

*Gordon Wye*



**Goldfields Naturalists Club Inc.**

# **A BIOLOGICAL SURVEY OF VICTORIA ROCK NATURE RESERVE**



**A GOLDFIELDS NATURALISTS CLUB PROJECT**

**Edited by Greg Barrett**

**November 1991**

Goldfields Naturalists Club (Inc.)  
P.O. Box 919, Kalgoorlie W.A. 6430

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## PREFACE

On September 2nd 1988, Andrew Chapman from the Goldfields Regional office of the Western Australian Department of Conservation and Land Management addressed a meeting of the Goldfields Naturalists Club. Andrew discussed amateur involvement in biological surveys and in particular, the work done by the Fitzgerald River National Park Association in surveying the Fitzgerald River National Park. This became the starting point for the study you now have before you.

Victoria Rock Nature Reserve had been visited by Club members and many other Goldfields people regularly. It is a small reserve, popular with the public, and yet little was known about the flora and fauna which it is designed to protect. When Club members expressed interest in embarking on a project similar to that described by Andrew, Victoria Rock Nature Reserve was the logical choice.

In 1989 the Club produced an introductory leaflet giving a brief description of the reserve and its features. This final report is the culmination of all the field work and data compilation which followed. We believe it to be a sound and accurate description of the flora and fauna but we acknowledge that biological communities are dynamic and would welcome any further observations which might be made.

The Club is proud to have made a positive contribution to the knowledge of our Goldfields flora and fauna. We hope you will find this report useful and informative and that it will encourage you to learn more about our unique wildlife heritage.

Greg Barrett,  
Editor,  
November 1991.

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## 1.0 GENERAL INTRODUCTION

### 1.1 Location

Victoria Rock Nature Reserve is located 45km south-west of Coolgardie (31°18'S, 120°56'E) in the Eastern Goldfields region of Western Australia, about 550km east of Perth (Figure 1). Access from Coolgardie is via a good gravel road which leads eventually to Lake Johnston and the Norseman-Coolgardie Road.

### 1.2 History

Prior to the arrival of Europeans seeking gold and then pastoral land, Aborigines probably used the Rock as a source of food and water for thousands of years. While there are no major Aboriginal sites known in the area, flaked stone tools have been found around the base of the Rock.

Victoria Rock was named by John Holland in April 1893. He discovered it while searching for a shorter route from Albany to the Eastern Goldfields. "Holland's Track", from Broomehill to Gnarlbine Rocks (15km north of Victoria Rock), took two weeks off the previous route and was used by thousands of hopeful prospectors.

Woodline railways from Kalgoorlie reached the area in 1921 and stumps of large trees cut for mining timbers may still be seen close to the Rock.

Prior to 1969 Victoria Rock was designated as an Experimental Tree Plantation. This probably reflects the requirements of local gold mining operations for structural timbers, although despite the title no actual plantings are believed to have taken place.

Following representations to the then Department of Fisheries and Wildlife by Professor A.R. Main on the biological values of granite rock outcrops, the 259ha reserve was vested in the W.A. Wildlife Authority for the conservation of flora and fauna. Since August 1989, Victoria Rock Nature Reserve (Res. No. 8480) has been an "A" Class Nature Reserve, vested in the National Parks and Nature Conservation Authority and managed by the Department of Conservation and Land Management (CALM).

An application for a mining tenement within the reserve in 1980 did not proceed, following objections from the Department of Fisheries and Wildlife.

### 1.3 Climate

The area is within a transitional zone between the arid interior and the higher rainfall belt of the South-west. Average rainfall is about 300mm and occurs mostly within the winter months. Average annual evaporation is around 3000mm. Mean summer temperatures range from 18° to 34°C with an extreme of 45°C recorded. The mean winter range is 4° to 20°C.

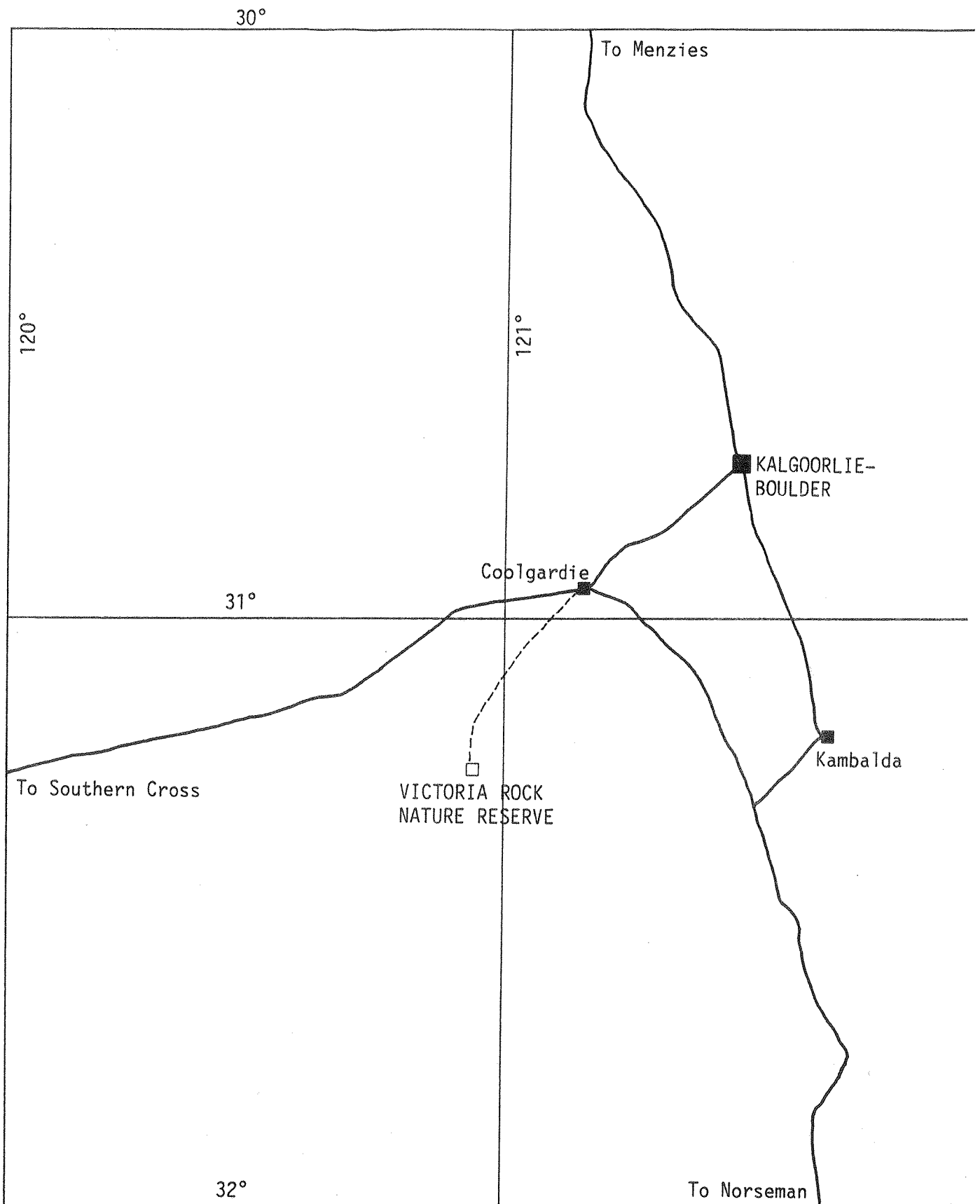


Figure 1: Location of Victoria Rock Nature Reserve.

#### 1.4 Geology

The granite that forms Victoria Rock is typical of many similar "whalebacks" in the ancient Yilgarn Block of Western Australia. It was formed during the Archaean period about 2.6 billion years ago (Bettenay, 1977).

Granite is believed to have crystallised slowly several kilometres below the surface of the earth forming the coarse interlocking pattern of quartz and feldspar crystals that can be discerned on the surface of the rock. Small cracks which formed during cooling filled with liquid magma to form the coarse pegmatite and fine aplite veins (dykes) which are common over much of the outcrop.

Millions of years of weathering have removed the overlying rocks and produced the overall shape of the outcrop that is visible today. Fissures and exfoliated sheets of rock have also been produced by weathering and in particular, temperature variation.

The reddish orange appearance of the Rock, in contrast to the grey or black of more western outcrops, is due to the much more sparse occurrence of lichens (Crook, 1979).

#### 1.5 Existing human influences

Though a gazetted nature reserve, current Western Australian legislation does not preclude the possibility of an active mining tenement occurring within the reserve. Exfoliated granite slabs have been collected from the reserve in the past (Crook, 1979).

Probably a greater threat to the integrity of the reserve however, is improper recreational use by members of the public. While most visitors no doubt leave the Rock as they find it, some engage in activities which cumulatively will decrease the value of the reserve.

Examples of undesirable activities include irresponsibility with fire, use of vehicles away from designated tracks and littering. Although CALM has provided facilities such as barbeques and seating and has sealed off unwanted tracks, the Club hopes that a better knowledge and appreciation of the natural environment through the distribution of our study will assist in the responsible use of the area.

## 2.0 VEGETATION AND FLORA

### 2.1 Introduction

There has been much botanical interest in the South West Interzone (Beard, 1979), as a zone of overlap between the higher rainfall areas of the south-west and the more arid interior. Victoria Rock occurs within the South West Interzone and granite outcrops like it can act as "islands" for species at the edge of their distribution.

Between 1977 and 1982 the Biological Survey of the Eastern Goldfields of Western Australia was conducted and in it a number of granite outcrops were surveyed (see Newbey *et al.*, 1984, and Dell *et al.*, 1985). Victoria Rock was apparently visited only briefly and did not become a formal study site.

There are, however, some records of botanical collections. It is known that at least four botanists (Andrew Brown, Steve Hopper, Ken Newbey and Allen Lowrie) have visited the Rock on a number of occasions and that others, including A.S. George, have made some collections there. These records include reference to an undescribed species of *Xanthorrhoea*.

The relatively dense stands of *Allocasuarina huegeliana* are unusual for the area and have been described as of "high regional conservation value" (Crook, 1979).

### 2.2 Materials and methods

The major vegetation units were identified with the use of an aerial photograph. The main components of each unit were then recorded in the field and the unit described using the system devised by Muir (1977). A summary of Muir codes used here is given in Table One.

Two principal survey sessions were held in 1989 in conjunction with the main fauna surveys (see 3.2), but the Club first began gathering botanical data in 1987 and continued to do so until 1991. During this period numerous visits were made by individuals and groups, with the result that the site was visited during each calendar month with the possible exception of February.

Flora collections and records were gathered by inspection of each vegetation unit. Due to the relatively small size of the reserve much of it could be traversed during the course of the study and it was therefore considered unnecessary to adopt a formal sampling regime.

Plant specimens were collected, pressed and dried, with most being subsequently identified and classified by Club members using a variety of botanical guides (Blackall and Grieve, 1980, 1981, 1981a, 1988; Grieve and Blackall, 1982; Brooker and Kleinig, 1990), personal field herbaria or the Reference Herbarium at the W.A. Herbarium. Some specimens were referred to botanists at the W.A. Herbarium and to other authorities for



Table One: Summary of Muir (1977) codes used to describe vegetation.

Code	Meaning
a <sub>1</sub>	<i>Atriplex vesicaria</i>
a <sub>2</sub>	<i>Acacia acuminata</i>
c	Mid-dense (30-70% canopy cover)
c <sub>1</sub>	<i>Allocasuarina huegeliana</i>
d	Dense (70-100% canopy cover)
e <sub>1</sub>	<i>Eucalyptus salmonophloia</i>
e <sub>2</sub>	<i>Eucalyptus loxophleba</i>
GL	Bunch grass <0.5m
H	Hummock grass
i	Sparse (10-30% canopy cover)
J	Herbs
KT	Mallee (tree form)
l <sub>1</sub>	<i>Leptospermum erubescens</i>
LA	Trees 5-15m
LB	Trees <5m
M	Trees 15-30m
r	Very sparse (2-10% canopy cover)
S	Shrubs >2m
SA	Shrubs 1.5-2.0m
SC	Shrubs 0.5-1.0m
SD	Shrubs 0.0-0.5m
v <sub>1</sub>	<i>Verticordia</i> sp.
VL	Sedges <0.5m
X	Ferns, mosses, liverworts

identification. Common names were attributed to species where given in one of the above references or in Beard (1970); Erickson *et al.* (1973); Gardner (1978, 1987); George and Foote (undated); Sampson and Hopper (1990) and Bennett (1991).

Suitable collections, not submitted elsewhere, will be incorporated into the Goldfields Reference Herbarium at Kalgoorlie College.

Records of the Orchidaceae given here were provided by Andrew Brown of the CALM. Steve Hopper, also of CALM, provided the names of some species not recorded by the Club but observed by himself and the late Ken Newbey at Victoria Rock. Another species not recorded by the Club, *Lawrenciacrepis repens*, is included here by virtue of a specimen collected by A.S. George and lodged at the W.A. Herbarium.

## 2.3 Results

### 2.3.1 Vegetation

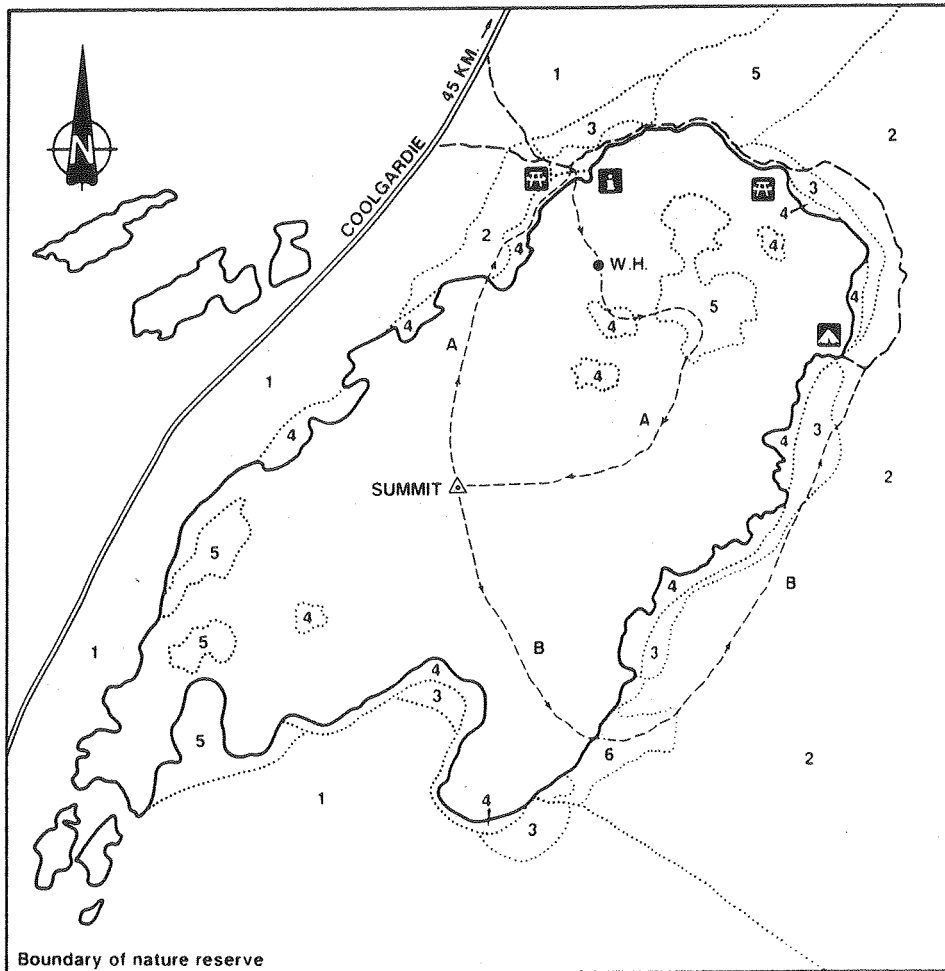
Seven distinct vegetation units were identified. The distribution of each is shown in Figure 2. The details of each unit are as follows:

a) **Salmon gum** (*Eucalyptus salmonophloia*) woodland (e<sub>1</sub>Mi.SAr.a<sub>1</sub>SCi.Jr): common to the west and south of the Rock. Dominated by *E. salmonophloia* with *E. salubris*, *E. cylindrocarpa* and *E. transcontinentalis* also occurring. Taller shrubs include *Eremophila* spp., *Acacia* spp. and *Exocarpos aphylla*. Smaller shrubs consist mainly of *Atriplex vesicaria* and other chenopods, with some weed species such as *Centaurea melitensis* along the roadside;

b) **York gum** (*E. loxophleba* subsp. *lissophloia*) open tree mallee (e<sub>2</sub>KTi.SAr.SCi.Jr): common east of the Rock. Dominated by the mallee *E. loxophleba* subsp. *lissophloia*, with an occasional *E. salmonophloia* and *E. transcontinentalis*. Shrubs include *Acacia* spp., *Eremophila maculata* and *Exocarpos aphyllus*;

c) **Casuarina** (*Allocasuarina huegeliana*) low forest (c<sub>1</sub>LAc.a<sub>2</sub>LBi.SDi.VL.Jr): occurs in a narrow discontinuous band around the edge of the Rock. Best developed on the southern and western edges. *A. huegeliana* dominates with *Acacia lasiocalyx* and the occasional *E. salmonophloia* and *E. petraea*. *Acacia acuminata* occasionally occurs in the understorey in a zone of overlap from another vegetation unit. Smaller shrubs include *Keraudrenia integrifolia*, *Halgania cyanea* and the sedges *Lepidosperma* spp., *Lomandra effusa* and *Chamaexeros fimbriata*. The orchid *Pterostylis nana* is common in late winter;

d) **Teatree** (*Leptospermum erubescens*) dense thicket (l<sub>1</sub>Sd.Ji): occurs in a narrow discontinuous band usually between the Rock and the casuarina low forest described above. Few other species occur with *L. erubescens*, although a few orchids and other herbs may be found there in spring;



Boundary of nature reserve

0 100 200 300 400 500  
Scale in metres







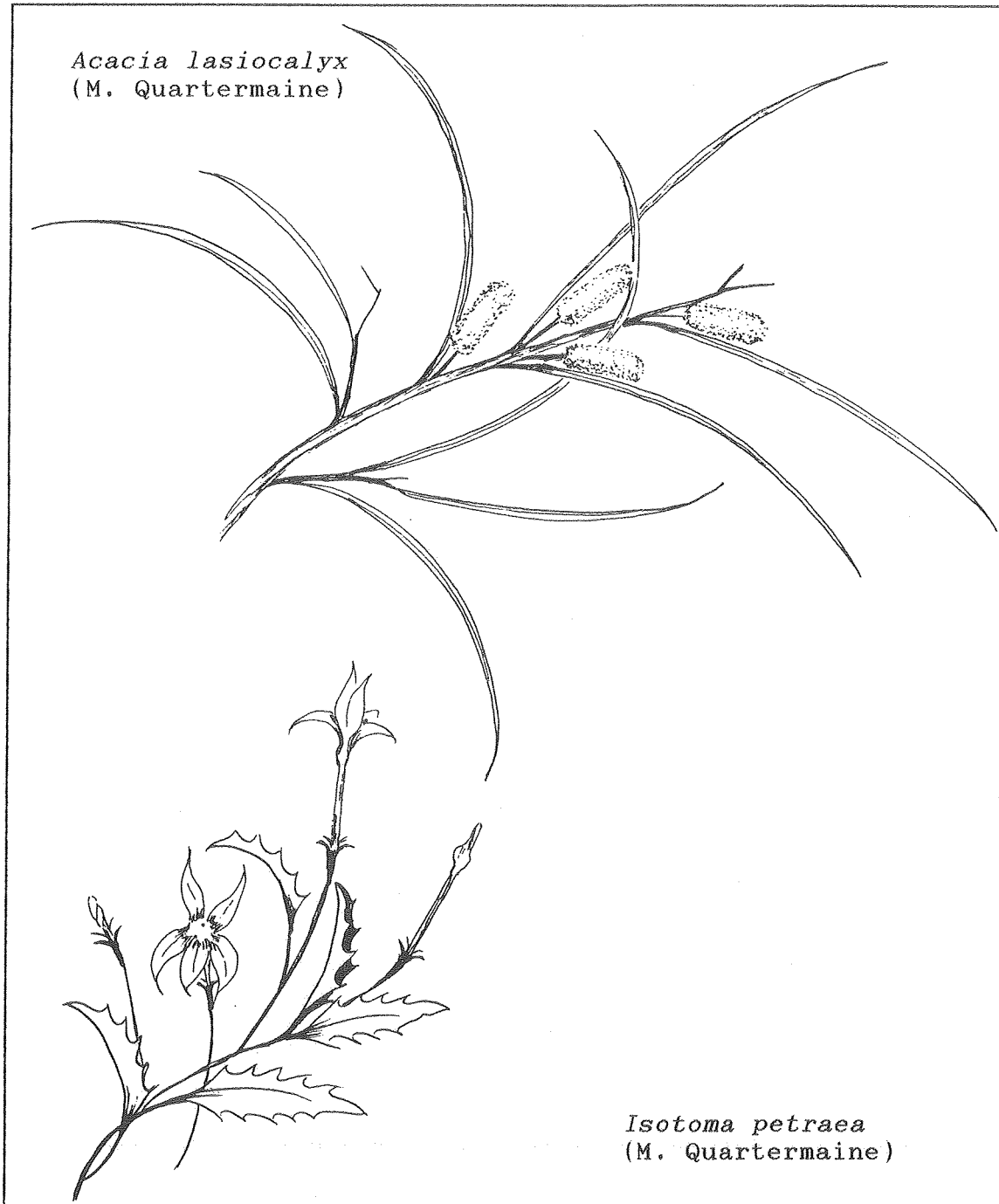
- |  |   |
|--|---|
| <p><b>KEY</b></p> <ul style="list-style-type: none"> <li> granite outcrop</li> <li> road</li> <li> vehicle track</li> <li> w.h. water hole</li> <li> suggested walks ( unmarked )</li> <li>A. allow 1 hr.</li> <li>B. allow 3 hrs.</li> </ul> | <p> Major Vegetation Types</p> <ol style="list-style-type: none"> <li>1. Salmon gum woodland</li> <li>2. York gum open tree mallee</li> <li>3. Casuarina low forest</li> <li>4. Teatree dense thicket</li> <li>5. Acacia low woodland</li> <li>6. Verticordia low heath</li> </ol> |
|--|---|

Figure 2: Distribution of six vegetation types around Victoria Rock. A seventh type, Open low grass, commonly occurs in small patches and is not shown above.

e) *Acacia* (*Acacia acuminata*) low woodland (a<sub>2</sub>LBi.SCr.Jr or a<sub>2</sub>LBi.SCr.Hc.Jr): occurs patchily within the Reserve. Dominated by *A. acuminata* with an understorey of mixed small shrubs. Where



the soil type becomes sandier, *Triodia scariosa* may occur and form a mid-dense hummock grass layer;

f) *Verticordia* (*Verticordia* sp.) low heath (v<sub>1</sub>SCc.Jr): occurs in a small patch near the south-east corner of the Rock. Dominated by *Verticordia* sp. with few other species occurring; and

g) Open low grass (GLi.Ji.Xc): occurs where very shallow pockets of soil have formed either on the Rock or near the base. Dominated by the grasses *Poa drummondiana* and *Aira caryophylla* often emergent from a bed of moss. Supports a number of species of fern, orchid, *Drosera* and *Stylidium*, all evident in winter and spring.

### 2.3.2 Flora

Two hundred and forty-eight species of flowering plant and four species of fern were recorded from fifty-five different families. The daisies (Asteraceae), chenopods (Chenopodiaceae), wattles (Leguminosae), eucalypts (Myrtaceae) and orchids (Orchidaceae), all recorded in excess of ten species each. A list of all the species recorded by family and with their common names is given in Appendix 1. An alphabetic listing is given in Appendix 2.

While the study aimed to collect vascular plants only, the liverwort *Asterella drummondii* was recorded among the collections.

### 2.4 Discussion

Newbey and Hnatiuk (1984, 1985) examined granite exposures to the north-west and south-east of Victoria Rock. There is considerable consistency with the vegetation and flora they recorded on and around granite outcrops and that recorded here. The physical factors behind such a consistency are likely to be the increased runoff from rainfall received by fringing vegetation and differences in soils, such as coarser texture and lower pH, from those supporting the surrounding woodland vegetation.

The flora survey recorded no undescribed taxa, although in a few instances, inadequate material was available to enable identification to species. It was also apparent, that as additional taxa continued to be encountered throughout the study, the species list is unlikely to be comprehensive despite the numerous visits undertaken. The scope for future visits to increase the species richness is particularly likely given that this study took place during below average rainfall years.

Hopper *et al.* (1990) lists two species recorded in this study (*Eremophila veronica* and *Gastrolobium graniticum*) as "Priority Two" taxa (known to occur on conservation lands but in need of urgent high-priority further survey). Only one individual of *E. veronica* was recorded at the Rock. *G. graniticum*, of which the Rock has two small populations, has since been declared rare and endangered and now receives special legislative protection.

### 3.0 VERTEBRATE FAUNA

#### 3.1 Introduction

The vertebrate fauna of Victoria Rock is of interest in two respects. Firstly, its occurrence within the South West Interzone (Beard, 1979) suggests a combination of south-west and arid zone species may occur there. Furthermore, the "island" nature of granite outcrops may support a richer, or at least different, suite of species in comparison to the more ubiquitous broad valleys and other landforms.

Secondly, the Eastern Goldfields Biological Survey conducted by the W.A. Museum, which surveyed a number of different landforms in a total area of 2.8 million hectares, contained few faunal study sites associated with granite outcrops. Therefore, this survey is an opportunity to add significantly to our knowledge of the vertebrate fauna of the Eastern Goldfields.

#### 3.2 Materials and methods

The principal method of survey for mammals, reptiles and amphibians was pit trapping. Pit traps consisted of PVC piping with an internal diameter of 250mm. Each was set 500mm deep vertically in the ground. Each trapping site had six traps 10m apart joined by a 50m long by 300mm high flywire drift fence to guide animals to the traps.

Four trapping sites were used. Locations and descriptions of each are given in Table Two. All pit traps were run for five consecutive days during two survey sessions in March 24-28 and October 3-8, 1989.

All mammals, except for one voucher specimen of each species, were identified, weighed, marked with texta pen to identify recaptures and released. Voucher specimens were submitted to the Western Australian Museum. Reptiles and amphibians were identified and released.

Additional methods of survey for mammals, reptiles and amphibians, included opportunistic searching, head-torching at night, digging burrows and searching leaf litter and debris. Mistnetting for bats was conducted beside a rock pool for two hours on the early evening of March 26, 1989.

Records of bird species were largely compiled through opportunistic observations. These were made during the main survey periods described above and also during numerous other visits made principally for botanical collections. An ongoing bird banding program, commenced in 1987, also contributed a number of records and aided in determining the status of some species within the reserve. Records of observations made by Wildlife Officers from CALM in the period June 1974 to February 1989, have also been included.



Table Two: Description of fauna sampling sites.

Site No.	Description
1	<p><i>Eucalyptus salmonophloia</i> woodland on clay loam (120°55'45"S,31°17'20"E)</p> <p>Mr.Sr.SAi.SDc</p> <p>Mr: <i>Eucalyptus salmonophloia</i>, occasional <i>E. gracilis</i> to 7m. Sr: <i>Eremophila scoparia</i>, occasional <i>Acacia jennerae</i>. SAi: <i>Eremophila ionantha</i>, <i>Scaevola spinescens</i> and <i>Exocarpos aphyllus</i>. SDc: <i>Atriplex vesicaria</i>.</p>
2	<p><i>Eucalyptus loxophleba</i> subsp. <i>lissophloia</i> mallee on sandy loam (120°56'12"S,31°18'00"E)</p> <p>KSi.SCi</p> <p>KSi: <i>Eucalyptus loxophleba</i> subsp. <i>lissophloia</i> (mallee form) SCi: <i>Olearia muelleri</i>, very occasional <i>Acacia jennerae</i> or <i>A. hemiteles</i>.</p>
3	<p><i>Allocasuarina huegeliana</i> fringing woodland on clayey sand (120°56'12"S,31°18'06"E)</p> <p>LAc.Sd.VTd.SAc</p> <p>LAc: <i>Allocasuarina huegeliana</i>. Sd: <i>Leptospermum erubescens</i>. VTd: <i>Lepidosperma</i> spp. SAc: <i>Keraudrenia integrifolia</i>.</p>
4	<p><i>Acacia acuminata</i> shrubland on sandy clay loam (120°55'50"S,31°17'10"E)</p> <p>SAi.Hi</p> <p>SAi: <i>Acacia acuminata</i>. Hi: <i>Triodia scariosa</i> with occasional <i>Wehlia thryptomenioides</i>.</p>

### 3.3 Results

#### 3.3.1 Amphibians

Only one species, *Pseudophryne occidentalis* (Orange-crowned Toadlet), was recorded. Several adult frogs were dug from moist sand from which they were calling during both survey periods.

#### 3.3.2 Reptiles

The following seventeen species were recorded:

##### *Gehyra variegata*

Head-torched at night, usually in lower branches of *Acacia acuminata* trees. Several records.

##### *Oedura reticulata*

Head-torched at night on trunk of *Eucalyptus salubris*. One record.

##### *Phyllurus milii* (Barking Gecko)

Head-torched at night on bare granite with exfoliated pieces nearby. One record.

##### *Ctenophorus ornatus* (Ornate Dragon)

A common diurnally-active lizard on bare rock surfaces. Readily visible in warm weather. Numerous records.

##### *Ctenophorus reticulatus* (Reticulate Dragon)

Observed on edge of granite outcrop. One record.

##### *Ctenophorus scutulatus*

Observed in *Allocasuarina corniculata* thicket. One record.

##### *Moloch horridus* (Thorny Devil)

Observed in *Allocasuarina*/*Acacia* woodland. One record.

##### *Cryptoblepharus plagiocephalus*

Observed on dead, fallen timber. Several records.

##### *Ctenotus schomburgkii*

Pit trapped in *Eucalyptus loxophleba* subsp. *lissophloia* mallee (site 2). One record.

##### *Eremiascincus richardsonii*

Pit trapped in *Acacia acuminata*/*Triodia scariosa* (site 4). One record.

*Egernia inornata*

Pit trapped in *Acacia acuminata*/*Triodia scariosa* (site 4). One record.

*Tiliqua occipitalis* (Western Blue-tongue)

Observed in *Allocasuarina*/*Acacia* shrubs on gravelly sand. One record.

*Tiliqua rugosa* (Bobtail or Shingleback)

Observed in woodland near base of Rock and a skeleton recovered on Rock.

*Varanus gouldii* (Goulds Monitor)

One seen by a visiting Wildlife Officer in June 1974.

*Demansia psammophis*

Pit trapped in *Eucalyptus loxophleba* subsp. *lissophloia* mallee (site 2). One record.

*Pseudechis australis* (Mulga or King Brown Snake)

One seen near base of Rock and a shed skin was located among boulders on the Rock.

*Morelia spilota* (Carpet Python)

A 2m specimen seen in *Melaleuca elliptica* near base of Rock.

3.3.3 Birds

The following sixty-six species were recorded:

**Emu** (*Dromaius novaehollandiae*)

Common resident. Groups of up to seven commonly seen, due in part to the presence of water in rockholes.

**Brown Goshawk** (*Accipiter fasciatus*)

Uncommon vagrant. One female seen in *Acacia lasiocalyx* on Rock in March 1989.

**Collared Sparrowhawk** (*Accipiter cirrhocephalus*)

Uncommon, status unknown. One female seen in *Allocasuarina huegeliana* near edge of the Rock in January 1989 and September 1990.

**Little Eagle** (*Hieraetus morphnoides*)

Uncommon vagrant. One seen flying over the Rock in January 1989.

**Brown Falcon (*Falco berigora*)**

Uncommon vagrant. One seen in January 1981 with Ornate Dragon (*Ctenophorus ornatus*) in talons.

**Australian Kestrel (*Falco cenchroides*)**

Uncommon vagrant. One seen in June 1974.

**Banded Lapwing (*Vanellus tricolor*)**

Uncommon vagrant. Two adults with two chicks recorded on edge of the Rock in October 1989 and a group of four were seen in June 1974.

**Common Bronzewing (*Phaps chalcoptera*)**

Common resident. Frequently recorded at dawn and dusk drinking at rockholes.

**Galah (*Cacatua roseicapilla*)**

Uncommon vagrant. A group of four was seen flying over the Rock in March 1991.

**Purple-crowned Lorikeet (*Glossopsitta porphyrocephala*)**

Moderately common vagrant. Usually seen flying in small groups of 10-15 birds over casuarina or eucalypt woodland. Their presence and abundance appears determined by flowering eucalypts.

**Regent Parrot (*Polytelis anthopeplus*)**

Uncommon vagrant. Solitary birds and a pair seen in *Acacia lasiocalyx* surrounding the Rock in March 1989.

**Western Rosella (*Platycercus icterotis*)**

Uncommon vagrant. A pair has been seen several times in woodland fringing the Rock.

**Port Lincoln Ringneck (*Barnardius zonarius*)**

Common resident. Always present on most habitats on the reserve.

**Mulga Parrot (*Psephotus varius*)**

Uncommon vagrant. Several seen with Port Lincoln Ringnecks drinking at a rockhole in March 1989.

**Pallid Cuckoo (*Cuculus pallidus*)**

Uncommon migrant. Two seen in June 1974.

**Fan-tailed Cuckoo (*Cuculus flabelliformis*)**

Uncommon migrant. One seen in woodland near base of the Rock in March 1991.

**Black-eared Cuckoo (*Chrysococcyx osculans*)**

Rare migrant. One seen in casuarina woodland in September 1990.

**Southern Boobook (*Ninox novaeseelandiae*)**

Uncommon, status unknown. Occasionally heard at night in woodland fringing the Rock.

**Tawny Frogmouth (*Podargus strigoides*)**

Uncommon resident. Two observed in daylight in casuarina woodland in March 1989 and also heard at night.

Tawny Frogmouth  
(L. Clarke)



**Australian Owlet-nightjar (*Aegotheles cristatus*)**

Uncommon resident. One seen on the Rock in March 1989 and also heard calling at night.

**Spotted Nightjar (*Eurostopodus argus*)**

Uncommon, status unknown. One heard flying over woodland fringing the Rock in the early evening in October 1989.

**Rainbow Bee-eater (*Merops ornatus*)**

Uncommon migrant. Three or four birds were seen flying over woodland fringing the Rock in October 1989 and five birds were seen in *Eucalyptus salmonophloia* in March 1991. Fifteen to twenty birds were also recorded in January 1981.

**Tree Martin (*Hirundo nigricans*)**

Uncommon vagrant. One group of 8-10 birds was seen in casuarina woodland in June 1989.

**Richard's Pipit (*Anthus novaeseelandiae*)**

Uncommon vagrant. Solitary birds occasionally seen on bare granite.

**Black-faced Cuckoo-shrike (*Coracina novaehollandiae*)**

Common vagrant. Solitary birds and small groups seen in all habitats. One group of 13 was seen flying through woodland fringing the Rock in January 1990.

**Jacky Winter (*Microeca leucophaea*)**

Uncommon, status unknown. One seen in January and May 1981.

**Red-capped Robin (*Petroica goodenovii*)**

Common resident. Solitary birds and pairs seen in woodland fringing the Rock and especially in *Acacia acuminata*. Several juvenile birds recorded in March 1991.

**Western Yellow Robin (*Eopsaltria griseogularis*)**

Common resident. Usually seen in casuarina woodland.

**Golden Whistler (*Pachycephala pectoralis*)**

Uncommon resident. Usually seen in woodland fringing the Rock.

**Rufous Whistler (*Pachycephala rufiventris*)**

Uncommon resident. One pair recorded several times in casuarina woodland.



**Grey Shrike-thrush (*Colluricincla harmonica*)**

Common resident. Seen or heard in all habitats on the reserve.

**Crested Bellbird (*Oreoica gutturalis*)**

Common resident. Often heard but seldom seen in most habitats on the reserve.

**Grey Fantail (*Rhipidura fuliginosus*)**

Uncommon migrant. Observed hawking for insects in April 1988, July 1990 and March 1991. Usually occurs in woodland near base of the Rock.

**Willie Wagtail (*Rhipidura leucophrys*)**

Common resident. Frequently seen and heard in woodlands fringing the Rock.

**White-browed Babbler (*Pomatostomus superciliosus*)**

Common resident. Seen and heard in groups of up to ten birds in *Allocasuarina* and *Acacia*.

**Variegated Fairy-wren (*Malurus lambertii*)**

Uncommon resident. One seen in *Leptospermum erubescens* in January 1990.

**Redthroat (*Smicrornis brunneus*)**

Common resident. Observed in most habitats.

**Weebill (*Smicrornis brevirostris*)**

Common resident. Small groups of up to four birds usually seen in canopies of eucalypts; often forages with thornbills.

**Western Flyeater (*Gerygone fusca*)**

Uncommon migrant. Heard and seen in *Eucalyptus petraea* in October 1990.

**Inland Thornbill (*Acanthiza apicalis*)**

Common resident. Observed in small groups of 4-5 birds in most habitats.

**Chestnut-rumped Thornbill (*Acanthiza uropygialis*)**

Common resident. Observed in small groups of 2-4 birds in most habitats. Often forages with other thornbills and Southern Whiteface. A group of at least 15 was observed in January 1990.

**Yellow-rumped Thornbill (*Acanthiza chrysorrhoa*)**

Very common resident. In groups of 5-6 birds usually in more open vegetation. An active nest was recorded in an *Allocasuarina huegeliana* in October 1989.

**Southern Whiteface (*Aphelocephala leucopsis*)**

Uncommon resident. Occasionally observed feeding on ground in *Acacia acuminata* woodland with thornbills.

**Red Wattlebird (*Anthochaera carunculata*)**

Very common resident. Always present in taller vegetation.

**Yellow-throated Miner (*Manorina flavigula*)**

Uncommon vagrant. One to four birds recorded in June 1974, February and May 1980, May 1981 and February 1983.

**Spiny-cheeked Honeyeater (*Acanthagenys rufogularis*)**

Uncommon, status unknown. Observed or heard in *Acacia acuminata* woodland or other more open vegetation.

**Singing Honeyeater (*Lichenostomus virescens*)**

Common, status unknown. Present in thickets and woodland fringing the Rock.

**White-eared Honeyeater (*Lichenostomus leucotis*)**

Common resident. Present in vegetation fringing the Rock with high perching opportunities.

**Purple-gaped Honeyeater (*Lichenostomus cratitius*)**

Uncommon, status unknown. Occasionally seen in *Allocasuarina huegeliana* woodland.

**Yellow-plumed Honeyeater (*Lichenostomus ornatus*)**

Common resident. Present in taller woodlands usually in *Allocasuarina huegeliana* and *Eucalyptus salmonophloia*.

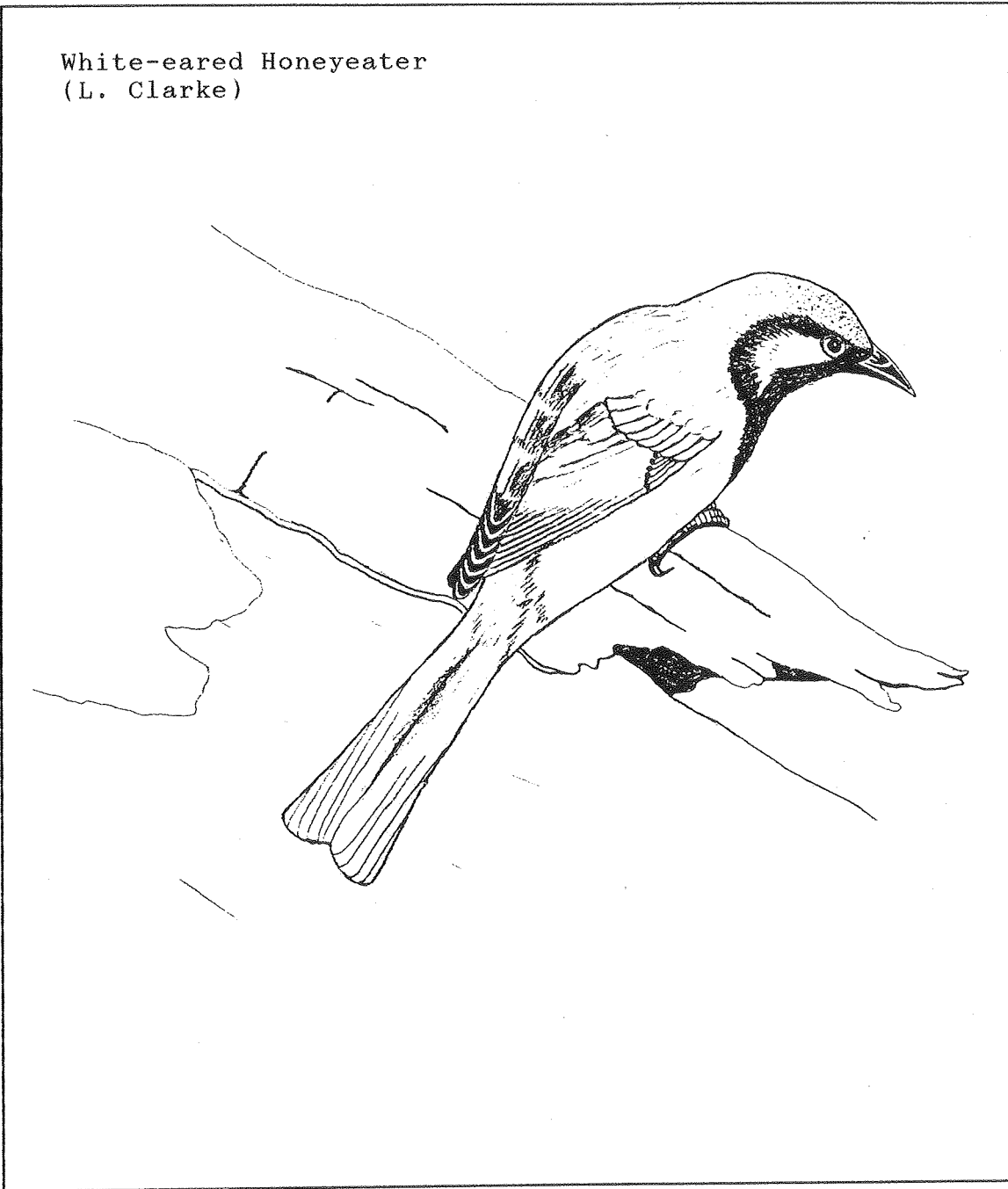
**White-fronted Honeyeater (*Phylidonyris albifrons*)**

Common, status unknown but considered nomadic. Observed in all vegetation types.

**Brown-headed Honeyeater (*Melithreptus brevirostris*)**

Uncommon vagrant. Seen in groups of up to eight birds in *Acacia acuminata*.

White-eared Honeyeater  
(L. Clarke)



**Brown Honeyeater (*Lichmera indistincta*)**

Very common resident. Frequently seen or heard in taller woodlands or flowering shrubs such as *Melaleuca elliptica* or *Kunzea pulchella*.

**White-fronted Chat (*Epthianura albifrons*)**

Uncommon vagrant. Observed in groups of up to ten birds on open granite flats near rockhole.

**Crimson Chat (*Epthianura tricolor*)**

Uncommon vagrant. A pair seen on open ground in September 1991.

**Zebra Finch (*Poephila guttata*)**

Uncommon vagrant. A group of thirty recorded in May 1980.

**Magpie-lark (*Grallina cyanoleuca*)**

Uncommon vagrant. Two observed in May 1980.

**Black-faced Woodswallow (*Artamus cinereus*)**

Uncommon vagrant. Several recorded in February 1989.

**Mistletoebird (*Dicaeum hirundinaceum*)**

Uncommon vagrant. Observed in *Eucalyptus salmonophloia* in October 1989.

**Striated Pardalote (*Pardalotus striatus*)**

Uncommon vagrant. Occasionally seen or heard in taller woodlands.

**Silvereye (*Zosterops lateralis*)**

Uncommon vagrant. A solitary bird seen in *Leptospermum erubescens* thicket in December 1989.

**Grey Butcherbird (*Cracticus torquatus*)**

Uncommon resident. One immature bird recorded in *Acacia acuminata* in April 1988.

**Pied Butcherbird (*Cracticus nigrogularis*)**

Uncommon resident. One immature bird in *Allocasuarina huegeliana* woodland in March 1988.

**Australian Magpie (*Gymnorhina tibicen*)**

Uncommon vagrant. Two seen in June 1974.

**Grey Currawong (*Strepera versicolor*)**

Common resident. Frequently seen or heard throughout reserve.

**Australian Raven (*Corvus coronoides*)**

Uncommon vagrant. Occasionally seen flying high over the reserve in groups of 15-20 birds.

Additionally, records exist of three other species (Australian Bustard, Dusky Woodswallow and Southern Scrub-robin) as occurring "close to the reserve".

**3.3.4 Mammals**

Twelve species were recorded. These were:

***Macropus fuliginosus*** (Western Grey Kangaroo)

Present but uncommon on reserve; a pair and a solitary animal were observed in October 1989.

***Macropus robustus*** (Euro)

Uncommon; one observed in *Acacia acuminata* woodland surrounding the Rock in October 1989.

***Sminthopsis dolichura*** (Dunnart)

Two were pit trapped in *Eucalyptus* aff. *loxophleba* mallee (site 2-1) and *Allocasuarina huegeliana* woodland (site 3-1) in October 1989. 16.0, 16.5g.

***Ningauai yvonnae*** (Goldfields Ningauai)

Four were pit trapped in *Eucalyptus salmonophloia* woodland (site 1-1), *E.* aff. *loxophleba* mallee (site 2-1) and *Acacia acuminata/Triodia scariosa* (site 4-2) in October 1989. Males 11.0-12.0g, female 10.5g.

***Notomys mitchellii*** (Mitchell's Hopping Mouse)

Two were pit trapped in *Acacia acuminata/Triodia scariosa* (site 4) in October 1989. Males 17.5 and 31.0g.

***Pseudomys bolami***

One was pit trapped in *Eucalyptus salmonophloia* woodland (site 1) in October 1989. Male 11.5g.

***Pseudomys albocinereus*** (Ashy-grey Mouse)

One was pit trapped in *Acacia acuminata/Triodia scariosa* in October 1989. Female 15.5g.

***Mus musculus*** (House Mouse)

With one exception, pit trapped at site 3, all *Mus* (n=6) were trapped with Elliot traps in vegetated pockets on the Rock itself. Contrary to all other mammals *Mus* were more abundant in March (n=5) than October (n=2). One female in October, 19.5g, was pregnant with five foetuses.

***Chalinobolus gouldii*** (Gould's Wattled Bat)

Eight females and one male were mistnetted near a rockhole in March.

***Nyctophilus* sp.** (Long-eared Bat)

One was briefly mistnetted near a rockhole in March. Identification to species was not possible.

*Tadarida australis* (White-striped Mastiff-bat)

Often heard at night during both major survey periods.

*Oryctolagus cuniculatus* (Rabbit)

Present in moderate numbers, particularly in vegetation around the base of the Rock.

### 3.4 Discussion

The number of species of vertebrate fauna at Victoria Rock Nature Reserve compares favourably with other granite outcrops (Burra Rock and Cave Hill) which have been studied in the Goldfields (Table Three). The greater numbers from Victoria Rock are partially accounted for by the greater survey effort made there; additionally, Burra Rock and Cave Hill have been modified for water catchment and have higher levels of recreational use.

This survey complements the survey of the Southern Cross-Boorabbin section of the Eastern Goldfields Biological Survey. Apart from a vegetation site description on Cave Hill, granite outcrops were not studied in that survey. Victoria Rock therefore, has the distinction of being the most thoroughly studied outcrop in the Goldfields. Kangaroo Hills Timber Reserve, which is 30-40km north of Victoria Rock, has been intensively surveyed; the greater numbers of vertebrate and plant species there are due to both its larger size (c. 10,000ha) and the greater diversity of landforms.

The nature of the fauna of Victoria Rock Nature Reserve reflects its position in the South West Interzone. Both south-western and arid zone components are present but the former are predominant. For example, White-fronted Honeyeater, Southern Whiteface, *Sminthopsis dolichura*, *Ningauia yvonnae* and *Pseudomys bolami* are arid zone species as opposed to *Pseudomys albocinereus* and *Notomys mitchellii* which, as well as most of the birds and all of the reptiles, occur in the south-west. The avifauna includes a small suite of species including Fan-tailed Cuckoo, Grey Fantail, Western Flyeater and Western Rosella which regularly migrate in and out of the south-west. Except for Western Flyeater, Victoria Rock is close to their most inland occurrence.

One of the richest fauna sites in this survey was site 4, *Acacia acuminata* over *Triodia scariosa*, which is slightly outside the reserve boundary. The Goldfields Region Draft Management Plan recommends that Victoria Rock Nature Reserve become part of a large Goldfields Woodland National Park, including the existing Boorabbin National Park as well as Vacant Crown Land surrounding Victoria Rock.



Table Three: Comparative numbers of species of native vertebrate fauna recorded in several Goldfields reserves.

Reserve	Birds	Mammals	Reptiles	Frogs
Victoria Rock Nature Reserve	66	10	17	1
Burra Rock Nature Reserve <sup>1</sup>	41	2	11	1
Cave Hill Nature Reserve <sup>1</sup>	48	5	13	0
Kangaroo Hills Timber Reserve <sup>2</sup>	69	9	32	2

<sup>1</sup> data from Chapman *et al.* (1991).

<sup>2</sup> data from Bamford *et al.* (1991).

#### 4.0 CONCLUSIONS

Victoria Rock Nature Reserve, despite its small size, has a rich assemblage of flora and fauna. This is due to both the position of the Reserve between the arid zone and the south-west of Western Australia and the "island" nature of the Rock itself, which creates habitats more diverse than those found in the surrounding woodlands.

The Goldfields Naturalists Club believes that the Reserve is of a very high conservation value and its attraction to visitors from near and far is not in doubt. In view of these sometimes conflicting uses, the Reserve deserves the maximum possible management input together with the maximum legislative protection. Therefore, the Club supports the recommendation of the Department of Conservation and Land Management's "Goldfields Region Draft Management Plan", that the Reserve and surrounding areas as described be given national park status.

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APPENDIX ONE

List of plant families and individual taxa recorded at  
Victoria Rock Nature Reserve.

SPECIES	COMMON NAME
<b>ADIANTACEAE</b>	
<i>Cheilanthes austrotenuifolia</i> H.Quirk & T.C.Chambers	
<i>Cheilanthes lasiophylla</i> Pichi-Serm.	Woolly Cloak-fern
<b>AIZOACEAE</b>	
<i>Carpobrotus modestus</i> S.T.Blake	Inland Pigface
<b>AMARANTHACEAE</b>	
<i>Ptilotus drummondii</i> (Moq.)F.Muell.	Narrowleaf Mulla Mulla
<i>Ptilotus exaltatus</i> Nees	Purple Mulla Mulla
<i>Ptilotus spathulatus</i> (R.Br.)Poir.	
<b>APIACEAE</b>	
<i>Daucus glochidiatus</i> (Labill.)Fisch.	Australian Carrot
<i>Platysace effusa</i> (Turcz.)Norman	
<i>Trachymene ornata</i> (Endl.)Druce	Spongefruit
<b>APOCYNACEAE</b>	
<i>Alyxia buxifolia</i> R.Br.	Dysentery Bush
<b>ASPLENIACEAE</b>	
<i>Pleurosorus rutifolius</i> (R.Br.)Fee	Blanket Fern
<b>ASTERACEAE</b>	
<i>Angianthus tomentosus</i> Wendl.	Camel-grass
<i>Arctotheca calendula</i> (L.)Levyns*	Cape Weed
<i>Blennospora drummondii</i> A.Gray	
<i>Brachycome cheilocarpa</i> F.Muell.	
<i>Calocephalus multiflorus</i> (Turcz.)Benth.	Yellow-top
<i>Calotis hispidula</i> (F.Muell.)F.Muell.	Hairy Burr Daisy
<i>Centaurea melitensis</i> L.*	Maltese Cockspur
<i>Chthonocephalus pseudevax</i> Steetz in Lehm.	Woolly Groundheads
<i>Cotula australis</i> (Sieber ex Sprengel) J.D.Hook.	Common Cotula
<i>Chrysocoryne</i> sp.	
<i>Dittrichia graveolens</i> (L.)Greuter*	Stinkwort
<i>Gnaphalodes uliginosum</i> A.Gray	Flannel Cudweed
<i>Gnephosis pygmaea</i> (A.Gray)Benth.	Pygmy Gnephosis
<i>Gnephosis tenuissima</i> Cass.	



SPECIES	COMMON NAME
<b>ASTERACEAE (cont.)</b>	
<i>Helichrysum cassiope</i> S.Moore	
<i>Helichrysum cassinianum</i> Gaudich.	Pink Everlasting
<i>Helipterum manglesii</i> (Lindley)F.Muell. ex Benth.	Pink Sunray
<i>Hyalosperma demissum</i> (A.Gray)P.G.Wilson	Tiny Sunray
<i>Hypochoeris glabra</i> L.*	Smooth Catsear
<i>Isoetopsis graminifolia</i> Turcz.	Cushion Grass
<i>Millotia perpusilla</i> (Turcz.)P.S.Short	
<i>Millotia tenuifolia</i> Cass.	Soft Millotia
<i>Olearia exiguifolia</i> (F.Muell.)F.Muell.	Small-leaved Daisy-bush
<i>Olearia muelleri</i> (Sonder)Benth.	Goldfields Daisy
<i>Olearia pimelioides</i> (DC.)Benth.	Pimelea Daisy-bush
<i>Podolepis capillaris</i> (Steetz)Diels in Diels & E.Pritzel	Wiry Podolepis
<i>Podolepis lessonii</i> (Cass.)Benth.	
<i>Podolepis rugata</i> Labill.	Pleated Podolepis
<i>Podotheca gnaphalioides</i> R.A.Graham	Golden Long-heads
<i>Pseudognaphalium luteo-album</i> (L.) Hilliard & B.L.Burt*	Jersey Cudweed
<i>Quinetia urvillei</i> Cass.	Quinetia
<i>Rutidosia multiflora</i> (Nees)Robinson	Small Wrinklewort
<i>Senecio glossanthus</i> (Sonder)Belcher	Slender Groundsel
<i>Senecio lautus</i> G.Forster ex Willd.	Variable Groundsel
<i>Senecio quadridentatus</i> Labill.	Cotton Fireweed
<i>Sonchus oleraceus</i> L.*	Common Cowthistle
<i>Urospermum picroides</i> (L.)Scop. ex F.W.Schmidt*	False Hawkbit
<i>Vittadenia eremaea</i> N.Burb.	Fuzzweed
<i>Waitzia acuminata</i> Steetz in Lehm.	Orange Immortelle
<b>BORAGINACEAE</b>	
<i>Halgania cyanea</i> Lindley	Rough Halgania
<i>Halgania viscosa</i> S.Moore	
<i>Plagiobothrys australasicus</i> (DC.) I.M.Johnston	
<b>CAESALPINIACEAE</b>	
<i>Senna artemisioides</i> (DC.)Randell subsp. x <i>artemisioides</i>	Silver Cassia
<i>Senna artemisioides</i> (DC.)Randell subsp. <i>filifolia</i>	
<i>Senna cardiosperma</i> (DC.)Randell subsp. <i>cardiosperma</i>	

SPECIES	COMMON NAME
<b>CASUARINACEAE</b>	
<i>Allocasuarina campestris</i> (Diels) L.A.S.Johnson subsp. <i>campestris</i>	
<i>Allocasuarina corniculata</i> (F.Muell.) L.A.S.Johnson	
<i>Allocasuarina huegeliana</i> (Miq.) L.A.S.Johnson	Tamma
<b>CENTROLEPIDACEAE</b>	
<i>Aphelia brizula</i> F.Muell.	
<i>Centrolepis aristata</i> (R.Br.)Roemer & Schultes	Pointed Centrolepis
<i>Centrolepis ?humillima</i> F.Muell. ex Benth.	
<i>Centrolepis pilosa</i> Hieron	Dwarf Centrolepis
<i>Centrolepis polygyna</i> (R.Br.)Hieron	Wiry Centrolepis
<b>CHENOPODIACEAE</b>	
<i>Atriplex nummularia</i> Lindley in Mitch. subsp. <i>spathulata</i>	Old Man Saltbush
<i>Atriplex stipitata</i> Benth.	Mallee Saltbush
<i>Atriplex vesicaria</i> Heward ex Benth. subsp. <i>variabilis</i> Parr-Smith	Bladder Saltbush
<i>Enchylaena tomentosa</i> R.Br.	Ruby Saltbush
<i>Maireana carnososa</i> (Moq.)P.G.Wilson	Cottony Bluebush
<i>Maireana georgei</i> (Diels)P.G.Wilson	Satiny Bluebush
<i>Maireana trichoptera</i> (J.M.Black) P.G.Wilson	Pink-seeded Bluebush
<i>Maireana triptera</i> (Benth.)P.G.Wilson	Three-winged Bluebush
<i>Rhagodia</i> aff. <i>eremaea</i> P.G.Wilson	Thorny Saltbush
<i>Rhagodia preissii</i> Moq. subsp. <i>preissii</i>	
<i>Salsola kali</i> L.	Roly Poly
<i>Sclerolaena diacantha</i> (Nees)Benth.	Grey Copper Burr
<i>Sclerolaena drummondii</i> (Benth.)Domin	
<b>CLUSIACEAE</b>	
<i>Hypericum gramineum</i> G.Forster	Small St. John's Wort
<b>CRASSULACEAE</b>	
<i>Crassula ?sieberiana</i> (Schultes & J.H. Schultes)Druce	Australian Crassula
<i>Crassula</i> sp.	

SPECIES	COMMON NAME
<b>CUPPRESSACEAE</b>	
<i>Callitris preissii</i> Miq. subsp. <i>verrucosa</i> (A.Cunn. ex Vogel) J.Garden	Mallee Cypress Pine
<b>CYPERACEAE</b>	
<i>Isolepis</i> sp.	Club Rush
<i>Lepidosperma drummondii</i> Benth.	
<i>Lepidosperma</i> aff. <i>drummondii</i> Benth.	
<i>Lepidosperma resinsum</i> (Nees)Benth.	
<i>Lepidosperma tenue</i> Benth.	
<i>Schoenus</i> sp.	Bog Rush
<b>DROSERACEAE</b>	
<i>Drosera andersoniana</i> W.Fitzg. ex Ewart & White	Sturdy Sundew
<i>Drosera glanduligera</i> Lehm.	Pimpernel Sundew
<i>Drosera macrantha</i> Endl. subsp. <i>macrantha</i>	Bridal Rainbow
<i>Drosera peltata</i> Thunb.	Peltate Sundew
<i>Drosera subhirtella</i> Planch. subsp. <i>moorei</i> (Diels)Marchant	Sunny Rainbow
<b>EPACRIDACEAE</b>	
<i>Leucopogon</i> sp.	Beard Heath
<b>EUPHORBIACEAE</b>	
<i>Beyeria lechenaultii</i> (DC.)Baillon	Pale Turpentine Bush
<b>FRANKENIACEAE</b>	
<i>Frankenia</i> sp.	
<b>GERANIACEAE</b>	
<i>Erodium cicutarium</i> (L.)L'Her. in Aiton*	Common Crowfoot
<i>Erodium cygnorum</i> Nees in Lehm.	Blue Heron's-bill
<b>GOODENIACEAE</b>	
<i>Dampiera lavandulacea</i> Lindley	
<i>Goodenia berardiana</i> (Gaudich.) Carolin	
<i>Scaevola spinescens</i> R.Br.	Currant Bush

SPECIES	COMMON NAME
<b>HALORAGACEAE</b>	
<i>Gonocarpus nodulosus</i> Nees in Lehm.	
<i>Haloragis ?gossei</i> F.Muell.	
<b>HYPOXIACEAE</b>	
<i>Hypoxis glabella</i> R.Br.	Tiny Star
<b>JUNCAGINACEAE</b>	
<i>Triglochin calcitrapa</i> Hook.	Spurred Arrowgrass
<i>Triglochin centrocarpa</i> Hook.	Dwarf Arrowgrass
<i>Triglochin minutissima</i> F.Muell.	
<b>LAMIACEAE</b>	
<i>Prostanthera ?baxteri</i> Cunn. ex Benth.	
<i>Prostanthera grylloana</i> F.Muell.	
<b>LAURACEAE</b>	
<i>Cassytha ?melantha</i> R.Br.	Large Dodder-laurel
<b>LILIACEAE</b>	
<i>Arthropodium</i> sp.	
<i>Borya constricta</i> Churchill	Pincushions
<i>Chamaexeros fimbriata</i> (F.Muell.)Benth.	
<i>Dianella revoluta</i> R.Br.	Blueberry Lily
<i>Lomandra effusa</i> (Lindl.)Ewart	Scented Mat Rush
<i>Thysanotus patersonii</i> R.Br.	Twining Fringe Lily
<i>Thysanotus speckii</i> N.H.Brittan	
<i>Wurmbea tenella</i> (endl.)Benth.	Eight Nancy
<b>LOBELIACEAE</b>	
<i>Isotoma hypocrateriformis</i> (R.Br.)Druce	Woodbridge Poison
<i>Isotoma petraea</i> F.Muell.	Rock Isotome
<b>LORANTHACEAE</b>	
<i>Amyema miquelii</i> (Lehm. ex Miq.) Tieghem	Stalked Mistletoe
<i>Lysiana casuarinae</i> (Miq.)Tieghem	
<b>MALVACEAE</b>	
<i>Lawrencia repens</i> (S.Moore)Melville	
<i>Sida ?calyxhymenia</i> Gay ex DC.	

SPECIES	COMMON NAME
<b>MIMOSACEAE</b>	
<i>Acacia acuminata</i> Benth.	Jam
<i>Acacia calcarata</i> Maiden & Blakely	Wait-a-While
<i>Acacia colletioides</i> Benth.	
<i>Acacia erinacea</i> Benth.	
<i>Acacia hemiteles</i> Benth.	Tan Wattle
<i>Acacia jennerae</i> Maiden in Ewart & O.B.Davies	
<i>Acacia lasiocalyx</i> C.R.P.Andrews	Wilyurwur
<i>Acacia ?ligulata</i> Cunn. ex Benth.	Umbrella Bush
<i>Acacia merrallii</i> F.Muell.	
<i>Acacia nyssophylla</i> F.Muell.	
<i>Acacia tetragonophylla</i> F.Muell.	Kurara
<b>MYOPORACEAE</b>	
<i>Eremophila angustifolia</i> (S.Moore) Ostenf.	Narrow-leaved Emu Bush
<i>Eremophila caerulea</i> (S.Moore)Diels in Diels & E.Pritzel	
<i>Eremophila decipiens</i> Ostenf.	Slender Fuchsia
<i>Eremophila dempsteri</i> F.Muell.	
<i>Eremophila ionantha</i> Diels in Diels & E.Pritzel	Violet-flowered Eremophila
<i>Eremophila maculata</i> (Ker Gawler) F.Muell.	Native Fuchsia
<i>Eremophila oppositifolia</i> R.Br.	Weeooka
<i>Eremophila scoparia</i> (R.Br.)F.Muell.	Silver Poverty Bush
<i>Eremophila veronica</i> (S.Moore)C.Gardner	
<b>MYRTACEAE</b>	
<i>Baeckea</i> sp.	
<i>Eucalyptus cylindrocarpa</i> Blakely	Woodline Mallee
<i>Eucalyptus eremophila</i> (Diels)Maiden	Tall Sand Mallee
<i>Eucalyptus loxophleba</i> Benth. subsp. <i>lissophloia</i>	York Gum
<i>Eucalyptus occidentalis</i> Endl. var. <i>stenantha</i>	Slender-flowered Yate
<i>Eucalyptus oleosa</i> F.Muell. ex Miq.	Giant Mallee
<i>Eucalyptus petraea</i> D.J.Carr & S.G.M.Carr	
<i>Eucalyptus salmonophloia</i> F.Muell.	Granite Rock Box
<i>Eucalyptus salubris</i> F.Muell.	Salmon Gum
<i>Eucalyptus transcontinentalis</i> Maiden	Gimlet
<i>Kunzea pulchella</i> (Lindley)A.S.George	Redwood
<i>Leptospermum erubescens</i> Schauer in Lehm.	Granite Kunzea
<i>Melaleuca eleutrostachya</i> F.Muell.	Roadside Teatree
<i>Melaleuca elliptica</i> Labill.	Granite Bottlebrush

SPECIES	COMMON NAME
<b>MYRTACEAE (cont.)</b>	
<i>Melaleuca fulgens</i> R.Br. in W.T.Aiton	Scarlet Honeymyrtle
<i>Melaleuca pauperiflora</i> F.Muell.	Boree
<i>Melaleuca uncinata</i> R.Br. in W.T.Aiton	Broom Honeymyrtle
<i>Micromyrtus</i> sp.	
<i>Rinzia carnos</i> a (S.Moore)Trudgen	
<i>Verticordia</i> sp.	
<i>Wehlia thryptomenioides</i> F.Muell.	
<b>OPHIOGLOSSACEAE</b>	
<i>Ophioglossum lustianicum</i> L.	Adders Tongue
<b>ORCHIDACEAE</b>	
<i>Caladenia amplexans</i> A.S.George	
<i>Caladenia barbarossa</i> H.G.Reichb.	Dragon Orchid
<i>Caladenia cairnsiana</i> F.Muell.	Zebra Orchid
<i>Caladenia deformis</i> R.Br.	Blue Fairy Orchid
<i>Caladenia denticulata</i> Lindley	
<i>Caladenia douchae</i> O.Sarg.	Purple-veined Spider Orchid
<i>Caladenia flava</i> R.Br.	Cowslip Orchid
<i>Caladenia gemmata</i> Lindley	Blue China Orchid
<i>Caladenia hirta</i> Lindley	Sugar Candy Orchid
<i>Caladenia marginata</i> Lindley	White Fairy Orchid
<i>Caladenia radiata</i> Nicholls	Ray Spider Orchid
<i>Caladenia roei</i> Benth.	Ant Orchid
<i>Diuris corymbosa</i> Lindley	
<i>Diuris laxiflora</i> Lindley	
<i>Diuris picta</i> J.Drumm.	Bee Orchid
<i>Diuris setacea</i> R.Br.	Bristly Donkey Orchid
<i>Eriochilus dilatatus</i> Lindley	White Bunny Orchid
<i>Genoplesium nigricans</i> (R.Br.)D.Jones & M.Clements	
<i>Leporella fimbriata</i> (Lindley) A.S.George	Hare Orchid
<i>Lyperanthus nigricans</i> R.Br.	Red Beak Orchid
<i>Microtis parviflora</i> R.Br.	Slender Mignonette Orchid
<i>Microtis unifolia</i> (G.Forster) H.G.Reichb.	Common Mignonette Orchid
<i>Prasophyllum ringens</i> (H.G.Reichb.) R.Bates	
<i>Pterostylis allantoidea</i> R.Rogers	Shy Greenhood
<i>Pterostylis ciliata</i> M.Clements & D.Jones	
<i>Pterostylis mutica</i> R.Br.	Midget Greenhood
<i>Pterostylis nana</i> R.Br.	Snail Orchid
<i>Pterostylis picta</i> M.Clements	
<i>Pterostylis recurva</i> Benth.	Jug Orchid

SPECIES	COMMON NAME
<b>ORCHIDACEAE (cont.)</b>	
<i>Pterostylis sargentii</i> C.R.P.Andrews	Frog Greenhood
<i>Pterostylis vittata</i> Lindley	Banded Greenhood
<i>Spiculaea ciliata</i> Lindley	Elbow Orchid
<i>Thelymitra antennifera</i> (Lindley) J.D.Hook.	Vanilla Orchid
<i>Thelymitra</i> aff. <i>nuda</i> R.Br.	Scented Sun Orchid
<b>OXALIDACEAE</b>	
<i>Oxalis ?corniculata</i> L.*	Yellow Wood-Sorrel
<b>PAPILIONACEAE</b>	
<i>Daviesia benthamii</i> Meissner in Lehm.	Granite Poison
<i>Gastrolobium graniticum</i> (S.Moore)Crisp	
<i>Glycine clandestina</i> Willd.	
<i>Leptosema</i> sp.	
<i>Mirbelia microphylla</i> (Turcz.)Benth.	
<b>PITTOSPORACEAE</b>	
<i>Pittosporum phylliraeoides</i> DC.	Weeping Pittosporum
<b>POACEAE</b>	
<i>Aira caryophylla</i> L.*	Silvery Hair Grass
<i>Amphibromus neesii</i> Steudel	Swamp Wallaby Grass
<i>Aristida holathera</i> Domin var. <i>holathera</i>	Spear Grass
<i>Briza minor</i> L.*	Shivery Grass
<i>Eragrostis ?dielsii</i> Pilger ex Diels & Pritzel	Mulga Grass
<i>Eriachne ovata</i> Nees	Love Grass
<i>Pentaschistis airoides</i> (Nees)Stapf in Dyer*	False Hairgrass
<i>Poa annua</i> L.*	Winter Grass
<i>Poa drummondiana</i> Nees	Knotted Poa
<i>Spartochloa scirpoidea</i> (Steudel) C.E.Hubb.	
<i>Stipa elegantissima</i> Labill.	Feather Spear Grass
<i>Stipa nitida</i> Summerh. & C.E.Hubb.	Spear Grass
<i>Stipa mollis</i> R.Br.	
<i>Triodia scariosa</i> N.Burb.	Spinifex
<i>Vulpia myuros</i> (L.)C.Gmelin*	Rats Tail Fescue
<b>POLYGALACEAE</b>	
<i>Comesperma ?integerrimum</i> Endl.	Climbing Lignum
<i>Muehlenbeckia adpressa</i> (Labill.) Meisn.	

SPECIES	COMMON NAME
<b>PORTULACACEAE</b>	
<i>Calandrinia calyptrata</i> J.D.Hook.	Pink Purslane
<i>Calandrinia granulifera</i> Benth.	Pygmy Purslane
<b>PRIMULACEAE</b>	
<i>Anagallis arvensis</i> L. var. <i>caerulea</i> Gouan*	Blue Pimpernel
<b>PROTEACEAE</b>	
<i>Grevillea acuaria</i> F.Muell. ex Benth.	
<i>Grevillea ?teretifolia</i> Meissner in Lehm.	Round Leaf Grevillea
<i>Grevillea haplantha</i> F.Muell. ex Benth.	
<i>Hakea coriacea</i> Maconochie	Pink Spike Hakea
<i>Persoonia coriacea</i> J.W.Audas & P.Morris	Leathery-leaf Persoonia
<b>RHAMNACEAE</b>	
<i>Cryptandra parvifolia</i> Turcz.	
<b>RUTACEAE</b>	
<i>Phebalium tuberculosum</i> (F.Muell.) Benth.	
<b>SANTALACEAE</b>	
<i>Exocarpos aphyllus</i> R.Br.	Leafless Ballart
<i>Santalum acuminatum</i> (R.Br.) A.DC.	Quandong
<i>Santalum spicatum</i> (R.Br.) A.DC.	Sandalwood
<b>SAPINDACEAE</b>	
<i>Dodonaea lobulata</i> F.Muell.	Bead Hopbush
<i>Dodonaea ?microzyga</i> F.Muell.	
<b>SCROPULARIACEAE</b>	
<i>Glossostigma</i> sp.	Mudmat
<b>SOLANACEAE</b>	
<i>Nicotiana rotundifolia</i> Lindley	Round-leaved Tobacco
<i>Solanum hoplopetalum</i> Bitter & Summerh.	Thorny Solanum
<i>Solanum nigrum</i> L.*	Black Berry Nightshade
<i>Solanum orbiculatum</i> Dunal ex Poiret in Lam.	Wild Tomato
<i>Solanum petrophilum</i> F.Muell.	Rock Nightshade



SPECIES	COMMON NAME
<b>STACKHOUSIACEAE</b>	
<i>Stackhousia ?huegelii</i> Endl.	
<b>STERCULIACEAE</b>	
<i>Hannafordia bissillii</i> F.Muell. <i>Keraudrenia integrifolia</i> Steudel in Lehm.	Common Firebush
<b>STYLIDIACEAE</b>	
<i>Levenhookia dubia</i> Sonder	Hairy Stylewort
<i>Stylidium bulbiferum</i> Benth. in Endl.	Circus Triggerplant
<i>Stylidium ecorne</i> (F.Muell. ex R.Erickson & J.H.Willis) P.G.Farrell & S.H.James	Foot Triggerplant
<b>THYMELAEACEAE</b>	
<i>Pimelea angustifolia</i> R.Br.	Narrow-leaved Pimelea
<b>URTICACEAE</b>	
<i>Parietaria debilis</i> G.Forster	Pellitory

\*=introduced plants.

## APPENDIX TWO

### Alphabetical listing of plant taxa recorded at Victoria Rock Nature Reserve

*Acacia acuminata* Benth.  
*Acacia calcarata* Maiden & Blakely  
*Acacia colletioides* Benth.  
*Acacia erinacea* Benth.  
*Acacia hemiteles* Benth.  
*Acacia jennerae* Maiden in Ewart & O.B.Davies  
*Acacia lasiocalyx* C.R.P.Andrews  
*Acacia ?ligulata* Cunn. ex Benth.  
*Acacia merrallii* F.Muell.  
*Acacia nyssophylla* F.Muell.  
*Acacia tetragonophylla* F.Muell.  
*Aira caryophylla* L.\*  
*Allocasuarina campestris* (Diels)L.A.S.Johnson subsp. *campestris*  
*Allocasuarina corniculata* (F.Muell.)L.A.S.Johnson  
*Allocasuarina huegeliana* (Miq.)L.A.S.Johnson  
*Alyxia buxifolia* R.Br.  
*Amphibromus neesii* Steudel  
*Amyema miquelii* (Lehm. ex Miq.)Tieghem  
*Anagallis arvensis* L. var. *caerulea* Gouan\*  
*Angianthus tomentosus* Wendl.  
*Aphelia brizula* F.Muell.  
*Arctotheca calendula* (L.)Levyns\*  
*Aristida holathera* Domin var. *holathera*  
*Arthropodium* sp.  
*Atriplex nummularia* Lindley in Mitch. subsp. *spathulata*  
*Atriplex stipitata* Benth.  
*Atriplex vesicaria* Heward ex Benth. subsp. *variabilis*  
Parr-Smith  
*Baeckea* sp.  
*Beyeria lechenaultii* (DC.)Baillon  
*Blennospora drummondii* A.Gray  
*Borya constricta* Churchill  
*Brachycome cheilocarpa* F.Muell.  
*Briza minor* L.\*  
*Caladenia amplexans* A.S.George  
*Caladenia barbarossa* H.G.Reichb.  
*Caladenia cairnsiana* F.Muell.  
*Caladenia deformis* R.Br.  
*Caladenia denticulata* Lindley  
*Caladenia doutchae* O.Sarg.  
*Caladenia flava* R.Br.  
*Caladenia gemmata* Lindley  
*Caladenia hirta* Lindley  
*Caladenia marginata* Lindley  
*Caladenia radiata* Nicholls  
*Caladenia roei* Benth.  
*Calandrinia calyptrata* J.D.Hook.  
*Calandrinia granulifera* Benth.  
*Callitris preissii* Miq. ssp. *verrucosa* (A.Cunn. ex Vogel)J.Garden  
*Calocephalus multiflorus* (Turcz.)Benth.  
*Calotis hispidula* (F.Muell.)F.Muell.  
*Carpobrotus modestus* S.T.Blake

*Cassytha ?melantha* R.Br.  
*Centaurea melitensis* L.\*  
*Centrolepis aristata* (R.Br.)Roemer & Schultes  
*Centrolepis ?humillima* F.Muell. ex Benth.  
*Centrolepis pilosa* Hieron  
*Centrolepis polygyna* (R.Br.)Hieron  
*Chamaexeros fimbriata* (F.Muell.)Benth.  
*Cheilanthes austrotenuifolia* H.Quirk & T.C.Chambers  
*Cheilanthes lasiophylla* Pichi-Serm.  
*Chrysocoryne* sp.  
*Chthonocephalus pseudevax* Steetz in Lehm.  
*Comesperma ?integerrimum* Endl.  
*Cotula australis* (Sieber ex Sprengel)J.D.Hook.  
*Crassula ?sieberiana* (Schultes & J.H.Schultes)Druce  
*Crassula* sp.  
*Cryptandra parvifolia* Turcz.  
*Dampiera lavandulacea* Lindley  
*Daucus glochidiatus* (Labill.)Fisch.  
*Daviesia benthamii* Meissner in Lehm.  
*Dianella revoluta* R.Br.  
*Dittrichia graveolens* (L.)Greuter\*  
*Diuris corymbosa* Lindley  
*Diuris laxiflora* Lindley  
*Diuris picta* J.Drumm.  
*Diuris setacea* R.Br.  
*Dodonaea lobulata* F.Muell.  
*Dodonaea ?microzyga* F.Muell.  
*Drosera andersoniana* W.Fitzg. ex Ewart & White  
*Drosera glanduligera* Lehm.  
*Drosera macrantha* Endl. subsp. *macrantha*  
*Drosera peltata* Thunb.  
*Drosera subhirtella* Planch. subsp. *moorei* (Diels)Marchant  
*Enchylaena tomentosa* R.Br.  
*Eragrostis ?dielsii* Pilger ex Diels & Pritzel  
*Eremophila angustifolia* (S.Moore)Ostenf.  
*Eremophila caerulea* (S.Moore)Diels in Diels & E.Pritzel  
*Eremophila decipiens* Ostenf.  
*Eremophila dempsteri* F.Muell.  
*Eremophila ionantha* Diels in Diels & E.Pritzel  
*Eremophila maculata* (Ker Gawler)F.Muell.  
*Eremophila oppositifolia* R.Br.  
*Eremophila scoparia* (R.Br.)F.Muell.  
*Eremophila veronica* (S.Moore)C.Gardner  
*Eriachne ovata* Nees  
*Eriochilus dilatatus* Lindley  
*Erodium cicutarium* (L.)L'Her. in Aiton  
*Erodium cygnorum* Nees in Lehm.  
*Eucalyptus cylindrocarpa* Blakely  
*Eucalyptus eremophila* (Diels)Maiden  
*Eucalyptus loxophleba* Benth. subsp. *lissophloia*  
*Eucalyptus occidentalis* Endl. var. *stenantha*  
*Eucalyptus oleosa* F.Muell. ex Miq.  
*Eucalyptus petraea* D.J.Carr & S.G.M.Carr  
*Eucalyptus salmonophloia* F.Muell.  
*Eucalyptus salubris* F.Muell.  
*Eucalyptus transcontinentalis* Maiden  
*Exocarpos aphyllus* R.Br.

*Frankenia* sp.  
*Gastrolobium graniticum* (S.Moore)Crisp  
*Genoplesium nigricans* (R.Br.)D.Jones & M.Clements  
*Glossostigma* sp.  
*Glycine clandestina* Willd.  
*Gnaphalodes uliginosum* A.Gray  
*Gnephosis pygmaea* (A.Gray)Benth.  
*Gnephosis tenuissima* Cass.  
*Gonocarpus nodulosus* Nees in Lehm.  
*Goodenia berardiana* (Gaudich.)Carolin  
*Grevillea acuaria* F.Muell. ex Benth.  
*Grevillea ?teretifolia* Meissner in Lehm.  
*Grevillea haplantha* F.Muell. ex Benth.  
*Hakea coriacea* Maconochie  
*Halgania cyanea* Lindley  
*Halgania viscosa* S.Moore  
*Haloragis ?gossei* F.Muell.  
*Hannafordia bissillii* F.Muell.  
*Helichrysum cassiope* S.Moore  
*Helichrysum cassinianum* Gaudich.  
*Helipterum manglesii* (Lindley)F.Muell. ex Benth.  
*Hyalosperma demissum* (A.Gray)P.G.Wilson  
*Hypericum gramineum* G.Forster  
*Hypochoeris glabra* L.\*  
*Hypoxis glabella* R.Br.  
*Isoetopsis graminifolia* Turcz.  
*Isolepis* sp.  
*Isotoma hypocrateriformis* (R.Br.)Druce  
*Isotoma petraea* F.Muell.  
*Keraudrenia integrifolia* Steudel in Lehm.  
*Kunzea pulchella* (Lindley)A.S.George  
*Lawrencia repens* (S.Moore)Melville  
*Lepidosperma drummondii* Benth.  
*Lepidosperma* aff. *drummondii* Benth.  
*Lepidosperma resinum* (Nees)Benth.  
*Lepidosperma tenue* Benth.  
*Leporella fimbriata* (Lindley)A.S.George  
*Leptosema* sp.  
*Leptospermum erubescens* Schauer in Lehm.  
*Leucopogon* sp.  
*Levenhookia dubia* Sonder  
*Lomandra effusa* (Lindl.)Ewart  
*Lyperanthus nigricans* R.Br.  
*Lysiana casuarinae* (Miq.)Tieghem  
*Maireana carnosae* (Moq.)P.G.Wilson  
*Maireana georgei* (Diels)P.G.Wilson  
*Maireana trichoptera* (J.M.Black)P.G.Wilson  
*Maireana triptera* (Benth.)P.G.Wilson  
*Melaleuca eleutrostachya* F.Muell.  
*Melaleuca elliptica* Labill.  
*Melaleuca fulgens* R.Br. in W.T.Aiton  
*Melaleuca pauperiflora* F.Muell.  
*Melaleuca uncinata* R.Br. in W.T.Aiton  
*Micromyrtus* sp.  
*Microtis parviflora* R.Br.  
*Microtis unifolia* (G.Forster)H.G.Reichb.  
*Millotia perpusilla* (Turcz.)P.S.Short

*Millotia tenuifolia* Cass.  
*Mirbelia microphylla* (Turcz.) Benth.  
*Muehlenbeckia adpressa* (Labill.) Meisn.  
*Nicotiana rotundifolia* Lindley  
*Olearia exiguifolia* (F. Muell.) F. Muell.  
*Olearia muelleri* (Sonder) Benth.  
*Olearia pimelioides* (DC.) Benth.  
*Ophioglossum lustianicum* L.  
*Oxalis ? corniculata* L.  
*Parietaria debilis* G. Forster  
*Pentaschistis airoides* (Nees) Stapf in Dyer\*  
*Persoonia coriacea* J.W. Audas & P. Morris  
*Phebalium tuberculatum* (F. Muell.) Benth.  
*Pimelea angustifolia* R. Br.  
*Pittosporum phylliraeoides* DC.  
*Plagiobothrys australasicus* (DC.) I.M. Johnston  
*Platysace effusa* (Turcz.) Norman  
*Pleurisorus rutifolius* (R. Br.) Fee  
*Poa annua* L.\*  
*Poa drummondiana* Nees  
*Podolepis capillaris* (Steetz) Diels in Diels & E. Pritzel  
*Podolepis lessonii* (Cass.) Benth.  
*Podolepis rugata* Labill.  
*Podotheca gnaphalioides* R.A. Graham  
*Prasophyllum ringens* (H.G. Reichb.) R. Bates  
*Prostanthera ? baxteri* Cunn. ex Benth.  
*Prostanthera grylloana* F. Muell.  
*Pseudognaphalium luteo-album* (L.) Hilliard & B.L. Burt  
*Pterostylis allantoidea* R. Rogers  
*Pterostylis ciliata* M. Clements & D. Jones  
*Pterostylis mutica* R. Br.  
*Pterostylis nana* R. Br.  
*Pterostylis picta* M. Clements  
*Pterostylis recurva* Benth.  
*Pterostylis sargentii* C.R.P. Andrews  
*Pterostylis vittata* Lindley  
*Ptilotus drummondii* (Moq.) F. Muell.  
*Ptilotus exaltatus* Nees  
*Ptilotus spathulatus* (R. Br.) Poir.  
*Quinetia urvillei* Cass.  
*Rhagodia aff. eremaea* P.G. Wilson  
*Rhagodia preissii* Moq. subsp. *preissii*  
*Rinzia carnosae* (S. Moore) Trudgen  
*Rutidosis multiflora* (Nees) Robinson  
*Salsola kali* L.  
*Santalum acuminatum* (R. Br.) A. DC.  
*Santalum spicatum* (R. Br.) A. DC.  
*Scaevola spinescens* R. Br.  
*Schoenus* sp.  
*Sclerolaena diacantha* (Nees) Benth.  
*Sclerolaena drummondii* (Benth.) Domin  
*Senecio glossanthus* (Sonder) Belcher  
*Senecio lautus* G. Forster ex Willd.  
*Senecio quadridentatus* Labill.  
*Senna artemisioides* (DC.) Randell subsp. *X artemisioides*  
*Senna artemisioides* (DC.) Randell subsp. *filifolia*  
*Senna cardiosperma* (F. Muell.) Randell subsp. *cardiosperma*

*Sida ?calyxhymenia* Gay ex DC.  
*Solanum hoplopetalum* Bitter & Summerh.  
*Solanum nigrum* L.\*  
*Solanum orbiculatum* Dunal ex Poiret in Lam.  
*Solanum petrophilum* F.Muell.  
*Sonchus oleraceus* L.\*  
*Spartochloa scirpoidea* (Steudel)C.E.Hubb.  
*Spiculaea ciliata* Lindley  
*Stackhousia ?huegelii* Endl.  
*Stipa elegantissima* Labill.  
*Stipa nitida* Summerh. & C.E.Hubb.  
*Stipa mollis* R.Br.  
*Stylidium bulbiferum* Benth. in Endl.  
*Stylidium ecorne* (F.Muell. ex R.Erickson & J.H.Willis)P.G.Farrell  
 & S.H.James  
*Thelymitra antennifera* (Lindley)J.D.Hook.  
*Thelymitra* aff. *nuda* R.Br.  
*Thysanotus patersonii* R.Br.  
*Thysanotus speckii* N.H.Brittan  
*Trachymene ornata* (Endl.)Druce  
*Triglochin calcitrapa* Hook.  
*Triglochin centropcarpa* Hook.  
*Triglochin minutissima* F.Muell.  
*Triodia scariosa* N.Burb.  
*Urospermum picroides* (L.)Scop. ex F.W.Schmidt\*  
*Verticordia* sp.  
*Vittadenia eremaea* N.Burb.  
*Vulpia myuros* (L.)C.Gmelin\*  
*Waitzia acuminata* Steetz in Lehm.  
*Wehlia thryptomenioides* F.Muell.  
*Wurmbea tenella* (endl.)Benth.

\*=introduced plants.

#### ADDENDUM

At the time of going to print in April 1992 two further fauna records were to hand. Following unseasonally heavy rain over the previous six weeks, two species of frog from the genus *Neobatrachus* were observed. The Humming Frog (*N. pelobatroides*) was common on the rock and in rock pools where it was calling. In drainage lines around the rock two individuals of *N. kunapalari* were observed. They were calling in water.