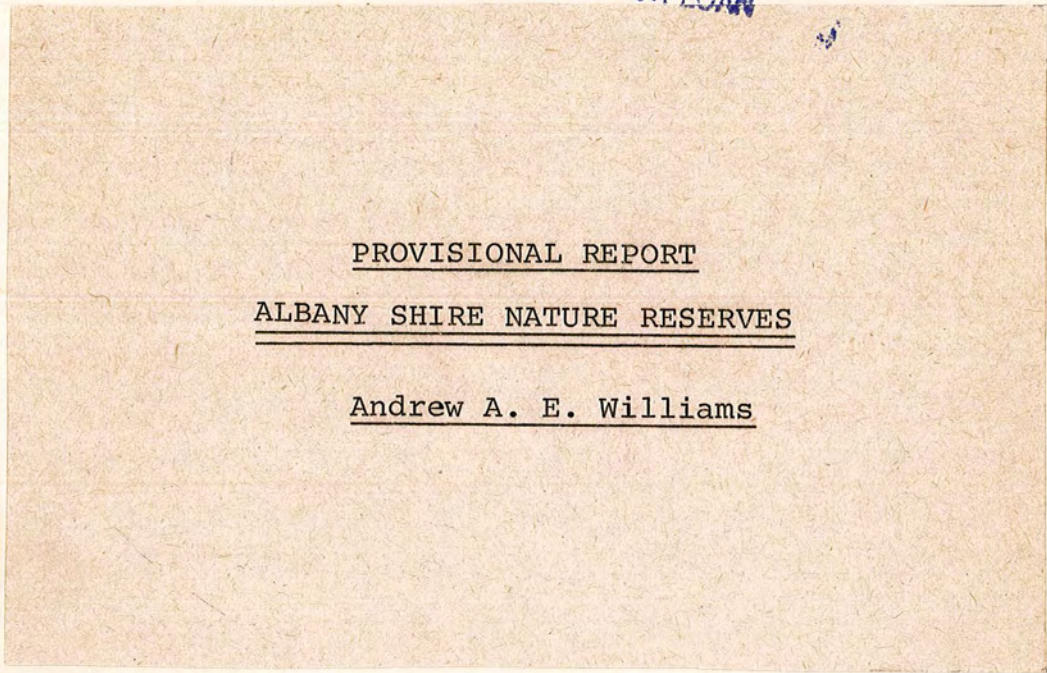


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Department of Fisheries & Wildlife  
W.A. Wildlife Research Centre

PROVISIONAL REPORT ON 3 NATURE RESERVES IN ALBANY SHIRE

Introduction:

This is the first of a series of reports on the Nature Reserves of Albany Shire. The aim is simply to present a basic picture of each reserve, where applicable pointing out items of special interest. For the sake of continuity the reports have been set out under a series of pre-arranged headings - i.e. Background, Physical Characteristics, Vegetation, etc. The data was obtained by Andrew Williams and Graeme Folley on two short expeditions to the Shire in February and March 1980. Each reserve was visited twice.

Weather conditions were ideal throughout, being sunny with some intermittent cloud cover. Most time was devoted to examining the vegetation on each reserve, but notes on birds and mammals were also taken. These, however, are only of a superficial nature as insufficient time was allowed for detailed observations. Habitat photographs and diagramatic vegetation maps have been produced for each area. The vegetation was classified following the B.G. Muir System as used in the W.A. Wheatbelt Survey. It proved reasonably satisfactory for the south west's vegetation. Bird nomenclature follows Slater's Field Guide to Australian Birds.

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The ultimate object of the exercise is to bring together reports for each of the mainland Nature Reserves falling within the Albany Shire boundaries. With this information it should then be possible to lay down a series of guide lines for the management of the reserves within the "Shire Unit", with special reference being paid to the problems peculiar to the area.

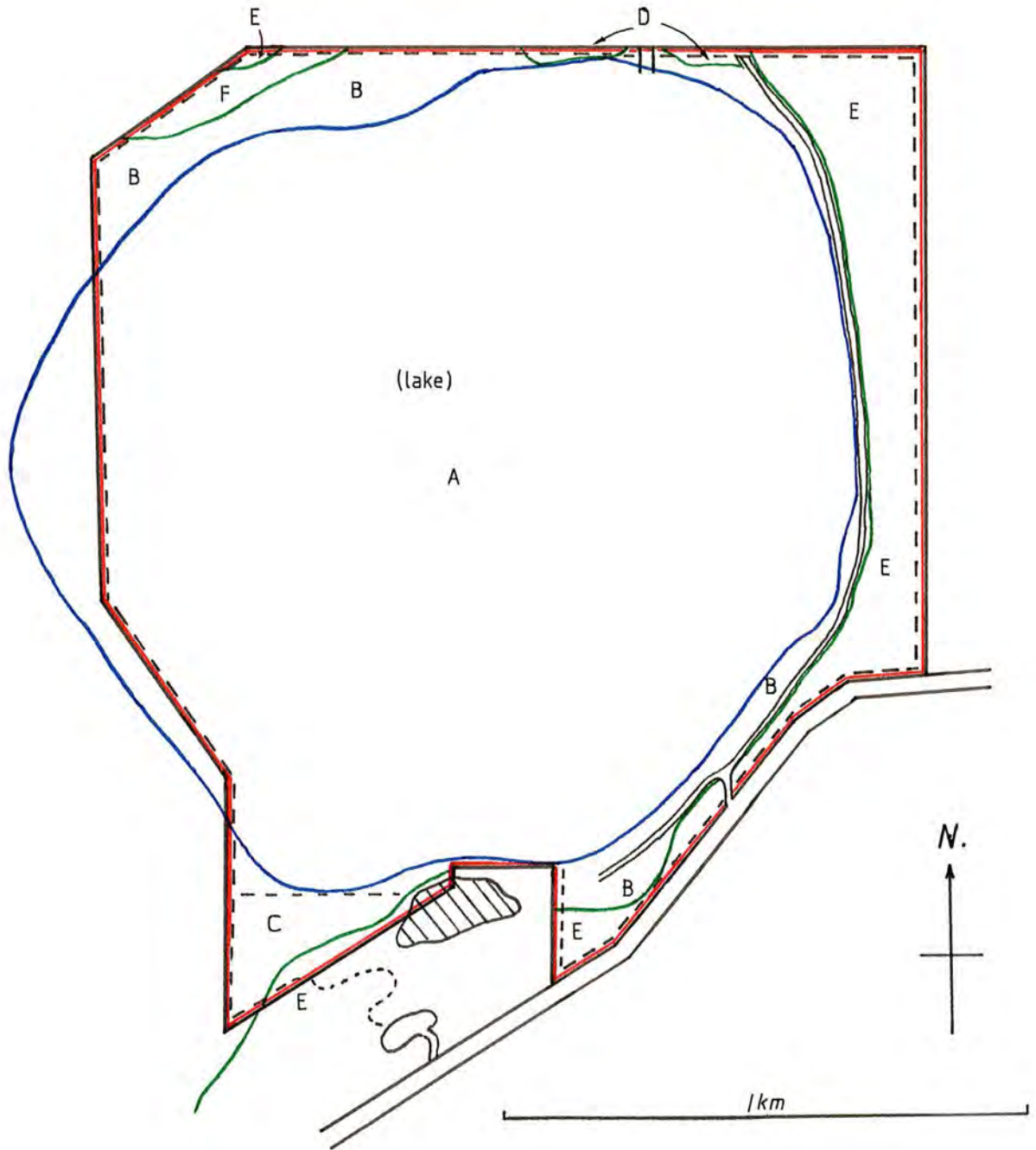
Thanks are due to Dr S.D. Hopper of the W.A.W.R.C. for his help in identifying plant specimens collected in the field. The herbarium collection at Two Peoples Bay Nature Reserve also proved extremely useful. My personal thanks are due to Mr Graeme Folley for his hospitality, and assistance in the field. It should be noted that he will be producing the reports for most of the remaining Nature Reserves in Albany Shire. Mr J.A.K. Lane and Mr G.B. Pearson kindly allowed me to use records from their water-bird surveys of the south west.









TABLE 1: VEGETATION CLASSIFICATION AS USED IN WHEATBELT SURVEY

LIFE FORM/HEIGHT CLASS		CANOPY COVER			
		DENSE 70-100% <sup>d</sup>	MID-DENSE 30-70% <sup>c</sup>	SPARSE 10-30% <sup>i</sup>	VERY SPARSE 2-10% <sup>r</sup>
T	Trees >30m	Dense Tall Forest	Tall Forest	Tall Woodland	Open Tall Woodland
M	Trees 15-30m	Dense Forest	Forest	Woodland	Open Woodland
LA	Trees 5-15m	Dense Low Forest A	Low Forest A	Low Woodland A	Open Low Woodland A
LB	Trees <5m	Dense Low Forest B	Low Forest B	Low Woodland B	Open Low Woodland B
KT	Mallee tree form	Dense Tree Mallee	Tree Mallee	Open Tree Mallee	Very Open Tree Mallee
KS	Mallee shrub form	Dense Shrub Mallee	Shrub Mallee	Open Shrub Mallee	Very Open Shrub Mallee
S	Shrubs >2m	Dense Thicket	Thicket	Scrub	Open Scrub
SA	Shrubs 1.5-2.0m	Dense Heath A	Heath A	Low Scrub A	Open Low Scrub A
SB	Shrubs 1.0-1.5m	Dense Heath B	Heath B	Low Scrub B	Open Low Scrub B
SC	Shrubs 0.5-1.0m	Dense Low Heath C	Low Heath C	Dwarf Scrub C	Open Dwarf Scrub C
SD	Shrubs 0.0-0.5m	Dense Low Heath D	Low Heath D	Dwarf Scrub D	Open Dwarf Scrub D
P	Mat plants	Dense Mat Plants	Mat Plants	Open Mat Plants	Very Open Mat Plants
H	Hummock Grass	Dense Hummock Grass	Mid-Dense Hummock Grass	Hummock Grass	Open Hummock Grass
GT	Bunch grass >0.5m	Dense Tall Grass	Tall Grass	Open Tall Grass	Very Open Tall Grass
GL	Bunch grass <0.5m	Dense Low Grass	Low Grass	Open Low Grass	Very Open Low Grass
J	Herbaceous spp.	Dense Herbs	Herbs	Open Herbs	Very Open Herbs
VT	Sedges >0.5m	Dense Tall Sedges	Tall Sedges	Open Tall Sedges	Very Open Tall Sedges
VL	Sedges <0.5m	Dense Low Sedges	Low Sedges	Open Low Sedges	Very Open Low Sedges
X	Ferns Mosses, liverwort	Dense Ferns Dense Mosses	Ferns Mosses	Open Ferns Open Mosses	Very Open Ferns Very Open Mosses

LAKE PLEASANT VIEW - RESERVE No. A.15107



-  Granite outcrop - 
-  Firebreak tracks 
-  Reserve Boundary 

- AREA A: Tall Sedges to Open Tall Sedges.
- AREA B: Open Low Woodland A over Open Low Scrub B over low Sedges.
- AREA C: Open Low Woodland A over Open Low Scrub A over Open Low Sedges.
- AREA D: Dense Heath A over Low Sedges.
- AREA E: Woodland over Thicket to Low Scrub B, over Open Low Sedges.
- AREA F: Low Woodland A over ~~133~~ Heath A over Dense Tall Sedges.



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LAKE PLEASANT VIEW - RESERVE No. A.15107Location:

Situated on the northern side of Hassell Road, ca. 32 kms N.E. of Albany, and sharing a common boundary with Manypeaks Townsite. Located on Lithograph 2528-111-Two Peoples Bay.

Background:

Lake Pleasant View was originally gazetted on 5th December 1913 for the purpose of water. On 27th May 1955 the area was first increased to 282 acres, and then again on 19th July 1957 to about 500 acres (ca 202.3428 ha).

On 3rd April 1959 the purpose was ammended to "Water and Conservation of Flora and Fauna", classified as a Class 'A' Reserve and vested in the Fauna Protection Advisory Committee. The area was again increased with the inclusion of Lot 2702 (formerly Reserve No. 15078) to its present size of 267.0925 ha.

Physical Characteristics:

This reserve covers an area of 267.0925 ha. It is bordered by farmland to the east, north and west, and by the Hassell Road to the south east. The south west section shares a common though irregular boundary with Manypeaks Townsite which is at present uncleared.

A shallow lake depression occupies most of the reserve area, though the water level varies according to seasonal rainfall. Along the eastern and southern sides

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of the reserve the land rises slightly to support a narrow belt of Jarrah/Redgum dominated forest. On the southern border between the road and the lake a high granite outcrop protrudes into the reserve. A motorable track skirts along the south eastern and eastern sides of the lake. Fire breaks have been constructed along the entire perimeter of the reserve, and the remains of an old dam <sup>are</sup> is located on the northern side of the lake. The soil throughout the reserve is made up of a light coloured sand. The altitude ranges from approximately 90 - 100 metres above sea level.

#### Vegetation:

The vegetation can be readily separated into the six associations shown on the diagrammatic map for the area. This breakdown covers a transition from the lake's sedges, through the Melaleuca dominated shoreline, to the Jarrah and Redgum Woodland on the higher ground. There is a distinct tendency for some of the understorey species found in the Redgum/Jarrah Woodland to encroach down onto the sloping margins of the lake.

Area A: A shallow lake, for the most part supporting numerous sedges - its size dependent on seasonal rainfall. The sedges range from 0.75 to 2 metres in height depending on the species. They grow densely in places but thin out towards the centre of the lake where there are large areas of open water. The Flag Rush, Baumea articulata, was common.



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Area B: Supports 'Open Low Woodland A' made up of scattered Paperbark trees, Melaleuca cuticularis growing from 12 to 15 metres over 'Open Low Scrub B' consisting primarily of Hakea varia, Leucopogon sp. and Acacia sp. This scrub in turn grows over 'Open Low Sedges' to a height of ca 0.5 metres.

Area C: This area supports an association of scattered Paperbarks, Melaleuca cuticularis to 12 metres, and Eucalyptus occidentalis from 6 to 14 metres, the latter mainly along the upper lake margins. They grow over 'Open Low Scrub A', made up of several species including young E. occidentalis, Hakea varia, Oxylobium cuneatum and Melaleuca sp. The ground is covered with 'Open Low Sedges' to ca 0.5 metres.

Area D: A limited area of 'Dense Heath A' made up in more or less equal proportions of Hakea varia and Hakea trifurcata growing to 1.5 metres, over 'Open Low Sedges' growing to 0.5 metres.

Area E: Dominated by mixed Eucalyptus calophylla, and Eucalyptus marginata Woodland to 18 metres with a variable understorey. In some parts this consisted of 'Thickets' of predominantly Bossiaea linophylla, Agonis parviceps and Oxylobium lanceolatum to ca 3 metres. In others it was classed as 'Low Scrub B' to 1.5 metres and made up of many species including Hakea varia, Hakea



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ceratophylla, Isopogon formosus, Banksia grandis and a Daviesia sp. Also noted were examples of Casuarina frazeriana, Agonis flexuosa, Melaleucas, Acacias and Blackboys. Sedges, grasses and Patersonia occidentalis made up much of the ground cover. Specimens of the rare Banksia dryandroides and the Swamp Banksia, B. littoralis, were found in whitish sand along the south eastern part of the Reserve where this association graded into swampy sedges along the lake shore.

Area F: Supports stands of young Eucalyptus occidentalis trees growing to a maximum height of 6 metres and quite dense in places, over 'Heath A' of predominantly Hakea varia and Oxylobium cuneatum to ca 1.5 metres. This over 'Dense Tall Sedges' to ca 1 metre. An Acacia sp. and Melaleuca sp. to 1 metre were also noted.

#### Human Usage:

In the past the reserve has been used by local farmers as a rubbish dump, but action on the part of local Wildlife Officers put a stop to this practice. Most of the debris has since been removed by the offenders. However, there are still some signs including a rusty car body on the S.E. boundary. Along the north eastern edge of the lake is an old decayed cattle carcass.

According to the Department of Fisheries & Wildlife sign erected on the Hassell Road boundary, the reserve is also seasonally open to both quail and duck shooting.

Fire History:

The Jarrah/Redgum Woodland shows signs of an old fire, but the reserve as a whole does not appear to have been burnt in recent years. However, a minor fire was reported to have burnt a small area of the reserve in December 1976. The damage was restricted to about one hectare along the edge of the lake and apparently originated from the Manypeaks Townsite dump.

The reserve has an excellent firebreak system though some of them are now in need of attention.

FAUNAMammals:

3 Grey Kangaroo - Macropus fuliginosus - in N.E. corner  
Rabbits - little sign.

Birds:

4 Australian Little Grebe - Podiceps novaehollandiae  
1 Little Black Cormorant - Phalacrocorax sulcirostris  
4 Little Pied Cormorant - Phalacrocorax melanoleucos  
37 White faced Heron - Ardea novaehollandiae  
1 Black Duck - Anas superciliosa  
7 Musk Duck - Biziura lobata  
1 Black-shouldered Kite - Elanus notatus  
2 Whistling Kite - Haliastur sphenurus  
2 Swamp Harrier - Circus approximans  
1 Little Falcon - Falco longipennis  
2 Brown Falcon - Falco berigora  
2 Swamphen - Porphyrio porphyrio  
2 Coots - Fulica atra



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3 Greenshank	- <u>Tringa nebularia</u>
1 Common Bronzewing	- <u>Phaps chalcoptera</u>
1 Fan-tailed Cuckoo	- <u>Cacomantis pyrrhophanus</u>
1 Laughing Kookaburra	- <u>Dacelo gigas</u>
12 Tree Martin	- <u>Petrochelidon nigricans</u>
1 Black-faced Cuckoo-shrike	- <u>Coracina novaehollandiae</u>
2 Grey Fantail	- <u>Rhipidura fuliginosa</u>
1 Willie Wagtail	- <u>Rhipidura leucophrys</u>
2 Australian Raven	- <u>Corvus coronoides</u>
8 Western Silvereye	- <u>Zosterops lateralis</u>

Other species previously reported from the Reserve but not encountered on this survey include Black Swans, Cygnus atratus, Western Warbler - Gerygone fusca, Brown Flycatcher - Microeca leucophaea, Golden Whistler - Pachycephala pectoralis, and the Western Shrike-thrush - Colluricincla harmonica.

#### Reptiles and Amphibians

Three species of small frog were found to be abundant in the sedges growing along the lake fringes.

Dugites and Tiger snakes have also been sighted on the granite outcrop in the past.

#### Remarks and Summary:

This is an important reserve for several reasons. Firstly, it acts as a suitable refuge for both migratory and resident birds, with its combination of wetland and woodland habitats. It is an aesthetically pleasing area

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and is used by hunters in the duck and quail shooting season.

The rare Banksia, B. dryandroides, was located along the south eastern side of the lake growing in sandy soil. The reserve is now almost completely surrounded by cleared farmland.





View onto reserve from the Hassell Road boundary



South eastern shore of lake with granite outcrop clearly visible in the background.





View from the northern boundary looking across the lake. Note Melaleuca cuticularis and sedges along shoreline, with open water towards the centre.



Looking S.E. across Lake Pleasant View with Mt. Manypeaks in the background.



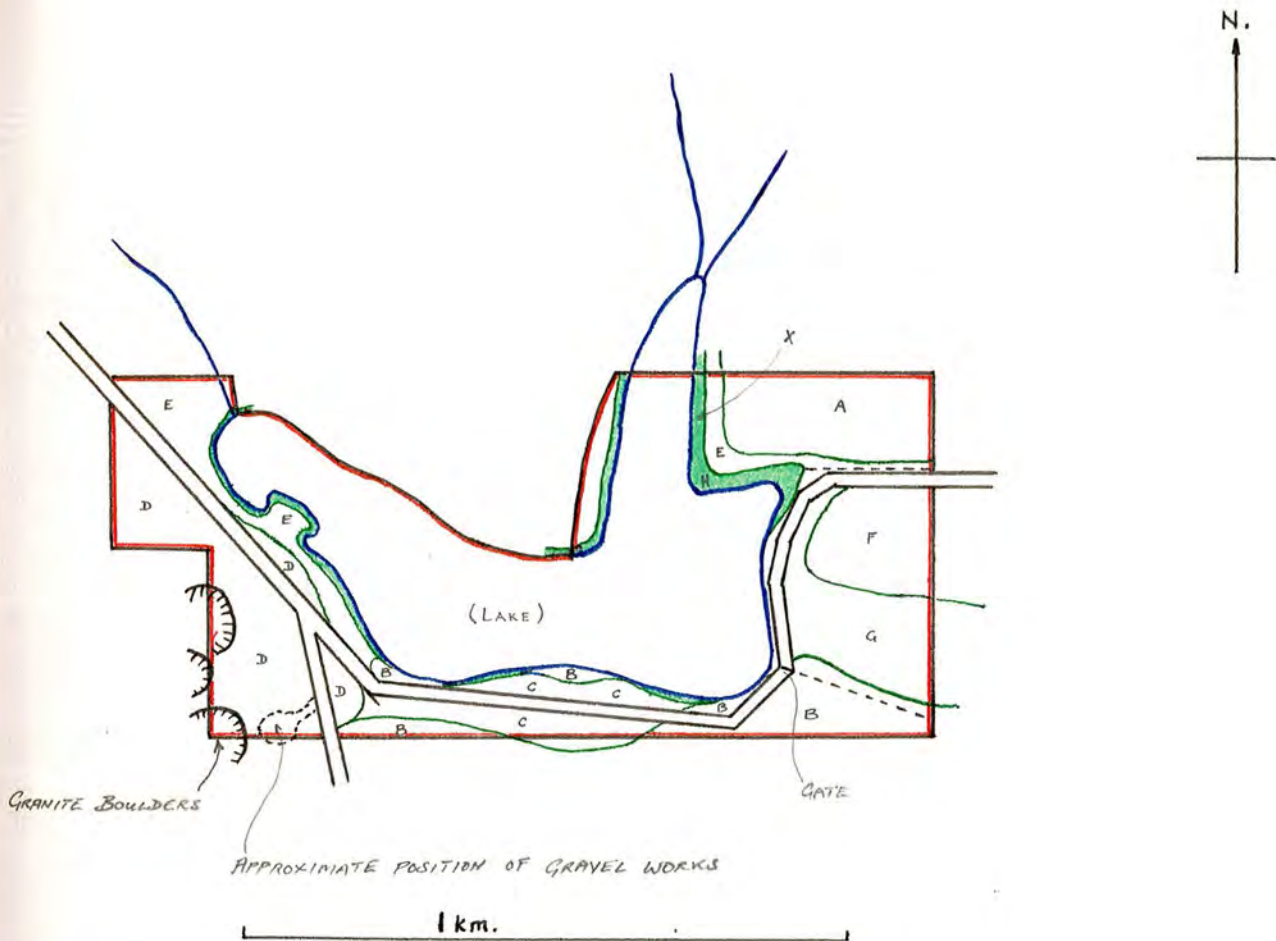


Banksia dryandroides along the S.E. shore of the lake.





MOLLOCULLOP SPRING - RESERVE No. 16367



— Reserve boundary

- - - Fence lines

- AREA A: Isolated patches of Low Forest A over Open Low Scrub A over Open Low Grass and Sedges.
- AREA B: Low Forest A over Thicket over Dense Tall Sedges.
- AREA C: Dense Thicket
- AREA D: Patches of Open Low Woodland B over Open Low Scrub A over Low Heath C.
- AREA E: Low Forest A over Low Scrub A over Very Open Sedges.
- AREA F: Shrub Mallee over Open Low Grasses.
- AREA G: Open Shrub Mallee over Heath B.
- AREA H: Melaleuca cuticularis Open Low Woodland A (marked green on map)

NOTE: The Flag Rush, Baumea articulata, occurs sporadically along the southern edge of the lake.



MOLLOCULLOP SPRING - RESERVE No. 16367Location:

Situated on the Warriup Road ca 1.5 kms south east of Reserve No. 26234 and ca 31 kms north east of Manypeaks Townsite. Shown on lithograph 2528 - 1 (Green Range).

Background:

Reserve No. 16367 was originally gazetted on 20th April 1916. Its area was decreased on 6th May 1921, and on 5th October 1923 it came under the control of Albany Shire. On 26th April 1968 the purpose was amended from "Water & Camping" to "Water, Camping and Conservation of Flora and Fauna", and vested in the Shire of Albany. On 24th October 1975 the reserve area was decreased to its present size of 115.6548 ha by the construction of road No. 15508 through part of the reserve.

Physical Characteristics:

This reserve has an overall area of 115.6548 ha. It is basically rectangular, though with a large bite out of the northern boundary and minus the south west corner. The longer axis runs east and west.

Some 50% of the area is taken up by a permanent fresh water lake. The land to the east and north east is dominated by two laterite rocky ridges which extend into the reserve before falling off sharply close to the lake's edge. Along the northern side the reserve boundary

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for the most part follows close to the edge of the lake.

The western and south western sides are dominated by a hillside with large granite boulders. Along the southern boundary the rim of the lake-basin rises only a few metres above the water level before dropping down again towards the sea. The total perimeter of the reserve measures ca 4.25 kms.

To the north of the reserve lies an extensive tract of woodland which reaches down to the lake. Along the southern and eastern sides the vegetation is largely undisturbed; the rocky ridge to the east is unsuitable for grazing and as such still retains its natural vegetation. The altitude on the reserve varies from 50 metres in the south west corner and ca 45 metres along the eastern rocky ridge to the lake level which averages at just under 20 metres above sea level.

The Warriup Road runs through the reserve from west to east, passing alongside the southern and eastern edges of the lake.

#### Vegetation:

The vegetation on Mollocullop Spring can be readily separated into 8 distinct zones as shown on the diagrammatic map for the area. The central part of the reserve is taken up by a permanent fresh water lake. This supports little vegetation other than a few stands of the Flag Rush, Baumea articulata, mainly along the southern side. The rest of the reserve is split up into the following associations.



Area A:

Consists of isolated small patches of E. calophylla, E. marginata and Nuytsia floribunda 'Low Forest A' from 4 to 6 metres over 'Open Low Scrub A' of predominantly Agonis sp. to 2 metres, Dryandra sessilis and stunted Banksia grandis. This over 'Open Low Grasses'. Ground species recorded included Dryandra nivea and Astroloma ciliatum. This is a somewhat degenerate area as it has in the past been grazed by cattle.

Area B:

Supports a mixed 'Low Forest A' association, made up of Agonis flexuosa to 8 metres, E. cornata and E. occidentalis to 10 metres, Banksia littoralis to 10 metres and Melaleuca cuticularis to 6 metres. This over "Thicket", consisting of young Melaleuca cuticularis, Hakea varia and Adenanthos sericea to 3 metres. This in turn over 'Dense Tall Sedges' to 1 metre including the Knotted Club Rush, Scirpus nodosus.

Area C:

'Dense Thicket' to 3 metres made up almost entirely of the Woolly Bush, Adenanthos sericea, growing on whitish deep sand.

Area D:

Dominated by a large granite rocky hillside and characterized by rather degenerate windblown vegetation growing on the exposed slope. It supports patchy 'Open

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Low Woodland B' make up predominantly of E. colophylla and Nuytsia floribunda to 5 metres, over 'Open Low Scrub A' made up mainly of Calothamnus quadrifidus, Acacia cyclops, Acacia sp., Dryandra sessilis and stunted Banksia grandis. This in turn over 'Low Heath C' made up largely of Casuarina humilis to 1 metre, Acacia sp. to 1 metre and Stirlingia latifolia. Also noted was an Astroloma sp. to 0.5 metres.

In several sections stands of E. calophylla grew in shrub-like formation to 3 metres.

#### Area E:

This association is found along the western and north eastern sides of the lake, often in areas where seasonal flooding occurs. Composed of 'Low Forest A' E. occidentalis to 10 metres over 'Low Scrub A' composed of young Melaleuca cuticularis, young Agonis flexuosa and an Acacia sp., over 'Very Open Low Sedges'. Where this association occurs in the N.E. of the reserve, the understory is largely absent presumably due to past grazing by cattle.

#### Area F:

This association occurs along the northern face of a rocky ridge and supports a mallee dominated vegetation quite unlike anything else found on the reserve. Consists of 'Shrub Mallee' made up of E. angulosa, E. decipiens, E. lehmannii and E. goniantha affin. to 6 metres, with little understorey other than 'Open Low Grasses' to less than 0.5 metres.



Area G:

'Open Shrub Mallee' of predominantly E. lehmannii to ca 5 metres over 'Heath B' made up of Calothamnus quadrifidus, Calothamnus sp., Agonis sp., Hakea trifurcata and stunted Banksia grandis on rocky soil.

Area H: (marked in green on the diagrammatic map)

Narrow margin round lake edge of 'Open Low Woodland A' made up of the Paperbark tree, Melaleuca cuticularis, to ca 6 metres.

Human Usage: Considerable.

1. The reserve is apparently used by local residents for recreational purposes. These include both boating and water skiing on the lake.

2. Stock. Local resident land owner, Mr W.A. Hassell, waters his stock on the eastern side of the lake.

Judging from tracks, cattle mainly use the Warriup Road to reach the water. Two fence lines constructed WITHIN the reserve and a gate across the main road prevent them from wandering elsewhere on the reserve (see diagram).

From a discussion with Mr Colin Hassell it seems that stock have been watered in this way for several years - through some prior arrangement with the Shire. It would be interesting to establish just what arrangement exists and if the Reserve purpose of "Water" gives Mr Hassell the right to water his stock on the reserve.

3. The Warriup Road passes through the reserve and as such provides public access and some vehicle disturbance.

4. There was almost no sign of rubbish on the reserve apart from an old bar-b~~q~~-que and "dunny" found in the Melaleuca woodland along the north eastern edge of the lake (marked x on the map)

5. Near the south west corner a gravel pit has been dug for road maintenance purposes. As survey markers for this section were not located it was impossible to ascertain whether these excavations were on the reserve.

#### Fire History:

There were no signs of recent fire on the reserve. The Warriup Road acts as an excellent firebreak. Even though the reserve has been set aside for camping no evidence of camp fires was seen. According to Mr Colin Hassell, the fire which passed through the nearby Tinkelelup Reserve some 12 to 15 years ago also went through Mollocullop Spring, though the effects on the latter are not so readily apparent.

#### FAUNA

##### Mammals:

4 x Grey Kangaroo - Macropus fuliginosus

Rabbit - little sign.



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Birds:

6 Hoary-headed Grebe	- <u>Podiceps poliocephalus</u>
2 Little Pied Cormorant	- <u>Phalacrocorax melanoleucos</u>
14 Mountain duck	- <u>Tadorna tadornoides</u>
3 Grey Teel	- <u>Anas gibberifrons</u>
4 Wood Duck	- <u>Chenonetta jubata</u>
1 Whistling Kite	- <u>Haliastur sphenurus</u>
1 White-breasted Sea-Eagle	<u>Haliaetus leucogaster</u>
9 Coot	- <u>Fulica atra</u>
2 Common Bronzewing	- <u>Phaps chalcoptera</u>
5 White-tailed Cockatoo	- <u>Calyptorhynchus funereus</u>
1 White-winged Triller	- <u>Lalage sueurii</u>
4 Blue-breasted Wren	- <u>Malurus pulcherrimus</u>
5 Yellow tailed Thornbill	<u>Acanthiza chrysorrhoa</u>
1 Spotted Scrub-Wren	- <u>Sericornis frontalis maculatus</u>
1 Scarlet Robin	- <u>Petroica multicolor</u>
1 Willie Wagtail	- <u>Rhipidura leucophrys</u>
1 Restless Flycatcher	- <u>Myiagra inquieta</u>
14 Western Silvereye	- <u>Zosterops laterolis gouldi</u>
2 Brown Honeyeater	- <u>Lichmera indistincta</u>
1 Western Spinebill	- <u>Acanthorhynchus superciliosus</u>
50 <sup>+</sup> New Holland Honeyeater	<u>Phylidonyris novachollandiae</u>
18 Red Wattle-bird	- <u>Anthochaera carunculata</u>
3 Australian Magpies	- <u>Gymnorhina dorsalis</u>

Birds previously reported but not encountered on this survey include Pied Cormorant - Phalacrocorax varius, White-faced Heron - Ardea novaehollandiae, Nankeen Night

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Heron - Nycticorax caledonicus, Black Duck - Anas superciliosa, Mallard - Anas platyrhynchos, Blue-winged Shoveler - Anas rhynchos, Blue-billed Duck - Oxyura australis, Musk Duck - Biziura lobata and Common Sandpiper - Tringa hypoleucos.

Remarks and Summary:

This is a most beautiful little reserve. It is important for many reasons. Firstly, it contains a permanent fresh water lake only 1.6 km from the sea. This acts as a refuge for water birds. The shoreline is fringed by mature Paperbark trees which act as resting sites for a small population of Nankeen Night Herons. An adult White-breasted Sea Eagle was recorded at the lake. Along the southern side a dense bank of flowering Adenanthos sericea attracts large numbers of Honeyeaters.

The rocky ridge which extends into the reserve from the east supports several kinds of mallee Eucalyptus. It is of interest to note that among these, one with affinities to E. goniantha may well represent only the second known locality for a new and as yet undescribed species. The dense scrub on the southern side of this ridge provides shelter and nesting sites for small birds.

The reserve is at present vested in the Shire of Albany. In view of its obvious value attempts should be made to have it vested in the Western Australian Wildlife



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Authority. An alternative watering site should be found for the cattle presently using the reserve and investigations carried out to establish what disturbance is caused by the use of the reserve for recreational purposes. From the management standpoint attempts should be made to acquire or purchase the privately owned land along the northern shore of the lake, thus turning the reserve into a compact rectangular block. Should this area be cleared the value of the reserve would diminish considerably. From conversations with Mr G. Folley it seems that Mr Hassell is conservation minded and might be willing to relinquish his hold on this portion of land.



View looking N.E. from the southern shore of the lake. Note the mallee-eucalyptus covered ridge in the background.



View across the reserve from the S.W. corner.



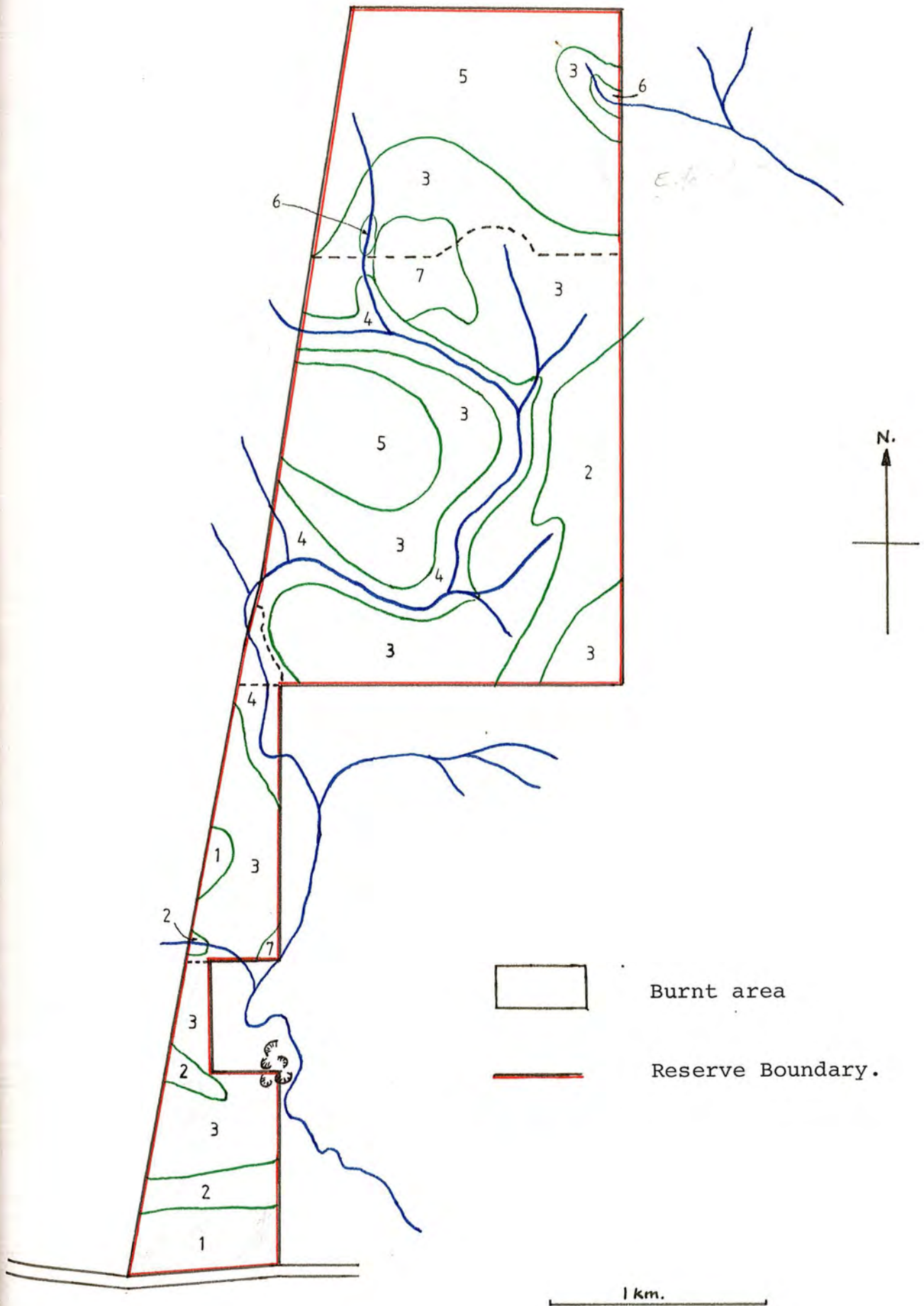


View across the reserve from the N.E. corner.



Dense thicket of Adenanthos sericea along the southern side of the reserve.

GREEN RANGE (TINKELELUP) - RESERVE No. 26234





GREEN RANGE (TINKELELUP) - RESERVE No. 26234Vegetation areas shown on map:

- Area 1: Open Low Woodland B and Thicket over Dense  
Low Heath C.
- Area 2: Open Low Woodland B over Low Heath C and  
Dense Low Heath C.
- Area 3: Low Woodland A over Heath A and Dense Heath A.
- Area 4: Low Forest A over Thicket
- Area 5: Low Woodland B over Heath A and Dense Heath A.
- Area 6: Open Low Woodland A over Thicket over  
Tall Sedges.
- Area 7: Open Low Woodland A over Dense Thicket.

GREEN RANGE (TINKELELUP) - RESERVE No. 26234Location:

Ca 30 kms north east of Manypeaks Townsite and shown on <sup>L</sup>lithograph 2528 - 1 - Green Range.

Background:

Reserve 26234 was originally set aside for the purpose "Conservation of Flora and Access". By Government Gazette notice of 30th May 1975, the purpose was changed to Conservation of Flora and Fauna, and vested in the West Australian Wildlife Authority.

Physical Characteristics:

This area, locally known as the Tinkelelup Reserve, has a total area of 575.5186 ha. The bulk of the reserve is made up of a roughly rectangular block of land, with its longer axis running north and south. From the south west corner of this rectangle protrudes a long narrow strip which reaches south 2.75 kms. to the Warriup Road. A firebreak/track, ca 16 kms in length, has been pushed around the perimeter of the reserve. Three lateral firebreaks cut through the reserve from east to west and lie approximately equidistant from each other. The northern part of this reserve cuts across the eastern end of Green Range, where it reaches an elevation of some 210 metres. The terrain is broken up into a series of hills and gullies as it descends rapidly towards the



south, reaching a low of 50 metres at the S.E. corner of the southern extension. The Mollocullop Creek system winds through the reserve where several of its main tributaries originate. Along these stream gullies vegetation is denser and taller due to the added moisture and protection afforded by the terrain. On the hill tops and unprotected slopes the vegetation has a wind-pruned appearance.

The surface soil falls into two basic categories, with most of the hills and ridges composed of laterite and in parts laterite gravel mixed with sand. The creek valleys and depressions between the ridges contain whitish sand.

The reserve is completely surrounded by privately owned land, though at the present time much of this is still uncleared. Ultimately the reserve will no doubt be cut off from the surrounding natural habitat when the area is opened up for farming.

#### Vegetation:

The Tinkelelup Reserve has a fairly complex mosaic of vegetation types. It is possible to break these down into 7 distinct associations although there is considerable overlap in some parts where one zone merges into another. The basic formations shown on the diagrammatic map are listed below:-

1. 'Open Low Woodland B' of scattered E. marginata and

mallee E. decipiens to 4 metres over tall Hakea cucullata 'Thicket' to 3 metres over 'Dense Low Heath C' - this made up of many species including Hakea ruscifolia, Hakea trifurcata, Beaufortia annisandra, Dryandra mucronulata affin., Dryandra pteridifolia, Daviesia sp., Stirlingia latifolia, Dryandra nivea and the Grassboy, Kingia australis. It should be noted that much of this association has been recently burnt.

2. On deep whitish-grey sand. 'Open Low Woodland B' mainly Banksia attenuata 2 to 5 metres with stunted E. marginata and E. calophylla to 4 metres. This over 'Low Heath C' to 'Dense Low Heath C' made up of many species including Adenanthos cuniatum, Hakea ruscifolia, Hakea trifurcata, Beaufortia annisandra and Stirlingia latifolia. Also noted were Daviesia sp., Melaleuca sp., Casuarina sp., Acacia sp., a small Agonis sp. and several grasses and sedges. The Kangaroo Paw, Anigozanthos rufus, was common along the firebreaks.

3. 'Low Woodland A' of stunted E. marginata and E. calophylla to 6 metres over an understory of 'Heath A' to 'Dense Heath A' made up of several species, with the Hakeas and Dryandras being dominant. Species noted include Hakea trifurcata to ca 2 metres, Hakea varia, Hakea ruscifolia, Dryandra mucronulata affin., Adenanthos cuneatum, Isopogon formosa, Lambertia uniflora, Melaleuca striata, Beaufortia annisandra and the Tassel



Flower, Leucopogon verticilliata. Examples of two small Banksias, B. dryandroides and B. prostrata were also recorded in this area. Note:- Along the southern side of the northern block Dryandra mucronulata affin. is totally dominant with Hakea varia common.

4. Confined to the deeper valleys along the Mollocullop Creek system, 'Low Forest A' of E. marginata and E. calophylla canopy cover ca 30%, over 'Thicket', made up of Bossiaea linophylla, Agonis sp., Spyridium globulosum and Acacia sp. Along the moist creek beds 'Tall Sedges' to ca 2 metres, with Hakea trifurcata to 2½ metres the dominant understory species on the higher ground. Banksia dryandroides to ca 0.75 metres was also common.

5. 'Low Woodland B' of E. marginata, E. calophylla and mallee E. decipiens to 3 metres over 'Heath A' to 'Dense Heath A' made up of predominantly Hakea trifurcata and Dryandra mucronulata affin., with Hakea varia, Beaufortia annisandra, Isopogon formosa, Banksia sphaerocarpa, Banksia prostrata and Banksia grandis also noted.

There are some open areas which support 'Open Mat Plants'.

This association in fact represents a more stunted version of Area 3. In places the shrub-form E. marginata and E. calophylla form a single upper canopy level with Hakea trifurcata.

6. Wetter areas along the Mollocullop and Tinkelelup Creek beds. 'Open Low Woodland A' of scattered Paperbark trees,

Melaleuca preissiana to 8 metres and Banksia littoralis trees to 6 metres over 'Thicket' made up of Agonis sp. and Oxylobium lanceolatum, over 'Open Tall Sedges'.

7. Stands of 'Open Low Woodland A' of E. cornuta and E. decipiens to 5 metres over 'Dense Thicket' of Oxylobium cuneatum to ca 3 metres. Where this association occurs in the south of the reserve small specimens of Agonis flexuosa are also present.

#### Human Usage:

Tinkelelup Reserve is free from rubbish. There was no sign of human activity on the reserve apart from the tracks put in for fire control purposes. Adequate fences have been erected where farmland adjoins the reserve. According to Mr Colin Hassell poachers occasionally hunt kangaroos on the reserve.

#### Fire History:

Virtually the entire reserve, together with all the surrounding bushland, appears to have carried a very hot fire some 12 to 15 years ago. The burnt tops of many of the trees still bear testimony to the blaze. Time has, however, allowed considerable regeneration to take place.

During the past year the local Bush Fires Brigade was responsible for a control burn on the southern end of the reserve extension, from the Warriup Road to the first



firebreak. Apparently the present arrangement allows for the next section to be burnt after a 3 year interval.

FAUNA

Birds:

- |  |  |
|--|--|
| 1 x Wedge-tailed Eagle   | - <u>Aquila audax</u>                    |
| 2 x Brown Falcon   | - <u>Falco berigora</u>                  |
| 6 x White-tailed Cockatoo                                      | <u>Calyptorhynchus funereus baudinii</u> |
| 2 x Black-faced Cuckoo-Shrike                                  | <u>Coracina novaehollandiae</u>          |
| 6 x Blue Wren<br>(non breeding plumage)                        | - <u>Malurus</u> sp.                     |
| 4 x Broad-tailed Thornbill                                     | <u>Acanthiza apicalis</u>                |
| 14 x Yellow-tailed Thornbill                                   | <u>Acanthiza chrysorrhoa</u>             |
| 1 x Spotted Scrub-Wren   | - <u>Sericornis frontalis maculatus</u>  |
| 1 x Scarlet Robin (male)                                       | - <u>Petroica multicolor</u>             |
| 3 x Grey Fantail   | - <u>Rhipidura fuliginosa</u>            |
| 1 x Spotted Pardalote  | - <u>Pardalotus punctatus</u>            |
| 9 x Silvereye  | - <u>Zosterops lateralis gouldi</u>      |
| 2 x Western Spinebill  | - <u>Acanthorhynchus superciliosus</u>   |
| 2 x New Holland Honeyeater                                     | <u>Phylidonyris novaehollandiae</u>      |
| 3 x Tawny-crowned Honeyeater                                   | <u>Gliciphila melanops</u>               |
| 2 x Red-eared Firetail<br>(2immatures seen<br>2 heard calling) | - <u>Emblema oculata</u>                 |
| 24 x Grey currawong  | - <u>Strepera versicolor</u>             |
| 7 x Australian Raven   | - <u>Corvus coronoides</u>               |

Species previously recorded but not encountered on this survey include Brown Quail - Synoicus australis,

Galah - Eolophus roseicapillus and Golden Whistler -  
Pachycephala pectoralis.

Mammals:

2 x Brush-tail Wallaby - Macropus irma  
7 x Grey Kangaroo - Macropus fuliginosus  
(5 adult  
2 sub-adult)  
1 x Fox

Also diggings of a small unidentified mammal  
(scrapings in the soil). Some sign of rabbits but  
none seen.

Reptiles:

1 x Bobtail Lizard - Teliqua rugosa  
1 x Varanus Lizard - Varanus gouldii  
1 small unidentified snake sighted at the base of a  
Melaleuca tree near the north east corner of the  
reserve.

Remarks and Summary:

This is a most interesting reserve and due to its  
varied topography contains a considerable number of  
habitat types. Situated as it is on the eastern end  
of Green Range it commands an impressive view overlooking  
the sea to the south east and the Stirling Ranges to the  
north west. From a botanical standpoint the flora is  
diverse, and seven species of Banksia were recorded:



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Namely B. attenuata, B. litoralis, B. grandis,  
B. sphaerocarpa, B. prostrata, B. dryandroides, and  
B. baxteri (located just outside the reserve). It is  
also large enough to offer cover and protection to a  
variety of birds and mammals, and this aspect will no  
doubt become more important as the surrounding land is  
cleared for farming. The continued protection of this  
reserve helps to ensure the safety of Mollocullop Creek  
which starts in the reserve and feeds the fresh-water  
lake on nearby Mollocullop Spring Reserve.



View facing S.S.W. from the N.E. corner.  
Note the burnt tops to the eucalyptus trees.



Firebreak along the southern edge of the northern  
block. Note the rapid interchange of soils.





Recently 'chained' vegetation on privately owned land along the eastern firebreak.



E. calophylla and E. marginata over understory dominated by Dryandra mucronulata affin.

Note: Local Tea Picker.