

## VERTEBRATE FAUNA OF THE BALLARAT AREA, VICTORIA

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### Abstract

The proportion of Crown Land remaining in the Ballarat area is small relative to most other areas surveyed by the Land Conservation Council of Victoria. The major habitats, grassland, woodland and swamp, which originally occurred across the basalt plains have been mainly cleared and drained for pasture and crop production, but some isolated tall open-forests and open-forests survive along the Great Dividing Range in the north of the survey area. Mainly because of alterations to habitat at least 4 species of mammals and 8 species of birds are now threatened with extinction or are extinct in the survey area.

Details of abundance, geographic distribution, habitat, breeding (birds only) and information sources are given for 42 species of mammals, 249 species of birds and 26 species of reptiles. Less detailed information is also presented for 12 species of amphibians. Only one public reserve in the area has been established for wildlife (mainly aquatic birds). As yet, no terrestrial area has been set aside as either a national park or a wildlife reserve although a woodland in the southeast of the area has been proposed as a flora reserve under the management of the National Parks Service.

### Introduction

The Ballarat area (Fig. 1) is located mainly within the basalt plains of western Victoria and has the Great Dividing Range as its northern boundary. Because the basalt plains were cleared for pasture and crops early during European settlement only small amounts of native forest and woodland now remain. Consequently, there have been few systematic surveys of the native fauna of many of these small blocks. However, good historical information is available for the birds because during the past 30 years one of the authors (J. R. Wheeler) has recorded his observations and those of other naturalists living in the survey area.

Officers of the Fisheries and Wildlife Division, Ministry for Conservation, conducted field surveys of the vertebrate animals in the Ballarat area during 1976 and early 1977. The data collected are being used by the Land Conservation Council in its assessment of land-use in Victoria.

The results presented here were derived mainly from our field surveys and the past observations of J. R. Wheeler, as well as all other previously documented records. Detailed information on each species of mammal, bird

and reptile recorded in the survey area is given in annotated lists at the end of this paper.

### Survey Area

#### PHYSIOGRAPHY AND GEOLOGY

The survey area includes a small part of the Great Divide where elevations range from 300 m to nearly 1000 m. To the east of Ballarat is a plateau whose average height is more than 450 m. Most of the area is composed of weathered Pleistocene basalt with some "stony rises" and alluvial material. These flat or undulating plains slope gradually to below 150 m in the south. Scattered throughout are small volcanic cones, e.g. Mt Buninyong south-east of Ballarat and Mt Hollowback west of Creswick, that rise to 300 m above the surrounding plain.

In the eastern part of the survey area there are Ordovician sedimentary rocks, which were the scene of intense gold mining more than 100 years ago. These areas (Enfield and Creswick Blocks) have now regained much of their vegetative cover, and together with Cambrian mudstones in the north (Ararat and Ben Major-Trawalla Blocks) compose much of the land remaining in public ownership. All these areas are low hills covered with skeletal soils and rise to 450 m.

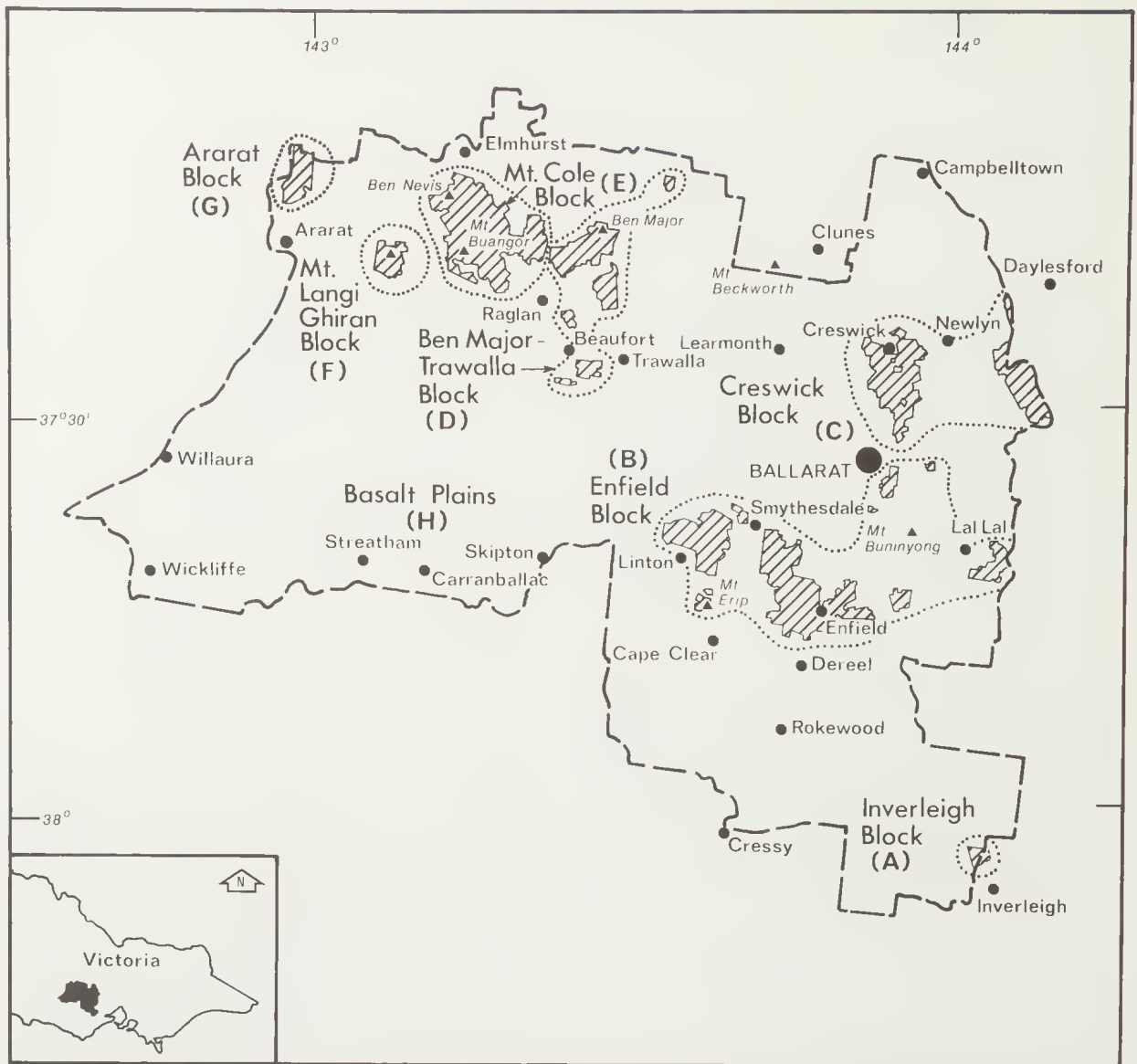


Figure 1—Place names and major blocks of Crown Land in the Ballarat area.

The highest areas, Mt Langi Ghiran and the Mt Cole massif, are Ordovician granitic intrusions which reach nearly 1000 m at Mt Buangor; there is some quaternary aeolian sand in the south (Inverleigh Block).

#### CLIMATE

Rainfall and temperature gradients over the survey area rise and fall respectively with increase in elevation. Annual rainfall on the Mt Cole massif is greater than 1000 mm, but

decreases to 625 mm in the south. Monthly variations in temperature and rainfall are shown in Table 1. Winter and spring are the seasons of maximum rainfall. Frosts occur during winter and snow falls occasionally on the highest ground.

#### VERTEBRATE HABITATS

Four plant formations serve the general purpose of denoting habitat and are used in discussing the distribution of the vertebrate

TABLE 1

Climatic data from two representative stations (Bureau of Meteorology 1975)

	Ballarat (Wendouree)					Elevation 459.6 m							
	J	F	M	A	M	J	J	A	S	O	N	D	Ann.
Rainfall (mm)	38	50	47	56	69	64	69	77	73	68	56	52	719
Max. Temp. (°C)	25.5	24.6	21.9	18.0	13.3	11.3	9.9	11.4	13.6	16.6	19.3	22.1	17.3
Min. Temp. (°C)	11.4	11.8	10.2	8.0	5.8	4.3	3.2	3.8	4.8	6.7	7.9	9.8	7.3

	Lismore (Post Office)					Elevation 159.7 m							
	J	F	M	A	M	J	J	A	S	O	N	D	Ann.
Rainfall (mm)	35	41	38	53	55	51	58	68	59	60	56	46	620
Max. Temp. (°C)	26.9	26.1	23.7	19.9	15.5	13.4	12.2	13.4	15.5	18.2	21.0	23.5	19.1
Min. Temp. (°C)	11.6	12.3	10.9	8.9	7.0	5.2	4.4	5.0	5.9	7.2	8.5	10.3	8.1

animals in the Ballarat area. Three of these formations (tall open-forest, open-forest and woodland) occur mainly on Crown Land and the fourth formation (grassland) occurs on private land. For each plant formation, the dominant plant species, the characteristic features and the blocks in which each occurs are shown in Table 2. The terminology for the plant formations follows that of Specht (1970) and Specht *et al.* (1974).

The aquatic habitat includes streams, swamps, lakes, farm ponds and associated vegetation which occurs in, or borders on, the open water areas. The swamps and lakes, which are found mainly in the basalt plains, provide a valuable wildlife environment and for 25 of these (Fig. 2) we have a large amount of data on the animals utilizing them.

### Methods

Information was collected on all vertebrate animals except fishes. The field work was conducted by the Wildlife Survey Team of the Fisheries and Wildlife Division between February 1976 and January 1977 (a total of 50 days was spent in the field by between 1-4 people). Records were kept of the vegetation formation at each site where observations were made and form the basis for comments on habitats. Data, particularly on birds, were collected on a long-term basis by J. R. Wheeler who has records for the last 30 years and who has, for many years, written a nature column for the newspaper, Ballarat Courier. Additional information on the vertebrate

fauna came from the collections of the National Museum of Victoria, field records of the Mammal Survey Group of the Field Naturalists Club of Victoria, specimens and files held by the Fisheries and Wildlife Division, interviews with local naturalists, records of the Australian Bird-banding Scheme, published literature and nest records of the Royal Australasian Ornithologists Union (RAOU). Information sources are listed alphabetically and each is preceded by an identifying letter and number in the section on Sources of Information. In the annotated lists, information sources for some species are listed only by these letters and numbers (those in bold face denote sources containing breeding information).

Mammals were trapped in wire cage traps (36 x 20 x 16 cm) baited with a mixture of peanut butter, honey and rolled oats. The traps, to a maximum of 100, were set at each locality for two nights and the intervening day. They were checked on the first morning, and captured animals were either retained or marked and released. All traps were reset and checked again on the second morning, after which they were removed from the site and set in another locality later in the day. Observations of mammals during daylight hours and by spotlight at night were routinely recorded as were characteristic scats, burrows and diggings. Scientific nomenclature for the native mammals follows Ride (1970).

Field work on the birds consisted of visiting the different habitats in each block of Crown Land (including aquatic areas) and



TABLE 2  
Terrestrial habitats in the Ballarat area

Formation/ dominant species	Characteristic features	Occurrence in blocks
Tall open-forest		
<i>Eucalyptus obliqua</i> <i>E. st johnii</i> <i>E. viminalis</i>	Trees >30 m high; mesomorphic shrub understory to 3 m with tree ferns in gullies	Mt Cole Creswick
Open-forest		
<i>Eucalyptus obliqua</i> <i>E. dives</i>	Trees 10-30 m; xeromorphic shrubs to 1 m	Creswick Ben Major-Trawalla Enfield
<i>E. aromaphloia</i> <i>E. obliqua</i>	Sparse shrubs to 1 m; patchy <i>Pteridium esculentum</i>	Creswick Enfield
<i>E. viminalis</i> <i>E. ovata</i>	Dense shrubs and <i>Pteridium</i> with sedges and <i>Leptospermum</i> spp. in gullies	Creswick Mt Cole Langi Ghiran
<i>E. rubida</i> <i>E. pauciflora</i>	Tussock grass mid-dense to 1 m	Enfield Ben Major-Trawalla
<i>E. goniocalyx</i> <i>E. macrorhyncha</i> <i>E. polyanthemus</i>	Many multistemmed trees from coppice shoots; sparse shrubs and tussock grass to 0.5 m	Ararat Langi Ghiran Mt Cole Enfield
<i>E. macrorhyncha</i> <i>E. sideroxylon</i>	Sparse shrubs to 1 m; sparse <i>Acacia pycnantha</i> to 2 m	Enfield (Mt Erip)
<i>E. aromaphloia</i> <i>E. melliodora</i>	Sparse shrubs to 1 m and sparse grass to 0.5 m	Ararat Langi Ghiran
Woodland		
<i>Eucalyptus viminalis</i> <i>E. camaldulensis</i>	Dense grass to 0.5 m; patches of <i>Acacia armata</i> to 2 m	Inverleigh
<i>E. melliodora</i> <i>E. camaldulensis</i>	Dense grass to 0.5 m; patches of <i>Acacia</i>	Langi Ghiran Enfield (small)
<i>E. leucoxylon</i> <i>E. melliodora</i>	Sparse grass and xeromorphic shrubs to 0.5 m patches of <i>Acacia pycnantha</i> to 2 m	Ararat
Grassland/Herbfield		
<i>Themeda australis</i> *	Dense grass to 0.5 m	Basalt Plains

\* Mainly converted to introduced pasture grasses and crops.

recording actual or relative numbers of all avian species present and their utilization of particular structures within the habitats. Incidental observations were also made outside the Crown Land areas (e.g. on the basalt plains and in towns) and spotlighting at night was used for observing nocturnal species such as owls and frogmouths. The terms used to describe abundance (rare, uncommon and common) are estimates of the population of each species in the survey area relative to

population estimates that we have made for other areas of Victoria. Scientific names follow Condon (1975) for the non-passerines and Schodde (1975) for the passerines. Common names follow the RAOU (1978).

Collection of field data on reptiles consisted of observations and collection of specimens. Scientific names and, where available, common names follow Cogger (1975) except for the use of the genus *Lampropholis* (Greer 1974), the addition of *Leiopisma coventryi*

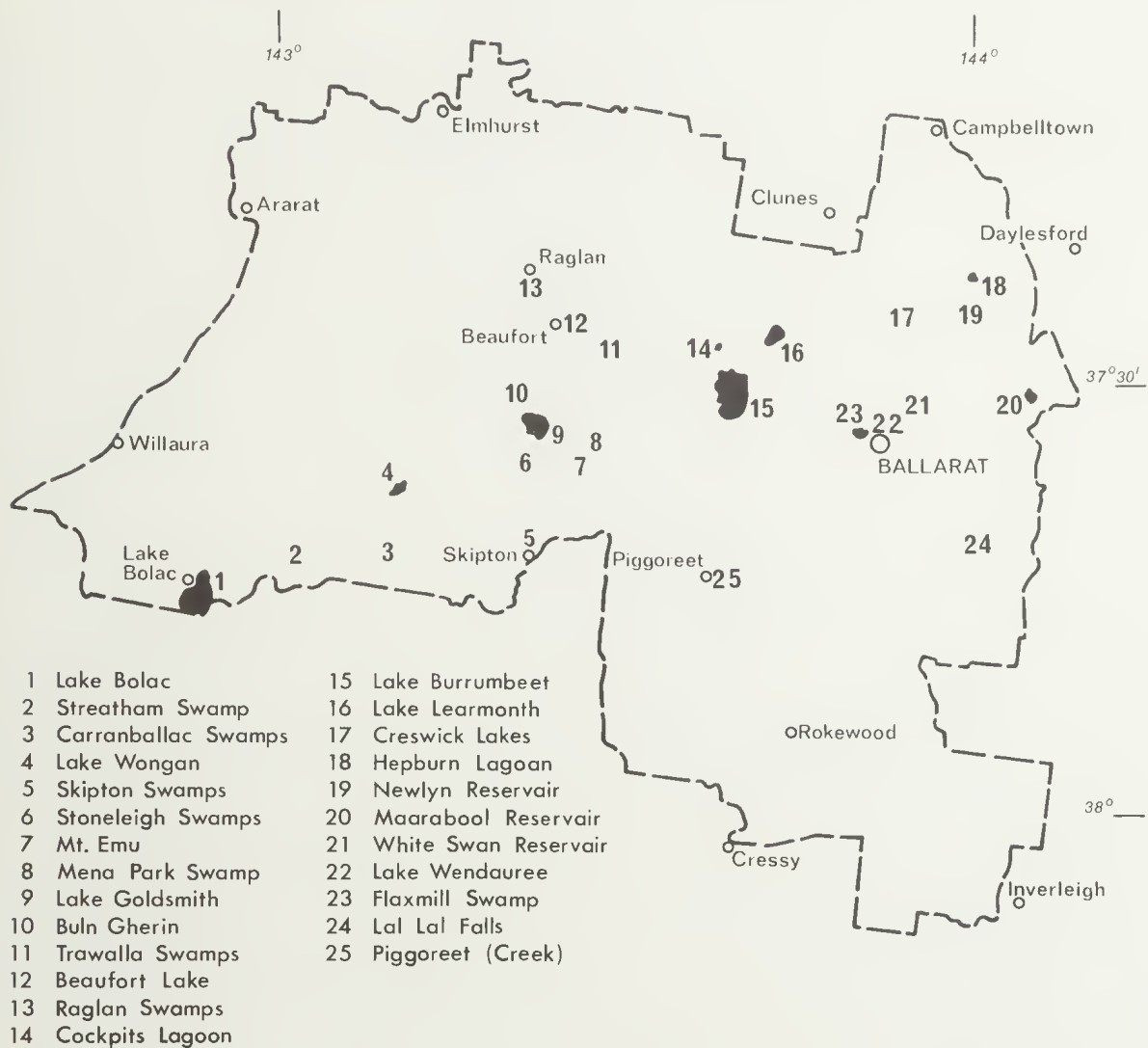


Figure 2—Major wetlands in the Ballarat area.

following Rawlinson (1975) and the use of *Anotis maccoyi* for *Hemiergis maccoyi* (Rawlinson *pers. comm.*). For those species not named in Cogger we have used local common names.

Amphibians were recorded and collected opportunistically and the field data for them are much less complete than for the other vertebrates. The list of amphibians was obtained from the distribution maps of Brook (1975). The scientific nomenclature of amphibians used here follows Cogger (1975).

## Results

More than 325 species of vertebrates (excluding fishes) were found or occurred recently in the Ballarat area. This total represents 42 species of mammals, 249 species of birds, 26 species of reptiles and 12 species of amphibians. Details of abundance, geographic distribution, habitat, breeding (birds only) and information sources are given for each vertebrate species (except 12 species of amphibians) in Appendices 1-3. The distribution of all



TABLE 3 (Continued)

Species	Distribution of species in defined areas (see Fig. 1)							
	A	B	C	D	E	F	G	H
Black Kite								X
Whistling Kite	X	X	X	X			X	X
Brown Goshawk	X	X	X	X	X			X
Collared Sparrowhawk		X	X	X				X
Grey Goshawk		X	X					X
Wedge-tailed Eagle	X	X	X	X	X	X		X
Little Eagle	X		X		X			X
Spotted Harrier								X
Black Falcon								X
Peregrine Falcon	X	X	X	X	X			X
Australian Hobby	X		X					X
Brown Falcon	X	X	X	X	X			X
Australian Kestrel	X			X				X
Stubble Quail	X	X		X				X
King Quail			X					X
Red-backed Button-quail		Accidental. Recorded near Dowling.						
Painted Button-quail	X		X	X				
Little Button-quail								X
Black-breasted Button-quail		Accidental. Recorded at Cardigan.						
Red-chested Button-quail								X
Plains-wanderer								X
Australian Bustard								X
Bush Thick-knee	X							X
Superb Fruit-Dove		Accidental. Recorded at Raglan.						
Feral Pigeon	X	X						X
Spotted Turtle-Dove	X							X
Peaceful Dove			X				X	
Diamond Dove			X					X
Common Bronzewing	X	X	X				X	
Brush Bronzewing		X						
Crested Pigeon		X						X
Yellow-tailed Black-Cockatoo	X	X		X	X			X
Gang-gang Cockatoo			X					
Galah	X	X		X			X	X
Long-billed Corella				X	X	X	X	X
Pink Cockatoo		Accidental. Recorded at Smythes Creek.						
Sulphur-crested Cockatoo	X		X	X	X	X	X	X
Rainbow Lorikeet					X			
Musk Lorikeet	X		X	X	X		X	X
Purple-crowned Lorikeet	X		X	X	X			X
Little Lorikeet	X		X	X			X	
Australian King Parrot		Accidental. Recorded at Enfield and Eganstown.						
Cockatiel	X			X				X
Budgerigar	X			X				X
Swift Parrot	X							
Crimson Rosella	X	X	X	X	X	X	X	X
Eastern Rosella	X	X	X	X	X		X	X
Red-rumped Parrot	X	X	X	X	X		X	X
Blue-winged Parrot	X				X			X
Elegant Parrot								X
Pallid Cuckoo	X	X	X	X	X			
Brush Cuckoo		X		X	X			
Fan-tailed Cuckoo	X	X	X	X	X			X
Black-eared Cuckoo	X	X		X				
Horsfield's Bronze-Cuckoo	X	X	X	X	X	X		X
Shining Bronze-Cuckoo	X	X	X	X	X			X
Powerful Owl		X	X	X	X	X		X
Southern Boobook	X	X	X	X	X			X







TABLE 3 (Continued)

Species	Distribution of species in defined areas (see Fig. 1)							
	A	B	C	D	E	F	G	H
Jacky Lizard	X	X			X	X		
Large Striped Skink					X	X		
Cunningham's Skink								X
Black Rock Skink					X			
White's Skink		X			X	X		X
Three-toed Skink				X	X			
Garden Skink		X			X	X	X	X
Coventry's Skink			X	X	X			
Grass Skink		X	X		X	X		X
Three-lined Skink				X		X		X
Bougainville's Skink					X	X		
Spencer's Skink					X			
Southern Water Skink		X	X	X	X	X		
Blotched Blue-tongued Lizard		X						
Eastern Blue-tongued Lizard								X
Shingle-back				X	X	X		
Copperhead		X			X			X
White-lipped Snake			X		X			
Eastern Tiger Snake				X	X			X
Red-bellied Black Snake			X		X			X
Eastern Brown Snake					X	X		X
Little Whip Snake	X			X	X	X	X	X
AMPHIBIANS								
<i>Crinia parinsignifera</i>	No NMV specimens or FWD records (see Brook 1975).							
<i>Crinia signifera</i>		X	X	X	X	X	X	X
<i>Geocrinia victoriana</i>		X	X	X	X	X		X
<i>Limnodynastes dumerilii</i>		X	X	X	X			
<i>Limnodynastes peroni</i>	No NMV specimens or FWD records (see Brook 1975).							
<i>Limnodynastes tasmaniensis</i>	X		X	X	X			X
<i>Neobatrachus pictus</i>	No NMV specimens or FWD records (see Brook 1975).							
<i>Pseudophryne bibronii</i>		X		X	X	X		X
<i>Litoria ewingii</i>	X	X	X	X	X		X	X
<i>Litoria lesueurii</i>		X						
<i>Litoria raniformis</i>		X	X		X			X
<i>Litoria verreauxii</i>	No NMV specimens or FWD records (see Brook 1975).							

X = present in defined area.

TABLE 4  
Distribution of aquatic birds in the Ballarat area

Species	Distribution of species on specific wetlands (see Fig. 2)																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Great Crested Grebe	X							X			X														
Hoary-headed Grebe	X	O	O	X	O	O		X	X	X	X	X													
Australasian Grebe	X	O	O	X	O	O		X	X	X	X	O	X												
Australian Pelican	X		X					X	X	X	X														
Darter	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Great Cormorant	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pied Cormorant	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Little Black Cormorant	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Little Pied Cormorant	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pacific Heron	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
White-faced Heron*	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cattle Egret	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Great Egret	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Intermediate Egret	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rufous Night Heron	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Little Bittern	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Australasian Bittern	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Glossy Ibis	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sacred Ibis	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Straw-necked Ibis	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Royal Spoonbill	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Yellow-billed Spoonbill	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Magpie Goose	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Plumed Whistling-Duck	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Black Swan*	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Freckled Duck	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cape Barren Goose	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Australian Shelduck*	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pacific Black Duck	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mallard	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Grey Teal	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chestnut Teal	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Australasian Shoveller	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pink-eared Duck	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hardhead	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Maned Duck	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Blue-billed Duck	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Musk Duck	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Marsh Harrier	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brown Quail	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Buff-banded Rail	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Lewin's Rail	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Survival in survey area doubtful.

TABLE 4 (continued)

Species	Distribution of species on specific wetlands (see Fig. 2)																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Baillon's Crake					X				X								X						X		
Australian Crane										X			X				X					O			
Spotless Crane									X								X					X			
Black-tailed Native-hen				X		X			X								X					X			
Dusky Moorhen	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Purple Swamphen	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Eurasian Coot	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brolga	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Painted Snipe	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Masked Lapwing*	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Banded Lapwing	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Lesser Golden Plover	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Red-kneed Dotterel	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Double-banded Plover	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Red-capped Plover	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Black-fronted Plover	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Black-winged Stilt	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Banded Stilt	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Red-necked Avocet	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Wood Sandpiper	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Common Sandpiper	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Greenshank	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Latham's Snipe	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sharp-tailed Sandpiper	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Red-necked Stint	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Curlew Sandpiper	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Silver Gull	O	O	O		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Whiskered Tern	O	O	O		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Gull-billed Tern	O	O	O		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Caspian Tern	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Azure Kingfisher	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Clamorous Reed-warbler	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Little Grassbird	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Golden-headed Cisticola	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

X = Present on wetland; O = Nesting on wetland; \* = Species has nested in most wetlands where recorded.



### Discussion

The percentage of land in public ownership in the survey areas under consideration by the Land Conservation Council (LCC) varies from nearly 90 per cent in some of the areas in the eastern portion of the State to less than 10 per cent in some of the areas in the western portion. The percentage of Crown Land in the Ballarat survey area is amongst the lowest of all the LCC survey areas and those public lands which remain are fragmented into numerous small parcels (Fig. 1). Consequently some species of wildlife have either disappeared from the area or their populations have declined to such an extent that specific efforts may be required to ensure their survival in the survey area.

Most of the native grasslands which occurred across the basalt plains before European settlement has now been cleared for farming. Native animals which have disappeared from the Ballarat area as a result of these changes include the Quoll (*Dasyurus viverrinus*), Gunn's Bandicoot (*Perameles gunnii*) and Emu (*Dromaius novaehollandiae*). Other species, the Plains-wanderer (*Pedionomus torquatus*), Australian Bustard (*Ardeotis australis*) and Elegant Parrot (*Neophema elegans*), are still found occasionally in cultivated grasslands of the survey area, but their numbers have declined. However, many species of native wildlife still exist in large numbers in the survey area only in the grass and crop lands of the basalt plains. These include the Fat-tailed Dunnart (*Sminthopsis crassicaudata*), Spinifex Lizard (*Delma impar*), Cunningham's Skink (*Egernia cunninghami*), Black-shouldered Kite (*Elanus notatus*), Whistling Kite (*Haliastur sphenurus*), Little Eagle (*Hieraaetus morphnoides*), Brown Falcon (*Falco berigora*), Australian Kestrel (*F. cenchroides*), several species of quail (*Coturnix* spp. and *Turnix* spp.), Galah (*Cacatua roseicapilla*), Richard's Pipit (*Anthus novaeseelandiae*), Brown Songlark (*Cinchorhamphus cruralis*), Yellow-rumped Thornbill (*Acanthiza chrysorrhoa*) and Southern Whiteface (*Aphelocephala leucopsis*).

Drainage of many of the swamps has reduced the numbers of Brolgas (*Grus rubi-*

*cundus*) in the Ballarat area and the Magpie Goose (*Anseranas semipalmata*) has also disappeared from the area. However, a large number of native animals still occur in the aquatic habitats of the survey area (Fig. 2). These include 76 species of birds (Table 4), 12 species of amphibians (Table 3), the Platypus (*Ornithorhynchus anatinus*), Eastern Water Rat (*Hydromys chrysogaster*) and Long-necked Tortoise (*Chelodina longicollis*). Nine of the aquatic bird species are inter-continental migrants which spend parts of their non-breeding seasons in the aquatic environments of the Ballarat area.

Some species of animals still extant in the blocks of Crown Land in the survey area are in low numbers and further fragmentation and reductions in sizes of blocks will result in local extinction of some of these species. In particular, the Tiger Cat (*Dasyurus maculatus*), possibly the Yellow-bellied Glider (*Petaurus australis*), Bush Thick-knee (*Burhinus magnirostris*) and Rainbow Lorikeet (*Trichoglossus haematodus*) have only small isolated populations in the survey area.

Although generally small and fragmented, the Crown Land areas are still inhabited by a large number of wildlife species. Many of these species are widespread throughout the Crown Land, but some species exist as small groups only in some of the seven blocks (Fig. 1) to which we have arbitrarily allocated fragments of Crown Land. The reasons why these groups of species are confined to specific blocks in the survey area are many and varied, but are mainly related to the types of habitats present. For example, the Enfield Block has the only records of the Tiger Cat, Mouse Dunnart (*Sminthopsis murina*), Blotched Blue-tongued Lizard (*Tiliqua nigrolutea*), Spotted Nightjar (*Caprimulgus guttatus*) and accidental occurrences of Red Fruit Bat (*Pteropus scapulatus*) and Bent-winged Bat (*Miniopterus schreibersii*). The Creswick Block contains several tall open-forest inhabitants which have not been confirmed as occurring elsewhere in the survey area; these include the Wombat (*Vombatus ursinus*), Greater Glider (*Schoinobates volans*), Bush Rat (*Rattus fuscipes*), Olive Whistler (*Pachycephala olivacea*), Red-

browed Treecreeper (*Climacteris erythroptera*) and the unusual occurrences of White-throated Nightjar (*Caprimulgus mystacalis*) and Satin Bowerbird (*Ptilonorhynchus violaceus*). The Ararat Block is inhabited by three avian species, White-browed Babbler (*Pomatostomus superciliosus*), Black-chinned Honey-eater (*Melithreptus gularis*) and Peaceful Dove (*Geopelia placida*), which are seldom recorded further south in the survey area.

The wide range of habitats in the Mt Cole Block is reflected by a high species diversity of all classes of vertebrates; it is also the only block having Swainson's Antechinus (*Antechinus swainsonii*), Yellow-bellied Glider, Red-necked Wallaby (*Macropus rufogriseus*), Black Rock Skink (*Egernia saxatilis*) and Spencer's Skink (*Pseudemoia spenceri*). The tall open-forest at Mt Cole also contains an unusually high density of Swamp Rats (*Rattus lutreolus*); this may be related to a lack of interspecific competition because Bush Rats, the usual inhabitants of tall open-forest, are absent from Mt Cole.

The western portion of the Langi Ghiran Block and all the Inverleigh Block are covered by woodland having an understorey of native grasses. This habitat was once more extensive in the Ballarat area and is becoming quite rare throughout all of western Victoria. These woodlands in the survey area now have few mammals, reptiles or amphibians but they do contain a large number of species of birds, and may be important in the future for attempting reintroductions of mammals such as the Quoll and Gunn's Bandicoot.

The Ballarat area now has only one public reserve (Lake Goldsmith State Game Reserve) set aside specifically for wildlife conservation. The Inverleigh Block has been recommended as a flora reserve to be managed by the National Parks Service (Land Conservation Council 1977) and this may enable the existing wildlife community to remain intact if recreation pressures are not too great. It should be noted that the third most populous urban area in Victoria (Ballarat) is located in the survey area and that there are few large public reserves catering specifically for recreation. Therefore areas very valuable for wildlife may

come under pressure from recreation because of the absence of large natural areas set aside for the latter.

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### Appendix 1

Annotated list of Mammals in the Ballarat area

#### TACHYGLOSSIDAE

*Tachyglossus aculeatus*. Echidna.

ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from 1.5 km NNW of Mt Cole, 3 km SSW of Mt Langi Ghiran, near Mt Erip, 5.5 km W of Daylesford, 2 km NW

of Mt Langi Ghiran, 1 km SW of Ben Nevis and the Inverleigh Block (FWD survey; Parnaby pers. comm.; Wheeler unpublished data). HABITAT. Open-forest and woodland.

#### ORNITHORHYNCHIDAE

*Ornithorhynchus anatinus*. Platypus.

ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from Hepburn Lagoon, Beaufort, Ballarat, Newlyn, Mt Emu Creek near Skipton, Fiery Creek near Raglan, Woody Yaloak River and Lake Wendouree.

HABITAT. Aquatic.

INFORMATION SOURCES. B2; C2; F3; M2; N1; W4.

#### DASYURIDAE

*Dasyurus maculatus*. Tiger Cat.

ABUNDANCE AND DISTRIBUTION. Only one record from "The Meadows" Rokewood on 3 April 1964 (FWD specimen).

HABITAT. Open-forest.

*Dasyurus viverrinus*. Quoll.

ABUNDANCE AND DISTRIBUTION. Once common and widespread, now presumed extinct in the survey area. The following account was published by Wheeler in the Ballarat Courier (3/4/65): "Native cats were often seen perched on fence posts on moonlit nights before 1900 at Emu Hill Station south of Linton towards Mannibadar . . . both Native and Tiger cats were known in the Mortchup district about the 1880's". Wheeler in the Ballarat Courier (8/5/65) gives the following report by Mr A. Sonsee: "An old friend of mine at Kooroocheang . . . informed me that Native cats were common in stone fences, stone heaps and basalt outcrops in that district but they all disappeared in the early 1900's".

HABITAT. Woodland and grassland with piles of stones.

*Phascogale tapoatafa*. Tuan.

ABUNDANCE AND DISTRIBUTION. Infrequently recorded but widespread in the survey area. Recorded from 2 km SW of Mt Buangor, Linton, Elmhurst, Beaufort, Pyrenees Highway 25 km ENE of Ararat, 3 km E of Ararat and Stockyard Hill (FWD survey, specimens and

files; NMV specimens; Clements pers. comm.). Fleay (1934) mentions one trapped at Smeaton and a road kill on the Western Highway at Gordon.

HABITAT. Open-forest and woodland.

*Antechinus flavipes.*

Yellow-footed Antechinus.

ABUNDANCE AND DISTRIBUTION. Uncommon and restricted to the NW corner of the survey area. Recorded from Ararat, Mt Cole Range-Warrak and 2 km NW of Mt Langi Ghiran (FWD specimens and files; NMV specimens). Fleay (1949) mentions seeing them in the stony rises between Smeaton and Campbelltown, and Millar (pers. comm.) reports them from Stockyard Hill.

HABITAT. Open-forest with sparse ground cover.

*Antechinus stuartii.* Brown Antechinus.

ABUNDANCE AND DISTRIBUTION. Common and widespread in the north and east of the survey area. Recorded from Snake Valley, 15 km SSW of Daylesford, 2 km ENE of Creswick, 2 km SE of Mt Langi Ghiran, 2 km NW of Mt Langi Ghiran, Mt Erip State Forest and throughout the Mt Cole Block (FWD survey and specimens).

HABITAT. Tall open-forest and open-forest.

*Antechinus swainsonii.* Swainson's Antechinus.

ABUNDANCE AND DISTRIBUTION. Occurs near the northern part of the eastern boundary (Heislars pers. comm.) but the stronghold of this species in the survey area is the Mt Cole State Forest. Recorded from 3 km E of Mt Buangor, 2 km SW of Mt Buangor and 1 km NE of Mt Cole (FWD survey).

HABITAT. Tall open-forest, especially in gullies.

*Sminthopsis murina.* Mouse Dunnart.

ABUNDANCE AND DISTRIBUTION. Rarely recorded. One was collected from beneath a piece of bark in a bush paddock 1.5 km SW of Mt Buninyong on 15/1/1964 (FWD specimen) and 2 were found beneath a sheet of iron in Mt Erip State Forest 14 km SW of Smythesdale on 31/3/1976 (FWD survey).

HABITAT. Open-forest.

*Sminthopsis crassicaudata.* Fat-tailed Dunnart.  
ABUNDANCE AND DISTRIBUTION. Infrequently recorded but widespread. Recorded from Ararat, Beaufort, Cape Clear, 8 km NE of Beaufort, Smythesdale and Elaine (FWD and NMV specimens; Wheeler in Ballarat Courier 12/9/64).

HABITAT. Grassland, where it shelters beneath rocks and logs.

PERAMELIDAE

*Perameles gunnii.* Gunn's Bandicoot.

ABUNDANCE AND DISTRIBUTION. Once common and widespread, now presumed extinct in the survey area. Recorded from Beaufort, near Trawalla and near Mt Emu (NMV specimens). Wheeler in the Ballarat Courier (23/9/67) mentions Barred Bandicoots found on the railway line between Pittong and Skipton. Another colony was known at Carngham towards Mena Park.

HABITAT. Grassland and woodland.

VOMBATIDAE

*Vombatus ursinus.* Wombat.

ABUNDANCE AND DISTRIBUTION. Restricted to the NE corner of the survey area where it is either rare or extinct. No evidence of it was found in the survey area during the FWD survey although it was recorded just east of the boundary. It has occurred further west because Fleay (1972) mentions Wombats in wet sclerophyll forest near Moorabool Reservoir in 1924.

HABITAT. Tall open-forest and open-forest.

PHASCOLARCTIDAE

*Phascolarctos cinereus.* Koala.

ABUNDANCE AND DISTRIBUTION. Widespread but patchy distribution. Recorded from 1.5 km N of Mt Cole, Dercel, 2 km E of Creswick, Mt Buninyong, 2 km SE of Mt Langi Ghiran, 2 km NW of Mt Langi Ghiran, Lal Lal State Forest and Mt Cole State Forest 4 km S of Elmhurst (FWD survey and specimen; Wheeler in Ballarat Courier 22/4/76 and 30/5/70).

HABITAT. Tall open-forest, open-forest and woodland.

## PHALANGERIDAE

*Trichosurus vulpecula*. Brush-tailed Possum.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from Mt Cole State Forest, Mt Erip State Forest, Cape Clear, Mt Bute, Ararat, 10 km NNE of Ararat, 2 km E of Creswick, 2 km SE of Mt Langi Ghiran and Inverleigh Common (FWD survey and files; NMV specimens).

HABITAT. Tall open-forest, open-forest, woodland and urban areas.

## PETAURIDAE

*Pseudocheirus peregrinus*. Ring-tailed Possum.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from Mt Cole State Forest, 3 km W of Spargo Creek, 2 km NW of Barkstead, Mt Erip State Forest, Mt Buninyong, Mt Bute—W of Linton, Ararat, 2 km E of Creswick and 2 km W of Beaufort (FWD survey; NMV specimens).

HABITAT. Tall open-forest, open-forest and woodland.

*Petaurus breviceps*. Sugar Glider.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from Mt Cole State Forest, 4 km W of Enfield, Smythesdale, Beaufort, Happy Valley, Mt Helen, Mt Clear and Creswick.

HABITAT. Tall open-forest and open-forest.

INFORMATION SOURCES. B4; C2; C11; F3; W6.

*Petaurus australis*. Yellow-bellied Glider.

ABUNDANCE AND DISTRIBUTION. If present, restricted and rare. Only indirect evidence for the presence of this species in Mt Cole State Forest exists. Two trees with rows of bites, which were possibly made by Yellow-bellied Gliders, were found along Buckingham's Creek Road 3 km S of Ben Nevis (FWD survey). A "glider tree" has also been reported along Hutching's Track 3 km N of Mt Cole (Millar pers. comm.). The species is also listed as occurring in the Mt Cole area by the Geelong F.N.C. and Western Victorian F.N.C.A. (1972) but details are not given. Confirmation of the presence of this species in the survey area is required.

HABITAT. Tall open-forest.

*Schoinobates volans*. Greater Glider.

ABUNDANCE AND DISTRIBUTION. The NE boundary of the survey area is at the western edge of the range of this species. The westernmost known occurrence is at Koorweingu-boorah Reservoir (Heisl's pers. comm.).

HABITAT. Tall open-forest.

## BURRAMYIDAE

*Acrobates pygmaeus*. Feather-tailed Glider.

ABUNDANCE AND DISTRIBUTION. Widespread but rarely seen. Recorded from Happy Valley, Trawalla State Forest, Gordon, Linton, Enfield State Forest and Willaura (FWD and NMV specimens; Wheeler in Ballarat Courier 6/4/68).

HABITAT. Tall open-forest, open-forest and woodland.

*Cercartetus nanus*. Eastern Pigmy Possum.

ABUNDANCE AND DISTRIBUTION. Widespread but not commonly encountered. Recorded from Smythesdale, Snake Valley, Enfield, Ballarat area and Scarsdale (FWD specimens; Wheeler in Ballarat Courier 4/4/70).

HABITAT. Open-forest.

## MACROPODIDAE

*Macropus giganteus*. Eastern Grey Kangaroo.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from all blocks of public land in the survey area (FWD survey).

HABITAT. Open-forest, woodland and tall open-forest.

*Macropus rufogriseus*. Red-necked Wallaby.

ABUNDANCE AND DISTRIBUTION. Restricted and uncommon. Recorded only in the Mt Cole State Forest (FWD survey) although once common in the Ben Major-Trawalla Block near Mt Lonarch (Clements pers. comm.).

HABITAT. Tall open-forest and open-forest.

*Wallabia bicolor*. Black Wallaby.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from all blocks of public land except the Ararat and Mt Langi Ghiran blocks (FWD survey).

HABITAT. Tall open-forest and open-forest wherever there is a dense understorey about 1 m high.



## PTEROPODIDAE

*Pteropus scapulatus*. Red Fruit Bat.

ABUNDANCE AND DISTRIBUTION. Occasional individuals stray into the area. There is an NMV specimen from Piggoreet and Wheeler in the Ballarat Courier (26/5/73) mentions unidentified fruit bats from Ararat and Lake Bolac.

## VESPERTILIONIDAE

*Pipistrellus tasmaniensis*.

Tasmanian Pipistrelle.

ABUNDANCE AND DISTRIBUTION. Recorded from 6 km W of Daylesford, Enfield State Forest—5 km SW of Enfield and Mt Cole State Forest—4 km S of Elmhurst (FWD survey; NMV specimen).

HABITAT. Tall open-forest and open-forest.

*Eptesicus pumilus*. Little Bat.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from 4 km S of Elmhurst, 2 km SE of Mt Langi Ghiran, Mt Buninyong, Creswick and 5 km W of Daylesford (FWD survey and specimens; NMV specimens).

HABITAT. Tall open-forest and open-forest.

*Chalinolobus gouldii*. Gould's Wattled Bat.

ABUNDANCE AND DISTRIBUTION. Common. Recorded from 4 km S of Elmhurst, 5 km SW of Enfield and Ballarat (FWD survey and specimens).

HABITAT. Tall open-forest and open-forest.

*Miniopterus schreibersii*. Bent-winged Bat.

ABUNDANCE AND DISTRIBUTION. Rare. Only recorded at Buninyong (FWD specimen) and a jawbone was found in a lava cave on Mt Widderin near Skipton by Simpson and Smith (1964).

HABITAT. This bat lives in caves, man-made tunnels and mine shafts.

*Nyctophilus geoffroyi*. Lesser Long-eared Bat.

ABUNDANCE AND DISTRIBUTION. Common. Recorded from Ballarat, Mt Buninyong, Elmhurst, Creswick, Smythesdale, 2 km E of Creswick, 7 km SW of Spargo Hotel and 5 km SW of Enfield (FWD survey and specimens; NMV specimens).

HABITAT. Open-forest.

## MOLOSSIDAE

*Tadarida australis*. White-striped Bat.

ABUNDANCE AND DISTRIBUTION. Uncommon. Recorded from 4 km S of Elmhurst and Stockyard Hill—1.5 km S of Trawalla State Forest (FWD survey and specimens).

HABITAT. Open-forest and woodland.

## LEPORIDAE

*Lepus europaeus*. Hare.

ABUNDANCE AND DISTRIBUTION. Probably widespread and uncommon. None recorded during the FWD survey, but Wheeler (unpublished data) indicates they occur in the Carngham, Beaufort and Carranballac area. Records from districts adjacent to the survey area suggest they are present throughout. An introduced species.

HABITAT. Woodland and grassland.

*Oryctolagus cuniculus*. Rabbit.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from all blocks in the survey area (FWD survey). An introduced species.

HABITAT. Open-forest, woodland and grassland. Only occurs in tall open-forest along the edge of tracks.

## MURIDAE

*Rattus fuscipes*. Bush Rat.

ABUNDANCE AND DISTRIBUTION. Restricted to the NE of the survey area where it is common in the western end of the Wombat State Forest. Recorded from 15 km SSW of Daylesford and 3 km W of Spargo (FWD survey). A record from the Enfield State Forest (Bedgood pers. comm.) requires confirmation.

HABITAT. Tall open-forest and open-forest.

*Rattus rattus*. Black Rat.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from Snake Valley, 2 km E of Creswick, 15 km SSW of Daylesford, Mt Erip, Woody Yallock River—7 km SSE of Linton, 4 km N of Linton, 3.5 km E of Mt Buangor, 0.6 km NE of Mt Cole, 3 km NW of Barkstead, 2 km SW of Mt Buangor and 2 km N of Mt Cole (FWD survey and specimens). An introduced species.



**HABITAT.** Tall open-forest, open-forest, aquatic (reed beds) and suburban environments. This species is usually found in natural environments that have been disturbed, for example mining or recent logging.

*Rattus lutreolus.* Swamp Rat.

**ABUNDANCE AND DISTRIBUTION.** Restricted and common. Recorded from 2 km SE of Mt Langi Ghiran, 3 km N of Mt Cole, 2 km SW of Mt Buangor and 1 km NE of Mt Cole (FWD survey).

**HABITAT.** Tall open-forest and open-forest.

*Mus musculus.* House Mouse.

**ABUNDANCE AND DISTRIBUTION.** Widespread and common. Recorded from 5.5 km S of Smythesdale, Mt Langi Ghiran, Linton and 3 km NW of Barkstead (FWD survey and specimens). An introduced species.

**HABITAT.** Tall open-forest, open-forest, woodland, grassland and suburban environments. Usually only found in forested environments that have been disturbed.

*Hydromys chrysogaster.* Eastern Water Rat.

**ABUNDANCE AND DISTRIBUTION.** Widespread and uncommon. Recorded from Lake Wendouree, Flax Mill Swamp, Hepburn Lagoon, 3 km N of Mt Cole, 5 km NNW of Cape Clear, 3 km SW of Cape Clear and Eaton's Dam—2 km NE of Creswick (FWD survey; Heislars pers. comm.; Wheeler unpublished data).

**HABITAT.** Aquatic.

#### SCIURIDAE

*Sciura carolinensis.* Grey Squirrel.

**ABUNDANCE AND DISTRIBUTION.** Once restricted to the gardens in Ballarat; it now appears that they are no longer present in the survey area. They were introduced on 24 November 1936 by Mr T. Beaumont, who brought individuals from "Rippon Lea" in Melbourne; the latest sightings were in 1966 (FWD files; Wheeler in Ballarat Courier 29/2/64).

**HABITAT.** Suburban parks with many northern hemisphere trees.

#### CANIDAE

*Vulpes vulpes.* Fox.

**ABUNDANCE AND DISTRIBUTION.** Widespread and common. Recorded from 2 km W of Spargo, Barkstead, 2 km NW of Barkstead, Mt Erip State Forest, 5 km NNE of Cape Clear, 5 km NNW of Cape Clear and 2 km NW of Inverleigh (FWD survey). An introduced species.

**HABITAT.** Occurs in all habitats.

#### FELIDAE

*Felis catus.* Cat.

**ABUNDANCE AND DISTRIBUTION.** Widespread and common. Recorded from 2 km NW of Inverleigh and 2 km NW of Mt Langi Ghiran (FWD survey and files). An introduced species.

**HABITAT.** Occurs in all habitats.

#### CERVIDAE

*Cervus unicolor.* Sambar Deer.

**ABUNDANCE AND DISTRIBUTION.** Restricted to Mt Cole State Forest and Mt Langi Ghiran Forest Park (FWD survey and files). It is suggested by Bentley (1978) that the present population of Sambar Deer in the Mt Cole State Forest originated from a liberation at Ercildoune near Burrumbeet in 1871.

**HABITAT.** Tall open-forest.

*Cervus elephas.* Red Deer.

**ABUNDANCE AND DISTRIBUTION.** Has spread from earlier liberations in the western district, but the population has declined in farmlands and it is now restricted to the Enfield and Ben Major-Trawalla Blocks (Clements pers. comm.). Bentley (1978) provides the following information: "A small herd of red deer inhabits the timbered country and pine plantations in the Shire of Grenville south of Ballarat. The deer are descendants of those once held by Philip Russell on his property Carngham, Snake Valley. In 1890 about twenty deer were moved to Langi Willi the property of George Russell near Linton . . . The Langi Willi deer were liberated in the Linton forest about 1914. Very occasionally red deer have been reported seen in the Mt Cole State Forest."

**HABITAT.** Open-forest.

## Appendix 2

Annotated list of Birds in the Ballarat area

## DROMAIIDAE

*Dromaius novaehollandiae*. Emu.

ABUNDANCE AND DISTRIBUTION. Survival in the survey area is doubtful.

INFORMATION SOURCES. W4; W5; W9.

## PODICIPEDIDAE

*Podiceps cristatus*. Great Crested Grebe.

ABUNDANCE AND DISTRIBUTION. Uncommon. Regular summer visitor to Lake Wendouree, occasional elsewhere. In 1972 the population on Lake Wendouree consisted of 45 adults and 10 young of the year (Wheeler unpublished data).

HABITAT. Aquatic.

BREEDING. It nests regularly on Lake Wendouree; see RAOU nest record cards for details. A pair also has been recorded by Wheeler (Ballarat Courier 16/1/58) as nesting at Newlyn.

INFORMATION SOURCES. C2; C8; R7; R9; T6; W4; W5; W6; W20; W28; W29.

*Poliiocephalus poliocephalus*.

Hoary-headed Grebe.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Aquatic.

BREEDING. Recorded nesting at Stoneleigh Lake and Carranballac Swamps (Wheeler unpublished data).

INFORMATION SOURCES. C8; F3; J2; P2; R9; S3; S4; T6; W4; W5; W6; W7; W11; W13; W20; W21; W29.

*Tachybaptus novaehollandiae*.

Australasian Grebe.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Aquatic.

BREEDING. It regularly nests in the survey area particularly on margins of farm ponds. Also see Table 4.

INFORMATION SOURCES. A2; C8; F3; G1; J2; M4; P2; R7; T2; T6; W4; W5; W7; W8; W13; W17; W20; W21; W27; W28; W29.

## PELECANIDAE

*Pelecanus conspicillatus*. Australian Pelican.  
ABUNDANCE AND DISTRIBUTION. Uncommon; usually on large bodies of water.

HABITAT. Aquatic.

INFORMATION SOURCES. A2; C8; F3; T6; W5; W15; W20; W29.

## ANHINGIDAE

*Anhinga melanogaster*. Darter.

ABUNDANCE AND DISTRIBUTION. Rare; a few sightings of single birds are reported in the literature and Wheeler (unpublished data) has recorded it on Lake Wendouree, Creswick Lakes and on Woody Yaloak Creek near Piggorcet.

HABITAT. Aquatic.

BREEDING. Not recorded in the survey area, but just to the north it occasionally nests in River Red Gums near Clunes (Thomas pers. comm.).

INFORMATION SOURCES. A2; C8; T6; W4; W5; W25; W35.

## PHALACROCORACIDAE

*Phalacrocorax carbo*. Great Cormorant.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Aquatic.

BREEDING. Not recorded in the survey area, but just to the north it nests near Clunes (Thomas pers. comm.).

INFORMATION SOURCES. C8; D1; J2; M4; R9; T6; W5; W7; W11; W13; W20; W21; W27; W28; W29.

*Phalacrocorax varius*. Pied Cormorant.

ABUNDANCE AND DISTRIBUTION. Rare; reported at Lakes Wendouree, Learmonth, Burrumbeet, Goldsmith, Bolac and at Buln Gherin (Wheeler unpublished data).

HABITAT. Aquatic.

INFORMATION SOURCES. T6; W4; W5.

*Phalacrocorax sulcirostris*.

Little Black Cormorant.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Aquatic.

INFORMATION SOURCES. D1; F3; T6; W5; W7; W20.

*Phalacrocorax melanoleucos.*

Little Pied Cormorant.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Aquatic.

INFORMATION SOURCES. A2; C8; D1; F3; G1; J2; R9; T6; W5; W6; W7; W8; W12; W13; W17; W20; W21; W27; W28; W29.

## ARDEIDAE

*Ardea pacifica.* Pacific Heron.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Numbers appear to fluctuate, possibly nomadic.

HABITAT. Aquatic and grassland.

BREEDING. It nests in the survey area (Thomas pers. comm.; Wheeler unpublished data).

INFORMATION SOURCES. A2; C8; F3; G1; G2; M3; R9; T6; W4; W5; W13; W21; W27; W28; W29; W30.

*Ardea novaehollandiae.* White-faced Heron.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Aquatic and grassland.

BREEDING. It nests in the survey area; see RAOU nest record cards for details of nests near Beaufort.

INFORMATION SOURCES. A2; C4; C8; D1; F3; G1; G2; J1; J2; M3; M4; P2; R7; R9; S4; T2; T3; T6; W5; W8; W11; W12; W13; W14; W15; W17; W20; W21; W27; W28; W29; W30.

*Ardeola ibis.* Cattle Egret.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Numbers are increasing (Thomas pers. comm.; Wheeler unpublished data).

HABITAT. Aquatic and grassland.

INFORMATION SOURCES. A3; T6; W4; W5; W6.

*Egretta alba.* Great Egret.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Numbers appear to fluctuate, possibly nomadic (Thomas pers. comm.).

HABITAT. Aquatic and grassland.

INFORMATION SOURCES. C8; F3; G2; T6; W4; W5; W21; W29.

*Egretta intermedia.* Intermediate Egret.

ABUNDANCE AND DISTRIBUTION. Rare; recorded near Skipton (Anon. 1974) and at Lake Goldsmith, Cockpits Lagoon, Lake Wendourec, Buln Gherin and Lake Burrumbeet (Wheeler unpublished data).

HABITAT. Aquatic.

INFORMATION SOURCES. A2; T6; W4; W5.

*Nycticorax caledonicus.* Rufous Night Heron.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Aquatic.

INFORMATION SOURCES. A3; C2; C8; P2; T3; T6; W4; W5; W6; W21; W27.

*Ixobrychus minutus.* Little Bittern.

ABUNDANCE AND DISTRIBUTION. Rare; one or two seen at Lake Wendouree in 1957 and in 1960 and one recorded at Happy Valley in 1966 (Wheeler in Ballarat Courier 15/11/75).

HABITAT. Aquatic.

INFORMATION SOURCES. T6; W5; W6; W18; W20; W22.

*Botaurus poiciloptilus.* Australasian Bittern.

ABUNDANCE AND DISTRIBUTION. Rare and widespread.

HABITAT. Aquatic.

BREEDING. A RAOU nest record card contains details of a nest near Streatham.

INFORMATION SOURCES. C8; R7; T6; W4; W5.

## PLATALEIDAE

*Plegadis falcinellus.* Glossy Ibis.

ABUNDANCE AND DISTRIBUTION. Rare; recorded from Lake Wendouree and near Skipton (Wheeler in Ballarat Courier 6/11/65 and 6/5/67), near Streatham (Anon. 1974) and Lake Learmonth and Buln Gherin (Wheeler unpublished data).

HABITAT. Aquatic and grassland.

INFORMATION SOURCES. A3; T6; W4; W5; W6.

*Threskiornis aethiopica.* Sacred Ibis.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread; numbers appear to fluctuate, possibly nomadic (Thomas pers. comm.).

HABITAT. Aquatic and grassland.

BREEDING. It nests in the survey area at Buln Gherin (Wheeler unpublished data).



INFORMATION SOURCES. C8; F3; G1; G2; M4; T2; T6; W4; W5; W20; W21; W27; W28; W29.

*Threskiornis spinicollis*. Straw-necked Ibis.

ABUNDANCE AND DISTRIBUTION. Common and widespread; numbers appear to fluctuate, possibly nomadic (Thomas pers. comm.).

HABITAT. Aquatic and grassland.

BREEDING. A large breeding colony was reported by Wheeler (Ballarat Courier 8/1/66) near Streatham in 1964/65 and 1965/66; it has also nested at Buln Gherin (Wheeler unpublished data).

INFORMATION SOURCES. A2; C8; F3; G1; G2; J1; P2; R9; T3; T6; W4; W5; W6; W15; W20; W21; W27; W28; W29.

*Platalea regia*. Royal Spoonbill.

ABUNDANCE AND DISTRIBUTION. Rare; recorded by Wheeler (Ballarat Courier 11/7/70) near Lake Burrumbeet in 1953, at Beaufort Lake and Lake Wendouree in 1969 and by Grant (1978) near Lexton in 1977. Also listed at Mena Park Swamp, Lake Learmonth, Lake Goldsmith and Buln Gherin (Wheeler unpublished data).

HABITAT. Aquatic.

INFORMATION SOURCES. G2; T6; W4; W5; W6.

*Platalea flavipes*. Yellow-billed Spoonbill.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Aquatic.

BREEDING. It nested at Beaufort Lake in 1967 (Wheeler unpublished data).

INFORMATION SOURCES. C8; F3; G2; M3; M4; T6; W4; W5; W20; W21; W27; W28.

## ANATIDAE

*Anseranas semipalmata*. Magpie Goose.

ABUNDANCE AND DISTRIBUTION. Survival in the survey area is doubtful. It disappeared from Lake Wendouree in the 1890s (Wheeler unpublished data).

INFORMATION SOURCES. W4; W5.

*Dendrocygna eytoni*. Plumed Whistling-Duck.

ABUNDANCE AND DISTRIBUTION. Rare. A flock of 10 remained for a week near Tourello during February 1958 and another flock of 8

remained for 3 days at Buln Gherin in November 1969 (Wheeler unpublished data).

HABITAT. Aquatic.

*Cygnus atratus*. Black Swan.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Aquatic and grassland.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A2; C8; D1; F3; G1; J2; M4; P2; R7; R9; S3; S4; T2; T6; W4; W5; W7; W8; W11; W13; W14; W15; W16; W17; W19; W20; W21; W27; W28; W29.

*Stictonetta naevosa*. Freckled Duck.

ABUNDANCE AND DISTRIBUTION. Rare; recorded by Wheeler (Ballarat Courier 19/9/64) at Beaufort, Burrumbeet, Carranballac, Streatham and Skipton. Also at Lake Wongan (Clements pers. comm.).

HABITAT. Aquatic.

INFORMATION SOURCES. C2; T6; W4; W5; W6.

*Cereopsis novaehollandiae*.

Cape Barren Goose.

ABUNDANCE AND DISTRIBUTION. Rare; recorded by Wheeler (Ballarat Courier 19/9/64, 9/1/71 and 17/3/73) at Burrumbeet, Langi Kal Kal, Carranballac, Wallinduc, Mt Bute, Lexton and near Ballarat. As many as 30 or 40 have been seen at Lake Wongan (Clements pers. comm.). Also listed at Cardigan, Streatham Swamps and Skipton Swamps (Wheeler unpublished data).

HABITAT. Grassland and aquatic.

INFORMATION SOURCES. C2; T6; W4; W5; W6.

*Tadorna tadornoides*. Australian Shelduck.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Aquatic and grassland.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A3; C2; C7; C8; F1; F3; G1; M3; M4; P2; R9; S3; S4; T6; W4; W5; W6; W8; W11; W13; W14; W15; W16; W17; W19; W21; W27; W28; W29.

*Anas superciliosa*. Pacific Black Duck.

ABUNDANCE AND DISTRIBUTION. Common and widespread.



**HABITAT.** Aquatic and grassland.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; A3; A4; C2; C4; C8; D1; F3; G1; J2; M3; P2; R7; R9; S3; S4; T2; T6; W4; W5; W6; W7; W8; W11; W13; W14; W15; W16; W17; W19; W20; W21; W27; W28; W29.

*Anas platyrhynchos.* Mallard.

**ABUNDANCE AND DISTRIBUTION.** Accidental. One bird was on Lake Wendouree in April 1970 (Wheeler unpublished data). This is an introduced species which should not be allowed to become established because of its propensity to interbreed with *Anas superciliosa*.

**HABITAT.** Aquatic.

*Anas gibberifrons.* Grey Teal.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread.

**HABITAT.** Aquatic and grassland.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A3; C2; C8; F3; J2; M4; P2; R9; T6; W4; W5; W8; W11; W13; W16; W17; W20; W21; W27; W28; W29.

*Anas castanea.* Chestnut Teal.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread; more observed in recent years (Thomas pers. comm.).

**HABITAT.** Aquatic.

**BREEDING.** It has nested on Skipton swamps (Wheeler unpublished data).

**INFORMATION SOURCES.** C2; F3; T6; W4; W5.

*Anas rhynchotis.* Australasian Shoveller.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Aquatic and grassland.

**BREEDING.** Recorded nesting at Lakes Goldsmith and Burrumbeet (Wheeler unpublished data).

**INFORMATION SOURCES.** C2; C7; C8; F3; J2; M4; P2; T6; W4; W5; W20; W21; W27.

*Malacorhynchus membranaceus.*

Pink-eared Duck.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Aquatic.

**INFORMATION SOURCES.** A3; C2; T6; W4; W5; W6; W11; W17; W21; W29.

*Aythya australis.* Hardhead.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread; numbers fluctuate. In 1957 an estimated 15,000 remained many months on Lake Learmonth and in 1977 500 were on Lake Wendouree (Wheeler unpublished data).

**HABITAT.** Aquatic.

**BREEDING.** It nested on Lake Wendouree in 1956, 1961, 1962 and 1969 (Wheeler unpublished data).

**INFORMATION SOURCES.** A3; C2; C8; F3; J2; T6; W4; W5; W6; W7; W11; W13; W17; W20; W21; W27; W29.

*Chenonetta jubata.* Maned Duck.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Aquatic and grassland.

**INFORMATION SOURCES.** C8; F3; G1; R9; S4; T6; W4; W5; W21; W27.

*Oxyura australis.* Blue-billed Duck.

**ABUNDANCE AND DISTRIBUTION.** A regular summer visitor to Lake Wendouree, usually arriving in July and August and leaving in March or April. Uncommon elsewhere in the survey area.

**HABITAT.** Aquatic.

**BREEDING.** It nests at Lake Wendouree and Stoneleigh Lake (Wheeler unpublished data).

**INFORMATION SOURCES.** A3; A5; C2; J2; T6; W4; W5; W6; W7; W20; W23.

*Biziura lobata.* Musk Duck.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread.

**HABITAT.** Aquatic.

**BREEDING.** It nests at Lake Wendouree and Cockpits Lagoon (Wheeler unpublished data).

**INFORMATION SOURCES.** A2; A3; C6; C8; F3; J2; M4; P2; R9; S3; T6; W4; W5; W7; W13; W15; W17; W19; W20; W21; W27; W28; W29.

## ACCIPITRIDAE

*Elanus notatus.* Black-shouldered Kite.

**ABUNDANCE AND DISTRIBUTION.** Uncommon

and widespread; numbers appear to fluctuate, possibly nomadic (Thomas pers. comm.).

**HABITAT.** Grassland and woodland.

**BREEDING.** It nests in the survey area.

**INFORMATION SOURCES.** C8; F3; G1; M3; M4; S7; T6; W5; W11; W20; W27; W28; W29.

*Elanus scriptus.* Letter-winged Kite.

**ABUNDANCE AND DISTRIBUTION.** Rare; one recorded at Langi Kal Kal in 1952 and a pair at Mt Mercer in 1970 (Wheeler in Ballarat Courier 9/8/75). An influx of this species into Victoria occurred in 1977 and it was recorded in the survey area at Skipton and Beaufort (Wheeler, W. R. 1977).

**HABITAT.** Grassland.

**INFORMATION SOURCES.** T6; W5; W6; W36.

*Milvus migrans.* Black Kite.

**ABUNDANCE AND DISTRIBUTION.** Rare; recorded near Linton (Wheeler unpublished data), Mt Cole (Geelong F.N.C. and Western Victoria F.N.C.A. 1972) and east of Streatham (Austin 1953).

**HABITAT.** Grassland.

**INFORMATION SOURCES.** A6; G1; W5.

*Haliastur sphenurus.* Whistling Kite.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. In recent FWD survey it was recorded in the Ararat Block.

**HABITAT.** Grassland and woodland.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; A4; C7; C8; F1; F3; G1; M3; R9; S7; T2; T6; W5; W7; W8; W14; W15; W16; W17; W20; W21; W23; W27; W29.

*Accipiter fasciatus.* Brown Goshawk.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. In recent FWD survey it was recorded in the Mt Cole, Enfield, Creswick and Inverleigh Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; A4; C8; F3; G1; K1; M3; R7; T2; T3; T6; W5; W14; W27; W30.

*Accipiter cirrhocephalus.*

Collared Sparrowhawk.

**ABUNDANCE AND DISTRIBUTION.** Rare and widespread. In recent FWD survey it was recorded in the Enfield Block.

**HABITAT.** Open-forest, woodland and introduced pines.

**BREEDING.** Recorded nesting near Beaufort and Buln Gherir (Wheeler undated).

**INFORMATION SOURCES.** F3; M3; P2; T6; W5; W14.

*Accipiter novaehollandiae.* Grey Goshawk.

**ABUNDANCE AND DISTRIBUTION.** Rare; recorded at Creswick, around Ballarat and Linton Park (Wheeler in Ballarat Courier 8/4/67 and 28/3/70).

**HABITAT.** Tall open-forest, open-forest and grassland.

**BREEDING.** Reported to have nested at Invermay (near Ballarat) in the 1940s (Wheeler in Ballarat Courier 28/3/70).

**INFORMATION SOURCES.** T6; W5; W6.

*Aquila audax.* Wedge-tailed Eagle.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. In recent FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield and Creswick Blocks.

**HABITAT.** It soars over all habitats, but most nesting and hunting activities occur in tall open-forest, open-forest, woodland and grassland.

**BREEDING.** It nests in the survey area.

**INFORMATION SOURCES.** A2; A4; C2; C4; C8; F3; F8; G1; M1; M4; P2; R9; S7; T2; T3; T6; W5; W6; W11; W14; W15; W16; W27; W29; W30.

*Hieraaetus morphnoides.* Little Eagle.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Grassland.

**INFORMATION SOURCES.** A1; C8; F3; T6; W5; W16; W27.

*Circus assimilis.* Spotted Harrier.

**ABUNDANCE AND DISTRIBUTION.** Rare; recently reported from North Creswick (Cowley 1960a), Ross Creek (Wheeler in Ballarat Courier 16/8/76) and Hadden (Wheeler unpublished data).

HABITAT. Grassland.

INFORMATION SOURCES. C8; T6; W4; W5; W6.

*Circus aeruginosus*. Marsh Harrier.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Grassland and aquatic.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. C8; D1; F3; G1; J2; M4; R7; S7; T6; W4; W5; W8; W13; W15; W16; W17; W20; W21; W23; W27; W29; W30.

## FALCONIDAE

*Falco subniger*. Black Falcon.

ABUNDANCE AND DISTRIBUTION. Rare; recorded in Creswick area in 1958 (Cowley 1960a), near Blowhard and Ballarat in 1954 (Wheeler unpublished data), and near Skipton in 1951 (Austin 1953).

HABITAT. Grassland.

INFORMATION SOURCES. A6; C8; T6; W4; W5.

*Falco peregrinus*. Peregrine Falcon.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Open-forest, woodland, introduced pines, grassland and aquatic.

BREEDING. It nests in the survey area.

INFORMATION SOURCES. A2; A3; C2; C8; F3; G1; H2; M3; N2; T2; T6; W5; W6; W17; W27.

*Falco longipennis*. Australian Hobby.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Open-forest, woodland, introduced pines and grassland/suburban.

BREEDING. It nested near Lake Wendouree in 1954 (Wheeler unpublished data).

INFORMATION SOURCES. C8; G1; K1; M4; T6; W4; W5; W20; W27.

*Falco berigora*. Brown Falcon.

ABUNDANCE AND DISTRIBUTION. Common and widespread. In recent FWD survey it was recorded in the Ben Major-Trawalla, Enfield and Inverleigh Blocks.

HABITAT. Open-forest, woodland and grassland.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A1; A2; A4; C8; F3; G1; M3; M4; P2; R9; S3; S4; S7; T2; T3; T6; W5; W8; W11; W12; W13; W14; W15; W16; W17; W21; W27; W28; W29; W30; W31.

*Falco cenchroides*. Australian Kestrel.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Grassland.

INFORMATION SOURCES. A2; C8; F3; G1; M3; M4; S4; T6; W5; W8; W14; W16; W21; W27.

## PHASIANIDAE

*Coturnix novaezelandiae*. Stubble Quail.

ABUNDANCE AND DISTRIBUTION. Common and widespread; numbers appear to be greater during the summer, probably nomadic.

HABITAT. Grassland.

BREEDING. Adults with young were seen in the Inverleigh Block during recent FWD survey; also recorded with young at Skipton in 1912 (RAOU Council 1913). Wheeler (unpublished data) has recorded nesting at Burrumbeet, Newlyn and Buln Gherin.

INFORMATION SOURCES. A2; F3; G1; M3; P2; R6; R9; T6; W4; W5; W27; W31.

*Coturnix australis*. Brown Quail.

ABUNDANCE AND DISTRIBUTION. Rare; recorded at Mt Emu, Lake Goldsmith, Buln Gherin and Mt Bute (Wheeler unpublished data).

HABITAT. Grassland and aquatic.

BREEDING. Recorded nesting at Mt Bute (Wheeler unpublished data).

INFORMATION SOURCES. T6; W4; W5.

*Coturnix chinensis*. King Quail.

ABUNDANCE AND DISTRIBUTION. Accidental; recorded at Creswick (Payne 1931) and in Ballarat in 1930 and Windermere in 1928 (Wheeler in Ballarat Courier 29/4/67).

HABITAT. Recorded in introduced pines at Creswick (Payne 1931).

INFORMATION SOURCES. P2; W5; W6.

## TURNICIDAE

*Turnix maculosa*. Red-backed Button-quail.

ABUNDANCE AND DISTRIBUTION. Accidental;



reported at Dowling near Ballarat in 1930 (Wheeler 1967).

INFORMATION SOURCES. W5; W32.

*Turnix varia*. Painted Button-quail.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. In recent FWD survey it was recorded in the Ben Major-Trawalla Block.

HABITAT. Open-forest, woodland and introduced pines.

BREEDING. It nests in the survey area.

INFORMATION SOURCES. C8; F3; G1; M3; P2; R7; T6; W5; W27.

*Turnix melanogaster*.

Black-breasted Button-quail.

ABUNDANCE AND DISTRIBUTION. Accidental; five were shot at Cardigan near Ballarat in 1902 (Wheeler 1967).

INFORMATION SOURCES. W5; W32.

*Turnix velox*. Little Button-quail.

ABUNDANCE AND DISTRIBUTION. Rare, with occasional influxes of birds such as occurred during December and January of 1954-55 (Wheeler in Ballarat Courier 14/11/70).

HABITAT. Grassland.

BREEDING. Many nested in the Newlyn district in 1954-55 (Wheeler in Ballarat Courier 14/11/70).

INFORMATION SOURCES. R6; T6; W5; W6.

*Turnix pyrrhotorax*.

Red-chested Button-quail.

ABUNDANCE AND DISTRIBUTION. Accidental; seen at Dowling near Ballarat in 1930 (Wheeler 1967) and in the Cressy-Bradvale district (west of Cape Clear) in 1957 and near Garibaldi in 1970 (Wheeler in Ballarat Courier 14/11/70).

INFORMATION SOURCES. W5; W6; W32.

## PEDIONOMIDAE

*Pedionomus torquatus*. Plains-wanderer.

ABUNDANCE AND DISTRIBUTION. Rare; the National Museum of Victoria has specimens from Ballarat, Skipton and Shelford. The species was reported at Beaufort in 1922 (D'Ombra 1926) and at Inverleigh in 1976 (Pescott 1977).

HABITAT. Grassland.

INFORMATION SOURCES. D2; L3; N1; P3; T6; W5; W34.

## RALLIDAE

*Rallus philippensis*. Buff-banded Rail.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Grassland and aquatic.

BREEDING. Nesting recorded at Linton (Wheeler in Ballarat Courier 28/3/64), at Newlyn in 1972 (RAOU nest record card) and at Cockpits Lagoon, Mt Rowan and Skipton Swamps (Wheeler unpublished data).

INFORMATION SOURCES. G1; P2; R7; T6; W4; W5; W6.

*Rallus pectoralis*. Lewin's Rail.

ABUNDANCE AND DISTRIBUTION. Rare; recorded in or near Ballarat at Gong Gong and the Flax Mill (Wheeler in Ballarat Courier 20/4/63 and 27/1/68). Also listed at Miners Rest, Mt Rowan and Lake Burrumbeet (Wheeler unpublished data).

HABITAT. Aquatic.

BREEDING. It has nested at Miners Rest (Wheeler unpublished data).

INFORMATION SOURCES. T6; W4; W5; W6.

*Porzana pusilla*. Baillon's Crake.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Nomadic.

HABITAT. Aquatic.

BREEDING. It has nested at Lake Wendouree and Cockpits Lagoon (Wheeler unpublished data).

INFORMATION SOURCES. T6; W4; W5; W6; W20.

*Porzana fluminea*. Australian Crake.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Possibly nomadic.

HABITAT. Aquatic.

BREEDING. An unfledged young was banded on the Hopkins River near Willaura in 1965 (Australian bird-banding scheme).

INFORMATION SOURCES. A7; C8; G1; T6; W4; W5; W6; W20.

*Porzana tabuensis*. Spotless Crake.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

**HABITAT.** Aquatic.

**BREEDING.** Recorded nesting at Coekpits Lagoon near Burrumbeet by Wheeler (Ballarat Courier 25/4/70).

**INFORMATION SOURCES.** C8; P2; T6; W4; W5; W6.

*Gallinula ventralis.* Black-tailed Native-hen.

**ABUNDANCE AND DISTRIBUTION.** Nomadic with irregular irruptions.

**HABITAT.** Grassland and aquatic.

**INFORMATION SOURCES.** M4; T6; W4; W5; W6; W33.

*Gallinula tenebrosa.* Dusky Moorhen.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread.

**HABITAT.** Aquatic.

**BREEDING.** Recorded nesting in the Inverleigh District (Wheeler 1973) and at Lake Wendouree (Wheeler unpublished data).

**INFORMATION SOURCES.** A2; C4; C8; D1; F3; J2; P2; T6; W4; W5; W7; W17; W20; W21; W27; W28; W29.

*Porphyrio porphyrio.* Purple Swamphen.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread.

**HABITAT.** Grassland and aquatic.

**BREEDING.** Recorded nesting in the Inverleigh District (Wheeler 1973) and at Lake Wendouree and Buln Gherin (Wheeler unpublished data).

**INFORMATION SOURCES.** A2; A5; C6; C8; D1; F3; J2; P2; R9; S3; T6; W4; W5; W8; W11; W15; W17; W20; W21; W23; W27; W28; W29.

*Fulica atra.* Eurasian Coot.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread.

**HABITAT.** Aquatic.

**BREEDING.** Recorded nesting in the Inverleigh District (Wheeler 1973) and at Lake Wendouree and Buln Gherin (Wheeler unpublished data).

**INFORMATION SOURCES.** A2; A3; C4; C8; D1; F2; F3; J2; P2; R9; S3; T6; W4; W5; W7; W11; W20; W21; W27; W28; W29.

## GRUIDAE

*Grus rubicundus.* Brolga.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Grassland and aquatic.

**BREEDING.** It nests in the survey area (see Table 4).

**INFORMATION SOURCES.** A2; C2; F1; F3; R7; R9; T6; W4; W5; W6; W8; W11; W17; W21; W27; W29.

## OTIDIDAE

*Ardeotis australis.* Australian Bustard.

**ABUNDANCE AND DISTRIBUTION.** Rare; it occasionally still appears in the Rokewood-Mt Hesse area. Recorded in 1954, 1958 and 1966 (Wheeler in Ballarat Courier 27/6/64 and 17/9/66).

**HABITAT.** Grassland.

**BREEDING.** In the past it nested in the Rokewood-Mt Hesse area (Wheeler in Ballarat Courier 17/9/66).

**INFORMATION SOURCES.** W5; W6; W31.

## BURHINIDAE

*Burhinus magnirostris.* Bush Thick-knee.

**ABUNDANCE AND DISTRIBUTION.** Rare; recent records are from Skipton, Lexton, Campbelltown, Carranballae, the Inverleigh district and Mt Emu.

**HABITAT.** Open-forest and woodland.

**BREEDING.** Two young hatched near Lexton in 1967 (Wheeler in Ballarat Courier 21/10/67; RAOU nest record card).

**INFORMATION SOURCES.** R7; T6; W4; W5; W6; W27.

## ROSTRATULIDAE

*Rostratula benghalensis.* Painted Snipe.

**ABUNDANCE AND DISTRIBUTION.** Rare; recorded at Stoneleigh Swamps, Invermay, Ercildoune, near Lal Lal Falls, Miners Rest and Lake Burrumbeet (Wheeler unpublished data). NMV specimens are from Ballarat (1939) and Wendouree (Flaxmill Swamp) in 1969.

**HABITAT.** Aquatic.

**INFORMATION SOURCES.** N1; T6; W4; W5; W6.



## CHARADRIIDAE

*Vanellus miles*. Masked Lapwing.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Grassland and aquatic.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A2; C8; F3; G1; J1; M4; R7; R9; S3; S4; T2; T6; W4; W5; W8; W11; W12; W13; W14; W15; W16; W17; W20; W21; W27; W28; W29.

*Vanellus tricolor*. Banded Lapwing.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. In recent FWD survey it was recorded near Naringal (west of Pitfield Plains).

HABITAT. Grassland.

BREEDING. Recorded nesting at Lake Goldsmith and at Buln Gherin (Wheeler unpublished data).

INFORMATION SOURCES. C8; F3; M4; R7; T6; W4; W5; W6; W8; W12; W21; W27.

*Pluvialis dominica*. Lesser Golden Plover.

ABUNDANCE AND DISTRIBUTION. Accidental. Reported at 'Blythevale' near Streatham by Bill Weatherly (Wheeler in Ballarat Courier 13/3/65).

HABITAT. Aquatic.

BREEDING. It nests in Siberia and northern North America.

*Erythrogonys cinctus*. Red-kneed Dotterel.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Usually observed during spring and summer.

HABITAT. Aquatic.

INFORMATION SOURCES. M4; T6; W4; W5; W6.

*Charadrius bicinctus*. Double-banded Plover.

ABUNDANCE AND DISTRIBUTION. Uncommon. Recorded at Lake Wongan (Millar and Tiley 1972-73), Lake Goldsmith (Thomas pers. comm.) and Lake Burrumbeet, Cockpits Lagoon and Inverleigh Block (Wheeler unpublished data); a winter migrant to Victoria.

HABITAT. Aquatic.

BREEDING. It nests in New Zealand.

INFORMATION SOURCES. M4; T6; W4; W5; W8; W29.

*Charadrius ruficapillus*. Red-capped Plover.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Aquatic.

BREEDING. Nesting has been documented at several localities in the survey area.

INFORMATION SOURCES. F3; M4; R7; S4; T6; W4; W5; W8; W11; W15; W17; W21; W29.

*Charadrius melanops*. Black-fronted Plover.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Aquatic.

BREEDING. Nesting has been documented at several localities in the survey area.

INFORMATION SOURCES. A2; C7; C8; F3; G1; P2; T6; W4; W5; W8; W13; W14; W15; W20; W21; W27.

## RECURVIROSTRIDAE

*Himantopus himantopus*. Black-winged Stilt.

ABUNDANCE AND DISTRIBUTION. Uncommon; regularly observed on Lake Goldsmith, occasional elsewhere (Thomas pers. comm.).

HABITAT. Aquatic.

BREEDING. Nesting recorded at Lake Wongan (Millar and Tiley 1972-73), Lake Goldsmith (RAOU nest record card), Lake Bolac (Australian bird-banding scheme) and Cockpits Lagoon and Buln Gherin (Wheeler unpublished data).

INFORMATION SOURCES. A7; G2; M4; R7; R9; T6; W4; W5; W6; W21; W28; W29.

*Cladorhynchus leucocephalus*. Banded Stilt.

ABUNDANCE AND DISTRIBUTION. Rare; recorded at Carranballae, Lake Goldsmith and in the Langi Kal Kal-Burrumbeet area (Wheeler unpublished data).

HABITAT. Aquatic.

*Recurvirostra novaehollandiae*.

Red-necked Avocet.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Aquatic.

BREEDING. Nesting recorded at Lake Goldsmith (Thomas pers. comm.; RAOU nest cards) and at Lake Bolac (Australian bird-banding scheme).

INFORMATION SOURCES. **A7; R7; T6; W4; W5; W6; W8; W11; W21; W29.**

## SCOLOPACIDAE

*Tringa glareola.* Wood Sandpiper.

ABUNDANCE AND DISTRIBUTION. Rare, a summer migrant to Victoria. Recorded at Lake Goldsmith (Wheeler 1967).

HABITAT. Aquatic.

BREEDING. It nests in northern Eurasia.

INFORMATION SOURCES. T6; W5; W32.

*Tringa hypoleucos.* Common Sandpiper.

ABUNDANCE AND DISTRIBUTION. Rare, a summer migrant to Victoria. Recorded at Lake Wendouree in 1968 by Wheeler (Ballarat Courier 7/12/68).

HABITAT. Aquatic.

BREEDING. It nests in Eurasia and parts of Africa.

INFORMATION SOURCES. T6; W5; W6.

*Tringa nebularia.* Greenshank.

ABUNDANCE AND DISTRIBUTION. Rare, a summer migrant to Victoria. Recorded at Lake Goldsmith (Thomas pers. comm.; Anon. 1975), and at Lake Wongan (Miller and Tiley 1972-73) and at the Streatham Swamps and Buln Gherin (Wheeler unpublished data).

HABITAT. Aquatic.

BREEDING. It nests in northern Eurasia.

INFORMATION SOURCES. A3; M4; T6; W4; W5.

*Gallinago hardwickii.* Latham's Snipe.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Regularly recorded at Beaufort Lake. A summer migrant to Victoria.

HABITAT. Grassland and aquatic.

BREEDING. It nests in Japan.

INFORMATION SOURCES. C8; G1; M4; P2; R9; T6; W4; W5; W6; W21; W27.

*Calidris acuminata.* Sharp-tailed Sandpiper.

ABUNDANCE AND DISTRIBUTION. Common at Lakes Goldsmith and Wongan, occasional elsewhere. A summer migrant to Victoria.

HABITAT. Aquatic.

BREEDING. It nests in Siberia.

INFORMATION SOURCES. M4; T6; W4; W5; W6; W20.

*Calidris ruficollis.* Red-necked Stint.

ABUNDANCE AND DISTRIBUTION. Common on Lake Goldsmith, uncommon elsewhere. A summer migrant to Victoria.

HABITAT. Aquatic.

BREEDING. It nests in Siberia and Alaska.

INFORMATION SOURCES. M4; T6; W4; W5; W8; W17; W20; W21.

*Calidris ferruginea.* Curlew Sandpiper.

ABUNDANCE AND DISTRIBUTION. Rare; recorded on Lakes Goldsmith (Thomas pers. comm.) and Wongan (Miller and Tiley 1972-73). A summer migrant to Victoria.

HABITAT. Aquatic.

BREEDING. It nests in Siberia.

INFORMATION SOURCES. M4; T6; W5.

## LARIDAE

*Larus novaehollandiae.* Silver Gull.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Grassland and aquatic.

BREEDING. It nests on Lakes Goldsmith and Bolac (Australian bird-banding scheme) and on the Streatham Swamps and at Buln Gherin (Wheeler unpublished data).

INFORMATION SOURCES. A2; **A7; C8; F3; J1; J2; M4; R9; S3; T6; W4; W5; W8; W11; W13; W15; W17; W20; W21; W29.**

*Chlidonias hybrida.* Whiskered Tern.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Aquatic.

BREEDING. It has nested near Streatham, at Lake Bolac (Australian bird-banding scheme) and on the Carranballac Swamps (Wheeler unpublished data).

INFORMATION SOURCES. A3; **A7; M4; T6; W4; W5.**

*Gelochelidon nilotica.* Gull-billed Tern.

ABUNDANCE AND DISTRIBUTION. Uncommon; most records are from Lakes Goldsmith and Wongan.

HABITAT. Aquatic.

BREEDING. It has nested on Lake Goldsmith (Australian bird-banding scheme; Wheeler in Ballarat Courier 7/9/68).

INFORMATION SOURCES. A7; M4; R7; T4; T6; W5; W6.

*Hydroprogne caspia*. Caspian Tern.

ABUNDANCE AND DISTRIBUTION. Rare; recorded from Lakes Goldsmith, Burrumbeet and Wendouree (Wheeler unpublished data).

HABITAT. Aquatic.

INFORMATION SOURCES. T6; W4; W5; W6.

## COLUMBIDAE

*Ptilinopus superbus*. Superb Fruit Dove.

ABUNDANCE AND DISTRIBUTION. Accidental; one specimen was collected at Raglan in 1930 (Ross 1930).

*Columba livia*. Feral Pigeon.

ABUNDANCE AND DISTRIBUTION. Common and widespread. An introduced species.

HABITAT. Suburban and farming areas.

BREEDING. It nests in the Inverleigh District (Wheeler 1973).

INFORMATION SOURCES. A2; F3; W5; W27.

*Streptopelia chinensis*. Spotted Turtle-Dove.

ABUNDANCE AND DISTRIBUTION. Common and widespread. An introduced species.

HABITAT. Suburban and grassland areas.

BREEDING. It nests in the Inverleigh District (Wheeler 1973).

INFORMATION SOURCES. J1; J2; W5; W7; W20; W27.

*Geopelia placida*. Peaceful Dove.

ABUNDANCE AND DISTRIBUTION. Rare; recorded at Bald Hills near Creswick in 1971 by Wheeler (Ballarat Courier 26/6/71), at Linton (Wheeler unpublished data), and in the Ararat Block during recent FWD survey.

HABITAT. Woodland and grassland.

INFORMATION SOURCES. F3; G1; T6; W4; W5; W6.

*Geopelia cuneata*. Diamond Dove.

ABUNDANCE AND DISTRIBUTION. Accidental; recorded at Miners Rest in 1965 and at Creswick in 1967 by Wheeler (Ballarat Courier 18/3/67); also Mt Cole and Linton (Wheeler unpublished data).

BREEDING. An adult with one young observed at Creswick.

INFORMATION SOURCES. W4; W5; W6.

*Phaps chalcoptera*. Common Bronzewing.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. In recent FWD survey it was recorded in the Creswick, Ararat and Inverleigh Blocks.

HABITAT. Open-forest, woodland, introduced pines and grassland.

BREEDING. It nests near Creswick (Wheeler unpublished data). A nest was also found in the Inverleigh Block during FWD survey.

INFORMATION SOURCES. A4; C8; F3; G1; P2; T2; T6; W4; W5; W27.

*Phaps elegans*. Brush Bronzewing.

ABUNDANCE AND DISTRIBUTION. Rare and widespread.

HABITAT. Tall open-forest and open-forest.

BREEDING. It has nested near Linton (Thomas pers. comm.).

INFORMATION SOURCES. A2; A4; G1; T6; W4; W5.

*Ocyphaps lophotes*. Crested Pigeon.

ABUNDANCE AND DISTRIBUTION. Accidental; recorded near Cape Clear in 1961 and near Smythesdale in 1968 (Wheeler unpublished data).

## CACATUIDAE

*Calyptorhynchus funereus*.

Yellow-tailed Black-Cockatoo.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. In recent FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla and Enfield Blocks.

HABITAT. Tall open-forest, open-forest and introduced pines.

INFORMATION SOURCES. A2; F3; G1; M3; R9; T6; W5; W27; W30.

*Callocephalon fimbriatum*.

Gang-gang Cockatoo.

ABUNDANCE AND DISTRIBUTION. Rare; two recorded flying over Ballarat in 1970 (Wheeler in Ballarat Courier 18/4/70); also seen at Spargo Creek and near White Swan Reservoir (Wheeler unpublished data). Probably present in the Wombat Forest on NE side of survey area.

HABITAT. Tall open-forest and open-forest.

INFORMATION SOURCES. T6; W4; W5; W6.



*Cacatua roseicapilla*. Galah.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. In recent FWD survey we recorded it at several localities on the basalt plains and in the Ararat Block.

HABITAT. Woodland and grassland.

BREEDING. It nests in the survey area.

INFORMATION SOURCES. A2; C8; F3; G1; K1; M3; S4; T6; W5; W16; W17; W27; W28.

*Cacatua tenuirostris*. Long-billed Corella.

ABUNDANCE AND DISTRIBUTION. Uncommon; most records are from the basalt plains in the western portion of the survey area. In recent FWD survey it was also recorded in the Langi Ghiran and Ararat Blocks.

HABITAT. Woodland and grassland.

INFORMATION SOURCES. F3; G1; G2; G3; M3; T6; W5; W28; W30.

*Cacatua leadbeateri*. Pink Cockatoo.

ABUNDANCE AND DISTRIBUTION. Accidental; a group of three was seen near Smythes Creek and later at Cambrian Hill during March 1961 (Wheeler unpublished data).

*Cacatua galerita*. Sulphur-crested Cockatoo.

ABUNDANCE AND DISTRIBUTION. Common and widespread. In recent FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Creswick and Ararat Blocks.

HABITAT. Tall open-forest, open-forest, woodland and grassland.

BREEDING. It nests in the survey area.

INFORMATION SOURCES. C8; F3; G1; M1; M3; M4; S3; T6; W5; W13; W14; W27; W28; W29; W30.

#### LORIIDAE

*Trichoglossus haematodus*. Rainbow Lorikeet.

ABUNDANCE AND DISTRIBUTION. Rare; formerly common in the Mt Cole-Beaufort area (Wheeler in Ballarat Courier 12/8/67). Also recorded in exotic trees in Ararat (Wheeler unpublished data).

HABITAT. Open-forest and suburban garden.

INFORMATION SOURCES. G1; W4; W5; W6.

*Glossopsitta concinna*. Musk Lorikeet.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Nomadic. In recent FWD survey it was recorded in the Ararat Block.

HABITAT. Tall open-forest, open-forest, woodland and trees remaining in grassland/suburban areas.

INFORMATION SOURCES. C8; F3; G1; M3; P2; T6; W5; W27; W30.

*Glossopsitta porphyrocephala*.

Purple-crowned Lorikeet.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Nomadic.

HABITAT. Open-forest and woodland.

INFORMATION SOURCES. C8; G1; M3; T6; W5; W21; W27; W30.

*Glossopsitta pusilla*. Little Lorikeet.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Nomadic. In recent FWD survey it was observed in the Ararat Block.

HABITAT. Open-forest, woodland and trees remaining in grassland/suburban areas.

INFORMATION SOURCES. C8; F3; G1; M3; T6; W4; W5; W27.

#### POLYTELITIDAE

*Alisterus scapularis*. Australian King Parrot.

ABUNDANCE AND DISTRIBUTION. Accidental; recorded at Enfield and Eganstown in 1967 by Wheeler (Ballarat Courier 5/8/67).

*Nymphicus hollandicus*. Cockatiel.

ABUNDANCE AND DISTRIBUTION. Rare; recorded near Skipton (Wheeler in Ballarat Courier 21/1/67), near Beaufort (Millar and Tiley 1971), in the Inverleigh District (Wheeler 1973) and at Carranballac and Buln Gherin (Wheeler unpublished data). Nomadic.

HABITAT. Open-forest, woodland and trees remaining in grassland/suburban areas.

INFORMATION SOURCES. M3; W4; W5; W6; W27.

#### PLATYCERCIDAE

*Melopsittacus undulatus*. Budgerigar.

ABUNDANCE AND DISTRIBUTION. Rare; recorded near Clunes (just north of survey area) by Wheeler (Ballarat Courier 11/1/64), near Beaufort (Millar and Tiley 1971), over Lake Wongan (Millar and Tiley 1972-73), in the Inverleigh District (Wheeler 1973) and at Cardigan (NMV specimen).



HABITAT. Woodland and grassland.

INFORMATION SOURCES. M3; M4; N1; W5; W6; W27.

*Lathamus discolor*. Swift Parrot.

ABUNDANCE AND DISTRIBUTION. Rare; recorded in the Mt Cole area (Geelong F.N.C. and Western Victoria F.N.C.A. 1972), at Lake Wendouree (Wheeler unpublished data) and in the Inverleigh District (Wheeler 1973). A winter migrant to Victoria.

HABITAT. Open-forest, woodland and trees remaining in grassland/suburban areas.

BREEDING. It nests in Tasmania.

INFORMATION SOURCES. G1; W4; W5; W27.

*Platycercus elegans*. Crimson Rosella.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

BREEDING. It is a common nesting species in the survey area.

INFORMATION SOURCES. A2; A4; C4; C8; C10; F3; G1; K1; M1; M3; P2; R7; S4; T2; T3; T6; W5; W11; W12; W13; W14; W16; W17; W27; W28; W29; W30.

*Platycercus eximius*. Eastern Rosella.

ABUNDANCE AND DISTRIBUTION. Common and widespread. Mainly in trees remaining on the basalt plains, but during FWD survey we also recorded it in the Ararat and Inverleigh Blocks.

HABITAT. Open-forest, woodland and grassland.

BREEDING. It is a common nesting species in the survey area.

INFORMATION SOURCES. A2; A4; C4; C8; F3; G1; J1; J2; K1; M3; P2; R7; R9; S3; S4; T2; T3; T6; W5; W8; W11; W12; W13; W14; W15; W16; W17; W21; W27; W28; W29; W30.

*Psephotus haematonotus*. Red-rumped Parrot.

ABUNDANCE AND DISTRIBUTION. Common and widespread on the basalt plains. It was also recorded in the Ararat and Inverleigh Blocks during FWD survey.

HABITAT. Woodland and grassland, particularly where River Red Gums are present.

BREEDING. It nests in the survey area.

INFORMATION SOURCES. A2; C8; F3; G1; K1; M3; P2; R9; S4; S7; T6; W5; W8; W14; W16; W17; W21; W27; W28; W29; W30.

*Neophtema chrysostris*. Blue-winged Parrot.

ABUNDANCE AND DISTRIBUTION. Rare; Robinson (1955) mentions a flock of about 1000 birds being near Skipton for two years. Also recorded in the Mt Cole Block (Wheeler and Thomas 1975), in the Inverleigh District (Wheeler 1973) and on Barunah Plains near Wingeel (Wheeler W. R. 1954).

HABITAT. Open-forest, woodland and grassland.

INFORMATION SOURCES. R4; T6; W5; W27; W30; W31.

*Neophtema elegans*. Elegant Parrot.

ABUNDANCE AND DISTRIBUTION. Rare and widespread. Apparently this species has declined in numbers in the survey area because Robinson (1955) comments that in 1886, considerable numbers of Elegant Parrots used to fly over Ascot, near Ballarat, both morning and evening.

HABITAT. Grassland.

INFORMATION SOURCES. R4; W4; W5; W31.

## CUCULIDAE

*Cuculus pallidus*. Pallid Cuckoo.

ABUNDANCE AND DISTRIBUTION. Common and widespread. In FWD survey it was recorded in the Mt Cole Block. A summer migrant to Victoria.

HABITAT. Open-forest, woodland, introduced pines and grassland.

BREEDING. It nests in the survey area.

INFORMATION SOURCES. A1; C4; C8; F3; G1; G4; J2; M3; P2; S4; T2; T3; T6; W5; W6; W17; W20; W27; W28.

*Cuculus variolosus*. Brush Cuckoo.

ABUNDANCE AND DISTRIBUTION. Rare and widespread. In FWD survey it was recorded in the Mt Cole Block. A summer migrant to Victoria.

**HABITAT.** Tall open-forest and open-forest.  
**INFORMATION SOURCES.** F3; G1; M3; T3; T4; T6; W4; W5; W6.

*Cuculus pyrrhopterus.* Fan-tailed Cuckoo.  
**ABUNDANCE AND DISTRIBUTION.** Common and widespread. In recent FWD survey it was recorded in the Mt Cole and Enfield Blocks. Mainly a summer migrant to Victoria, but some over-winter here.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

**BREEDING.** It nests in the survey area.  
**INFORMATION SOURCES.** A1; A2; A4; C4; C8; D1; F3; G1; M3; P2; S4; T2; T3; T6; W5; S12; W15; W17; W20; W27; W28; W29; W30.

*Chrysococcyx osculans.* Black-eared Cuckoo.  
**ABUNDANCE AND DISTRIBUTION.** Rare and widespread. A summer migrant to Victoria.

**HABITAT.** Open-forest and woodland.  
**BREEDING.** Nesting recorded near Beaufort (Millar and Tiley 1971; RAOU nest record card).

**INFORMATION SOURCES.** M3; R7; T2; T6; W5; W6; W27.

*Chrysococcyx basalis.*  
 Horsfield's Bronze-Cuckoo.  
**ABUNDANCE AND DISTRIBUTION.** Common and widespread. In FWD survey it was recorded in the Mt Cole and Langi Ghiran Blocks. A summer migrant to Victoria.

**HABITAT.** Open-forest, woodland, introduced pines and grassland.

**BREEDING.** Recorded nesting (the foster parents being Superb Fairy-wrens) at Invermay (Wheeler unpublished data).

**INFORMATION SOURCES.** A1; A3; A4; C8; C10; F3; G1; M3; P2; S4; T2; T3; T6; W4; W5; W12; W15; W17; W21; W27; W28; W29; W30.

*Chrysococcyx lucidus.*  
 Shining Bronze-Cuckoo.  
**ABUNDANCE AND DISTRIBUTION.** Common and widespread. In FWD survey it was recorded in the Mt Cole Block. A summer migrant to Victoria.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland.

**BREEDING.** Recorded nesting near Beaufort (RAOU nest record card).

**INFORMATION SOURCES.** A1; A2; A3; A4; C8; C10; F1; F3; G1; M3; R7; T2; T3; T6; W5; W15; W16; W17; W27; W30.

## STRIGIDAE

*Ninox strenua.* Powerful Owl.  
**ABUNDANCE AND DISTRIBUTION.** Common and widespread. Recorded near Springmount, Wattle Flat, Spargo Creek, Elaine, near Linton, near Beaufort, Mt Cole Forest and at McDonald Park west of Ararat (Wheeler in Ballarat Courier 11/1/75). Also in the Langi Ghiran Block (Mammal Survey Group F.N.C.V. 1974), near Creswick (FWD survey) and in the Wombat Forest (Thomas pers. comm.).

**HABITAT.** Tall open-forest and open-forest.

**BREEDING.** It nests near Beaufort.  
**INFORMATION SOURCES.** A2; C1; F3; G1; M1; M3; R7; T2; T6; W5; W6.

*Ninox novaeseelandiae.* Southern Boobook.  
**ABUNDANCE AND DISTRIBUTION.** Common and widespread. In FWD survey it was seen in the Mt Cole Block.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and trees remaining in grasslands.

**BREEDING.** It nests in the survey area.  
**INFORMATION SOURCES.** A2; C2; C4; C8; C10; F3; G1; M3; P2; R9; T6; W5; W10; W27; W30.

*Ninox connivens.* Barking Owl.  
**ABUNDANCE AND DISTRIBUTION.** Rare; three records from the Enfield Block over the past 50 years (Wheeler unpublished data).

**HABITAT.** Woodland and grassland.  
**INFORMATION SOURCES.** T6; W4; W5.

## TYTONIDAE

*Tyto alba.* Barn Owl.  
**ABUNDANCE AND DISTRIBUTION.** Common and widespread.  
**HABITAT.** Grassland.

**BREEDING.** Recorded nesting at Waubra Junction, Buln Gherin, Dowling and Scarsdale (Wheeler unpublished data).

**INFORMATION SOURCES.** C2; C8; M3; P2; T6; W4; W5; W21; W27.

#### PODARGIDAE

*Podargus strigoides.* Tawny Frogmouth.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread. In FWD survey it was recorded in the Enfield Block.

**HABITAT.** Open-forest, woodland and trees remaining in grassland areas.

**BREEDING.** Recorded nesting near Streatham (Anon. 1975), near Beaufort (RAOU nest record cards) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A3; C2; C8; C10; F3; G1; M1; M3; R7; R9; T6; W5; W6; W15; W17; W27.

*Aegotheles cristatus.* Australian Owlet-nightjar.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread. During FWD survey it was recorded in the Enfield Block.

**HABITAT.** Open-forest and woodland.

**BREEDING.** Recorded nesting near Linton, Lal Lal Falls, Snake Valley, Mt Cole, Enfield, Waterloo and near Beaufort.

**INFORMATION SOURCES.** A2; F1; F3; G1; M3; P2; R7; T6; W4; W5; W6; W27.

#### CAPRIMULGIDAE

*Caprimulgus mystacalis.*

White-throated Nightjar.

**ABUNDANCE AND DISTRIBUTION.** Accidental; the one record for the survey area is an injured bird found SE of the Creswick Forest at Glenpark (Thomas pers. comm.; Wheeler in Ballarat Courier 23/11/74).

*Caprimulgus guttatus.* Spotted Nightjar.

**ABUNDANCE AND DISTRIBUTION.** Accidental; recorded from Enfield Forest (Thomas pers. comm.; Wheeler in Ballarat Courier 26/5/73) and Invermay (Wheeler unpublished data).

#### APODIDAE

*Hirundapus caudacutus.*

White-throated Needletail.

**ABUNDANCE AND DISTRIBUTION.** Common and

widespread. A summer migrant to Victoria.

**HABITAT.** An aerial species which flies over all habitats.

**BREEDING.** It nests in Asia and Japan.

**INFORMATION SOURCES.** B6; C8; F3; G1; P2; S7; T6; W5; W27.

*Apus pacificus.* Fork-tailed Swift.

**ABUNDANCE AND DISTRIBUTION.** Rare and widespread. A summer migrant to Victoria.

**HABITAT.** An aerial species which flies over all habitats.

**BREEDING.** It nests in Asia and Japan.

**INFORMATION SOURCES.** B6; G1; T6; W5.

#### ALCEDINIDAE

*Ceyx azureus.* Azure Kingfisher.

**ABUNDANCE AND DISTRIBUTION.** Rare; recorded at Mena Park Swamps in 1965 and at Ballarat in 1953 (Wheeler unpublished data).

**INFORMATION SOURCES.** W4; W5; W6.

*Dacelo novaeguineae.* Laughing Kookaburra.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in all seven of the Crown Land Blocks (Fig. 1) that were surveyed.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; A4; C8; C10; F3; G1; J1; J2; K1; M1; M3; P2; R7; R9; S3; S4; S7; T2; T3; T6; W5; W7; W8; W10; W11; W12; W13; W14; W15; W16; W17; W20; W21; W27; W28; W29; W30.

*Halcyon pyrrhopygia.* Red-backed Kingfisher.

**ABUNDANCE AND DISTRIBUTION.** Accidental; one recorded at Invermay near Ballarat in November of 1977 (Grant 1978).

*Halcyon sancta.* Sacred Kingfisher.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. A summer migrant to Victoria. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran and Inverleigh Blocks.

**HABITAT.** Open-forest, woodland, trees remaining in grassland areas and aquatic.



**BREEDING.** Recorded nesting near Creswick (Cowley 1971), in the Inverleigh District (Wheeler 1973), near Beaufort (Millar and Tiley 1971) and at Lake Wendourec and Linton (Wheeler unpublished data).

**INFORMATION SOURCES.** A4; C4; **C8; C10;** F3; G1; **M3;** P2; T2; T3; **T6; W4; W5; W20; W27; W28.**

#### MEROPIDAE

*Merops ornatus.* Rainbow Bee-eater.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread. A summer migrant to Victoria. During FWD survey it was recorded in the Langi Ghiran and Inverleigh Blocks.

**HABITAT.** Open-forest, woodland and grassland.

**BREEDING.** Recorded nesting at Skipton, Snake Valley, in the Inverleigh District, along the Creswick-Clunes Road and near Linton.

**INFORMATION SOURCES.** A3; A4; **C4; C8; F1; F3;** G1; T2; T3; **T6; W4; W5; W6; W27; W30.**

#### CORACIIDAE

*Eurystomus orientalis.* Dollarbird.

**ABUNDANCE AND DISTRIBUTION.** Accidental; a pair seen at Ercildoune in 1915 and one or two seen at Trawalla in 1953 and 1958 (Wheeler in Ballarat Courier 9/9/67 and 1/2/69).

#### ALAUDIDAE

*Mirafra javanica.* Singing Bushlark.

**ABUNDANCE AND DISTRIBUTION.** Rare, possibly nomadic (Thomas pers. comm.). Recorded near Streatham in 1966 (Wheeler in Ballarat Courier 22/1/66), near Beaufort in 1956 (Russell 1957) and at Buln Gherin (Wheeler unpublished data).

**HABITAT.** Crop and grass land.

**INFORMATION SOURCES.** R9; T6; W4; W5; W6.

*Alauda arvensis.* Skylark.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. An introduced species.

**HABITAT.** Crop and grass land.

**BREEDING.** Recorded nesting in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** B1; C8; M4; R9; T1; T6; **W5; W8; W11; W12; W13; W14; W15; W17; W20; W21; W27; W28; W29.**

#### HIRUNDINIDAE

*Hirundo neoxena.* Welcome Swallow.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Ararat and Inverleigh Blocks.

**HABITAT.** Open-forest, woodland, introduced pines, grassland and aquatic.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; A4; **C8; D1; F3; G1; J1; J2; M3; M4; P2; R7; R9; S3; S4; S7; T2; T3; T6; W4; W5; W7; W8; W10; W11; W12; W13; W14; W15; W16; W17; W20; W24; W27; W28; W29; W30.**

*Cecropis nigriceps.* Tree Martin.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Langi Ghiran and Inverleigh Blocks.

**HABITAT.** Woodland, grassland and aquatic.

**BREEDING.** Recorded nesting near Lake Goldsmith (RAOU nest record card), in the Inverleigh District (Wheeler 1973), in the Creswick District (Cowley 1960a) and at Beaufort Lake and Buln Gherin (Wheeler unpublished data).

**INFORMATION SOURCES.** A2; A4; C8; F3; G1; S4; T3; **T6; W4; W5; W16; W27; W29.**

*Cecropis ariel.* Fairy Martin.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Inverleigh Block.

**HABITAT.** Woodland, grassland and aquatic.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; **C8;** G1; J2; M3; P2; **R7; S7; T6; W4; W5; W14; W17; W20; W21; W27; W28; W29.**

#### MOTACILLIDAE

*Anthus novaeseelandiae.* Richard's Pipit.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread.

**HABITAT.** Crop and grass land.



**BREEDING.** Recorded nesting in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; C8; F3; G1; M4; P2; R9; S3; S7; **T6; W5;** W6; W8; W11; W12; W14; W15; W17; W20; W21; **W27;** W28; W29; W31.

### CAMPEPHAGIDAE

*Coracina novaehollandiae.*

Black-faced Cuckoo-shrike.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Creswick, Ararat and Inverleigh Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland and grassland.

**BREEDING.** Recorded nesting near Beaufort (RAOU nest record cards; Millar and Tiley 1971), in the Creswick District (Cowley 1960a) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; A4; C4; **C8;** C10; F3; G1; K1; **M3;** P2; **R7;** R9; S4; T2; T3; **T6; W5;** W13; W16; W17; W20; W21; **W27;** W28; W29; W30.

*Coracina papuensis.*

White-bellied Cuckoo-shrike.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread. During FWD survey it was recorded in the Langi Ghiran and Ararat Blocks.

**HABITAT.** Open-forest and woodland.

**BREEDING.** Reported nesting near Beaufort (Thomas pers. comm.; Millar and Tiley 1971) and at Clunes (just north of the survey area) (Thomas pers. comm.).

**INFORMATION SOURCES.** F3; **M3; T6; W5;** W27.

*Lalage sueurii.* White-winged Triller.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread. A summer migrant to Victoria.

**HABITAT.** Open-forest, woodland and trees remaining in grassland.

**BREEDING.** Recorded nesting at Dean, Lake Wendouree, Invermay, Beaufort, Buln Gherin, Snake Valley and Linton (Wheeler unpublished data).

**INFORMATION SOURCES.** C4; C8; F1; G1; M3; P2; T3; **T6; W4; W5;** W27.

### MUSCICAPIDAE

*Zoothera dauma.* White's Thrush.

**ABUNDANCE AND DISTRIBUTION.** Uncommon; recorded at Creswick (including the recent FWD survey), in the Mt Cole and Langi Ghiran Blocks, at Ballarat and in the Inverleigh District.

**HABITAT.** Tall open-forest, open-forest and introduced pines.

**BREEDING.** Recorded nesting at Creswick (Cowley 1960; Wheeler J. R. 1954; Wheeler 1955d), in the Mt Cole Block (Wheeler and Thomas 1975), in the Langi Ghiran (= Mt Mistake) Block (Hill 1907) and at Ballarat (Wheeler 1955a).

**INFORMATION SOURCES.** **C8;** F3; G1; **H2;** P2; T4; **T6; W5; W9; W10; W13;** W14; W27; W28; **W30.**

*Turdus merula.* Common Blackbird.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Creswick and Inverleigh Blocks. An introduced species.

**HABITAT.** Tall open-forest, open-forest, introduced pines and grassland/suburban areas.

**BREEDING.** Recorded nesting in the Creswick District (Cowley 1960a), in the Mt Cole Block (Wheeler 1957a), in the Inverleigh District (Wheeler 1973) and at Ballarat (Johnson 1955b).

**INFORMATION SOURCES.** A2; A4; B1; **C8;** D1; F3; G1; J1; **J2;** R9; S3; S4; T1; T3; T6; **W5;** W7; W12; W13; **W14;** W15; W16; W17; W20; W21; **W27;** W28; W29; W30.

*Turdus philomelos.* Song Thrush.

**ABUNDANCE AND DISTRIBUTION.** Rare; recorded at Ballarat (Johnson 1955a) and Ararat (Tarr 1950). An introduced species.

**HABITAT.** Suburban.

**INFORMATION SOURCES.** J1; T1; W5.

*Petroica rosea.* Rose Robin.

**ABUNDANCE AND DISTRIBUTION.** Rare; between 1954 and 1976 it was recorded at Ballarat (Botanic Gardens and Lake Wendouree), Lal Lal, Creswick, Mt Clear, Inverleigh and Trawalla (Wheeler in Ballarat Courier 7/2/76).

**HABITAT.** Tall open-forest, open-forest and suburban areas.

**INFORMATION SOURCES.** T6; W5; W6; W27.

*Petroica rodinogaster.* Pink Robin.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Tall open-forest and introduced pines.

**BREEDING.** An old nesting record exists for White Swan Reservoir (Wheeler unpublished data).

**INFORMATION SOURCES.** C7; C8; G1; **T6; W4; W5; W10; W12; W13; W16; W27.**

*Petroica phoenicea.* Flame Robin.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread during winter. Numbers decline during summer with some adults remaining in the dense forests in the Mt Cole and Creswick Blocks. During FWD survey it was recorded in the Mt Cole Block.

**HABITAT.** Tall open-forest, open-forest, woodland and grassland/suburban areas.

**BREEDING.** Recorded nesting in the Creswick Block (Cowley 1960a and 1960b) and in the Mt Cole Block (RAOU nest record cards; Geelong F.N.C. and Western Victoria F.N.C.A. 1972).

**INFORMATION SOURCES.** A2; C7; **C8; C9; F3; G1; J2; M1; M3; P2; R7; S3; T6; W5; W8; W12; W13; W14; W15; W16; W17; W21; W27; W28; W29; W30; W31.**

*Petroica multicolor.* Scarlet Robin.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

**HABITAT.** Open-forest, woodland, introduced pines and grassland/suburban areas.

**BREEDING.** Recorded nesting near Beaufort (Millar and Tiley 1971), near Creswick (Cowley 1971) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; A4; C7; **C8; C10; F3; G1; J1; K1; M3; P2; R9; S3; S4; T2; T3; T4; T6; W5; W8; W10; W11; W12; W13; W14; W15; W16; W17; W27; W29; W30.**

*Petroica goodenovii.* Red-capped Robin.

**ABUNDANCE AND DISTRIBUTION.** Rare; recorded during summer at Creswick (Payne 1931), near Linton (Wheeler unpublished data), Lake Wendouree in Ballarat (Thomas 1973) and a pair noted at Piggoreet in 1964 by Wheeler (Ballarat Courier 28/3/69).

**HABITAT.** Open-forest, woodland, introduced pines and grassland/suburban areas.

**INFORMATION SOURCES.** P2; T4; T6; W4; W5; W6.

*Melanodryas cucullata.* Hooded Robin.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread. During FWD survey it was recorded in the Ararat Block.

**HABITAT.** Woodland and grassland.

**BREEDING.** Recorded nesting near Linton (RAOU nest record cards).

**INFORMATION SOURCES.** A2; A4; F3; M3; **R7; T2; T3; T6; W5; W6; W16; W27; W29.**

*Eopsaltria australis.* Eastern Yellow Robin.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland and introduced pines.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; **A3; A4; C4; C8; F3; G1; M1; M3; P2; R7; S3; S4; T2; T3; T6; W5; W12; W13; W14; W16; W17; W20; W21; W27; W28; W29; W30.**

*Microeca leucophaea.* Jacky Winter.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Ben Major-Trawalla, Langi Ghiran, Enfield, Ararat and Inverleigh Blocks.

**HABITAT.** Open-forest, woodland and grassland.

**BREEDING.** Recorded nesting near Beaufort (Millar and Tiley 1971), in the Inverleigh District (Wheeler 1973) and near Linton (Thomas 1970; Anon. 1975).

**INFORMATION SOURCES.** A2; **A3; A4; C4; F3;**

G1; K1; **M3**; S3; S4; **T2**; T3; **T6**; **W5**; W8; W11; W12; W15; W16; **W27**; W28; W29; W30.

*Falcunculus frontatus*. Crested Shrike-tit.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in all seven blocks of Crown Land that we surveyed.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland areas where trees remain.

BREEDING. Recorded nesting in the Inverleigh District (Wheeler 1973) and near Beaufort (RAOU nest record card; Millar and Tiley 1971).

INFORMATION SOURCES. A2; A4; C4; C8; C10; F3; G1; M1; **M3**; P2; **R7**; S3; S4; T2; T3; **T6**; **W5**; W8; W13; W20; W21; **W27**; W28; W29; W30.

*Pachycephala olivacea*. Olive Whistler.

ABUNDANCE AND DISTRIBUTION. Rare; recorded from the Wombat Forest which is on the north-east boundary of the survey area (Thomas pers. comm.) and Spargo Creek (Wheeler unpublished data).

HABITAT. Tall open-forest.

INFORMATION SOURCES. T6; W4; W5.

*Pachycephala pectoralis*. Golden Whistler.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Mt Cole, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

BREEDING. Recorded nesting in the Creswick area (Cowley 1960a), in the Mt Cole Block (FWD survey), near Linton (RAOU nest record card) and in the Inverleigh District (Wheeler 1973).

INFORMATION SOURCES. A1 A2; A4; C4; **C8**; **F3**; G1; J1; J2; K1; M3; P2; **R7**; R9; S3; S4; T2; T3; **T6**; **W5**; W12; W14; W15; W16; W20; **W27**; W28; W29; **W30**; W31.

*Pachycephala rufiventris*. Rufous Whistler.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was re-

corded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran (nesting) and Enfield Blocks. Mainly seen during spring and summer.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A2; A4; C4; **C8**; **F3**; G1; J2; **M3**; P2; **R7**; R9; T2; T3; **T6**; **W5**; W20; **W27**; W28; W29; **W30**.

*Colluricincla harmonica*. Grey Shrike-thrush.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in all seven Crown Land Blocks that we surveyed.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. **A1**; A2; A4; **B3**; **C8**; **F3**; G1; J1; J2; K1; M1; **M3**; P2; **R7**; S3; S4; T2; T3 **T6**; **W5**; W8; W10; W11; W12; W13; W14; W15; W16; W17; W20; W21; **W27**; **W28**; W29; W30.

*Myiagra rubecula*. Leaden Flycatcher.

ABUNDANCE AND DISTRIBUTION. Rare; recorded at Mt Cole, near Linton, near Creswick and at Invermay (Wheeler in Ballarat Courier 2/1/71). A summer migrant to Victoria.

HABITAT. Open-forest and woodland.

BREEDING. Recorded nesting at Invermay 'many years ago' (Wheeler in Ballarat Courier 2/1/71).

INFORMATION SOURCES. **W5**; **W6**.

*Myiagra cyano-leuca*. Satin Flycatcher.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. During FWD survey it was recorded in the Mt Cole Block. A summer migrant to Victoria.

HABITAT. Tall open-forest, open-forest and woodland.

BREEDING. Recorded nesting near Beaufort (RAOU nest record card; Millar and Tiley 1971), at Mt Cole (Wheeler and Thomas 1975), in the Inverleigh District (Wheeler



1973), in the Creswick area (Cowley 1971) and near Linton (Thomas 1970).

INFORMATION SOURCES. A2; A3; A4; C4; C8; C10; F3; G1; M3; R7; T2; T3; T6; W5; W6; W27; W28; W29.

*Myiagra inquieta*. Restless Flycatcher.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Ben Major-Trawalla, Langi Ghiran, Enfield, Ararat and Inverleigh Blocks.

HABITAT. Open-forest, woodland, introduced pines and grassland.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A1; A2; A4; C8; F3; K1; M3; M4; P2; R7; R9; S3; T2; T3; T4; T6; W5; W8; W13; W14; W15; W16; W17; W21; W27; W29; W30; W31.

*Rhipidura rufifrons*. Rufous Fantail.

ABUNDANCE AND DISTRIBUTION. Uncommon; most records are from the Mt Cole and Creswick Blocks. During FWD survey it was recorded in the Mt Cole Block. A summer migrant to Victoria.

HABITAT. Tall open-forest.

BREEDING. It nests in the Mt Cole Block (see information sources) and single records also exist for Ballarat (Wakefield 1963c) and Creswick (Wheeler unpublished data).

INFORMATION SOURCES. C8; F3; F8; G1; R7; T6; W2; W3; W4; W5; W28; W30.

*Rhipidura fuliginosa*. Grey Fantail.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield and Creswick Blocks.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A1; A2; A3; A4; C8; D1; F3; G1; J2; M3; P2; R7; R9; S4; S7; T2; T3; T6; W3; W5; W10; W13; W14; W15; W16; W17; W20; W21; W26; W27; W28; W30.

*Rhipidura leucophrys*. Willie Wagtail.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Ben Major-Trawalla, Langi Ghiran, Enfield, Ararat and Inverleigh Blocks.

HABITAT. Woodland and grassland/suburban areas.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A2; C7; C8; F3; G1; J1; J2; K1; M3; M4; R7; R9; S3; S4; T2; T6; W5; W7; W8; W11; W13; W14; W15; W16; W17; W20; W21; W27; W28; W29; W30.

#### ORTHONYCHIDAE

*Cinclosoma punctatum*. Spotted Quail-thrush.

ABUNDANCE AND DISTRIBUTION. Uncommon; most records come from the Creswick and Enfield Blocks (including sightings in both blocks during FWD survey).

HABITAT. Open-forest and introduced pines.

BREEDING. Recorded nesting in the Creswick (Cowley 1960a) and Enfield (Bedgood pers. comm.) Blocks.

INFORMATION SOURCES. A2; B2; C7; C8; F3; N1; T6; W5; W6.

#### TIMALIIDAE

*Pomatostomus superciliosus*.

White-browed Babbler.

ABUNDANCE AND DISTRIBUTION. Uncommon; recorded from Campbelltown by Wheeler (Ballarat Courier 6/5/67), from the Ararat Block (FWD survey) and from the Ben Major-Trawalla Block (Wheeler unpublished data).

HABITAT. Open-forest and woodland.

BREEDING. Recorded nesting at Campbelltown in 1967 (Wheeler in Ballarat Courier 6/5/67). There is a general reference to nesting in the Ararat District (Lang 1932) but a precise locality is not given.

INFORMATION SOURCES. F3; L2; T6; W4; W5; W6.

#### SYLVIIDAE

*Acrocephalus stentoreus*.

Clamorous Reed-Warbler.

ABUNDANCE AND DISTRIBUTION. Common and widespread. A summer migrant to Victoria.

HABITAT. Aquatic.



**BREEDING.** Recorded nesting at Lake Wendouree in Ballarat (RAOU nest record cards) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** C8; D1; F2; J2; P2; R7; R9; T6; W4; W5; W20; W21; W27; W28.

*Megalurus gramineus.* Little Grassbird.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread.

**HABITAT.** Grassland and aquatic.

**BREEDING.** Recorded nesting at Lake Wendouree (RAOU nest record card), Flaxmill Swamp (Wheeler unpublished data) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** C8; G1; J2; P2; R7; T6; W4; W5; W7; W20; W27; W28.

*Cisticola exilis.* Golden-headed Cisticola.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Grassland and aquatic.

**BREEDING.** Recorded nesting near Lake Goldsmith (Feather 1977-78), near Beaufort by Wheeler (Ballarat Courier 11/3/67), at Buln Gherin (Wheeler unpublished data) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** C7; C8; F1; T6; W4; W5; W6; W15; W27.

*Cinclorhamphus mathewsi.* Rufous Songlark.

**ABUNDANCE AND DISTRIBUTION.** Uncommon; recorded in the Creswick area (Payne 1931), near Beaufort (NMV specimen; Millar and Tiley 1971), in the Inverleigh District (Wheeler 1973; FWD survey) and at Lake Wendouree (Thomas pers. comm.). A summer migrant to Victoria.

**HABITAT.** Open-forest, woodland and grassland.

**INFORMATION SOURCES.** F3; M3; P2; T6; W5; W27.

*Cinclorhamphus cruralis.* Brown Songlark.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. A summer migrant to Victoria.

**HABITAT.** Grassland.

**BREEDING.** Recorded nesting near Beaufort (RAOU nest record cards) and at Buln Gherin (Wheeler unpublished data).

**INFORMATION SOURCES.** C8; M3; M4; N1; R7; T6; W4; W5; W6; W27; W29.

## MALURIDAE

*Malurus cyaneus.* Superb Fairy-wren.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in all seven Crown Land Blocks that we surveyed.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; A4; C4; C8; F3; G1; K1; M3; P2; R7; S3; S4; T2; T3; T4; T6; W5; W12; W13; W14; W15; W16; W17; W20; W27; W28; W29; W30.

## ACANTHIZIDAE

*Sericornis frontalis.* White-browed Scrubwren.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield and Creswick Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A1; A2; A4; C8; F3; G1; M3; P2; R7; S4; T2; T3; T6; W5; W12; W13; W14; W15; W20; W27; W28; W29; W30.

*Sericornis fuliginosus.* Calamanthus.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Grassland.

**BREEDING.** Recorded nesting at Streatham (Wheeler unpublished data).

**INFORMATION SOURCES.** C8; G1; T6; W4; W5; W13; W17; W20; W21; W27.

*Sericornis sagittatus.* Speckled Warbler.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Ben Major-Trawalla, Langi Ghiran and Ararat Blocks.

**HABITAT.** Open-forest, woodland and introduced pines.

**BREEDING.** Recorded nesting near Beaufort (Millar and Tiley 1971).

INFORMATION SOURCES. A2; A4; C4; C8; F1; F3; M3; T2; T3; T6; W5; W6; W15; W16; W17; W27; W29.

*Smicrornis brevirostris*. Webbill.

ABUNDANCE AND DISTRIBUTION. Uncommon. Recorded from just north of the survey area at Clunes (Thomas pers. comm.), near Linton (Thomas 1970), in the Inverleigh District (Wheeler 1973) and in the Langi Ghiran Block (FWD survey).

HABITAT. Open-forest and woodland.

INFORMATION SOURCES. F3; T2; T6; W5; W27.

*Gerygone fusca*. Western Gerygone.

ABUNDANCE AND DISTRIBUTION. Accidental; recorded at Waubra Junction in the 1930s by Len Harvey and at Mt Beckworth (just north of the survey area) in 1971 (Wheeler unpublished data).

*Gerygone olivacea*. White-throated Gerygone. ABUNDANCE AND DISTRIBUTION. Rare; recorded at Waubra Junction and near White Swan Reservoir in the 1930s by Len Harvey and at Linton in 1957 by Gordon Clarke (Wheeler unpublished data).

HABITAT. Open-forest.

*Acanthiza pusilla*. Brown Thornbill.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A2; A4; C8; F3; G1; J1; J2; M3; P2; R7; S3; S4; T2; T3; T6; W5; W7; W8; W10; W11; W12; W13; W14; W15; W16; W20; W27; W28; W29; W30.

*Acanthiza uropygialis*.

Chestnut-rumped Thornbill.

ABUNDANCE AND DISTRIBUTION. Rare; recorded from near Beaufort (Millar and Tiley 1971) and from Creswick and near White Swan Reservoir (Wheeler unpublished data).

HABITAT. Open-forest and woodland.

BREEDING. Recorded nesting near White Swan Reservoir (Wheeler unpublished data).

INFORMATION SOURCES. M3; T6; W4; W5.

*Acanthiza reguloides*. Buff-rumped Thornbill.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

HABITAT. Open-forest, woodland and introduced pines.

BREEDING. Recorded nesting near Beaufort (Millar and Tiley 1971), near Stockyard Hill (Wheeler 1957b), near Creswick (Cowley 1960a) and in the Inverleigh District (Wheeler 1973).

INFORMATION SOURCES. A2; A4; C8; F3; G1; M3; P2; S3; T2; T3; T6; W5; W10; W12; W13; W14; W15; W16; W17; W27; W29; W30.

*Acanthiza chrysorrhoa*.

Yellow-rumped Thornbill.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Langi Ghiran Block.

HABITAT. Grassland, occasionally woodland and edges of introduced pine plantations.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A2; C8; F3; G1; J1; J2; M1; M3; R7; R9; S3; S4; S7; T2; T3; T6; W5; W8; W10; W11; W12; W13; W14; W15; W16; W17; W20; W21; W27; W28; W29; W30.

*Acanthiza nana*. Yellow Thornbill.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread.

HABITAT. Open-forest and trees and shrubs remaining in grasslands.

INFORMATION SOURCES. A2; A4; C8; G1; M3; T6; W5; W27; W28; W30.

*Acanthiza lineata*. Striated Thornbill.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

**BREEDING.** Recorded nesting in the Creswick area (Cowley 1960a) and in the Ben Major-Trawalla Block (RAOU nest record card).

**INFORMATION SOURCES.** A1; A2; A4; **C8**; F3; G1; M3; **R7**; T3; **T6**; **W5**; W10; W11; W12; W13; W15; W16; W17; W20; W27; W28; W29; W30.

*Aphelocephala leucopsis.* Southern Whiteface.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Grassland.

**INFORMATION SOURCES.** T6; W5; W6; W27; W29.

## NEOSITTIDAE

*Daphoenositta chrysoptera.* Varied Sittella.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland and trees remaining in grassland areas.

**BREEDING.** Recorded nesting near Beaufort (Millar and Tiley 1971; RAOU nest record cards) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; A3; A4; C8; C10; F3; G1; K1; M1; **M3**; **R7**; T2; T3; **T6**; **W5**; **W27**.

## CLIMACTERIDAE

*Climacteris leucophaea.*

White-throated Treecreeper.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

**HABITAT.** Tall open-forest, open-forest and introduced pines.

**BREEDING.** Recorded nesting near Beaufort (Millar and Tiley 1971), in the Creswick area (Cowley 1971) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; A4; C7; **C8**; **C10**;

F3; G1; K1; **M3**; P2; R9; S3; S4; T2; T3; **T6**; **W5**; W8; W10; W11; W12; W13; W14; W15; W16; W17; W20; **W27**; W28; W29; W30.

*Climacteris erythroptera.*

Red-browed Treecreeper.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and restricted mainly to the Wombat Forest in the Creswick Block (Thomas pers. comm.; FWD survey), although there also has been a report from the Enfield Block (Wheeler in Ballarat Courier 30/4/66) which requires confirmation.

**HABITAT.** Tall open-forest.

**INFORMATION SOURCES.** F3; T6; W5; W6.

*Climacteris picumnus.* Brown Treecreeper.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Ben Major-Trawalla, Langi Ghiran, Enfield and Ararat Blocks.

**HABITAT.** Open-forest and woodland.

**BREEDING.** Recorded nesting near Beaufort (Millar and Tiley 1971) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; F3; M1; **M3**; S3; S4; T4; **T6**; **W5**; W6; W14; W16; **W27**; W29; W30.

## MELIPHAGIDAE

*Anthochaera carunculata.* Red Wattlebird.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Langi Ghiran, Ararat and Inverleigh Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

**BREEDING.** Recorded nesting near Beaufort (Millar and Tiley 1971; RAOU nest record cards) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; A4; C8; D1; **F3**; G1; J1; J2; **M3**; P2; **R7**; R9; S3; S4; S8; T2; T3; **T6**; **W5**; W7; W8; W10; W11; W14; W15; W17; W20; W21; **W27**; W28; W29; W30.

*Anthochaera chrysoptera.* Little Wattlebird.

**ABUNDANCE AND DISTRIBUTION.** Accidental;



recorded at Lake Wendouree in Ballarat by Thomas (1973).

HABITAT. Open-forest.

INFORMATION SOURCES. T4; T6; W5.

*Acanthagenys rufogularis.*

Spiny-cheeked Honeyeater.

ABUNDANCE AND DISTRIBUTION. Rare; recorded at Ballarat in 1974 (Wheeler in Ballarat Courier 20/7/74) and at Barunah Plains near Wingeel in 1954 (Wheeler W. R. 1954). Nomadic.

HABITAT. Open-forest and suburban.

INFORMATION SOURCES. T6; W6; W31.

*Xanthomyza phrygia.* Regent Honeyeater.

ABUNDANCE AND DISTRIBUTION. Rare; recorded near Beaufort (Millar and Tiley 1971) and at Lake Wendouree in Ballarat (Thomas 1973).

HABITAT. Open-forest and woodland.

INFORMATION SOURCES. M3; T4; T6; W5.

*Manorina melanocephala.* Noisy Miner.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Inverleigh Block.

HABITAT. Woodland and trees remaining in grasslands.

BREEDING. Recorded nesting near Beaufort (RAOU nest record cards), in the Inverleigh District (Wheeler 1973) and in Sugar Gum plantations west of Ballarat (Wheeler unpublished data).

INFORMATION SOURCES. A2; C8; F3; G1; M3; P2; R7; S4; S7; T6; W4; W5; W8; W13; W14; W16; W17; W21; W27; W30.

*Lichenostomus chrysops.*

Yellow-faced Honeyeater.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Ararat and Inverleigh Blocks.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A2; A3; A4; C4; C8; F3; G1; M3; P2; R7; S4; S8; T2; T3; T6; W5;

W11; W12; W14; W15; W17; W27; W28; W29; W30.

*Lichenostomus virescens.* Singing Honeyeater. ABUNDANCE AND DISTRIBUTION. Rare; recorded at Skipton, Buln Gherin and Lake Goldsmith (Wheeler in Ballarat Courier 17/8/68; Wheeler 1957c).

HABITAT. Grassland/suburban areas.

BREEDING. Recorded nesting at Stoneleigh in 1970 (Wheeler unpublished data).

INFORMATION SOURCES. T6; W4; W5; W6; W17.

*Lichenostomus leucotis.*

White-eared Honeyeater.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded at Mt Cole, Langi Ghiran, Enfield, Creswick, Ararat and Inverleigh Blocks.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

BREEDING. Recorded nesting near Creswick (Cowley 1960a), in the Inverleigh District (Wheeler 1973) and in the Ben Major-Trawalla Block (RAOU nest record card).

INFORMATION SOURCES. A2; A4; C8; F3; G1; K1; M1; M3; P2; R7; S8; T2; T3; T6; W5; W12; W14; W16; W20; W21; W27; W30.

*Lichenostomus melanops.*

Yellow-tufted Honeyeater.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. During FWD survey it was recorded in the Langi Ghiran and Ararat Blocks.

HABITAT. Open-forest and woodland.

INFORMATION SOURCES. C8; F3; M3; S8; T6; W5; W29.

*Lichenostomus ornatus.*

Yellow-plumed Honeyeater.

ABUNDANCE AND DISTRIBUTION. Accidental; recorded at Beaufort in 1968 (Wheeler unpublished data).

*Lichenostomus fuscus.* Fuscous Honeyeater.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was re-

corded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran and Ararat Blocks.

HABITAT. Open-forest and woodland.

BREEDING. Recorded nesting near Beaufort (RAOU nest record cards; Millar and Tiley 1971).

INFORMATION SOURCES. F3; G1; M3; P2; R7; S3; T6; W5; W16; W21; W29.

*Lichenostomus penicillatus*.

White-plumed Honeyeater.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Enfield, Ararat and Inverleigh Blocks.

HABITAT. Woodlands and trees remaining in grassland/suburban areas. Particularly abundant in River Red Gum areas.

BREEDING. Recorded nesting near Beaufort (Millar and Tiley 1971; RAOU nest record card), at Buln Gherin (Wheeler J. R. 1977) and in the Inverleigh District (Wheeler 1973).

INFORMATION SOURCES. A2; C8; F3; G1; M3; M4; R7; S3; S7; T6; W5; W13; W14; W17; W21; W27; W28; W29; W30.

*Melithreptus gularis*.

Black-chinned Honeyeater.

ABUNDANCE AND DISTRIBUTION. Uncommon; recorded north of the survey area at Clunes (Thomas pers. comm.), at Lake Wendouree in Ballarat (Thomas 1973) and in the Ararat Block (FWD survey).

HABITAT. Open-forest and woodland.

INFORMATION SOURCES. F3; T4; T6; W5.

*Melithreptus brevirostris*.

Brown-headed Honeyeater.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Langi Ghiran, Enfield and Creswick Blocks.

HABITAT. Tall open-forest, open-forest, woodland and trees remaining in grassland/suburban areas.

INFORMATION SOURCES. A1; A2; A4; C7; C8; F3; G1; K1; M3; S7; T3; T6; W5; W27; W29; W30.

*Melithreptus lunatus*. White-naped Honeyeater.

ABUNDANCE AND DISTRIBUTION. Common and

widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

HABITAT. Tall open-forest, open-forest, woodland and trees remaining in grassland/suburban areas.

BREEDING. Recorded nesting near Beaufort (Millar and Tiley 1971), in the Mt Cole Block (Wheeler J. R. 1977), in the Inverleigh District (Wheeler 1973) and near Creswick (Cowley 1960a).

INFORMATION SOURCES. A2; A3; A4; C4; C8; F3; G1; M3; P2; S3; S4; T2; T3; T6; W5; W8; W12; W13; W14; W15; W17; W27; W28; W29; W30.

*Grantiella picta*. Painted Honeyeater.

ABUNDANCE AND DISTRIBUTION. Uncommon; recorded from Linton, Piggoreet and near Beaufort.

HABITAT. Open-forest, woodland and trees remaining in grasslands.

BREEDING. It has nested near Linton (Wheeler in Ballarat Courier 24/3/73) and near Beaufort (RAOU nest record card).

INFORMATION SOURCES. A3; F1; R7; T2; T6; W5; W6.

*Phylidonyris pyrrhoptera*. Crescent Honeyeater.

ABUNDANCE AND DISTRIBUTION. Uncommon; recorded mainly at Mt Cole (including FWD survey) with occasional sightings at Creswick (Cowley 1960a), near Beaufort (Wheeler 1953b and 1955b) and Enfield (Strange 1966).

HABITAT. Tall open-forest, open-forest and occasionally suburban areas.

BREEDING. Recorded nesting in the Mt Cole Block (RAOU nest record cards).

INFORMATION SOURCES. C8; F3; G1; R7; S8; T6; W5; W8; W11; W28; W30.

*Phylidonyris novaehollandiae*.

New Holland Honeyeater.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. During FWD survey it was recorded in the Langi Ghiran, Enfield and Ararat Blocks.

HABITAT. Open-forest, woodland and occasionally suburban gardens.

**BREEDING.** It nests in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A1; A2; A4; C8; F3; G1; M3; S8; T3; **T6; W5; W27; W30.**

*Phylidonyris melanops.*

Tawny-crowned Honeyeater.

**ABUNDANCE AND DISTRIBUTION.** Rare; recorded in Ballarat, Skipton and at Buln Gherin (Wheeler Ballarat Courier 10/8/68 and 17/8/68; Wheeler unpublished data).

**HABITAT.** Suburban gardens.

**BREEDING.** It has nested at Buln Gherin (Wheeler unpublished data).

**INFORMATION SOURCES.** G1; T6; **W4; W5; W6.**

*Acanthorhynchus tenuirostris.*

Eastern Spinebill.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A1; A2; A3; A4; **C8; F2; F3; G1; J1; J2; M3; P2; R7; S4; S8; T3; T6; W5; W10; W14; W15; W20; W27; W28; W30.**

#### EPHTHIANURIDAE

*Ephthianura albifrons.* White-fronted Chat.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread.

**HABITAT.** Mainly grassland, but occasionally recorded in introduced pines and on mud flats along margins of standing water.

**BREEDING.** Nesting recorded at Lake Wongan (Millar and Tiley 1972-73), Lake Goldsmith (RAOU nest record card), near Beaufort (RAOU nest record cards) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; C8; F3; G1; M3; **M4; P2; R7; R9; S3; T6; W4; W5; W8; W11; W12; W14; W15; W17; W21; W27; W28; W29.**

#### DICAEIDAE

*Dicaeum hirundinaceum.* Mistletoebird.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread. During FWD survey it was recorded in the Langi Ghiran and Enfield Blocks.

**HABITAT.** Open-forest (particularly box forest) and woodland.

**BREEDING.** Recorded nesting in Ballarat (Wheeler 1955a).

**INFORMATION SOURCES.** A2; A3; A4; C4; C8; C10; F3; G1; M3; P2; T2; T3; **T6; W5; W10; W27; W30.**

#### PARDALOTIDAE

*Pardalotus punctatus.* Spotted Pardalote.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield and Ararat Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland and trees remaining in grassland/suburban areas.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; **A3; A4; C8; F3; G1; K1; M3; P2; S3; S7; T2; T3; T6; W5; W8; W13; W14; W15; W17; W27; W30.**

*Pardalotus striatus.* Striated Pardalote.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Ararat and Inverleigh Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland and trees remaining in grassland/suburban areas.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; **A3; A4; C4; C8; F3; G1; M3; P2; R7; S7; T2; T3; T6; W5; W16; W17; W20; W21; W27; W29; W30.**

#### ZOSTEROPIDAE

*Zosterops lateralis.* Silveryeye.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole and Enfield Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland/suburban areas.



**BREEDING.** Recorded nesting in the Creswick area (Cowley 1960a).

**INFORMATION SOURCES.** A1; A2; A4; **C8**; F3; G1; J2; M3; P2; R9; S8; **T6**; **W5**; W12; W14; W16; W20; W27; W30.

#### FRINGILLIDAE

*Carduelis carduelis.* European Goldfinch.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. An introduced species. During FWD survey it was recorded in the Inverleigh Block.

**HABITAT.** Grassland and introduced pines.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; A4; **C8**; F3; G1; J1; J2; K1; **M3**; M4; P2; **R7**; R9; S3; S4; T2; T3; T6; **W5**; W8; W10; W12; W13; W14; W15; W16; W17; W20; W21; **W27**; W28; W29; W30.

*Carduelis chloris.* European Greenfinch.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread. An introduced species.

**HABITAT.** Grassland, suburban areas and introduced pines.

**BREEDING.** Recorded nesting in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A4; **C8**; G1; J1; P2; T1; T6; **W5**; W8; W13; W20; **W27**; W29.

#### PASSERIDAE

*Passer domesticus.* House Sparrow.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. An introduced species.

**HABITAT.** Grassland and suburban.

**BREEDING.** Recorded nesting in the Creswick area (Cowley 1960a) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; **C8**; D1; F3; G1; J1; J2; P2; R9; T2; T3; T6; **W5**; W8; W11; W12; W13; W14; W15; W16; W17; W20; W21; **W27**; W28; W29; W30.

*Passer montanus.* Tree Sparrow.

**ABUNDANCE AND DISTRIBUTION.** Rare; recorded in Ballarat (Wheeler unpublished data).

**HABITAT.** Suburban garden.

#### PLOCEIDAE

*Emblema temporalis.* Red-browed Firetail.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield and Inverleigh (nesting) Blocks.

**HABITAT.** Tall open-forest, open-forest, woodland, introduced pines and grassland.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A1; A2; A4; C4; **C8**; **F3**; G1; **M3**; P2; **R7**; S4; T2; **T3**; T4; **T6**; **W5**; W13; W14; W15; **W27**; W28; W30.

*Emblema guttata.* Diamond Firetail.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread. During FWD survey it was recorded in the Ararat and Inverleigh Blocks.

**HABITAT.** Woodland and grassland.

**BREEDING.** Recorded nesting near Beaufort (RAOU nest record card; Millar and Tiley 1971) and in the Inverleigh Block (FWD survey).

**INFORMATION SOURCES.** C4; **F3**; G1; **M3**; **R7**; S4; **T6**; **W5**; **W27**.

#### STURNIDAE

*Sturnus vulgaris.* Common Starling.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. An introduced species.

**HABITAT.** Grassland and suburban areas.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; **C8**; D1; F3; G1; J1; J2; **M3**; M4; P2; **R7**; R9; S3; S4; T5; T6; **W5**; W7; W8; W11; W12; W13; W14; W15; W16; W17; W20; W21; **W27**; W28; W29; W30.

*Acridotheres tristis.* Common Myna.

**ABUNDANCE AND DISTRIBUTION.** Rare; two seen in Ballarat in the 1950s (Wheeler unpublished data).

**HABITAT.** Suburban areas.

**INFORMATION SOURCES.** W4; W5.

#### ORIOOLIDAE

*Oriolus sagittatus.* Olive-backed Oriole.

**ABUNDANCE AND DISTRIBUTION.** Common and

widespread. A summer migrant to Victoria, although some winter here. During FWD survey it was recorded in the Mt Cole and Inverleigh (nesting) Blocks.

**HABITAT.** Open-forest, woodland and trees remaining in grassland/suburban areas.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** C4; C8; F3; G1; M3; R7; T2; T3; T6; W5; W6; W27.

#### PARADISAEIDAE

*Ptilonorhynchus violaceus.* Satin Bowerbird.

**ABUNDANCE AND DISTRIBUTION.** Accidental. One recorded at Creswick in the 1960s by Wheeler (Ballarat Courier 11/12/65).

**INFORMATION SOURCES.** W5; W6.

#### CORCORACIDAE

*Corcorax melanorhamphos.*

White-winged Chough.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick and Ararat Blocks.

**HABITAT.** Open-forest, woodland and, occasionally, introduced pines and grassland.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; C8; F3; G1; M3; R9; S4; T6; W5; W8; W12; W14; W16; W17; W27; W30.

*Struthidea cinerea.* Apostlebird.

**ABUNDANCE AND DISTRIBUTION.** Accidental. Reported from Lake Goldsmith and Smythesdale (Wheeler in Ballarat Courier 27/2/71).

**INFORMATION SOURCES.** W5; W6.

#### GRALLINIDAE

*Grallina cyanoleuca.* Australian Magpie-lark.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread.

**HABITAT.** Woodland, grassland and margins of standing water.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A2; B3; C8; D1; F3; G1; J1; J2; K1; M3; M4; P2; R7; R9; S3; S4; S7; T2; T6; W5; W7; W8; W10; W11; W12; W13; W14; W15; W16; W17; W20; W21; W27; W28; W29; W30.

#### ARTAMIDAE

*Artamus superciliosus.*

White-browed Woodswallow.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and nomadic. Recorded from the Creswick area, the Inverleigh District (including FWD survey) and at Waterloo.

**HABITAT.** Woodland and grassland.

**BREEDING.** Recorded nesting at Waterloo (Wheeler in Ballarat Courier 28/4/73) and in the Inverleigh District (Wheeler 1973; FWD survey).

**INFORMATION SOURCES.** C8; F3; G1; P2; R7; T6; W5; W6; W27.

*Artamus cyanopterus.* Dusky Woodswallow.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield and Inverleigh (nesting) Blocks.

**HABITAT.** Open-forest, woodland and grassland.

**BREEDING.** A common nesting species in the survey area.

**INFORMATION SOURCES.** A1; A2; A4; C4; C8; C10; F3; G1; M3; P2; R7; S4; T2; T3; T6; W5; W14; W15; W16; W17; W27; W29; W30.

#### CRACTICIDAE

*Cracticus torquatus.* Grey butcherbird.

**ABUNDANCE AND DISTRIBUTION.** Uncommon and widespread.

**HABITAT.** Open-forest, woodland and, particularly, suburban areas.

**BREEDING.** Recorded nesting in the Creswick area (Cowley 1960a) and in the Inverleigh District (Wheeler 1973).

**INFORMATION SOURCES.** A2; C8; D1; G1; J1; J2; N1; P2; T6; W5; W7; W20; W27.

*Gymnorhina tibicen.* Australian Magpie.

**ABUNDANCE AND DISTRIBUTION.** Common and widespread. During FWD survey it was re-

corded in the Mt Cole, Ben Major-Trawalla, Enfield, Ararat and Inverleigh Blocks.

HABITAT. Open-forest, woodland, introduced pines and grassland/suburban areas.

BREEDING. A common nesting species in the survey area.

INFORMATION SOURCES. A1; A2; A4; **C8**; D1; F3; G1; **J1**; J2; M1; **M3**; M4; P2; R9; **S3**; S4; S7; T2; T3; **T6**; **W5**; **W8**; W10; W11; **W12**; **W13**; **W14**; **W15**; W16; W17; W20; **W21**; **W27**; W28; W29; W30.

*Strepera graculina*. Pied Currawong.

ABUNDANCE AND DISTRIBUTION. Uncommon and restricted to the Mt Cole area and, possibly, the Wombat Forest (NE edge of survey area) during summer. More widely distributed during winter when some visit orchard properties east of Ballarat each year (Thomas pers. comm.).

HABITAT. Tall open-forest and open-forest during summer and grassland/orchards during winter.

INFORMATION SOURCES. G1; P2; T6; W5; W11; W28.

*Strepera versicolor*. Grey Currawong.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Mt Cole, Ben Major-Trawalla, Langi Ghiran, Enfield, Creswick, Ararat and Inverleigh Blocks.

HABITAT. Tall open-forest, open-forest, woodland, introduced pines and grassland.

BREEDING. Recorded nesting in the Creswick area (Cowley 1960a).

INFORMATION SOURCES. A2; C7; **C8**; F3; G1; J1; M3; P2; S4; **T6**; **W5**; W8; W10; W11; W12; W13; W14; W15; W20; W27; W29; W30.

## CORVIDAE

*Corvus coronoides*. Australian Raven.

ABUNDANCE AND DISTRIBUTION. Common and widespread. During FWD survey it was recorded in the Ararat Block.

HABITAT. Open-forest, woodland, introduced pines and grassland.

BREEDING. It nests in the survey area.

INFORMATION SOURCES. A2; **C8**; F3; G1; M1; **M3**; P2; **R7**; T3; **T6**; **W5**; **W27**; W30.

*Corvus mellori*. Little Raven.

ABUNDANCE AND DISTRIBUTION. Common and widespread.

HABITAT. Woodland and grassland.

BREEDING. It nests in the Inverleigh District (Wheeler 1973).

INFORMATION SOURCES. A2; F3; G1; M3; **T6**; W5; **W27**; W28; W30.

## Appendix 3

Annotated list of reptiles in the Ballarat area

### CHELIDAE

*Chelodina longicollis*. Long-necked Tortoise.

ABUNDANCE AND DISTRIBUTION. Reported from the Hopkins River and Mt Emu Creek although no specimens are available (Clements pers. comm.).

HABITAT. Aquatic.

### GEKKONIDAE

*Phyllodactylus marmoratus*. Marbled Gecko.

ABUNDANCE AND DISTRIBUTION. Only recorded from the northern portion of the survey area. Recorded from Ararat, Mt Langi Ghiran, Elmhurst, 3 km NNE of Ben Nevis, 4 km S of Ben Nevis, 2 km S of Victoria Mill Scenic Reserve, Wallaby Caves—1 km W of Mt Buangor (FWD survey; NMV specimens).

HABITAT. Open-forest and woodland, found beneath exfoliating granite or beneath bark on stumps, in areas with a NW aspect.

*Underwoodisaurus milii*. Thick-tailed Gecko.

ABUNDANCE AND DISTRIBUTION. Restricted to the northern portion of the survey area. Recorded from 3 km NW of Mt Langi Ghiran and Wallaby Caves—1 km W of Mt Buangor (FWD survey).

HABITAT. Open-forest and woodland where granite outcrops, on slopes with a NW aspect.

### PYGOPODIDAE

*Delma impar*. Spinifex Lizard.

ABUNDANCE AND DISTRIBUTION. There is only one record from Westmere (NMV specimen) but records from localities surrounding the survey area suggest that the species is widespread throughout the basalt plains.

HABITAT. Grassland.



## AGAMIDAE

*Amphibolurus muricatus*. Jacky Lizard.

ABUNDANCE AND DISTRIBUTION. Widespread. Recorded from 3 km W of Mt Langi Ghiran, 3 km SSW of Ben Nevis, 3 km W of Enfield, Berringa, Wallaby Caves—1 km W of Mt Buangor and 2 km NW of Inverleigh (FWD survey).

HABITAT. Open-forest and woodland, frequently beneath dry logs.

## SCINCIDAE

*Ctenotus robustus*. Large Striped Skink.

ABUNDANCE AND DISTRIBUTION. Restricted to the NW of the survey area where it is uncommon. Recorded from 3 km NNE of Ben Nevis (FWD survey) and 11 km WNW of Buangor (NMV specimen).

HABITAT. Open-forest and woodland; it shelters beneath rocks in areas with a NW aspect.

*Egernia cunninghami*. Cunningham's Skink.

ABUNDANCE AND DISTRIBUTION. Rare and restricted to the area called Devil's Kitchen near Piggoreet (FWD survey).

HABITAT. Large basalt outcrops in grassland.

*Egernia saxatilis*. Black Rock Skink.

ABUNDANCE AND DISTRIBUTION. Uncommon and restricted to higher altitudes in the north of the survey area. Recorded from 2 km NW of Mt Cole, 2 km NW of Mt Buangor, 4 km S of Ben Nevis, 2 km S of Victoria Mill Reserve and Wallaby Caves—1 km W of Mt Buangor (FWD survey; NMV specimens).

HABITAT. Open-forest with large rock outcrops.

*Egernia whitii*. White's Skink.

ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from 0.5 km N of Mt Langi Ghiran, Ararat, Beaufort, Ben Nevis Tower, 4 km S of Ben Nevis, 1 km W of Little Hard Hills, 11 km SW of Cape Clear and Wallaby Caves—1 km W of Mt Buangor (FWD survey; NMV specimens).

HABITAT. Open-forest and grassland; it shelters in burrows or beneath rocks.

*Hemiergis decresiensis*. Three-toed Skink.

ABUNDANCE AND DISTRIBUTION. Common in the NW of the survey area. Recorded from

Ben Nevis Tower, 3 km S of Ben Nevis, 4 km S of Ben Nevis, 3 km NNE of Ben Nevis, 7 km NW of Lookout Hill, 2 km NW of Mt Buangor, 5 km SW of Ben Major, 5 km SSW of Ben Major, 5 km NE of Waterloo, Wallaby Caves—1 km W of Mt Buangor and 5 km S of Elmhurst (FWD survey; NMV specimens).

HABITAT. Open-forest with sparse ground cover, found beneath rocks or logs embedded in the soil.

*Lampropholis guichenoti*. Garden Skink.

ABUNDANCE AND DISTRIBUTION. Widespread. Recorded from 10 km NNE of Ararat, 2 km NW of Mt Langi Ghiran, Ben Nevis, 1.5 km W of Mt Buangor, 5 km SSW of Ben Major, 3 km W of Enfield, 7 km SSW of Scarsdale and 1 km N of Barkstead (FWD survey; NMV specimens).

HABITAT. Tall open-forest and open-forest, where it forages amongst litter.

*Leiopisma coventryi*. Coventry's Skink.

ABUNDANCE AND DISTRIBUTION. Restricted to higher altitudes in the northern part of the survey area where it is uncommon. Recorded from 14.5 km S of Elmhurst, Raglan, 2 km E of Creswiek, 3 km W of Spargo Creek, 1 km N of Barkstead and Koorweinguboorah Reservoir (FWD survey; NMV specimens).

HABITAT. Tall open-forest and open-forest; retreats to within decomposing logs.

*Leiopisma entrecasteauxii*. Grass Skink.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from 2 km N of Mt Cole, Ben Nevis Tower, 3 km S of Ben Nevis, summit of Cave Hill, 1 km S of Mt Langi Ghiran, 3 km W of Enfield, Koorweinguboorah Reservoir, 3 km W of Spargo, 1 km N of Barkstead and 11 km SW of Cape Clear (FWD survey).

HABITAT. Tall open-forest, open-forest, woodland and grassland. Shelters within decomposing logs and beneath rocks.

*Leiopisma trilineata*. Three-lined Skink.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Recorded from 3 km W of Mt Langi Ghiran, 5 km SSW of Ben Major, 2.5 km S of Beaufort, Raglan, Skipton and

Devil's Kitchen near Piggoreet (FWD survey; NMV specimens).

HABITAT. Woodland, grassland and clearings in open-forest.

*Lerista bougainvillii*. Bougainville's Skink.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Recorded from Ballarat, Ben Nevis Tower, 2 km S of Victoria Mill Reserve, Wallaby Caves—1 km W of Mt Buangor and 3 km NW of Mt Langi Ghiran (FWD survey; NMV specimens).

HABITAT. Woodland and open-forest beneath rocks embedded in soil.

*Pseudemoia spenceri*. Spencer's Skink.

ABUNDANCE AND DISTRIBUTION. Rare and restricted to higher altitudes. Recorded from Ben Nevis Tower (FWD survey) and Gillingham Road Raglan (NMV specimen).

HABITAT. Open-forest, where it lives in shrinkage gaps in dead trees or beneath granite exfoliations.

*Sphenomorphus tympanum*. Southern Water Skink (this is the "Cool Temperate" form of Rawlinson 1971).

ABUNDANCE AND DISTRIBUTION. Common, restricted to higher altitudes in the north and east of the survey area. Recorded from 0.5 km N of Mt Langi Ghiran, 2 km N of Mt Cole, 3 km S of Ben Nevis, The Glut, Lookout Hill, 2 km NW of Mt Buangor, 3 km W of Spargo, Gillingham Road Raglan and 1 km W of Little Hard Hills (FWD survey; NMV specimens).

HABITAT. Tall open-forest and open-forest; it shelters within decomposing logs and beneath rocks.

*Tiliqua nigrolutea*.

Blotched Blue-tongued Lizard.

ABUNDANCE AND DISTRIBUTION. Uncommon but probably widespread in the north and east of the survey area. Recorded from Piggoreet (White pers. comm.).

HABITAT. Open-forest.

*Tiliqua scincoides*.

Eastern Blue-tongued Lizard.

ABUNDANCE AND DISTRIBUTION. Uncommon but probably widespread in the survey area.

Recorded from 11 km SW of Cape Clear (FWD survey).

HABITAT. Grassland; it shelters beneath basalt boulders.

*Trachydosaurus rugosus*. Shingle-back.

ABUNDANCE AND DISTRIBUTION. Uncommon and restricted to the NW of the survey area. Recorded from Mt Langi Ghiran, 2 km SW of Mt Buangor, Raglan, Elmhurst and 3 km NW of Mt Langi Ghiran (FWD survey; NMV specimens).

HABITAT. Woodland and open-forest.

#### ELAPIDAE

*Austrelaps superba*. Copperhead.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Recorded from 4 km S of Ben Nevis, 16 km NW of Ballarat, 8 km ENE of Cape Clear and Piggoreet (FWD survey; NMV specimens).

HABITAT. Open-forest and pasture with scattered trees.

*Drysdalia coronoides*. White-lipped Snake.

ABUNDANCE AND DISTRIBUTION. Uncommon and restricted to higher altitudes in the northern part of the survey area. Recorded from 1 km NW of Mt Buangor (FWD survey) and Bungaree (NMV specimen).

HABITAT. Open-forest.

*Notechis scutatus*. Eastern Tiger Snake.

ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from the Fern Tree Falls-Mt Cole Forest Park, 2 km NNW of Mt Cole, S of Raglan, 2 km ESE of Beaufort and Devil's Kitchen near Piggoreet (FWD survey).

HABITAT. Open-forest.

*Pseudechis porphyriacus*.

Red-bellied Black Snake.

ABUNDANCE AND DISTRIBUTION. Rare but apparently widespread in the north of the survey area. Recorded from Elmhurst, 7 km E of Elmhurst, 4 km S of Elmhurst and Devil's Kitchen near Piggoreet (FWD survey; Wheeler in Ballarat Courier 13/4/63).

HABITAT. Open-forest, usually near water.

*Pseudonaja textilis*. Eastern Brown Snake.

ABUNDANCE AND DISTRIBUTION. Common and

widespread. Recorded from 3 km SSW of Mt Langi Ghiran, 3 km S of Ben Nevis, 1 km S of Mt Buangor and at Lake Bolac (FWD survey).

HABITAT. Open-forest, woodland and grassland.

*Unechis flagellum*. Little Whip Snake.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Recorded from Ararat, Mt Langi Ghiran, 2 km NW of Mt Langi Ghiran, 0.5 km N of Mt Langi Ghiran, 3 km NNE of Ben Nevis, Stockyard Hill, 3 km NW of Mt Langi Ghiran and Inverleigh Common (FWD

survey; NMV specimens; King 1976).

HABITAT. Open-forest, woodland and grassland; usually found beneath rocks.

### Explanation of Plates

#### PLATE 3

Fig. 1—Pasture land in the basalt plains with Lake Burrumbeet in the background.

Fig. 2—Tall open-forest in the Mt Cole Block.

#### PLATE 4

Fig. 3—Open-forest in the Ben Major-Trawalla Block.

Fig. 4—Feather-tailed Glider. This small arboreal mammal is widespread in the Ballarat area.





FIGURE 1



FIGURE 2





FIGURE 3



FIGURE 4