

NOTES
ON THE VEGETATION
OF PIMBE STATION

by

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CALM VOLUNTEER

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1.0 Introduction

Pimbe Station was visited on the 15 to 17 July 1998. The aim was to gather preliminary descriptions of the vegetation of the station to assist the Department of Conservation and Land Management in establishing the nature conservation value of the station. These descriptions are given in section 5.0, 12 sites were recorded.

2.0 Methods

Sites were chosen to represent the major variation on the station, using rangeland type and geology maps as guides in the selection. Mr Norm McKenzie and Mr Angus Hopkins of CALM provided advice and guided the selection process.

At each site brief notes were made of the physical characteristics of the site and then the height and percentage cover of the dominant plant species were recorded. A list of other plant species present was then recorded, as most annual species were only present as seedlings many of these could only be ascribed to a genus.

The site data recorded was typed up to prepare section 5.0. during this process the data was used to prepare vegetation descriptions.

3.0 Acknowledgements

Mr Norm McKenzie and Mr Angus Hopkins provided entertaining and stimulating company in the field as well as a sonorous nightly chorus.

Mr Greg Kieghery of CALM assisted with the identification of many of the plant specimens. Mrs S. Lam typed the field notes.

The owners of Pimbe Station, Kim and Belinda Miles, kindly allowed use of their shearers quarters and provided meals during the survey.

4.0 Overview of the vegetation and flora of Pimbe Station

The vegetation of Pimbe Station is largely dominated by Acacia (Wattle) species, including both trees and large shrubs. The major trees are:

Acacia coriacea ssp. pendens (Waterwood or Dune Gidgee) which dominates many of the sand dunes on the station.

Acacia pruinocarpa (Gidgee) which is less common.

Acacia citrinoviridis which is more common on plains on the east of the station.

Acacia aneura (Mulga, three forms were observed on the station) which occurs mostly in depressions on Pimbe Station.

The major shrubs are:

Acacia tetragonophylla (Curara Bush) which mostly occurs in slight depressions with more clayey soil on Pimbe.

Acacia wanyu (Bowgada) which forms extensive shrublayers on plains and the seed of which is apparently an important food source for sheep on the station.

Acacia coolgardiensis ssp effusa was a common shrub.

Eucalypts were uncommon, with the only species recorded being Corymbia lenziana. Eucalyptus camaldulensis was observed on the Wooramel River outside Pimbe but, probably occurs along this river where it cuts through the southern section of Pimbe.

The shrub flora of the station is quite low in diversity, with only a few species being common, including the shrub Acacia species noted above and Cassia helmsii (?x), Solanum lasiophyllum, Ptilotus obovatus and Chorizema spp.

The herb flora on the other hand was more diverse but, could not be properly sampled as most species were only present as seedlings.

5.0 Description of the vegetation recording sites recorded on Pimbe Station

Site number: 1

Topography: Crest and upper slopes of a north-west/south-east trending sand dune.

Soil: Red, fine siliceous sand.

Lat/Long.: 25°30'01.6" S 114°43'09.1". Photograph: No. 5-6 roll 1 (N.MacKenzie).

Date: 15-7-98.

Vegetation description: Acacia coriacea ssp. pendens low woodland over scattered shrubs of Mirbelia aff ramulosa over Sida sp. low open shrubland to low shrubland (mostly dead) over ? Eriachne (dead) annual tussock grassland.

Condition: Good. Sida sp. low open shrubland to low shrubland (mostly dead).

Dominants:

Acacia coriacea ssp. pendens 5-8 m 15-20%

Mirbelia spinosa 1-1.4 m 1-2%

Notes: The annuals were mostly juveniles. The Euphorbia was dead. Also on the dunes: Grevillea ?eristachya, Solanum orbiculatum. Patches of Sida sp. (dead) in small hollows. Lots of rabbit droppings seen. Litter cover < 5-10%. No weeds observed, possibly has lost perennial grasses. Has been heavily grazed, but for region as it is now, is a reasonable example. Acacia sp. shrub 3.5 m tall, straggly, nodes like Exocarpus, bark grey-brown coarsely fibrous, twigs green.

Associated annuals: Euphorbia, Rhodanthe fitzgibonii, Trachymene, Brachycome iberidifolia, Erodium, Aristida.

Associated perennials: Acacia wanyu, Acacia coolgardiensis ssp. effusa, Eragrostis lanipes, Calytrix truncatifolia, Rhagodia eremaea, Maireana planifolia, Tricoryne aff corynothecoides, Solanum lasiophyllum, Acacia sp.

Site number: 2

Topography: Interdunal sand plain.

Soil: Red, fine siliceous sand.

Lat/Long.: 25°27'55" 114°47'32". Photograph: No. 8/9/10 roll 1. Date: 15-7-98.

Vegetation description: Acacia coriacea ssp. pendens low open woodland over Acacia wanyu high shrubland over Ptilotus schwartzii, Sida sp. (= site 1), Solanum lasiophyllum low open shrubland over scattered ?Eriachne sp. and annual Eriachne.

Dominants:

Acacia coriacea ssp. pendens 5-9 m 2-5 %

Acacia wanyu 2-4 m 10-20%

?Eriachne sp. XXXX 1%

Notes: Location: about 3.7 km north of Mill 2 (= Middle Mill). Some litter in patches.

Condition: Poor to good.

Associated annuals: Erodium, Trachymene.

Associated perennials: *Sida atrovirens*, *Stipa elegantissima*, *Eremophila* sp., *Eremophila ?forrestii* sp. *forrestii*, *Acacia tetragonophylla*.

Associated lianes: *Rhyncharrhena linearis*.

Stones Bore

Localised heavy infestation of double gee (**Emex australis*), forming a herbfield with a *Tetragonia* (possibly **Tetragonia cristata*), some **Brassica* and native species.

Site number: 3

Topography: Fairly flat.

Soil: Siliceous red sand, area underlain by silcrete (see Geol map).

Lat/Long.: 25°25'48"S 114°46'14"E. Photographs: No. 11-16 roll 1. Date: 15-7-98.

Vegetation description: *Acacia coolgardiensis* ssp. *effusa*, *Acacia tetragonophylla* high shrubland over *Chorizema* sp. (leafy), *Cassia helmsii* shrubland

Dominants:

Acacia coolgardiensis ssp. *effusa* 3.5 m 5% (10%)

Acacia tetragonophylla 2-3.5 m ≥ 3%

Chorizema sp. (leafy) 0.5-1.3 m ≥ 15%

Cassia helmsii (x?) ca. 1 m 2-3%

Notes: Location: West of Stones Bore about 2 km.

Condition: Poor to good, lost up to 10 cm soil between large, old shrubs.

Associated annuals: *Euphorbia*, *Calandrinia*, *Chenopodium*, *Tetragonia*, *?Eriachne* (= site 1), *Ptilotus polystachys*, *Erodium*.

Associated perennials: *Corchorus crozophorifolius*, *Solanum orbiculatum*, *Spartothamnella teucriflora*, *Rhagodia eremaea*, *Acacia sclerosperma*, *Alectryon oleifolius* ssp. *oleifolius*.

Associated lianes: *Gymnema granitica*, *Murchisonia volubilis*, *Porana commixta*.

Site number: 4

Topography: Flat to gently sloping.

Soil: Red siliceous sand with coarse calcareous pebbles strewn on slight rise (over calcrete).

Lat/Long.: 25°34'22" 114°43'51". Photograph: to photo 20 roll 1. Date: 16-7-98.

Vegetation description: *Acacia pruinocarpa*, *Acacia citrinoviridis* low open woodland over scattered tall shrubs of *Acacia victoriae* over *Ptilotus obovatus* low open shrubland

Dominants:

Acacia pruinocarpa < 5-10 %

Acacia citrinoviridis 2-7 m

Acacia victoriae 1.5-3.5 m

Cassia ?helmsii 0.6-1.1 m ≤ 1% (patches 5%)

Ptilotus obovatus 0.4-0.7 m < 5%

Notes: Location: 1.9 km west on old Medo road from new Medo road.

Condition: Poor, seems to have lost 10-15 cm of soil. Chorizema sp. (leafy) in patches at the edge of the calcareous areas.

Associated annuals: Zygophylla apiculatum, Bulbine semi-barbata, Erodium, Goodenia, *Emex australis, Schoenia cassiniana, Euphorbia, Dysphania rhadinostachya, Erodium, Lepidium oxytrichum

Associated perennials: Hakea preissii, Rhagodia eremaea, Acacia tetragonophylla, Acacia wanyu, Acacia sclerosperma, Corchous crozophorifolius, Eremophila forrestii ssp. forrestii, Maireana, Scaevola tomentosa, Cassia helmsii (?x)

Site number: 5

Topography: Margins of clay pan, gentle slope.

Soil:

Lat/Long.: 25°34'26"S 114°43'40"E. Photograph: No. 21/22 roll 1. Date: 16-7-98.

Vegetation description: Acacia tetragonophylla, Eremophila sp. shrubland

Dominants:

Acacia tetragonophylla 1-2 m < 5%

Eremophila sp. 1-1.4 m ≥ 20%

Notes: A Myriophyllum was abundant in the centre of the claypan.

Similar vegetation was seen around a claypan north of Diedos Bore (north from site 7) one difference here was that there were Melaleuca uncinata shrubs scattered around the edge of the claypan. A Peplidium was observed in small pools on the slope into the latter claypan.

Associated annuals: Menkea villosula, Calandrinia, Nicotiana, Brachycome cheilocarpa, Dysphania rhadinostachya, Sclerolaena, Bulbine semibarbata, Salsola kali, Atriplex.

Associated perennials: Cassia chatelainiana, Chorizema sp. (leafy), *Cenchrus ciliaris, Scaevola spinescens, Myriophyllum sp. (in claypan), Acacia wanyu, Cassia helmsii (x?), Grevillea eriostachya.

Site number: 6

Topography: Crest and upper slopes of an east-west trending dune.

Soil: Orange-brown siliceous sand.

Lat/Long.: 25° 29' 56" S 114° 54' 40" E. Photograph: No. 23 roll 1. Date: 16-7-98.

Vegetation description: Acacia sclerosperma, Acacia wanyu high shrubland over Chorizema sp. (leafy), Scaevola spinescens, Pityrodia loxocarpa, Pityrodia paniculata open shrubland

Dominants:

Acacia sclerosperma 2-3.5 m > 10-15 %

Acacia wanyu 1.8-2.5 m < 5%

Chorizema sp. (leafy) 0.5-1 m < 1%

Scaevola spinescens < 1%

Pityrodia loxocarpa & Pityrodia paniculata 0.5-1 m 1% combined

Notes: Location: 1.6 km to Diedos Bore north of main Road.
Condition: Most of surface disturbed. Poor or poor to good.

Associated annuals: Calandrinia, Heliotropium, Tribulus terrestris (native form), Nicotiana, Brachycome.

Associated perennials: Pileanthus peduncularis, Corchorus crozophorifolius, *Cenchrus ciliaris, Pimelea microcephala ssp. microcephala, Zygophyllum fruticulosum, Acacia tetragonophylla, ?Sida, Cassia helmsii (x?), Eremophila sp. (2 m, grey), Chenopodium desertorum, Alectryon oleifolius ssp. oleifolius, Trichoryne corynothecoides, Amyema fitzgeraldii, Ptilotus obovatus.

Site number: 7

Topography: Low spot in undulating plain.

Soil: Sandy clay surface over clay (very boggy!).

Lat/Long.: 25°27'32"S 114°54'48"E. Photograph: No. x roll 1. Date: 16-7-98.

Vegetation description: Acacia aneura var. low open woodland over Acacia tetragonophylla high shrubland over Ptilotus obovatus, Cassia helmsii low open shrubland

Dominants:

Acacia aneura var. (terete, long phyllodes) 5-8 m < 5%

Acacia tetragonophylla 1.5-4.5 m < 15 - 20%

Ptilotus obovatus 0.3-0.6 m < 1%, -2%

Cassia helmsii (?x) < 1%

Notes: Location: north of Diedos Bore (in Qp on geology map).

Associated annuals: Lepidium oxytrichum, *Sisymbrium orientale, Stackhousia muricata, Erodium, Goodenia, Calotis hispidula, Menkea villosula, Tetragonia diptera, Crassula colorata, Cuscuta, Dysphania rhadinostachya, Sclerolaena, Nicotiana, ?Eragrostis, Sida sp.

Associated perennials: Wurmbea, Solanum lasiophyllum, Hibiscus gardneri, Chorizema (leafy), Enchylaena tomentosa, Eremophila fraseri ssp. fraseri, Maireana, Abutilon geranioides, Rhagodia ?eremaea (old), Acacia wanyu, Eremophila latrobei.

Site number: 8

Topography: Small depression. These patches apparently make up about 5% of the landform they occur in.

Soil: Red-brown sandy loam.

Lat/Long.: 25°36'37"S 115°01'19"E. Photograph: No. 2 roll 2. Date: 16-7-98.

Vegetation description: Acacia aneura low woodland to low open forest over scattered shrubs of Ptilotus obovatus and Solanum lasiophyllum

Dominants:

Acacia aneura (1.8 m) 6-9 m 25-40%

Ptilotus obovatus 0.5-0.7 m < 1%

Solanum lasiophyllum 0.4-0 m 1%

Notes: Condition: Good to very good, weed free.

Associated annuals: *Erodium*, *Schoenia cassiniana*, Puffball fungus (white), *Centipeda cunninghamii*, *Lepidium oxytrichum*, *Asteraceae* spp, *Crassula colorata*.

Associated perennials: *Hibiscus* cf. *coatesii*, *Hibiscus* ?*burtonii*, ? *Eriachne* (large sp.), *Indigofera* cf. *boviperda*, *Chielanthes austrotenuifolia*, *Maireana*, *Acacia tetragonophylla*, *Aristida*?, *Cassia helmsii* (?x), *Spartothamnella teucriflora*, *Chorizema* (leafy), *Hakea suberea*, *Eragrostis*.

Site number: 9

Topography: Bed and banks of a river.

Soil: Very patchy with areas of calcretisation exposed by river flow and deposition of pale brown fine siliceous sand on much of the banks.

Lat/Long.: Photograph: No. x roll 1. Date: 16-7-98.

Vegetation description (see notes): *Eucalyptus camaldulensis* var. *obtusa* open woodland to open forest over *Acacia citrinoviridis* low open woodland to low open forest over *Melaleuca glomerata* high open shrubland to high shrubland

Dominants:

Eucalyptus camaldulensis var. *obtusa* 12-17 m < 5 -> 25%

Acacia citrinoviridis 4-9 m < 10-35%

Melaleuca glomerata 1-4 m + < 1-15%

Notes: Condition: very poor. Physically very disturbed. The vegetation description given is a rough average of the mosaic of plant communities developed on the different microhabitats developed along the part of the river visited. The lower layer of much of the banks was heavily weed invaded. The record of *Chamelaucium micranthum* is a northern extension from the previous known range (G.J. Kieghery pers comm.).

Location: Wooramel River at the crossing on Gilroy Station (upstream).

Associated annuals: **Brassica tournefortii* (very abundant), **Centaurea*, *Amaranthus*, *Chenopodium melanocarpum*, *Bulbine barbarta*, *Nicotiana*, *Euphorbia*, *Ptilotus aervoides*, *Ptilotus polystachyus*, *Calotis multicaulis*, *Daucus glochidiatus*, **Rumex vesicarius* (Ruby Dock), **Emex australis* (Doublegee), **Sonchus oleraceus*, **Centaureum*, *Haloragis gossei*, *Aristida contorta*, *Portulaca oleracea*, *Podolepis gracilis*.

Associated perennials: *Chamelaucium micranthum*, *Corchorus crozophorifolius*, *Acacia tetragonophylla*, *Rhagodia eremaea*, *Solanum lasiophyllum*, *Pimelea microcephala* ssp. *microcephala*, *Cyperus vaginatus*, **Cenchrus ciliaris*, *Sida* sp., *Solanum lonchophyllum*.

Associated lianes: *Porana commixta*.

Site number: 10

Topography: Gently undulating plain.

Soil: Red-brown loam.

Lat/Long.: 25°41'16"S 115°05'42"E. Photograph: . Date: 16-7-98.

Vegetation description: Scattered Acacia pruinocarpa over Acacia aneura low open woodland over Acacia wanyu high shrubland over Eremophila forrestii ssp. forrestii, Cassia helmsii (?x) shrubland over scattered Ptilotus obovatus.

Dominants:

Acacia aneura (short, terete) 5-8 m < 5-10%

Acacia pruinocarpa 12 m < 1%

Acacia wanyu (1) 2.5-4.5 m < 10-20%

Eremophila forrestii ssp. forrestii 1-1.6 m ± 10%

Cassia helmsii (?x) 0.6-2 m ≤ 1-2%

Ptilotus obovatus 0.4-0.7 m < 1%

Notes: Condition very good. The stand is extensive. Some small patches of snakewood between site 10 and site 8.

Associated annuals: Schoenia cassiniana, Asteraceae spp. (seedlings/juveniles), Lepidium oxytrichum, Menkea villosula, Goodenia, Ptilotus polystachyus, Cephalopterum drummondii.

Associated perennials: Solanum lasiophyllum, Acacia tetragonophylla, Enchylaena tomentosa, Eriachne ?helmsii (= large), Rhagodia eremaea, Solanum orbiculatum, Maireana planifolia.

Site number: 11

Topography: Plain but higher than to the west.

Soil: Red sand, siliceous.

Lat/Long.: 25° 28' 38" S 115° 03' 14" E. Photograph.: Date: 17-7-98.

Vegetation description: Acacia citrinoviridis low woodland over Acacia wanyu high shrubland over Eremophila forrestii ssp. forrestii open shrubland

Dominants:

Acacia citrinoviridis 4-8 m 10-15%

Acacia wanyu > 1.5-3.5 m ?%

Eremophila forrestii ssp. forrestii 1-1.5 m > 1-5%

Sida sp. (dead) < 1%

Eriachne ?benthamii (large) 40 cm ≤ 1%

Notes: Condition: Very good. Corymbia lenziana was present as a mallee 6 m tall. Lower stems stout (about 20 cm diameter), bark very pale grey over cinnamon tones, flaky, thin platelets. Leaves pendent, dull mid-green. Upper bark white, smooth. Scattered and infrequent.

Associated annuals: Trachymene, Nicotiana occidentalis, Calandrinia, Brachycome iberidifolia, Schoenia cassiniana, Erodium, Menkea villosula, Tetragonia, Crassula colorata.

Associated perennials: Eragrostis lanipes, Murchisonia volubilis, Enchylaena tomentosa, Canthium attenuatum, Ptilotus obovatus, Spartothamnella teucriflora, Sida, Pityrodia paniculata, Grevillea integrifolia, Eremophila, Acacia coolgardiensis ssp. effusa, Stylobasium spathulatum, Ptilotus schwartzii, Solanum lasiophyllum, Rhagodia eremaea.

Site number: 12

Topography: Fairly flat area.

Soil: Clayey red-brown sandy/loam over a siliceous/ferruginous hard layer which is exposed for few % of the surface.

Lat/Long.: 25°28'57"S 114°59'24"E. Photograph: No. x roll 1. Date: 17-7-98.

Vegetation description: Acacia pruinocarpa open woodland over Acacia wanyu high shrubland over Cassia helmsii (?x), Eremophila forrestii ssp. forrestii open shrubland

Dominants:

Acacia pruinocarpa 8-11 m 2%

Acacia wanyu 1.5-4 m ≤ 20%

Cassia helmsii (?x) 0.6-1.6 m 1-2%

Eremophila forrestii ssp. forrestii 0.6-1.4 m 3-5%+

Ptilotus obovatus 0.4-0.7 m << 1%

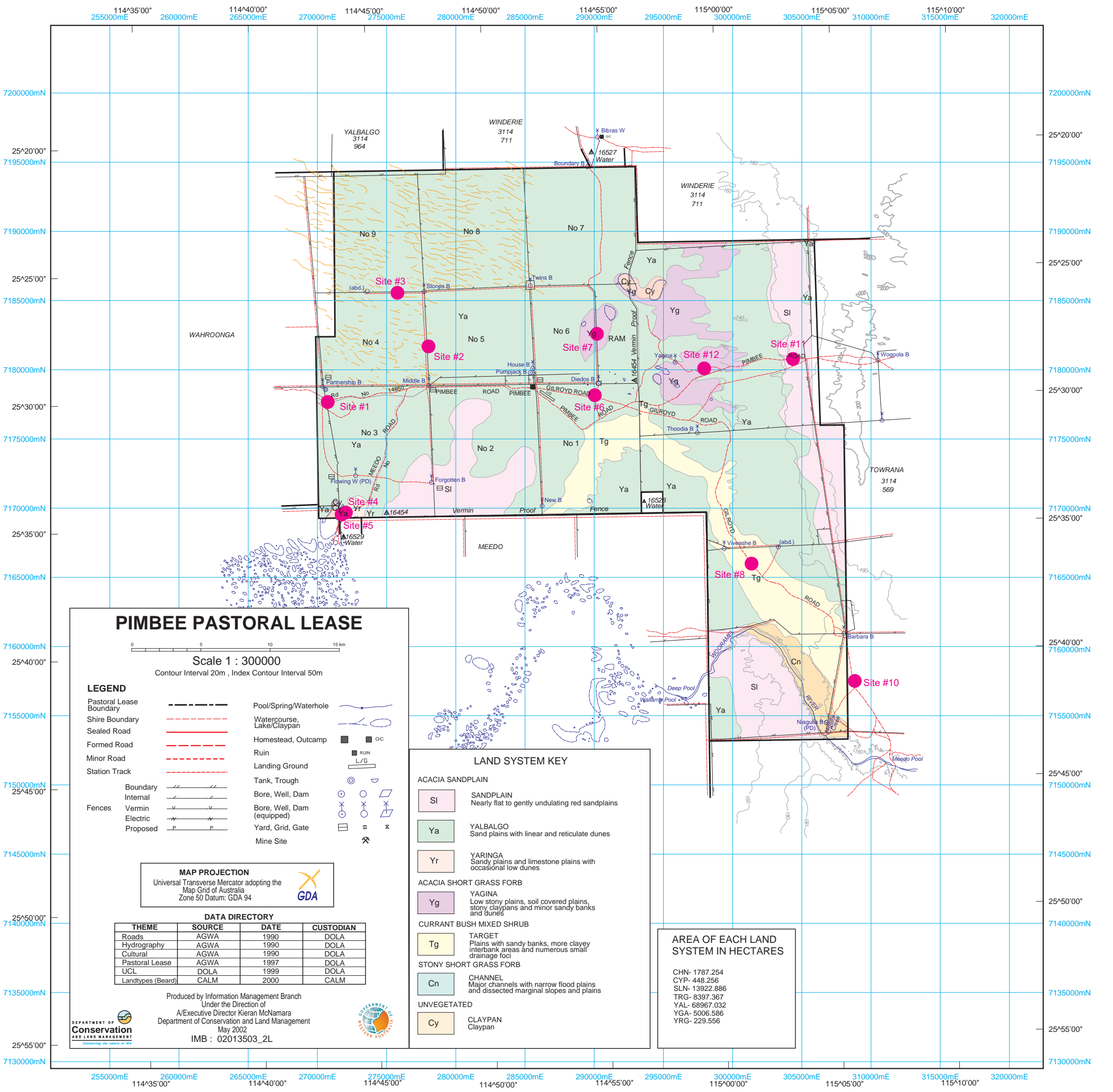
Eriachne helmsii 40 cm << 1%

Notes: Condition: Good (poor-good). Some patches of Acacia tetragonophylla.

Associated annuals: Calandrinia, Tetragonia, Erodium, Schoenia cassiniana, Nicotiana, Dysphania rhadinostachya, Menkea villosula, Chenopodium melanocarpum.

Associated perennials: Solanum lasiophyllum, Eragrostis, Abutilon fraseri, Acacia tetragonophylla, Maireana, Eremophila, Eremophila, Ptilotus schwartzii, Pileanthus peduncularis.

Associated lianes: Glycine.



PIMBEE PASTORAL LEASE

Scale 1 : 300000
Contour Interval 20m , Index Contour Interval 50m

LEGEND

Pastoral Lease Boundary	---	Pool/Spring/Waterhole	—●—
Shire Boundary	- - - - -	Watercourse, Lake/Claypan	—○—
Sealed Road	=====	Homestead, Outcamp	■
Formed Road	-----	Ruin	■
Minor Road	- - - - -	Landing Ground	■
Station Track	- - - - -	Tank, Trough	○
Boundary	=====	Bore, Well, Dam	○
Internal	=====	Bore, Well, Dam (equipped)	○
Fences	=====	Yard, Grid, Gate	■
Vermin	=====	Mine Site	■
Electric	=====		
Proposed	=====		

MAP PROJECTION

Universal Transverse Mercator adopting the Map Grid of Australia Zone 50 Datum: GDA 94



DATA DIRECTORY

THEME	SOURCE	DATE	CUSTODIAN
Roads	AGWA	1990	DOLA
Hydrography	AGWA	1990	DOLA
Cultural	AGWA	1990	DOLA
Pastoral Lease	AGWA	1997	DOLA
UCL	DOLA	1999	DOLA
Landtypes (Beard)	CALM	2000	CALM

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LAND SYSTEM KEY

ACACIA SANDPLAIN

SI SANDPLAIN
Nearly flat to gently undulating red sandplains

Ya

YALBALGO
Sand plains with linear and reticulate dunes

Yr

YARINGA
Sandy plains and limestone plains with occasional low dunes

ACACIA SHORT GRASS FORB

Yg YAGINA
Low stony plains, soil covered plains, stony claypans and minor sandy banks and dunes

CURRENT BUSH MIXED SHRUB

Tg TARGET
Plains with sandy banks, more clayey interbank areas and numerous small drainage foci

STONY SHORT GRASS FORB

Cn CHANNEL
Major channels with narrow flood plains and dissected marginal slopes and plains

UNVEGETATED

Cy CLAYPAN
Claypan

AREA OF EACH LAND SYSTEM IN HECTARES

CHN- 1787.254
CYP- 448.256
SLN- 13922.886
TRG- 8397.367
YAL- 68967.032
YGA- 5006.586
YRG- 229.556



Nanga

Red sandplain + ridge landscape with ~~multiple~~ ^{5 or 6} veg sites ~~for~~ completed up to 25 km a point 25 km south (along eastern boundary) from Tamala Rd. photos taken

South of Rd is in very good condition, N of the road is in poor condition. 300 sets have been done north of the road. Five ALTRM biodiversity quadrats have been completed along the Tamala Rd.

Pimbee

^{sand} Red / ^{de} dense / ^{swale} landscape of Central Basin = Acacia communities in good condition
Acacia conocarpia (Sandhill Gidgee)

Red sand ridge / ^{sandy} alluvial plain / claypans deep
landscapes of old river course flats
Acacia citrinovirens, *A. aneura*, *A. tetragonophylla*, *A. pruinocarpa*

River frontage Cze + Cda
E. victrix + *A. citrinovirens* Kim + Belinda
Melaleuca glomerata

Outcrop plains Czd

12 sites described + photos taken

Check Stewart's data + equiv. aquatic sites

Bill Mitchell
Jenny

Ti / Pulli / Angus / all pinbe.doc

Pinbe	photo	Roll	Lat	Long	Surface
P1 ✓	5+6	1	25 30 01	114 43 09	Qe dune
P2 ✓	7, 8, 9, 10	1	25 27 55	114 47 32	Qe swale
P3 ✓	11-13, 16	1	25 25 48	114 46 14	Czd
P4 ✓	17-20	1	25 34 22	114 43 51	Qzd
P5 ✓	21-22	1	25 34 26	114 43 40	Qp
P6 ✓	23	1	25 29 56	114 54 40	Qep dune
P7 ✓	24+25	1	25 27 52	114 54 48	Qp
Photo of claypan lake = aquatic photo 1 Roll 2					
P8 ✓	2	2	25 36 37	115 01 19	Qep ^{Mulga Island} ^{plain} ^{loam}
P9 ✓	3	2	25 44 30	115 07 40	Qa ^{Warramul River}
P10 ✓	4	2	25 41 16	115 05 42	Qep - sandy ^{loam}
P11 ✓	5-7	2	25 28 37	115 03 13	Qe ^{A. citrinoviridis} ^{sandy plain}
P12 ✓	8-9	2	25 28 59	114 59 25	Czd ^{Gidye} ^{sw}



























