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**SOME NATURE RESERVES
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WHEATBELT**

PART 13

MUKINBUDIN SHIRE

B.G. MUIR

1979

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SOME NATURE RESERVES OF THE WESTERN AUSTRALIA

WHEATBELT

PART 13 : MUKINBUDIN SHIRE

B.G. MUIR

WESTERN AUSTRALIAN MUSEUM

1978

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SOME NATURE RESERVES OF THE MUKINBUDIN SHIRE

B.G. MUIR

Introduction

Mukinbudin Shire is in the eastern-central wheatbelt and has an area of about 3413 square km. There are 9 Nature Reserves within the Shire totalling 19.19 square km or ca 0.6% of the area of the Shire. The largest Nature Reserve in the Shire is Wundowlin Reserve (22262) being ca 723 ha in area and the smallest Reserves ca 25 ha (31195). Seven of the 9 Reserves are less than 200 ha in area. None have 'A' class status and only 4 are vested; three in the Western Australian Wildlife Authority and the other in the Local Authority.

This survey was carried out in December 1978 and consisted of brief examinations of 5 Reserves: 13051, 29303, 30705, 31195, 31629. A report on each of the Reserves is appended.

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 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.

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	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

11

20

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 13051 - ca 170 ha: Gimlet woodland and Acacia/Casuarina shrubland; gnamma hole with water most of the year; permanent residence by Aboriginal couple in shack; important nesting area for birds.

Reserve 29303 - ca 194 ha: mallee, Casuarina shrubland and two fire regeneration associations; several interesting plant species.

Reserve 30705 - ca 118 ha: woodland, breakaway and lithic complex; an undescribed Acanthocarpus is present. The Reserve is complex and one of the best observed in the eastern-central wheatbelt. Rich in plant species; probably rich in fauna; picturesque: recommend addition of adjacent lithic complex to area of Reserve. Requires firebreaks; suggest 'A' classification.

Reserve 31195 - ca 25 ha: lithic complex and post-fire heath; only uncleared land in immediate vicinity and probably valuable as resting site for transient birds.

Reserve 31629 - ca 377 ha: woodland, shrubland and salt complex; numerous tree nesting hollows; fairly rich in plant species.

Of the 5 Reserves examined 3 contain good areas of woodland but mallee and heaths are poorly represented. Two Reserves show evidence of recent fires. Unusual and interesting plants are found on some of the reserves and illustrate, to a minor extent, the influence of the Goldfields vegetation only a short distance to the east.

Reserve 30705 is rich in flora and probably in fauna and has a complex assemblage of formations and associations. As there are no 'A' class Reserves within the Shire it would be advantageous to have at least one with a little more than average protection, and Reserve 30705 is most suitable.

I strongly recommend that an investigation be made to determine if there is uncleared land suitable for reservation in the Shire and that moves be made to set such land aside. This would particularly apply to any heathy vegetation. Continued expansion of wheat growing into sub-optimal land of the east will increase clearing pressure in this Shire and others currently near the eastern margins of the existing wheatbelt.

ACKNOWLEDGEMENTS

Mr. M. Powell assisted in the field. The Western Australian Herbarium provided access to collections and assistance in identifying plants.

Reserve 13051

Located ca 9.5 km due N of Lake Brown Siding and shown on lithograph 54/80, AB-3.

Background

Originally gazetted 30 September 1910 for "Camping and Water". The Reserve was vested in the Metropolitan Water Supply, Sewerage and Drainage Board on 14 September 1917. Tenders to lease the land for grazing or clearing were called for on 20 May 1955. An application for grazing was granted from the Reserve. The lease was rescinded in 1958. The purpose of the Reserve was changed to "Conservation of Flora" and the MWSSDB vesting revoked on 5 April 1963.

Physical characteristics

Reserve 13051 is square, with a total perimeter of ca 5.2 km and an area of 169.9680 ha. There are no contour maps available but there are spot altitudes of ca 312 m above sea level (ASL) 3 km N, ca 350 m ASL 2.5 km E, and ca 348 m ASL ca 2 km S of the Reserve. It is visually estimated that there is about 15 m difference between the highest and lowest part of the Reserve.

Vegetation

The Reserve is about one-third Gimlet woodland and about one-half Acacia or Casuarina shrubland, the remainder being granite and small areas of mallee.

Plant species

Only 27 plant species were recorded but the survey was not detailed. Of those species recorded 7 are exploited by the wildflower seed trade.

Nest hollows

Common in woodland and a few in tree mallee on the W side. Very few young trees.

Weeds

Ephemerals around damsite, granite and in woodland. Some grass around granite.

Fire

No evidence of burning for at least 30 years.

Fauna

Port Lincoln Parrot (Platycercus zonarius): several in woodland.

White-eared Honeyeater (Meliphaga leucotis): 2 in shrubland.

Exotic fauna

Old rabbit warrens were seen. No recent rabbit activity noted. The area is visited regularly by the Agricultural Protection Board.

Firebreaks and fences

Fenced on E, S and W sides with firebreaks on the N (roadway), E and S sides in adjacent farmland and the N half of the W side in adjacent farmland.

Human usage

Much timber has been removed from the woodland and a damsite (which doesn't hold water) is present. An Aboriginal couple (Mr. and Mrs. Arthur Edward Jones) have had a shack near the centre of the Reserve since about 1952. The large gnamma hole on the granite is used as their water source and there is some rubbish dumping associated with the camp. The influence of the camp is however totally restricted to ca 1 ha near the granite. The Reserve has not been burnt for many years so fire does not appear to be a problem.

Adjacent uncleared land

About 50 ha of uncleared land is contiguous with the W boundary of the Reserve.

Opinion and recommendations

Reserve 13051 is an excellent windbreak for nearby farmland, a much used roosting and nesting site for birds and probably provides an excellent refuge for many species of reptiles. The gnamma hole contains water through most of the summer months and is probably used by native fauna as well as for the occupants of the shack. The influence of Mr. Jones tenancy is minimal and appears to cause little harm to the Reserve. Additionally, after such a long period of occupation it is unlikely Mr. and Mrs. Jones could find

accommodation elsewhere. I recommend that the Reserve be retained in its present condition and that Mr. and Mrs. Jones be allowed to retain their present occupancy for as long as they wish. I also recommend that Reserve 13051 be vested in the Western Australian Wildlife Authority.

APPENDIX I

Reserve 13051

Gimlet woodland

Eucalyptus salubris trees, 8-14 m tall, ca 10% canopy cover with scattered E. salmonophloia trees to 20 m tall. Other species recorded were: Acacia acuminata, A. erinacea, A. merrallii, Bassia diacantha, Eremophila clarkii, E. oppositifolia, Exocarpus sparteus, Ptilotus exaltatus, Solanum nummularium, Stipa elegantissima. Soil is red, medium clay. Poorly drained.

Acacia shrubland

Acacia resinomarginea and/or Casuarina acutivalvis shrubs, 2.5-4 m tall, 30-70% canopy cover. Also present were Amphipogon debilis, Astroloma serratifolium, Baekkea muricata, Dianella revoluta, Ecdeiocolea monostachya, Grevillea paradoxa, Hakea subsulcata, Melaleuca oldfieldii. Some areas with dense understory of Eriostemon deserti. Soil light yellowish brown, fine sandy clay loam with ca 80% latente.

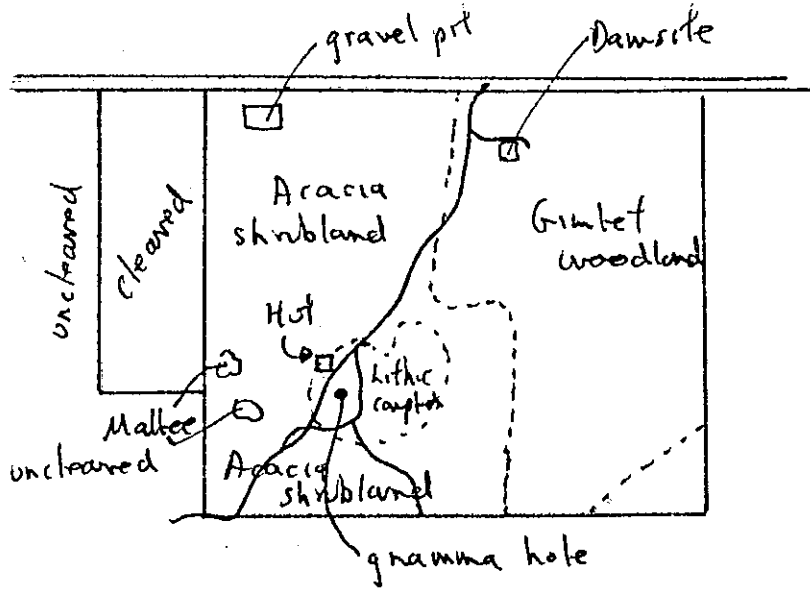
Mallee

Mostly Eucalyptus redunca shrub mallee 4-9 m tall, ca 2-10% cover in a small area on the W side of the Reserve.

Granite area

Borya nitida cover with some Amphipogon debilis grasses. Scattered shrubs of Casuarina campestris present.

Reserve 13051



1 km



Plate 1. Gimlet woodland on Reserve 13051.



Plate 2. Acacia shrubland near SW corner of Reserve.

Reserve 29303

Located ca 6 km NNW Bonnie Rock Siding and shown on lithograph 67/80, B3.

Background

Originally set aside 6 September 1968 for "Conservation of Flora and Fauna".

Physical characteristics

Reserve 29303 is rectangular, 1.8 km long (E-W axis) by ca 1.2 km broad (N-S axis). The Reserve therefore has a total perimeter of ca 5.5 km and an area of 194.2491 ha. No contour maps are available but there is a spot altitude of ca 408 m above sea level about 1 km S of the Reserve. There is an altitudinal difference of ca 80 between the highest and lowest parts of the Reserve.

Vegetation

Four associations are present, 2 of which are fire regrowth.
Mallee area: York Gum and Eucalyptus transcontinentalis Open Tree Mallee over mixed Open Low Scrub B.
Casuarina corniculata shrubland: C. corniculata Dense Thicket with no understory.
Fire regrowth type 1: mixed Dense Low Heath C.
Fire regrowth type 2: mixed Dense Heath B.

Plant species

Forty-five plant species were recorded, 9 of which are exploited by the wildflower seed trade. An undescribed species, Schoenus sp. 3 forms dense stands on this Reserve. Elsewhere it occurs as small isolated populations.

Nest hollows

Abundant in Water Reserve contiguous to S end of Reserve.

Weeds

Many small ephemerals in wet areas surrounding granit outcrop.

Fire history

The shrubland area was burnt prior to 1962 and is thus greater than 16 years old. The mallee areas are much older.

Fauna

Emu (Dromaius novaehollandiae): fresh droppings sighted.

Port Lincoln Parrot (Platycercus zonarius): several flying over Reserve and roosting at night in Water Reserve.

Galah (Cacatua roseicapilla): abundant, 60 or more roosting in Water Reserve.

Red-tailed Black Cockatoo (Calyptorhynchus magnificus): 59 seen roosting in Water Reserve.

Crested Bellbird (Oreoica gutturalis): heard calling in several parts of the Reserve.

Exotic fauna

An active rabbit warren and numerous piles of scats observed.

Firebreaks and fences

Only in adjacent paddocks. Fences on E side Reserve in poor condition.

Human usage

None recorded apart from roadway.

Adjacent uncleared land

A Water Reserve of ca 69 ha is contiguous with the SE boundary of the Reserve. It comprises a granite outcrop and an excellent stand of Salmon Gum woodland.

Opinion and recommendations

A valuable Reserve in an area with little uncleared bushland left intact. The mallee area has several interesting plants present and the shrubland was reasonably rich in species. The woodland on the adjacent Water Reserve is very important for birds, particularly parrots, and which probably spend some time feeding in the Reserve. The fenceline on the E side of the Reserve is in poor repair and is likely to allow sheep to enter. It would be advantageous to obtain some control over the Water Reserve for if its present purpose ceases the woodland may be cleared. With regards the portion of land which is Reserve 29303 I recommend it be retained in its present form and that it be vested in the Western Australian Wildlife Authority.

APPENDIX 2

Reserve 29303

Mallee area

Eucalyptus loxophleba and E. transcontinentalis tree mallee, 4-10 m tall, 10-30% cover over mixed shrubs to 1.5 m tall, 2-10% cover. The E. loxophleba is the smooth trunked eastern wheatbelt form of the species. Other plant species recorded were: Acacia acuminata, A. colletioides, A. mackayana, Amphipogon debilis, Astroloma serratifolium, Bertya cunninghami, Daviesia nematophylla, Dianella revoluta, Eriostemon desertorum, Exocarpus aphyllus, Grevillea paradoxa, Lepidosperma sp., Lomandra effusa, Melaleuca uncinata, Olearia muelleri, O. revoluta, Phebalium tuberculatum, Prostanthera aspalathoides, Solanum nummularium and Westringia cephalantha. Small patches which accumulate a little runoff have dense cover of Schoenus sp. 3. There are scattered E. salmonophloia to 24 m tall present throughout the mallee area. Soil red, sandy clay loam; poorly drained.

Casuarina corniculata shrubland

Casuarina corniculata shrubs, 1-2.5 m tall, 70-100% cover with no understory. Other species recorded were Acacia acuminata, A. resinomarginea, Choretrum pritzellii, Eriostemon deserti, Hakea minyma, Hemigenia eutaxioides, Hibbertia desmophylla, Platysace effusa, Spyridium denticulatum. Soil yellow, sandy clay with ca 80% laterite pebbles. Poorly drained. There are portions of this association which contain Casuarina acutivalvis as co-dominant and Grevillea yorkrakinensis, Hakea subsulcata and Thryptomene kochii in the understory.

Fire regrowth type 1

Unstratified heath with no particular dominants. Regrowth to 1 m tall, 70-100% cover. Other species recorded were: Acacia steedmani, A. stereophylla, Casuarina corniculata, Choretrum pritzellii, Eucalyptus leptopoda, Grevillea apiciloba, G. didymobotrya, G. yorkrakinensis, Hakea subsulcata, Melaleuca cordata, Phebalium thryptomenoides, Platysace effusa, Scholtzia sp., Triodia scariosa. Soil yellow, fine sandy loam. Well drained.

Fire regrowth type 2

Unstratified but irregular regrowth to about 1.5 m tall, 70-100% cover. Acacia resinomarginea locally dominant. Acacia stereophylla, A. sp. 19, Casuarina acutivalvis, Eucalyptus leptopoda. Soil yellow, sandy clay with ca 60% laterite pebbles. Moderately drained.

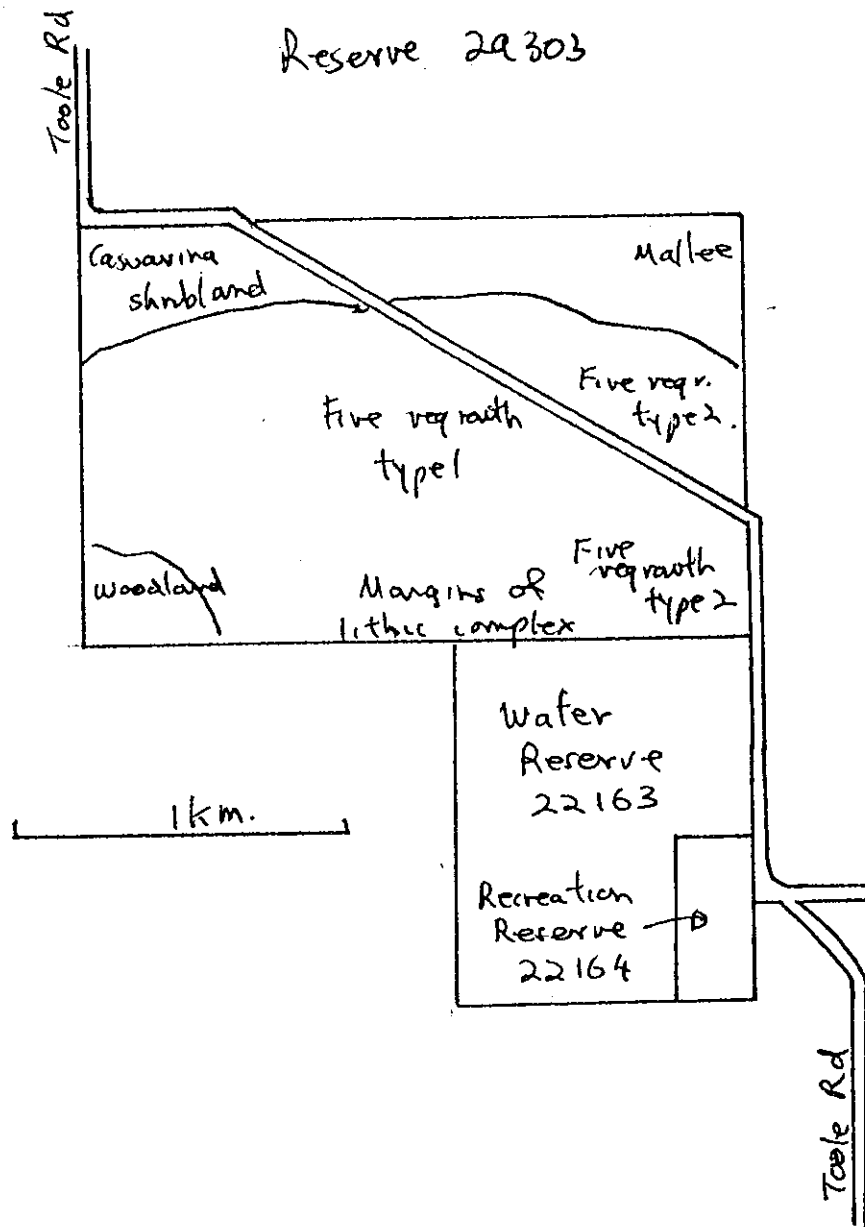




Plate 3 NE corner of Reserve 29303 showing Eucalyptus transcontinentalis mallee. Wet area dominated by Schoenus sp. 3 in foreground.



Plate 4 Tamma scrub on E side Reserve.

Reserve 30705

Located ca 19 km NE of Lake Brown Siding and ca 28 km ENE Mukinbudin Townsite. Shown on lithograph 54/80, C2.

Background

Originally set aside for "Conservation of Flora" on 11 December 1970.

Physical characteristics

Reserve 30705 is ca 1.4 km long (N-S axis) by ca 0.8 km broad (E-W axis). It has a total perimeter of 4.4 km and an area of 117.7736 ha. Spot altitudes of ca 359 m above sea level (ASL) ca 4 km N of the Reserve and 366 m ASL ca 4 km W of the Reserve are available. The reserve itself has a variation of ca 20 m within its boundaries.

Vegetation

Woodlands, breakaways and lithic complex are represented on the Reserve. The woodland is Salmon Gum and Gimlet Open Woodland with no understory. Breakaway complex has patches of shrubs and Wandoo woodland in clay areas with high runoff. The breakaway platform and margins are fairly species rich. Lithic complex is mainly restricted to the S end of the Reserve and is mostly clumps of shrubs with grassy flats between.

Plant species

Forty plant species were recorded, 10 of which are exploited by the wildflower seed trade. Acanthocarpus sp. 1 an undescribed species of widespread but localised distribution was found on the breakaways.

Nest hollows

Common in woodland.

Weeds

Common around granite areas and wetter portions of woodland. Mostly small ephemerals.

Fire history

Reserve has not been burnt for at least 30 years.

Fauna

Echidna (Tachyglossus aculeatus): several around breakaways.

Grey Kangaroo (Macropus fuliginosus): scats common. Two seen S end Reserve.

Emu (Dromaius novaehollandiae): scats seen.

Wedgetail Eagle (Aquila audax): feather collected at S end Reserve.

Crested Pigeon (Ocyphaps lophotes): 3 seen on fenceline W side.

Port Lincoln Parrot (Platycercus zonarius): common in woodland.

Galah (Cacatua roseicapilla): common in woodland.

Fairy Martin (Hirundo ariel): remains of old nest under granite overhang.

Ornate Dragon (Amphibolurus ornatus): 2 seen on granite outcrop.

Exotic fauna

Rabbit scats and old burrows common.

Firebreaks and/or fences

Marginal firebreaks are present within the Reserve but are in poor condition. Fences are present on the E and W sides but that on the S side is in disrepair. The portion of Avon loc. 28358 which is contiguous with S end of the Reserve is granite complex with similar vegetation. There is no sign of grazing in the Reserve or adjacent bushland and it would appear that the upper portion of 28358 is probably fenced off from that further S. The fence, if it exists, was not sighted.

Human usage

None recorded.

Adjacent uncleared land

The N end of Avon loc. 28358 is uncleared and mostly granite outcrop and patchy shrubland. It probably totals at least 200 ha of uncleared land.

Opinion and recommendations

Reserve 30705 is one of the best examined in the eastern-central wheatbelt. It supports extensive areas of woodland and a complex mosaic of breakaways with woodlands and shrubs. The lithic complex at the S end is highly mosaic and rich in plant species. It has picturesque boulder piles, some of which show grotesque sculpturing. Indications that it is rich in fauna are apparent. I strongly recommend that an attempt be made to add the uncleared

lithic complex S of the Reserve to the Reserve's area. I also recommend firebreaks be renewed, particularly on the W and S sides. I feel that the Reserve is worthy of "A" classification as its importance to fauna is probably considerable and it contains plant assemblages, particularly on the breakaways, which are uncommon elsewhere in this Shire. I recommend the Reserve be vested in the Western Australian Wildlife Authority.

APPENDIX 3
Reserve 30705

Woodland

Eucalyptus salmonophloia and scattered E. salubris trees, 12-18 m tall, 2-10% cover. Other plant species recorded were: Acacia acuminata, A. erinacea, A. mackayana, A. sp. 14, Bassia diacantha, Eremophila drummondii, E. oppositifolia, Exocarpus sparteus, Olearia muelleri, Rhagodia nutans, Waitzia acuminata. Soil dark reddish brown, light clay. Poorly drained.

Breakaway complex and associated shrubland

Breakaway margins with Eucalyptus wandoo stands of varying height and density. Ridges with scattered low shrubs. Some areas with heavily weathered granite or exposed quartzite intrusions. Runoff areas with Melaleuca uncinata thickets. Plant species recorded in the complex were: Acacia acuaria, A. erinacea, Acanthorcarpus sp. 1, Alyxia buxifolia, Bassia diacantha, Eremophila clarkii, E. scoparia, Eriostemon deserti, Exocarpus aphyllus, Micromyrtus drummondii, Olearia muelleri, O. pimelioides, Phebalium tuberculatum, Platysace ? juncea.

Lithic complex

Complex mosaic of granite outcrop and patchy shrubs. Some areas of grassy flats. Plant species recorded were: Acacia extensa, A. lasiocalyx, A. tetragonophylla, Bursaria spinosa, Dodonaea attenuata, D. inequifolia, Grevillea paniculata, Hakea decurva, Hibbertia affin. glomerata, Isotana petraea, Muhlenbeckia adpressa, Pittosporum phyllinaeoides, Ptilotus obovatus, Santalum acuminatum, Solanum lasiophyllum, Spartochloa scirpoidea.

Reserve 30705

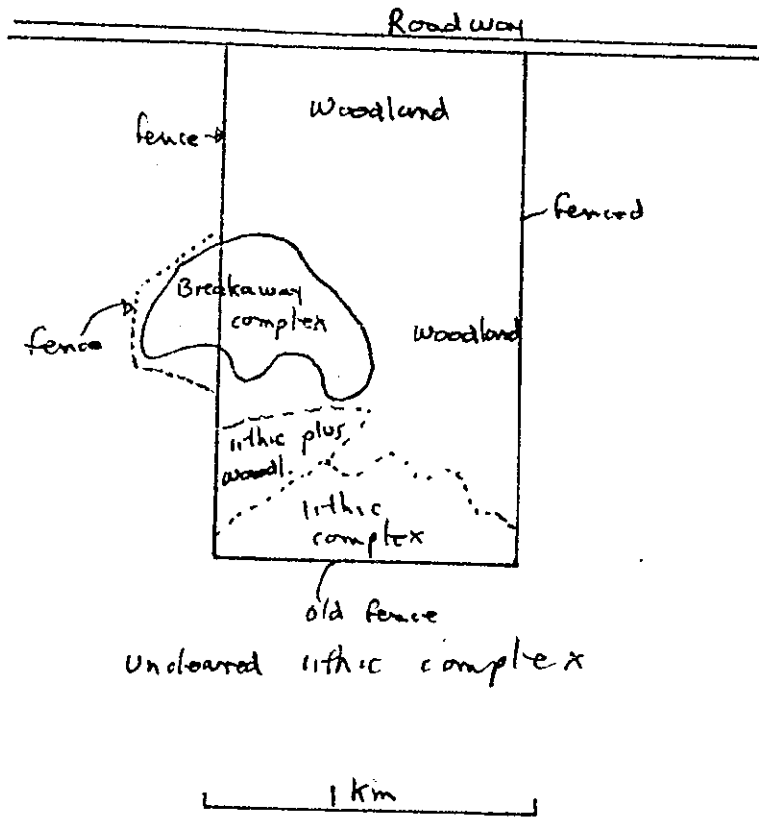




Plate 5 Breakaway complex on Reserve 30705, showing patchy wandoo and shrubby area in runoff zone.



Plate 6 Salmon Gum-Gimlet woodland on N end Reserve.

Reserve 31195

Located ca 21 km NNE Mukinbudin Townsite and shown on lithograph 54/80, A1.

Background

Originally set aside 21 January 1972 for "Conservation of Flora".

Physical characteristics

Reserve 31195 is triangular, with a total perimeter of ca 2.4 km and an area of 24.9461 ha.

Vegetation

The Reserve is partly covered by a complex lithic mosaic, mostly Dense Thicket of Tamma or Calycopeplus. Sandy areas had post-fire regrowth of Acacia Dense Low Heath C.

Plant species

Eighteen plant species were recorded, 5 of which are exploited by the wildflower seed trade.

Nest hollows

None present.

Weeds

Abundant ephemerals in wet runoff areas from granite.

Fire history

A portion of the Reserve has been burnt within the last 20 years (see map). The remainder is older than 30 years.

Fauna

Western Shrike-thrush (Colluricincla harmonica rufiventris): 2 heard calling near N end.

The Reserve may be important for some invertebrates e.g. Buprestidae (Jewel Beetles).

Exotic fauna

None recorded.

Firebreaks and fences

No firebreaks but the SW side has an adjoining roadway. The E boundary is fenced.

Human usage

None recorded.

Adjacent uncleared land

At least 90 ha of uncleared land are contiguous with the Reserve.

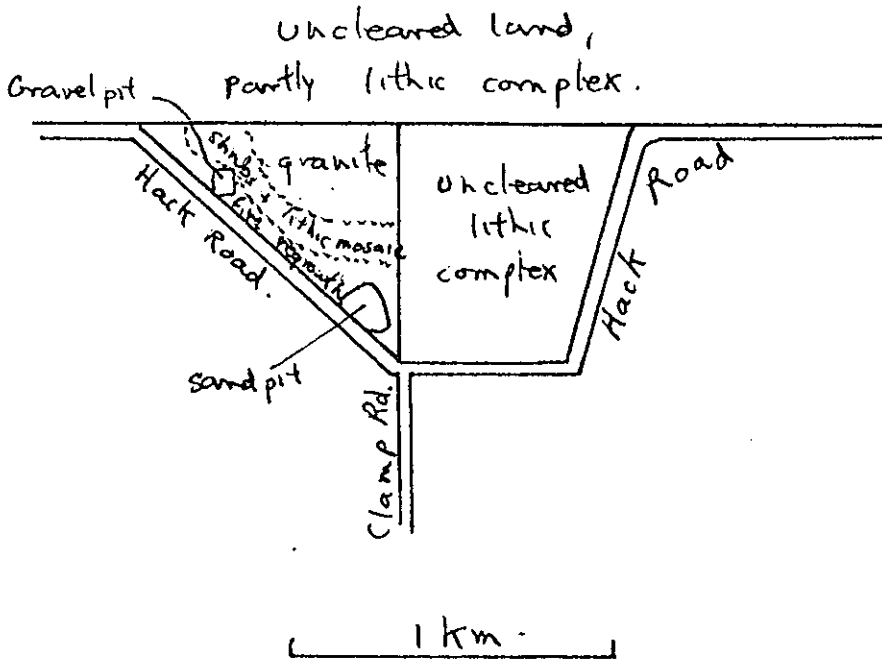
Opinion and recommendations

Reserve 31195 is in good condition and supports a plant assemblage representative of shrubland and lithic complex. Adjacent uncleared land is also mostly lithic complex and so is unlikely to be cleared. The effective area of the Reserve is thus in excess of its actual boundary. The Reserve is almost the only uncleared land in the region and is undoubtedly valuable as a stepping stone for transient species. I recommend the Reserve be retained in its present condition and that it be vested in the Western Australian Wildlife Authority.

APPENDIX 4
Reserve 31195

The majority of the Reserve is a complex lithic mosaic dominated by Calothamnus gilesii, Calycopeplus helmsii and Casuarina campestris averaging 2-3 m tall and 70-100% cover. Lower slopes and gravelly portion on W side Reserve are mostly burnt. Regrowth is mainly Acacia stereophylla shrubs 1 m tall, 70-100% cover. Other plant species recorded were: Acacia neurophylla, A. sp. 18, Casuarina acutivalvis, Choretrum pritzellii, Ecdeiocolea monotachya, Eriostemon thryptomenoides, Eucalyptus leptopoda, Goodenia pinifolia, Grevillea excelsior, G. paradoxa, Hakea coriacea, Melaleuca cordata, Thryptomene sp., Westringia sp. Soil in the sand areas was pinkish grey, sandy clay, poorly drained.

Reserve 31195



Reserve 31629

Located ca 10.5 km SSE Mudinbudin Townsite and shown as Avon loc. 13414 on lithograph 54/8(A4), 55/80(F4), and 35/80(A1).

Background

Originally set aside for "Conservation of Flora and Fauna" on 15 September 1972.

Physical characteristics

Reserve 31629 is irregular rectangular, ca 2.1 km long (N-S axis) by 1.6 km broad (E-W axis). It thus has a total perimeter of ca 7.6 km and an area of 376.7623 ha. No contour maps are available but there are spot altitudes of ca 318 m above sea level ca 5 km NW and NE of the Reserve. Topographic variation within the Reserve probably doesn't exceed 5 m.

Vegetation

Eucalyptus gracilis (Yorrel) Open Low Woodland A over chenopod Open Dwarf Scrub D occupies the NE corner of the Reserve. Much of the rest is Melaleuca Open Scrub with Acacia Scrub. Western portions of the Reserve are salt flats, the majority of which lies outside the Reserve boundary.

Plant species

Twenty-eight plant species were recorded, of which 5 are exploited by the wildflower seed trade. Most were found in the woodland.

Nest hollows

Abundant hollows in E. gracilis woodland.

Weeds

Abundant ephemerals in wet areas.

Fire history

All vegetation is older than 30 years.

Fauna

Crested Pigeon (Ocyphaps lophotes): 4 seen in shrubland.

Port Lincoln Parrot (Platycercus zonarius): several in woodland.

Galah (Cacatua roseicapilla): common in woodland and feeding in marginal shrublands.

Weebill (Smicrornis brevirostris): in eucalypts.

Yellow-rumped Thornbill (Acanthiza chrysorrhoa): in E. gracilis woodland and in marginal shrublands.

White-fronted Chat (Epthianura albifrons): in marginal shrublands.

Exotic fauna

None recorded.

Firebreaks and fences

No firebreaks except in adjacent farmland; particularly on the E side. There is a good fence on the E boundary but none of the S or W sides. The N boundary has a fence in poor condition.

Human usage

Timber has been removed from the woodland, old fences and disturbances on the N end suggest a stockyard or old house site. The Reserve may have been grazed. A powerline crosses the N end of the Reserve.

Adjacent uncleared land

More than 1000 ha of salt complex and scrub are contiguous with the Reserve.

Remarks

The powerline, which was installed on 5 October 1973, cleared ca 0.5 ha or ca 0.1% of the Reserve. This clearance was in a strip ca 1.6 km long by 3 m wide. An examination of the cleared area showed excellent regrowth of ephemerals and small herbaceous species and the Melaleuca hamulosa patch has partly reinvaded. There is no evidence of recent vehicle use of the track. The powerline track probably has little or no influence on the distribution or movement of fauna at the time of this survey.

Opinion and recommendations

Reserve 31629 provides several important habitats, particularly woodlands with nest hollows. Most is undisturbed and the area is relatively rich in plant species. I recommend the Reserve be retained in its present form and that it be vested in the Western Australian Wildlife Authority.

APPENDIX 5

Reserve 31629

Eucalyptus gracilis woodland

Eucalyptus gracilis trees, 8-14 m tall, 2-10% cover over Atriplex affin. vesicaria and Bassia diacantha shrubs, 0.5 m tall, 2-10% cover. Other plant species recorded were: Acacia erinacea, A. merrallii, Alyxia buxifolia, Eremophila drummondii, E. oppositifolia, Lycium australe, Olearia axillaris eremicola, O. muelleri, Pittosporum phylliraeoides, Ptilotus exaltatus, Rhagodia nutans, Scaevola spinescens, Stipa elegantissima and Templetonia sulcata. Soil is reddish-brown medium clay. Poorly drained.

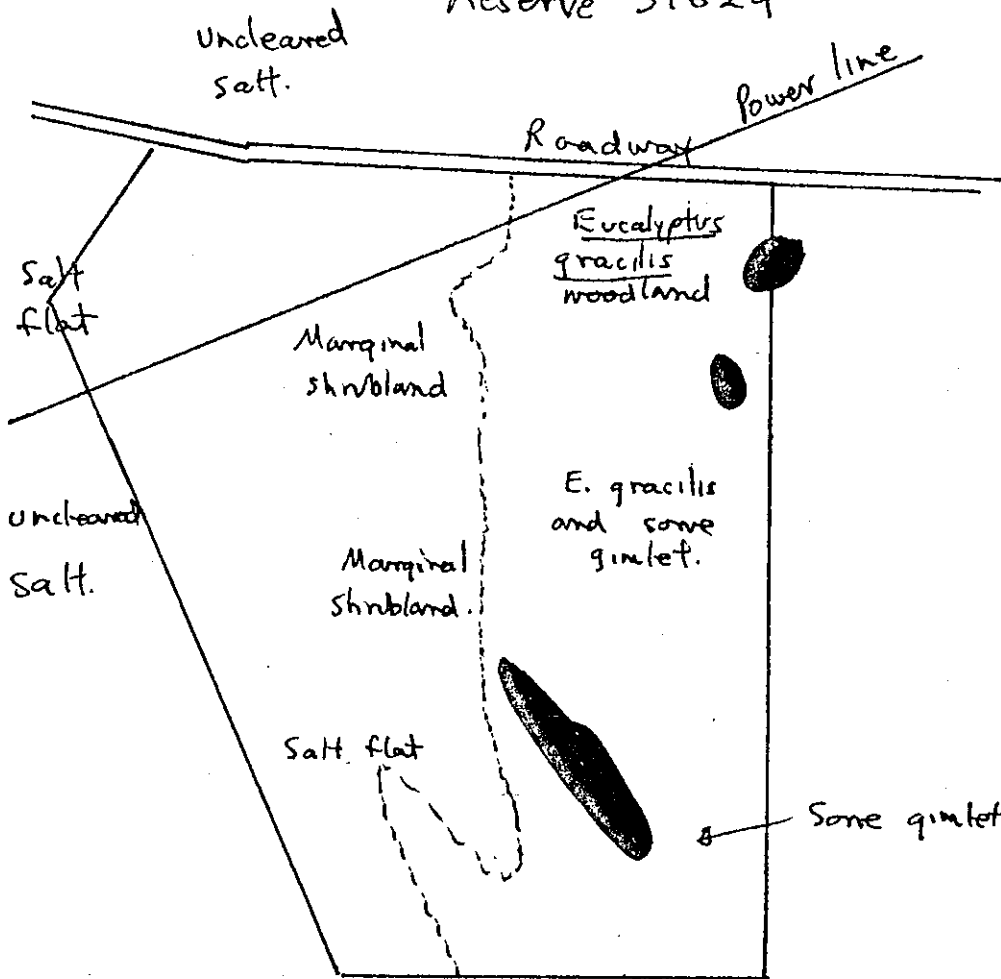
Marginal shrubland

Melaleuca hamulosa shrubs 3-5 m tall, patchily distributed and Acacia multispicata shrubs 2-3 m tall. Overall cover 10-30%. Understorey sparse but seasonal cover of Asteraceae. Other species recorded were: Arthrocnemum bidens, Argyroglottis turbinatus, Atriplex affin. vesicaria, Bassia diacantha, Carpobrotus edulis, Dysphema blackii, Gunniopsis intermedia, Melaleuca uncinata, Rhagodia nutans. Soil grey, sandy clay. Poorly drained; some salt influence.

Salt flat

Arthrocnemum bidens and A. halocnemoides patchily distributed along watercourse. Most of this association is W of the Reserve.

Reserve 31629



1 km.

● clay/salt pan.



Plate 7 Reserve 31629. View S into Eucalyptus gracilis woodland showing senescent trees and abundant hollow fallen logs. There is a dense seasonal growth of Asteraceae.



Plate 8 Melaleuca and Acacia shrubland on salt margins.