



# Woodland Watch 2005 Survey of Wheatbelt Woodlands







# Western Australian Herbarium







# **Contents**

INTRODUCTION	1
METHODOLOGY	2
TEN BY TEN METRE QUADRATS	2
RANDOM STRATIFIED COLLECTION	2
OVERALL ASSESSMENT	2
RESULTS	3
COLLECTIONS OF NOTE	4
Likely New Species	4
PRIORITY TAXA (CONFIRMED)	4
Cumulative findings	4
SIGNIFICANT RANGE EXTENSIONS	5
CONCLUSION	6
ACKNOWLEDGMENTS	7
REFERENCES	7
MAP OF SURVEY SITES	8
SITE SDECIES I ISTS	0

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# Introduction

Woodland Watch is a woodlands conservation project launched in 2000 by WWF-Australia, in collaboration with the Herbarium of the Department of Conservation and Land Management, and with the assistance of funding from the Natural Heritage Trust and the national Action Plan for Salinity & Water Quality. One of the major objectives of the project was to carry out floristic surveys of selected remnant eucalypt woodlands of the Avon Wheatbelt region – on private farmlands and other lands not within the conservation estate. The Avon Wheatbelt bioregion is situated in the South West Botanical Province of Western Australia, which roughly corresponds to one of WWF's Global 200 priority ecoregions - the Southwest Australia Ecoregion. It is bound by Jarrah forest in the southwest, and the Eremaean Botanical Province –the Murchison and goldfields districts, to the north and east. It encompasses an area of 93,520 square kms, of which 93% has been cleared – predominantly for agriculture (Beard 1990).

Four woodland types considered by WWF-Australia to be amongst the most threatened eucalypt woodland communities of the Avon Wheatbelt region were selected for the research and conservation project: those dominated by salmon gum (Eucalyptus salmonophloia), gimlet (E. salubris), York gum (E. loxophleba) and red morrel (E. longicornis).

The primary aims of the project were to identify woodlands of high conservation value in the Avon Wheatbelt, to assist private landowners and rural communities to better manage and conserve these remnant woodlands, and to help landholders to better understand the major threats to these woodlands and their management needs. These include consideration of such impacts as overclearing and grazing, which have contributed to the secondary and more important problems of salinity, rising water tables, and soil compaction.

Conducting flora surveys in these woodland communities was considered an essential preliminary activity, to highlight their uniqueness and diversity, and to assess and report on their condition. Using this and other information, property owners could then be advised on how best to manage and protect their remnant vegetation through fencing and other management practices, and conservation support schemes such as covenants. Thus, through Woodland Watch, it is possible to address some of the threats to the woodlands, including salinity. Future monitoring of the sites may provide data on the ability and rate at which these eucalypt woodlands can recover from disturbance.

The role of the WA Herbarium in this project was to survey, identify and voucher all plant specimens collected from selected woodland sites. A total of 41 sites were surveyed in the first year (2000), followed by 21 sites in 2001, 25 sites in 2002, 25 sites in 2003, and 35 sites in 2004.

In 2005 a further nine sites were surveyed and 398 voucher specimens collected. To date this series of projects has sampled 156 sites and collected a total of 5,918 voucher specimens.

# Methodology

Sites were surveyed and plants vouchered by Mike Hislop of the WA Herbarium, with the assistance of Rebecca Ovens, Mike Griffiths and Mick Davis of WWF-Australia and Georgie Troup of the Moore Catchment Council. As with previous Woodland Watch surveys, the methodology for each site visited in 2005 comprised three parts:

### Ten by ten metre quadrats

Each 10 x 10 metre quadrat was carefully located soas to proived a typical representation of species composition within the selected woodland type. All species found were collected. Each quadrat was permanently marked by a steel stake on the north-western corner, from which the coordinates were recorded using a GPS.

### Random stratified collection

This involved a random walk covering the confines of the selected woodland, avoiding adjoining habitats to keep the integrity of survey purely to the targeted Eucalyptus woodland habitat.

### **Overall assessment**

An overall assessment of the condition of each site was made using procedures adopted by the Wildflower Society of Western Australia (Trudgen 1991).

This methodology was considered the most effective to achieve the objectives of the project within the time constraints.

# **Results**

In 2005 a total of nine sites were surveyed, resulting in 398 collections. Of the nine woodland sites surveyed. Two were dominated by *Eucalyptus salmonophloia* and four by *Eucalyptus loxophleba*. The remaining three sites were dominated by other woodland types: with the dominant species being either *Eucalyptus todtiana*, *Eucalyptus accedens* or *Eucalyptus arachnaea*. These selected woodlands varied in size and condition, from almost pristine to sites where the understorey has been almost totally cleared.

One site was found to have an exceptionally high numbers of species. Site WW-151, a *Eucalyptus loxophleba* woodland N of Beacon, produced voucher specimens of 57 species. Site WW-156, a mallee woodland (with *Eucalyptus arachnaea*) northwest of Miling, produced 54 species. The smallest collection was recorded for a low woodland (with *Eucalyptus todtiana*), represented by 34 species (Site WW-150, northwest of Moora).



Eucalyptus salubris [Photo: Richard McLellan/WWF-Australia]

### **Collections of note**

A number of gatherings made during the 2005 survey provided small range extensions; some of these were more significant, including several undescribed species, new locations of Priority taxa, and more notable range extensions. These are highlighted below.

### **Likely New Species**

Specimens of three (3) possible new species were collected on Woodland Watch sites during the survey. All require further study.

- Acacia sp. narrow phyllode (B.R. Maslin 7831). WW-151. This is an informal phrase name currently in use at the WA Herbarium to refer to a taxon that is probably unnamed but of uncertain status. This species is widespread in the Southwest Australia Ecoregion.
- Calandrinia sp. Blackberry (D.M. Porter 171). WW-158. A phrase name taxon (refer note above). Widespread in the Southwest Australia Ecoregion.
- **Hemigenia sp Yuna (A.C. Burns 95)**. WW-152. A phrase name taxon (refer note above) at the southern extremity of its distribution at this locality.
- Lepidosperma sp P1 small head (M.D.Tindale 166A).WW-153. Phrase name taxon refer note above. Widespread in the Southwest Australia Ecoregion.

### **Priority taxa (confirmed)**

Ten (4) new populations of DRF and Priority species were recorded during this survey:

	Taxon		Status	Site
•	Calothamnus accedens	DRF		WW-149
•	Hemigenia curvifolia	P2		WW-150
•	Thomasia tenuivestita	P3		WW-153
•	Stenanthemum tridentatum	P4		WW-156

### **Cumulative findings**

These collections add further value to the scientific significance of the Woodland Watch project.

Between 2000 and 2004, a total of 25 collections were made that were considered 'likely new species'. During the same period a total of 28 new populations of Declared Rare Flora (DRF) and Priority flora were also recorded as a result of the Woodland Watch flora surveys.

These new collections (2005) bring the cumulative total of significant findings from the project to 29 likely new species; and 32 new populations of DRF and Priority flora.

# **Significant Range Extensions**

Three (3) taxa were collected with significant range extensions:

	Taxon	Site	Notes
•	Calothamnus accedens	WW-149	Just the sixth known population of this DRF species and particularly significant in that it is the only one not occurring on a road verge. With the exception of a single plant found north of Watheroo it is also the most northerly population.
•	Thomasia tenuivestita	WW-153	This collection represents a westerly range extension for this P3 species. The nearest known population is at Winchester to the northeast.
•	Stenanthemum tridentatum	WW-156	Apart from an occurrence at Gunyidi this is the most northerly known population of this P4 species.

# **Other Collections of Interest:**

	Taxon	Site	Notes
•	Crassula colorata	WW-148	Mixed collection of <i>C. colorata</i> var <i>colorata</i> & var <i>acuminata</i> .
•	Hakea recurva subsp recurva	WW-149	An interesting population in that it comprises both long, recurved leaved and shorter, erect leaved variants. Normally populations are either one or the other with the latter having a more inland distribution.
•	Lepidosperma aff leptostachyum	WW-150	The taxonomy of West Australian Lepidosperma is particularly complex with much work remaining. This entity may either come to be recognised as just a variant within a polymorphic concept of <i>L. leptostachyum</i> or as a separate taxon.
•	Hemigenia curvifolia	WW-150	An apparently very restricted P2 species with most of the eight records at the WA Herbarium coming from the Moora area.
•	Sida atrovirens	WW-151	One of very few collections of this species from the Avon Wheatbelt.
•	Crassula colorata	WW-151	Another mixed collection of <i>C. colorata</i> var colorata & var acuminata.
•	Petrophile megalostegia	WW-153	An unusual flat rather than terete leaved variant.
•	Beaufortia bracteosa	WW-153	This species apparently represents a complex of closely related entities and seems certain to be divided into several segregate taxa with future revisionary studies. This large, scarlet flowered variant is known from several areas of the northern sandplains.

# Conclusion

The woodlands surveyed in 2005 were found to be largely comprised of species in the following plant families (in alphabetical order) — Asteraceae, Chenopodiaceae, Mimosaceae, Papilionaceae and Poaceae.

Although dominated by eucalypts, there are relatively few species of Myrtaceae within these woodlands, except for the genus *Melaleuca*. In the taller shrub layers of these woodlands the latter are probably second in importance only to *Acacia* species. There were eight species of *Melaleuca* found in the woodlands visited in this survey, namely *M. acuminata*, *M. adnata*, *M. atroviridis*, *M. ciliosa*, *M. lanceolata*, *M. radula*, *M. stereophloia* and *M. urceolaris*.

As with sites surveyed in 2000-2001, 2002, 2003 and 2004, Proteaceae was also poorly represented in these woodland types.



Red Morrel woodland [Photo: Richard McLellan/WWF-Australia]

# **Acknowledgments**

This document draws on information collected and provided by Mike Hislop, and was compiled and edited by Nicholas Lander. Document design follows that devised by Alex Chapman for earlier reports in this series. The map was prepared by Paul Gioia and the accompanying web site by Ben Richardson (see **References**). Photographs by Richard McLellan/WWF-Australia.

Special thanks are given to Andrew Brown, Malcolm French, Bruce Maslin, and Paul Wilson for their expert taxonomic advice. The WA Herbarium Database Team (supervisor Sue Carroll) provided much technical assistance.

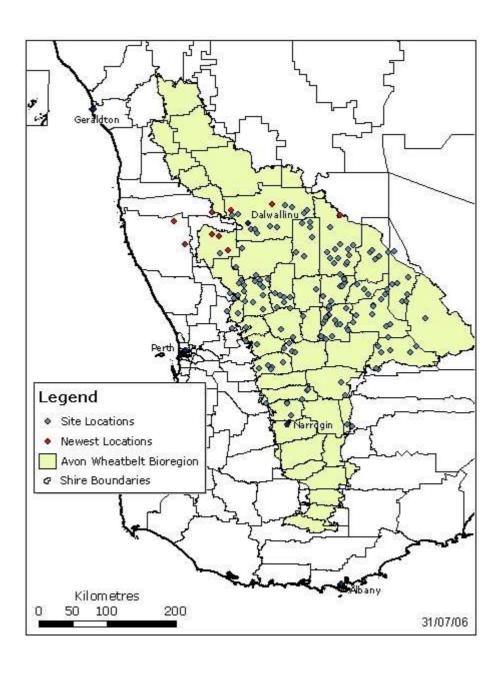
# References

- Beard, J.S. (1990). Plant Life of Western Australia. Kangaroo Press, Kenthurst.
- Hobbs, R.J. & Yates, C.J. (1999). *Temperate Woodlands in Australia*. Surrey Beatty & Sons, Chipping Norton.
- Maslin, B.R. (2001). WATTLE *Acacias of Australia* CD-ROM and manual. Australian Biological Resources Study / Dept of Conservation & Land Management, WA.
- Trudgen, M.E. (1991) Vegetation Condition Scale. Modified by B.J. Keighery in Keighery, B.J. (1994) Bush Land Plant Survey; a Guide to Plant Community Survey for the Community. Wildflower Society of Western Australia (Inc) Nedlands, W.A 6009.
- Western Australian Herbarium (1998). FloraBase Information on the Western Australian flora.

  Department of Conservation and Land Management.

  <a href="http://www.calm.wa.gov.au/science/florabase.html">http://www.calm.wa.gov.au/science/florabase.html</a>
- Western Australian Herbarium (2002). FloraBase Woodland Watch. Department of Conservation and Land Management. http://florabase.calm.wa.gov.au/special/wwatch/
- Western Australian Herbarium (2002). Woodland Watch 2000 and 2001 Survey of Wheatbelt Woodlands. Department of Conservation and Land Management. Unpublished Report.
- WWF-Australia (2001). South West Ecoregion Program Woodland Watch http://www.wwf.org.au/content/woodlandwatch.htm

# **Map of Survey Sites**



# **Site Species Lists**

For a current listing of all Woodland Watch survey sites, please refer to the Western Australian Herbarium's FloraBase - Woodland Watch web site at

http://florabase.calm.wa.gov.au/wwatch/

\* Denotes exotic species

No. of Species: 35 **Site: WW-148** 

Locality: NE of Moora

Vegetation: Eucalyptus salmonophloia woodland

\*Anagallis arvensis var caerulea

Arthropodium dyeri \*Avellinia michelii Bulbine semibarbata Calandrinia calyptrata Calandrinia granulifera

Calandrinia sp. Blackberry (D.M. Porter 171) - This is an informal phrase name currently in use at the WA Herbarium to refer to a taxon that is probably unnamed but of uncertain status.

Calotis hispidula \*Cotula bipinnata

Crassula colorata - Mixed collection of Crassula colorata var, colorata & var, acuminata

Daucus glochidiatus Dodonaea larreoides

\*Ehrharta longiflora

Enchylaena lanata

Eremophila drummondii

Erymophyllum tenellum

Eucalyptus loxophleba subsp loxophleba Eucalyptus obtusiflora subsp obtusiflora

Eucalyptus salmonophloia

\*Galium murale

Goodenia berardiana

Goodenia pusilliflora

Lawrencella rosea

Maireana marginata

Melaleuca acuminata subsp websteri

Melaleuca adnata Parietaria cardiostegia \*Pentaschistis airoides

Plantago debilis

Senecio glossanthus

\*Spergula pentandra

Thysanotus manglesianus

Trachymene cyanopetala

Trachymene ornata

\*Tripteris clandestina

Site: WW-149 No. of Species : 35

Locality: S of Miling

Vegetation: Eucalyptus loxophleba woodland

\*Aira cupaniana

Allocasuarina campestris

Arthropodium dyeri

Austrodanthonia caespitosa

Austrostipa variabilis

Brachyscome perpusilla

\*Bromus rubens

Calothamnus accedens – Declared Rare Flora, just the sixth known population of this species and particularly significant in that it is the only one not occurring on a road verge. With the exception of a single plant found north of Watheroo it is also the most northerly population.

Calotis hispidula

Cheilanthes sieberi subsp sieberi

Comesperma volubile

Drosera glanduligera

Erodium cygnorum

Erymophyllum tenellum

Eucalyptus arachnaea subsp arachnaea

Eucalyptus loxophleba subsp loxophleba

Goodenia pusilliflora

Hakea recurva subsp recurva – An interesting population in that it comprises both long, recurved leaved and shorter, erect leaved variants. Normally populations are either one or the other with the latter having a more inland distribution.

Hyalosperma glutinosum subsp glutinosum

Hydrocotyle pilifera var glabrata

Lepidosperma costale

Melaleuca radula

Neuracne alopecuroidea

\*Parentucellia latifolia

Podolepis lessonii

Prasophyllum gracile

Ptilotus holosericeus

Ptilotus spathulatus forma spathulatus

Rhodanthe laevis

Rhodanthe pygmaea

Siloxerus multiflorus

Trachymene cyanopetala

Trachymene ornata

Velleia cycnopotamica

\*Vulpia muralis

Site: WW-150 No. of Species : 34

Locality: NW of Moora

Vegetation: Eucalyptus todtiana woodland

Actinostrobus arenarius Amphipogon turbinatus

Anigozanthos humilis subsp humilis Banksia leptophylla var leptophylla

Banksia prionotes

Boronia ramosa subsp anethifolia

Caladenia flava subsp flava

Chamelaucium drummondii subsp drummondii

Conospermum stoechadis subsp stoechadis

Conostylis teretifolia subsp teretifolia

Cryptandra pungens

Drosera erythrorhiza subsp magna

Drosera menziesii subsp penicillaris

Dryandra lindleyana subsp lindleyana

Eremaea pauciflora var lonchophylla

Eucalyptus todtiana

Hemigenia curvifolia — Priority 2 taxon. An apparently very restricted species with most of the 8 records at the WA Herbarium from the Moora area.

Hibbertia acerosa

Hibbertia hypericoides

Lepidobolus preissianus subsp preissianus

Lepidosperma aff leptostachyum – The taxonomy of the West Australian Lepidosperma is particularly complex with remaining work remaining to do. This entity may either come to be recognised as just a variant within a polymorphic concept of L. leptostachyum or as a separate taxon.

Leptospermum erubescens

Leucopogon oliganthus

Mesomelaena preissii

Millotia tenuifolia var tenuifolia

Mirbelia trichocalyx

Neurachne alopecuroidea

Opercularia vaginata

Petrophile recurva

Rhodanthe citrina

Schoenus clandestinus

Stylidium adpressum

Synaphea spinulosa

Trachymene pilosa

Site: WW-151 No. of Species : 57

Locality: N of Beacon

Vegetation: Eucalyptus loxophleba woodland

Acacia sp. narrow phyllode (B.R. Maslin 7831)

Acacia obtecta

Acacia tetragonophylla

Actinobole uliginosum

Alyxia buxifolia

Arthropodium dyeri

Austrostipa tenuifolia

Austrostipa trichophylla

Brachyscome ciliocarpa

Calandrinia eremaea

Calotis hispidula

Cephalipterum drummondii

Cheilanthes sieberi subsp sieberi

Chthonocephalus pseudevax

Comesperma integerrimum

Crassula colorata - A mixed collection of Crassula colorata var colorata & var acuminata

\*Cuscuta planiflora

Dampiera lavandulacea

Daucus glochidiatus

Dianella revoluta

Elvmus scaber

Enchylaena lanata

Erodium cygnorum

Eucalyptus loxophleba subsp supralaevis

Exocarpos aphyllus

Gilruthia osbornei

Goodenia berardiana

Hakea recurva subsp recurva

Hyalosperma demissum

Hyalosperma glutinosum subsp glutinosum

Hyalosperma zacchaeus

Hydrocotyle pilifera var glabrata

\*Hypochaeris glabra

Isoetopsis graminifolia

Maireana georgei

\*Medicago truncatula

Melaleuca stereophloia

Millotia myosotidifolia

Nicotiana rotundifolia

Olearia pimeleoides

Plantago debilis

Podolepis canescens

Ptilotus gaudichaudii var parviflorus

Ptilotus obovatus

Rhodanthe chlorocephala subsp rosea

Rhodanthe laevis

Rhodanthe pygmaea

Schoenia cassiniana

Senecio glossanthus

Senna artemisioides subsp filifolia

Sida atrovirens - One of very few collections of this species from the Avon Wheatbelt.

Stenopetalum filifolium

Thysanotus manglesianus

Trachymene cyanopetala

Trachymene ornata

Velleia cycnopotamica

Waitzia acuminata var acuminata

Site: WW-152 No. of Species : 51

Locality: E of Wubin

Vegetation: Eucalyptus salmonophloia woodland

Acacia anthochaera

Acacia erinacea

Allocasuarina acutivalvis subsp acutivalvis

Angianthus tomentosus

Austrostipa variabilis

\*Brassica tournefortii

Calandrinia eremaea

Cephalipterum drummondii

Comesperma integerrimum

Crassula colorata var colorata

\*Cuscuta planiflora

Dodonaea inaequifolia

Enchylaena lanata

Eremophila oldfieldii subsp oldfieldii

Eremophila oppositifolia subsp angustifolia

Eucalyptus salmonophloia

Gastrolobium laytonii

Grevillea obliquistigma subsp obliquistigma

Hakea preissii

Hemigenia sp Yuna (A.C. Burns 95) – A phrase name taxon (refer note above) at the southern extremity of its distribution at this locality.

Lepidium oxytrichum

Lepidium rotundum

Maireana carnosa

Maireana georgei

Maireana marginata

Maireana trichoptera

Melaleuca atroviridis

Olearia muelleri

Parietaria cardiostegia

Philotheca brucei subsp brucei

Pimelea microcephala subsp microcephala

Pittosporum angustifolium

Pogonolepis muelleriana

Ptilotus divaricatus var divaricatus

Ptilotus exaltatus

Ptilotus obovatus

Rhagodia drummondii

Santalum acuminatum

Scaevola spinescens

Sclerolaena diacantha

Sclerolaena drummondii

Sclerostegia disarticulata

Senecio glossanthus

Senna artemisioides subsp filifolia

\*Silene nocturna

\*Sisymbrium orientale

\*Spergula pentandra

Stenopetalum lineare

Thysanotus manglesianus

Zygophyllum eremaeum

Zygophyllum ovatum

Site: WW-153 No. of Species: 44

Locality: NW of Watheroo

Vegetation: Eucalyptus accedens woodland with E. gittinsii

Acacia shuttleworthiana Acacia applanata

Allocasuarina microstachva

Baeckea grandiflora

Beaufortia bracteosa – This species apparently represents a complex of closely related entities and seems certain to be divided into several segregate taxa with future revisionary studies. This large, scarlet flowered variant is known from several areas of the northern sandplains.

Billardiera venusta

Calothamnus sanguineus

Calytrix leschenaultii

Caustis dioica

Cryptandra pungens

Cryptandra wichurae

Desmocladus lateriticus

Diplolaena velutina

Drosera stolonifera subsp porrecta

Dryandra armata

Dryandra bipinnatifida subsp multifida

Eucalyptus accedens

Eucalyptus gittinsii subsp illucida

Gastrolobium plicatum

Glischrocaryon aureum var aureum

Hakea incrassata

Hakea lissocarpha

Hakea stenocarpa

Hibbertia acerosa

Hibbertia crassifolia

Hibbertia hypericoides

Jacksonia hakeoides

Lepidosperma sp P1 small head (M.D.Tindale 166A) - Phrase name taxon, refer note above.

Leucopogon oldfieldii

Melaleuca ciliosa

Melaleuca urceolaris

Neurachne alopecuroidea

Opercularia vaginata

Petrophile megalostegia - An unusual flat rather than terete leaved variant.

Petrophile shuttleworthiana

Philotheca pinoides

Philotheca spicata

Schoenus clandestinus

Stylidium miniatum

Synaphea spinulosa

Tetratheca confertifolia

Thomasia tenuivestita Priority 3 taxon. – This collection represents a westerly range extension for this species. The nearest known population is at Winchester to the northeast.

Trachymene pilosa Verticordia nobilis

Site: WW-154 No. of Species: 45

Locality: NE of Watheroo

Vegetation: Eucalyptus loxophleba woodland

\*Aira cupaniana

Acacia andrewsii

Allocasuarina campestris

Austrostipa scabra

Austrostipa tenuifolia

Austrostipa trichophylla

Borya sphaerocephala

\*Bromus rubens

Calandrinia eremaea

Calotis hispidula

Cephalipterum drummondii

Cheilanthes sieberi subsp sieberi

Crassula colorata var acuminata

\*Ehrharta longiflora

Elymus scaber

Enchylaena lanata

Eremophila oldfieldii subsp oldfieldii

Erymophyllum tenellum

Eucalyptus loxophleba subsp loxophleba

Exocarpus aphyllus

Gonocarpus nodulosus

Goodenia berardiana

Goodenia pusilliflora

Grevillea levis

Hyalosperma glutinosum subsp glutinosum

Hydrocotyle pilifera var glabrate

\*Hypochaeris glabra Isoetopsis graminifolia Lawrencella rosea

Lepidium rotundum

Lepidosperma costale

Maireana marginata

Oxalis perennans

\*Parentucellia latifolia

\*Pentaschistis airoides

Podolepis lessonii

Ptilotus divaricatus var divaricatus

Rhagodia drummondii

Rhodanthe manglesii

Rhodanthe polycephala

Scaevola spinescens

Sclerolaena diacantha

Thysanotus manglesianus

Trachymene cyanopetala

Trymalium daphnifolium

Waitzia nitida

Site: WW-155 No. of Species: 43

Locality: NW of Wubin

Vegetation: Eucalyptus loxophleba woodland

Acacia acuaria

Acacia anthochaera

Acacia erinacea

Alyxia buxifolia

Angianthus tomentosus

Arthropodium curvipes

Austrostipa elegantissima

Austrostipa scabra

Brachyscome perpusilla

Bulbine semibarbata

Calandrinia eremaea

Calotis hispidula

Crassula colorata var acuminata

Enchylaena lanata

Erymophyllum tenellum

Eucalyptus loxophleba subsp supralaevis

Exocarpos aphyllus

Hakea recurva subsp recurva

Hyalosperma glutinosum subsp glutinosum

Lepidium rotundum

\*Lamarckia aurea

Maireana carnosa

Maireana marginata

Olearia muelleri

Plantago debilis

Podolepis lessonii

Pogonolepis muelleriana

Ptilotus eriotrichus

Ptilotus gaudichaudii var parviflorus

Ptilotus obovatus

Rhagodia drummondii

Rhagodia preissii subsp preissii

Rhodanthe laevis

Rhodanthe polycephala

Sclerolaena diacantha

Sclerolaena drummondii Senecio glossanthus Senna charlesiana Thysanotus manglesianus Trachymene ornata Waitzia acuminata var acuminata Zygophyllum simile

Site: WW-156 No. of Species : 54

Locality: NW of Miling

Vegetation: Eucalyptus arachnaea woodland

\*Arctotheca calendula Acacia erinacea Acacia hemiteles Acacia ligustrina

Austrostipa elegantissima

Austrostipa scabra
Austrostipa variabilis
Baeckea crispiflora
Blennospora drummondii
Borya sphaerocephala
Calandrinia calyptrata
Calandrinia eremaea

Comesperma integerrimum

\*Cotula bipinnata

Calotis hispidula

Crassula colorata var acuminata

Daucus glochidiatus

Daviesia benthamii subsp benthamii Dodonaea divaricata

Dodonaea larreoides Enchylaena lanata Eremophila drummondii

Eremophila lehmanniana

Eremophila oldfieldii subsp oldfieldii

Erodium cygnorum
Erymophyllum tenellum
Eucalyntus arachnagas

Eucalyptus arachnaea subsp arachnaea

Goodenia berardiana Goodenia pusilliflora

Hyalosperma glutinosum subsp glutinosum

Isotropis juncea Maireana marginata Melaleuca concreta Melaleuca coronicarpa Neurachne alopecuroidea

Oxalis perennans \*Parentucellia latifolia

Plantago debilis

Ptilotus divaricatus var divaricatus

Rhagodia drummondii Rhodanthe laevis Rhodanthe manglesii

Rhodanthe polycephala

Scaevola spinescens Schoenus clandestinus Sclerolaena diacantha Stenanthemum tridentatum Priority 4 taxon. – Apart from an occurrence at Gunyidi this is the most northerly known population of this species.

Stenanthemum tridentatum Priority 4 taxo known population of this species. Stylidium periscelianthum Thysanotus manglesianus Trachymene cyanopetala Trymalium daphnifolium Ttrachymene ornata Waitzia nitida