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**SOME NATURE RESERVES
OF THE
WESTERN AUSTRALIAN
WHEATBELT**

**PART 24
BEVERLEY SHIRE**

B.G. MUIR

1979

Some Nature Reserves of the Western Australian wheatbelt

Part 24: Beverley Shire

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Western Australian Museum

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SOME NATURE RESERVES OF BEVERLEY SHIRE

B.G. Muir

INTRODUCTION

Beverley Shire lies in the western central wheatbelt and has an area of about 2310 square km. There are 8 Nature Reserves within the Shire, totalling ca 35 square km or ca 1.5% of the area of the Shire. The largest Nature Reserve in the Shire is 34442 (Dababerry Swamp) with an area of ca 1896 ha. Four of the 8 reserves are less than 50 ha in area. Two of the reserves have 'A' classification; A833, vested in the Local Authority and A3218 which is unvested. Of the remaining 6 the Western Australian Wildlife Authority holds the vesting for 4 (28088, 31837, 33188 and 34442). The remaining 2 are unvested.

This survey was carried out in July 1979 and consisted of brief examinations of the 2 unvested reserves, 16412 and 26897. Reports on these two reserves are attached.

METHODOLOGY

Physical characteristics of the reserves were obtained directly from the most recently available lithographs as published by the Department of Lands and Survey, and interpreted from observations made on the reserve.

Reserves were examined by vehicle where tracks were available, and on foot. Local knowledge and air-photographs were consulted to find areas of particular interest. Only a very short time could be spent on each reserve, the smaller ones being examined in 1 or 2 hours, the larger ones in a full day.

Vegetation was classified using Muir's (1977) system (Table 1),

which was designed specifically for describing wheatbelt vegetation. In the presentation of the abbreviated descriptions (in the section titled "Vegetation") capital letters in descriptive terms refer to specific classes of life form, height and canopy cover as used in the classification.

As the survey period on any reserve was very brief only the commonest plant species could be noted. Any species in which less than 3 individual plants were encountered within a space of 10-15 minutes examination of the vegetation were considered uncommon and are not listed. As much of the survey work was carried out rapidly and in unfavourable seasons, many plants were not flowering and so identifications were made from foliage alone. Only if an important dominant plant was not recognised were specimens brought back to the laboratory for examination.

Soil was examined very briefly and classified according to Northcote's (1971) texture groups and Munsell (1954) colour terms.

Fire history was determined from observation of the area, appearance of air-photographs and information from nearby farmers.

Fauna were not specifically sought, but some species (usually the most obvious) were encountered while examining vegetation. The lists provided are only a small fraction of the species present on nearly every reserve examined. Scats, footprints, burrows, nests and other indirect evidence is used only where identification is certain. Observations by farmers are used if considered reliable.

Opinion and recommendations expressed in these reports are entirely those of the author and are based on extensive experience in vegetation mapping and description in the wheatbelt, and association with faunal and habitat studies conducted by suitably qualified researchers.

RESULTS AND DISCUSSION

The features of each reserve can be summarised as follows:

Reserve 16412 - ca 47 ha; Wandoo woodland and Ti-tree
heath; rich in plants; needs rabbit control
but should be retained.

Reserve 26897 - ca 16 ha; Wandoo woodland and York Gum wood-
land; heavily grazed; no understorey; prone
to salt encroachment if cleared; should be
retained.

Both reserves are of value for fauna conservation, and 16412
also has a fairly rich assemblage of plants. Both are worth retention
and vesting in the Western Australian Wildlife Authority.

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TABLE 1: VEGETATION CLASSIFICATION AS USED IN WHEATBELT SURVEY

LIFE FORM/HEIGHT CLASS		CANOPY COVER			
		DENSE 70-100% ^d	MID-DENSE 30-70% ^c	SPARSE 10-30% ⁱ	VERY SPARSE 2-10% ^r
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	Dense Ferns	Ferns	Open Ferns	Very Open Ferns
	Mosses, liverwort	Dense Mosses	Mosses	Open Mosses	Very Open Mosses

Reserve 16412

Locality ca 16 km SE of Kauring Siding and ca 11 km due S of Balkuling Siding. Shown on lithograph 3/80, B4 and 1:50,000 Quajabin sheet (2333-IV).

Background

Originally set aside on 23 June, 1916 as a Rifle Range. Its purpose was changed to "Flora and Fauna" on 27 June, 1952.

Physical characteristics

Reserve 16412 is triangular, ca 1.8 km long by ca 0.4 km broad at its widest (S) end. It has a total perimeter of ca 4 km, an area of 46.6653 ha and the W boundary is inclined at a bearing of 333^oW. The lowest point is ca 325 m above sea level and the Reserve has a topographic range of ca 25m.

Vegetation

- (1) Wandoo Low Woodland A over Dwarf Scrub C
- (2) Leptospermum (ti-tree) Dense Heath B over mixed Open Dwarf Scrub D

Plant species

Forty-three species of plants were recorded, of which 17 are exploited by the wildflower seed trade.

Nest Hollows

Abundant in woodland area. Numerous young trees present.

Weeds

Abundant ephemerals in woodland and some in heath areas. In the heath mostly confined to paddock edges and on rabbit warrens.

Fire History

No evidence of fire within the last 30 years.

Fauna

Echidna (Tachyglossus aculeatus): scats in woodland
Kangaroo (probably Macropus fuliginosus): footprints common.
Common Bronzewing (Phaps chalcoptera): 13 seen
Port Lincoln Parrot (Platycercus zonarius): 5 seen
Barn Owl (Tyto alba): 2 in hollow tree trunk.
Western Shrike Thrush (Colluricincla harmonica rufiventris): 1 heard
Western Warbler (Gerygone fusca): 2 in woodland N end.
Yellow-rumped Thornbill (Acanthiza chrysorrhoa): common in woodland.
Wren (Malurus sp.): female seen
Singing Honeyeater (Meliphaga virescens): 2 in Wandoo tree
White-eared honeyeater (M. leucotis): 3 in Eucalyptus macrocarpa

Exotic Fauna

Rabbits abundant.

Firebreaks and Fences

Firebreaks in adjacent paddocks. Good fences with rabbit mesh on W and S sides.

Human Usage.

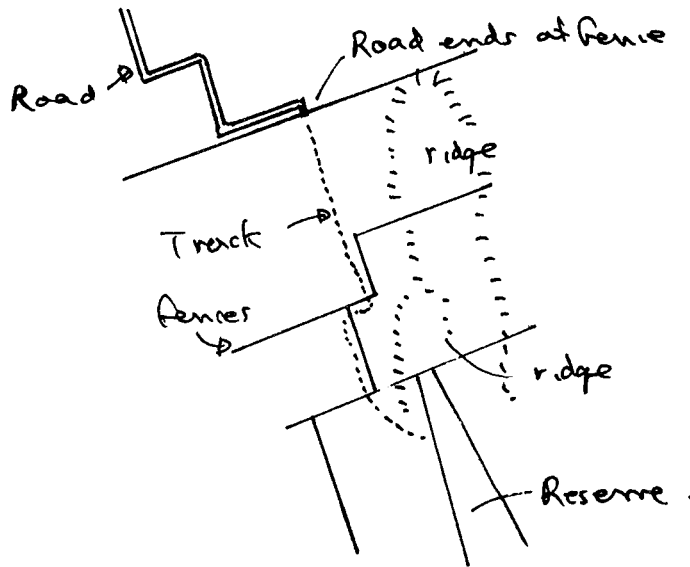
Some timber has been removed from the woodland.

Adjacent uncleared land

Thin strips of uncleared land extend to the N and S of the Reserve and 200 or more ha of uncleared land are contiguous with the E boundary.

Remarks

No access to Reserve except through adjacent paddocks as shown:



Opinion and Recommendations

Reserve 16412 is fairly rich in associations and plant species and is a valuable conservation area. Rabbits are a problem in the heath and a visit by the Agricultural Protection Board would be advantageous. I recommend that Reserve 16412 be retained in its present form and that it be vested in the Western Australian Wildlife Authority.

APPENDIX 1

Reserve 16412

Wandoo Woodland

Eucalyptus wandoo trees, 3-10m tall, 10-30% canopy cover over Gastrolobium trilobum and Hypocalymma angustifolium shrubs 1m tall, 10-30% cover.

Scattered E. wandoo emergent to 15m. Some Casuarina huegeliana to 6m tall. Other species recorded were: Acacia microbotrya, A. pulchella, Bossiaea preissii, Calytrix affin. fraseri, Eucalyptus eremophila, Hakea lissocarpa, Lepidosperma tenue, Lomandra effusa, Loxocarya pubescens, Podolepis capillaris, Xanthorrhoea reflexa. Some open areas are present where Leptospermum erubescens dominates, 1.5m tall, 70-100% cover. In these areas Acacia microbotrya, Casuarina campestris, Lepidosperma drummondii and Xanthorrhoea reflexa are prominent. Soil is pink, sandy clay, with poor drainage.

Leptospermum heath

Leptospermum erubescens shrubs 1.5m tall, 70-100% cover over Melaleuca seriata, Eremaea pauciflora and mixed shrubs, 0.5m tall, 2-10% cover.

Other plants recorded were:

Acacia lasiocalyx, A. pulchella, Andersonia lehmanii, Banksia attenuata, B. sphaerocarpa, Calothamnus sanguineus, Cassytha pubescens (on Melaleuca scabra), Casuarina huegeliana, C. humilis, Caustis dioica, Daviesia daphnioides, Dryandra sessilis, Eucalyptus macrocarpa, E. redunca, Glischrocaryon flavescens, Hakea varia, Hibbertia enervia, H. affin verrucosa, Jacksonia floribunda, Loxocarya pubescens, Lysinema ciliatum, Melaleuca scabra, Muhlenbeckia adpressa, Persoonia striata.

Soil, ^{white} sand. Excessively well drained.

Reserve 16412

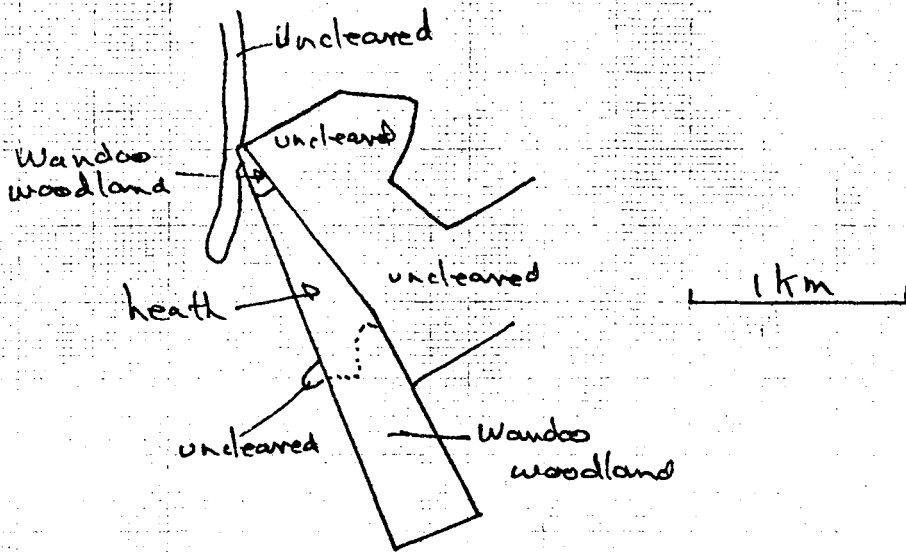




Plate 1. Reserve 16412 showing Wandoo woodland with understorey of Gastrolobium and Hypocalymma.



Plate 2. Leptospermum erubescens heath. Note clump of Eucalyptus macrocarpa in the distance.

RESERVE 26897

Located ca 5 km SSE of Kauring Siding and ca 9 km due W of Balkuling Siding. Shown on Lithograph 3/80, A3-4 and 1:50,000 Balkuling Sheet (2334-111).

Background

Originally set aside for "Conservation of Flora" on 19th July, 1963.

Physical characteristics

Reserve 26897 is square, with the N-S sides inclined at $333^{\circ}W$. It has a perimeter of ca 1.8km and an area of 16.1874 ha. The Reserve is ca 225 above sea level and has a topographic range of ca 4 m with the creek being ca 3m below the level of the Reserve.

Vegetation

- (1) Wandoo Open Woodland with no understorey
- (2) York Gum Woodland with no understorey

Plant Species

Five species of plants were recorded, all of which are exploited by the wildflower seed trade.

Nest hollows

Abundant, with some immature trees also present.

Weeds

Abundant ephemerals. Adjacent paddocks are heavily infested with Cape Tulip but none of these weeds were sighted within the Reserve.

Fire History

No evidence of fire within the last 30 years.

Fauna

Port Lincoln Parrot (Platycecrus zonarius): common

Willie Wagtail (Rhipidura leucophrys): 2 in York Gum

Weebill (Smicronis bevirostris): common

Yellow-rumped Thornbill (Acanthiza chrysorrhoa): common,
mostly in Wandoo

Australian Raven (Carvus coronoides): Common

Exotic Fauna

Sheep have grazed out all the understorey. A fox was sighted and rabbit scats and diggings were common.

Firebreaks and fences

No firebreaks. Fences on the sides examined were broken down and stock have been in the Reserve over a long period.

Human Usage

Timber has been removed from the woodland. The Reserve has been used as part of the adjacent farmland, stock having grazed it over a long period.

Adjacent uncleared land

None except salt vegetation following the creek.

Remarks

There is no access to the Reserve except through adjacent farmland. The nearest approach by road is on the N side of the Reserve.

Opinion and Recommendations

Reserve 26897 should probably be retained in its present condition. Although illegally grazed, if it is refenced the consequent growth of weeds will no doubt encourage the farmer to burn and this will lead to death of the trees. At the moment the trees provide useful

nest hollows and a resting place for transient birds.

In the long term however, the reserve is of little value.

The presence of a salt creek and the nature of the vegetation on the reserve suggest the land is salt-prone and any clearing is likely to be detrimental.

The Agricultural Protection Board should be encouraged to visit the Reserve and to treat it for rabbits and fox. More important might be an approach to the farmer holding adjacent land to the north of the Reserve to undertake a Cape tulip eradication plan. Such maintenance has obviously been neglected for many years.

I recommend Reserve 26897 be vested in the Western Australian Wildlife Authority.

APPENDIX
RESERVE 26897

Wandoo Woodland

Eucalyptus wandoo trees, 8-18m tall, and E. salmonophloea trees, 22-26m tall, 2-10% overall canopy cover. Scattered Acacia acuminata and Casuarina huegeliana trees present, but no understorey.

York Gum Woodland

Eucalyptus loxophleba trees, 8-18 m tall with some to 24m tall. Overall canopy cover 10-30%. Scattered Acacia acuminata present; no understorey.

