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**SOME NATURE RESERVES
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WESTERN AUSTRALIAN
WHEATBELT**

**PART 27
CUBALLING SHIRE**

B.G. MUIR

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WHEATBELT

PART 27 : CUBALLING SHIRE

B.G. MUIR
WESTERN AUSTRALIAN WHEATBELT

1979

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Wheatbelt. Parts 1 - 28. Dept. Fish. Wildl. Unpubl. Repts.

A NATURE RESERVE IN THE CUBALLING SHIRE

B.G. MUIR

INTRODUCTION

Cuballing Shire lies in the south-western central wheatbelt and has an area of ca 1251 square km. There are 6 Nature Reserves in the Shire, totalling ca 5 square km or ca 0.4% of the area of the Shire. The Reserves are all small, the largest being only 202 ha, and 4 of the remainder less than 70 ha in area. None of the Reserves have 'A' classification but 4 of them (21056, 21230 Yornaning, 21287 and 21830 14 Mile Brook) are vested in the Western Australian Wildlife Authority. The other 2, 24439 and 29589 are not vested.

This survey was carried out in July 1979 and consisted of a brief examination of Reserve 29589. A report is attached.

METHODOGY

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 bought 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.

TABLE 1: VEGETATION CLASSIFICATION AS USED IN WHEATBELT SURVEY

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

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Opinions 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

Reserve 29589 is ca 40 ha in area and supports York Gum woodland. A shallow ephemeral creek flows through the Reserve and into a small swamp with a sedge cover. Understorey has been almost completely removed by grazing. Despite this disturbance 17 species of birds were recorded, 6 of which were nest building and the Reserve is obviously heavily utilised by birds. Any clearing of the Reserve would almost certainly lead to salinity increases. I recommend the Reserve be retained in its present form and that it be vested in the Western Australian Wildlife Authority.

REFERENCES

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- NORTHCOTE, K.H. (1971). A factual key for the recognition of Australian soils. Glenside, S.A. : C.S.I.R.O./Rellim.

ACKNOWLEDGEMENTS

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RESERVE 29589

Located ca 19 km NE of Narrogin Townsite and shown on lithograph 385/80 and 1 : 50,000 Yilliminning sheet (2332-11). The latter map shows the Reserve as ca 7 km due N of Yilliminning Townsite.

Background

Originally set aside for "Conservation of Flora" on 17 January 1969.

Physical characteristics

Reserve 29589 is rectangular ca 0.8 km long (N-S axis) by ca 0.5 km broad (E-W axis). It has a total perimeter of ca 2.5 km and an area of 40.4686 ha. Lowest point on the reserve is ca 360 m above sea level and there is a topographic range of ca 20 m

Vegetation

York Gum Dense **F**orest with the understorey grazed heavily. The N and NE portions of the Reserve have some Wandoo trees. A shallow creek flows into a swamp with Juncus kraussii cover.

Plant species

Twelve plant species were recorded.

Nest hollows.

Numerous nest hollows, mostly in Wandoo trees.

Weeds

Guildford Grass (Romulea rosea), Ursinia anthemoides and Stinking-roger (Osteospermum clandestinum) are common throughout the Reserve.

Fire history

Farmers who own the surrounding land suggest the Reserve has not been burnt for at least 50 years.

Fauna

Mountain Duck (Tadorna tadornoides) : 2 in hollow tree

Port Lincoln Parrot (Platycercus zonarius) : common

Mulga Parrot (Platycercus varius) : pair seen

Pallid Cuckoo (Cuculus pallidus) : 1 seen nest building, another heard.

Boobook Owl (Ninox novaeseelandiae) : 1 in hollow tree

Red-capped Robin (Petroica goodenovii) : 2 pairs seen, 1 male with nest building material.

Western-Shrike-thrush (Colluricincla harmonica rufiventris) : 1 heard

Grey Fantail (Rhipidura fuliginosa) : common

Willie Wagtail (R. leucophrys) : common

White-browed Babbler (Pomatostomus superciliosus) : 6 in Jam trees

NE corner.

Weebill (Smicronis brevirostris) : common

Yellow-rumped Thornbill (Acanthiza chrysorrhoa) : common; pair seen nest building.

Mistletoe Bird (Dicaeum hirundinaceum) : heard calling

Silver eye (Zosterops lateralis gouldi) : common

Singing Honeyeater (Meliphaga virescens) : common in canopy of trees

White-eared honeyeater (M. leucotis) : common in trees, mainly Wandoo.

Western Magpie (Cracticus tibicen dorsalis) : pair seen nest building; 18 individuals seen.

Exotic fauna

Cattle have been in the Reserve within the last 2 - 3 weeks. Occasional rabbit scats and diggings noted.

Firebreaks and fences.

Firebreaks only in adjacent paddocks. Fenced on all sides.

Human usage

Timber has been removed from the Reserve. An old well and cleared area for a school site are present. Cattle have been in the Reserve and removed most of the understorey. Sheep and cattle carcasses have been dumped on the Reserve.

Adjacent uncleared land.

None present.

Remarks

The Reserve is completely isolated and surrounded by farm land. Access is through Williams location 298.

Opinion and recommendations.

Reserve 29589 is disturbed by cattle and other human influence but supports an extremely rich bird fauna, considering its size. Seventeen species of birds, 6 of which were nesting, were recorded in canopy of York Gum and Wandoo. The reason for this richness is not certain, but the isolation of the Reserve and lack of fire may be important factors. The creek flowing into the Reserve and forming a swamp is slightly salty. Clearing of the Reserve would lead to salting up of surrounding farmland. I recommend that the Reserve be retained in its present form and that the owner of the adjacent farmland be discouraged from allowing further grazing of cattle. Thereafter the Reserve should be inspected frequently to determine if grass and weed growth is becoming unmanageable. If this does occur it may be of value to allow grazing rather than risk a fire which would destroy the tree canopy. Although grazing is removing seedlings it does not appear to disturb the fauna

of the canopy. I recommend that Reserve 29589 be vested in the Western Australian Wildlife Authority.

APPENDIX

Reserve 29589

York Gum Woodland

Eucalyptus loxophleba trees, 6-18 m tall, 70-100% cover. Other species recorded were: Acacia acuminata, A. microbotrya, Amphipogon debilis, Astroloma pallidum, Cheilanthes tenuifolia, Stipa elegantissima, Stylidium repens, Stypandra imbricata. Soil brown loamy sand, well to moderately drained.

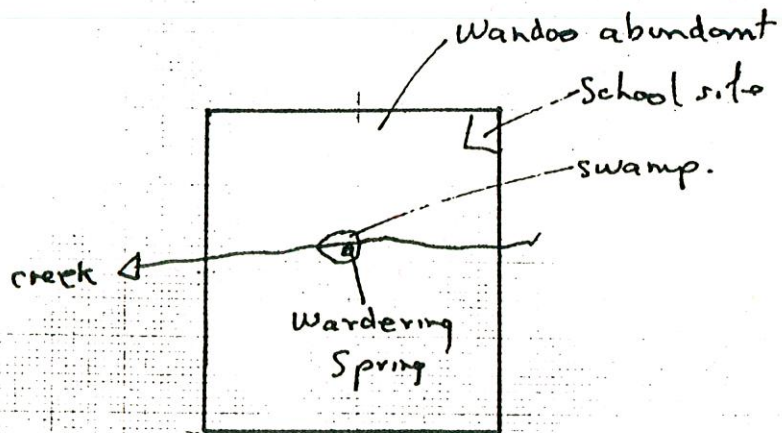
Wandoo woodland.

Small areas where Eucalyptus wandoo becomes abundant. Mostly 6-14 m tall, 2-10% cover with the same understorey species as in York Gum woodland.

Creek and swamp

The lower reaches of the shallow creek and a swamp into which it drains have dense cover of Juncus kraussii sedge and some Cotula coronopifolia growing on the edges.

Reserve 29589



0.25 km



Plate 1. Reserve 29589 showing York Gum woodland with the understory almost completely grazed out.



Plate 2. Swamp with sedge cover. The creek leads into the swamp in the foreground.