3
EPW	82	13790	53	501600	6266750	ESC	44	<i>Acacia ligulata</i>	0	21	11	11
EPW	82	13791	53	517950	6248950	LON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	21	16	5
EPW	82	13792	53	517700	6249000	DUN	48	<i>Atriplex cinerea</i>	0	15	11	4
EPW	82	13794	53	517650	6249100	DUN	48	<i>Atriplex cinerea</i>	0	10	7	3
EPW	82	13795	53	495000	6270550	DUN	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	29	17	12
EPW	82	13797	53	515800	6252550	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	20	12	8
EPW	82	13798	53	515500	6252750	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	21	14	7
EPW	82	13799	53	515500	6252250	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	21	14	7
EPW	82	13800	53	515300	6251550	DUN	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	26	21	5
EPW	82	13868	53	392350	6404100	BEA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	13	12	1
EPW	82	13869	53	392300	6403900	BEA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	15	14	2
EPW	82	13874	53	394850	6427000	PLA	30	<i>Melaleuca lanceolata/Atriplex paludosa ssp</i>	0	13	12	1
EPW	82	13875	53	394520	6426670	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa ssp</i>	0	14	13	1
EPW	82	13876	53	393800	6427350	DUN	30	<i>Melaleuca lanceolata/Atriplex paludosa ssp</i>	0	13	12	1
EPW	82	13877	53	391950	6408750	CON	46	<i>Nitraria billardiarei</i>	0	17	15	3
EPW	82	13878	53	392050	6408800	ESC	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	23	23	1
EPW	82	13879	53	392500	6407250	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	1	26	24	2
EPW	82	13880	53	392350	6407650	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa ssp</i>	0	20	17	3
EPW	82	13881	53	392250	6407450	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	19	15	4
EPW	82	13882	53	392200	6407300	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	18	17	2
EPW	82	13883	53	392350	6406650	CON	31	<i>Triodia compacta</i>	0	11	10	1
EPW	82	13884	53	380950	6436200	BEA	30	<i>Melaleuca lanceolata/Atriplex paludosa ssp</i>	0	8	8	0
EPW	82	13885	53	379950	6437000	BEA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	20	20	0
EPW	82	13886	53	380000	6436850	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	21	21	0
EPW	82	13887	53	378750	6437350	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa ssp</i>	0	10	10	0
EPW	82	13888	53	378700	6437100	DUN	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	19	18	2
EPW	82	13889	53	377350	6437050	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	10	10	0
EPW	82	13890	53	377100	6436650	ESC	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	20	18	2
EPW	82	13891	53	362850	6440250	BEA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	15	14	1
EPW	82	13892	53	362700	6439900	CON	46	<i>Nitraria billardiarei</i>	0	6	6	0
EPW	82	13893	53	365100	6443350	BEA	30	<i>Melaleuca lanceolata/Atriplex paludosa ssp</i>	0	15	14	1

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EPW	82	13894	53	365800	6443100	BEA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	15	14	1
EPW	82	13895	53	365900	6442700	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	15	14	1
EPW	82	13897	53	311050	6448250	BEA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	21	21	1
EPW	82	13898	53	309200	6447250	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	17	16	2
EPW	82	13899	53	304050	6452800	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	15	14	1
EPW	82	13901	53	304300	6453050	PLA	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	22	19	3
EPW	82	13902	53	305950	6452250	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	18	17	2
EPW	82	13903	53	323800	6440150	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	13	13	0
EPW	82	13905	53	323700	6440050	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	10	10	0
EPW	82	13907	53	323500	6439950	CON	6	<i>Cakile maritima</i> ssp <i>maritima</i>	0	9	7	2
EPW	82	13908	53	324600	6437650	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	15	12	3
EPW	82	13909	53	324800	6436400	BEA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	19	18	1
EPW	82	13910	53	324050	6436800	PLA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	21	19	2
EPW	82	13911	53	324400	6436250	CON	47	<i>Leucophyta brownii</i>	1	10	9	1
EPW	82	13912	53	323650	6435300	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	1	21	17	4
EPW	82	13913	53	348250	6437100	PLA	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	13	13	0
EPW	82	13914	53	347850	6436750	CON	31	<i>Triodia compacta</i>	0	21	22	0
EPW	82	13915	53	348200	6436550	PLA	31	<i>Triodia compacta</i>	0	25	25	1
EPW	82	13916	53	353500	6438850	CON	43	<i>Olearia axillaris/Rhagodia candolleana</i> ssp <i>candolleana</i>	0	12	10	2
EPW	82	13917	53	353500	6438650	DUN	48	<i>Atriplex cinerea</i>	0	12	11	1
EPW	82	13918	53	335500	6435500	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	9	8	1
EPW	82	13919	53	335750	6435400	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	8	7	1
EPW	82	13920	53	335500	6435100	PLA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	22	22	1
EPW	82	13921	53	335450	6434850	ESC	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	18	18	1
EPW	82	13922	53	342100	6438700	PLA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	13	13	0
EPW	82	13923	53	342050	6438450	PLA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	1	21	21	0
EPW	82	13924	53	341800	6438300	ESC	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	21	20	1
EPW	82	13925	53	344450	6438400	DUN	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	14	14	0
EPW	82	13926	53	344300	6438150	PLA	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	22	22	0
EPW	82	13933	53	344400	6437950	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	11	11	0
EPW	82	13934	53	344400	6437600	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	11	9	2
EPW	82	13935	53	441100	6330000	CON	31	<i>Triodia compacta</i>	1	20	20	0
EPW	82	13936	53	441000	6330000	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	1	24	24	0
EPW	82	13937	53	441000	6328900	CON	32	<i>Melaleuca lanceolata/Senecio lautus</i>	0	24	23	2
EPW	82	13938	53	441500	6330200	PLA	31	<i>Triodia compacta</i>	1	19	18	1
EPW	82	13939	53	446000	6332500	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	18	18	0
EPW	82	13940	53	446000	6332250	CON	47	<i>Leucophyta brownii</i>	0	12	12	0
EPW	82	13941	53	431900	6336400	CON	31	<i>Triodia compacta</i>	0	18	18	0
EPW	82	13942	53	425800	6348050	CON	31	<i>Triodia compacta</i>	0	15	14	1
EPW	82	13943	53	431800	6336250	CON	31	<i>Triodia compacta</i>	0	16	16	0
EPW	82	13944	53	431500	6336200	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	13	13	0
EPW	82	13945	53	431100	6336200	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	1	13	13	0
EPW	82	13946	53	430700	6340500	CON	30	<i>Melaleuca lanceolata/Atriplex paludosa</i> ssp	0	11	10	1
EPW	82	13947	53	429200	6342600	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	1	21	16	5
EPW	82	13948	53	421400	6346750	PLT	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	1	15	15	0
EPW	82	13949	53	425000	6348000	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	12	10	2
EPW	82	13950	53	424700	6354000	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	18	15	3
EPW	82	13951	53	417700	6358300	LON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	22	18	4
EPW	82	13952	53	417500	6358200	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	15	14	1
EPW	82	13953	53	412100	6358500	ESC	47	<i>Leucophyta brownii</i>	0	15	13	2
EPW	82	13954	53	418200	6371250	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	16	9	7
EPW	82	13955	53	413200	6358200	CON	46	<i>Nitraria billardierei</i>	0	12	11	1

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EPW	82	13956	53	413200	6361000	CON	27	<i>Maireana oppositifolia</i>	2	18	19	0
EPW	82	13957	53	415200	6361500	CON	27	<i>Maireana oppositifolia</i>	1	13	10	4
EPW	82	13958	53	415600	6361900	ESC	31	<i>Triodia compacta</i>	2	24	24	0
EPW	82	13959	53	415200	6362550	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	1	23	21	2
EPW	82	15876	53	484400	6304680	DUN	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	29	21	8
EPW	82	15877	53	484980	6305170	PAR	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	1	33	30	3
EPW	82	15878	53	484590	6305220	PAR	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	22	20	2
EPW	82	15879	53	484560	6305160	PAR	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	25	20	5
EPW	82	15880	53	484610	6304940	PAR	40	<i>Alyxia buxifolia</i>	1	47	34	13
EPW	82	15881	53	484220	6304760	DUN	48	<i>Atriplex cinerea</i>	0	10	9	1
EPW	82	15903	53	528620	6215560	DUN	48	<i>Atriplex cinerea</i>	0	9	7	2
EPW	82	15904	53	528450	6216160	ESC	47	<i>Leucophyta brownii</i>	0	24	16	8
EPW	82	15905	53	528510	6216480	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	31	18	13
EPW	82	15906	53	528890	6216630	DUN	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	1	51	29	22
EPW	82	15907	53	529640	6217270	DUN	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	37	20	17
EPW	82	15908	53	525180	6228300	ESC	31	<i>Triodia compacta</i>	0	35	25	10
EPW	82	15909	53	525490	6228110	DUN	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	39	26	13
EPW	82	15910	53	525680	6228460	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	33	20	13
EPW	82	15911	53	525990	6229900	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	34	21	13
EPW	82	15912	53	525990	6228910	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	50	28	22
EPS	79	12748	53	587400	6148700				0	10	10	0
EPS	79	12750	53	590700	6149600				0	5	5	0
EPS	79	12751	53	591600	6148200				0	8	8	0
EPS	79	12752	53	587500	6148000				0	8	8	0
EPS	79	12754	53	586600	6144300				0	12	12	0
EPS	79	12755	53	587000	6133700				0	4	4	0
EPS	79	12756	53	587600	6132000				0	8	8	0
EPS	79	12757	53	569300	6144000				0	6	6	0
EPS	79	12759	53	585000	6134700				0	13	13	0
EPS	79	12762	53	567700	6146500				0	6	6	0
EPS	79	12763	53	578500	6146600				0	3	3	0
EPS	79	12764	53	580900	6147800				0	8	8	0
EPS	79	12765	53	591800	6149000				0	8	8	0
EPS	79	12767	53	577300	6145600				0	12	12	0
EPS	79	12768	53	570300	6147300				0	12	12	0
EPS	79	12769	53	587900	6143800				0	12	12	0
EPS	79	12770	53	587700	6143900				0	11	10	1
EPS	79	12771	53	587200	6142600				0	13	13	0
EPS	79	12772	53	585800	6131100				0	7	7	0
EPS	79	12773	53	587800	6128000				1	13	13	0
EPS	79	12774	53	590500	6153500				0	7	7	0
EPS	79	12775	53	591700	6148300				0	17	17	0
EPS	79	12776	53	586400	6128700				1	16	16	0
EPS	79	12777	53	586500	6128700				0	12	12	0
EPS	79	12778	53	571700	6147300				1	8	8	0
EPS	79	12779	53	578000	6138300				1	11	10	1
EPS	79	12781	53	587800	6131400				0	10	10	0
EPS	79	12782	53	579000	6141700				0	6	6	0
EPS	79	12783	53	584800	6137000				0	15	15	0
EPS	79	12784	53	586700	6129600				0	19	19	0
EPS	79	12785	53	590900	6156800				0	12	11	1
EPS	79	12786	53	567000	6145000				2	8	7	1

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
EPS	79	12787	53	579000	6152900				0	13	13	0
EPS	79	12788	53	573500	6151900				0	9	9	0
EPS	79	12789	53	587500	6130800				0	5	5	0
EPS	80	13232	53	600321	6177609	SAN	9	<i>Eucalyptus</i> sp/ <i>Melaleuca lanceolata</i> / <i>Melaleuca uncinata</i>	1	31	31	0
EPS	80	13233	53	600095	6177886	SAN	9	<i>Eucalyptus</i> sp/ <i>Melaleuca lanceolata</i> / <i>Melaleuca uncinata</i>	0	41	41	0
EPS	80	13234	53	599660	6178255	PLA	9	<i>Eucalyptus</i> sp/ <i>Melaleuca lanceolata</i> / <i>Melaleuca uncinata</i>	1	36	36	0
EPS	80	13235	53	600403	6179175	PLA	9	<i>Eucalyptus</i> sp/ <i>Melaleuca lanceolata</i> / <i>Melaleuca uncinata</i>	1	33	33	0
EPS	80	13236	53	598688	6180986	PLA	9	<i>Eucalyptus</i> sp/ <i>Melaleuca lanceolata</i> / <i>Melaleuca uncinata</i>	0	31	28	3
EPS	80	13276	53	532263	6206736	PLA	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	1	39	25	14
EPS	80	13278	53	534502	6199825	HIL	30	<i>Melaleuca lanceolata</i> / <i>Atriplex paludosa</i> ssp	0	22	19	3
EPS	80	13279	53	533707	6199819	LOW	21	<i>Eucalyptus rugosa</i> / <i>Melaleuca lanceolata</i>	0	49	42	7
EPS	80	13280	53	534015	6198042	HIL	18	<i>Allocasuarina verticillata</i>	0	48	35	13
EPS	80	13281	53	532995	6199151	RIS	39	<i>Gahnia lanigera</i> / <i>Lepidosperma congestum</i>	0	47	39	8
EPS	80	13289	53	533795	6192127	HIL	21	<i>Eucalyptus rugosa</i> / <i>Melaleuca lanceolata</i>	1	54	44	10
EPS	80	13290	53	534207	6192992	HIL	21	<i>Eucalyptus rugosa</i> / <i>Melaleuca lanceolata</i>	0	60	43	17
EPS	80	13291	53	539596	6184037	LOW	10	<i>Melaleuca uncinata</i>	0	64	50	14
EPS	80	13292	53	535857	6186995	PLA	20	<i>Leucopogon parviflorus</i> / <i>Acrotriche patula</i>	2	50	40	10
EPS	80	13318	53	590329	6153064	PLA	29	<i>Melaleuca lanceolata</i> / <i>Tetragonia implexicoma</i>	1	28	25	4
EPS	80	13319	53	586514	6152334	PLA	29	<i>Melaleuca lanceolata</i> / <i>Tetragonia implexicoma</i>	0	23	19	4
EPS	80	13320	53	588885	6149865	PLA	1	<i>Melaleuca halmaturorum</i>	0	15	13	2
EPS	80	13321	53	585758	6151687	HIL	29	<i>Melaleuca lanceolata</i> / <i>Tetragonia implexicoma</i>	1	24	19	5
EPS	80	13322	53	585663	6151308	HIL	11	<i>Beyeria lechenaultii</i> / <i>Acrotriche patula</i>	3	37	36	1
EPS	80	13323	53	585451	6151306	HIL	11	<i>Beyeria lechenaultii</i> / <i>Acrotriche patula</i>	3	59	52	7
EPS	80	13324	53	580207	6153964	RIS	21	<i>Eucalyptus rugosa</i> / <i>Melaleuca lanceolata</i>	1	37	33	4
EPS	80	13325	53	578054	6147159	PLA	19	<i>Melaleuca lanceolata</i> /				
								<i>Acrotriche patula</i> / <i>Lasiopetalum discolor</i>	2	44	38	6
EPS	80	13326	53	573310	6150175	PLA	13	<i>Eucalyptus diversifolia</i> / <i>Gonocarpus mezeianus</i>	7	59	57	2
EPS	80	13327	53	572235	6151714	PLA	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	0	73	65	8
EPS	80	13328	53	586067	6145146	PLA	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	2	30	29	1
EPS	80	13329	53	587050	6142967	PLA	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	1	47	47	0
EPS	80	13330	53	578281	6145738	PLA	7	<i>Meleleuca brevifolia</i> / <i>Gahnia filum</i>	2	34	28	6
EPS	80	13331	53	579612	6140148	CON	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	1	44	31	13
EPS	80	13332	53	580323	6141318	PLA	23	<i>Eucalyptus diversifolia</i> / <i>Clematis microphylla</i>	0	16	14	2
EPS	80	13333	53	579502	6141923	PLA	23	<i>Eucalyptus diversifolia</i> / <i>Clematis microphylla</i>	1	28	23	5
EPS	80	13334	53	570336	6143398	PLA	23	<i>Eucalyptus diversifolia</i> / <i>Clematis microphylla</i>	0	28	19	9
EPS	80	13335	53	585454	6135343	PLA	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	0	46	27	19
EPS	80	13336	53	584779	6134166	HIL	23	<i>Eucalyptus diversifolia</i> / <i>Clematis microphylla</i>	0	52	43	9
EPS	80	13337	53	583957	6137154	PLA	20	<i>Leucopogon parviflorus</i> / <i>Acrotriche patula</i>	3	53	46	7
EPS	80	13338	53	581956	6136504	CON	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	0	39	30	9
EPS	80	13339	53	578903	6137371	CON	20	<i>Leucopogon parviflorus</i> / <i>Acrotriche patula</i>	3	67	55	12
EPS	80	13340	53	577997	6138233	ESC	47	<i>Leucophyta brownii</i>	1	34	24	10
EPS	80	13341	53	590026	6129050	PLA	21	<i>Eucalyptus rugosa</i> / <i>Melaleuca lanceolata</i>	0	19	17	3
EPS	80	13342	53	586926	6129510	CON	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	0	41	24	17
EPS	80	13343	53	587321	6127578	CON	21	<i>Eucalyptus rugosa</i> / <i>Melaleuca lanceolata</i>	1	43	37	6
EPS	80	13344	53	570117	6143715	CON	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	0	39	28	11
EPS	80	13382	53	593068	6181024	DUN	29	<i>Melaleuca lanceolata</i> / <i>Tetragonia implexicoma</i>	1	23	17	6
EPS	80	13383	53	588738	6181774	PLA	26	<i>Halosarcia indica</i> ssp	2	30	19	11
EPS	80	13389	53	584475	6168791	LOW	10	<i>Melaleuca uncinata</i>	6	77	64	13
EPS	80	13394	53	580710	6154337	PLA	21	<i>Eucalyptus rugosa</i> / <i>Melaleuca lanceolata</i>	1	30	30	0
EPS	80	13395	53	576581	6154678	RIS	23	<i>Eucalyptus diversifolia</i> / <i>Clematis microphylla</i>	1	41	30	11
EPS	80	13398	53	588591	6181433	PLA	1	<i>Melaleuca halmaturorum</i>	4	47	33	14
EPS	80	13420	53	568585	6151636	PLA	23	<i>Eucalyptus diversifolia</i> / <i>Clematis microphylla</i>	1	43	36	7

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
EPS	80	13421	53	566981	6146136	PLA	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	2	50	42	8
EPS	80	13423	53	551014	6147138	LOW	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	19	18	1
EPS	80	13424	53	549650	6148808	LOW	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	1	30	22	8
EPS	80	13425	53	564812	6144223	PLA	13	<i>Eucalyptus diversifolia/Gonocarpus mezeianus</i>	0	38	33	5
EPS	80	13426	53	562895	6145820	PLA	18	<i>Allocasuarina verticillata</i>	2	56	44	12
EPS	80	13427	53	561941	6143797	PLA	13	<i>Eucalyptus diversifolia/Gonocarpus mezeianus</i>	4	55	50	5
EPS	80	13428	53	560574	6142267	PLA	13	<i>Eucalyptus diversifolia/Gonocarpus mezeianus</i>	7	45	43	2
EPS	80	13429	53	558898	6142499	LOW	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	40	33	7
EPS	80	13430	53	556411	6141250	HIL	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	62	46	16
EPS	80	13431	53	554020	6142354	DUN	19	<i>M. lanceolata/A. patula/L. discolor</i>	3	45	39	6
EPS	80	13432	53	561217	6138181	PLA	18	<i>Allocasuarina verticillata</i>	0	19	18	1
EPS	80	13433	53	562371	6134328	RIS	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	0	31	31	0
EPS	80	13434	53	559607	6135985	LOW	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	26	19	7
EPS	80	13435	53	559180	6138760	RIS	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	3	47	37	10
EPS	80	13436	53	557249	6133656	DUN	19	<i>M. lanceolata/A. patula/L. discolor</i>	0	49	46	3
EPS	80	13437	53	557131	6135723	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	50	37	13
EPS	80	13438	53	614685	6206205	HIL	11	<i>Beyeria lechenaultii/Acrotriche patula</i>	0	35	23	12
EPS	80	13446	53	603297	6198748	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	32	23	9
EPS	80	13447	53	602426	6198599	TID	2	<i>Sarcocornia quinqueflora</i>	0	26	15	11
EPS	80	13452	53	601887	6191385	DUN	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	27	26	1
EPS	80	13453	53	601546	6191585	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	20	18	2
EPS	80	13454	53	601468	6193289	TID	52	<i>Avicennia marina var resinifera</i>	0	3	3	0
EPS	80	13457	53	598977	6183359	DUN	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	33	31	2
EPS	80	13458	53	595945	6184573	PLA	1	<i>Melaleuca halmaturorum</i>	1	8	6	2
EPS	80	13459	53	593419	6184198	PLA	9	<i>Eucalyptus sp/Melaleuca lanceolata/Melaleuca uncinata</i>	0	33	27	6
EPS	80	13464	53	542779	6181332	RIS	18	<i>Allocasuarina verticillata</i>	2	46	37	9
EPS	80	13465	53	539959	6177521	PLT	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	21	9	12
EPS	80	13466	53	538344	6179159	RIS	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	44	38	6
EPS	80	13467	53	538524	6178650	RIS	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	0	43	28	15
EPS	80	13468	53	537809	6178794	RIS	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	39	19	20
EPS	80	13469	53	536044	6181125	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	38	32	7
EPS	80	13470	53	535292	6180036	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	27	27	1
EPS	80	13471	53	535822	6179791	RIS	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	0	47	20	27
EPS	80	13472	53	527089	6178497	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	32	21	11
EPS	80	13473	53	527110	6179550	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	33	33	0
EPS	80	13474	53	525032	6180978	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	21	17	4
EPS	80	13475	53	542549	6169761	RIS	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	28	22	6
EPS	80	13476	53	544877	6169380	RIS	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	0	43	31	12
EPS	80	13477	53	536369	6172741	RIS	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	38	22	16
EPS	80	13478	53	536248	6172214	TID	26	<i>Halosarcia indica ssp</i>	0	7	7	0
EPS	80	13479	53	537588	6171305	RIS	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	46	30	16
EPS	80	13480	53	532315	6169923	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	24	23	2
EPS	80	13481	53	532501	6172220	CON	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	10	8	2
EPS	80	13482	53	529183	6173357	PLA	1	<i>Melaleuca halmaturorum</i>	0	1	1	0
EPS	80	13483	53	528769	6174227	LOW	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	0	22	18	4
EPS	80	13484	53	527380	6175038	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	28	19	9
EPS	80	13485	53	541398	6168047	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	28	27	1
EPS	80	13486	53	540839	6167423	RIS	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	22	22	0
EPS	80	13487	53	538264	6163841	CON	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	0	44	34	10
EPS	80	13488	53	531731	6163401	LOW	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	30	28	2
EPS	80	13489	53	529844	6161888	RIS	19	<i>M. lanceolata/A. patula/L. discolor</i>	0	38	36	2
EPS	80	13490	53	532653	6165792	RIS	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	33	25	8

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
EPS	80	13491	53	535808	6162161	CON	19	<i>M. lanceolata/A. patula/L. discolor</i>	0	39	35	4
EPS	80	13492	53	531160	6162136	HIL	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	31	27	4
EPS	80	13493	53	536011	6172200	RIS	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	0	56	42	14
EPS	80	13507	53	548161	6170401	CON	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	0	49	35	14
EPS	80	13508	53	548731	6170631	PLA	8	<i>Gahnia trifida</i>	6	27	23	4
EPS	80	13515	53	519231	6186243	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	30	21	9
EPS	80	13516	53	518814	6189126	LOW	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	1	27	17	10
EPS	80	13517	53	517705	6185713	PLA	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	21	9	12
EPS	80	13518	53	517329	6185650	LOW	19	<i>M. lanceolata/A. patula/L. discolor</i>	2	35	32	3
EPS	80	13519	53	514368	6179364	LOW	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	1	23	20	3
EPS	80	13520	53	513450	6179080	LOW	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	1	32	25	7
EPS	80	13521	53	519613	6182030	PLA	20	<i>Leucopogon parviflorus/Acrotriche patula</i>	0	29	19	10
EPS	80	13522	53	518711	6181270	PLA	7	<i>Meleleuca brevifolia/Gahnia filum</i>	0	5	5	0
EPS	80	13523	53	518744	6179694	RIS	7	<i>Meleleuca brevifolia/Gahnia filum</i>	0	15	10	5
EPS	80	13524	53	518489	6177696	RIS	2	<i>Sarcocornia quinqueflora</i>	1	7	6	1
EPS	80	13525	53	522196	6181524	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	31	24	7
EPS	82	15882	53	531720	6208310	ESC	47	<i>Leucophyta brownii</i>	0	30	20	10
EPS	82	15883	53	531980	6208170	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	28	18	10
EPS	82	15884	53	532140	6207920	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	40	24	16
EPS	82	15885	53	531900	6207440	ESC	40	<i>Alyxia buxifolia</i>	0	31	19	12
EPS	82	15886	53	532050	6207230	ESC	47	<i>Leucophyta brownii</i>	0	36	25	11
EPS	82	15887	53	530230	6162960	DUN	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	21	15	6
EPS	82	15888	53	530300	6163140	CON	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	48	39	9
EPS	82	15889	53	530420	6161600	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	43	35	8
EPS	82	15890	53	529950	6161530	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	40	33	7
EPS	82	15891	53	529730	6161550	DUN	31	<i>Triodia compacta</i>	0	28	24	4
EPS	82	15892	53	530490	6161500	CON	48	<i>Atriplex cinerea</i>	0	32	24	8
EPS	82	15893	53	562260	6136540	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	45	32	13
EPS	82	15894	53	561970	6136710	CON	19	<i>M. lanceolata/A. patula/L. discolor</i>	0	52	37	15
EPS	82	15895	53	563000	6136280	PLA	19	<i>M. lanceolata/A. patula/L. discolor</i>	1	36	25	11
EPS	82	15896	53	563100	6136600	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	51	38	13
EPS	82	15897	53	562860	6136530	PLA	19	<i>M. lanceolata/A. patula/L. discolor</i>	3	39	36	3
EPS	82	15898	53	589140	6127170	ESC	19	<i>M. lanceolata/A. patula/L. discolor</i>	1	36	33	3
EPS	82	15899	53	589050	6127610	CON	19	<i>M. lanceolata/A. patula/L. discolor</i>	2	31	28	3
EPS	82	15900	53	589060	6127680	CON	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	0	25	20	5
EPS	82	15901	53	588120	6127530	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	29	27	2
EPS	82	15902	53	586530	6128800	ESC	47	<i>Leucophyta brownii</i>	1	26	23	3
EPS	82	15913	53	531670	6166430	DUN	48	<i>Atriplex cinerea</i>	0	6	4	2
EPS	82	15914	53	531640	6166520	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	26	23	3
EPS	82	15915	53	531880	6166330	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	54	45	9
EPS	82	15916	53	532210	6166550	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	49	41	8
EPS	82	15917	53	562650	6134930	ESC	19	<i>M. lanceolata/A. patula/L. discolor</i>	4	36	36	0
EPS	82	15918	53	562840	6133530	ESC	19	<i>M. lanceolata/A. patula/L. discolor</i>	1	38	35	3
EPS	82	15919	53	562110	6133670	DUN	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	2	34	34	0
EPS	82	15920	53	558220	6133040	ESC	19	<i>M. lanceolata/A. patula/L. discolor</i>	1	51	42	9
EPS	82	15921	53	557350	6134310	CON	19	<i>M. lanceolata/A. patula/L. discolor</i>	1	55	50	5
EPS	82	15922	53	591690	6149550	DUN	48	<i>Atriplex cinerea</i>	0	38	32	6
EPS	82	15923	53	591770	6149370	PLA	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	38	29	9
EPS	82	15924	53	592060	6149110	BEA	48	<i>Atriplex cinerea</i>	1	39	34	5
EPS	82	15925	53	592680	6149100	PLA	40	<i>Alyxia buxifolia</i>	2	54	49	5
EPS	82	15926	53	591800	6148740	DUN	40	<i>Alyxia buxifolia</i>	1	48	38	10
EPE	80	13403	53	634146	6236464	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	28	17	11

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
EPE	80	13409	53	625153	6228540	CON	44	<i>Acacia ligulata</i>	0	28	12	16
EPE	80	13410	53	624148	6225049	DUN	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	36	22	14
EPE	80	13411	53	623843	6224455	RIS	9	<i>Eucalyptus sp/Melaleuca lanceolata/Melaleuca uncinata</i>	0	38	25	13
EPE	80	13413	53	624159	6223161	RIS	9	<i>Eucalyptus sp/Melaleuca lanceolata/Melaleuca uncinata</i>	0	48	36	12
EPE	80	13415	53	621793	6217063	LOW	4	<i>Enchylaena tomentosa var tomentosa</i>	0	26	13	13
EPE	80	13417	53	623238	6224471	RIS	9	<i>Eucalyptus sp/Melaleuca lanceolata/Melaleuca uncinata</i>	0	20	16	4
EPE	82	14577	53	638960	6238250	CON	5	<i>Eucalyptus incrassata</i>	0	15	12	3
EPE	82	14578	53	639300	6238590	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	20	12	8
EPE	82	14579	53	640260	6239420	CON	5	<i>Eucalyptus incrassata</i>	0	21	17	4
EPE	82	14580	53	640070	6239320	CON	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	0	17	8	9
EPE	82	14581	53	648690	6248420	LON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	24	23	1
EPE	82	14582	53	679700	6262820	DUN	44	<i>Acacia ligulata</i>	0	22	20	2
EPE	82	14583	53	679670	6262930	CON	44	<i>Acacia ligulata</i>	0	22	21	1
EPE	82	14584	53	674460	6260090	DUN	48	<i>Atriplex cinerea</i>	0	7	5	2
EPE	82	14585	53	674330	6260160	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	29	23	6
EPE	82	14586	53	674420	6260300	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	22	18	4
EPE	82	14587	53	665830	6257370	PLA	28	<i>Atriplex vesicaria ssp</i>	1	19	17	2
EPE	82	14588	53	660840	6254990	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	19	14	5
EPE	82	14589	53	660860	6255200	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	22	17	5
EPE	82	14590	53	648290	6248120	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	19	15	4
EPE	82	14591	53	648370	6248140	DUN	44	<i>Acacia ligulata</i>	0	23	22	1
EPE	82	14592	53	648050	6248160	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	26	20	6
SPG	49	10843	54	222781	6338407				1	24	12	12
SPG	49	10856	54	225258	6331065				0	8	7	1
SPG	49	10870	54	223919	6333250				0	3	3	0
SPG	49	10871	54	224298	6333176				0	7	7	0
SPG	63	11933	53	765500	6315641	TID	2	<i>Sarcocornia quinqueflora</i>	2	14	12	2
SPG	63	11937	53	767356	6301442	BEA	28	<i>Atriplex vesicaria ssp</i>	0	37	32	5
SPG	63	11940	53	765474	6315490	TID	52	<i>Avicennia marina var resinifera</i>	0	2	2	0
SPG	82	14556	53	721490	6304550	LON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	15	15	0
SPG	82	14557	53	721790	6304830	CON	46	<i>Nitraria billardiarei</i>	0	11	10	1
SPG	82	14558	53	721680	6304630	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	18	18	0
SPG	82	14559	53	720760	6303630	LON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	30	30	0
SPG	82	14560	53	712870	6290480	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	1	29	28	1
SPG	82	14562	53	712790	6291150	CON	28	<i>Atriplex vesicaria ssp</i>	0	38	35	3
SPG	82	14563	53	688800	6268970	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	32	27	5
SPG	82	14564	53	686320	6266690	DUN	44	<i>Acacia ligulata</i>	0	20	18	2
SPG	82	14565	53	684150	6266570	CON	44	<i>Acacia ligulata</i>	1	31	24	7
SPG	82	14566	53	684460	6266400	ESC	28	<i>Atriplex vesicaria ssp</i>	1	28	27	1
SPG	82	14567	53	684390	6266580	ESC	28	<i>Atriplex vesicaria ssp</i>	1	33	30	3
SPG	82	14568	53	686140	6267160	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	31	28	3
SPG	82	14569	53	686690	6267660	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	33	26	7
SPG	82	14570	53	757450	6378310	PLA	28	<i>Atriplex vesicaria ssp</i>	1	20	17	3
SPG	82	14571	53	757750	6380960	PLA	28	<i>Atriplex vesicaria ssp</i>	1	25	22	3
SPG	82	14572	53	758390	6385080	LOW	28	<i>Atriplex vesicaria ssp</i>	0	20	16	4
SPG	82	14573	53	757440	6355410	BEA	28	<i>Atriplex vesicaria ssp</i>	1	36	32	4
SPG	82	14574	53	757740	6355450	BEA	46	<i>Nitraria billardiarei</i>	0	12	9	3
SPG	82	14575	53	757480	6355840	BEA	28	<i>Atriplex vesicaria ssp</i>	1	24	22	2
SPG	82	14576	53	757160	6354740	BEA	28	<i>Atriplex vesicaria ssp</i>	2	34	25	9
SPG	82	14593	53	750750	6350500	CON	28	<i>Atriplex vesicaria ssp</i>	0	16	15	1
SPG	82	14594	53	750620	6350380	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	19	17	2

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SPG	82	14595	53	750600	6350230	BEA	28	<i>Atriplex vesicaria</i> ssp	0	12	9	3
SPG	82	14596	53	750550	6350180	BEA	26	<i>Halosarcia indica</i> ssp	0	13	12	1
SPG	82	14597	53	750520	6350110	BEA	26	<i>Halosarcia indica</i> ssp	0	7	6	1
SPG	82	14598	53	750550	6350050	BEA	46	<i>Nitraria billardiarei</i>	0	6	4	2
SPG	82	14599	53	759330	6347990	BEA	28	<i>Atriplex vesicaria</i> ssp	0	20	13	7
SPG	82	14600	53	759300	6348130	ESC	28	<i>Atriplex vesicaria</i> ssp	1	23	13	10
SPG	82	14601	53	759230	6348340	ESC	28	<i>Atriplex vesicaria</i> ssp	2	20	16	4
SPG	82	14602	53	758630	6349260	ESC	28	<i>Atriplex vesicaria</i> ssp	1	17	15	2
SPG	87	15166	53	774784	6350708	DUN	44	<i>Acacia ligulata</i>	2	49	30	19
SPG	87	15168	53	773612	6358418	DUN	44	<i>Acacia ligulata</i>	3	40	23	17
SPG	87	15169	53	772722	6361484	DUN	44	<i>Acacia ligulata</i>	3	33	22	11
SPG	87	15176	53	769896	6376645	PLA	46	<i>Nitraria billardiarei</i>	1	7	4	3
SPG	87	15184	53	760252	6399531	MAR	52	<i>Avicennia marina</i> var <i>resinifera</i>	0	3	3	0
SPG	87	15185	53	761768	6397921	MAR	24	<i>Halosarcia halocnemoides</i> ssp	1	5	5	0
SPG	82	15738	53	767570	6299750	CON	28	<i>Atriplex vesicaria</i> ssp	0	28	18	10
SPG	82	15739	53	767260	6299920	BEA	26	<i>Halosarcia indica</i> ssp	1	23	15	8
SPG	82	15740	53	767360	6300120	BEA	44	<i>Acacia ligulata</i>	2	30	25	5
SPG	82	15834	53	762410	6373770	LOW	28	<i>Atriplex vesicaria</i> ssp	1	24	22	2
SPG	82	15835	53	762270	6374310	BEA	28	<i>Atriplex vesicaria</i> ssp	1	23	20	3
SPG	82	15836	53	761070	6376010	BEA	28	<i>Atriplex vesicaria</i> ssp	0	25	19	6
YOP	13	06455	53	672000	6093000				0	9	8	1
YOP	13	06456	53	672094	6094000				0	9	9	0
YOP	13	06487	53	667000	6098000				0	17	17	0
YOP	13	06491	53	665900	6098000				1	31	31	0
YOP	13	06492	53	665900	6098200				2	20	20	0
YOP	13	06493	53	666000	6098000				0	16	16	0
YOP	13	06494	53	666000	6098100				0	21	21	0
YOP	13	06495	53	666000	6098200				1	21	21	0
YOP	13	06496	53	666000	6098300				0	17	17	0
YOP	13	06497	53	669000	6102000				1	25	25	0
YOP	13	06499	53	668100	6099500				0	8	8	0
YOP	13	06500	53	669000	6103000				1	22	22	0
YOP	13	06501	53	670000	6103000				0	9	9	0
YOP	13	06502	53	672000	6093000				1	18	18	0
YOP	13	06503	53	672000	6104000				1	22	22	0
YOP	13	06504	53	671000	6104000				0	18	17	1
YOP	13	06505	53	672600	6105000				0	15	15	0
YOP	13	06506	53	672300	6105000				0	8	6	2
YOP	13	06507	53	672400	6105000				0	11	11	0
YOP	13	06508	53	673000	6105000				1	19	19	0
YOP	13	06511	53	673000	6107000				0	13	13	0
YOP	13	06512	53	674000	6107000				1	18	18	0
YOP	46	11206	53	728300	6158500				2	25	19	5
YOP	46	11247	53	726300	6148000				3	36	24	11
YOP	63	11681	53	678496	6096951	PLA	1	<i>Melaleuca halmaturorum</i>	0	22	19	3
YOP	63	11682	53	676091	6094044	CON	37	<i>Leucopogon parviflorus</i>	1	46	37	9
YOP	63	11684	53	672155	6093909	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	1	32	25	7
YOP	63	11685	53	672012	6093075	CON	19	<i>M. lanceolata/A. patula/L. discolor</i>	0	43	42	1
YOP	63	11688	53	669284	6093667	DUN	19	<i>M. lanceolata/A. patula/L. discolor</i>	3	41	40	1
YOP	63	11690	53	666733	6097449	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	32	27	6
YOP	63	11703	53	773046	6286121	BEA	44	<i>Acacia ligulata</i>	2	38	24	14
YOP	63	11720	53	724878	6113624	CON	40	<i>Alyxia buxifolia</i>	0	37	27	10

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YOP	63	11721	53	726142	6112945	CON	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	0	29	21	8
YOP	63	11722	53	713122	6109220	PLA	1	<i>Melaleuca halmaturorum</i>	1	15	14	1
YOP	63	11723	53	711277	6105975	CON	40	<i>Alyxia buxifolia</i>	0	40	33	7
YOP	63	11724	53	703605	6134321	PLA	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	0	33	21	12
YOP	63	11725	53	702687	6134861	BEA	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	29	19	10
YOP	63	11726	53	701949	6135079	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	30	22	8
YOP	63	11735	53	728232	6157294	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	37	27	10
YOP	63	11736	53	728467	6156372	PLA	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	0	47	34	13
YOP	63	11737	53	727690	6154835	DUN	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	1	48	41	7
YOP	63	11750	53	751078	6110743	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	29	18	11
YOP	63	11751	53	749634	6110125	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	25	22	3
YOP	63	11752	53	749414	6109867	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	42	32	10
YOP	63	11753	53	739348	6105940	DUN	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	29	21	8
YOP	63	11754	53	738965	6106262	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	38	25	13
YOP	63	11766	53	687843	6099722	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	31	22	9
YOP	63	11767	53	687889	6099821	DUN	41	<i>Lepidosperma gladiatum</i>	0	28	19	9
YOP	63	11768	53	689937	6100251	PLA	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	1	56	50	6
YOP	63	11771	53	692867	6098401	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	39	30	9
YOP	63	11772	53	696837	6098452	RIS	19	<i>M. lanceolata/A. patula/L. discolor</i>	0	42	37	5
YOP	63	11776	53	700016	6102732	CON	41	<i>Lepidosperma gladiatum</i>	2	41	33	8
YOP	63	11820	53	728519	6196806	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	36	22	14
YOP	63	11821	53	728887	6195326	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	39	23	16
YOP	63	11823	53	728548	6192598	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	1	41	29	12
YOP	63	11833	53	728391	6186286	DUN	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	1	30	12	18
YOP	63	11847	53	734445	6233802	TID	2	<i>Sarcocornia quinqueflora</i>	0	4	4	0
YOP	63	11856	53	734484	6233762	TID	2	<i>Sarcocornia quinqueflora</i>	0	11	10	1
YOP	63	11860	53	674079	6107026	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	40	32	9
YOP	63	11861	53	674000	6106885	CON	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	1	42	34	9
YOP	63	11867	53	669933	6102895	RIS	1	<i>Melaleuca halmaturorum</i>	0	29	21	8
YOP	63	11868	53	670451	6102818	PLA	47	<i>Leucophyta brownii</i>	2	12	10	2
YOP	63	11870	53	668043	6099457	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	38	28	10
YOP	63	11871	53	666008	6097947	DUN	47	<i>Leucophyta brownii</i>	0	32	28	4
YOP	63	11888	53	729624	6219307	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	1	31	16	15
YOP	63	11889	53	727290	6218280	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	39	21	18
YOP	63	11891	53	728133	6214490	DUN	48	<i>Atriplex cinerea</i>	0	12	10	2
YOP	63	11892	53	728791	6213777	CON	3	<i>Juncus kraussii</i>	4	30	25	5
YOP	63	11893	53	729322	6214430	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	18	12	6
YOP	63	11894	53	729930	6210860	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	39	26	13
YOP	63	11895	53	726756	6150251	CON	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	2	29	28	1
YOP	63	11897	53	726302	6146463	PLA	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	3	39	32	7
YOP	63	11899	53	723069	6131788	CON	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	1	23	17	6
YOP	63	11900	53	723300	6131602	PLA	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	0	33	27	6
YOP	63	11902	53	712442	6131059	PLA	1	<i>Melaleuca halmaturorum</i>	2	11	8	3
YOP	63	11918	53	748863	6257002	LOW	4	<i>Enchylaena tomentosa var tomentosa</i>	5	35	21	14
YOP	63	11924	53	740336	6241318	DUN	44	<i>Acacia ligulata</i>	0	29	12	17
YOP	63	11925	53	739597	6240910	PLA	25	<i>Threlkeldia diffusa</i>	1	16	3	13
YOP	63	11926	53	736407	6237199	TID	2	<i>Sarcocornia quinqueflora</i>	0	7	7	0
YOP	63	11928	53	743721	6244746	PLA	47	<i>Leucophyta brownii</i>	4	39	24	15
YOP	63	11929	53	743617	6244688	PLA	24	<i>Halosarcia halocnemoides ssp</i>	0	9	6	3
YOP	63	11942	53	724947	6190134	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	25	18	7
YOP	63	11943	53	725983	6187454	PLA	2	<i>Sarcocornia quinqueflora</i>	0	5	5	0
YOP	63	11944	53	728208	6182441	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	22	10	12

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YOP	63	11945	53	724699	6186999	RIS	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	0	23	18	5
YOP	82	15741	53	766240	6277240	BEA	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	20	9	11
YOP	82	15742	53	766400	6277450	BEA	44	<i>Acacia ligulata</i>	1	27	13	14
YOP	82	15743	53	756960	6267820	BEA	44	<i>Acacia ligulata</i>	0	37	20	17
YOP	82	15744	54	756960	6267560	BEA	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	1	37	23	14
YOP	82	15745	53	756340	6267050	BEA	44	<i>Acacia ligulata</i>	0	33	17	16
YOP	82	15746	53	756640	6267150	BEA	44	<i>Acacia ligulata</i>	2	38	18	20
YOP	82	15747	53	768220	6279500	BEA	44	<i>Acacia ligulata</i>	1	32	13	19
YOP	82	15748	53	734760	6224910	PAR	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	42	23	19
YOP	82	15749	53	734580	6224490	LON	44	<i>Acacia ligulata</i>	1	47	34	13
YOP	82	15750	53	736950	6230680	PAR	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	39	21	18
YOP	82	15751	53	736940	6230830	PAR	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	1	38	19	19
YOP	82	15752	53	736700	6231200	PAR	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	21	10	11
YOP	82	15753	53	736650	6231190	PAR	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	31	19	12
YOP	82	15754	53	736880	6231200	PAR	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	35	20	15
YOP	82	15755	53	734400	6224560	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	40	24	16
YOP	82	15756	53	734510	6224570	CON	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	10	8	2
YOP	82	15757	53	734250	6224310	DUN	48	<i>Atriplex cinerea</i>	0	22	14	8
YOP	82	15758	53	734580	6224450	LON	44	<i>Acacia ligulata</i>	0	60	44	16
YOP	82	15759	53	720100	6130640	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	30	23	7
YOP	82	15760	53	720250	6130680	DUN	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	0	25	21	4
YOP	82	15762	53	720620	6130800	DUN	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	0	25	18	7
YOP	82	15763	53	720500	6130680	DUN	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	0	22	14	8
YOP	82	15764	53	728250	6195750	DUN	46	<i>Nitraria billardieri</i>	0	24	10	14
YOP	82	15765	53	728260	6195630	DUN	46	<i>Nitraria billardieri</i>	0	25	16	9
YOP	82	15766	53	728270	6195330	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	30	19	11
YOP	82	15767	53	728340	6195330	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	23	12	11
YOP	82	15768	53	728350	6195750	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	25	15	10
YOP	82	15769	53	725520	6147500	DUN	48	<i>Atriplex cinerea</i>	0	29	20	9
YOP	82	15770	53	725580	6147420	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	35	27	8
YOP	82	15771	53	725900	6147600	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	33	21	12
YOP	82	15772	53	725980	6147800	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	38	29	9
YOP	82	15773	53	723600	6133580	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	30	27	3
YOP	82	15774	53	728050	6175220	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	25	18	7
YOP	82	15776	53	728120	6175330	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	36	24	12
YOP	82	15777	53	728310	6175300	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	22	16	6
YOP	82	15778	53	728240	6195270	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	29	16	13
YOP	82	15779	53	724650	6190300	DUN	48	<i>Atriplex cinerea</i>	0	30	20	10
YOP	82	15780	53	725800	6189750	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	29	17	12
YOP	82	15781	53	725950	6189800	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	27	17	10
YOP	82	15782	53	724100	6189900	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	30	17	13
YOP	82	15783	53	725900	6190300	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	31	23	8
YOP	82	15784	53	729850	6205700	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	39	34	5
YOP	82	15785	53	729850	6205540	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	35	25	10
YOP	82	15786	53	729850	6205340	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	11	9	2
YOP	82	15787	53	730060	6205200	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	36	26	10
YOP	82	15788	53	730220	6205180	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	32	18	14
YOP	82	15789	53	729350	6161750	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	1	40	28	12
YOP	82	15790	53	726810	6152720	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	5	3	2
YOP	82	15791	53	726780	6152790	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	47	35	12
YOP	82	15792	53	726920	6152800	DUN	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	1	51	42	9
YOP	82	15793	53	703940	6135280	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	47	35	12

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YOP	82	15794	53	704090	6135210	BEA	42	<i>Olearia axillaris</i> /* <i>Lycium ferocissimum</i>	0	29	23	6
YOP	82	15795	53	704310	6135120	BEA	29	<i>Melaleuca lanceolata</i> / <i>Tetragonia implexicoma</i>	0	31	22	9
YOP	82	15796	53	693490	6133750	BEA	46	<i>Nitraria billardiarei</i>	0	17	11	6
YOP	82	15797	53	693410	6133640	BEA	42	<i>Olearia axillaris</i> /* <i>Lycium ferocissimum</i>	1	37	28	9
YOP	82	15798	53	679940	6128780	DUN	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	0	38	27	11
YOP	82	15799	53	680050	6129350	DUN	48	<i>Atriplex cinerea</i>	0	32	23	9
YOP	82	15800	53	678250	6121750	ESC	43	<i>Olearia axillaris</i> / <i>Rhagodia candolleana</i> ssp <i>candolleana</i>	1	42	32	10
YOP	82	15801	53	677000	6113260	DUN	45	<i>Olearia axillaris</i> / <i>Tetragonia implexicoma</i>	0	19	15	4
YOP	82	15802	53	677140	6112980	DUN	40	<i>Alyxia buxifolia</i>	0	38	31	7
YOP	82	15803	53	679810	6124550	DUN	21	<i>Eucalyptus rugosa</i> / <i>Melaleuca lanceolata</i>	0	45	38	7
YOP	82	15804	53	678600	6095520	CON	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	2	46	46	0
YOP	82	15805	53	678610	6095540	CON	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	1	41	39	2
YOP	82	15806	53	675920	6093830	CON	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	0	45	44	1
YOP	82	15808	53	676450	6093750	CON	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	0	37	34	3
YOP	82	15809	53	666750	6095740	CON	47	<i>Leucophyta brownii</i>	0	26	25	1
YOP	82	15810	53	667650	6095750	CON	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	0	41	33	8
YOP	82	15811	53	667670	6095720	DUN	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	0	37	32	5
YOP	82	15812	53	667860	6096170	PAR	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	1	44	37	7
YOP	82	15813	53	667760	6095980	PAR	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	0	33	25	8
YOP	82	15814	53	668040	6096290	CON	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	0	44	38	6
YOP	82	15815	53	666000	6097800	CON	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	0	36	28	8
YOP	82	15816	53	666200	6097900	CON	47	<i>Leucophyta brownii</i>	0	23	22	1
YOP	82	15817	53	667850	6099350	DUN	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	2	31	27	4
YOP	82	15818	53	667790	6099410	DUN	45	<i>Olearia axillaris</i> / <i>Tetragonia implexicoma</i>	1	26	21	5
YOP	82	15819	53	668290	6099830	DUN	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	1	42	34	8
YOP	82	15820	53	669710	6103610	DUN	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	1	31	25	6
YOP	82	15821	53	670650	6104040	DUN	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	0	40	32	8
YOP	82	15822	53	670770	6103810	DUN	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	0	38	32	6
YOP	82	15823	53	671590	6104520	DUN	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	0	32	25	7
YOP	82	15824	53	671480	6104640	CON	47	<i>Leucophyta brownii</i>	0	29	25	4
YOP	82	15825	53	673780	6107770	DUN	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	0	45	37	8
YOP	82	15826	53	673750	6107680	DUN	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	0	29	21	8
YOP	82	15827	53	673730	6107620	DUN	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	0	35	28	7
YOP	82	15828	53	673690	6107490	DUN	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	0	44	34	10
YOP	82	15829	53	673390	6108010	CON	45	<i>Olearia axillaris</i> / <i>Tetragonia implexicoma</i>	0	27	19	8
YOP	82	15830	53	673550	6107720	DUN	38	<i>Olearia axillaris</i> / <i>Lasiopetalum discolor</i>	0	32	26	6
YOP	82	15831	53	678740	6115690	DUN	51	<i>Spinifex sericeus</i> / <i>Euphorbia paralias</i>	1	11	8	3
YOP	82	15832	53	678870	6115510	PAR	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	0	47	31	16
YOP	82	15841	53	727430	6111600	DUN	43	<i>Olearia axillaris</i> / <i>Rhagodia candolleana</i> ssp <i>candolleana</i>	0	43	29	14
YOP	82	15842	53	727480	6111650	DUN	40	<i>Alyxia buxifolia</i>	2	46	34	12
YOP	82	15843	53	727360	6111830	DUN	40	<i>Alyxia buxifolia</i>	0	55	38	17
YOP	82	15844	53	727220	6112100	DUN	40	<i>Alyxia buxifolia</i>	0	60	45	15
YOP	82	15845	53	727420	6111640	DUN	51	<i>Spinifex sericeus</i> / <i>Euphorbia paralias</i>	0	16	12	4
YOP	82	15847	53	709290	6105730	BEA	49	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	1	44	36	8
YOP	82	15848	53	709310	6105740	BEA	46	<i>Nitraria billardiarei</i>	0	30	21	9
YOP	82	15849	53	709330	6105700	DUN	46	<i>Nitraria billardiarei</i>	0	19	12	7
YOP	82	15850	53	687100	6100150	DUN	19	<i>M. lanceolata</i> / <i>A. patula</i> / <i>L. discolor</i>	0	53	48	5
YOP	82	15851	53	697840	6098660	ESC	43	<i>Olearia axillaris</i> / <i>Rhagodia candolleana</i> ssp <i>candolleana</i>	0	44	35	9
YOP	82	15852	53	732380	6110940	DUN	43	<i>Olearia axillaris</i> / <i>Rhagodia candolleana</i> ssp <i>candolleana</i>	0	41	28	13
YOP	82	15853	53	732120	6111090	CON	40	<i>Alyxia buxifolia</i>	0	51	35	16
YOP	82	15854	53	732450	6110960	CON	40	<i>Alyxia buxifolia</i>	0	44	31	13
YOP	82	15855	53	732580	6110970	CON	40	<i>Alyxia buxifolia</i>	0	54	35	19

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YOP	82	15856	53	732830	6110850	CON	40	<i>Alyxia buxifolia</i>	0	43	31	12
YOP	82	15857	53	732970	6110850	CON	19	<i>M. lanceolata/A. patula/L. discolor</i>	0	53	39	14
YOP	82	15858	53	732940	6110680	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	33	26	7
YOP	82	15859	53	678770	6115700	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	30	24	6
YOP	82	15860	53	687100	6100150	DUN	41	<i>Lepidosperma gladiatum</i>	1	38	28	10
YOP	82	15861	53	686850	6100100	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	29	25	4
YOP	82	15862	53	726830	6152690	DUN	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	0	56	49	7
YOP	82	15863	53	727010	6152950	DUN	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	0	41	21	20
YOP	82	15864	53	687050	6100100	DUN	41	<i>Lepidosperma gladiatum</i>	2	37	30	7
YOP	82	15865	53	687050	6100020	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	8	6	2
YOP	82	15866	53	687050	6100040	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	21	17	4
YOP	82	15867	53	686040	6100060	DUN	41	<i>Lepidosperma gladiatum</i>	0	28	19	9
YOP	82	15868	53	679830	6128780	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	9	7	2
YOP	82	15869	53	679870	6128780	DUN	40	<i>Alyxia buxifolia</i>	0	48	38	10
YOP	82	15870	53	680070	6128960	PAR	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	33	26	7
YOP	82	15871	53	676300	6122150	ESC	40	<i>Alyxia buxifolia</i>	2	39	33	6
YOP	82	15872	53	676920	6113290	ESC	47	<i>Leucophyta brownii</i>	0	29	27	2
YOP	82	15873	53	677090	6113080	DUN	40	<i>Alyxia buxifolia</i>	0	41	28	13
YOP	82	15874	53	677040	6113100	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	1	43	29	14
YOP	82	15875	53	679690	6124480	DUN	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	2	62	49	13
SVG	63	11692	53	775721	6195637	ALP	24	<i>Halosarcia halocnemoides ssp</i>	2	8	6	2
SVG	63	11698	53	765921	6179233	BEA	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	30	12	18
SVG	63	11699	53	770266	6189106	BEA	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	4	39	22	17
SVG	63	11700	53	768399	6187052	HIL	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	13	50	41	9
SVG	63	11782	54	242212	6203061	BEA	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	2	20	13	7
SVG	63	11783	54	238996	6204359	PLA	2	<i>Sarcocornia quinqueflora</i>	0	4	4	0
SVG	63	11784	54	237736	6204188	PLA	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	1	26	16	10
SVG	63	11785	54	237815	6205334	TID	52	<i>Avicennia marina var resinifera</i>	0	1	1	0
SVG	63	11786	54	245324	6196126	BEA	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	5	23	17	6
SVG	63	11787	54	244686	6199750	BEA	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	5	31	22	9
SVG	63	11788	54	225079	6200230	TID	2	<i>Sarcocornia quinqueflora</i>	0	2	2	0
SVG	63	11789	54	224790	6197522	TID	2	<i>Sarcocornia quinqueflora</i>	0	2	2	0
SVG	63	11790	54	224743	6201425	TID	2	<i>Sarcocornia quinqueflora</i>	0	3	3	0
SVG	63	11791	54	223733	6193535	BEA	46	<i>Nitraria billardieri</i>	0	5	4	1
SVG	63	11878	53	763323	6158950	HIL	30	<i>Melaleuca lanceolata/Atriplex paludosa ssp</i>	1	24	19	5
SVG	63	11879	53	765742	6163689	BEA	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	26	14	12
SVG	63	11887	53	754012	6129202	PLA	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	7	28	23	5
SVG	63	11913	54	228015	6215379	TID	2	<i>Sarcocornia quinqueflora</i>	0	2	2	0
SVG	63	11914	54	228112	6215257	TID	52	<i>Avicennia marina var resinifera</i>	0	1	1	0
SVG	65	12318	54	269350	6110400	LOW			5	45	27	18
SVG	70	12740	54	271500	6113250	LOW			2	28	12	16
SVG	88	15079	54	275646	6152464	PLA	25	<i>Threlkeldia diffusa</i>	2	13	7	6
SVG	88	15081	54	274344	6152437	TID	52	<i>Avicennia marina var resinifera</i>	0	1	1	0
SVG	88	15086	54	252346	6178519	BEA	2	<i>Sarcocornia quinqueflora</i>	0	5	5	0
SVG	88	15087	54	255562	6176530	SAN	25	<i>Threlkeldia diffusa</i>	2	22	14	8
SVG	88	15095	54	262678	6167309	DUN	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	2	25	17	8
SVG	88	15097	54	265648	6160505	ALF	52	<i>Avicennia marina var resinifera</i>	0	1	1	0
SVG	88	15106	54	249293	6181390	CHE	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	5	36	21	15
SVG	88	15107	54	249166	6183668	TID	2	<i>Sarcocornia quinqueflora</i>	1	18	12	6
SVG	88	15120	54	247859	6187086	BEA	40	<i>Alyxia buxifolia</i>	6	37	22	15
SVG	82	15738	53	767570	6299750	CON	28	<i>Atriplex vesicaria ssp</i>	1	30	21	9
SVG	82	15837	53	775270	6193420	BEA	46	<i>Nitraria billardieri</i>	0	20	9	11

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SVG	82	15838	53	771030	6189980	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	1	41	21	20
SVG	82	15839	53	771900	6190570	DUN	46	<i>Nitraria billardierei</i>	0	33	18	15
SVG	82	15840	53	771520	6190470	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	31	17	14
SVG	82	15971	54	271600	6115600	CON	11	<i>Beyeria lechenaultii/Acrotriche patula</i>	7	48	31	17
SVG	82	15972	54	272500	6118200	ESC	11	<i>Beyeria lechenaultii/Acrotriche patula</i>	8	38	27	11
SVG	82	15973	54	269690	6099900	ESC	11	<i>Beyeria lechenaultii/Acrotriche patula</i>	5	67	43	24
SVG	82	15974	54	269400	6106350	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	10	3	7
SVG	82	15975	54	269500	6106600	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	3	29	23	6
SVG	82	15976	54	255750	6176180	BEA	25	<i>Threlkeldia diffusa</i>	5	37	21	16
SVG	82	15977	54	248180	6184540	BEA	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	4	32	18	14
SVG	82	15978	54	251620	6179270	BEA	46	<i>Nitraria billardierei</i>	2	26	13	13
SVG	82	15979	54	251580	6179420	BEA	44	<i>Acacia ligulata</i>	2	23	14	9
SVG	82	15980	54	256390	6174360	BEA	25	<i>Threlkeldia diffusa</i>	0	25	10	15
SVG	82	15981	54	256420	6174320	BEA	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	22	11	11
SVG	82	15991	54	255420	6177540	BEA	25	<i>Threlkeldia diffusa</i>	3	32	19	13
SVG	82	15992	54	248350	6184500	BEA	44	<i>Acacia ligulata</i>	4	30	17	13
SVG	82	15993	54	248300	6184730	BEA	44	<i>Acacia ligulata</i>	4	32	18	14
SVG	82	15994	54	269500	6111370	ESC	11	<i>Beyeria lechenaultii/Acrotriche patula</i>	9	47	32	15
SVG	82	15995	54	271000	6114050	ESC	11	<i>Beyeria lechenaultii/Acrotriche patula</i>	7	40	27	13
SVG	82	15996	54	269880	6136950	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	3	48	25	23
SVG	82	15997	54	269890	6137310	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	3	48	25	23
SVG	82	15998	54	273150	6149030	CON	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	30	15	15
KIS	15	04429	53	652500	6020300	LOW			0	33	33	0
KIS	15	04430	53	649700	6020700				2	31	31	0
KIS	15	04431	53	649100	6020300				0	12	12	0
KIS	15	04432	53	647500	6020700				2	32	31	1
KIS	15	04433	53	645400	6023500				0	27	26	0
KIS	15	04434	53	645200	6023100	LOW			2	23	22	1
KIS	15	04435	53	645200	6024700	LOW			2	16	16	0
KIS	15	04436	53	644700	6024400	LOW			1	34	34	0
KIS	15	04437	53	642700	6026300				1	10	9	0
KIS	15	04438	53	640500	6027000	LOW			0	12	12	0
KIS	15	04439	53	639700	6026600	RIS			2	30	29	1
KIS	15	04440	53	639300	6026300				3	25	23	2
KIS	15	04441	53	639200	6026300				1	16	16	0
KIS	15	04442	53	639900	6027600				0	20	18	2
KIS	15	04443	53	639800	6027600				0	6	4	2
KIS	15	04444	53	639000	6028300				0	18	18	0
KIS	15	04445	53	641500	6028800	RIS			1	26	26	0
KIS	15	04446	53	641500	6028700	LOW			1	26	26	0
KIS	15	04447	53	643200	6031400				1	29	29	0
KIS	15	04479	53	654500	6009600	RIS			1	36	34	2
KIS	15	04480	53	655800	6012800	LOW			0	24	24	0
KIS	15	04481	53	656650	6012850	LOW			1	28	27	1
KIS	15	04482	53	658300	6011800				0	31	31	0
KIS	15	04483	53	658200	6009100				2	31	31	0
KIS	15	04484	53	655500	6009700				3	33	33	0
KIS	15	04485	53	655500	6009700				1	33	33	0
KIS	15	04486	53	653400	6007500	LOW			2	47	33	14
KIS	15	04500	53	660800	6013000				0	31	30	0
KIS	15	04501	53	661100	6010900				1	24	21	3
KIS	15	04502	53	661100	6010900				1	16	16	0

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
KIS	15	04503	53	661100	6010900				1	29	27	2
KIS	15	04504	53	667500	6013200				1	22	19	3
KIS	15	04505	53	668500	6014200	PLA			0	45	40	5
KIS	15	04506	53	669200	6014000	PLA			2	9	9	0
KIS	15	04507	53	669200	6014000				1	5	5	0
KIS	15	04508	53	669200	6014000				5	27	25	2
KIS	15	04509	53	669000	6014000				3	9	9	0
KIS	15	04510	53	667700	6016000	PLA			1	35	32	3
KIS	15	04511	53	667700	6016000				0	32	31	1
KIS	15	04514	53	667300	6014900				2	38	34	4
KIS	15	04515	53	666500	6012300				1	26	23	3
KIS	15	04516	53	667100	6012400				0	24	21	3
KIS	15	04517	53	667100	6012400				0	9	7	2
KIS	15	04518	53	667100	6012400				1	19	17	2
KIS	15	04528	53	680600	6011900				0	29	27	2
KIS	15	04529	53	681500	6012500	DUN			3	35	34	1
KIS	15	04530	53	681600	6012100				1	34	26	8
KIS	15	04531	53	681400	6012000				4	41	39	2
KIS	15	04532	53	681900	6013400	RIS			0	39	36	3
KIS	15	04533	53	681900	6014200				2	20	18	2
KIS	15	04534	53	681150	6015050				1	11	11	0
KIS	15	04535	53	681100	6015100	RIS			1	41	39	2
KIS	15	04536	53	682900	6013500	RIS			0	19	19	0
KIS	15	04537	53	683000	6014950	PLA			0	41	40	0
KIS	15	04557	53	693000	6011400				1	52	46	6
KIS	15	04558	53	692800	6011700				1	36	35	1
KIS	15	04559	53	692300	6012500				1	31	30	0
KIS	15	04561	53	698500	6017900	RIS			1	25	22	2
KIS	15	04562	53	698800	6017800				0	11	9	2
KIS	15	04563	53	702100	6019400				2	29	26	3
KIS	15	04564	53	702200	6019400	DUN			1	25	24	1
KIS	15	04565	53	702300	6019300	DUN			1	24	22	2
KIS	15	04567	53	708700	6014100				0	11	11	0
KIS	15	04568	53	708700	6014100				0	4	4	0
KIS	15	04569	53	708800	6014200				0	7	7	0
KIS	15	04570	53	707700	6015400				1	19	19	0
KIS	15	04571	53	709400	6015200	DUN			0	16	16	0
KIS	15	04573	53	710100	6015700	DUN			3	24	24	0
KIS	15	04574	53	711200	6014800				1	15	14	1
KIS	15	04575	53	711300	6014800				2	18	18	0
KIS	15	04584	53	747250	6029580	LOW			1	20	16	4
KIS	15	04585	53	746200	6030350				1	29	27	2
KIS	15	04586	53	746900	6029850				3	17	16	1
KIS	15	04587	53	747100	6030000				2	18	16	2
KIS	15	04588	53	747600	6029000				0	29	24	5
KIS	15	04589	53	747750	6029000	LOW			0	35	31	4
KIS	15	04614	53	743150	6026300				2	38	31	7
KIS	15	04615	53	743250	6027600				0	27	26	1
KIS	15	04616	53	742900	6028350				0	23	23	0
KIS	15	04617	53	737650	6028350				1	36	36	0
KIS	15	04672	53	734400	6017400				2	36	31	5
KIS	15	04673	53	735200	6013800				0	23	16	7

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
KIS	15	04674	53	734700	6013200				2	52	44	8
KIS	15	04675	53	734700	6012500	RIS			1	39	34	5
KIS	15	04676	53	728200	6010300				1	40	38	2
KIS	15	04677	53	730100	6010500				1	35	34	1
KIS	15	04678	53	721500	6005700				0	34	26	8
KIS	15	04679	53	721500	6004900				1	26	24	2
KIS	15	04680	53	722200	6005400				0	10	10	0
KIS	15	04681	53	733500	6020300	RIS			1	32	32	0
KIS	15	04682	53	735200	6022300	RIS			1	33	27	6
KIS	15	04683	53	734500	6021200				0	30	30	0
KIS	15	04686	53	732500	6020800				0	22	22	0
KIS	72	12438	53	695700	6015800	DUN			0	26	25	1
KIS	82	14642	53	657780	6009450	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	30	29	1
KIS	82	14643	53	658350	6009820	LOW	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	30	30	0
KIS	82	14644	53	658350	6009530	RIS	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	33	33	0
KIS	82	14645	53	658490	6009480	RIS	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	22	22	0
KIS	82	14646	53	658660	6009320	RIS	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	2	25	25	0
KIS	82	14647	53	663380	6010330	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	2	32	29	3
KIS	82	14648	53	663730	6010860	CON	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	31	31	0
KIS	82	14649	53	664250	6011010	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	28	28	0
KIS	82	14650	53	664670	6011640	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	27	27	0
KIS	82	14651	53	652950	6008090	LON	47	<i>Leucophyta brownii</i>	3	27	24	3
KIS	82	14652	53	653290	6008500	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	31	28	4
KIS	82	14653	53	654550	6008480	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	2	39	36	4
KIS	82	14655	53	654770	6009100	RIS	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	3	32	32	0
KIS	82	14656	53	654850	6011140	LOW	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	24	24	0
KIS	82	14657	53	638720	6027660	RIS	47	<i>Leucophyta brownii</i>	2	21	20	1
KIS	82	14658	53	639190	6027710	RIS	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	2	28	28	0
KIS	82	14659	53	639640	6028190	RIS	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	28	28	0
KIS	82	14660	53	640190	6028100	RIS	15	<i>Eucalyptus cneorifolia/Orthrosanthus multiflorus</i>	1	27	25	2
KIS	82	14662	53	640090	6027000	LOW	17	<i>Acacia paradoxa</i>	0	22	22	0
KIS	82	14663	53	646880	6019680	CON	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	2	40	36	5
KIS	82	14664	53	646720	6019720	RIS	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	3	46	45	2
KIS	82	14665	53	646380	6019840	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	3	42	38	4
KIS	82	14666	53	646310	6019930	LOW	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	2	29	27	2
KIS	82	14667	53	646600	6020190	CON	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	0	28	26	2
KIS	82	14668	53	646980	6020020	CON	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	1	26	23	4
KIS	82	14708	53	712700	6013410	ESC	47	<i>Leucophyta brownii</i>	0	19	16	3
KIS	82	14709	53	712540	6013770	DUN	6	<i>Cakile maritima ssp maritima</i>	0	1	0	1
KIS	82	14710	53	712580	6013800	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	6	3	3
KIS	82	14711	53	711820	6014140	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	23	21	2
KIS	82	14712	53	705740	6014480	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	28	28	0
KIS	82	14713	53	732930	6010700	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	37	37	1
KIS	82	14714	53	732830	6010770	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	32	31	1
KIS	82	14715	53	731310	6010700	DUN	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	30	30	0
KIS	82	14716	53	731580	6010490	ESC	37	<i>Leucopogon parviflorus</i>	0	23	23	0
KIS	82	14717	53	687260	6011670	ESC	37	<i>Leucopogon parviflorus</i>	2	19	19	0
KIS	82	14718	53	687260	6011780	CON	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	2	26	26	0
KIS	82	14719	53	687230	6012010	CON	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	4	41	40	1
KIS	82	14720	53	683610	6011170	ESC	37	<i>Leucopogon parviflorus</i>	4	29	28	1
KIS	82	14721	53	696660	6013700	CON	37	<i>Leucopogon parviflorus</i>	1	41	38	3
KIS	82	14722	53	701020	6016300	DUN	37	<i>Leucopogon parviflorus</i>	0	34	28	6

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
KIS	82	14723	53	701020	6016180	DUN	37	<i>Leucopogon parviflorus</i>	2	28	23	5
KIS	82	14724	53	741240	6025740	ESC	38	<i>Olearia axillaris/Lasiopetalum discolor</i>	0	44	36	8
KIS	82	14725	53	740750	6025570	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	46	42	4
KIS	82	14726	53	740820	6025910	DUN	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	2	13	13	0
KIS	82	14727	53	741070	6026130	CON	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	2	30	27	3
KIE	15	04581	53	747650	6033750	LOW			0	22	20	1
KIE	15	04582	53	747500	6032850				0	17	16	1
KIE	15	04583	53	747450	6033400				1	31	28	3
KIE	15	04590	53	749700	6029250				1	29	26	3
KIE	15	04591	53	749700	6029050				0	30	27	3
KIE	15	04592	53	749700	6029850				1	4	4	0
KIE	15	04593	53	749650	6029850				2	15	14	1
KIE	15	04594	53	754130	6031700	PLA			1	6	6	0
KIE	15	04595	53	751800	6034800				0	26	20	6
KIE	15	04596	53	752550	6033800				0	20	15	5
KIE	15	04597	53	752250	6033600				0	21	17	4
KIE	15	04598	53	751350	6033300				2	20	18	2
KIE	15	04599	53	755050	6034250	DUN			0	26	20	6
KIE	15	04600	53	753100	6034800				1	23	17	6
KIE	15	04601	53	750700	6034700				2	9	9	0
KIE	15	04602	53	751100	6035200				0	27	22	5
KIE	15	04603	53	751650	6035100				1	18	15	3
KIE	15	04604	53	733800	6046600				2	10	8	2
KIE	15	04605	53	733050	6043350				2	6	6	0
KIE	15	04606	53	733050	6042450				1	12	10	2
KIE	15	04607	53	736550	6041870				0	16	16	0
KIE	15	04608	53	737070	6042150				1	33	28	5
KIE	15	04609	53	737200	6041820				0	21	18	3
KIE	15	04612	53	746700	6041350				1	16	13	3
KIE	15	04621	53	752600	6040100				0	24	19	4
KIE	15	04622	53	752900	6039700				0	17	16	0
KIE	15	04623	53	752850	6038900				2	18	17	0
KIE	15	04624	53	751600	6038600	LOW			0	16	13	3
KIE	15	04625	54	235550	6025350	LOW			1	21	20	1
KIE	15	04626	54	233500	6028400	LOW			0	19	19	0
KIE	15	04628	54	236250	6026400	DUN			2	49	45	4
KIE	15	04629	54	235250	6026550				1	47	47	0
KIE	15	04630	54	235150	6027900	LOW			0	34	34	0
KIE	15	04631	54	237000	6028000	LOW			1	36	35	1
KIE	15	04632	54	237150	6027950				2	28	27	1
KIE	15	04633	54	233950	6036300				2	26	25	1
KIE	15	04634	54	234250	6036000	LOW			0	13	11	2
KIE	15	04635	54	234150	6038300				0	30	24	6
KIE	15	04636	54	234800	6034200	PLA			5	33	24	9
KIE	15	04640	53	766550	6026500				2	52	38	14
KIE	15	04641	53	766500	6027250				2	36	30	6
KIE	15	04644	53	770250	6026200				3	28	26	2
KIE	15	04647	53	762100	6039300				1	46	24	22
KIE	15	04666	53	760400	6027100				5	84	67	17
KIE	15	04698	53	730500	6058600				2	33	28	5
KIE	15	04699	53	731000	6058300	LOW			2	26	24	2
KIE	15	04700	53	729200	6057900				0	30	21	9

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
KIE	15	04743	53	751400	6034600	DUN			0	2	2	0
KIE	72	12492	53	737900	6050470	HIL			3	30	28	2
KIE	82	14674	53	747290	6041190	RIS	15	<i>Eucalyptus cneorifolia/Orthrosanthus multiflorus</i>	2	33	33	0
KIE	82	14675	53	746920	6041700	RIS	15	<i>Eucalyptus cneorifolia/Orthrosanthus multiflorus</i>	6	58	46	12
KIE	82	14676	53	736660	6060480	CON	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	1	35	27	8
KIE	82	14677	53	733710	6060900	RIS	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	0	23	11	12
KIE	82	14678	53	738220	6060300	RIS	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	0	21	8	13
KIE	82	14681	53	731300	6059120	BEA	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	5	51	41	11
KIE	82	14682	53	731420	6059050	RIS	29	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	3	13	7	6
KIE	82	14683	53	731620	6059440	RIS	17	<i>Acacia paradoxa</i>	2	43	29	14
KIE	82	14728	54	234600	6038550	ESC	18	<i>Allocasuarina verticillata</i>	2	17	15	2
KIE	82	14730	54	234820	6036060	CON	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	10	4	6
KIE	82	14731	54	234760	6035990	CON	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	16	14	2
KIE	82	14732	54	234700	6036180	ESC	17	<i>Acacia paradoxa</i>	0	15	12	3
KIE	82	14733	54	234630	6036080	LOW	15	<i>Eucalyptus cneorifolia/Orthrosanthus multiflorus</i>	3	16	12	4
KIE	82	14734	53	769600	6024520	ESC	37	<i>Leucopogon parviflorus</i>	0	46	42	4
KIE	82	14735	53	769690	6024510	ESC	37	<i>Leucopogon parviflorus</i>	1	37	33	4
KIE	82	14736	53	769880	6024740	HIL	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	1	28	26	2
KIE	82	14737	53	769320	6024610	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	28	28	0
KIE	82	14738	53	767230	6025810	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	1	8	6	2
KIE	82	14739	53	767260	6026160	CON	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	1	19	18	1
KIE	82	14740	53	766640	6026640	CON	37	<i>Leucopogon parviflorus</i>	1	25	19	6
KIE	82	14741	53	755930	6034460	ESC	40	<i>Alyxia buxifolia</i>	0	37	31	7
KIE	82	14742	53	756570	6034550	CON	40	<i>Alyxia buxifolia</i>	0	33	26	7
KIE	82	14743	53	756570	6034540	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	19	13	6
KIE	82	14744	54	239140	6028990	ESC	17	<i>Acacia paradoxa</i>	4	31	28	3
KIE	82	14745	54	231020	6022850	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	2	33	32	1
KIE	82	14746	54	230980	6023150	HIL	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	2	26	26	0
KIE	82	14747	54	230640	6023060	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	29	25	4
KIE	82	14748	53	760560	6026860	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	41	39	3
KIE	82	14750	53	759970	6027350	CON	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	1	19	16	3
KIE	82	14751	53	760200	6027580	CON	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	1	22	20	2
KIE	82	14752	53	750880	6028810	CON	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	0	30	26	4
KIE	82	14753	53	751220	6029170	LOW	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	1	16	16	0
KIN	15	04402	53	647300	6040750	RIS			4	44	43	1
KIN	15	04403	53	646650	6038950	LOW			2	29	29	0
KIN	15	04405	53	645550	6037900				1	24	24	0
KIN	15	04406	53	644350	6038400				0	20	20	0
KIN	15	04407	53	658120	6043500	LOW			3	44	44	0
KIN	15	04408	53	643100	6041800				2	27	27	0
KIN	15	04409	53	643350	6041900	LOW			3	26	26	0
KIN	15	04410	53	643800	6042100				2	29	29	0
KIN	15	04411	53	657200	6043500				0	37	37	0
KIN	15	04412	53	657800	6043450	LOW			2	35	34	1
KIN	15	04420	53	675700	6049650				4	20	16	4
KIN	15	04421	53	675600	6049470				1	41	38	3
KIN	15	04720	53	694400	6054400	RIS			3	25	23	2
KIN	15	04721	53	694400	6054600	RIS			1	35	30	5
KIN	15	04722	53	693600	6053000				5	43	36	7
KIN	15	04723	53	692400	6053300				5	56	50	6
KIN	72	12458	53	645800	6037800	HIL			1	28	28	0
KIN	72	12462	53	645800	6037700	HIL			0	18	18	0

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
KIN	72	12463	53	675500	6049300	HIL			0	4	4	0
KIN	72	12472	53	675700	6049800	HIL			1	14	11	3
KIN	82	14603	53	644750	6042750	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	2	24	24	0
KIN	82	14604	53	644900	6042650	ESC	22	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	1	27	27	0
KIN	82	14605	53	648050	6042450	ESC	18	<i>Allocauarina verticillata</i>	2	22	18	4
KIN	82	14606	53	647540	6042420	PLA	15	<i>Eucalyptus cneorifolia/Orthrosanthus multiflorus</i>	1	22	20	2
KIN	82	14607	53	647270	6042480	ESC	16	<i>Melaleuca gibbosa/Acacia paradoxa</i>	3	39	37	2
KIN	82	14608	53	654980	6044210	ESC	14	<i>Eucalyptus cosmophylla</i>	2	29	29	0
KIN	82	14609	53	655230	6044570	PLA	14	<i>Eucalyptus cosmophylla</i>	2	29	29	0
KIN	82	14610	53	655330	6044920	ESC	14	<i>Eucalyptus cosmophylla</i>	2	25	25	0
KIN	82	14611	53	661300	6046250	PLA	16	<i>Melaleuca gibbosa/Acacia paradoxa</i>	0	28	24	4
KIN	82	14612	53	661150	6046050	LOW	18	<i>Allocauarina verticillata</i>	1	13	12	1
KIN	82	14613	53	661000	6046600	LOW	18	<i>Allocauarina verticillata</i>	1	12	10	2
KIN	82	14614	53	661050	6047080	ESC	16	<i>Melaleuca gibbosa/Acacia paradoxa</i>	1	23	20	3
KIN	82	14615	53	661190	6047520	ESC	40	<i>Alyxia buxifolia</i>	3	37	31	6
KIN	82	14616	53	661350	6047350	PLA	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	1	24	17	7
KIN	82	14617	53	663550	6047650	ESC	18	<i>Allocauarina verticillata</i>	3	21	17	4
KIN	82	14618	53	667130	6048220	BEA	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	1	9	5	4
KIN	82	14619	53	667450	6048260	ESC	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	3	25	19	6
KIN	82	14622	53	667390	6048350	ESC	42	<i>Olearia axillaris/*Lycium ferocissimum</i>	1	24	17	7
KIN	82	14637	53	669090	6048500	ESC	14	<i>Eucalyptus cosmophylla</i>	3	38	37	1
KIN	82	14638	53	669560	6048420	ESC	14	<i>Eucalyptus cosmophylla</i>	0	16	16	0
KIN	82	14639	53	669450	6048600	ESC	14	<i>Eucalyptus cosmophylla</i>	3	25	25	0
KIN	82	14640	53	669700	6048730	ESC	14	<i>Eucalyptus cosmophylla</i>	2	24	24	0
KIN	82	14641	53	673460	6049150	ESC	14	<i>Eucalyptus cosmophylla</i>	1	29	29	0
KIN	82	14669	53	687400	6050660	CON	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	11	8	3
KIN	82	14670	53	687520	6050700	CON	41	<i>Lepidosperma gladiatum</i>	1	23	18	5
KIN	82	14671	53	693700	6054390	PLT	16	<i>Melaleuca gibbosa/Acacia paradoxa</i>	5	49	41	8
KIN	82	14672	53	693880	6054400	PLT	18	<i>Allocauarina verticillata</i>	2	23	19	4
KIN	82	14673	53	693930	6054710	PLT	16	<i>Melaleuca gibbosa/Acacia paradoxa</i>	6	52	47	5
KIN	82	14679	53	719020	6058680	LOW	17	<i>Acacia paradoxa</i>	3	49	42	7
KIN	82	14680	53	718890	6058540	LOW	10	<i>Melaleuca uncinata</i>	3	35	35	0
KIN	82	14684	53	709240	6059810	LOW	40	<i>Alyxia buxifolia</i>	5	45	37	8
KIN	82	14685	53	708940	6059500	LOW	16	<i>Melaleuca gibbosa/Acacia paradoxa</i>	3	39	30	9
KIN	82	14686	53	709130	6059240	LOW	10	<i>Melaleuca uncinata</i>	4	27	19	8
KIN	82	14687	53	700460	6056050	LOW	19	<i>M. lanceolata/A. patula/L. discolor</i>	3	46	34	13
KIN	82	14688	53	700370	6055670	LOW	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	2	36	27	9
KIN	82	14689	53	712870	6059040	ESC	44	<i>Acacia ligulata</i>	5	56	40	16
KIN	82	14690	53	712940	6058950	LOW	10	<i>Melaleuca uncinata</i>	3	34	34	0
KIN	82	14691	53	712600	6059210	LOW	44	<i>Acacia ligulata</i>	2	46	28	18
KIN	82	14692	53	697720	6055650	ESC	19	<i>M. lanceolata/A. patula/L. discolor</i>	4	41	41	1
KIN	82	14693	53	697610	6055490	LOW	21	<i>Eucalyptus rugosa/Melaleuca lanceolata</i>	7	37	32	5
FLP	5	04906	54	268400	6090950				1	24	23	1
FLP	5	04966	54	243750	6050350				0	25	24	1
FLP	5	04967	54	243550	6050000				0	32	32	0
FLP	5	04968	54	243450	6050500				0	29	26	3
FLP	5	04978	54	252300	6053200				1	40	40	0
FLP	5	04979	54	251950	6052400				0	12	12	0
FLP	5	04999	54	271550	6054250				2	19	17	2
FLP	5	05000	54	271700	6054550				5	46	44	2
FLP	5	06664	54	237750	6052900				0	4	2	2
FLP	5	06665	54	237900	6052900				0	12	9	3

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
FLP	5	06666	54	247950	6050500				1	38	33	5
FLP	5	06679	54	272100	6054750				3	27	26	1
FLP	5	06687	54	253400	6053350				0	32	31	1
FLP	42	06694	54	276850	6054090				4	43	42	1
FLP	42	06697	54	272400	6054070				8	36	33	3
FLP	42	06698	54	273720	6054090				3	11	11	0
FLP	5	06704	54	268110	6091040				1	17	14	3
FLP	5	06705	54	268160	6091240				1	17	13	4
FLP	5	06706	54	268175	6091450				0	23	19	4
FLP	5	06707	54	268250	6091430				2	19	15	4
FLP	42	06708	54	255750	6074260				1	21	14	7
FLP	42	06709	54	256100	6075060				1	21	13	8
FLP	42	06710	54	256580	6074230				1	23	19	4
FLP	42	06732	54	255410	6073490				0	21	14	7
FLP	42	06733	54	255310	6073550				1	19	13	6
FLP	42	06734	54	255260	6073590				0	13	8	5
FLP	42	06739	54	271960	6053920				3	27	26	1
FLP	42	06740	54	271840	6054030				3	33	33	0
FLP	42	06741	54	271160	6053950				0	10	9	1
FLP	42	06772	54	276060	6053410				13	51	51	0
FLP	42	08953	54	277190	6054310				7	51	50	1
FLP	42	09123	54	282740	6058400				1	20	16	4
FLP	42	09124	54	282910	6058580				3	31	25	6
FLP	42	09125	54	282830	6058720				2	26	20	6
FLP	42	09130	54	287140	6064630				3	26	21	5
FLP	42	09216	54	285020	6063900				3	24	18	6
FLP	52	11441	54	253450	6052750				0	29	28	1
FLP	52	11455	54	249250	6051300				1	30	30	0
FLP	93	15688	54	237000	6054250	PLA			7	37	27	10
FLP	82	15927	54	275700	6052900	ESC	19	<i>M. lanceolata/A. patula/L. discolor</i>	9	66	51	15
FLP	82	15928	54	275900	6053160	ESC	19	<i>M. lanceolata/A. patula/L. discolor</i>	15	49	47	2
FLP	82	15929	54	275480	6052880	ESC	19	<i>M. lanceolata/A. patula/L. discolor</i>	19	52	48	4
FLP	82	15930	54	274850	6053230	CON	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	4	34	22	12
FLP	82	15931	54	276010	6053430	ESC	13	<i>Eucalyptus diversifolia/Gonocarpus megianus</i>	13	57	57	0
FLP	82	15932	54	276910	6054120	ESC	13	<i>Eucalyptus diversifolia/Gonocarpus megianus</i>	8	98	90	8
FLP	82	15933	54	276790	6053970	ESC	13	<i>Eucalyptus diversifolia/Gonocarpus megianus</i>	12	56	51	5
FLP	82	15934	54	276730	6053930	ESC	13	<i>Eucalyptus diversifolia/Gonocarpus megianus</i>	5	57	49	8
FLP	82	15935	54	249500	6067450	ESC	12	<i>Olearia ramulosa/Calytrix tetragona</i>	6	44	23	21
FLP	82	15936	54	249650	6067430	HIL	12	<i>Olearia ramulosa/Calytrix tetragona</i>	3	44	28	16
FLP	82	15937	54	243200	6065450	ESC	12	<i>Olearia ramulosa/Calytrix tetragona</i>	2	32	15	17
FLP	82	15938	54	242520	6064450	ESC	12	<i>Olearia ramulosa/Calytrix tetragona</i>	0	27	8	19
FLP	82	15939	54	266380	6084410	ESC	11	<i>Beyeria lechenaultii/Acrotriche patula</i>	4	41	21	20
FLP	82	15940	54	257960	6079240	ESC	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	2	45	19	26
FLP	82	15941	54	267650	6085940	ESC	11	<i>Beyeria lechenaultii/Acrotriche patula</i>	1	37	23	14
FLP	82	15942	54	243020	6050350	HIL	18	<i>Allocasuarina verticillata</i>	0	30	21	9
FLP	82	15944	54	243010	6050040	HIL	37	<i>Leucopogon parviflorus</i>	0	37	20	17
FLP	82	15945	54	245380	6049550	ESC	17	<i>Acacia paradoxa</i>	2	41	32	9
FLP	82	15946	54	245290	6050100	HIL	17	<i>Acacia paradoxa</i>	4	54	50	4
FLP	82	15947	54	250900	6051090	ESC	17	<i>Acacia paradoxa</i>	1	27	23	4
FLP	82	15948	54	250540	6051030	HIL	17	<i>Acacia paradoxa</i>	3	28	27	1
FLP	82	15949	54	250820	6051040	ESC	17	<i>Acacia paradoxa</i>	1	39	27	12
FLP	82	15950	54	252590	6052380	HIL	17	<i>Acacia paradoxa</i>	0	17	16	1

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
FLP	82	15951	54	252710	6052280	ESC	37	<i>Leucopogon parviflorus</i>	1	24	16	8
FLP	82	15952	54	253810	6052580	HIL	41	<i>Lepidosperma gladiatum</i>	0	9	8	1
FLP	82	15953	54	257540	6052610	CON	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	8	3	5
FLP	82	15957	54	275240	6053950	ESC	19	<i>M. lanceolata/A. patula/L. discolor</i>	14	63	57	6
FLP	82	15958	54	271380	6053650	ESC	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	2	43	26	17
FLP	82	15959	54	272150	6053800	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	4	1	3
FLP	82	15960	54	270620	6053930	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	3	33	20	13
FLP	82	15961	54	272150	6053800	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	17	13	4
FLP	82	15962	54	273540	6053860	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	17	15	2
FLP	82	15963	54	273540	6053830	ESC	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	5	52	32	20
FLP	82	15964	54	271900	6053900	CON	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	2	48	40	8
FLP	82	15965	54	273500	6053850	CON	37	<i>Leucopogon parviflorus</i>	6	27	19	8
FLP	82	15966	54	237970	6052880	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	33	15	18
FLP	82	15968	54	237910	6053020	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	41	21	20
FLP	82	15969	54	237650	6053110	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	35	20	15
FLP	82	15970	54	267550	6091500	DUN	11	<i>Beyeria lechenaultii/Acrotriche patula</i>	9	39	34	5
FLP	82	15982	54	236890	6053750	DUN	17	<i>Acacia paradoxa</i>	0	46	19	27
FLP	82	15983	54	236920	6054170	ESC	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	6	48	30	18
FLP	82	15984	54	237240	6053790	DUN	17	<i>Acacia paradoxa</i>	0	40	25	15
FLP	82	15985	54	236790	6055420	CON	39	<i>Gahnia lanigera/Lepidosperma congestum</i>	9	53	33	20
FLP	82	15986	54	247650	6066480	ESC	12	<i>Olearia ramulosa/Calytrix tetragona</i>	5	46	26	20
FLP	82	15990	54	279090	6056430	PLA	13	<i>Eucalyptus diversifolia/Gonocarpus mezeianus</i>	8	78	64	14
COO	4	00112	54	353900	6030400				0	1	1	0
COO	4	00113	54	353800	6030500				0	4	4	0
COO	4	00114	54	353600	6030400				0	1	0	1
COO	4	00115	54	353400	6030400				0	2	1	1
COO	4	00116	54	353400	6030500				0	9	2	7
COO	4	00117	54	356700	6028200				0	4	4	0
COO	4	00118	54	360400	6022100				0	3	3	0
COO	4	00119	54	360300	6022100				0	10	8	2
COO	4	00120	54	360200	6022000				0	10	8	2
COO	4	00121	54	360100	6022300				0	11	9	2
COO	4	00122	54	360000	6022400				0	10	9	1
COO	4	00123	54	360000	6022500				0	6	6	0
COO	4	00124	54	360000	6022600				0	10	8	2
COO	4	00125	54	360100	6022600				0	8	7	1
COO	4	00126	54	360100	6022400				0	7	6	1
COO	4	00127	54	360700	6021700				0	11	8	3
COO	4	00128	54	360700	6021900				0	10	8	2
COO	4	00129	54	360800	6022000				0	10	8	2
COO	4	00130	54	360800	6021900				0	11	9	2
COO	4	00131	54	360900	6022000				0	1	0	1
COO	4	00132	54	361300	6021400				0	4	4	0
COO	4	00133	54	361200	6021200				0	11	11	1
COO	4	00134	54	361100	6021400				1	9	9	0
COO	4	00135	54	361800	6020800				3	17	15	2
COO	4	00136	54	361800	6020900				0	8	7	1
COO	4	00137	54	361800	6021000				1	10	10	0
COO	4	00138	54	364000	6019100				0	7	5	2
COO	4	00139	54	363800	6019000				0	6	6	0
COO	4	00140	54	316700	6060900				1	5	5	0
COO	4	00141	54	316700	6060800				0	2	2	0

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
COO	4	00142	54	316600	6060800				1	1	1	0
COO	4	00143	54	316800	6060800				1	3	3	0
COO	4	00144	54	316900	6060400				0	6	6	0
COO	4	00145	54	317000	6060500				0	6	6	0
COO	4	00147	54	317200	6060700				1	6	6	0
COO	4	00148	54	317400	6060500				0	7	7	0
COO	4	00149	54	317300	6060200				0	5	5	0
COO	4	00150	54	317400	6060200				1	4	4	0
COO	4	00151	54	317500	6060500				1	3	2	1
COO	4	00152	54	378200	6000800				0	21	17	4
COO	4	00153	54	380000	5993400				1	10	10	0
COO	4	00154	54	380200	5993600				0	19	16	3
COO	4	00155	54	380900	5993900				0	14	14	0
COO	4	00156	54	381100	5993900				0	18	18	0
COO	4	00157	54	378200	5992100				0	9	9	0
COO	4	00158	54	378250	5992100				0	11	10	1
COO	4	00159	54	379000	5992700				0	5	5	0
COO	4	00160	54	377200	5995600				0	11	11	0
COO	4	00161	54	377400	5995500				0	5	3	2
COO	4	00162	54	382600	5990800				0	18	18	0
COO	4	00163	54	385500	5984100				0	20	19	1
COO	4	00164	54	390600	5968300				0	21	19	2
COO	4	00165	54	390600	5968200				0	15	11	4
COO	4	00166	54	390500	5968500				0	22	19	3
COO	4	00167	54	389300	5971200				0	22	17	5
COO	4	00168	54	389300	5971100				1	14	12	2
COO	4	00173	54	392600	5916700				0	12	12	0
COO	4	00174	54	392200	5916300				0	11	10	1
COO	16	01713	54	328000	6054500				1	42	33	9
COO	16	01714	54	333200	6051750				0	37	32	4
COO	16	01769	54	351150	6034900				0	21	16	5
COO	16	01770	54	349742	6035909				0	26	21	5
COO	16	01771	54	348700	6038300				2	39	37	1
COO	16	01904	54	361446	6024357				0	31	19	12
COO	16	01905	54	353512	6033793				0	37	23	14
COO	42	06750	54	302600	6065400				0	6	5	1
COO	42	06751	54	302660	6065360				0	18	11	7
COO	42	06752	54	296460	6066970				0	23	16	7
COO	42	06753	54	296480	6066910				0	31	19	12
COO	29	07312	54	395693	5956395				0	10	9	1
COO	29	07314	54	398514	5955774				0	35	34	1
COO	29	07317	54	395729	5951698				0	24	22	2
COO	29	07318	54	395319	5951349				0	25	21	4
COO	29	07319	54	401846	5945051				0	41	39	2
COO	29	07321	54	402895	5934172				0	34	34	0
COO	29	07410	54	398448	5931942				0	19	13	6
COO	29	07411	54	398518	5932012				0	23	18	5
COO	29	07412	54	398989	5931929				0	21	19	2
COO	29	07413	54	400742	5931670				0	12	12	0
COO	29	07414	54	401882	5931770				1	41	41	0
COO	29	07415	54	402400	5931717				3	40	40	0
COO	29	07581	54	393486	5963407				0	22	22	0

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COO	82	14754	54	309390	6062220	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	27	23	4
COO	82	14755	54	309100	6062100	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	23	16	7
COO	82	14756	54	309260	6062020	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	24	17	7
COO	82	14757	54	309270	6062050	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	27	20	7
COO	82	14758	54	309300	6062060	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	23	18	5
COO	82	14759	54	338520	6041550	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	1	32	26	6
COO	82	14760	54	338380	6041780	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	0	26	19	7
COO	82	14761	54	338180	6041950	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	1	27	21	6
COO	82	14762	54	338190	6041670	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	11	9	2
COO	82	14763	54	338320	6041670	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	1	26	24	2
COO	82	14764	54	355390	6024460	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	1	30	22	8
COO	82	14765	54	355460	6024240	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	18	15	3
COO	82	14766	54	355700	6024570	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	37	26	12
COO	82	14767	54	355540	6024690	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	37	25	12
COO	82	14768	54	355640	6024670	DUN	43	<i>Olearia axillaris/Rhagodia candolleana ssp candolleana</i>	1	35	25	10
COO	82	14769	54	385950	5976900	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	42	31	11
COO	82	14771	54	385620	5976680	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	12	10	2
COO	82	14772	54	386350	5976980	DUN	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	48	35	14
COO	82	14773	54	386350	5977120	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	43	33	10
COO	82	14774	54	389610	5967210	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	14	10	4
COO	82	14775	54	389750	5967210	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	20	17	3
COO	82	14776	54	389900	5967220	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	34	26	8
COO	82	14777	54	390160	5967150	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	40	29	11
COO	82	14778	54	390250	5967320	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	26	16	10
COO	82	14779	54	310940	6061020	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	5	3	2
COO	82	14780	54	311230	6061160	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	19	17	2
COO	82	14781	54	311210	6061140	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	26	19	7
COO	82	14782	54	311340	6061180	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	34	26	8
COO	82	14783	54	311090	6061260	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	19	15	4
COO	82	14784	54	319910	6056310	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	22	18	4
COO	82	14785	54	319740	6056100	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	33	28	5
COO	82	14786	54	319900	6055770	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	29	23	6
COO	82	14787	54	319840	6055750	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	29	25	4
COO	82	14788	54	319800	6055700	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	10	8	2
COO	82	14789	54	370090	6005920	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	30	26	4
COO	82	14790	54	369940	6005920	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	36	29	7
COO	82	14792	54	369760	6006120	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	34	29	5
COO	82	14793	54	369790	6005970	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	34	27	7
COO	82	14794	54	369730	6005750	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	19	17	2
COO	82	14795	54	382670	5983090	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	21	18	3
COO	82	14796	54	383460	5983010	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	31	25	6
COO	82	14797	54	383270	5983120	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	31	29	2
COO	82	14798	54	384120	5982510	DUN	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	1	39	32	7
COO	82	14799	54	384020	5983310	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	34	29	5
COO	82	14800	54	387350	5972480	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	30	25	5
COO	82	14801	54	387740	5972440	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	27	22	5
COO	82	14802	54	388110	5972450	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	39	34	5
COO	82	14810	54	388090	5972570	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	37	30	7
COO	82	14812	54	388070	5972690	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	31	26	5
COO	82	14814	54	312490	6060290	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	10	8	2
COO	82	14816	54	312550	6060480	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	35	29	6
COO	82	14822	54	312810	6060420	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	31	24	7

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
COO	82	14824	54	312540	6060320	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	23	21	2
COO	82	14825	54	312500	6060240	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	19	15	4
COO	82	14835	54	330210	6048190	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	17	16	1
COO	82	14836	54	330230	6048180	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	23	20	3
COO	82	14837	54	330580	6048150	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	28	21	7
COO	82	14838	54	330540	6048460	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	1	34	27	7
COO	82	14839	54	330740	6048190	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	28	24	4
COO	82	14841	54	330730	6048030	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	10	9	1
COO	82	14842	54	351560	6028630	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	1	20	17	3
COO	82	14843	54	351570	6028660	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	28	23	5
COO	82	14844	54	351840	6028780	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	1	31	24	7
COO	82	14845	54	351930	6028640	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	29	22	7
COO	82	14846	54	352040	6028580	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	27	20	7
COO	82	14847	54	351890	6028330	DUN	48	<i>Atriplex cinerea</i>	0	17	15	2
COO	82	14849	54	379080	5991200	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	24	21	3
COO	82	14853	54	379080	5990860	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	28	22	6
COO	82	14857	54	378910	5990770	BEA	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	24	19	5
COO	82	14861	54	378930	5990830	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	28	19	9
COO	82	14862	54	378870	5990770	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	24	21	3
COO	82	14863	54	378810	5990790	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	4	1	3
COO	82	14864	54	379620	5990690	PAR	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	42	31	11
COO	82	14865	54	388780	5971200	PAR	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	39	27	12
COO	82	14867	54	388240	5970360	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	39	28	11
COO	82	14868	54	388240	5970780	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	23	18	5
COO	82	14869	54	388480	5971040	PAR	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	32	27	5
COO	82	14870	54	388880	5970800	PAR	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	28	24	4
COO	82	14896	54	398420	5928650	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	37	19	18
COO	82	14897	54	398330	5928700	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	40	22	18
COO	82	14898	54	398230	5928690	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	19	9	10
COO	82	14899	54	391070	5915220	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	34	30	4
COO	82	14901	54	391140	5915300	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	32	29	3
COO	82	14920	54	397640	5944720	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	39	29	10
COO	82	14921	54	396970	5944400	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	40	30	10
COO	82	14922	54	397140	5944560	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	31	21	10
COO	93	15704	54	302450	6065650	TID			1	17	14	3
COO	82	15954	54	301140	6065490	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	17	10	7
COO	82	15955	54	301290	6065310	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	4	1	3
COO	82	15956	54	301430	6065490	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	20	12	8
COO	82	15987	54	304920	6064000	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	15	9	6
COO	82	15988	54	304840	6064280	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	16	7	9
COO	82	15989	54	304830	6064270	CON	45	<i>Olearia axillaris/Tetragonia implexicoma</i>	0	14	10	4
SOE	4	00001	54	414510	5851890				0	37	26	11
SOE	4	00002	54	414510	5851890				0	32	22	10
SOE	4	00003	54	404600	5864000				0	27	17	10
SOE	4	00004	54	394670	5873000				0	39	30	9
SOE	4	00005	54	395200	5873540				0	38	23	15
SOE	4	00006	54	394930	5875080				1	23	19	4
SOE	4	00007	54	394930	5875080				0	22	19	3
SOE	4	00008	54	394930	5875080				0	32	23	9
SOE	4	00009	54	390660	5895060				0	30	23	7
SOE	4	00010	54	390660	5895060				0	28	24	4
SOE	4	00011	54	399690	5869370				0	20	17	3

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SOE	4	00012	54	396120	5874160				0	33	26	7
SOE	4	00013	54	396120	5874160				0	34	24	10
SOE	4	00014	54	395240	5875700				0	20	20	0
SOE	4	00015	54	395240	5875700				0	7	7	0
SOE	4	00016	54	395240	5875700				0	16	15	1
SOE	4	00017	54	395240	5875700				1	10	10	0
SOE	4	00018	54	393550	5879330				0	37	29	8
SOE	4	00019	54	393550	5879330				0	18	17	1
SOE	4	00020	54	393550	5879330				0	21	21	0
SOE	4	00021	54	392920	5879120				0	17	17	0
SOE	4	00022	54	392200	5879390				0	15	14	1
SOE	4	00023	54	411110	5852680				0	36	30	6
SOE	4	00024	54	411110	5852680				0	32	26	6
SOE	4	00025	54	409640	5855400				0	34	29	5
SOE	4	00026	54	408900	5856020				0	13	11	2
SOE	4	00027	54	408900	5856020				0	21	18	3
SOE	4	00028	54	408900	5856020				0	13	9	4
SOE	4	00029	54	408460	5856650				0	12	11	1
SOE	4	00030	54	408460	5856650				0	29	19	10
SOE	4	00031	54	408460	5856650				0	30	24	6
SOE	4	00032	54	445000	5805810				0	33	25	8
SOE	4	00033	54	424310	5848670				0	29	21	8
SOE	4	00034	54	424310	5848670				1	16	16	0
SOE	4	00035	54	445000	5805810				0	24	19	5
SOE	4	00040	54	447400	5804460				0	14	11	3
SOE	4	00041	54	447400	5804460				0	28	22	6
SOE	4	00042	54	447400	5804460				0	8	7	1
SOE	4	00043	54	447400	5804460				0	21	18	3
SOE	4	00050	54	465860	5791070				0	20	17	3
SOE	4	00051	54	465860	5791070				0	10	10	0
SOE	4	00052	54	465860	5791070				0	32	23	9
SOE	4	00056	54	494950	5788150				0	17	15	2
SOE	4	00057	54	494950	5788150				0	29	20	9
SOE	4	00058	54	494950	5788150				1	29	23	6
SOE	4	00059	54	494950	5788930				1	18	18	0
SOE	4	00060	54	494950	5788930				0	26	23	3
SOE	4	00061	54	494920	5788790				1	16	16	0
SOE	4	00062	54	494920	5788790				2	9	9	0
SOE	4	00063	54	494920	5788790				1	3	3	0
SOE	4	00064	54	494920	5788790				0	4	4	0
SOE	4	00065	54	494920	5788790				0	16	16	0
SOE	4	00070	54	439000	5820600				0	23	21	2
SOE	4	00071	54	439000	5820600				1	25	21	4
SOE	4	00072	54	439000	5820600				0	22	19	3
SOE	4	00073	54	439000	5820600				0	16	13	3
SOE	4	00074	54	433050	5830950				0	22	22	0
SOE	4	00075	54	431550	5831750				0	19	18	1
SOE	4	00076	54	431550	5831750				0	10	9	1
SOE	4	00077	54	434200	5831800				0	25	24	1
SOE	4	00078	54	434200	5831800				0	15	14	1
SOE	4	00079	54	433050	5834060				1	29	23	6
SOE	4	00080	54	433050	5834060				0	22	19	3

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SOE	4	00081	54	433050	5834060				0	25	22	3
SOE	4	00082	54	445100	5805300				0	14	14	0
SOE	4	00088	54	451600	5801050				0	17	9	8
SOE	4	00089	54	456780	5795760				0	12	12	0
SOE	4	00090	54	456780	5795760				0	22	18	4
SOE	4	00091	54	456780	5795760				0	30	19	11
SOE	4	00098	54	458000	5795750				0	14	11	3
SOE	4	00100	54	468000	5790000				1	9	6	3
SOE	4	00101	54	468900	5789200				0	12	11	1
SOE	4	00102	54	470850	5787740				1	12	10	2
SOE	4	00103	54	470250	5787150				0	12	10	2
SOE	4	00104	54	471000	5788200				0	10	9	1
SOE	4	00106	54	469500	5789150				0	7	7	0
SOE	4	00109	54	465800	5791300				0	6	5	1
SOE	4	00110	54	465600	5791300				0	11	11	0
SOE	4	00111	54	463300	5790750				0	8	8	0
SOE	4	00169	54	382300	5909200				0	7	6	1
SOE	4	00170	54	381700	5909300				0	10	10	0
SOE	4	00171	54	384500	5905700				0	10	7	3
SOE	4	00175	54	396300	5893800				0	5	4	1
SOE	4	00177	54	396400	5894000				0	9	9	0
SOE	4	00178	54	392750	5895600				1	7	7	0
SOE	4	00179	54	390100	5884000				0	8	8	0
SOE	4	00180	54	389300	5883500				0	12	12	0
SOE	4	00181	54	391350	5884700				0	7	7	0
SOE	4	00182	54	394300	5880480				0	8	7	1
SOE	29	07260	54	406248	5863010				0	15	14	1
SOE	29	07261	54	405891	5863517				0	12	12	0
SOE	29	07262	54	445007	5807095				0	11	8	3
SOE	29	07263	54	445285	5807190				0	8	5	3
SOE	29	07264	54	444593	5807720				0	16	16	0
SOE	29	07275	54	424516	5842897				0	13	11	2
SOE	29	07277	54	422480	5840857				0	18	15	3
SOE	29	07278	54	423830	5840453				0	15	13	2
SOE	29	07341	54	485469	5789582				1	35	23	12
SOE	29	07342	54	494448	5789100				1	44	35	9
SOE	29	07353	54	419434	5854305				0	13	7	6
SOE	29	07354	54	414305	5852003				0	14	13	1
SOE	29	07355	54	415517	5851930				0	13	12	1
SOE	4	07597	54	433050	5830950	DUN			0	17	17	0
SOE	82	14873	54	382340	5909940	PLA	37	<i>Leucopogon parviflorus</i>	2	51	35	16
SOE	82	14881	54	382280	5909920	PLA	37	<i>Leucopogon parviflorus</i>	3	58	44	14
SOE	82	14886	54	382180	5909980	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	39	26	13
SOE	82	14892	54	381950	5910030	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	37	22	15
SOE	82	14895	54	381850	5910010	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	35	29	7
SOE	82	14902	54	407960	5855280	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	13	8	5
SOE	82	14903	54	407880	5855350	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	1	28	19	9
SOE	82	14904	54	408330	5855430	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	27	23	4
SOE	82	14905	54	408470	5855480	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	29	25	4
SOE	82	14908	54	408570	5855500	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	27	23	4
SOE	82	14909	54	409280	5853410	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	43	34	9
SOE	82	14910	54	409070	5853720	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	31	22	9

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
SOE	82	14911	54	409030	5853750	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	27	22	5
SOE	82	14912	54	409580	5853780	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	27	23	4
SOE	82	14913	54	410430	5853890	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	34	28	6
SOE	82	14914	54	421210	5841730	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	49	41	8
SOE	82	14915	54	421650	5841020	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	30	24	6
SOE	82	14917	54	421680	5841020	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	39	31	8
SOE	82	14918	54	422920	5839710	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	47	37	10
SOE	82	14919	54	423180	5840010	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	25	23	2
SOE	82	14923	54	431180	5831710	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	10	5	5
SOE	82	14924	54	431910	5831310	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	39	31	8
SOE	82	14925	54	431870	5831410	BEA	3	<i>Juncus kraussii</i>	1	19	14	5
SOE	82	14926	54	432170	5831640	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	38	31	7
SOE	82	14927	54	431900	5830850	BEA	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	1	16	13	3
SOE	82	14928	54	418940	5848340	LON	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	26	17	9
SOE	82	14929	54	418900	5848390	BEA	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	32	25	7
SOE	82	14930	54	416310	5851130	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	16	10	6
SOE	82	14931	54	416310	5851100	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	44	30	14
SOE	82	14932	54	416310	5851200	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	37	28	9
SOE	82	14933	54	391470	5894710	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	36	29	7
SOE	82	14934	54	391420	5894560	BEA	41	<i>Lepidosperma gladiatum</i>	1	19	15	4
SOE	82	14935	54	391310	5894330	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	32	20	12
SOE	82	14936	54	391320	5894360	BEA	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	32	21	11
SOE	82	14937	54	391260	5894330	BEA	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	7	4	3
SOE	82	14938	54	388630	5886950	ESC	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	41	26	15
SOE	82	14939	54	388590	5886870	ESC	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	47	28	19
SOE	82	14940	54	397400	5868630	ESC	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	44	35	9
SOE	82	14941	54	397650	5868820	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	28	22	6
SOE	82	14942	54	398760	5868120	LON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	28	24	4
SOE	82	14943	54	399080	5867440	BEA	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	10	8	2
SOE	82	14944	54	399140	5867400	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	1	29	23	6
SOE	82	14945	54	398260	5867880	BEA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	33	25	8
SOE	82	14946	54	389720	5883810	CON	23	<i>Eucalyptus diversifolia/Clematis microphylla</i>	0	19	18	1
SOE	82	14947	54	389370	5883540	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	26	24	2
SOE	82	14948	54	389160	5883620	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	36	27	9
SOE	82	14949	54	389370	5883140	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	34	26	8
SOE	82	14950	54	389390	5883200	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	29	24	5
SOE	82	14951	54	391680	5879470	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	26	24	2
SOE	82	14952	54	391680	5879280	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	25	24	1
SOE	82	14953	54	392250	5878650	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	22	20	2
SOE	82	14954	54	392300	5878400	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	22	20	2
SOE	82	15043	54	391850	5878150	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	29	25	4
SOE	82	15044	54	393550	5875150	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	8	4	4
SOE	82	15045	54	393270	5876480	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	21	17	4
SOE	82	15046	54	393430	5876150	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	32	25	7
SOE	82	15047	54	393590	5876070	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	21	20	1
SOE	82	15048	54	393680	5876320	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	37	28	9
SOE	82	15163	54	393670	5876400	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	34	24	10
SOE	82	15164	54	446990	5803050	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	45	36	9
SOE	82	15216	54	446850	5803170	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	37	27	10
SOE	82	15217	54	438020	5820630	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	13	10	3
SOE	82	15218	54	438080	5820530	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	15	13	2
SOE	82	15221	54	438150	5820800	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	20	17	3

Reg	Sur	PID	A	East	North	Pat	G	Floristic community	R	Sp	N	I
SOE	82	15222	54	438360	5821030	DUN	3	<i>Juncus kraussii</i>	0	20	17	3
SOE	82	15223	54	439410	5817930	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	17	15	2
SOE	82	15224	54	439570	5818000	DUN	3	<i>Juncus kraussii</i>	0	6	6	0
SOE	82	15225	54	439410	5818030	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	26	20	6
SOE	82	15226	54	439660	5818270	PAR	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	17	14	3
SOE	82	15227	54	444060	5807310	CON	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	25	22	3
SOE	82	15228	54	444210	5807700	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	19	17	2
SOE	82	15229	54	440890	5814740	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	22	18	4
SOE	82	15230	54	440780	5814440	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	20	17	3
SOE	82	15232	54	441150	5814450	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	13	11	2
SOE	82	15233	54	441110	5814660	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	23	17	6
SOE	82	15235	54	456590	5796070	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	26	20	6
SOE	82	15239	54	456720	5795990	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	22	19	3
SOE	82	15240	54	456700	5796280	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	2	33	25	8
SOE	82	15243	54	456800	5796190	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	16	14	2
SOE	82	15244	54	456240	5797440	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	23	21	2
SOE	82	15246	54	456010	5797180	DUN	50	<i>Olearia axillaris/Leucopogon parviflorus</i>	0	28	22	6
SOE	82	15247	54	456100	5797060	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	32	24	8
SOE	82	15248	54	456050	5797710	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	25	21	4
SOE	82	15249	54	486250	5789630	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	1	30	19	11
SOE	82	15250	54	486130	5789620	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	29	22	7
SOE	82	15251	54	486000	5789430	CON	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	34	23	11
SOE	82	15252	54	486070	5789530	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	33	24	9
SOE	82	15253	54	466900	5789480	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	25	20	5
SOE	82	15254	54	462870	5790790	ESC	37	<i>Leucopogon parviflorus</i>	0	32	26	6
SOE	82	15255	54	495870	5787940	DUN	51	<i>Spinifex sericeus/ Euphorbia paralias</i>	0	18	14	4
SOE	82	15256	54	496240	5787920	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	23	20	3
SOE	82	15257	54	493420	5788200	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	31	21	10
SOE	82	15258	54	493460	5788220	PLA	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	10	10	0
SOE	82	15259	54	496790	5788330	DUN	8	<i>Gahnia trifida</i>	0	5	5	0
SOE	82	15260	54	496810	5787950	DUN	49	<i>Leucopogon parviflorus/ Olearia axillaris</i>	0	18	14	4
SOE	82	15261	54	494150	5788270	DUN	3	<i>Juncus kraussii</i>	0	14	10	4
SOE	29	15654	54	447310	5804030				1	45	24	21
SOE	29	15655	54	446590	5804860	CON			0	36	17	19
SOE	29	15658	54	393360	5881850	PLA			1	34	29	5
SOE	29	15677	54	424800	5848500	PLA			2	45	27	18

Appendix 6 Perennial Plant Species Regional Distribution

Plant species Scientific name of all perennial species (easily detectable) recorded in all survey quadrats

Fr Total number of quadrats in which the species is recorded

AUS Australian conservation rating designated for that species (where applicable)

SA South Australian conservation rating designated for that species (where applicable)

NUL - Nullarbor, HOB - Head of Bight, EPW - Eyre Peninsula west, EPS - Eyre Peninsula south, EPE - Eyre Peninsula east, SPG - Spencer Gulf, YOP - Yorke Peninsula, SVG - Gulf St Vincent, KIS - Kangaroo Island south, KIE - Kangaroo Island east, KIN - Kangaroo Island north, FLP - Fleurieu Peninsula, COO - Coorong, SOE - South East

Conservation statue codes (Briggs and Leigh 1995; Lang and Kraehenbuehl 1998)

Distribution categories

2 species with a very restricted distribution in Australia and with a maximum geographic range of less than 100 km

3 species with a range of at least 100 km but occurring only in small populations (often restricted to highly specific and localised habitats)

Conservation categories

E Endangered: in danger of disappearing from the wild state within one or two decades if present land use and other causal factors continue to operate

V Vulnerable: rare and at risk from potential threats or long term threats which could cause the species to become endangered in the future

R Rare: has a low overall frequency of occurrence (may be locally common with a very restricted distribution or may be scattered sparsely over a wider area). Not currently exposed to significant threats, but warrants monitoring and protective measures to prevent reduction of population size

T Threatened: likely to be either Endangered or Vulnerable but insufficient data for a more precise assessment

K Uncertain: likely to be either Threatened or Rare but insufficient data for a more precise assessment

Q Not yet assessed but flagged as being of possible significance

U Uncommon: less common species of interest but not rare enough to warrant special protective measures

N Not of particular significance/common

Reservation categories

C known to be present within a national park or other conservation reserve

a adequately reserved with a total of at least 1000 plants known to occur in reserves

I inadequately reserved with a total of less than 1000 plants in reserves

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Acacia acinacea</i>	8		N				1				1	5E	1E				
<i>Acacia aff. anceps</i>	9				9												
<i>Acacia alcockii</i>	7	2RCa	R				7R										
<i>Acacia anceps</i>	42					4	5			33							
<i>Acacia anceps</i> (NC)	95					71	13			11							

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Acacia anceps</i> x <i>nematophylla</i>	7						1			6							
<i>Acacia ancistrophylla</i> var <i>lissophylla</i>	1								1								
<i>Acacia brachybotrya</i>	5					3	1			1							
<i>Acacia calamifolia</i>	19						9			10							
<i>Acacia colletioides</i>	1				1												
<i>Acacia continua</i>	1							1									
<i>Acacia cupularis</i>	58		N			14	15	1		15	1R		2	1	3R	5	1
<i>Acacia cupularis</i> /ligulata	4									2	2						
<i>Acacia cyclops</i>	18		N	2						9	4		1		2		
<i>Acacia dodonaeifolia</i>	5	3RCa	R				3R							2K			
<i>Acacia dodonaeifolia</i> x <i>paradoxa</i>	2														2		
<i>Acacia farinosa</i>	1									1							
<i>Acacia gillii</i>	2						2										
<i>Acacia hakeoides</i>	1										1						
<i>Acacia leiophylla</i>	72						13			7	1	13	13	1		12	12
<i>Acacia leiophylla</i> /pycnantha	3						1									2	
<i>Acacia ligulata</i>	83							7	14	53	8				1K		
<i>Acacia ligulata</i> (NC)	11								1	3		2	3	1		1	
<i>Acacia longifolia</i> var	2						1									1	
* <i>Acacia longifolia</i> var <i>longifolia</i>	1														1		
<i>Acacia longifolia</i> var <i>sophorae</i>	315					14	28			21	6	5	4	1	15	100	121
<i>Acacia microcarpa</i>	1									1							
<i>Acacia myrtifolia</i> (NC)	23											9	3	4	6	1	
<i>Acacia myrtifolia</i> var	2						2										
<i>Acacia myrtifolia</i> var <i>angustifolia</i>	2													2			
<i>Acacia myrtifolia</i> var <i>myrtifolia</i>	14						6					5			3		
<i>Acacia nematophylla</i>	76					2	28			46							
<i>Acacia notabilis</i>	3				1	2											
<i>Acacia nyssophylla</i>	1									1							
<i>Acacia oswaldii</i>	22			9	1	4			6	2							
<i>Acacia papyrocarpa</i>	3								3								
<i>Acacia paradoxa</i>	100						7					15	28	24	25		1
<i>Acacia paradoxa</i> hybrid	1										1						

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Acacia pycnantha</i>	40						2				2	5		1	24	2	4
<i>Acacia retinodes</i> var	1														1		
<i>Acacia retinodes</i> var <i>retinodes</i> (NC)	7											7					
<i>Acacia retinodes</i> var <i>uncifolia</i>	21		U									11	1	1	8R		
<i>Acacia rupicola</i>	18		N				14					1R		2R	1		
* <i>Acacia saligna</i>	1										1						
<i>Acacia sclerophylla</i>	2						1	1									
<i>Acacia spinescens</i>	94					3	29			25	3	2	2	14	10	6	
<i>Acacia trineura</i>	1									1							
<i>Acacia triquetra</i>	33		N			1	9			6		10Q	7Q				
<i>Acacia verticillata</i>	16											2		1	11		2
<i>Acaena echinata</i> var	11						6			4					1		
<i>Acaena novae-zelandiae</i>	120											3			4	24	89
<i>Acaena</i> x <i>anserovina</i>	1											1					
<i>Acrotriche affinis</i>	20									6		5		4		3	2
<i>Acrotriche cordata</i>	166						40			33		56	16	10	7	1	3
<i>Acrotriche cordata</i> x <i>patula</i>	1		N							1					R		
<i>Acrotriche depressa</i>	32											8	12	12			
<i>Acrotriche halmaturina</i>	2													2			
<i>Acrotriche patula</i>	292		N	6	2	34	90	3		77	9R	20	33	13	5R		
<i>Acrotriche serrulata</i>	6														3	3	
<i>Adenanthos macropodiana</i>	12											8	2	2			
<i>Adenanthos terminalis</i>	22						3					7		10	2		
<i>Adriana klotzschii</i>	62					2	10			14	3	4	2		1	16	10
<i>Alectryon oleifolius</i> ssp <i>canescens</i>	9								9								
<i>Allocauarina muelleriana</i> ssp	3													1	2		
<i>Allocauarina muelleriana</i> ssp <i>muelleriana</i>	12						5								6	1	
<i>Allocauarina muelleriana</i> ssp <i>notocolpica</i>	12											6	4	2			
<i>Allocauarina pusilla</i>	3		N							3R							
<i>Allocauarina striata</i>	36											13	5	13	5		
<i>Allocauarina verticillata</i>	138					9	31			31		4	8	26	15	6	8
<i>Alyogyne huegelii</i>	1						1										
<i>Alyxia buxifolia</i>	155		N			16	16	3	5	46	12R	6	10	6	2R	12	21

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
* <i>Ammophila arenaria</i>	30					2				2	2	1	1		7	7	8
<i>Amyema melaleucae</i>	46		N	5	1	5	15		5	8	4K					2Q	1Q
<i>Amyema miquelii</i>	3								1						1	1	
<i>Amyema miraculosum</i> ssp <i>boormanii</i>	3								3								
<i>Amyema quandang</i> var <i>quandang</i>	1								1								
<i>Apium prostratum</i> ssp <i>prostratum</i> var	2						1									1	
<i>Apium prostratum</i> ssp <i>prostratum</i> var <i>filiforme</i>	9											2	1		1	1	4
<i>Apium prostratum</i> ssp <i>prostratum</i> var <i>prostratum</i>	37									1						11	25
* <i>Arctotheca populifolia</i>	7			2	1	2				1							1
* <i>Arctotis stoechadifolia</i>	1										1						
<i>Argentipallium obtusifolium</i>	2						1									1	
* <i>Argyranthemum frutescens</i> ssp <i>foeniculaceum</i>	6										1		1				4
* <i>Argyranthemum frutescens</i> ssp <i>frutescens</i>	1									1							
* <i>Asclepias rotundifolia</i>	15										2				6	7	
<i>Asperula conferta</i>	3																3
<i>Asperula euryphylla</i> var <i>tetraphylla</i>	1		V									1V					
<i>Astroloma conostephioides</i>	60						4					11	9	23	10	3	
<i>Astroloma humifusum</i>	89						7				1	10	21	10	31	8	1
<i>Atriplex cinerea</i>	86			6	9	29	4	3	2	19	3	2	1	1	1	2	4
<i>Atriplex nummularia</i> ssp <i>spathulata</i>	11			11													
<i>Atriplex paludosa</i> ssp	2					1	1										
<i>Atriplex paludosa</i> ssp <i>cordata</i>	121			17		64		1	12	14	12		1				
<i>Atriplex paludosa</i> ssp <i>paludosa</i>	8		Q						4K	1						3Q	
* <i>Atriplex prostrata</i>	4										1				1	1	1
<i>Atriplex semibaccata</i>	2						1									1	
<i>Atriplex stipitata</i>	1			1													
<i>Atriplex vesicaria</i> (NC)	11			4	7												
<i>Atriplex vesicaria</i> ssp	95			28	36	8		2	19	1	1						
<i>Austrofestuca littoralis</i>	28		N			1	1			1K			1R			10	14
<i>Avicennia marina</i> var <i>resinifera</i>	10					1	1		3		5						
<i>Baeckea behrii</i>	7						7										
<i>Baeckea crassifolia</i>	8		N				4							2	2R		
<i>Baeckea ericaea</i>	5											5					

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Baeckea ramosissima</i> ssp <i>ramosissima</i>	14											1		10	3		
<i>Banksia marginata</i>	53		N				3R					22	3	5	8	7	5
<i>Banksia ornata</i>	11		N				1R					6		2	1	1	
<i>Baumea arthropphylla</i>	4		N				1R					1					2
<i>Baumea articulata</i>	2																2
<i>Baumea juncea</i>	38		N				5			1V	1	2R	2R	5R	1	3	18
<i>Bertya rotundifolia</i>	6											2	4				
* <i>Berula erecta</i>	1																1
<i>Beyeria lechenaultii</i>	301			3	14	32	45		5	67	7	60	18	12	10	6	22
<i>Billardiera bignoniacea</i>	6											3		2	1		
<i>Billardiera cymosa</i>	76						2	1		2	1	2	8		14	40	6
<i>Billardiera lehmanniana</i>	5		E				1E			4E							
<i>Billardiera sericophora</i>	11						3								2	5	1
<i>Billardiera uniflora</i>	22		N				3K					9		10			
<i>Billardiera versicolor</i>	17		U				12					1R	1R	1R	2R		
<i>Blechnum nudum</i>	1		R									1R					
<i>Blennospora drummondii</i>	3				1		2										
<i>Bolboschoenus caldwellii</i>	5															4	1
<i>Boronia coerulescens</i> ssp <i>coerulescens</i>	1														1		
<i>Boronia edwardsii</i>	3											1		2			
<i>Boronia filifolia</i>	23		N				1K					14		8			
<i>Boronia inornata</i> ssp <i>leptophylla</i>	1								1								
<i>Bossiaea prostrata</i>	5														5		
<i>Brachycome tatei</i>	7	3KC-	K	7K													
<i>Brachycome uliginosa</i>	2		R													2R	
<i>Brachyloma ericoides</i> ssp	5														5		
<i>Brachyloma ericoides</i> ssp <i>bicolor</i>	10											7	1	2			
<i>Brachyloma ericoides</i> ssp <i>ericoides</i>	8														7	1	
<i>Bracteantha bracteata</i>	2												1		1		
<i>Bursaria spinosa</i>	31						4			15		3			2	5	2
* <i>Cakile edentula</i>	1					1											
* <i>Cakile maritima</i> ssp <i>maritima</i>	137			4		16	4	4	4	29	9	5	4	2	7	18	31
<i>Callistemon rugulosus</i> var	2						2										

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Callistemon rugulosus</i> var <i>rugulosus</i>	5											3	2				
<i>Callitris canescens</i>	15					2	3			7				3			
<i>Callitris preissii</i>	18					1		2	2	1	2		4	5	1		
<i>Callitris rhomboidea</i>	3											2		1			
<i>Calytrix glaberrima</i>	31											14	5	12			
<i>Calytrix involucrata</i>	5						4	1									
<i>Calytrix smeatoniana</i>	2	2RC-	R									2R					
<i>Calytrix tetragona</i>	132					1	15			36	4	30	14	13	18	1	
<i>Carex breviculmis</i>	4		N				1K								3		
<i>Carex fascicularis</i>	1		U														1R
<i>Carex pumila</i>	1						1										
* <i>Carpobrotus aequilaterus</i>	5					5											
* <i>Carpobrotus edulis</i>	1										1						
<i>Carpobrotus modestus</i>	1						1										
<i>Carpobrotus modestus/rossii</i>	4															4	
<i>Carpobrotus rossii</i>	699			2	27	111	72	3	1	140	18	58	24	9	14	108	112
<i>Carpobrotus</i> sp	23							9	12						2		
* <i>Carrichtera annua</i>	38			1				2	18	11	6						
<i>Cassinia uncata</i>	13												2		11		
<i>Cassytha glabella</i> forma <i>dispar</i>	86					2	29			22	2	9		4	18		
<i>Cassytha melantha</i>	30			7	3	2	6	1		1		4	6				
<i>Cassytha peninsularis</i> var	10					7	3										
<i>Cassytha peninsularis</i> var <i>peninsularis</i>	95					30	36	3	1	21			1	3			
<i>Cassytha pubescens</i>	88						8			2		37	4	3	5	4	25
<i>Casuarina pauper</i>	6				1				5								
<i>Caustis pentandra</i>	2											1		1			
<i>Cheilanthes austrotenuifolia</i>	39						8				1	2	6	10	11		1
<i>Cheilanthes sieberi</i> ssp <i>sieberi</i>	1						1										
<i>Chenopodium curvispicatum</i>	1								1								
<i>Chenopodium desertorum</i> ssp <i>anidiophyllum</i>	1								1								
<i>Chenopodium desertorum</i> ssp <i>desertorum</i>	3								3								
* <i>Chondrilla juncea</i>	1										1						
<i>Choretrum glomeratum</i> var	5						1					1	2	1			

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Choretrum glomeratum</i> var <i>glomeratum</i>	37						2					22	9	3		1	
<i>Choretrum spicatum</i>	2	R	R									2R					
<i>Chrysocephalum apiculatum</i>	40					3	12			11	2	1	2	2	7		
<i>Chrysocephalum baxteri</i>	2						2										
* <i>Cirsium vulgare</i>	6															2	4
<i>Cladium procerum</i>	1																1
<i>Clematis microphylla</i>	494					33	83	3	1	108	5	11	18	2	25	72	133
<i>Comesperma calymega</i>	12						2					6	1	2	1		
<i>Comesperma volubile</i>	151			1	1	18	30	2		17	8	5	14	3	12	7	33
<i>Conospermum patens</i>	3											3					
<i>Convolvulus erubescens</i>	10						2				1				7		
<i>Convolvulus erubescens</i> (NC)	9									6	2				1		
<i>Convolvulus remotus</i>	5					1	3								1		
* <i>Coprosma repens</i>	3																3
* <i>Coronopus didymus</i>	1													1			
<i>Correa alba</i> var <i>pannosa</i>	6		R												3R	3R	
<i>Correa decumbens</i>	5											1		4			
<i>Correa pulchella</i>	123		N			6	33			42		13	3	13	13R		
<i>Correa reflexa</i>	56					1	2					34	12	1			6
<i>Correa reflexa</i> var <i>coriacea</i>	21			3			16			1					1		
<i>Correa reflexa</i> var <i>reflexa</i>	17						3					1	1			7	5
<i>Correa</i> sp aff <i>calycina</i>	78		R									45	25	1	7R		
<i>Cratystylis conocephala</i>	17			3	5	6		1	2								
<i>Cryptandra amara</i> var	1					1											
<i>Cryptandra amara</i> var <i>amara</i>	3									3							
<i>Cryptandra leucophracta</i>	6						5					1					
<i>Cryptandra tomentosa</i>	3														2	1	
<i>Cryptandra waterhousii</i>	3											1		2			
<i>Cyperus gymnocaulos</i>	1																1
<i>Cyperus vaginatus</i>	1		N											1K			
* <i>Dactylis glomerata</i>	3															1	2
<i>Dampiera dysantha</i>	5														5		
<i>Dampiera lanceolata</i> var	2														2		

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<i>Dampiera lanceolata</i> var <i>insularis</i>	4											2	2				
<i>Dampiera rosmarinifolia</i>	10		N				2	1		1	6R						
<i>Danthonia caespitosa</i>	62		N		1	9	20		2	11	7	1K			9	2	
<i>Danthonia eriantha</i>	1		R												1K		
<i>Danthonia geniculata</i>	6											2		2	1		1
<i>Danthonia laevis</i>	7		K			7K											
<i>Danthonia pilosa</i> var <i>paleacea</i>	2														2		
<i>Danthonia pilosa</i> var <i>pilosa</i>	1																1
<i>Danthonia racemosa</i> var <i>racemosa</i>	1														1		
<i>Danthonia setacea</i> var <i>setacea</i>	128			11	5	21	29		1	10	2	10	14	10	14		1
<i>Danthonia tenuior</i>	1		Q								1Q						
<i>Darwinia micropetala</i> (NC)	5											5					
<i>Daviesia asperula</i> ssp <i>asperula</i>	13											3	3	7			
<i>Daviesia benthamii</i> ssp <i>humilis</i>	3											2		1			
<i>Daviesia brevifolia</i>	16						2					5		1	5	3	
<i>Daviesia leptophylla</i>	1														1		
<i>Daviesia pectinata</i>	2	3RC-	R												2E		
<i>Daviesia ulicifolia</i>	6					1								1	4		
<i>Dianella brevicaulis</i>	431					23	68	12	12	72	23	43	30	14	26	75	33
<i>Dianella brevicaulis</i> /revoluta var	40					6	13			7	4				2	7	1
<i>Dianella longifolia</i> var	1															1	
<i>Dianella revoluta</i> (NC)	31			2						7					19	3	
<i>Dianella revoluta</i> var	19									19							
<i>Dianella revoluta</i> var <i>divaricata</i>	2			2													
<i>Dianella revoluta</i> var <i>revoluta</i>	100				3	10	18	6	1	11	3	5	3	4	7	11	18
<i>Dichelachne crinita</i>	26		N				14					2K	2K	3K	3		2
<i>Dichondra repens</i>	135						5					11	5	3	17	21	73
<i>Dillwynia hispida</i>	22						2						1	6	12	1	
<i>Dillwynia sericea</i>	14											9	1	4			
* <i>Diplotaxis tenuifolia</i>	14					5	7						1				1
<i>Disphyma crassifolium</i> ssp	2														2		
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	163			25	22	53	19	5	4	11	11	5	2		4	2	
<i>Disphyma crassifolium</i> ssp <i>crassifolium</i> (NC)	2									2							

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Dissocarpus biflorus</i> var <i>biflorus</i>	2								2								
<i>Distichlis distichophylla</i>	19		N							3R	1				1	11	3
<i>Dodonaea baueri</i>	5					3				1	1						
<i>Dodonaea hexandra</i>	6		N			1	4				1R						
<i>Dodonaea humilis</i>	81						23			9		34	11	4			
<i>Dodonaea lobulata</i>	2								2								
<i>Dodonaea stenozyga</i>	12			10	2												
<i>Dodonaea viscosa</i> ssp	6						1								3	2	
<i>Dodonaea viscosa</i> ssp <i>angustissima</i>	23								5		2	9	6	1			
<i>Dodonaea viscosa</i> ssp <i>cuneata</i>	1		U												1V		
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	31						6		2		3	1	2	4	7	1	5
* <i>Ehrharta calycina</i>	6										1				5		
* <i>Ehrharta villosa</i> var <i>maxima</i>	4										2					2	
<i>Einadia nutans</i> ssp	1														1		
<i>Einadia nutans</i> ssp <i>nutans</i>	5						1	1						1	2		
<i>Eleocharis acuta</i>	1																1
<i>Eleocharis sphacelata</i>	1		R									1R					
* <i>Elymus farctus</i>	16										1		1			12	2
<i>Elymus scabrus</i> var <i>scabrus</i>	6						4								1		1
<i>Enchylaena tomentosa</i> var	5					3									1	1	
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	155			14	7	26	13	7	23	24	14	2	4		7	13	1
<i>Enneapogon nigricans</i>	1														1		
<i>Epacris impressa</i>	2													1	1		
<i>Epilobium billardierianum</i> ssp <i>billardierianum</i>	17		N				1					E	E				16
<i>Epilobium billardierianum</i> ssp <i>cinereum</i>	4											1	1				2
<i>Epilobium billardierianum</i> ssp x <i>intermedium</i>	17															4	13
* <i>Epilobium ciliatum</i>	1																1
<i>Epilobium pallidiflorum</i>	2		U														2K
<i>Eremophea spinosa</i>	1					1											
<i>Eremophila alternifolia</i>	3			2					1								
<i>Eremophila crassifolia</i>	10					5	4	1									
<i>Eremophila deserti</i>	67				14	44			4	2	3						
<i>Eremophila glabra</i> ssp	2		N				1			Q	Q		1				

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Eucalyptus obliqua</i> var	1																1
<i>Eucalyptus obliqua</i> var <i>obliqua</i>	3											1					2
<i>Eucalyptus odorata</i>	3		N											3K			
<i>Eucalyptus oleosa</i>	49		N	2	3	15	12	1	1	2	1	5R	5R	2R			
<i>Eucalyptus ovata</i>	1																1
<i>Eucalyptus porosa</i>	6								1		1				4		
<i>Eucalyptus remota</i>	1											1					
<i>Eucalyptus rugosa</i>	71		N	1		6	19			3		24	11	5	2V		
<i>Eucalyptus socialis</i>	8			4	1	1		2									
<i>Eucalyptus striatocalyx</i>	2				2												
<i>Eucalyptus viminalis</i> ssp <i>cygnetensis</i>	4		N				1V									3	
<i>Eucalyptus yalataensis</i>	18			16	1	1											
<i>Eucalyptus yumbarrana</i> ssp	1					1											
<i>Euchiton gymnocephalus</i>	1													1			
<i>Euchiton sphaericus</i>	12						3		1			2	3	1	1		1
<i>Euphorbia drummondii</i>	9			5			1		1								2
* <i>Euphorbia helioscopia</i>	1									1							
* <i>Euphorbia paralias</i>	144			3	7	18	2	4	1	19	3	4	6	4	7	34	32
* <i>Euphorbia terracina</i>	64					1				38	9					9	7
<i>Euphrasia collina</i> ssp <i>osbornii</i>	3	3EC-	E								1E		1E		1E		
<i>Euphrasia collina</i> ssp <i>tetragona</i>	23						3			4		6	9	1			
<i>Eutaxia diffusa</i>	2		U										1E		1V		
<i>Eutaxia microphylla</i> var <i>microphylla</i>	135			3	1	18	27	1		18	6	27	10	12	11	1	
<i>Eutaxia</i> sp	21					5	10			2	1				3		
<i>Exocarpos aphyllus</i>	223		N	16	14	58	42	9	17	44	6V	1R	2R	11R	1V	2	
<i>Exocarpos cupressiformis</i>	3													2			1
<i>Exocarpos sparteus</i>	6						3			2						1	
<i>Exocarpos strictus</i>	1					1											
<i>Exocarpos syrticola</i>	245			1	2	40	31		1	56	1					76	37
* <i>Festuca arundinacea</i>	5																5
* <i>Festuca pratensis</i>	2																2
<i>Frankenia foliosa</i>	11			6	4							1					
<i>Frankenia pauciflora</i> var	16				1	5	5		1		3				1		

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	148			3	16	76	11		4	18	6	3	5			6	
<i>Frankenia pauciflora</i> var <i>gunnii</i>	26						4	1	12	1	5	1			1		1
* <i>Frankenia pulverulenta</i>	1										1						
<i>Frankenia serpyllifolia</i>	9				7	2											
<i>Frankenia sessilis</i>	93			36	24	27			1	5							
<i>Gahnia clarkei</i>	2		R														2R
<i>Gahnia deusta</i>	84		N				50	3		8	1	11	3		6R	2	
<i>Gahnia filum</i>	45		N				8			4					1R	5	27
<i>Gahnia hystrix</i>	31	2RCa	R									23R	1R	7R			
<i>Gahnia lanigera</i>	111		N			20	28			47	7R	1K		1K	6R	1	
<i>Gahnia trifida</i>	14						5					2					7
* <i>Galenia pubescens</i> var <i>pubescens</i>	6						1	1		1	3						
<i>Galium australe</i>	5											1	2	2			
<i>Galium compactum</i>	8									2		3			3		
<i>Galium gaudichaudii</i>	12						5			2					3	1	1
<i>Galium migrans</i>	37			1			5			9	1	4	5	3	1		8
* <i>Gazania rigens</i>	1							1									
<i>Geijera linearifolia</i>	152		N	17	17	66	5	8	26	10	2		1E				
<i>Geranium potentilloides</i> var <i>potentilloides</i>	91						4			10		3	2			48	24
<i>Geranium retrorsum</i>	86						10		1	32	1	8	8		5	4	17
<i>Geranium solanderi</i> var <i>solanderi</i>	22						5				1		3		1	3	9
<i>Glischrocaryon behrii</i>	13						3					9	1				
<i>Glycine clandestina</i> var	1										1						
<i>Glycine clandestina</i> var <i>sericea</i>	5		N				1	2		1Q					1		
<i>Glycine latrobeana</i>	1												1				
<i>Gompholobium ecostatum</i>	6											4		2			
<i>Gonocarpus mezianus</i>	71						18					11	8	12	22		
<i>Gonocarpus tetragynus</i>	15												1		11	3	
<i>Goodenia amplexans</i>	29													5	24		
<i>Goodenia blackiana</i>	31						16			5		3	1	1	5		
<i>Goodenia geniculata</i>	10											2	1		3	4	
<i>Goodenia gibbosa</i>	1					1											
<i>Goodenia ovata</i>	2											1			1		

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Goodenia pinnatifida</i>	8					2					6						
<i>Goodenia pusilliflora</i>	4									4							
<i>Goodenia robusta</i>	2					1	1										
<i>Goodenia varia</i>	166		N	8	5	12	8			48		53	20	7	2K	3	
<i>Goodenia willisiana</i>	22		N			2	6	2		7	3R				2R		
<i>Goodia lotifolia</i> var <i>lotifolia</i>	5						3			1							1
<i>Gratiola peruviana</i>	1		N														1R
<i>Grevillea aspera</i>	1						1										
<i>Grevillea ilicifolia</i> var	3														3		
<i>Grevillea ilicifolia</i> var <i>ilicifolia</i>	24		N				4					7	6	2	5K		
<i>Grevillea lavandulacea</i> var	3														3		
<i>Grevillea lavandulacea</i> var <i>lavandulacea</i>	2														2		
<i>Grevillea lavandulacea</i> var <i>sericea</i>	6										1				5		
<i>Grevillea linearifolia</i>	6											4	2				
<i>Grevillea muricata</i>	4														4		
<i>Grevillea pauciflora</i> ssp	2						1					1					
<i>Grevillea pauciflora</i> ssp <i>pauciflora</i>	41											32		9			
<i>Grevillea pterosperma</i>	1					1											
<i>Grevillea quinquenervis</i>	6											4		2			
<i>Grevillea rogersii</i>	2	2RC-	R											2R			
<i>Gunniopsis calcarea</i>	2			2													
<i>Gyrostemon thesioides</i>	1												1				
<i>Hakea carinata</i>	1											1					
<i>Hakea cycloptera</i>	15						11	4									
<i>Hakea francisiana</i>	1					1											
<i>Hakea leucoptera</i> ssp <i>leucoptera</i>	1					1											
<i>Hakea muelleriana</i>	46		N				1					27	2	11	1R	4	
<i>Hakea rostrata</i>	41											8	3	17	10	3	
<i>Hakea rugosa</i>	19						1				2	2			14		
<i>Hakea vittata</i>	50		N				10					26	3	6	1K	3	1
<i>Haloragis acutangula</i> forma	29						3			23						3	
<i>Haloragis acutangula</i> forma <i>acutangula</i>	1									1							
<i>Haloragis acutangula</i> forma <i>annulata</i>	1						1										

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Haloragis acutangula</i> forma <i>tetraptera</i>	2									1					1		
<i>Haloragis brownii</i>	1		R														1R
<i>Halosarcia halocnemoides</i> ssp	6						1		2	1	2						
<i>Halosarcia halocnemoides</i> ssp <i>halocnemoides</i>	11		N		1				2	3	5K						
<i>Halosarcia indica</i> ssp	4					1	1	1	1								
<i>Halosarcia indica</i> ssp <i>bidens</i>	2						2										
<i>Halosarcia indica</i> ssp <i>leiostachya</i>	10					1			5		3					1	
<i>Halosarcia pergranulata</i> ssp	3				1						2						
<i>Halosarcia pergranulata</i> ssp <i>pergranulata</i>	6		N							2Q	2Q		1K			1	
<i>Halosarcia pruinosa</i>	1										1						
<i>Halosarcia pterygosperma</i> ssp <i>pterygosperma</i>	14		N	6	6K		2K										
<i>Halosarcia syncarpa</i>	1										1						
<i>Hardenbergia violacea</i>	54		N				31			5		5R	6R	2R	5		
<i>Helichrysum leucopsidium</i>	236					39	34	4	2	75	4	19	17	6	7	12	17
<i>Helichrysum scorpioides</i>	1																1
<i>Hemarthria uncinata</i> var <i>uncinata</i>	1																1
<i>Hemichroa diandra</i>	54			12	12	29											1
<i>Hemichroa pentandra</i>	7		U				1R						5E			1	
<i>Hibbertia acicularis</i>	2		R									2R					
<i>Hibbertia exutiacies</i>	2		N											1T	1		
<i>Hibbertia incana</i>	1														1		
<i>Hibbertia paeninsularis</i>	1													1			
<i>Hibbertia prostrata</i>	6											6					
<i>Hibbertia riparia</i>	81						13	2		2		18	18	16	11	1	
<i>Hibbertia riparia</i> (<i>glabriuscula</i>)	32						10			1	1	2		1	17		
<i>Hibbertia riparia</i> (<i>long-leaved</i> aff <i>H. stricta</i>)	1						1										
<i>Hibbertia sericea</i> var	13									4					7	2	
<i>Hibbertia sericea</i> var <i>major</i>	13						8							5			
<i>Hibbertia sericea</i> var <i>major</i> (NC)	2													2			
<i>Hibbertia sericea</i> var <i>scabrifolia</i>	13		N									3		3	2R	5	
<i>Hibbertia sericea</i> var <i>sericea</i>	30									4		9		6	3	7	1
<i>Hibbertia</i> sp A	9						8								1		
<i>Hibbertia</i> sp B	8												3	5			

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Hibbertia</i> sp C	21		N									16	1	2	2E		
<i>Hibbertia</i> sp D	26					1	25										
<i>Hibbertia stricta</i> (NC)	2											2					
<i>Hibbertia stricta</i> var (NC)	7						7										
<i>Hibbertia stricta</i> var <i>stricta</i>	1						1										
<i>Hibbertia virgata</i>	22					2	8			3		6			3		
<i>Homoranthus homoranthoides</i>	4						4										
<i>Homoranthus wilhelmii</i>	5						1	4									
<i>Hybanthus floribundus</i> ssp <i>floribundus</i>	5						5										
<i>Hydrocotyle capillaris</i>	88		N			6	26			24		18		5	7R		2
<i>Hydrocotyle hirta</i>	1		R									1R					
<i>Hydrocotyle laxiflora</i>	78															32	46
<i>Hydrocotyle muscosa</i>	1																1
<i>Hydrocotyle plebeya</i>	1																1
* <i>Hypochaeris radicata</i>	69					1	3	1		19	5	3	3	5	12	9	8
<i>Hypolaena fastigiata</i>	15						2					4			5	1	3
<i>Imperata cylindrica</i>	1															1	
<i>Isolepis cernua</i>	2																2
<i>Isolepis fluitans</i>	1											1					
<i>Isolepis marginata</i>	104					1	5	1		24	2	5	5	10	8	24	19
<i>Isolepis nodosa</i>	455				3	37	31	7		68	6	34	16	5	24	101	123
<i>Isopogon ceratophyllus</i>	35											9	3	13	7	3	
<i>Ixiolaena pluriseta</i>	1	3R	K			1K											
<i>Ixiolaena supina</i>	42						2			4		23	5	1	7		
<i>Ixodia achillaeoides</i> ssp <i>achillaeoides</i>	42						7			21		12		2			
<i>Ixodia achillaeoides</i> ssp <i>alata</i>	31											19	7	4	1		
<i>Juncus caespiticius</i>	1																1
<i>Juncus holoschoenus</i>	1																1
<i>Juncus kraussii</i>	40						1			1					1	7	30
<i>Juncus pallidus</i>	4											3			1		
<i>Juncus pauciflorus</i>	3											1				2	
<i>Kennedia prostrata</i>	61					2	8	2		19	4	1	1	1	6	8	9
<i>Kunzea pomifera</i>	90									4		10	3		12	28	33

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Lagenifera stipitata</i> var <i>stipitata</i>	5											3	1				1
* <i>Lagurus ovatus</i>	324					4	15			99	20	20	27	11	32	46	50
<i>Lasiopetalum baueri</i>	19						13								6		
<i>Lasiopetalum behrii</i>	9						5	3	1								
<i>Lasiopetalum</i> Cordate-leaved HP Vonow 810	2													2			
<i>Lasiopetalum discolor</i>	270		N			36	101			65		30	18	6	2R	6	6
<i>Lasiopetalum schulzenii</i>	81						8					49	11	9			4
<i>Lasiopetalum</i> x <i>tepperi</i>	1												1				
<i>Lavatera plebeia</i>	4													1		3	
<i>Lawrencia glomerata</i>	3			1	1											1	
<i>Lawrencia spicata</i>	5		U							1R		1	1				2
<i>Lawrencia squamata</i>	63			13	12	20	3	1	2	10						2	
<i>Laxmannia orientalis</i>	2													1	1		
<i>Laxmannia sessiliflora</i> (NC)	4														4		
<i>Lemna disperma</i>	2																2
<i>Lepidium phlebopetalum</i>	1			1													
<i>Lepidobolus drapetocoleus</i>	2														1		1
<i>Lepidosperma carphoides</i>	32						7					3			15	7	
<i>Lepidosperma concavum</i>	15						1			1		5		1	5	2	
<i>Lepidosperma concavum/congestum/laterale</i>	3															3	
<i>Lepidosperma congestum</i>	62					1	18			34	3		2		4		
<i>Lepidosperma curtisiae</i>	1														1		
<i>Lepidosperma gladiatum</i>	212					3	26			35	2	6	1	1	11	37	90
<i>Lepidosperma laterale</i> (NC)	1											1					
<i>Lepidosperma semiteres</i>	15											7	1	4	3		
<i>Lepidosperma viscidum</i>	89					3	21			7	2	23	3	19	11		
<i>Leptocarpus brownii</i>	8		N				2K									2	4
<i>Leptocarpus tenax</i>	2											1					1
<i>Leptomeria aphylla</i>	14											10		4			
<i>Leptorhynchus elongatus</i>	2		K								2E						
<i>Leptorhynchus squamatus</i>	28		N			2K	7K			11	3	1R			4		
<i>Leptospermum continentale</i>	12											8	1		2		1
<i>Leptospermum coriaceum</i>	11					1	5	3	2								

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Leptospermum lanigerum</i>	22											1					21
<i>Leptospermum myrsinoides</i>	20											8	1	1	6	4	
<i>Leucophyta brownii</i>	170				6	29	12	1		38		19	3	2	12	26	22
<i>Leucopogon clelandii</i>	3		R											2R		1R	
<i>Leucopogon concurvus</i>	15											10		5			
<i>Leucopogon cordifolius</i>	12		N			1	3	1		7R							
<i>Leucopogon costatus</i>	6											5		1			
<i>Leucopogon lanceolatus</i>	3		U									1R		1R			1
<i>Leucopogon parviflorus</i>	596					31	98			75	2	79	29	1	28	90	163
<i>Leucopogon rufus</i>	31		U				1					11	8	7	4R		
<i>Leucopogon virgatus</i>	3														3		
* <i>Limonium binervosum</i>	3						1									1	1
* <i>Limonium companyonis</i>	20					5	2		1	6	3					2	1
<i>Linum marginale</i>	12						8			4							
* <i>Linum strictum</i> ssp <i>strictum</i>	42									38	2				2		
* <i>Linum trigynum</i>	1										1						
<i>Lissanthe strigosa</i>	11						3					3		5			
<i>Lobelia alata</i>	7		N				2R					1					4
<i>Lobelia gibbosa</i>	7						2					3	1	1			
<i>Logania crassifolia</i>	80		N			3	9			45		11	4	3	2K	1	2
<i>Logania insularis</i>	4	2VCa	V											4V			
<i>Logania linifolia</i>	1		N												1R		
<i>Logania minor</i>	1									1							
<i>Logania ovata</i>	40						4			7		17	6	5	1		
* <i>Lolium multiflorum</i>	3									2							1
* <i>Lolium perenne</i>	5														1		4
* <i>Lolium x hybridum</i>	1									1							
<i>Lomandra collina</i>	50		N			7	16			13	6R			2K	6R		
<i>Lomandra densiflora</i>	3										1				2		
<i>Lomandra effusa</i>	90		N	1		9	18	1	3	42	5				9R	2Q	
<i>Lomandra fibrata</i>	2														2		
<i>Lomandra juncea</i>	5														2	3	
<i>Lomandra leucocephala</i> ssp <i>robusta</i>	7		N				2	3			1R					1	

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Melaleuca uncinata</i>	35					1	10	5				4	12	3			
* <i>Melianthus comosus</i>	3														3		
<i>Mentha diemenica</i>	1		R														1R
* <i>Mesembryanthemum crystallinum</i>	65			2	5	11	3	7	8	10	14		2			2	1
* <i>Mesembryanthemum nodiflorum</i>	11						2		3	1	5						
<i>Micrantheum demissum</i>	14		N				1T					6	2	5			
<i>Microcybe pauciflora</i>	23						8					15					
* <i>Micropterum papulosum</i>	3									3							
<i>Millotia major</i>	14					3	9			2							
<i>Minuria cunninghamii</i>	2								2								
<i>Minuria leptophylla</i>	14					6	3			2	3						
<i>Montia australasica</i>	3		R									3K					
<i>Muehlenbeckia adpressa</i>	101					4	18	3		13		6	6	1	2	9	39
<i>Muehlenbeckia florulenta</i>	7		N							1K						6R	
<i>Muehlenbeckia gunnii</i>	243						3			57	9	6	4	1	34	100	29
<i>Myoporum brevipes</i>	2		N									2R					
<i>Myoporum insulare</i>	268		N		12	27	7	5	10	37	8R	31	20	9	7	72	23
<i>Myoporum montanum</i>	3								3								
<i>Myoporum parvifolium</i>	8		R			1R	2R			3R		2R					
<i>Myoporum platycarpum</i> (NC)	1					1											
<i>Myoporum platycarpum</i> ssp	4								4								
<i>Myoporum viscosum</i>	7		U				1			2R			1		3		
<i>Myriophyllum muelleri</i>	3											3					
<i>Myriophyllum simulans</i>	1		Q									1R					
<i>Neurachne alopecuroidea</i>	12					1	6								3	2	
* <i>Nicotiana glauca</i>	4								2		1					1	
<i>Nicotiana goodspeedii</i>	21			15	4	1			1								
<i>Nicotiana maritima</i>	10		N				2		2	5Q				1			
<i>Nicotiana velutina</i>	1			1													
<i>Nitraria billardiarei</i>	118			23	21	33	1	1	14	13	11				1		
<i>Olea europaea</i> ssp	2														2		
* <i>Olea europaea</i> ssp <i>europaea</i>	4									1	2				1		
<i>Olearia axillaris</i>	742				12	126	66	16	12	146	13	41	18	5	33	125	129

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
* <i>Pennisetum clandestinum</i>	2														1		1
* <i>Pentaschistis pallida</i>	1														1		
<i>Petrophile multisecta</i>	28											11	1	16			
<i>Phebalium bullatum</i>	4						2	2									
<i>Phragmites australis</i>	15		N												K	3	12
<i>Phyllanthus australis</i>	8											2	1	2	3		
<i>Phyllanthus calycinus</i>	1		R				1R										
<i>Phyllota pleurandroides</i>	9											7		1	1		
<i>Picris squarrosa</i>	2		Q								2E						
<i>Pimelea curviflora</i> var <i>gracilis</i>	2										1				1		
<i>Pimelea flava</i> ssp <i>dichotoma</i>	27					2	3			2	1	11		7	1		
<i>Pimelea flava</i> ssp <i>flava</i>	4											2	1	1			
<i>Pimelea glauca</i>	84						20			8	2	32	4	4	9		5
<i>Pimelea humilis</i>	1														1		
<i>Pimelea macrostegia</i>	1											1					
<i>Pimelea micrantha</i>	4		N							1	3R						
<i>Pimelea microcephala</i> ssp <i>microcephala</i>	12							1	11								
<i>Pimelea octophylla</i>	3												1		2		
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	485				2	38	51	4	1	104	7	29	15	7	20	93	114
<i>Pimelea stricta</i>	31						6					6	6	13			
* <i>Pinus halepensis</i>	4						1			1			1		1		
* <i>Piptatherum miliaceum</i>	1										1						
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	157		N		10	49	35	7	24	21	9R			2V			
<i>Plantago gaudichaudii</i>	1		N								1R						
<i>Plantago hispida</i>	17					1	4			3	1	1	3		1		3
* <i>Plantago lanceolata</i> var <i>dubia</i>	1										1						
* <i>Plantago lanceolata</i> var <i>lanceolata</i>	13				4					1	2		1				5
<i>Plantago varia</i>	2										1						1
<i>Platylobium obtusangulum</i>	10											1		3	6		
<i>Platysace heterophylla</i> var <i>heterophylla</i>	1	2RCa	R												1R		
<i>Platysace heterophylla</i> var <i>tepperi</i>	1													1			
* <i>Poa bulbosa</i>	1					1											
<i>Poa clelandii</i>	2						2										

[illegible]

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Ptilotus obovatus</i> var <i>obovatus</i>	26			3	5	13			4	1							
<i>Ptilotus seminudus</i>	2								1	1							
<i>Ptilotus spathulatus</i> forma	1						1										
<i>Ptilotus spathulatus</i> forma <i>angustatus</i>	1														1		
<i>Ptilotus spathulatus</i> forma <i>spathulatus</i>	9		N				3	1			2R				3R		
* <i>Puccinellia fasciculata</i>	4																4
<i>Pultenaea acerosa</i>	57						10			2		35	6	1	1		2
<i>Pultenaea canaliculata</i> var	5		U				1K					1			3		
<i>Pultenaea canaliculata</i> var <i>canaliculata</i>	3											2			1		
<i>Pultenaea canaliculata</i> var <i>latifolia</i>	8														8		
<i>Pultenaea daphnoides</i>	11											3		1	7		
<i>Pultenaea densifolia</i>	2		U									1			1V		
<i>Pultenaea elachista</i>	4			1		3											
<i>Pultenaea largiflorens</i>	5		N										2K		3		
<i>Pultenaea laxiflora</i>	2						2										
<i>Pultenaea rigida</i> var	3						3										
<i>Pultenaea rigida</i> var <i>ovata</i>	6		U			1R	5R										
<i>Pultenaea rigida</i> var <i>rigida</i>	38		N				1R					23	8	6			
<i>Pultenaea stricta</i>	3																3
<i>Pultenaea tenuifolia</i>	71		N			10	8			32		2	3	2	8K	2	4
<i>Pultenaea teretifolia</i> var <i>brachyphylla</i>	1	2RC-	R											1R			
<i>Pultenaea trinervis</i>	8						3								5		
<i>Pultenaea vestita</i>	15		U				1R					9	4	1			
<i>Pultenaea villifera</i> var <i>glabrescens</i>	1	2VCi	V											1V			
<i>Pultenaea viscidula</i>	9											2	1	6			
<i>Ranunculus papulentus</i>	3		K									2					1K
* <i>Ranunculus repens</i>	1																1
* <i>Reseda lutea</i>	2									1	1						
<i>Rhagodia candolleana</i> ssp	39					9						1	1		12	9	7
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	646			10	2	79	76	11	13	126	33	34	22	11	28	101	100
<i>Rhagodia crassifolia</i>	118			26	33	46	5		1	6				1			
<i>Rhagodia parabolica</i>	34		N				3		18	12					1V		
<i>Rhagodia preissii</i> ssp <i>preissii</i>	18				1		1	8	7	1							

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Rhagodia spinescens</i>	7					1			6								
<i>Rhagodia ulicina</i>	1			1													
* <i>Rhamnus alaternus</i>	5						1								3	1	
* <i>Ricinus communis</i>	3																3
* <i>Rorippa nasturtium-aquaticum</i>	1																1
* <i>Rosa canina</i>	1														1		
<i>Salsola kali</i>	42			8	6	13		2	1	12							
* <i>Salvia verbenaca</i> form	1														1		
* <i>Salvia verbenaca</i> form A	2										2						
* <i>Sambucus gaudichaudiana</i>	8																8
<i>Samolus repens</i>	138		N		2	16	14			13		22Q	10Q	1Q	3	16	41
<i>Santalum acuminatum</i>	57		N	5		20	12	1	3	12	2V				2V		
<i>Santalum murrayanum</i>	2					2											
<i>Santalum spicatum</i>	2		K						2K								
<i>Sarcocornia blackiana</i>	16				1		5		3	4		1	2				
<i>Sarcocornia quinqueflora</i>	41						6		4	7	6	1	8		1	6	2
<i>Sarcostemma viminale</i> ssp <i>australe</i>	1								1								
<i>Sarcozona praecox</i>	2			1					1								
* <i>Scabiosa atropurpurea</i>	4										3				1		
<i>Scaevola aemula</i>	1												1				
<i>Scaevola albida</i>	2										1				1		
<i>Scaevola albida</i> var (NC)	1														1		
<i>Scaevola albida</i> var <i>albida</i>	1														1		
<i>Scaevola albida</i> var <i>pallida</i>	1																1
<i>Scaevola angustata</i>	6		N			1K	1K			1		2			1V		
<i>Scaevola calendulacea</i>	11		V												1E	5V	5V
<i>Scaevola crassifolia</i>	124		N		3	26	12	1	1	49	1R	8	7	2	3R	3	8
<i>Scaevola linearis</i> ssp <i>confertifolia</i>	5											2	3				
<i>Scaevola linearis</i> ssp <i>linearis</i>	1						1										
<i>Scaevola spinescens</i>	14					1			9	3	1						
<i>Schoenoplectus litoralis</i>	1		N														1R
<i>Schoenoplectus pungens</i>	4															1	3
<i>Schoenus apogon</i>	12						1						1		7		3

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Schoenus breviculmis</i>	31						8					1		4	16	2	
<i>Schoenus carsei</i>	1		U				1T										
<i>Schoenus deformis</i>	9		N				3T							2K	3R	1	
<i>Schoenus nanus</i>	5						5										
<i>Schoenus nitens</i>	16		N				1R			1R			1R	1R	1R	2	9
<i>Schoenus racemosus</i>	3						3										
<i>Scleranthus pungens</i>	5		N				1							1R	3R		
<i>Sclerolaena diacantha</i>	30		N	18	1	3	4				1R				3R		
<i>Sclerolaena obliquicuspis</i>	8			2	4				2								
<i>Sclerolaena patenticuspis</i>	5			3	1					1							
<i>Sclerolaena uniflora</i>	91			15	11	50	7		3	5							
<i>Sclerostegia arbuscula</i>	20					1			2	3	7		7				
<i>Sclerostegia disarticulata</i>	17			14		1			2								
<i>Sclerostegia tenuis</i>	5					4			1								
<i>Selliera radicans</i>	36		N				3R					1R	1R			5	26
<i>Senecio gawlerensis</i>	1			1													
<i>Senecio glomeratus</i>	9															1	8
<i>Senecio lautus</i>	657			22	25	112	53	9	22	128	22	41	16	7	21	80	99
<i>Senecio odoratus</i> var	2														2		
<i>Senecio odoratus</i> var <i>longifolius</i>	3		R									1R	1R	1R			
<i>Senecio odoratus</i> var <i>obtusifolius</i>	7		V												7V		
<i>Senecio odoratus</i> var <i>odoratus</i>	58		N									16	15		16	2Q	9Q
* <i>Senecio pterophorus</i> var <i>pterophorus</i>	34					1	31				1					1	
<i>Senecio quadridentatus</i>	3		N							1R					1	1	
<i>Senecio squarrosus</i>	1																1
<i>Senecio tenuiflorus</i>	1		N				1R										
<i>Senna artemisioides</i> nothosp <i>coriacea</i>	3								3								
<i>Senna artemisioides</i> ssp <i>filifolia</i>	1				1												
<i>Sida petrophila</i>	2		N							2T							
* <i>Solanum aviculare</i>	3																3
<i>Solanum ellipticum</i>	7								7								
<i>Solanum hermanni</i>	2														2		
<i>Solanum laciniatum</i>	10															2	8

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Solanum simile</i>	1			1													
<i>Sonchus megalocarpus</i>	96		N			1	1			1		9	1		1K	22	60
<i>Sphaerolobium minus</i>	2		R				2K										
<i>Spinifex hirsutus</i>	33			1	3	21	4	3	1								
<i>Spinifex sericeus</i>	129			1						26	5	6	4	2	7	46	32
* <i>Sporobolus indicus</i> var <i>capensis</i>	1																1
<i>Sporobolus virginicus</i>	16					1	2		1	4		1			1	3	3
<i>Sporobolus virginicus</i> (NC)	13											3	2				8
<i>Spyridium bifidum</i> var <i>integrifolium</i>	4											3	1				
<i>Spyridium coactilifolium</i>	14	2VCa	V												14V		
<i>Spyridium eriocephalum</i> (NC)	1												1				
<i>Spyridium halmaturinum</i> var <i>halmaturinum</i>	24											22	2				
<i>Spyridium halmaturinum</i> var <i>integrifolium</i>	17											11		6			
<i>Spyridium halmaturinum</i> var <i>scabridum</i>	3	2KC-	R									1R		2R			
<i>Spyridium leucopogon</i>	3	3KC-	K				3K										
<i>Spyridium nitidum</i>	2						1					1					
<i>Spyridium phlebophyllum</i>	1											1					
<i>Spyridium phylicoides</i>	92			1	2	19	17			20		25	8				
<i>Spyridium spathulatum</i>	20	3RCa	R				1R					1R	4R	7R	7R		
<i>Spyridium tricolor</i>	3											1	2				
<i>Spyridium vexilliferum</i> var <i>latifolium</i>	4		N				R			K		1				3	
<i>Stackhousia aspericocca</i> ssp	2									1		1					
<i>Stackhousia aspericocca</i> ssp	11						3			3		2	3				
<i>cylindrical inflorescence</i> (WR Barker 1418)																	
<i>Stackhousia aspericocca</i> ssp <i>one-sided</i> <i>inflorescence</i> (WR Barker 697)	15						5					2	3	2		2	1
<i>Stackhousia spathulata</i>	76						3			2		4	4	2		31	30
<i>Stipa acrociliata</i>	25			4	2	6	5		1	3	4						
<i>Stipa blackii</i>	3		N				3R										
<i>Stipa breviglumis</i>	1	3RC-	R						1R								
<i>Stipa curticoma</i>	2														2		
<i>Stipa drummondii</i>	24			2	2	6	2	1	2	1	8						
<i>Stipa echinata</i>	3	3RC-	R			1R				2R							

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Stipa elegantissima</i>	86		N			9	17	6	8	22	16		2T	1T	5		
<i>Stipa eremophila</i>	15		N	8	1	1				1	3						1R
<i>Stipa exilis</i>	93		N			8	45	3			2T	6	10	4	5T	2R	8R
<i>Stipa flavescens</i>	223					39	60			34	4	18	11	6	14	21	16
<i>Stipa hemipogon</i>	17						10	1					4	2			
<i>Stipa mollis</i>	12						2				4	2			4		
<i>Stipa mollis group</i>	2															2	
<i>Stipa multispiculis</i>	1	3RC-	R								1R						
<i>Stipa mundula</i>	9		N			1	4						2		2K		
<i>Stipa nitida</i>	9			1	4					1	2				1		
<i>Stipa nitida group</i> (NC)	1															1	
<i>Stipa nodosa</i>	2						1		1								
<i>Stipa platychaeta</i>	4							1	2	1							
<i>Stipa puberula</i>	2		R	1R		1K											
<i>Stipa scabra group</i>	5								1	2	2						
<i>Stipa scabra ssp</i>	1		N							1K							
<i>Stipa scabra ssp falcata</i>	17					5	3			2	2				3	1	1
<i>Stipa scabra ssp scabra</i>	1					1											
<i>Stipa semibarbata</i>	3		N							1T		1			1		
<i>Stipa stipoides</i>	49		N				5R			6		20	7		2R	2	7
<i>Stipa velutina</i>	21			8	8	5											
<i>Stylidium graminifolium</i>	3											3					
<i>Stylidium tepperianum</i>	4	2RCa	R									4R					
<i>Styphelia exarrhena</i>	6		N									1	1	2	2R		
<i>Suaeda australis</i>	39					2	4		4	4	4		7		1	10	3
<i>Swainsona lessertifolia</i>	113		N									24	9	1	6R	9	64
* <i>Taraxacum erythrospermum</i>	1															1	
<i>Templetonia retusa</i>	116			5	4	19	33			41		13	1				
<i>Tetragonia eremaea</i>	2								2								
<i>Tetragonia implexicoma</i>	677			17	21	124	36	17	24	118	28	19	11	7	24	108	123
<i>Tetratheca halmaturina</i>	11											7		4			
<i>Tetratheca insularis</i>	3											1		2			
<i>Tetratheca pilosa ssp pilosa</i>	1														1		

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Teucrium sessiliflorum</i>	1										1						
<i>Themeda triandra</i>	4										1				2		1
<i>Thomasia petalocalyx</i>	20											4	5	1	6	3	1
<i>Threlkeldia diffusa</i>	524			26	34	125	41	14	25	118	30	15	9	6	11	51	19
<i>Thryptomene calycina</i>	1					1											
<i>Thryptomene ericaea</i>	16											1	15				
<i>Thryptomene micrantha</i>	6					4		1	1								
<i>Tricostularia pauciflora</i>	1													1			
<i>Triodia compacta</i>	35		N			25	1			7					2R		
<i>Triodia irritans</i>	3					2				1							
<i>Triodia irritans</i> var	2					2											
<i>Triodia scariosa</i> ssp <i>scariosa</i>	10					1	6	3									
<i>Trymalium wayae</i>	3		U										1R	2R			
<i>Typha domingensis</i>	10											1				1	8
<i>Velleia arguta</i>	3		N								3R						
* <i>Veronica arvensis</i>	1												1				
<i>Veronica calycina</i>	1		U									1K					
<i>Veronica gracilis</i>	3		V														3V
<i>Veronica gracilis</i> (NC)	1																1
<i>Veronica hillebrandii</i>	78		N			1	17			7		30	16	1	4K	1K	1K
<i>Villarsia reniformis</i>	2		N									1R					1
<i>Villarsia umbricola</i> var <i>beaugleholei</i>	1		V														1V
<i>Villarsia umbricola</i> var <i>umbricola</i>	1		U														1R
<i>Viola sieberiana</i>	3											1		2			
<i>Vittadinia australasica</i> var <i>australasica</i>	36				1	6	24			1		1	2			1	
<i>Vittadinia blackii</i>	1		N								1R						
<i>Vittadinia cuneata</i> var <i>cuneata</i> forma <i>cuneata</i>	3						1				2						
<i>Vittadinia gracilis</i>	4						1			1	2						
<i>Vittadinia megacephala</i>	4						3			1							
<i>Wahlenbergia communis</i>	2										2						
<i>Wahlenbergia luteola</i>	2						1								1		
<i>Westringia dampieri</i>	22					20	2										
<i>Westringia eremicola</i>	4		N			1	1						2R				

Plant species	Fr	AUS	SA	NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Westringia rigida</i>	29			15	1	9			3		1						
<i>Wilsonia backhousei</i>	3		N			2R											1
<i>Wilsonia humilis</i> var <i>humilis</i>	16				4		1		3	7		1					
<i>Wilsonia rotundifolia</i>	3		N				2R			1E							
<i>Xanthorrhoea australis</i>	1																1
<i>Xanthorrhoea caespitosa</i>	13															13	
<i>Xanthorrhoea semiplana</i> ssp	23						12								11		
<i>Xanthorrhoea semiplana</i> ssp <i>semiplana</i>	1						1										
<i>Xanthorrhoea semiplana</i> ssp <i>tateana</i>	49											16	4	18	11		
<i>Xanthosia dissecta</i> var <i>floribunda</i>	3											1	2				
<i>Xanthosia pusilla</i>	3						1								2		
<i>Xanthosia tasmanica</i>	1		R									1V					
<i>Zantedeschia aethiopica</i>	3												1		2		
<i>Zoysia matrella</i>	1		R														1R
<i>Zygophyllum angustifolium</i>	9								3	3	3						
<i>Zygophyllum apiculatum</i>	3			1			3		2								
<i>Zygophyllum aurantiacum</i> (NC)	3								2	1							
<i>Zygophyllum aurantiacum</i> ssp	4								1	2	1						
<i>Zygophyllum billardieri</i>	35					7	3		1	24							
<i>Zygophyllum billardieri</i> (NC)	89			10	14	31	5			10		9	4	2		3	1
<i>Zygophyllum confluens</i>	4		N						2		1R				1R		
<i>Zygophyllum emarginatum</i>	2					2											
<i>Zygophyllum glaucum</i>	1			1													
<i>Zygophyllum iodocarpum</i>	2								2								
<i>Zygophyllum ovatum</i>	7			6		1											
<i>Zygophyllum simile</i>	11							1	5	5							

Appendix 7 Frequency of Perennials

FREQUENCY OF OCCURRENCE OF PERENNIAL PLANT SPECIES >24% OF ALL SURVEYS

Perennial species include easily detectable, quad - quadrat, NUL - Nullarbor, HOB - Head of Bight, EPW - Eyre Peninsula west, EPS - Eyre Peninsula south, EPE - Eyre Peninsula east, SPG - Spencer Gulf, YOP - Yorke Peninsula, SVG - Gulf St Vincent, KIS - Kangaroo Island south, KIE - Kangaroo Island east, KIN - Kangaroo Island north, FLP - Fleurieu Peninsula, COO - Coorong, SOE - South East

Plant species	Total quad	% of total quad	% of quadrats in region with plant species													
			NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
Plant species located in all geomorphic regions																
<i>Carpobrotus rossii</i>	699	44.4	3.1	50.0	57.2	38.7	13.0	2.1	67.3	33.3	41.7	29.6	15.0	16.7	61.7	55.2
<i>Tetragonia implexicoma</i>	677	43.0	26.6	38.9	63.9	19.4	73.9	50.0	56.7	51.9	13.7	13.6	11.7	28.6	61.7	60.6
<i>Senecio lautus</i>	657	41.8	34.4	46.3	57.7	28.5	39.1	45.8	61.5	40.7	29.5	19.8	11.7	25.0	45.7	48.8
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	646	41.1	15.6	3.7	40.7	40.9	47.8	27.1	60.6	61.1	24.5	27.2	18.3	33.3	57.7	49.3
<i>Threlkeldia diffusa</i>	524	33.3	40.6	63.0	64.4	22.0	60.9	52.1	56.7	55.6	10.8	11.1	10.0	13.1	29.1	9.4
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	488	31.0	45.3	35.2	45.9	53.8	39.1	18.8	24.0	20.4	59.0	39.5	26.7	16.7	3.4	10.8
* <i>Euphorbia paralias</i>	144	9.2	4.7	13.0	9.3	1.1	17.4	2.1	9.1	5.6	2.9	7.4	6.7	8.3	19.4	15.8
<i>Atriplex cinerea</i>	86	5.5	9.4	16.7	14.9	2.2	13.0	4.2	9.1	5.6	1.4	1.2	1.7	1.2	1.1	2.0
Plant species located in >75% of regions																
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	155	9.9	21.9	13.0	13.4	7.0	30.4	47.9	11.5	25.9	1.4	4.9		8.3	7.4	0.5
<i>Comesperma volubile</i>	151	9.6	1.6	1.9	9.3	16.1	8.7		8.2	14.8	3.6	17.3	5.0	14.3	4.0	16.3
<i>Beyeria lechenaultii</i>	301	19.1	4.7	25.9	16.5	24.2		10.4	32.2	13.0	43.2	22.2	20.0	11.9	3.4	10.8
<i>Danthonia setacea</i> var <i>setacea</i>	128	8.1	17.2	9.3	10.8	15.6		2.1	4.8	3.7	7.2	17.3	16.7	16.7		0.5
* <i>Cakile maritima</i> ssp <i>maritima</i>	137	8.7	6.3		8.2	2.2	17.4	8.3	13.9	16.7	3.6	4.9	3.3	8.3	10.3	15.3
<i>Exocarpos aphyllus</i>	223	14.2	25.0	25.9	29.9	22.6	39.1	35.4	21.2	11.1	0.7	2.5	18.3	1.2	1.1	
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	163	10.4	39.1	40.7	27.3	10.2	21.7	8.3	5.3	20.4	3.6	2.5		4.8	1.1	
<i>Eucalyptus oleosa</i>	49	3.1	3.1	5.6	7.7	6.5	4.3	2.1	1.0	1.9	3.6	6.2	3.3			
<i>Acrotriche patula</i>	292	18.6	9.4	3.7	17.5	48.4	13.0		37.0	16.7	14.4	40.7	21.7	6.0		
<i>Eutaxia microphylla</i> var <i>microphylla</i>	135	8.6	4.7	1.9	9.3	14.5	4.3		8.7	11.1	19.4	12.3	20.0	13.1	0.6	

Plant species	Total quad	% of total quad	% of quadrats in region with plant species													
			NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Olearia axillaris</i>	742	47.2		22.2	64.9	35.5	69.6	25.0	70.2	24.1	29.5	22.2	8.3	39.3	71.4	63.5
<i>Pimelea serpyllifolia ssp serpyllifolia</i>	485	30.8		3.7	19.6	27.4	17.4	2.1	50.0	13.0	20.9	18.5	11.7	23.8	53.1	56.2
<i>Myoporum insulare</i>	268	17.0		22.2	13.9	3.8	21.7	20.8	17.8	14.8	22.3	24.7	15.0	8.3	41.1	11.3
<i>Scaevola crassifolia</i>	124	7.9		5.6	13.4	6.5	4.3	2.1	23.6	1.9	5.8	8.6	3.3	3.6	1.7	3.9
* <i>Lycium ferocissimum</i>	241	15.3		5.6	24.2	2.7	65.2	22.9	37.5	46.3		9.9	3.3	13.1	15.4	4.4
<i>Dianella revoluta</i> var <i>revoluta</i>	100	6.4		5.6	5.2	9.7	26.1	2.1	5.3	5.6	3.6	3.7	6.7	8.3	6.3	8.9
<i>Leucophyta brownii</i>	170	10.8		11.1	14.9	6.5	4.3		18.3		13.7	3.7	3.3	14.3	14.9	10.8
<i>Isolepis nodosa</i>	455	28.9		5.6	19.1	16.7	30.4		32.7	11.1	24.5	19.8	8.3	28.6	57.7	60.6
<i>Helichrysum leucopsideum</i>	236	15.0			20.1	18.3	17.4	4.2	36.1	7.4	13.7	21.0	10.0	8.3	6.9	8.4
<i>Alyxia buxifolia</i>	155	9.9			8.2	8.6	13.0	10.4	22.1	22.2	4.3	12.3	10.0	2.4	6.9	10.3
<i>Dianella brevicaulis</i>	431	27.4			11.9	36.6	52.2	25.0	34.6	42.6	30.9	37.0	23.3	31.0	42.9	16.3
<i>Clematis microphylla</i>	494	31.4			17.0	44.6	13.0	2.1	51.9	9.3	7.9	22.2	3.3	29.8	41.1	65.5
<i>Kennedia prostrata</i>	61	3.9			1.0	4.3	8.7		9.1	7.4	0.7	1.2	1.7	7.1	4.6	4.4
<i>Isolepis marginata</i>	104	6.6			0.5	2.7	4.3		11.5	3.7	3.6	6.2	16.7	9.5	13.7	9.4
<i>Poa poiformis</i>	191	12.1			1.0	9.1	4.3		26.0	5.6	4.3	4.9	5.0	16.7	7.4	36.5
Plant species widely distributed along the coast in <75% of regions																
<i>Eucalyptus diversifolia</i>	280	17.8	10.9		4.6	38.7			12.5		43.9	34.6	40.0	25.0	10.3	6.9
<i>Exocarpos syrticola</i>	245	15.6	1.6	3.7	20.6	16.7		2.1	26.9	1.9					43.4	18.2
<i>Zygophyllum billardierei</i> (NC)	89	5.7	15.6	25.9	16.0	2.7			4.8		6.5	4.9	3.3		1.7	0.5
* <i>Mesembryanthemum crystallinum</i>	65	4.1	3.1	9.3	5.7	1.6	30.4	16.7	4.8	25.9		2.5			1.1	0.5
<i>Hemichroa diandra</i>	54	3.4	18.8	22.2	14.9											0.5
<i>Amyema melaleucae</i>	46	2.9	7.8	1.9	2.6	8.1		10.4	3.8	7.4					1.1	0.5
<i>Galium migrans</i>	37	2.4	1.6			2.7			4.3	1.9	2.9	6.2	5.0	1.2		3.9
<i>Goodenia varia</i>	166	10.6	12.5	9.3	6.2	4.3			23.1		38.1	24.7	11.7	2.4	1.7	
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	148	9.4	4.7	29.6	39.2	5.9		8.3	8.7	11.1	2.2	6.2			3.4	
<i>Lomandra effusa</i>	90	5.7	1.6		4.6	9.7	4.3	6.3	20.2	9.3				10.7	1.1	
<i>Lawrencia squamata</i>	63	4.0	20.3	22.2	10.3	1.6	4.3	4.2	4.8						1.1	
<i>Dianella revoluta</i> (NC)	31	2.0	3.1						3.4					22.6	1.7	
<i>Samolus repens</i>	138	8.8		3.7	8.2	7.5			6.3		15.8	12.3	1.7	3.6	9.1	20.2
<i>Danthonia caespitosa</i>	62	3.9		1.9	4.6	10.8		4.2	5.3	13.0	0.7			10.7	1.1	
<i>Vittadinia australasica</i> var <i>australasica</i>	36	2.3		1.9	3.1	12.9			0.5		0.7	2.5			0.6	
Plant species variable distribution																
<i>Olearia exiguiifolia</i>	36	2.3	23.4	18.5	5.7											

Plant species	Total quad	% of total quad	% of quadrats in region with plant species													
			NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Eucalyptus dumosa</i> complex	25	1.6	1.6		9.8	1.6	8.7									
<i>Spinifex hirsutus</i>	33	2.1	3.1	5.6	10.8	2.2	13.0	2.1								
<i>Sclerolaena uniflora</i>	91	5.8	23.4	20.4	25.8	3.8		6.3	2.4							
<i>Salsola kali</i>	42	2.7	12.5	11.1	6.7		8.7	2.1	5.8							
<i>Frankenia sessilis</i>	93	5.9	56.3	44.4	13.9			2.1	2.4							
<i>Ptilotus obovatus</i> var <i>obovatus</i>	26	1.7	4.7	9.3	6.7			8.3	0.5							
<i>Stipa acrociliata</i>	25	1.6	6.3	3.7	3.1	2.7		2.1	1.4	7.4						
<i>Maireana erioclada</i>	106	6.7	53.1	25.9	22.2		8.7	12.5	1.0	9.3						
<i>Atriplex vesicaria</i> ssp	95	6.0	43.8	66.7	4.1		8.7	39.6	0.5	1.9						
<i>Lycium australe</i>	54	3.4	20.3	14.8	7.7			31.3	1.0	1.9						
<i>Westringia rigida</i>	29	1.8	23.4	1.9	4.6			6.3		1.9						
<i>Cassutha melantha</i>	30	1.9	10.9	5.6	1.0	3.2	4.3		0.5		2.9	7.4				
<i>Templetonia retusa</i>	116	7.4	7.8	7.4	9.8	17.7			19.7		9.4	1.2				
<i>Spyridium phyllicoides</i>	92	5.8	1.6	3.7	9.8	9.1			9.6		18.0	9.9				
<i>Geijera linearifolia</i>	152	9.7	26.6	31.5	34.0	2.7	34.8	54.2	4.8	3.7		1.2				
<i>Maireana oppositifolia</i>	105	6.7	21.9	42.6	15.5	1.1		14.6	5.8	20.4		7.4				
<i>Eucalyptus gracilis</i>	38	2.4	4.7	7.4	4.6	5.9	8.7	6.3	1.0	3.7		2.5				
<i>Atriplex paludosa</i> ssp <i>cordata</i>	121	7.7	26.6		33.0		4.3	25.0	6.7	22.2		1.2				
<i>Rhagodia crassifolia</i>	118	7.5	40.6	61.1	23.7	2.7		2.1	2.9				1.7			
<i>Nitraria billardierei</i>	118	7.5	35.9	38.9	17.0	0.5	4.3	29.2	6.3	20.4				1.2		
<i>Sclerolaena diacantha</i>	30	1.9	28.1	1.9	1.5	2.2				1.9				3.6		
<i>Eucalyptus rugosa</i>	71	4.5	1.6		3.1	10.2			1.4		17.3	13.6	8.3	2.4		
<i>Santalum acuminatum</i>	57	3.6	7.8		10.3	6.5	4.3	6.3	5.8	3.7				2.4		
* <i>Carrichtera annua</i>	38	2.4	1.6				8.7	37.5	5.3	11.1						
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	157	10.0		18.5	25.3	18.8	30.4	50.0	10.1	16.7			3.3			
<i>Eremophila deserti</i>	67	4.3		25.9	22.7			8.3	1.0	5.6						
<i>Hibbertia</i> sp D	26	1.7			0.5	13.4										
<i>Zygophyllum billardierei</i>	35	2.2			3.6	1.6		2.1	11.5							
<i>Acacia anceps</i>		42	2.7			2.1	2.7			15.9						
<i>Acacia anceps</i> (NC)	95	6.0			36.6	7.0			5.3							
<i>Acacia nematophylla</i>	76	4.8			1.0	15.1			22.1							
<i>Acacia triquetra</i>	33	2.1			0.5	4.8			2.9		7.2	8.6				
<i>Cassutha peninsularis</i> var <i>peninsularis</i>	95	6.0			15.5	19.4	13.0	2.1	10.1			1.2	5.0			

Plant species	Total quad	% of total quad	% of quadrats in region with plant species													
			NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Melaleuca uncinata</i>	35	2.2			0.5	5.4	21.7				2.9	14.8	5.0			
<i>Stipa elegantissima</i>	86	5.5			4.6	9.1	26.1	16.7	10.6	29.6		2.5	1.7	6.0		
<i>Lepidosperma viscidum</i>	89	5.7			1.5	11.3			3.4	3.7	16.5	3.7	31.7	13.1		
<i>Opercularia turpis</i>	60	3.8			2.6	9.7			6.7	3.7	2.9	7.4	5.0	9.5		
<i>Chrysocephalum apiculatum</i>	40	2.5			1.5	6.5			5.3	3.7	0.7	2.5	3.3	8.3		
<i>Cassytha glabella</i> forma <i>dispar</i>	86	5.5			1.0	15.6			10.6	3.7	6.5		6.7	21.4		
<i>Leptorhynchos squamatus</i>	28	1.8			1.0	3.8			5.3	5.6	0.7			4.8		
<i>Pimelea flava</i> ssp <i>dichotoma</i>	27	1.7			1.0	1.6			1.0	1.9	7.9		11.7	1.2		
<i>Lepidosperma congestum</i>	62	3.9			0.5	9.7			16.3	5.6		2.5		4.8		
<i>Lomandra collina</i>	50	3.2			3.6	8.6			6.3	11.1			3.3	7.1		
<i>Correa pulchella</i>	123	7.8			3.1	17.7			20.2		9.4	3.7	21.7	15.5		
<i>Triodia compacta</i>	35	2.2			12.9	0.5			3.4					2.4		
<i>Calytrix tetragona</i>	132	8.4			0.5	8.1			17.3	7.4	21.6	17.3	21.7	21.4	0.6	
<i>Gahnia lanigera</i>	111	7.1			10.3	15.1			22.6	13.0	0.7		1.7	7.1	0.6	
<i>Acacia spinescens</i>	94	6.0			1.5	15.6			12.0	5.6	1.4	2.5	23.3	11.9	3.4	
* <i>Senecio pterophorus</i> var <i>pterophorus</i>	34	2.2			0.5	16.7				1.9					0.6	
<i>Acacia cupularis</i>	58	3.7			7.2	8.1	4.3		7.2	1.9		2.5	1.7	3.6	2.9	0.5
* <i>Hypochaeris radicata</i>	69	4.4			0.5	1.6	4.3		9.1	9.3	2.2	3.7	8.3	14.3	5.1	3.9
<i>Melaleuca halmaturorum</i> ssp <i>halmaturorum</i>	42	2.7			1.0	4.8	4.3		2.4			3.7		1.2	5.1	5.9
<i>Muehlenbeckia adpressa</i>	101	6.4			2.1	9.7	13.0		6.3		4.3	7.4	1.7	2.4	5.1	19.2
<i>Stipa exilis</i>	93	5.9			4.1	24.2	13.0			3.7	4.3	12.3	6.7	6.0	1.1	3.9
<i>Suaeda australis</i>	39	2.5			1.0	2.2		8.3	1.9	7.4		8.6		1.2	5.7	1.5
<i>Olearia ramulosa</i>	124	7.9			0.5	1.6			4.8	22.2	23.0	12.3	26.7	44.0	1.1	0.5
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	94	6.0			1.0	9.1			9.1	22.2	7.2	12.3	6.7	9.5	1.1	4.9
<i>Stipa flavescens</i>	223	14.2			20.1	32.3			16.3	7.4	12.9	13.6	10.0	16.7	12.0	7.9
* <i>Lagurus ovatus</i>	324	20.6			2.1	8.1			47.6	37.0	14.4	33.3	18.3	38.1	26.3	24.6
<i>Lepidosperma gladiatum</i>	212	13.5			1.5	14.0			16.8	3.7	4.3	1.2	1.7	13.1	21.1	44.3
<i>Acacia longifolia</i> var <i>sophorae</i>	315	20.0			7.2	15.1			10.1	11.1	3.6	4.9	1.7	17.9	57.1	59.6
<i>Leucopogon parviflorus</i>	596	37.9			16.0	52.7			36.1	3.7	56.8	35.8	1.7	33.3	51.4	80.3
<i>Adriana klotzschii</i>	62	3.9			1.0	5.4			6.7	5.6	2.9	2.5		1.2	9.1	4.9
<i>Lotus australis</i>	63	4.0			1.0	2.7			5.8	7.4	4.3	2.5		1.2	10.9	5.9
<i>Dianella brevicaulis/revoluta</i> var	40	2.5			3.1	7.0			3.4	7.4				2.4	4.0	0.5
<i>Melaleuca gibbosa</i>	143	9.1			1.5	2.2			3.4		54.0	32.1	43.3	1.2		0.5

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			NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Veronica hillebrandii</i>	78	5.0			0.5	9.1			3.4		21.6	19.8	1.7	4.8	0.6	0.5
<i>Hydrocotyle capillaris</i>	88	5.6			3.1	14.0			11.5		12.9		8.3	8.3		1.0
<i>Logania crassifolia</i>	80	5.1			1.5	4.8			21.6		7.9	4.9	5.0	2.4	0.6	1.0
<i>Pultenaea tenuifolia</i>	71	4.5			5.2	4.3			15.4		1.4	3.7	3.3	9.5	1.1	2.0
<i>Lasiopetalum discolor</i>	270	17.2			18.6	54.3			31.3		21.6	22.2	10.0	2.4	3.4	3.0
<i>Allocasuarina verticillata</i>	138	8.8			4.6	16.7			14.9		2.9	9.9	43.3	17.9	3.4	3.9
<i>Sonchus megalocarpus</i>	96	6.1			0.5	0.5			0.5		6.5	1.2		1.2	12.6	29.6
<i>Austrofestuca littoralis</i>	28	1.8			0.5	0.5			0.5			1.2			5.7	6.9
<i>Correa reflexa</i>	56	3.6			0.5	1.1					24.5	14.8	1.7			3.0
* <i>Euphorbia terracina</i>	64	4.1			0.5				18.3	16.7					5.1	3.4
* <i>Ammophila arenaria</i>	30	1.9			1.0				1.0	3.7	0.7	1.2		8.3	4.0	3.9
<i>Rhagodia candolleana</i> ssp	39	2.5			4.6						0.7	1.2		14.3	5.1	3.4
<i>Dodonaea humilis</i>	81	5.1				12.4			4.3		24.5	13.6	6.7			
<i>Olearia ciliata</i> var <i>ciliata</i>	31	2.0				2.2			6.3		5.8	1.2	8.3			
<i>Ixodia achillaeoides</i> ssp <i>achillaeoides</i>	42	2.7				3.8			10.1		8.6		3.3			
<i>Orthrosanthus multiflorus</i>	97	6.2				0.5					28.1	50.6	26.7			
<i>Pimelea stricta</i>	31	2.0				3.2					4.3	7.4	21.7			
<i>Pultenaea rigida</i> var <i>rigida</i>	38	2.4				0.5					16.5	9.9	10.0			
<i>Eucalyptus cladocalyx</i>	26	1.7				0.5					9.4	2.5	16.7			
<i>Rhagodia parabolica</i>	34	2.2				1.6		37.5	5.8					1.2		
<i>Hibbertia riparia</i> (<i>glabriuscula</i>)	32	2.0				5.4			0.5	1.9	1.4		1.7	20.2		
<i>Logania ovata</i>	40	2.5				2.2			3.4		12.2	7.4	8.3	1.2		
<i>Hardenbergia violacea</i>	54	3.4				16.7			2.4		3.6	7.4	3.3	6.0		
<i>Ixiolaena supina</i>	42	2.7				1.1			1.9		16.5	6.2	1.7	8.3		
<i>Goodenia blackiana</i>	31	2.0				8.6			2.4		2.2	1.2	1.7	6.0		
<i>Melaleuca decussata</i>	33	2.1				8.1			1.4					17.9		
<i>Gonocarpus mezianus</i>	71	4.5				9.7					7.9	9.9	20.0	26.2		
<i>Leucopogon rufus</i>	31	2.0				0.5					7.9	9.9	11.7	4.8		
<i>Gahnia deusta</i>	84	5.3				26.9	13.0		3.8	1.9	7.9	3.7		7.1	1.1	
<i>Hibbertia riparia</i>	81	5.1				7.0	8.7		1.0		12.9	22.2	26.7	13.1	0.6	
<i>Haloragis acutangula</i> forma	29	1.8				1.6			11.1						1.7	
<i>Astroloma conostephioides</i>	60	3.8				2.2					7.9	11.1	38.3	11.9	1.7	
<i>Hakea muelleriana</i>	46	2.9				0.5					19.4	2.5	18.3	1.2	2.3	

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<i>Choretrum glomeratum</i> var <i>glomeratum</i>	37	2.4				1.1					15.8	11.1	5.0		0.6	
<i>Schoenus breviculmis</i>	31	2.0				4.3					0.7		6.7	19.0	1.1	
<i>Lepidosperma carphoides</i>	32	2.0				3.8					2.2			17.9	4.0	
<i>Frankenia pauciflora</i> var <i>gunnii</i>	26	1.7				2.2	4.3	25.0	0.5	9.3	0.7			1.2		0.5
<i>Billardiera cymosa</i>	76	4.8				1.1	4.3		1.0	1.9	1.4	9.9		16.7	22.9	3.0
<i>Sarcocornia quinqueflora</i>	41	2.6				3.2		8.3	3.4	11.1	0.7	9.9		1.2	3.4	1.0
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	31	2.0				3.2		4.2		5.6	0.7	2.5	6.7	8.3	0.6	2.5
<i>Geranium retrorsum</i>	86	5.5				5.4		2.1	15.4	1.9	5.8	9.9		6.0	2.3	8.4
<i>Muehlenbeckia gunnii</i>	243	15.4				1.6			27.4	16.7	4.3	4.9	1.7	40.5	57.1	14.3
<i>Pimelea glauca</i>	84	5.3				10.8			3.8	3.7	23.0	4.9	6.7	10.7		2.5
<i>Acacia leiophylla</i>	72	4.6				7.0			3.4	1.9	9.4	16.0	1.7		6.9	5.9
<i>Baumea juncea</i>	38	2.4				2.7			0.5	1.9	1.4	2.5	8.3	1.2	1.7	8.9
<i>Pelargonium australe</i>	153	9.7				0.5			11.1	16.7	4.3	1.2		10.7	33.7	22.2
<i>Pomaderris obcordata</i>	77	4.9				13.4			1.4		17.3	12.3	11.7	7.1		1.0
<i>Pultenaea acerosa</i>	57	3.6				5.4			1.0		25.2	7.4	1.7	1.2		1.0
<i>Acrotriche cordata</i>	166	10.6				21.5			15.9		40.3	19.8	16.7	8.3	0.6	1.5
<i>Cassytha pubescens</i>	88	5.6				4.3			1.0		26.6	4.9	5.0	6.0	2.3	12.3
<i>Stackhousia spathulata</i>	76	4.8				1.6			1.0		2.9	4.9	3.3		17.7	14.8
<i>Stipa stipoides</i>	49	3.1				2.7			2.9		14.4	8.6		2.4	1.1	3.4
<i>Geranium potentilloides</i> var <i>potentilloides</i>	91	5.8				2.2			4.8		2.2	2.5			27.4	11.8
<i>Bursaria spinosa</i>	31	2.0				2.2			7.2		2.2			2.4	2.9	1.0
<i>Gahnia filum</i>	45	2.9				4.3			1.9					1.2	2.9	13.3
<i>Juncus kraussii</i>	40	2.5				0.5			0.5					1.2	4.0	14.8
<i>Astroloma humifusum</i>	89	5.7				3.8				1.9	7.2	25.9	16.7	36.9	4.6	0.5
<i>Cheilanthes austrotenuifolia</i>	39	2.5				4.3				1.9	1.4	7.4	16.7	13.1		0.5
<i>Acacia pycnantha</i>	40	2.5				1.1				3.7	3.6		1.7	28.6	1.1	2.0
<i>Dichondra repens</i>	135	8.6				2.7					7.9	6.2	5.0	20.2	12.0	36.0
<i>Banksia marginata</i>	53	3.4				1.6					15.8	3.7	8.3	9.5	4.0	2.5
<i>Hakea vittata</i>	50	3.2				5.4					18.7	3.7	10.0	1.2	1.7	0.5
<i>Acacia paradoxa</i>	100	6.4				3.8					10.8	34.6	40.0	29.8		0.5
<i>Dichelachne crinita</i>	26	1.7				7.5					1.4	2.5	5.0	3.6		1.0
<i>Lasiopetalum schulzenii</i>	81	5.1				4.3					35.3	13.6	15.0			2.0
<i>Selliera radicans</i>	36	2.3				1.6					0.7	1.2			2.9	12.8

Plant species	Total quad	% of total quad	% of quadrats in region with plant species													
			NUL	HOB	EPW	EPS	EPE	SPG	YOP	SVG	KIS	KIE	KIN	FLP	COO	SOE
<i>Acacia ligulata</i>	83	5.3					30.4	29.2	25.5	14.8				1.2		
<i>Spinifex sericeus</i>	129	8.2							12.5	9.3	4.3	4.9	3.3	8.3	26.3	15.8
* <i>Linum strictum</i> ssp <i>strictum</i>	42	2.7							18.3	3.7				2.4		
<i>Kunzea pomifera</i>	90	5.7							1.9		7.2	3.7		14.3	16.0	16.3
<i>Hibbertia sericea</i> var <i>sericea</i>	30	1.9							1.9		6.5		10.0	3.6	4.0	0.5
<i>Apium prostratum</i> ssp <i>prostratum</i> var <i>prostratum</i>	37	2.4							0.5						6.3	12.3
<i>Acrotriche depressa</i>	32	2.0									5.8	14.8	20.0			
<i>Calytrix glaberrima</i>	31	2.0									10.1	6.2	20.0			
<i>Gahnia hystrix</i>	31	2.0									16.5	1.2	11.7			
<i>Petrophile multisepta</i>	28	1.8									7.9	1.2	26.7			
<i>Grevillea pauciflora</i> ssp <i>pauciflora</i>	41	2.6									23.0		15.0			
<i>Correa</i> sp aff <i>calycina</i>	78	5.0									32.4	30.9	1.7	8.3		
<i>Xanthorrhoea semiplana</i> ssp <i>tateana</i>	49	3.1									11.5	4.9	30.0	13.1		
<i>Allocasuarina striata</i>	36	2.3									9.4	6.2	21.7	6.0		
<i>Ixodia achillaeoides</i> ssp <i>alata</i>	31	2.0									13.7	8.6	6.7	1.2		
<i>Eucalyptus cosmophylla</i>	34	2.2									5.0		16.7	20.2		
<i>Hakea rostrata</i>	41	2.6									5.8	3.7	28.3	11.9	1.7	
<i>Isopogon ceratophyllus</i>	35	2.2									6.5	3.7	21.7	8.3	1.7	
<i>Eucalyptus fasciculosa</i>	33	2.1									5.0		3.3	20.2	4.0	
<i>Swainsona lessertifolia</i>	113	7.2									17.3	11.1	1.7	7.1	5.1	31.5
<i>Senecio odoratus</i> var <i>odoratus</i>	58	3.7									11.5	18.5		19.0	1.1	4.4
<i>Acaena novae-zelandiae</i>	120	7.6									2.2			4.8	13.7	43.8
<i>Goodenia amplexans</i>	29	1.8											8.3	28.6		
<i>Hydrocotyle laxiflora</i>	78	5.0													18.3	22.7
<i>Ozothamnus turbinatus</i>	63	4.0													12.6	20.2

Appendix 8 Perennial Species by Geomorphic Region

LISTS OF PERENNIAL SPECIES IN EACH GEOMORPHIC REGION ON COASTAL QUADRATS
Perennial (easily detectable) species >24%,
% - percentage of quadrats in region, * indicates introduced species, NC - non-current

Species	%
Nullarbor	
Total number of quadrats	64
<i>Frankenia sessilis</i>	56.3
<i>Maireana erioclada</i>	53.1
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	45.3
<i>Atriplex vesicaria</i> ssp	43.8
<i>Threlkeldia diffusa</i>	40.6
<i>Rhagodia crassifolia</i>	40.6
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	39.1
<i>Nitraria billardierei</i>	35.9
<i>Senecio lautus</i>	34.4
<i>Sclerolaena diacantha</i>	28.1
<i>Tetragonia implexicoma</i>	26.6
<i>Geijera linearifolia</i>	26.6
<i>Atriplex paludosa</i> ssp <i>cordata</i>	26.6
<i>Exocarpos aphyllus</i>	25.0
<i>Sclerolaena uniflora</i>	23.4
<i>Olearia exiguiifolia</i>	23.4
<i>Westringia rigida</i>	23.4
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	21.9
<i>Maireana oppositifolia</i>	21.9
<i>Lawrenzia squamata</i>	20.3
<i>Lycium australe</i>	20.3
<i>Hemichroa diandra</i>	18.8
<i>Danthonia setacea</i> var <i>setacea</i>	17.2
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	15.6
<i>Zygophyllum billardierei</i> (NC)	15.6
<i>Goodenia varia</i>	12.5
<i>Salsola kali</i>	12.5
<i>Eucalyptus diversifolia</i>	10.9
<i>Cassya melantha</i>	10.9
<i>Acrotriche patula</i>	9.4
<i>Atriplex cinerea</i>	9.4
<i>Templetonia retusa</i>	7.8
<i>Santalum acuminatum</i>	7.8
<i>Amyema melaleuca</i>	7.8

Species	%
* <i>Cakile maritima</i> ssp <i>maritima</i>	6.3
<i>Stipa acroclita</i>	6.3
<i>Beyeria lechenaultii</i>	4.7
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	4.7
* <i>Euphorbia paralias</i>	4.7
<i>Eutaxia microphylla</i> var <i>microphylla</i>	4.7
<i>Eucalyptus gracilis</i>	4.7
<i>Ptilotus obovatus</i> var <i>obovatus</i>	4.7
<i>Carpobrotus rossii</i>	3.1
* <i>Mesembryanthemum crystallinum</i>	3.1
<i>Eucalyptus oleosa</i>	3.1
<i>Dianella revoluta</i> (NC)	3.1
<i>Exocarpos syrticola</i>	1.6
<i>Comesperma volubile</i>	1.6
<i>Spinifex sericeus</i>	1.6
<i>Spyridium phylloides</i>	1.6
<i>Lomandra effusa</i>	1.6
<i>Eucalyptus rugosa</i>	1.6
* <i>Carrichtera annua</i>	1.6
<i>Galium migrans</i>	1.6
<i>Spinifex hirsutus</i>	1.6
<i>Eucalyptus dumosa</i> complex	1.6
Head of Bight	
Total number of quadrats	54
<i>Atriplex vesicaria</i> ssp	66.7
<i>Threlkeldia diffusa</i>	63.0
<i>Rhagodia crassifolia</i>	61.1
<i>Carpobrotus rossii</i>	50.0
<i>Senecio lautus</i>	46.3
<i>Frankenia sessilis</i>	44.4
<i>Maireana oppositifolia</i>	42.6
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	40.7
<i>Tetragonia implexicoma</i>	38.9
<i>Nitraria billardierei</i>	38.9
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	35.2
<i>Geijera linearifolia</i>	31.5
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	29.6
<i>Beyeria lechenaultii</i>	25.9
<i>Exocarpos aphyllus</i>	25.9
<i>Maireana erioclada</i>	25.9
<i>Zygophyllum billardierei</i> (NC)	25.9

Species	%
<i>Eremophila deserti</i>	25.9
<i>Olearia axillaris</i>	22.2
<i>Myoporum insulare</i>	22.2
<i>Lawrenzia squamata</i>	22.2
<i>Hemichroa diandra</i>	22.2
<i>Sclerolaena uniflora</i>	20.4
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	18.5
<i>Olearia exiguiifolia</i>	18.5
<i>Atriplex cinerea</i>	16.7
<i>Lycium australe</i>	14.8
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	13.0
* <i>Euphorbia paralias</i>	13.0
<i>Leucophyta brownii</i>	11.1
<i>Salsola kali</i>	11.1
<i>Goodenia varia</i>	9.3
<i>Danthonia setacea</i> var <i>setacea</i>	9.3
* <i>Mesembryanthemum crystallinum</i>	9.3
<i>Ptilotus obovatus</i> var <i>obovatus</i>	9.3
<i>Templetonia retusa</i>	7.4
<i>Eucalyptus gracilis</i>	7.4
<i>Isolepis nodosa</i>	5.6
* <i>Lycium ferocissimum</i>	5.6
<i>Scaevola crassifolia</i>	5.6
<i>Dianella revoluta</i> var <i>revoluta</i>	5.6
<i>Eucalyptus oleosa</i>	5.6
<i>Spinifex hirsutus</i>	5.6
<i>Cassythia melantha</i>	5.6
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	3.7
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	3.7
<i>Acrotriche patula</i>	3.7
<i>Exocarpos syrticola</i>	3.7
<i>Samolus repens</i>	3.7
<i>Spyridium phyllicoides</i>	3.7
<i>Stipa acrociliata</i>	3.7
<i>Comesperma volubile</i>	1.9
<i>Eutaxia microphylla</i> var <i>microphylla</i>	1.9
<i>Danthonia caespitosa</i>	1.9
<i>Amyema melaleuca</i>	1.9
<i>Vittadinia australasica</i> var <i>australasica</i>	1.9
<i>Sclerolaena diacantha</i>	1.9
<i>Westringia rigida</i>	1.9
Eyre Peninsula west	
Total number of quadrats	194
<i>Olearia axillaris</i>	64.9
<i>Threlkeldia diffusa</i>	64.4
<i>Tetragonia implexicoma</i>	63.9
<i>Senecio lautus</i>	57.7
<i>Carpobrotus rossii</i>	57.2
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	45.9
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	40.7
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	39.2

Species	%
<i>Acacia anceps</i> (NC)	36.6
<i>Geijera linearifolia</i>	34.0
<i>Atriplex paludosa</i> ssp <i>cordata</i>	33.0
<i>Exocarpos aphyllus</i>	29.9
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	27.3
<i>Sclerolaena uniflora</i>	25.8
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	25.3
* <i>Lycium ferocissimum</i>	24.2
<i>Rhagodia crassifolia</i>	23.7
<i>Eremophila deserti</i>	22.7
<i>Maireana erioclada</i>	22.2
<i>Exocarpos syrticola</i>	20.6
<i>Helichrysum leucopsidium</i>	20.1
<i>Stipa flavescens</i>	20.1
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	19.6
<i>Isolepis nodosa</i>	19.1
<i>Lasiopetalum discolor</i>	18.6
<i>Acrotriche patula</i>	17.5
<i>Clematis microphylla</i>	17.0
<i>Nitraria billardierei</i>	17.0
<i>Beyeria lechenaultii</i>	16.5
<i>Leucopogon parviflorus</i>	16.0
<i>Zygophyllum billardierei</i> (NC)	16.0
<i>Maireana oppositifolia</i>	15.5
<i>Cassythia peninsularis</i> var <i>peninsularis</i>	15.5
<i>Leucophyta brownii</i>	14.9
<i>Atriplex cinerea</i>	14.9
<i>Hemichroa diandra</i>	14.9
<i>Myoporum insulare</i>	13.9
<i>Frankenia sessilis</i>	13.9
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	13.4
<i>Scaevola crassifolia</i>	13.4
<i>Triodia compacta</i>	12.9
<i>Dianella brevicaulis</i>	11.9
<i>Danthonia setacea</i> var <i>setacea</i>	10.8
<i>Spinifex hirsutus</i>	10.8
<i>Gahnia lanigera</i>	10.3
<i>Lawrenzia squamata</i>	10.3
<i>Santalum acuminatum</i>	10.3
<i>Templetonia retusa</i>	9.8
<i>Spyridium phyllicoides</i>	9.8
<i>Eucalyptus dumosa</i> complex	9.8
<i>Comesperma volubile</i>	9.3
* <i>Euphorbia paralias</i>	9.3
<i>Eutaxia microphylla</i> var <i>microphylla</i>	9.3
<i>Alyxia buxifolia</i>	8.2
<i>Samolus repens</i>	8.2
* <i>Cakile maritima</i> ssp <i>maritima</i>	8.2
<i>Lycium australe</i>	7.7
<i>Eucalyptus oleosa</i>	7.7
<i>Acacia longifolia</i> var <i>sophorae</i>	7.2

Species	%
<i>Acacia cupularis</i>	7.2
<i>Salsola kali</i>	6.7
<i>Ptilotus obovatus</i> var <i>obovatus</i>	6.7
<i>Goodenia varia</i>	6.2
* <i>Mesembryanthemum crystallinum</i>	5.7
<i>Olearia exiguifolia</i>	5.7
<i>Dianella revoluta</i> var <i>revoluta</i>	5.2
<i>Pultenaea tenuifolia</i>	5.2
<i>Eucalyptus diversifolia</i>	4.6
<i>Allocasuarina verticillata</i>	4.6
<i>Lomandra effusa</i>	4.6
<i>Stipa elegantissima</i>	4.6
<i>Danthonia caespitosa</i>	4.6
<i>Rhagodia candolleana</i> ssp	4.6
<i>Eucalyptus gracilis</i>	4.6
<i>Westringia rigida</i>	4.6
<i>Atriplex vesicaria</i> ssp	4.1
<i>Stipa exilis</i>	4.1
<i>Lomandra collina</i>	3.6
<i>Zygophyllum billardiieri</i>	3.6
<i>Correa pulchella</i>	3.1
<i>Hydrocotyle capillaris</i>	3.1
<i>Eucalyptus rugosa</i>	3.1
<i>Dianella brevicaulis/revoluta</i> var	3.1
<i>Vittadinia australasica</i> var <i>australasica</i>	3.1
<i>Stipa acrociliata</i>	3.1
<i>Opercularia turpis</i>	2.6
<i>Amyema melaleucae</i>	2.6
* <i>Lagurus ovatus</i>	2.1
<i>Muehlenbeckia adpressa</i>	2.1
<i>Acacia anceps</i>	2.1
<i>Lepidosperma gladiatum</i>	1.5
<i>Melaleuca gibbosa</i>	1.5
<i>Acacia spinescens</i>	1.5
<i>Lepidosperma viscidum</i>	1.5
<i>Logania crassifolia</i>	1.5
<i>Chrysocephalum apiculatum</i>	1.5
<i>Sclerolaena diacantha</i>	1.5
<i>Poa poiiformis</i>	1.0
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	1.0
<i>Cassytha glabella</i> forma <i>dispar</i>	1.0
<i>Acacia nematophylla</i>	1.0
<i>Lotus australis</i>	1.0
<i>Adriana klotzschii</i>	1.0
<i>Kennedia prostrata</i>	1.0
<i>Melaleuca halmaturorum</i> ssp <i>halmaturorum</i>	1.0
<i>Suaeda australis</i>	1.0
* <i>Ammophila arenaria</i>	1.0
<i>Cassytha melantha</i>	1.0
<i>Leptorhynchus squamatus</i>	1.0
<i>Pimelea flava</i> ssp <i>dichotoma</i>	1.0

Species	%
<i>Calytrix tetragona</i>	0.5
<i>Olearia ramulosa</i>	0.5
<i>Isolepis marginata</i>	0.5
<i>Sonchus megalocarpus</i>	0.5
<i>Veronica hillebrandii</i>	0.5
* <i>Hypochaeris radicata</i>	0.5
* <i>Euphorbia terracina</i>	0.5
<i>Lepidosperma congestum</i>	0.5
<i>Correa reflexa</i>	0.5
<i>Melaleuca uncinata</i>	0.5
* <i>Senecio pterophorus</i> var <i>pterophorus</i>	0.5
<i>Acacia triquetra</i>	0.5
<i>Austrofestuca littoralis</i>	0.5
<i>Hibbertia</i> sp D	0.5
Eyre Peninsula south	
Total number of quadrats	186
<i>Lasiopetalum discolor</i>	54.3
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	53.8
<i>Leucopogon parviflorus</i>	52.7
<i>Acrotriche patula</i>	48.4
<i>Clematis microphylla</i>	44.6
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	40.9
<i>Carpobrotus rossii</i>	38.7
<i>Eucalyptus diversifolia</i>	38.7
<i>Dianella brevicaulis</i>	36.6
<i>Olearia axillaris</i>	35.5
<i>Stipa flavescens</i>	32.3
<i>Senecio lautus</i>	28.5
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	27.4
<i>Gahnia deusta</i>	26.9
<i>Beyeria lechenaultii</i>	24.2
<i>Stipa exilis</i>	24.2
<i>Exocarpos aphyllus</i>	22.6
<i>Threlkeldia diffusa</i>	22.0
<i>Acrotriche cordata</i>	21.5
<i>Tetragonia implexicoma</i>	19.4
<i>Cassytha peninsularis</i> var <i>peninsularis</i>	19.4
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	18.8
<i>Helichrysum leucopsidium</i>	18.3
<i>Correa pulchella</i>	17.7
<i>Templetonia retusa</i>	17.7
<i>Isolepis nodosa</i>	16.7
<i>Exocarpos syrticola</i>	16.7
<i>Allocasuarina verticillata</i>	16.7
<i>Hardenbergia violacea</i>	16.7
* <i>Senecio pterophorus</i> var <i>pterophorus</i>	16.7
<i>Comesperma volubile</i>	16.1
<i>Danthonia setacea</i> var <i>setacea</i>	15.6
<i>Acacia spinescens</i>	15.6
<i>Cassytha glabella</i> forma <i>dispar</i>	15.6
<i>Acacia longifolia</i> var <i>sophorae</i>	15.1

Species	%
<i>Gahnia lanigera</i>	15.1
<i>Acacia nematophylla</i>	15.1
<i>Eutaxia microphylla</i> var <i>microphylla</i>	14.5
<i>Lepidosperma gladiatum</i>	14.0
<i>Hydrocotyle capillaris</i>	14.0
<i>Pomaderris obcordata</i>	13.4
<i>Hibbertia</i> sp D	13.4
<i>Vittadinia australasica</i> var <i>australasica</i>	12.9
<i>Dodonaea humilis</i>	12.4
<i>Lepidosperma viscidum</i>	11.3
<i>Pimelea glauca</i>	10.8
<i>Danthonia caespitosa</i>	10.8
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	10.2
<i>Eucalyptus rugosa</i>	10.2
<i>Muehlenbeckia adpressa</i>	9.7
<i>Dianella revoluta</i> var <i>revoluta</i>	9.7
<i>Lomandra effusa</i>	9.7
<i>Gonocarpus meianus</i>	9.7
<i>Lepidosperma congestum</i>	9.7
<i>Opercularia turpis</i>	9.7
<i>Poa poiformis</i>	9.1
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	9.1
<i>Spyridium phyllicoides</i>	9.1
<i>Stipa elegantissima</i>	9.1
<i>Veronica hillebrandii</i>	9.1
<i>Alyxia buxifolia</i>	8.6
<i>Lomandra collina</i>	8.6
<i>Goodenia blackiana</i>	8.6
* <i>Lagurus ovatus</i>	8.1
<i>Calytrix tetragona</i>	8.1
<i>Acacia cupularis</i>	8.1
<i>Amyema melaleucae</i>	8.1
<i>Melaleuca decussata</i>	8.1
<i>Samolus repens</i>	7.5
<i>Dichelachne crinita</i>	7.5
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	7.0
<i>Acacia anceps</i> (NC)	7.0
<i>Hibbertia riparia</i>	7.0
<i>Acacia leiophylla</i>	7.0
<i>Dianella brevicaulis/revoluta</i> var	7.0
<i>Leucophyta brownii</i>	6.5
<i>Scaevola crassifolia</i>	6.5
<i>Santalum acuminatum</i>	6.5
<i>Eucalyptus oleosa</i>	6.5
<i>Chrysocephalum apiculatum</i>	6.5
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	5.9
<i>Eucalyptus gracilis</i>	5.9
<i>Geranium retrorsum</i>	5.4
<i>Adriana klotzschii</i>	5.4
<i>Pultenaea acerosa</i>	5.4
<i>Hakea vittata</i>	5.4

Species	%
<i>Melaleuca uncinata</i>	5.4
<i>Hibbertia riparia</i> (<i>glabriuscula</i>)	5.4
<i>Logania crassifolia</i>	4.8
<i>Melaleuca halmaturorum</i> ssp <i>halmaturorum</i>	4.8
<i>Acacia triquetra</i>	4.8
<i>Goodenia varia</i>	4.3
<i>Cassytha pubescens</i>	4.3
<i>Lasiopetalum schulzenii</i>	4.3
<i>Pultenaea tenuifolia</i>	4.3
<i>Kennedia prostrata</i>	4.3
<i>Gahnia filum</i>	4.3
<i>Cheilanthes austrotenuifolia</i>	4.3
<i>Schoenus breviculmis</i>	4.3
<i>Myoporum insulare</i>	3.8
<i>Acacia paradoxa</i>	3.8
<i>Sclerolaena uniflora</i>	3.8
<i>Astroloma humifusum</i>	3.8
<i>Ixodia achillaeoides</i> ssp <i>achillaeoides</i>	3.8
<i>Lepidosperma carphoides</i>	3.8
<i>Leptorhynchus squamatus</i>	3.8
<i>Sarcocornia quinqueflora</i>	3.2
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	3.2
<i>Pimelea stricta</i>	3.2
<i>Cassytha melantha</i>	3.2
* <i>Lycium ferocissimum</i>	2.7
<i>Geijera linearifolia</i>	2.7
<i>Dichondra repens</i>	2.7
<i>Rhagodia crassifolia</i>	2.7
<i>Isolepis marginata</i>	2.7
<i>Zygophyllum billardierei</i> (NC)	2.7
<i>Lotus australis</i>	2.7
<i>Stipa stipoides</i>	2.7
<i>Acacia anceps</i>	2.7
<i>Baumea juncea</i>	2.7
<i>Galium migrans</i>	2.7
<i>Stipa acrociliata</i>	2.7
<i>Melaleuca gibbosa</i>	2.2
* <i>Cakile maritima</i> ssp <i>maritima</i>	2.2
<i>Geranium potentilloides</i> var <i>potentilloides</i>	2.2
<i>Atriplex cinerea</i>	2.2
<i>Astroloma conostephioides</i>	2.2
<i>Logania ovata</i>	2.2
<i>Suaeda australis</i>	2.2
<i>Spinifex hirsutus</i>	2.2
<i>Bursaria spinosa</i>	2.2
<i>Olearia ciliata</i> var <i>ciliata</i>	2.2
<i>Sclerolaena diacantha</i>	2.2
<i>Frankenia pauciflora</i> var <i>gunnii</i>	2.2
<i>Muehlenbeckia gunnii</i>	1.6
<i>Olearia ramulosa</i>	1.6
<i>Stackhousia spathulata</i>	1.6

Species	%
* <i>Hypochaeris radicata</i>	1.6
* <i>Mesembryanthemum crystallinum</i>	1.6
<i>Lawrenzia squamata</i>	1.6
<i>Banksia marginata</i>	1.6
<i>Selliera radicans</i>	1.6
<i>Zygophyllum billardierei</i>	1.6
<i>Rhagodia parabolica</i>	1.6
<i>Haloragis acutangula</i> forma	1.6
<i>Pimelea flava</i> ssp <i>dichotoma</i>	1.6
<i>Eucalyptus dumosa</i> complex	1.6
* <i>Euphorbia paralias</i>	1.1
<i>Maireana oppositifolia</i>	1.1
<i>Billardiera cymosa</i>	1.1
<i>Correa reflexa</i>	1.1
<i>Ixiolaena supina</i>	1.1
<i>Acacia pycnantha</i>	1.1
<i>Choretrum glomeratum</i> var <i>glomeratum</i>	1.1
<i>Pelargonium australe</i>	0.5
<i>Nitraria billardierei</i>	0.5
<i>Orthrosanthus multiflorus</i>	0.5
<i>Sonchus megalocarpus</i>	0.5
<i>Hakea muelleriana</i>	0.5
<i>Juncus kraussii</i>	0.5
<i>Pultenaea rigida</i> var <i>rigida</i>	0.5
<i>Triodia compacta</i>	0.5
<i>Leucopogon rufus</i>	0.5
<i>Austrofestuca littoralis</i>	0.5
<i>Eucalyptus cladocalyx</i>	0.5
Eyre Peninsula east	
Total number of quadrats	23
<i>Tetragonia implexicoma</i>	73.9
<i>Olearia axillaris</i>	69.6
* <i>Lycium ferocissimum</i>	65.2
<i>Threlkeldia diffusa</i>	60.9
<i>Dianella brevicaulis</i>	52.2
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	47.8
<i>Senecio lautus</i>	39.1
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	39.1
<i>Exocarpos aphyllus</i>	39.1
<i>Geijera linearifolia</i>	34.8
<i>Isolepis nodosa</i>	30.4
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	30.4
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	30.4
<i>Acacia ligulata</i>	30.4
* <i>Mesembryanthemum crystallinum</i>	30.4
<i>Dianella revoluta</i> var <i>revoluta</i>	26.1
<i>Stipa elegantissima</i>	26.1
<i>Myoporum insulare</i>	21.7
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	21.7
<i>Melaleuca uncinata</i>	21.7
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	17.4

Species	%
<i>Helichrysum leucopsidium</i>	17.4
* <i>Euphorbia paralias</i>	17.4
* <i>Cakile maritima</i> ssp <i>maritima</i>	17.4
<i>Carpobrotus rossii</i>	13.0
<i>Clematis microphylla</i>	13.0
<i>Acrotriche patula</i>	13.0
<i>Alyxia buxifolia</i>	13.0
<i>Muehlenbeckia adpressa</i>	13.0
<i>Cassytha peninsularis</i> var <i>peninsularis</i>	13.0
<i>Stipa exilis</i>	13.0
<i>Atriplex cinerea</i>	13.0
<i>Gahnia deusta</i>	13.0
<i>Spinifex hirsutus</i>	13.0
<i>Comesperma volubile</i>	8.7
<i>Maireana erioclada</i>	8.7
<i>Atriplex vesicaria</i> ssp	8.7
<i>Hibbertia riparia</i>	8.7
<i>Kennedia prostrata</i>	8.7
<i>Salsola kali</i>	8.7
<i>Eucalyptus gracilis</i>	8.7
* <i>Carrichtera annua</i>	8.7
<i>Eucalyptus dumosa</i> complex	8.7
<i>Poa poiformis</i>	4.3
<i>Leucophyta brownii</i>	4.3
<i>Eutaxia microphylla</i> var <i>microphylla</i>	4.3
<i>Scaevola crassifolia</i>	4.3
<i>Atriplex paludosa</i> ssp <i>cordata</i>	4.3
<i>Nitraria billardierei</i>	4.3
<i>Isolepis marginata</i>	4.3
<i>Lomandra effusa</i>	4.3
<i>Billardiera cymosa</i>	4.3
* <i>Hypochaeris radicata</i>	4.3
<i>Lawrenzia squamata</i>	4.3
<i>Acacia cupularis</i>	4.3
<i>Santalum acuminatum</i>	4.3
<i>Eucalyptus oleosa</i>	4.3
<i>Melaleuca halmaturorum</i> ssp <i>halmaturorum</i>	4.3
<i>Cassytha melantha</i>	4.3
<i>Frankenia pauciflora</i> var <i>gunnii</i>	4.3
Spencer Gulf	
Total number of quadrats	48
<i>Geijera linearifolia</i>	54.2
<i>Threlkeldia diffusa</i>	52.1
<i>Tetragonia implexicoma</i>	50.0
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	50.0
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	47.9
<i>Senecio lautus</i>	45.8
<i>Atriplex vesicaria</i> ssp	39.6
* <i>Carrichtera annua</i>	37.5
<i>Rhagodia parabolica</i>	37.5
<i>Exocarpos aphyllus</i>	35.4

Species	%
<i>Lycium australe</i>	31.3
<i>Nitraria billardierei</i>	29.2
<i>Acacia ligulata</i>	29.2
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	27.1
<i>Olearia axillaris</i>	25.0
<i>Dianella brevicaulis</i>	25.0
<i>Atriplex paludosa</i> ssp <i>cordata</i>	25.0
<i>Frankenia pauciflora</i> var <i>gunnii</i>	25.0
* <i>Lycium ferocissimum</i>	22.9
<i>Myoporum insulare</i>	20.8
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	18.8
<i>Stipa elegantissima</i>	16.7
* <i>Mesembryanthemum crystallinum</i>	16.7
<i>Maireana oppositifolia</i>	14.6
<i>Maireana erioclada</i>	12.5
<i>Beyeria lechenaultii</i>	10.4
<i>Alyxia buxifolia</i>	10.4
<i>Amyema melaleucae</i>	10.4
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	8.3
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	8.3
* <i>Cakile maritima</i> ssp <i>maritima</i>	8.3
<i>Eremophila deserti</i>	8.3
<i>Sarcocornia quinqueflora</i>	8.3
<i>Suaeda australis</i>	8.3
<i>Ptilotus obovatus</i> var <i>obovatus</i>	8.3
<i>Sclerolaena uniflora</i>	6.3
<i>Lomandra effusa</i>	6.3
<i>Santalum acuminatum</i>	6.3
<i>Eucalyptus gracilis</i>	6.3
<i>Westringia rigida</i>	6.3
<i>Helichrysum leucopsidium</i>	4.2
<i>Atriplex cinerea</i>	4.2
<i>Lawrencia squamata</i>	4.2
<i>Danthonia caespitosa</i>	4.2
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	4.2
<i>Carpobrotus rossii</i>	2.1
<i>Clematis microphylla</i>	2.1
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	2.1
<i>Exocarpos syrticola</i>	2.1
* <i>Euphorbia paralias</i>	2.1
<i>Danthonia setacea</i> var <i>setacea</i>	2.1
<i>Scaevola crassifolia</i>	2.1
<i>Rhagodia crassifolia</i>	2.1
<i>Dianella revoluta</i> var <i>revoluta</i>	2.1
<i>Cassytha peninsularis</i> var <i>peninsularis</i>	2.1
<i>Frankenia sessilis</i>	2.1
<i>Geranium retrorsum</i>	2.1
<i>Eucalyptus oleosa</i>	2.1
<i>Salsola kali</i>	2.1
<i>Zygophyllum billardierei</i>	2.1
<i>Spinifex hirsutus</i>	2.1

Species	%
<i>Stipa acrociliata</i>	2.1
Yorke Peninsula	
Total number of quadrats	208
<i>Olearia axillaris</i>	70.2
<i>Carpobrotus rossii</i>	67.3
<i>Senecio lautus</i>	61.5
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	60.6
<i>Tetragonia implexicoma</i>	56.7
<i>Threlkeldia diffusa</i>	56.7
<i>Clematis microphylla</i>	51.9
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	50.0
* <i>Lagurus ovatus</i>	47.6
* <i>Lycium ferocissimum</i>	37.5
<i>Acrotriche patula</i>	37.0
<i>Leucopogon parviflorus</i>	36.1
<i>Helichrysum leucopsidium</i>	36.1
<i>Dianella brevicaulis</i>	34.6
<i>Isolepis nodosa</i>	32.7
<i>Beyeria lechenaultii</i>	32.2
<i>Lasiopetalum discolor</i>	31.3
<i>Muehlenbeckia gunnii</i>	27.4
<i>Exocarpos syrticola</i>	26.9
<i>Poa poiformis</i>	26.0
<i>Acacia ligulata</i>	25.5
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	24.0
<i>Scaevola crassifolia</i>	23.6
<i>Goodenia varia</i>	23.1
<i>Gahnia lanigera</i>	22.6
<i>Alyxia buxifolia</i>	22.1
<i>Acacia nematophylla</i>	22.1
<i>Logania crassifolia</i>	21.6
<i>Exocarpos aphyllus</i>	21.2
<i>Correa pulchella</i>	20.2
<i>Lomandra effusa</i>	20.2
<i>Templetonia retusa</i>	19.7
<i>Leucophyta brownii</i>	18.3
* <i>Euphorbia terracina</i>	18.3
* <i>Linum strictum</i> ssp <i>strictum</i>	18.3
<i>Myoporum insulare</i>	17.8
<i>Calytrix tetragona</i>	17.3
<i>Lepidosperma gladiatum</i>	16.8
<i>Stipa flavescens</i>	16.3
<i>Lepidosperma congestum</i>	16.3
<i>Acrotriche cordata</i>	15.9
<i>Acacia anceps</i>	15.9
<i>Geranium retrorsum</i>	15.4
<i>Pultenaea tenuifolia</i>	15.4
<i>Allocasuarina verticillata</i>	14.9
* <i>Cakile maritima</i> ssp <i>maritima</i>	13.9
<i>Eucalyptus diversifolia</i>	12.5
<i>Spinifex sericeus</i>	12.5

Species	%
<i>Acacia spinescens</i>	12.0
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	11.5
<i>Isolepis marginata</i>	11.5
<i>Hydrocotyle capillaris</i>	11.5
<i>Zygophyllum billardierei</i>	11.5
<i>Pelargonium australe</i>	11.1
<i>Haloragis acutangula</i> forma	11.1
<i>Cassytha glabella</i> forma <i>dispar</i>	10.6
<i>Stipa elegantissima</i>	10.6
<i>Acacia longifolia</i> var <i>sophorae</i>	10.1
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	10.1
<i>Cassytha peninsularis</i> var <i>peninsularis</i>	10.1
<i>Ixodia achillaeoides</i> ssp <i>achillaeoides</i>	10.1
<i>Spyridium phyllicoides</i>	9.6
* <i>Euphorbia paralias</i>	9.1
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	9.1
<i>Atriplex cinerea</i>	9.1
* <i>Hypochaeris radicata</i>	9.1
<i>Kennedia prostrata</i>	9.1
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	8.7
<i>Eutaxia microphylla</i> var <i>microphylla</i>	8.7
<i>Comesperma volubile</i>	8.2
<i>Acacia cupularis</i>	7.2
<i>Bursaria spinosa</i>	7.2
<i>Atriplex paludosa</i> ssp <i>cordata</i>	6.7
<i>Adriana klotzschii</i>	6.7
<i>Opercularia turpis</i>	6.7
<i>Samolus repens</i>	6.3
<i>Nitraria billardierei</i>	6.3
<i>Muehlenbeckia adpressa</i>	6.3
<i>Lomandra collina</i>	6.3
<i>Olearia ciliata</i> var <i>ciliata</i>	6.3
<i>Maireana oppositifolia</i>	5.8
<i>Lotus australis</i>	5.8
<i>Santalum acuminatum</i>	5.8
<i>Salsola kali</i>	5.8
<i>Rhagodia parabolica</i>	5.8
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	5.3
<i>Dianella revoluta</i> var <i>revoluta</i>	5.3
<i>Acacia anceps</i> (NC)	5.3
<i>Danthonia caespitosa</i>	5.3
<i>Chrysocephalum apiculatum</i>	5.3
* <i>Carrichtera annua</i>	5.3
<i>Leptorhynchus squamatus</i>	5.3
<i>Geijera linearifolia</i>	4.8
<i>Danthonia setacea</i> var <i>setacea</i>	4.8
<i>Olearia ramulosa</i>	4.8
<i>Geranium potentilloides</i> var <i>potentilloides</i>	4.8
<i>Zygophyllum billardierei</i> (NC)	4.8
* <i>Mesembryanthemum crystallinum</i>	4.8
<i>Lawrenzia squamata</i>	4.8

Species	%
<i>Dodonaea humilis</i>	4.3
<i>Galium migrans</i>	4.3
<i>Pimelea glauca</i>	3.8
<i>Gahnia deusta</i>	3.8
<i>Amyema melaleuca</i>	3.8
<i>Melaleuca gibbosa</i>	3.4
<i>Lepidosperma viscidum</i>	3.4
<i>Veronica hillebrandii</i>	3.4
<i>Acacia leiophylla</i>	3.4
<i>Sarcocornia quinqueflora</i>	3.4
<i>Dianella brevicaulis/revoluta</i> var	3.4
<i>Logania ovata</i>	3.4
<i>Triodia compacta</i>	3.4
<i>Dianella revoluta</i> (NC)	3.4
<i>Rhagodia crassifolia</i>	2.9
<i>Stipa stipoides</i>	2.9
<i>Acacia triquetra</i>	2.9
<i>Frankenia sessilis</i>	2.4
<i>Sclerolaena uniflora</i>	2.4
<i>Hardenbergia violacea</i>	2.4
<i>Melaleuca halmaturorum</i> ssp <i>halmaturorum</i>	2.4
<i>Goodenia blackiana</i>	2.4
<i>Kunzea pomifera</i>	1.9
<i>Gahnia filum</i>	1.9
<i>Ixiolaena supina</i>	1.9
<i>Suaeda australis</i>	1.9
<i>Hibbertia sericea</i> var <i>sericea</i>	1.9
<i>Pomaderris obcordata</i>	1.4
<i>Eucalyptus rugosa</i>	1.4
<i>Melaleuca decussata</i>	1.4
<i>Stipa acrociliata</i>	1.4
<i>Maireana erioclada</i>	1.0
<i>Cassytha pubescens</i>	1.0
<i>Hibbertia riparia</i>	1.0
<i>Stackhousia spathulata</i>	1.0
<i>Billardiera cymosa</i>	1.0
<i>Eremophila deserti</i>	1.0
<i>Pultenaea acerosa</i>	1.0
<i>Lycium australe</i>	1.0
<i>Eucalyptus oleosa</i>	1.0
<i>Eucalyptus gracilis</i>	1.0
* <i>Ammophila arenaria</i>	1.0
<i>Pimelea flava</i> ssp <i>dichotoma</i>	1.0
<i>Sonchus megalocarpus</i>	0.5
<i>Atriplex vesicaria</i> ssp	0.5
<i>Juncus kraussii</i>	0.5
<i>Baumea juncea</i>	0.5
<i>Apium prostratum</i> ssp <i>prostratum</i> var <i>prostratum</i>	0.5
<i>Vittadinia australasica</i> var <i>australasica</i>	0.5
<i>Hibbertia riparia</i> (glabriuscula)	0.5
<i>Cassytha melantha</i>	0.5

Species	%
<i>Austrofestuca littoralis</i>	0.5
<i>Frankenia pauciflora</i> var <i>gunnii</i>	0.5
<i>Ptilotus obovatus</i> var <i>obovatus</i>	0.5
Gulf St Vincent	
Total number of quadrats	54
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	61.1
<i>Threlkeldia diffusa</i>	55.6
<i>Tetragonia implexicoma</i>	51.9
* <i>Lycium ferocissimum</i>	46.3
<i>Dianella brevicaulis</i>	42.6
<i>Senecio lautus</i>	40.7
* <i>Lagurus ovatus</i>	37.0
<i>Carpobrotus rossii</i>	33.3
<i>Stipa elegantissima</i>	29.6
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	25.9
* <i>Mesembryanthemum crystallinum</i>	25.9
<i>Olearia axillaris</i>	24.1
<i>Alyxia buxifolia</i>	22.2
<i>Olearia ramulosa</i>	22.2
<i>Atriplex paludosa</i> ssp <i>cordata</i>	22.2
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	22.2
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	20.4
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	20.4
<i>Nitraria billardiarei</i>	20.4
<i>Maireana oppositifolia</i>	20.4
<i>Acrotriche patula</i>	16.7
<i>Muehlenbeckia gunnii</i>	16.7
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	16.7
<i>Pelargonium australe</i>	16.7
* <i>Cakile maritima</i> ssp <i>maritima</i>	16.7
* <i>Euphorbia terracina</i>	16.7
<i>Myoporum insulare</i>	14.8
<i>Comesperma volubile</i>	14.8
<i>Acacia ligulata</i>	14.8
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	13.0
<i>Beyeria lechenaultii</i>	13.0
<i>Gahnia lanigera</i>	13.0
<i>Danthonia caespitosa</i>	13.0
<i>Isolepis nodosa</i>	11.1
<i>Acacia longifolia</i> var <i>sophorae</i>	11.1
<i>Exocarpos aphyllus</i>	11.1
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	11.1
<i>Eutaxia microphylla</i> var <i>microphylla</i>	11.1
<i>Lomandra collina</i>	11.1
<i>Sarcocornia quinqueflora</i>	11.1
* <i>Carrichtera annua</i>	11.1
<i>Clematis microphylla</i>	9.3
<i>Spinifex sericeus</i>	9.3
<i>Maireana erioclada</i>	9.3
<i>Lomandra effusa</i>	9.3
* <i>Hypochaeris radicata</i>	9.3

Species	%
<i>Frankenia pauciflora</i> var <i>gunnii</i>	9.3
<i>Helichrysum leucopsidium</i>	7.4
<i>Stipa flavescens</i>	7.4
<i>Calytrix tetragona</i>	7.4
<i>Lotus australis</i>	7.4
<i>Kennedia prostrata</i>	7.4
<i>Amyema melaleuca</i>	7.4
<i>Dianella brevicaulis/revoluta</i> var	7.4
<i>Suaeda australis</i>	7.4
<i>Stipa acrociliata</i>	7.4
<i>Poa poiformis</i>	5.6
* <i>Euphorbia paralias</i>	5.6
<i>Dianella revoluta</i> var <i>revoluta</i>	5.6
<i>Acacia spinescens</i>	5.6
<i>Atriplex cinerea</i>	5.6
<i>Eremophila deserti</i>	5.6
<i>Adriana klotzschii</i>	5.6
<i>Lepidosperma congestum</i>	5.6
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	5.6
<i>Leptorhynchus squamatus</i>	5.6
<i>Leucopogon parviflorus</i>	3.7
<i>Lepidosperma gladiatum</i>	3.7
<i>Geijera linearifolia</i>	3.7
<i>Danthonia setacea</i> var <i>setacea</i>	3.7
<i>Isolepis marginata</i>	3.7
<i>Stipa exilis</i>	3.7
<i>Lepidosperma viscidum</i>	3.7
<i>Cassitha glabella</i> forma <i>dispar</i>	3.7
<i>Pimelea glauca</i>	3.7
<i>Opercularia turpis</i>	3.7
<i>Santalum acuminatum</i>	3.7
* <i>Linum strictum</i> ssp <i>strictum</i>	3.7
<i>Acacia pycnantha</i>	3.7
<i>Chrysocephalum apiculatum</i>	3.7
<i>Eucalyptus gracilis</i>	3.7
* <i>Ammophila arenaria</i>	3.7
<i>Exocarpos syrticola</i>	1.9
<i>Scaevola crassifolia</i>	1.9
<i>Atriplex vesicaria</i> ssp	1.9
<i>Astroloma humifusum</i>	1.9
<i>Geranium retrorsum</i>	1.9
<i>Gahnia deusta</i>	1.9
<i>Billardiera cymosa</i>	1.9
<i>Acacia leiophylla</i>	1.9
<i>Acacia cupularis</i>	1.9
<i>Lycium australe</i>	1.9
<i>Eucalyptus oleosa</i>	1.9
<i>Cheilanthes austrotenuifolia</i>	1.9
<i>Baumea juncea</i>	1.9
<i>Galium migrans</i>	1.9
* <i>Senecio pterophorus</i> var <i>pterophorus</i>	1.9

Species	%
<i>Hibbertia riparia</i> (glabriuscula)	1.9
<i>Sclerolaena diacantha</i>	1.9
<i>Westringia rigida</i>	1.9
<i>Pimelea flava</i> ssp <i>dichotoma</i>	1.9
Kangaroo Island south	
Total number of quadrats	139
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	59.0
<i>Leucopogon parviflorus</i>	56.8
<i>Melaleuca gibbosa</i>	54.0
<i>Eucalyptus diversifolia</i>	43.9
<i>Beyeria lechenaultii</i>	43.2
<i>Carpobrotus rossii</i>	41.7
<i>Acrotriche cordata</i>	40.3
<i>Goodenia varia</i>	38.1
<i>Lasiopetalum schulzenii</i>	35.3
<i>Correa</i> sp. aff. <i>calycina</i>	32.4
<i>Dianella brevicaulis</i>	30.9
<i>Olearia axillaris</i>	29.5
<i>Senecio lautus</i>	29.5
<i>Orthrosanthus multiflorus</i>	28.1
<i>Cassytha pubescens</i>	26.6
<i>Pultenaea acerosa</i>	25.2
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	24.5
<i>Isolepis nodosa</i>	24.5
<i>Dodonaea humilis</i>	24.5
<i>Correa reflexa</i>	24.5
<i>Olearia ramulosa</i>	23.0
<i>Pimelea glauca</i>	23.0
<i>Grevillea pauciflora</i> ssp <i>pauciflora</i>	23.0
<i>Myoporum insulare</i>	22.3
<i>Lasiopetalum discolor</i>	21.6
<i>Calytrix tetragona</i>	21.6
<i>Veronica hillebrandii</i>	21.6
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	20.9
<i>Eutaxia microphylla</i> var <i>microphylla</i>	19.4
<i>Hakea muelleriana</i>	19.4
<i>Hakea vittata</i>	18.7
<i>Spyridium phyllicoides</i>	18.0
<i>Swainsona lessertifolia</i>	17.3
<i>Pomaderris obcordata</i>	17.3
<i>Eucalyptus rugosa</i>	17.3
<i>Lepidosperma viscidum</i>	16.5
<i>Ixiolaena supina</i>	16.5
<i>Pultenaea rigida</i> var <i>rigida</i>	16.5
<i>Gahnia hystrix</i>	16.5
<i>Samolus repens</i>	15.8
<i>Banksia marginata</i>	15.8
<i>Choretrum glomeratum</i> var <i>glomeratum</i>	15.8
* <i>Lagurus ovatus</i>	14.4
<i>Acrotriche patula</i>	14.4
<i>Stipa stipoides</i>	14.4

Species	%
<i>Tetragonia implexicoma</i>	13.7
<i>Helichrysum leucopsidium</i>	13.7
<i>Leucophyta brownii</i>	13.7
<i>Ixodia achillaeoides</i> ssp <i>alata</i>	13.7
<i>Stipa flavescens</i>	12.9
<i>Hydrocotyle capillaris</i>	12.9
<i>Hibbertia riparia</i>	12.9
<i>Logania ovata</i>	12.2
<i>Senecio odoratus</i> var <i>odoratus</i>	11.5
<i>Xanthorrhoea semiplana</i> ssp <i>tateana</i>	11.5
<i>Threlkeldia diffusa</i>	10.8
<i>Acacia paradoxa</i>	10.8
<i>Calytrix glaberrima</i>	10.1
<i>Correa pulchella</i>	9.4
<i>Templetonia retusa</i>	9.4
<i>Acacia leiophylla</i>	9.4
<i>Allocasuarina striata</i>	9.4
<i>Eucalyptus cladocalyx</i>	9.4
<i>Ixodia achillaeoides</i> ssp <i>achillaeoides</i>	8.6
<i>Clematis microphylla</i>	7.9
<i>Dichondra repens</i>	7.9
<i>Gahnia deusta</i>	7.9
<i>Logania crassifolia</i>	7.9
<i>Gonocarpus mezeianus</i>	7.9
<i>Astroloma conostephioides</i>	7.9
<i>Leucopogon rufus</i>	7.9
<i>Petrophile multisepta</i>	7.9
<i>Pimelea flava</i> ssp <i>dichotoma</i>	7.9
<i>Danthonia setacea</i> var <i>setacea</i>	7.2
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	7.2
<i>Kunzea pomifera</i>	7.2
<i>Astroloma humifusum</i>	7.2
<i>Acacia triquetra</i>	7.2
<i>Sonchus megalocarpus</i>	6.5
<i>Zygophyllum billardierei</i> (NC)	6.5
<i>Cassytha glabella</i> forma <i>dispar</i>	6.5
<i>Isopogon ceratophyllus</i>	6.5
<i>Hibbertia sericea</i> var <i>sericea</i>	6.5
<i>Scaevola crassifolia</i>	5.8
<i>Geranium retrorsum</i>	5.8
<i>Hakea rostrata</i>	5.8
<i>Acrotriche depressa</i>	5.8
<i>Olearia ciliata</i> var <i>ciliata</i>	5.8
<i>Eucalyptus cosmophylla</i>	5.0
<i>Eucalyptus fasciculosa</i>	5.0
<i>Muehlenbeckia gunnii</i>	4.3
<i>Lepidosperma gladiatum</i>	4.3
<i>Poa poiformis</i>	4.3
<i>Alyxia buxifolia</i>	4.3
<i>Pelargonium australe</i>	4.3
<i>Spinifex sericeus</i>	4.3

Species	%
<i>Muehlenbeckia adpressa</i>	4.3
<i>Stipa exilis</i>	4.3
<i>Lotus australis</i>	4.3
<i>Pimelea stricta</i>	4.3
<i>Acacia longifolia</i> var <i>sophorae</i>	3.6
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	3.6
<i>Comesperma volubile</i>	3.6
* <i>Cakile maritima</i> ssp <i>maritima</i>	3.6
<i>Isolepis marginata</i>	3.6
<i>Dianella revoluta</i> var <i>revoluta</i>	3.6
<i>Hardenbergia violacea</i>	3.6
<i>Eucalyptus oleosa</i>	3.6
<i>Acacia pycnantha</i>	3.6
* <i>Euphorbia paralias</i>	2.9
<i>Allocasuarina verticillata</i>	2.9
<i>Stackhousia spathulata</i>	2.9
<i>Adriana klotzschii</i>	2.9
<i>Opercularia turpis</i>	2.9
<i>Galium migrans</i>	2.9
<i>Melaleuca uncinata</i>	2.9
<i>Cassytha melantha</i>	2.9
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	2.2
<i>Acaena novae-zelandiae</i>	2.2
<i>Geranium potentilloides</i> var <i>potentilloides</i>	2.2
* <i>Hypochaeris radicata</i>	2.2
<i>Lepidosperma carphoides</i>	2.2
<i>Bursaria spinosa</i>	2.2
<i>Goodenia blackiana</i>	2.2
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	1.4
<i>Acacia spinescens</i>	1.4
<i>Atriplex cinerea</i>	1.4
<i>Billardiera cymosa</i>	1.4
<i>Pultenaea tenuifolia</i>	1.4
<i>Cheilanthes austrotenuifolia</i>	1.4
<i>Baumea juncea</i>	1.4
<i>Hibbertia riparia</i> (<i>glabriuscula</i>)	1.4
<i>Dichelachne crinita</i>	1.4
<i>Exocarpos aphyllus</i>	0.7
<i>Gahnia lanigera</i>	0.7
<i>Danthonia caespitosa</i>	0.7
<i>Kennedia prostrata</i>	0.7
<i>Sarcocornia quinqueflora</i>	0.7
<i>Chrysocephalum apiculatum</i>	0.7
<i>Rhagodia candolleana</i> ssp	0.7
<i>Selliera radicans</i>	0.7
<i>Vittadinia australasica</i> var <i>australasica</i>	0.7
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	0.7
<i>Schoenus breviculmis</i>	0.7
* <i>Ammophila arenaria</i>	0.7
<i>Leptorhynchus squamatus</i>	0.7
<i>Frankenia pauciflora</i> var <i>gunnii</i>	0.7

Species	%
Kangaroo Island east	
Total number of quadrats	81
<i>Orthrosanthus multiflorus</i>	50.6
<i>Acrotriche patula</i>	40.7
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	39.5
<i>Dianella brevicaulis</i>	37.0
<i>Leucopogon parviflorus</i>	35.8
<i>Eucalyptus diversifolia</i>	34.6
<i>Acacia paradoxa</i>	34.6
* <i>Lagurus ovatus</i>	33.3
<i>Melaleuca gibbosa</i>	32.1
<i>Correa</i> sp aff <i>calycina</i>	30.9
<i>Carpobrotus rossii</i>	29.6
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	27.2
<i>Astroloma humifusum</i>	25.9
<i>Myoporum insulare</i>	24.7
<i>Goodenia varia</i>	24.7
<i>Olearia axillaris</i>	22.2
<i>Clematis microphylla</i>	22.2
<i>Beyeria lechenaultii</i>	22.2
<i>Lasiopetalum discolor</i>	22.2
<i>Hibbertia riparia</i>	22.2
<i>Helichrysum leucopsidium</i>	21.0
<i>Senecio lautus</i>	19.8
<i>Isolepis nodosa</i>	19.8
<i>Acrotriche cordata</i>	19.8
<i>Veronica hillebrandii</i>	19.8
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	18.5
<i>Senecio odoratus</i> var <i>odoratus</i>	18.5
<i>Comesperma volubile</i>	17.3
<i>Calytrix tetragona</i>	17.3
<i>Danthonia setacea</i> var <i>setacea</i>	17.3
<i>Acacia leiophylla</i>	16.0
<i>Correa reflexa</i>	14.8
<i>Melaleuca uncinata</i>	14.8
<i>Acrotriche depressa</i>	14.8
<i>Tetragonia implexicoma</i>	13.6
<i>Stipa flavescens</i>	13.6
<i>Lasiopetalum schulzenii</i>	13.6
<i>Dodonaea humilis</i>	13.6
<i>Eucalyptus rugosa</i>	13.6
<i>Alyxia buxifolia</i>	12.3
<i>Samolus repens</i>	12.3
<i>Eutaxia microphylla</i> var <i>microphylla</i>	12.3
<i>Olearia ramulosa</i>	12.3
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	12.3
<i>Stipa exilis</i>	12.3
<i>Pomaderris obcordata</i>	12.3
<i>Threlkeldia diffusa</i>	11.1
<i>Swainsona lessertifolia</i>	11.1
<i>Astroloma conostephioides</i>	11.1

Species	%
<i>Choretrum glomeratum</i> var <i>glomeratum</i>	11.1
* <i>Lycium ferocissimum</i>	9.9
<i>Allocasuarina verticillata</i>	9.9
<i>Spyridium phycoides</i>	9.9
<i>Geranium retrorsum</i>	9.9
<i>Billardiera cymosa</i>	9.9
<i>Gonocarpus mezianus</i>	9.9
<i>Sarcocornia quinqueflora</i>	9.9
<i>Pultenaea rigida</i> var <i>rigida</i>	9.9
<i>Leucopogon rufus</i>	9.9
<i>Scaevola crassifolia</i>	8.6
<i>Stipa stipoides</i>	8.6
<i>Suaeda australis</i>	8.6
<i>Acacia triquetra</i>	8.6
<i>Ixodia achillaeoides</i> ssp <i>alata</i>	8.6
* <i>Euphorbia paralias</i>	7.4
<i>Maireana oppositifolia</i>	7.4
<i>Muehlenbeckia adpressa</i>	7.4
<i>Opercularia turpis</i>	7.4
<i>Pultenaea acerosa</i>	7.4
<i>Hardenbergia violacea</i>	7.4
<i>Logania ovata</i>	7.4
<i>Cheilanthes austrotenuifolia</i>	7.4
<i>Pimelea stricta</i>	7.4
<i>Cassytha melantha</i>	7.4
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	6.2
<i>Dichondra repens</i>	6.2
<i>Isolepis marginata</i>	6.2
<i>Eucalyptus oleosa</i>	6.2
<i>Ixiolaena supina</i>	6.2
<i>Galium migrans</i>	6.2
<i>Allocasuarina striata</i>	6.2
<i>Calytrix glaberrima</i>	6.2
<i>Acacia longifolia</i> var <i>sophorae</i>	4.9
<i>Muehlenbeckia gunnii</i>	4.9
<i>Poa poiiformis</i>	4.9
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	4.9
* <i>Cakile maritima</i> ssp <i>maritima</i>	4.9
<i>Spinifex sericeus</i>	4.9
<i>Zygophyllum billardierei</i> (NC)	4.9
<i>Cassytha pubescens</i>	4.9
<i>Pimelea glauca</i>	4.9
<i>Logania crassifolia</i>	4.9
<i>Stackhousia spathulata</i>	4.9
<i>Xanthorrhoea semiplana</i> ssp <i>tateana</i>	4.9
<i>Leucophyta brownii</i>	3.7
<i>Correa pulchella</i>	3.7
<i>Dianella revoluta</i> var <i>revoluta</i>	3.7
<i>Kunzea pomifera</i>	3.7
<i>Lepidosperma viscidum</i>	3.7
<i>Gahnia deusta</i>	3.7

Species	%
<i>Pultenaea tenuifolia</i>	3.7
* <i>Hypochaeris radicata</i>	3.7
<i>Banksia marginata</i>	3.7
<i>Hakea vittata</i>	3.7
<i>Melaleuca halmaturorum</i> ssp <i>halmaturorum</i>	3.7
<i>Hakea rostrata</i>	3.7
<i>Isopogon ceratophyllus</i>	3.7
<i>Exocarpos aphyllus</i>	2.5
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	2.5
<i>Acacia spinescens</i>	2.5
<i>Geranium potentilloides</i> var <i>potentilloides</i>	2.5
<i>Stipa elegantissima</i>	2.5
* <i>Mesembryanthemum crystallinum</i>	2.5
<i>Lotus australis</i>	2.5
<i>Adriana klotzschii</i>	2.5
<i>Lepidosperma congestum</i>	2.5
<i>Acacia cupularis</i>	2.5
<i>Hakea muelleriana</i>	2.5
<i>Chrysocephalum apiculatum</i>	2.5
<i>Baumea juncea</i>	2.5
<i>Eucalyptus gracilis</i>	2.5
<i>Vittadinia australasica</i> var <i>australasica</i>	2.5
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	2.5
<i>Dichelachne crinita</i>	2.5
<i>Eucalyptus cladocalyx</i>	2.5
<i>Lepidosperma gladiatum</i>	1.2
<i>Pelargonium australe</i>	1.2
<i>Geijera linearifolia</i>	1.2
<i>Atriplex paludosa</i> ssp <i>cordata</i>	1.2
<i>Templetonia retusa</i>	1.2
<i>Sonchus megalocarpus</i>	1.2
<i>Cassytha peninsularis</i> var <i>peninsularis</i>	1.2
<i>Atriplex cinerea</i>	1.2
<i>Kennedia prostrata</i>	1.2
<i>Rhagodia candolleana</i> ssp	1.2
<i>Selliera radicans</i>	1.2
<i>Goodenia blackiana</i>	1.2
<i>Gahnia hystrix</i>	1.2
<i>Olearia ciliata</i> var <i>ciliata</i>	1.2
* <i>Ammophila arenaria</i>	1.2
<i>Austrofestuca littoralis</i>	1.2
<i>Petrophile multisepta</i>	1.2
Kangaroo Island north	
Total number of quadrats	60
<i>Melaleuca gibbosa</i>	43.3
<i>Allocasuarina verticillata</i>	43.3
<i>Eucalyptus diversifolia</i>	40.0
<i>Acacia paradoxa</i>	40.0
<i>Astroloma conostephioides</i>	38.3
<i>Lepidosperma viscidum</i>	31.7
<i>Xanthorrhoea semiplana</i> ssp <i>tateana</i>	30.0

Species	%
<i>Hakea rostrata</i>	28.3
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	26.7
<i>Olearia ramulosa</i>	26.7
<i>Orthrosanthus multiflorus</i>	26.7
<i>Hibbertia riparia</i>	26.7
<i>Petrophile multisecta</i>	26.7
<i>Dianella brevicaulis</i>	23.3
<i>Acacia spinescens</i>	23.3
<i>Acrotriche patula</i>	21.7
<i>Calytrix tetragona</i>	21.7
<i>Correa pulchella</i>	21.7
<i>Allocasuarina striata</i>	21.7
<i>Isopogon ceratophyllus</i>	21.7
<i>Pimelea stricta</i>	21.7
<i>Beyeria lechenaultii</i>	20.0
<i>Eutaxia microphylla</i> var <i>microphylla</i>	20.0
<i>Gonocarpus mezianus</i>	20.0
<i>Acrotriche depressa</i>	20.0
<i>Calytrix glaberrima</i>	20.0
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	18.3
* <i>Lagurus ovatus</i>	18.3
<i>Exocarpos aphyllus</i>	18.3
<i>Hakea muelleriana</i>	18.3
<i>Acrotriche cordata</i>	16.7
<i>Danthonia setacea</i> var <i>setacea</i>	16.7
<i>Isolepis marginata</i>	16.7
<i>Astroloma humifusum</i>	16.7
<i>Cheilanthes austrotenuifolia</i>	16.7
<i>Eucalyptus cosmophylla</i>	16.7
<i>Eucalyptus cladocalyx</i>	16.7
<i>Carpobrotus rossii</i>	15.0
<i>Myoporum insulare</i>	15.0
<i>Lasiopetalum schulzenii</i>	15.0
<i>Grevillea pauciflora</i> ssp <i>pauciflora</i>	15.0
<i>Tetragonia implexicoma</i>	11.7
<i>Senecio lautus</i>	11.7
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	11.7
<i>Goodenia varia</i>	11.7
<i>Pomaderris obcordata</i>	11.7
<i>Leucopogon rufus</i>	11.7
<i>Gahnia hystrix</i>	11.7
<i>Pimelea flava</i> ssp <i>dichotoma</i>	11.7
<i>Threlkeldia diffusa</i>	10.0
<i>Lasiopetalum discolor</i>	10.0
<i>Helichrysum leucopsidium</i>	10.0
<i>Stipa flavescens</i>	10.0
<i>Alyxia buxifolia</i>	10.0
<i>Hakea vittata</i>	10.0
<i>Pultenaea rigida</i> var <i>rigida</i>	10.0
<i>Hibbertia sericea</i> var <i>sericea</i>	10.0
<i>Olearia axillaris</i>	8.3

Species	%
<i>Isolepis nodosa</i>	8.3
<i>Hydrocotyle capillaris</i>	8.3
<i>Eucalyptus rugosa</i>	8.3
* <i>Hypochaeris radicata</i>	8.3
<i>Banksia marginata</i>	8.3
<i>Logania ovata</i>	8.3
<i>Baumea juncea</i>	8.3
<i>Olearia ciliata</i> var <i>ciliata</i>	8.3
<i>Goodenia amplexans</i>	8.3
* <i>Euphorbia paralias</i>	6.7
<i>Dianella revoluta</i> var <i>revoluta</i>	6.7
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	6.7
<i>Stipa exilis</i>	6.7
<i>Cassytha glabella</i> forma <i>dispar</i>	6.7
<i>Pimelea glauca</i>	6.7
<i>Dodonaea humilis</i>	6.7
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	6.7
<i>Schoenus breviculmis</i>	6.7
<i>Ixodia achillaeoides</i> ssp <i>alata</i>	6.7
<i>Poa poiformis</i>	5.0
<i>Comesperma volubile</i>	5.0
<i>Dichondra repens</i>	5.0
<i>Cassytha peninsularis</i> var <i>peninsularis</i>	5.0
<i>Cassytha pubescens</i>	5.0
<i>Logania crassifolia</i>	5.0
<i>Opercularia turpis</i>	5.0
<i>Galium migrans</i>	5.0
<i>Choretrum glomeratum</i> var <i>glomeratum</i>	5.0
<i>Melaleuca uncinata</i>	5.0
<i>Dichelachne crinita</i>	5.0
<i>Clematis microphylla</i>	3.3
* <i>Lycium ferocissimum</i>	3.3
<i>Leucophyta brownii</i>	3.3
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	3.3
* <i>Cakile maritima</i> ssp <i>maritima</i>	3.3
<i>Spinifex sericeus</i>	3.3
<i>Scaevola crassifolia</i>	3.3
<i>Zygophyllum billardierei</i> (NC)	3.3
<i>Stackhousia spathulata</i>	3.3
<i>Pultenaea tenuifolia</i>	3.3
<i>Hardenbergia violacea</i>	3.3
<i>Lomandra collina</i>	3.3
<i>Eucalyptus oleosa</i>	3.3
<i>Ixodia achillaeoides</i> ssp <i>achillaeoides</i>	3.3
<i>Chrysocephalum apiculatum</i>	3.3
<i>Eucalyptus fasciculosa</i>	3.3
<i>Leucopogon parviflorus</i>	1.7
<i>Acacia longifolia</i> var <i>sophorae</i>	1.7
<i>Muehlenbeckia gunnii</i>	1.7
<i>Lepidosperma gladiatum</i>	1.7
<i>Samolus repens</i>	1.7

Species	%
<i>Rhagodia crassifolia</i>	1.7
<i>Swainsona lessertifolia</i>	1.7
<i>Gahnia lanigera</i>	1.7
<i>Muehlenbeckia adpressa</i>	1.7
<i>Atriplex cinerea</i>	1.7
<i>Stipa elegantissima</i>	1.7
<i>Veronica hillebrandii</i>	1.7
<i>Correa</i> sp aff <i>calycina</i>	1.7
<i>Acacia leiophylla</i>	1.7
<i>Kennedia prostrata</i>	1.7
<i>Acacia cupularis</i>	1.7
<i>Pultenaea acerosa</i>	1.7
<i>Correa reflexa</i>	1.7
<i>Ixiolaena supina</i>	1.7
<i>Acacia pycnantha</i>	1.7
<i>Hibbertia riparia</i> (<i>glabriuscula</i>)	1.7
<i>Goodenia blackiana</i>	1.7
Fleurieu Peninsula	
Total number of quadrats	84
<i>Olearia ramulosa</i>	44.0
<i>Muehlenbeckia gunnii</i>	40.5
<i>Olearia axillaris</i>	39.3
* <i>Lagurus ovatus</i>	38.1
<i>Astroloma humifusum</i>	36.9
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	33.3
<i>Leucopogon parviflorus</i>	33.3
<i>Dianella brevicaulis</i>	31.0
<i>Clematis microphylla</i>	29.8
<i>Acacia paradoxa</i>	29.8
<i>Tetragonia implexicoma</i>	28.6
<i>Isolepis nodosa</i>	28.6
<i>Acacia pycnantha</i>	28.6
<i>Goodenia amplexans</i>	28.6
<i>Gonocarpus mezianus</i>	26.2
<i>Senecio lautus</i>	25.0
<i>Eucalyptus diversifolia</i>	25.0
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	23.8
<i>Dianella revoluta</i> (NC)	22.6
<i>Calytrix tetragona</i>	21.4
<i>Cassytha glabella</i> forma <i>dispar</i>	21.4
<i>Dichondra repens</i>	20.2
<i>Eucalyptus cosmophylla</i>	20.2
<i>Eucalyptus fasciculosa</i>	20.2
<i>Hibbertia riparia</i> (<i>glabriuscula</i>)	20.2
<i>Senecio odoratus</i> var <i>odoratus</i>	19.0
<i>Schoenus breviculmis</i>	19.0
<i>Acacia longifolia</i> var <i>sophorae</i>	17.9
<i>Allocasuarina verticillata</i>	17.9
<i>Melaleuca decussata</i>	17.9
<i>Lepidosperma carphoides</i>	17.9
<i>Carpobrotus rossii</i>	16.7

Species	%
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	16.7
<i>Stipa flavescens</i>	16.7
<i>Poa poiformis</i>	16.7
<i>Danthonia setacea</i> var <i>setacea</i>	16.7
<i>Billardiera cymosa</i>	16.7
<i>Correa pulchella</i>	15.5
<i>Leucophyta brownii</i>	14.3
<i>Comesperma volubile</i>	14.3
<i>Kunzea pomifera</i>	14.3
* <i>Hypochaeris radicata</i>	14.3
<i>Rhagodia candolleana</i> ssp	14.3
<i>Threlkeldia diffusa</i>	13.1
* <i>Lycium ferocissimum</i>	13.1
<i>Lepidosperma gladiatum</i>	13.1
<i>Eutaxia microphylla</i> var <i>microphylla</i>	13.1
<i>Lepidosperma viscidum</i>	13.1
<i>Hibbertia riparia</i>	13.1
<i>Xanthorrhoea semiplana</i> ssp <i>tateana</i>	13.1
<i>Cheilanthes austrotenuifolia</i>	13.1
<i>Beyeria lechenaultii</i>	11.9
<i>Acacia spinescens</i>	11.9
<i>Astroloma conostephioides</i>	11.9
<i>Hakea rostrata</i>	11.9
<i>Pelargonium australe</i>	10.7
<i>Lomandra effusa</i>	10.7
<i>Pimelea glauca</i>	10.7
<i>Danthonia caespitosa</i>	10.7
<i>Isolepis marginata</i>	9.5
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	9.5
<i>Pultenaea tenuifolia</i>	9.5
<i>Opercularia turpis</i>	9.5
<i>Banksia marginata</i>	9.5
<i>Myoporum insulare</i>	8.3
<i>Helichrysum leucopsidium</i>	8.3
<i>Acrotriche cordata</i>	8.3
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	8.3
* <i>Euphorbia paralias</i>	8.3
* <i>Cakile maritima</i> ssp <i>maritima</i>	8.3
<i>Spinifex sericeus</i>	8.3
<i>Dianella revoluta</i> var <i>revoluta</i>	8.3
<i>Hydrocotyle capillaris</i>	8.3
<i>Correa</i> sp aff <i>calycina</i>	8.3
<i>Ixiolaena supina</i>	8.3
<i>Chrysocephalum apiculatum</i>	8.3
<i>Isopogon ceratophyllus</i>	8.3
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	8.3
* <i>Ammophila arenaria</i>	8.3
<i>Swainsona lessertifolia</i>	7.1
<i>Gahnia lanigera</i>	7.1
<i>Gahnia deusta</i>	7.1
<i>Pomaderris obcordata</i>	7.1

Species	%
<i>Kennedia prostrata</i>	7.1
<i>Lomandra collina</i>	7.1
<i>Acrotriche patula</i>	6.0
<i>Stipa exilis</i>	6.0
<i>Cassytha pubescens</i>	6.0
<i>Geranium retrorsum</i>	6.0
<i>Stipa elegantissima</i>	6.0
<i>Hardenbergia violacea</i>	6.0
<i>Allocasuarina striata</i>	6.0
<i>Goodenia blackiana</i>	6.0
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	4.8
<i>Acaena novae-zelandiae</i>	4.8
<i>Veronica hillebrandii</i>	4.8
<i>Lepidosperma congestum</i>	4.8
<i>Leucopogon rufus</i>	4.8
<i>Leptorhynchus squamatus</i>	4.8
<i>Samolus repens</i>	3.6
<i>Scaevola crassifolia</i>	3.6
<i>Acacia cupularis</i>	3.6
<i>Hibbertia sericea</i> var <i>sericea</i>	3.6
<i>Sclerolaena diacantha</i>	3.6
<i>Dichelachne crinita</i>	3.6
<i>Lasiopetalum discolor</i>	2.4
<i>Goodenia varia</i>	2.4
<i>Alyxia buxifolia</i>	2.4
<i>Muehlenbeckia adpressa</i>	2.4
<i>Logania crassifolia</i>	2.4
<i>Eucalyptus rugosa</i>	2.4
<i>Santalum acuminatum</i>	2.4
<i>Stipa stipoides</i>	2.4
* <i>Linum strictum</i> ssp <i>strictum</i>	2.4
<i>Dianella brevicaulis/revoluta</i> var	2.4
<i>Triodia compacta</i>	2.4
<i>Bursaria spinosa</i>	2.4
<i>Exocarpos aphyllus</i>	1.2
<i>Melaleuca gibbosa</i>	1.2
<i>Nitraria billardierei</i>	1.2
<i>Sonchus megalocarpus</i>	1.2
<i>Atriplex cinerea</i>	1.2
<i>Acacia ligulata</i>	1.2
<i>Lotus australis</i>	1.2
<i>Adriana klotzschii</i>	1.2
<i>Pultenaea acerosa</i>	1.2
<i>Hakea vittata</i>	1.2
<i>Hakea muelleriana</i>	1.2
<i>Gahnia filum</i>	1.2
<i>Melaleuca halmaturorum</i> ssp <i>halmaturorum</i>	1.2
<i>Sarcocornia quinqueflora</i>	1.2
<i>Juncus kraussii</i>	1.2
<i>Logania ovata</i>	1.2
<i>Suaeda australis</i>	1.2

Species	%
<i>Baumea juncea</i>	1.2
<i>Galium migrans</i>	1.2
<i>Rhagodia parabolica</i>	1.2
<i>Ixodia achillaeoides</i> ssp <i>alata</i>	1.2
<i>Pimelea flava</i> ssp <i>dichotoma</i>	1.2
<i>Frankenia pauciflora</i> var <i>gunnii</i>	1.2
Coorong	
Total number of quadrats	175
<i>Olearia axillaris</i>	71.4
<i>Carpobrotus rossii</i>	61.7
<i>Tetragonia implexicoma</i>	61.7
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	57.7
<i>Isolepis nodosa</i>	57.7
<i>Acacia longifolia</i> var <i>sophorae</i>	57.1
<i>Muehlenbeckia gunnii</i>	57.1
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	53.1
<i>Leucopogon parviflorus</i>	51.4
<i>Senecio lautus</i>	45.7
<i>Exocarpos syrticola</i>	43.4
<i>Dianella brevicaulis</i>	42.9
<i>Clematis microphylla</i>	41.1
<i>Myoporum insulare</i>	41.1
<i>Pelargonium australe</i>	33.7
<i>Threlkeldia diffusa</i>	29.1
<i>Geranium potentilloides</i> var <i>potentilloides</i>	27.4
* <i>Lagurus ovatus</i>	26.3
<i>Spinifex sericeus</i>	26.3
<i>Billardiera cymosa</i>	22.9
<i>Lepidosperma gladiatum</i>	21.1
* <i>Euphorbia paralias</i>	19.4
<i>Hydrocotyle laxiflora</i>	18.3
<i>Stackhousia spathulata</i>	17.7
<i>Kunzea pomifera</i>	16.0
* <i>Lycium ferocissimum</i>	15.4
<i>Leucophyta brownii</i>	14.9
<i>Acaena novae-zelandiae</i>	13.7
<i>Isolepis marginata</i>	13.7
<i>Sonchus megalocarpus</i>	12.6
<i>Ozothamnus turbinatus</i>	12.6
<i>Stipa flavescens</i>	12.0
<i>Dichondra repens</i>	12.0
<i>Lotus australis</i>	10.9
<i>Eucalyptus diversifolia</i>	10.3
* <i>Cakile maritima</i> ssp <i>maritima</i>	10.3
<i>Samolus repens</i>	9.1
<i>Adriana klotzschii</i>	9.1
<i>Poa poiformis</i>	7.4
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	7.4
<i>Helichrysum leucopsidium</i>	6.9
<i>Alyxia buxifolia</i>	6.9
<i>Acacia leiophylla</i>	6.9

Species	%
<i>Dianella revoluta</i> var <i>revoluta</i>	6.3
<i>Apium prostratum</i> ssp <i>prostratum</i> var <i>prostratum</i>	6.3
<i>Suaeda australis</i>	5.7
<i>Austrofestuca littoralis</i>	5.7
<i>Swainsona lessertifolia</i>	5.1
<i>Muehlenbeckia adpressa</i>	5.1
* <i>Hypochaeris radicata</i>	5.1
* <i>Euphorbia terracina</i>	5.1
<i>Melaleuca halmaturorum</i> ssp <i>halmaturorum</i>	5.1
<i>Rhagodia candolleana</i> ssp	5.1
<i>Astroloma humifusum</i>	4.6
<i>Kennedia prostrata</i>	4.6
<i>Comesperma volubile</i>	4.0
<i>Banksia marginata</i>	4.0
<i>Juncus kraussii</i>	4.0
<i>Dianella brevicaulis/revoluta</i> var	4.0
<i>Eucalyptus fasciculosa</i>	4.0
<i>Lepidosperma carphoides</i>	4.0
* <i>Ammophila arenaria</i>	4.0
<i>Hibbertia sericea</i> var <i>sericea</i>	4.0
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	3.4
<i>Beyeria lechenaultii</i>	3.4
<i>Lasiopetalum discolor</i>	3.4
<i>Frankenia pauciflora</i> var <i>fruticulosa</i>	3.4
<i>Allocasuarina verticillata</i>	3.4
<i>Acacia spinescens</i>	3.4
<i>Sarcocornia quinqueflora</i>	3.4
<i>Acacia cupularis</i>	2.9
<i>Gahnia filum</i>	2.9
<i>Selliera radicans</i>	2.9
<i>Bursaria spinosa</i>	2.9
<i>Cassytha pubescens</i>	2.3
<i>Geranium retrorsum</i>	2.3
<i>Hakea muelleriana</i>	2.3
<i>Goodenia varia</i>	1.7
<i>Scaevola crassifolia</i>	1.7
<i>Zygophyllum billardiieri</i> (NC)	1.7
<i>Astroloma conostephioides</i>	1.7
<i>Hakea vittata</i>	1.7
<i>Hakea rostrata</i>	1.7
<i>Baumea juncea</i>	1.7
<i>Isopogon ceratophyllus</i>	1.7
<i>Dianella revoluta</i> (NC)	1.7
<i>Haloragis acutangula</i> forma	1.7
<i>Exocarpos aphyllus</i>	1.1
<i>Disphyma crassifolium</i> ssp <i>clavellatum</i>	1.1
<i>Olearia ramulosa</i>	1.1
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	1.1
<i>Stipa exilis</i>	1.1
<i>Lomandra effusa</i>	1.1
<i>Atriplex cinerea</i>	1.1

Species	%
<i>Gahnia deusta</i>	1.1
<i>Pultenaea tenuifolia</i>	1.1
* <i>Mesembryanthemum crystallinum</i>	1.1
<i>Lawrenzia squamata</i>	1.1
<i>Danthonia caespitosa</i>	1.1
<i>Senecio odoratus</i> var <i>odoratus</i>	1.1
<i>Stipa stipoides</i>	1.1
<i>Amyema melaleuca</i>	1.1
<i>Acacia pycnantha</i>	1.1
<i>Schoenus breviculmis</i>	1.1
<i>Acrotriche cordata</i>	0.6
<i>Eutaxia microphylla</i> var <i>microphylla</i>	0.6
<i>Calytrix tetragona</i>	0.6
<i>Gahnia lanigera</i>	0.6
<i>Hibbertia riparia</i>	0.6
<i>Logania crassifolia</i>	0.6
<i>Veronica hillebrandii</i>	0.6
<i>Choretrum glomeratum</i> var <i>glomeratum</i>	0.6
<i>Vittadinia australasica</i> var <i>australasica</i>	0.6
* <i>Senecio pterophorus</i> var <i>pterophorus</i>	0.6
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	0.6
South East	
Total number of quadrats	203
<i>Leucopogon parviflorus</i>	80.3
<i>Clematis microphylla</i>	65.5
<i>Olearia axillaris</i>	63.5
<i>Tetragonia implexicoma</i>	60.6
<i>Isolepis nodosa</i>	60.6
<i>Acacia longifolia</i> var <i>sophorae</i>	59.6
<i>Pimelea serpyllifolia</i> ssp <i>serpyllifolia</i>	56.2
<i>Carpobrotus rossii</i>	55.2
<i>Rhagodia candolleana</i> ssp <i>candolleana</i>	49.3
<i>Senecio lautus</i>	48.8
<i>Lepidosperma gladiatum</i>	44.3
<i>Acaena novae-zelandiae</i>	43.8
<i>Poa poiformis</i>	36.5
<i>Dichondra repens</i>	36.0
<i>Swainsona lessertifolia</i>	31.5
<i>Sonchus megalocarpus</i>	29.6
* <i>Lagurus ovatus</i>	24.6
<i>Hydrocotyle laxiflora</i>	22.7
<i>Pelargonium australe</i>	22.2
<i>Samolus repens</i>	20.2
<i>Ozothamnus turbinatus</i>	20.2
<i>Muehlenbeckia adpressa</i>	19.2
<i>Exocarpos syrticola</i>	18.2
<i>Dianella brevicaulis</i>	16.3
<i>Comesperma volubile</i>	16.3
<i>Kunzea pomifera</i>	16.3
* <i>Euphorbia paralias</i>	15.8
<i>Spinifex sericeus</i>	15.8

Species	%
* <i>Cakile maritima</i> ssp <i>maritima</i>	15.3
<i>Stackhousia spathulata</i>	14.8
<i>Juncus kraussii</i>	14.8
<i>Muehlenbeckia gunnii</i>	14.3
<i>Gahnia filum</i>	13.3
<i>Selliera radicans</i>	12.8
<i>Cassytha pubescens</i>	12.3
<i>Apium prostratum</i> ssp <i>prostratum</i> var <i>prostratum</i>	12.3
<i>Geranium potentilloides</i> var <i>potentilloides</i>	11.8
<i>Myoporum insulare</i>	11.3
<i>Melaleuca lanceolata</i> ssp <i>lanceolata</i>	10.8
<i>Beyeria lechenaultii</i>	10.8
<i>Leucophyta brownii</i>	10.8
<i>Alyxia buxifolia</i>	10.3
<i>Threlkeldia diffusa</i>	9.4
<i>Isolepis marginata</i>	9.4
<i>Dianella revoluta</i> var <i>revoluta</i>	8.9
<i>Baumea juncea</i>	8.9
<i>Helichrysum leucopsidium</i>	8.4
<i>Geranium retrorsum</i>	8.4
<i>Stipa flavescens</i>	7.9
<i>Eucalyptus diversifolia</i>	6.9
<i>Austrofestuca littoralis</i>	6.9
<i>Acacia leiophylla</i>	5.9
<i>Lotus australis</i>	5.9
<i>Melaleuca halmaturorum</i> ssp <i>halmaturorum</i>	5.9
<i>Pomaderris paniculosa</i> ssp <i>paniculosa</i>	4.9
<i>Adriana klotzschii</i>	4.9
* <i>Lycium ferocissimum</i>	4.4
<i>Kennedia prostrata</i>	4.4
<i>Senecio odoratus</i> var <i>odoratus</i>	4.4
<i>Allocasuarina verticillata</i>	3.9
<i>Scaevola crassifolia</i>	3.9
<i>Stipa exilis</i>	3.9
* <i>Hypochaeris radicata</i>	3.9
<i>Galium migrans</i>	3.9
* <i>Ammophila arenaria</i>	3.9
* <i>Euphorbia terracina</i>	3.4
<i>Stipa stipoides</i>	3.4
<i>Rhagodia candolleana</i> ssp	3.4
<i>Lasiopetalum discolor</i>	3.0
<i>Billardiera cymosa</i>	3.0
<i>Correa reflexa</i>	3.0
<i>Pimelea glauca</i>	2.5
<i>Banksia marginata</i>	2.5
<i>Dodonaea viscosa</i> ssp <i>spatulata</i>	2.5
<i>Atriplex cinerea</i>	2.0
<i>Lasiopetalum schulzenii</i>	2.0
<i>Pultenaea tenuifolia</i>	2.0
<i>Acacia pycnantha</i>	2.0
<i>Acrotriche cordata</i>	1.5

Species	%
<i>Suaeda australis</i>	1.5
<i>Hydrocotyle capillaris</i>	1.0
<i>Logania crassifolia</i>	1.0
<i>Pomaderris obcordata</i>	1.0
<i>Pultenaea acerosa</i>	1.0
<i>Sarcocornia quinqueflora</i>	1.0
<i>Bursaria spinosa</i>	1.0
<i>Dichelachne crinita</i>	1.0
<i>Enchylaena tomentosa</i> var <i>tomentosa</i>	0.5
<i>Melaleuca gibbosa</i>	0.5
<i>Danthonia setacea</i> var <i>setacea</i>	0.5
<i>Olearia ramulosa</i>	0.5
<i>Acacia paradoxa</i>	0.5
<i>Astroloma humifusum</i>	0.5
<i>Zygophyllum billardierei</i> (NC)	0.5
<i>Veronica hillebrandii</i>	0.5
* <i>Mesembryanthemum crystallinum</i>	0.5
<i>Acacia cupularis</i>	0.5
<i>Hemichroa diandra</i>	0.5
<i>Hakea vittata</i>	0.5
<i>Amyema melaleucae</i>	0.5
<i>Dianella brevicaulis/revoluta</i> var	0.5
<i>Cheilanthes austrotenuifolia</i>	0.5
<i>Hibbertia sericea</i> var <i>sericea</i>	0.5
<i>Frankenia pauciflora</i> var <i>gunnii</i>	0.5

Appendix 9 Plant Species Recorded in only One Region

Freq - number of quadrats where species is recorded,
 * introduced species. Note some non-current (NC) species included may not have a unique regional frequency but are not able to be allocated to more common species due to subsequent splits in the species.

Plant species	Freq
Nullarbor	
Total number of quadrats	64
<i>Atriplex nummularia</i> ssp <i>spathulata</i>	11
<i>Pomaderris forrestiana</i>	9
<i>Brachycome tatei</i>	7
<i>Dianella revoluta</i> var <i>divaricata</i>	2
<i>Gunniopsis calcarea</i>	2
<i>Atriplex stipitata</i>	1
<i>Lepidium phlebopetalum</i>	1
<i>Melaleuca quadrifaria</i>	1
<i>Nicotiana velutina</i>	1
<i>Ptilotus obovatus</i> (NC)	1
<i>Rhagodia ulicina</i>	1
<i>Senecio gawlerensis</i>	1
<i>Solanum simile</i>	1
<i>Zygophyllum glaucum</i>	1
Total	14
Head of Bight	
Total number of quadrats	54
<i>Acacia colletioides</i>	1
<i>Senna artemisioides</i> ssp <i>filifolia</i>	1
<i>Eucalyptus striatocalyx</i>	2
Total	3
Eyre Peninsula west	
Total number of quadrats	194
<i>Danthonia laevis</i>	7
<i>Carpobrotus aequilaterus</i>	5
<i>Prostanthera calycina</i>	3
<i>Santalum murrayanum</i>	2
<i>Triodia irritans</i> var	2
* <i>Zygophyllum emarginatum</i>	2
<i>Cakile edentula</i>	1
<i>Cryptandra amara</i> var	1
<i>Eremophea spinosa</i>	1
<i>Eucalyptus calycogona</i> var	1
<i>Eucalyptus yumbarrana</i> ssp	1

Plant Species	Freq
<i>Exocarpos strictus</i>	1
<i>Goodenia gibbosa</i>	1
<i>Grevillea pterosperma</i>	1
<i>Hakea francisiana</i>	1
<i>Hakea leucoptera</i> ssp <i>leucoptera</i>	1
<i>Ixiolaena pluriseta</i>	1
<i>Melaleuca eleutherostachya</i>	1
<i>Myoporum platycarpum</i> (NC)	1
<i>Poa bulbosa</i>	1
<i>Stipa scabra</i> ssp <i>scabra</i>	1
<i>Thryptomene calycina</i>	1
Total	22
Eyre Peninsula south	
Total number of quadrats	186
<i>Eucalyptus angulosa</i>	21
<i>Acacia alcockii</i>	7
<i>Baeckea behrii</i>	7
<i>Hibbertia stricta</i> var (NC)	7
<i>Opercularia scabrida</i>	7
<i>Pomaderris flabellaris</i>	7
<i>Hybanthus floribundus</i> ssp <i>floribundus</i>	5
<i>Schoenus nanus</i>	5
<i>Homoranthus homoranthoides</i>	4
<i>Pultenaea rigida</i> var	3
<i>Schoenus racemosus</i>	3
<i>Spyridium leucopogon</i>	3
<i>Stipa blackii</i>	3
<i>Acacia gillii</i>	2
<i>Acacia myrtifolia</i> var	2
<i>Callistemon rugulosus</i> var	2
<i>Chrysocephalum baxteri</i>	2
<i>Halosarcia indica</i> ssp <i>bidens</i>	2
<i>Poa clelandii</i>	2
<i>Pultenaea laxiflora</i>	2
<i>Sphaerolobium minus</i>	2
<i>Alyogyne huegelii</i>	1
<i>Carex pumila</i>	1
<i>Carpobrotus modestus</i>	1
<i>Cheilanthes sieberi</i> ssp <i>sieberi</i>	1
<i>Eucalyptus lansdowneana</i> ssp	1
<i>Grevillea aspera</i>	1

Plant Species	Freq
<i>Haloragis acutangula</i> forma <i>annulata</i>	1
<i>Hibbertia riparia</i> (long-leaved aff <i>H. stricta</i>)	1
<i>Hibbertia stricta</i> var <i>stricta</i>	1
<i>Olearia subspicata</i>	1
<i>Phyllanthus calycinus</i>	1
<i>Prostanthera serpyllifolia</i> ssp <i>microphylla</i> (purplish-green flower)	1
<i>Ptilotus spathulatus</i> forma	1
<i>Scaevola linearis</i> ssp <i>linearis</i>	1
<i>Schoenus carsei</i>	1
<i>Senecio tenuiflorus</i>	1
<i>Xanthorrhoea semiplana</i> ssp <i>semiplana</i>	1
Total	38
Eyre Peninsula east	
Total number of quadrats	23
<i>Acacia continua</i>	1
<i>Eucalyptus flocktoniae</i> x <i>socialis</i>	1
* <i>Gazania rigens</i>	1
Total	3
Spencer Gulf	
Total number of quadrats	48
<i>Alectryon oleifolius</i> ssp <i>canescens</i>	9
<i>Solanum ellipticum</i>	7
<i>Maireana pyramidata</i>	6
<i>Maireana astrotricha</i>	4
<i>Myoporum platycarpum</i> ssp	4
<i>Acacia papyrocarpa</i>	3
<i>Amyema miraculosum</i> ssp <i>boormanii</i>	3
<i>Chenopodium desertorum</i> ssp <i>desertorum</i>	3
<i>Myoporum montanum</i>	3
<i>Senna artemisioides</i> notho ssp <i>coriacea</i>	3
<i>Dissocarpus biflorus</i> var <i>biflorus</i>	2
<i>Dodonaea lobulata</i>	2
<i>Minuria cunninghamii</i>	2
<i>Santalum spicatum</i>	2
<i>Tetragonia eremaea</i>	2
<i>Zygophyllum iodocarpum</i>	2
<i>Acacia ancistrophylla</i> var <i>lissophylla</i>	1
<i>Amyema quandang</i> var <i>quandang</i>	1
<i>Boronia inornata</i> ssp <i>leptophylla</i>	1
<i>Chenopodium curvispicatum</i>	1
<i>Chenopodium desertorum</i> ssp <i>anidiophyllum</i>	1
<i>Eremophila oppositifolia</i> var <i>oppositifolia</i>	1
<i>Eucalyptus flocktoniae</i>	1
<i>Olearia pimeleoides</i> ssp <i>pimeleoides</i>	1
<i>Sarcostemma viminalis</i> ssp <i>australe</i>	1
<i>Stipa breviglumis</i>	1
Total	26
Yorke Peninsula	
Total number of quadrats	208
<i>Dianella revoluta</i> var	19

Plant Species	Freq
<i>Allocasuarina pusilla</i>	3
<i>Cryptandra amara</i> var <i>amara</i>	3
* <i>Micropterum papulosum</i>	3
* <i>Polygala myrtifolia</i>	3
<i>Disphyma crassifolium</i> ssp <i>crassifolium</i> (NC)	2
<i>Podolepis rugata</i> var <i>rugata</i>	2
<i>Sida petrophila</i>	2
<i>Acacia farinosa</i>	1
<i>Acacia microcarpa</i>	1
<i>Acacia nyssophylla</i>	1
<i>Acacia trineura</i>	1
<i>Acrotriche cordata</i> x <i>patula</i>	1
* <i>Argyranthemum frutescens</i> ssp <i>frutescens</i>	1
* <i>Euphorbia helioscopia</i>	1
<i>Haloragis acutangula</i> forma <i>acutangula</i>	1
<i>Logania minor</i>	1
* <i>Lolium</i> x <i>hybridum</i>	1
<i>Olearia brachyphylla</i>	1
<i>Stipa scabra</i> ssp	1
Total	20
Gulf St Vincent	
Total number of quadrats	54
<i>Velleia arguta</i>	3
<i>Leptorhynchos elongatus</i>	2
<i>Picris squarrosa</i>	2
* <i>Salvia verbenaca</i> form A	2
<i>Wahlenbergia communis</i>	2
<i>Acacia hakeoides</i>	1
<i>Acacia paradoxa</i> hybrid	1
* <i>Acacia saligna</i>	1
* <i>Arctotis stoechadifolia</i>	1
* <i>Carpobrotus edulis</i>	1
* <i>Chondrilla juncea</i>	1
<i>Danthonia tenuior</i>	1
* <i>Frankenia pulverulenta</i>	1
<i>Glycine clandestina</i> var	1
<i>Halosarcia pruinosa</i>	1
<i>Halosarcia syncarpa</i>	1
* <i>Linum trigynum</i>	1
<i>Orobancha cernua</i> var <i>australiana</i>	1
* <i>Osteospermum fruticosum</i>	1
* <i>Piptatherum miliaceum</i>	1
<i>Plantago gaudichaudii</i>	1
* <i>Plantago lanceolata</i> var <i>dubia</i>	1
<i>Podolepis jaceoides</i>	1
<i>Stipa multispiculis</i>	1
<i>Teucrium sessiliflorum</i>	1
<i>Vittadinia blackii</i>	1
Total	26
Kangaroo Island south	
Total number of quadrats	139

Plant Species	Freq
<i>Olearia ciliata</i> var <i>squamifolia</i>	7
<i>Hibbertia prostrata</i>	6
<i>Baeckea ericaea</i>	5
<i>Darwinia micropetala</i> (NC)	5
<i>Stylidium tepperianum</i>	4
<i>Conospermum patens</i>	3
<i>Eucalyptus baxteri</i>	3
<i>Montia australasica</i>	3
<i>Myriophyllum muelleri</i>	3
<i>Stylidium graminifolium</i>	3
<i>Calytrix smeatoniana</i>	2
<i>Choretrum spicatum</i>	2
<i>Hibbertia acicularis</i>	2
<i>Hibbertia stricta</i> (NC)	2
<i>Myoporum brevipes</i>	2
<i>Ottelia ovalifolia</i>	2
<i>Acaena</i> x <i>anserovina</i>	1
<i>Asperula euryphylla</i> var <i>tetraphylla</i>	1
<i>Blechnum nudum</i>	1
<i>Eleocharis sphacelata</i>	1
<i>Eucalyptus remota</i>	1
<i>Hakea carinata</i>	1
<i>Hydrocotyle hirta</i>	1
<i>Isolepis fluitans</i>	1
<i>Lepidosperma laterale</i> (NC)	1
<i>Myriophyllum simulans</i>	1
<i>Parahebe derwentiana</i> (NC)	1
<i>Pimelea macrostegia</i>	1
<i>Pomaderris halmaturina</i> ssp <i>halmaturina</i>	1
<i>Spyridium phlebophyllum</i>	1
<i>Veronica calycina</i>	1
<i>Xanthosia tasmanica</i>	1
Total	32
Kangaroo Island east	
Total number of quadrats	81
<i>Prostanthera aspalathoides</i>	4
<i>Glycine latrobeana</i>	1
<i>Gyrostemon thesioides</i>	1
<i>Lasiopetalum</i> x <i>tepperi</i>	1
<i>Luzula flaccida</i>	1
<i>Scaevola aemula</i>	1
<i>Spyridium eriocephalum</i> (NC)	1
* <i>Veronica arvensis</i>	1
Total	8
Kangaroo Island north	
Total number of quadrats	60
<i>Logania insularis</i>	4
<i>Eucalyptus odorata</i>	3
<i>Acacia myrtifolia</i> var <i>angustifolia</i>	2
<i>Acrotriche halmaturina</i>	2
<i>Eriostemon angustifolius</i> ssp <i>angustifolius</i>	2

Plant Species	Freq
<i>Grevillea rogersii</i>	2
<i>Hibbertia sericea</i> var <i>major</i> (NC)	2
<i>Lasiopetalum</i> Cordate-leaved HP Vonow 810	2
<i>Olearia teretifolia</i>	2
* <i>Coronopus didymus</i>	1
<i>Cyperus vaginatus</i>	1
<i>Euchiton gymnocephalus</i>	1
<i>Hibbertia paeninsularis</i>	1
<i>Olearia microdisca</i>	1
<i>Platysace heterophylla</i> var <i>tepperi</i>	1
<i>Pultenaea teretifolia</i> var <i>brachyphylla</i>	1
<i>Pultenaea villifera</i> var <i>glabrescens</i>	1
<i>Tricostularia pauciflora</i>	1
Fleurieu Peninsula	
Total number of quadrats	84
<i>Spyridium coactilifolium</i>	14
<i>Pultenaea canaliculata</i> var <i>latifolia</i>	8
<i>Senecio odoratus</i> var <i>obtusifolius</i>	7
<i>Bossiaea prostrata</i>	5
<i>Brachyloma ericoides</i> ssp	5
<i>Dampiera dysantha</i>	5
<i>Prostanthera chlorantha</i>	5
<i>Grevillea muricata</i>	4
<i>Laxmannia sessiliflora</i> (NC)	4
<i>Grevillea ilicifolia</i> var	3
<i>Grevillea lavandulacea</i> var	3
<i>Leucopogon virgatus</i>	3
<i>Lomandra sororia</i>	3
* <i>Melianthus comosus</i>	3
<i>Acacia dodonaeifolia</i> x <i>paradoxa</i>	2
<i>Dampiera lanceolata</i> var	2
<i>Danthonia pilosa</i> var <i>paleacea</i>	2
<i>Daviesia pectinata</i>	2
<i>Disphyma crassifolium</i> ssp	2
<i>Eriostemon pungens</i>	2
<i>Eucalyptus leucoxydon</i> ssp <i>leucoxydon</i>	2
<i>Grevillea lavandulacea</i> var <i>lavandulacea</i>	2
<i>Lomandra fibrata</i>	2
<i>Olea europaea</i> ssp	2
<i>Pseudanthus micranthus</i>	2
<i>Senecio odoratus</i> var	2
<i>Solanum hermanni</i>	2
<i>Stipa curtica</i>	2
* <i>Acacia longifolia</i> var <i>longifolia</i>	1
<i>Acacia retinodes</i> var	1
<i>Boronia coerulescens</i> ssp <i>coerulescens</i>	1
<i>Danthonia eriantha</i>	1
<i>Danthonia racemosa</i> var <i>racemosa</i>	1
<i>Daviesia leptophylla</i>	1
<i>Dodonaea viscosa</i> ssp <i>cuneata</i>	1
<i>Einadia nutans</i> ssp	1

Plant Species	Freq
<i>Enneapogon nigricans</i>	1
<i>Hibbertia incana</i>	1
<i>Lepidosperma curtisiae</i>	1
<i>Logania linifolia</i>	1
<i>Lomandra nana</i>	1
<i>Olearia grandiflora</i>	1
<i>Olearia pannosa</i> ssp <i>pannosa</i>	1
<i>Olearia tubuliflora</i>	1
* <i>Paspalum vaginatum</i>	1
<i>Patersonia fragilis</i>	1
* <i>Pentaschistis pallida</i>	1
<i>Pimelea humilis</i>	1
<i>Platysace heterophylla</i> var <i>heterophylla</i>	1
<i>Ptilotus spathulatus</i> forma <i>angustatus</i>	1
* <i>Rosa canina</i>	1
* <i>Salvia verbenaca</i> form	1
<i>Scaevola albida</i> var (NC)	1
<i>Scaevola albida</i> var <i>albida</i>	1
<i>Tetradlea pilosa</i> ssp <i>pilosa</i>	1
Total	55
Coorong	
Total number of quadrats	175
<i>Xanthorrhoea caespitosa</i>	13
<i>Carpobrotus modestus</i> /rossii	4
<i>Lepidosperma concavum</i> /congestum/ <i>laterale</i>	3
<i>Brachycome uliginosa</i>	2
<i>Eucalyptus leucoxylon</i> ssp	2
<i>Stipa mollis</i> group	2
<i>Dianella longifolia</i> var	1
<i>Eucalyptus leucoxylon</i> ssp <i>pruinosa</i> (NC)	1
<i>Imperata cylindrica</i>	1
<i>Pelargonium rodneyanum</i>	1
<i>Stipa nitida</i> group (NC)	1
* <i>Taraxacum erythrospermum</i>	1
Total	12
South East	
Total number of quadrats	203
<i>Ozothamnus ferrugineus</i>	10
* <i>Sambucus gaudichaudiana</i>	8
<i>Melaleuca squarrosa</i>	6
* <i>Festuca arundinacea</i>	5
* <i>Puccinellia fasciculata</i>	4
<i>Asperula conferta</i>	3
* <i>Coprosma repens</i>	3
<i>Pultenaea stricta</i>	3
* <i>Ricinus communis</i>	3
* <i>Solanum aviculare</i>	3
<i>Veronica gracilis</i>	3
<i>Baumea articulata</i>	2
<i>Epilobium pallidiflorum</i>	2
* <i>Festuca pratensis</i>	2

Plant Species	Freq
<i>Gahnia clarkei</i>	2
<i>Isolepis cernua</i>	2
<i>Lemna disperma</i>	2
* <i>Berula erecta</i>	1
<i>Carex fascicularis</i>	1
<i>Cladium procerum</i>	1
<i>Cyperus gymnocaulos</i>	1
<i>Danthonia pilosa</i> var <i>pilosa</i>	1
<i>Eleocharis acuta</i>	1
* <i>Epilobium ciliatum</i>	1
<i>Eucalyptus obliqua</i> var	1
<i>Eucalyptus ovata</i>	1
<i>Gratiola peruviana</i>	1
<i>Haloragis brownii</i>	1
<i>Helichrysum scorpioides</i>	1
<i>Hemarthria uncinata</i> var <i>uncinata</i>	1
<i>Hydrocotyle muscosa</i>	1
<i>Hydrocotyle plebeya</i>	1
<i>Juncus caespiticius</i>	1
<i>Juncus holoschoenus</i>	1
<i>Lomandra longifolia</i>	1
<i>Mentha diemenica</i>	1
<i>Olearia glandulosa</i>	1
* <i>Poa pratensis</i>	1
<i>Pomaderris halmaturina</i> ssp	1
* <i>Ranunculus repens</i>	1
* <i>Rorippa nasturtium-aquaticum</i>	1
<i>Scaevola albida</i> var <i>pallida</i>	1
<i>Schoenoplectus litoralis</i>	1
<i>Senecio squarrosus</i>	1
* <i>Sporobolus indicus</i> var <i>capensis</i>	1
<i>Veronica gracilis</i> (NC)	1
<i>Villarsia umbricola</i> var <i>beaugleholei</i>	1
<i>Villarsia umbricola</i> var <i>umbricola</i>	1
<i>Xanthorrhoea australis</i>	1
<i>Zoysia matrella</i>	1
Total	50

Coastal Dune and Clifftop Vegetation Survey

Appendix X

PLANT SPECIES RATED ENDANGERED OR VULNERABLE

AUS - Australian conservation rating, SA - South Australian conservation rating, R - Regional conservation rating, Conservation status codes (Briggs and Leigh, 1995 and Lang and Kraehenbuehl 1998)

Distribution categories

- 2 species with a very restricted distribution in Australia and with a maximum geographic range of less than 100 km
- 3 species with a range of at least 100 km but occurring only in small populations (often restricted to highly specific and localised habitats)

Conservation categories

- E Endangered: in danger disappearing from the wild state within one or two decades if present land use and other causal factors continue to operate
- V Vulnerable: rare and at risk from potential threats or long term threats which could cause the species to become endangered in the future
- R Rare: has a low overall frequency of occurrence (may be locally common with a very restricted distribution or may be scattered sparsely over a wider area). Not currently exposed to significant threats, but warrants monitoring and protective measures to prevent reduction of population size
- T Threatened: likely to be either Endangered or Vulnerable but insufficient data for a more precise assessment
- K Uncertain: likely to be either Threatened or Rare but insufficient data for a more precise assessment
- Q Not yet assessed but flagged as being of possible significance

U Uncommon: less common species of interest but not rare enough to warrant special protective measures

N Not of particular significance/Common

Reservation categories

- C known to present within a national park or other conservation reserve
- a adequately reserved with a total of at least 1000 plants known to occur in reserves
- I in adequately reserved with

CA - cover abundance (adapted Braun Blanquet), - 0.1 - not many, 1-10 individuals, 0.5 - sparsely or very sparsely present; cover very small (less than 5%), 1.0 - plentiful, but of small cover (less than 5%), 2.0 - any number of individuals covering 5-25% of the area, 3.0 - any number of individuals covering 25-50% of the area, 4.0 - any number of individuals covering 50-75% of the area, 5.0 - covering more than 75% of the area,

LF - lifeform; GEOPID - combination of PID and geomorphic regional location, NUL - Nullarbor, HOB - Head of Bight, EPW - Eyre Peninsula west, EPS - Eyre Peninsula south, EPE - Eyre Peninsula east, SPG - Spencer Gulf, YOP - Yorke Peninsula, SVG - Gulf St Vincent, KIS - Kangaroo Island south, KIE - Kangaroo Island east, KIN - Kangaroo Island north, FLP - Fleurieu Peninsula, COO - Coorong, SOE - South East;

Floristic group - name; Grp - floristic group number, Reserve - reserve name; Map - map number

AUS	SA	R	Plant species	CA	LF	GEOPID	Floristic group	Grp	Reserve	Map	Map Name
	E	E	<i>Billardiera lehmanniana</i>	0.5	V	EPS13389	<i>Melaleuca uncinata</i>	10	-	6028-01	LINCOLN
	E	E	<i>Billardiera lehmanniana</i>	0.5	V	YOP11206			-	6328-02	TURTON
	E	E	<i>Billardiera lehmanniana</i>	0.5	V	YOP11247			-	6328-02	TURTON
	E	E	<i>Billardiera lehmanniana</i>	0.1	V	YOP11895	<i>Gahnia lanigera/Lepidosperma congestum</i>	39	-	6328-02	TURTON
	E	E	<i>Billardiera lehmanniana</i>	0.5	V	YOP15789	<i>Olearia axillaris/Rhagodia candolleana ssp.candolleana</i>	43	-	6428-04	CURRAMULKA
3EC-	E	E	<i>Euphrasia collina ssp. osbornii</i>	0.5	J	FLP15990	<i>Eucalyptus diversifolia/Gonocarpus mezianus</i>	13	-	6626-04	ENCOUNTER
3EC-	E	E	<i>Euphrasia collina ssp. osbornii</i>	1	J	KIE14744	<i>Acacia paradoxa</i>	17	-	6526-03	WILLOUGHBY
3EC-	E	E	<i>Euphrasia collina ssp. osbornii</i>	1	J	SVG15994	<i>Beyeria lechenaultii/Acrotriche patula</i>	11	-	6627-04	NOARLUNGA
2ECa	E	E	<i>Olearia microdisca</i>	0.5	SD	KIN14639	<i>Eucalyptus cosmophylla</i>	14	-	6226-01	SNUG COVE

AUS	SA	R	Plant species	CA	LF	GEOPID	Floristic group	Grp	Reserve	Map	Map Name
	V	V	<i>Asperula euryphylla</i> var. <i>tetraphylla</i>	0.5	J	KIS04534			-	6326-03	VIVONNE
2VCa	V	V	<i>Logania insularis</i>	0.5	SC	KIN14603	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	22	Flinders Chase	6226-04	BORDA
2VCa	V	V	<i>Logania insularis</i>	1	SD	KIN14604	<i>Melaleuca lanceolata/Melaleuca gibbosa</i>	22	Flinders Chase	6226-04	BORDA
2VCa	V	V	<i>Logania insularis</i>	0.5	SD	KIN04410			Flinders Chase	6226-04	BORDA
2VCa	V	V	<i>Logania insularis</i>	0.5	SD	KIN04409			Flinders Chase	6626-04	BORDA
	V	V	<i>Olearia glandulosa</i>		SA	SOE00017			Little Dip	6823-02	BEACHPORT
3VCa	V	V	<i>Olearia pannosa</i> ssp. <i>pannosa</i>	0.1	SC	FLP15933	<i>Eucalyptus diversifolia/Gonocarpus mezeianus</i>	13	Newland Head	6626-04	ENCOUNTER
3VC-	V	E	<i>Pomaderris halmaturina</i> ssp. <i>halmaturina</i>	0.5	SC	KIS04435			-	6226-03	VENNACHAR
2VCi	V	V	<i>Prostanthera calycina</i>	0.1	SD	EPW13935	<i>Triodia compacta</i>	31	-	5731-01	CALCA
2VCi	V	V	<i>Prostanthera calycina</i>	0.5	SD	EPW12427			Venus Bay	5831-04	VENUS
2VCi	V	V	<i>Prostanthera calycina</i>	0.1	SD	EPW12416			Venus Bay	5831-04	VENUS
2VCi	V	V	<i>Pultenaea villifera</i> var. <i>glabrescens</i>	0.1	SC	KIN14685	<i>Melaleuca gibbosa/Acacia paradoxa</i>	16	-	6326-01	CASSINI
	V	V	<i>Scaevola calendulacea</i>	0.5	P	COO14844	<i>Olearia axillaris/Leucopogon parviflorus</i>	50	Coorong	6726-02	MAGRATH FLAT
	V	V	<i>Scaevola calendulacea</i>	0.5	P	COO14759	<i>Olearia axillaris/Leucopogon parviflorus</i>	50	Coorong	6726-02	MAGRATH FLAT
	V	V	<i>Scaevola calendulacea</i>	2	P	COO14763	<i>Olearia axillaris/Leucopogon parviflorus</i>	50	Coorong	6726-02	MAGRATH FLAT
	V	V	<i>Scaevola calendulacea</i>	2	P	COO14761	<i>Olearia axillaris/Leucopogon parviflorus</i>	50	Coorong	6726-02	MAGRATH FLAT
	V	V	<i>Scaevola calendulacea</i>	0.5	P	COO14842	<i>Olearia axillaris/Leucopogon parviflorus</i>	50	Coorong	6726-02	MAGRATH FLAT
	V	E	<i>Scaevola calendulacea</i>			FLP09130			-	6626-04	ENCOUNTER
	V	V	<i>Scaevola calendulacea</i>	0.5	P	SOE14912	<i>Leucopogon parviflorus/Olearia axillaris</i>	49	Beachport	6823-02	BEACHPORT
	V	V	<i>Scaevola calendulacea</i>	0.5	P	SOE14944	<i>Olearia axillaris/Leucopogon parviflorus</i>	50	-	6823-02	BEACHPORT
	V	V	<i>Scaevola calendulacea</i>	0.5	P	SOE14903	<i>Olearia axillaris/Leucopogon parviflorus</i>	50	Beachport	6823-02	BEACHPORT
	V	V	<i>Scaevola calendulacea</i>	0.5	P	SOE14927	<i>Spinifex sericeus/Euphorbia paralias</i>	51	-	6922-04	BUFFON
	V	V	<i>Scaevola calendulacea</i>		P	SOE00058			Piccaninnie Ponds	7022-02	GAMBIER
	V	V	<i>Senecio odoratus</i> var. <i>obtusifolius</i>			FLP09123			-	6626-04	ENCOUNTER
	V	V	<i>Senecio odoratus</i> var. <i>obtusifolius</i>			FLP08953			-	6626-04	ENCOUNTER

AUS	SA	R	Plant species	CA	LF	GEOPID	Floristic group	Grp	Reserve	Map	Map Name
	V	V	<i>Senecio odoratus</i> var. <i>obtusifolius</i>	0.5	SD	FLP15934	<i>Eucalyptus diversifolia</i> / <i>Gonocarpus mezianus</i>	13	Newland Head	6626-04	ENCOUNTER
	V	V	<i>Senecio odoratus</i> var. <i>obtusifolius</i>			FLP09124			-	6626-04	ENCOUNTER
	V	V	<i>Senecio odoratus</i> var. <i>obtusifolius</i>	0.5	SC	FLP15990	<i>Eucalyptus diversifolia</i> / <i>Gonocarpus mezianus</i>	13	-	6626-04	ENCOUNTER
	V	V	<i>Senecio odoratus</i> var. <i>obtusifolius</i>	0.5	SD	FLP15932	<i>Eucalyptus diversifolia</i> / <i>Gonocarpus mezianus</i>	13	-	6626-04	ENCOUNTER
	V	V	<i>Senecio odoratus</i> var. <i>obtusifolius</i>	0.5	SB	FLP15949	<i>Acacia paradoxa</i>	17	Deep Creek	6526-04	CAPE JERVIS
2VCa	V	V	<i>Spyridium coactilifolium</i>			FLP06679			Newland Head	6526-01	TORRENS VALE
2VCa	V	V	<i>Spyridium coactilifolium</i>			FLP06772			Newland Head	6626-04	ENCOUNTER
2VCa	V	V	<i>Spyridium coactilifolium</i>	0.5	SC	FLP15933	<i>Eucalyptus diversifolia</i> / <i>Gonocarpus mezianus</i>	13	Newland Head	6626-04	ENCOUNTER
2VCa	V	V	<i>Spyridium coactilifolium</i>	3		FLP05000			Newland Head	6526-01	TORRENS VALE
2VCa	V	V	<i>Spyridium coactilifolium</i>			FLP08953			-	6626-04	ENCOUNTER
2VCa	V	V	<i>Spyridium coactilifolium</i>	0.5	SD	FLP15964	<i>Eucalyptus diversifolia</i> / <i>Clematis microphylla</i>	23	Newland Head	6526-01	TORRENS VALE
2VCa	V	V	<i>Spyridium coactilifolium</i>	0.5	SD	FLP15931	<i>Eucalyptus diversifolia</i> / <i>Gonocarpus mezianus</i>	13	Newland Head	6626-04	ENCOUNTER
2VCa	V	V	<i>Spyridium coactilifolium</i>	0.5	SD	FLP15929	<i>Melaleuca lanceolata</i> / <i>Acrotriche patula</i> / <i>Lasiopetalum discolor</i>	19	Newland Head	6626-04	ENCOUNTER
2VCa	V	V	<i>Spyridium coactilifolium</i>			FLP06694			Newland Head	6626-04	ENCOUNTER
2VCa	V	V	<i>Spyridium coactilifolium</i>			FLP06739			Newland Head	6526-01	TORRENS VALE
2VCa	V	V	<i>Spyridium coactilifolium</i>	1	SD	FLP15957	<i>Melaleuca lanceolata</i> / <i>Acrotriche patula</i> / <i>Lasiopetalum discolor</i>	19	Newland Head	6626-04	ENCOUNTER
2VCa	V	V	<i>Spyridium coactilifolium</i>	2	SD	FLP15928	<i>Melaleuca lanceolata</i> / <i>Acrotriche patula</i> / <i>Lasiopetalum discolor</i>	19	Newland Head	6626-04	ENCOUNTER
2VCa	V	V	<i>Spyridium coactilifolium</i>	2	SD	FLP15932	<i>Eucalyptus diversifolia</i> / <i>Gonocarpus mezianus</i>	13	-	6626-04	ENCOUNTER
2VCa	V	V	<i>Spyridium coactilifolium</i>	0.5	SD	FLP15990	<i>Eucalyptus diversifolia</i> / <i>Gonocarpus mezianus</i>	13	-	6626-04	ENCOUNTER
	V	V	<i>Veronica gracilis</i>	0.1	J	SOE15240	<i>Leucopogon parviflorus</i> / <i>Olearia axillaris</i>	49	Nene Valley	7022-03	SCHANK
	V	V	<i>Veronica gracilis</i>	0.5	J	SOE15654			Bucks Lake	6922-02	BENARA
	V	V	<i>Veronica gracilis</i>	1	J	SOE14925	<i>Juncus kraussii</i>	3	Canunda	6922-04	BUFFON
	V	V	<i>Villarsia umbricola</i> var. <i>beaugleholei</i>		J	SOE00034			-	6922-04	BUFFON

AUS	SA	R	Plant species	CA	LF	GEOPID	Floristic group	Grp	Reserve	Map	Map Name
3RC-	R	E	<i>Daviesia pectinata</i>			FLP08953			-	6626-04	ENCOUNTER
3RC-	R	E	<i>Daviesia pectinata</i>	2	S	FLP15934	<i>Eucalyptus diversifolia/Gonocarpus mezianus</i>	13	Newland Head	6626-04	ENCOUNTER
	R	V	<i>Podolepis jaceoides</i>	1	J	SVG11700	<i>Gahnia lanigera/Lepidosperma congestum</i>	39	-	6429-02	ARDROSSAN
	R	V	<i>Xanthosia tasmanica</i>	0.5	J	KIS04535			-	6326-03	VIVONNE
	K	E	<i>Leptorhynchus elongatus</i>	1	J	SVG11700	<i>Gahnia lanigera/Lepidosperma congestum</i>	39	-	6429-02	ARDROSSAN
	K	E	<i>Leptorhynchus elongatus</i>	0.5	J	SVG11887	<i>Gahnia lanigera/Lepidosperma congestum</i>	39	-	6428-02	STANSBURY
	U	E	<i>Hemichroa pentandra</i>	1	SD	KIE04593			-	6426-01	PENNESHAW
	U	E	<i>Hemichroa pentandra</i>	1	SD	KIE04601			-	6426-01	PENNESHAW
	U	E	<i>Hemichroa pentandra</i>	1	SD	KIE04604			-	6426-04	KINGSCOTE
	U	E	<i>Hemichroa pentandra</i>	1	SD	KIE04605			-	6426-04	KINGSCOTE
	U	E	<i>Hemichroa pentandra</i>	0.5	SD	KIE04636			-	6526-03	WILLOUGHBY
	U	E	<i>Orobanche cernua</i> var. <i>australiana</i>	0.5	J	SVG15975	<i>Olearia axillaris/Rhagodia candolleana</i> ssp. <i>candolleana</i>	43	-	6627-04	NOARLUNGA
	N	E	<i>Acacia acinacea</i>	0.5	SB	KIE04625			-	6526-03	WILLOUGHBY
	N	E	<i>Acacia acinacea</i>	1	SB	KIS04574			Seal Bay	6326-02	SEDDON
	N	E	<i>Acacia acinacea</i>	1	SB	KIS04586			-	6426-03	DESTREES
	N	E	<i>Acacia acinacea</i>	0.5	SC	KIS04564			-	6326-03	VIVONNE
	N	E	<i>Acacia acinacea</i>	0.5	SB	KIS04575			Seal Bay	6326-02	SEDDON
	N	E	<i>Acacia acinacea</i>	1	SC	KIS04570			Seal Bay	6326-02	SEDDON
	N	E	<i>Eremophila glabra</i> ssp. <i>glabra</i>	0.1	SD	KIE14675	<i>Eucalyptus cneorifolia/Orthrosanthus multiflorus</i>	15	-	6426-04	KINGSCOTE
	N	E	<i>Eremophila glabra</i> ssp. <i>glabra</i>	0.5	SC	YOP11928	<i>Leucophyta brownii</i>	47	-	6430-03	WALLAROO
	N	E	<i>Geijera linearifolia</i>	0.5	SC	KIE04698			-	6426-04	KINGSCOTE
	N	E	<i>Hibbertia</i> sp. <i>C</i>	0.1	SD	FLP15969	<i>Leucopogon parviflorus/Olearia axillaris</i>	49	-	6526-04	CAPE JERVIS
	N	E	<i>Hibbertia</i> sp. <i>C</i>	1	SD	FLP15983	<i>Gahnia lanigera/Lepidosperma congestum</i>	39	-	6526-04	CAPE JERVIS
	N	E	<i>Wilsonia rotundifolia</i>	0.5	J	YOP11902	<i>Melaleuca halmaturorum</i>	1	-	6328-02	TURTON
	N	V	<i>Eucalyptus gracilis</i>	2	KT	KIE14682	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	29	-	6426-04	KINGSCOTE
	N	V	<i>Eucalyptus gracilis</i>	0.1	KS	KIE14681	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	29	-	6426-04	KINGSCOTE
	N	V	<i>Eucalyptus gracilis</i>	1	KT	SVG15991	<i>Threlkeldia diffusa</i>	25	-	6528-01	VINCENT
	N	V	<i>Eucalyptus rugosa</i>	0.5	KS	FLP15688			-	6526-04	CAPE JERVIS
	N	V	<i>Eucalyptus rugosa</i>	2	KT	FLP15933	<i>Eucalyptus diversifolia/Gonocarpus mezianus</i>	13	Newland Head	6626-04	ENCOUNTER
	N	V	<i>Eucalyptus viminalis</i> ssp. <i>cygnetensis</i>	0.1	LA	EPS13426	<i>Allocasuarina verticillata</i>	18	-	6028-03	SLEAFORD
	N	V	<i>Exocarpos aphyllus</i>	0.1	LB	SVG15976	<i>Threlkeldia diffusa</i>	25	-	6528-01	VINCENT
	N	V	<i>Exocarpos aphyllus</i>	0.5	S	SVG15087	<i>Threlkeldia diffusa</i>	25	-	6528-01	VINCENT

AUS	SA	R	Plant species	CA	LF	GEOPID	Floristic group	Grp	Reserve	Map	Map Name
	N	V	<i>Exocarpos aphyllus</i>	1	S	SVG11699	<i>Olearia axillaris/Rhagodia candolleana ssp.candolleana</i>	43	-	6429-02	ARDROSSAN
	N	V	<i>Exocarpos aphyllus</i>	2	S	SVG11787	<i>Melaleuca lanceolata/Tetragonia implexicoma</i>	29	-	6529-03	INKERMAN
	N	V	<i>Exocarpos aphyllus</i>	2	S	SVG15106	<i>Olearia axillaris/Tetragonia implexicoma</i>	45	-	6529-02	DUBLIN
	N	V	<i>Exocarpos aphyllus</i>	0.5	S	FLP15936	<i>Olearia ramulosa/Calytrix tetragona</i>	12	-	6526-04	CAPE JERVIS
	N	V	<i>Melaleuca halmaturorum ssp. halmaturorum</i>			FLP09216			-	6626-04	ENCOUNTER
	N	V	<i>Orthrosanthus multiflorus</i>	0.5	VL	EPS13431	<i>Melaleuca lanceolata/Acrotriche patula/Lasiopetalum discolor</i>	19	-	6028-03	SLEAFORD
	N	V	<i>Pittosporum phylliraeoides var. microcarpa</i>	0.1	SC	KIN14689	<i>Acacia ligulata</i>	44	-	6326-01	CASSINI
	N	V	<i>Pittosporum phylliraeoides var. microcarpa</i>	0.5	SB	KIN14691	<i>Acacia ligulata</i>	44	-	6326-01	CASSINI
	N	V	<i>Rhagodia parabolica</i>	0.5	SB	FLP15986	<i>Olearia ramulosa/Calytrix tetragona</i>	12	-	6526-04	CAPE JERVIS
	N	V	<i>Santalum acuminatum</i>			FLP06704			Aldinga Scrub	6527-02	YANKALILLA
	N	V	<i>Santalum acuminatum</i>			FLP06708			-	6527-02	YANKALILLA
	N	V	<i>Scaevola angustata</i>	0.1	SD	FLP15970	<i>Beyeria lechenaultii/Acrotriche patula</i>	11	-	6527-02	YANKALILLA