

MAMMALS AND REPTILES OF NORTH CENTRAL VICTORIA

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Abstract

North Central Victoria contains two major physiographic regions: the Western Highlands which was originally covered by open-forest and woodland; and the Murray Basin Plains which was covered by woodland, shrubland and grassland. Much of the area has been cleared for agriculture and grazing but native vegetation remains on Crown Land which covers about 15% of the area. The open-forests and woodlands have been intensively harvested for timber and now consist mainly of immature stands. Following European settlement three species of mammal and one reptile have probably become extinct and populations of two mammals and two reptiles are very low. The present status of the forty species of mammals and forty-one species of reptiles recorded from the area is discussed in terms of abundance, distribution and habitat and all known records of each species are mapped.

Introduction

Information on the distribution and habitat preference of mammals and reptiles in North Central Victoria is meagre, often imprecise, and scattered throughout journals, survey reports, field notes and museum collections. The occurrence of some mammal species in the area can be deduced from the small-scale maps of Marlow (1965) or from the notes of Ride (1970) and a list of museum specimens from the area has been prepared by the National Museum of Victoria (Brumley and Evans 1976). A general indication of the reptiles occurring in the area can be gathered from the maps of Cogger (1975) but the scale is so small they are of little value to those requiring detailed information on distribution.

Field surveys of vertebrates in North Central Victoria were conducted between June and November 1975 and September and December 1976 by the Fisheries and Wildlife Division (Ministry for Conservation, Victoria). Information from the surveys is being used by the Land Conservation Council (LCC) in its assessment of land-use in Victoria.

In this paper we present the results of our field surveys of the mammals and reptiles, as well as all known previous documented records, in terms of the ecological and geographical distributions of the species recorded.

Survey Area

Topography

The surveys were conducted in an area of 19,300 km² bounded by Stawell to the west,

Nagambie to the east, Wedderburn to the north and Clunes to the south (Fig. 1). The area includes two main physiographic regions, the Western Highlands and Murray Basin Plains (Hills 1967). In the south the Western Highlands reach heights of 700 m in the Pyrene Range and extend northwards across the survey area in a series of four low, rounded ridges composed largely of Ordovician and Silurian slates and sandstones. These ridges are 100-500 m high and the Ordovician and Silurian deposits, which are auriferous, have been extensively mined for alluvial and reef gold.

The ridges are separated by the valleys of five north-flowing rivers, the Wimmera, Avoca, Loddon, Campaspe and Goulburn. In the north these valleys merge with the Murray Basin Plains which consist of extensive, flat to undulating alluvial plains.

Climate

The survey area has a warm temperate climate although it is generally warmer and drier on the plains to the north than on the slopes of the Western Highlands.

Rain falls throughout the year, usually with a winter maximum. Mean annual rainfall for stations within the survey area varies from 504 mm at St Arnaud to 624 mm at Castlemaine. Daily mean temperatures in summer are about 14° C (minimum) and 29° C (maximum) and in winter are about 4° C (minimum) and 12° C (maximum).

TABLE 1

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

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Daily maximum temperature (° C)													
A Mean	29.2	29.8	28.5	22.5	15.9	13.5	13.7	14.8	15.4	21.7	24.5	27.1	21.4
B Mean	29.0	29.0	24.8	20.0	16.3	13.1	12.5	13.7	15.0	20.0	23.0	26.4	20.2
Daily minimum temperature (° C)													
A Mean	13.4	15.0	12.7	9.4	5.6	3.3	2.6	3.2	4.2	6.4	9.2	11.5	8.0
B Mean	13.8	14.4	10.6	8.6	5.1	2.8	2.3	3.3	4.5	6.7	8.9	10.5	7.6
Rainfall (mm)													
A Mean	67	65	39	53	44	37	32	54	40	43	58	22	554
A Median	44	31	6	55	41	27	26	48	41	17	65	17	475
B Mean	33	38	39	44	57	64	58	61	54	50	39	36	573
B Median	20	25	25	34	52	61	58	57	51	45	35	25	569
Raindays (No.)													
A Mean	5	6	6	11	9	9	10	13	8	6	7	3	93
B Mean	4	4	4	6	9	10	11	12	10	9	6	5	90

A—Serpentine (Shire Office)

B—Heathcote (Post Office)

Open-forest II (Plate 1, Fig. 1) occurs throughout the survey area at lower altitudes on soils derived from Ordovician and Silurian sedimentaries (Newman 1961). These soils are generally poor clay loams which are shallow and skeletal on the ridges but deeper in gullies and on river flats. Dominant tree species are *Eucalyptus sideroxylon* and *E. macrorhyncha*. Less common are *E. polyanthemos*, *E. gonio-calyx*, *E. microcarpa* and *E. melliodora*. In most areas heavy demand for timber during the goldrush, and subsequent forestry practices have resulted in the forests becoming even-aged and having immature stands with much coppice regrowth and very few hollows. The shrub layer varies from sparse to mid-dense, is up to 2 m tall, and is floristically diverse. Common genera include *Acacia*, *Cassinia*, *Daviesia*, *Pultenaea*, *Grevillea* and *Epacris*. The ground-cover, often sparse, consists of scattered tussock grasses, herbs and lichens.

2. Woodland

This formation, which occurs on low rises and plains throughout the survey area, was once widespread but has been largely cleared and is now found only in scattered patches on Crown Land. On low rises of the northern extremities of the Western Highlands, there are woodlands of *Eucalyptus sideroxylon*, *E. leucoxylon*, *E. microcarpa* and *E. melliodora*. The understorey of such woodlands is usually

similar to that described for open-forest II. On the Murray Basin Plains, particularly along the broad river valleys, woodlands of *E. camaldulensis* once occurred extensively but this association has been largely cleared for agriculture. The remaining woodlands have usually been heavily grazed so that the understorey has changed from a natural *Danthonia* and *Stipa* association to one dominated by introduced pasture plants and weeds (Arnold 1977) (Plate 1, Fig. 2).

3. Shrubland

This formation consists of scattered stands of mallee vegetation growing on sandy or gravel soils in the northern parts of the survey area. The term mallee refers to dwarf, multi-stemmed eucalypts having underground lignotubers. Mallee eucalypts present in the survey area include *Eucalyptus beluriana*, *E. froggattii*, *E. polybractea*, *E. viridis* and *E. odorata* and vary from 4 to 8 m tall with thin, straight, multiple stems and very few hollows. There are often two shrub layers: one 1.5-3 m tall consisting of acacias, melaleucas and casuarinas; the other 0.1-1 m tall consisting of heathy shrubs such as species of *Grevillea*, *Daviesia*, *Hibbertia* and *Baeckia*. The ground-cover is open and consists of scattered ephemeral herbs.

4. Grassland

In this formation trees and shrubs are absent

or restricted to the banks of watercourses and swamps or to isolated hills. Natural grasslands of *Themeda* and *Poa* or *Danthonia* and *Stipa* may have occurred on the Murray Basin Plains. These plains have been altered by agriculture, grazing and artificial fertilizers and now consist of cereal crops, improved pasture or degraded grasslands dominated by introduced species particularly Mediterranean annuals.

5. Aquatic Habitats

Wetlands in the survey area are mainly confined to the Murray Basin Plains (Fig. 1). They consist of large reservoirs, some natural lakes, slow-flowing rivers and farm impoundments. Small streams with intermittent flows occur in the Western Highlands but are not important mammal or reptile habitats.

Methods

The surveys were conducted on Crown Land but observations were made on private land whenever possible. A total of 260 man-days was spent in the survey area but part of each man-day was taken up surveying birds. Half of this effort occurred between 23 June and 24 November 1975 and half between 13 September and 17 December 1976.

Small mammal trapping was carried out using wire cage traps (360 mm x 200 mm x 160 mm) baited with a mixture of peanut butter, honey and rolled oats. Eighty to 100 traps were set in rows of 10 at each site, left in place for 2 nights, and cleared each morning. Captured animals were either retained or marked and released. Spotlighting for arboreal mammals and macropods was carried out from a slowly moving vehicle or on foot using portable 6 volt spotlights. Characteristic scats, burrows or diggings and road-killed animals were used as evidence of a species presence wherever possible. Bats were collected at dams by stretching fine spring steel wires just above the surface of the water. Any bats which hit the wires fell to the water and were easily captured as they swam ashore. Reptiles were collected by hand by searching amongst logs, rocks and litter. A representative collection of small mammals and reptiles has been lodged

in the reference collections of the National Museum of Victoria (NMV).

A search of archival Victorian mammal collections for specimens from the survey area was carried out by the Vertebrate Department, NMV (Brumley and Evans 1976). A. J. Coventry provided a list of NMV reptile specimens from the survey area. We searched the literature and reports of the mammal survey groups operating in Victoria and interviewed local naturalists to obtain a more complete picture of the mammal and reptile faunas. All sources of information, including lists of specimens, literature records and personal communications, are listed alphabetically in the Sources of Information section which, in this paper, replaces the usual References section. Each source is numbered consecutively to allow cross-referencing between it and relevant species in the Annotated Lists.

All records are mapped onto a 5' latitude-longitude grid in a manner similar to that of Churchill and de Corona (1972), Brook (1976), Norris *et al.* (this volume) and the Royal Australasian Ornithologists Union's bird atlas project. Grid mapping allows the handling of large amounts of data and gives a clear picture of distribution patterns. Records from January 1967 to December 1977 are indicated by closed circles in the appropriate grid; those before them by open circles.

We stress that these maps show only known records and do not represent complete distributions; rather they illustrate the lack of detailed knowledge of the distribution of many species. Distribution data for the easily observed species such as the large macropods are more complete than those of the small shy species such as the Feather-tailed Glider *Acrobates pygmaeus*. No attempt was made to visit every 5' grid so even the maps for easily observed species are incomplete. This is illustrated by the map for the Rabbit *Oryctolagus cuniculus*, a species which may well occur in every grid. The distribution maps should be read in conjunction with Fig. 1, showing the distribution of Crown Land which represents most of the remaining timbered areas, and with Fig. 2 showing trapping and spotlighting coverage during the field survey.

Results

Thirty-eight species of mammals were recorded during the survey and three others (Tiger Cat *Dasyurus maculatus*, Quoll *D. viverrinus* and Dingo *Canis familiaris*) have probably become extinct since European settlement. The distribution, abundance and habitat of each species are discussed in the annotated lists as are any data on breeding which were collected during the survey.

The densities of small mammals are low. During 4657 trap nights only 107 individuals of 6 species were captured, an overall trapping success rate of 2.3%. Densities were highest in open-forest III in the Pyrene Range and in mature open-forest II near Stuart Mill. Trapping success rates for species of small mammals are given in the annotated list.

Arboreal mammals also occur at low densities. The densities of arboreal species were highest in open-forest III, and lowest in shrubland. Large macropods are generally common.

Eight families of reptiles are represented in the 41 species recorded (Table 2). The reptile fauna of the survey area is transitional between The Bassian fauna of the Western and Central Highlands and the Eyrean fauna of the Mallee and Murray Basin Plains. Within the survey area 15 Bassian species reach the northern limit of their range and 17 Eyrean species reach their southern limit. Nine species have ranges which include the entire survey area.

TABLE 2

Families of reptiles and the number of species recorded in each.

Chelidae	(Tortoises)	2
Agamidae	(Dragons)	2
Gekkonidae	(Geckoes)	3
Pygopodidae	(Legless Lizards)	3
Scincidae	(Skinks)	19
Varanidae	(Goannas)	2
Elapidae	(Snakes)	7
Typhlopidae	(Blind Snakes)	3

Discussion

Almost all the survey area has been used intensively by European man at some time

during the past 150 years. All areas suitable for agriculture have been cleared of natural vegetation and are used for pastures or crops. Areas less suitable for agriculture remain as isolated patches of timbered Crown Land, which cover approximately 15% of the survey area and are used mainly for forestry or production of eucalyptus oil.

The extensive auriferous deposits on the low hills of the Western Highlands were practically mined out in the latter half of the 19th century but the effects of mining are still apparent. Alluvial mining has resulted in severe erosion in some areas. Mining requires large quantities of timber for fuel, and many of the forests were heavily cut to meet this demand. Since then the forests have been managed on a short rotation to produce poles, fence posts, railway sleepers and fuel (Newman 1961) and now consist of even-aged, immature stands having few hollows.

This lack of mature trees with hollows is probably one of the main reasons for the very low densities of arboreal mammals in open-forest II. Newman (1961) details the history of exploitation of the open-forest II and describes present forestry practices such as regeneration felling (clearing of areas with a large percentage of trees of poor form) and liberation treatment (the felling or ringbarking of mature trees which affect tree regeneration adversely). These practices are deleterious to animals requiring tree hollows and, in the survey area, may threaten the existence of the Squirrel Glider *Petaurus norfolcensis*, Tuan *Phascogale tapoatafa* (Plate 2, Fig. 4) and Lace Monitor *Varanus varius*. Careful management of the remaining areas of mature open-forest II and woodland, including roadside verges, is necessary to ensure the survival of these species in the survey area.

The reasons for the low densities of small ground-dwelling mammals vary. The general lack of dense shrub and ground-cover and the dry conditions exclude species requiring dense cover. Two such species, the Swamp Rat *Rattus lutreolus* and Brown Antechinus *Antechinus stuartii*, have the northern limit of their range in the wetter forests of the Pyrene

Range. Three other small mammals, the Tuan, Yellow-footed Antechinus *Antechinus flavipes* and Mouse Dunnart *Sminthopsis murina* are more typical of drier open-forest II and woodland, and are present at low densities probably because of the lack of mature trees and fallen logs in the heavily used forests and because of the reduced diversity and biomass of the shrub and ground-layers caused by grazing.

Most reptiles are less sensitive to changes in the composition and structure of vegetation than are mammals or birds. So long as the climate is suitable and shelter remains adequate, reptiles can usually be found throughout their range. Species that appear to be influenced by present land-use practices are the wholly or partially arboreal and fossorial species. The Lacc Monitor is rarely recorded. It depends on mature trees, which are now much depleted in number. The Marbled Gecko *Phyllodactylus marmoratus* appears to have benefited from forestry practices that provide many old tree stumps with gaps (for shelter) between the bark and the wood. Populations of species such as *Sphenomorphus tympanum*, Garden Skink *Lampropholis guichenoti* and *Morethia boulengeri* are increased by the presence of large numbers of decaying logs. Fossorial species, such as the Bandy Bandy *Vermicella annulata* and various Blind Snakes (*Typhlina*) that inhabit areas with deep friable soils have their microhabitats destroyed by cultivation and have been rarely recorded

from the survey area since agriculture became widespread in the late 19th Century.

Annotated List of Mammals

Nomenclature follows Ride (1970). Grid references to localities are given in Appendix 1. Closed circles represent records dated post January 1967; open circles represent those prior to then.

TACHYGLOSSIDAE

1. *Tachyglossus aculeatus*. Echidna.

ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from: Stawell; Mt Avoca; 3 km W of Percydale; 7 km SW of Avoca; 11 km SSW of Stuart Mill; 5 km S of Teddington Reservoir; Whychitella Forest; 7 km SE of Wedderburn; Melville Caves; Inglewood; 2 km E of Newstead; Mt Alexander; Eppalock; Kamarooka Forest; Mandurang Forest; Lockwood Forest; Knowsley State Forest; Wellsford State Forest; Spring Gully; Big Hill; Whipstick Forest Park; 4 km SE of Heathcote; and Rushworth State Forest. **HABITAT.** All terrestrial habitats except farmland where no native vegetation remains. Echidnas occur wherever termites, ants and suitable shelter are available. **SOURCES OF INFORMATION.** A6; B2; B3; B5; F1; F3; J1; J2; M2; M4; W3; W6; W7. **MOST RECENT RECORD.** Observed during 1975/76 FWD surveys.

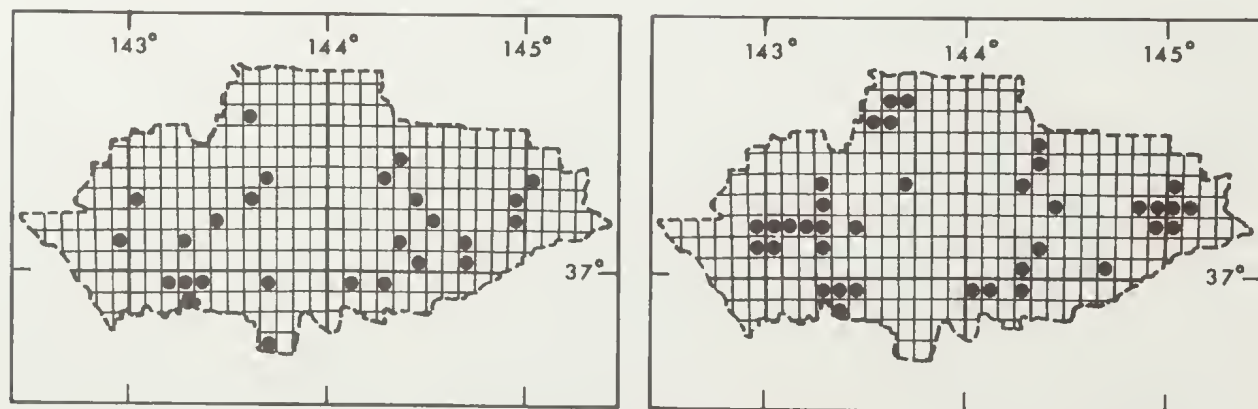
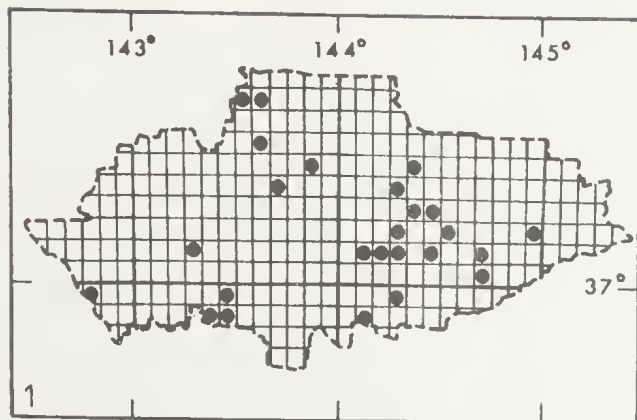


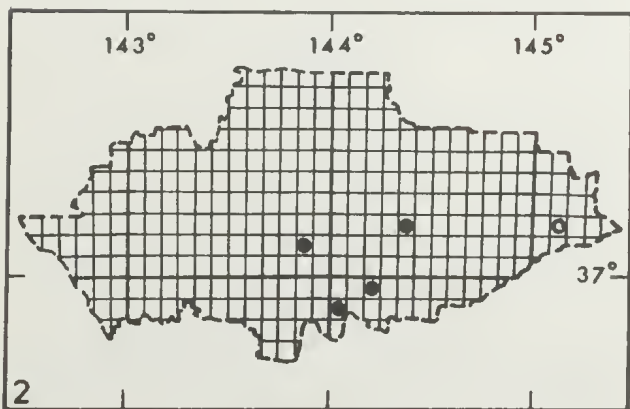
Figure 2—Grids in which trapping (left) and spotlighting (right) were carried out during the FWD field survey.



ORNITHORHYNCHIDAE

2. *Ornithorhynchus anatinus*. Platypus.

ABUNDANCE AND DISTRIBUTION. Uncommon and restricted. Probably present in streams and reservoirs throughout the area but documented only from the Goulburn River at Nagambie; the Loddon and Campaspe Rivers where they are locally common; Barker Creek, Castlemaine; and Sheepwash Creek, Strathfieldsaye. **HABITAT.** Aquatic; requiring permanent fresh water with a mud or gravel substrate and banks of friable soil in which to construct nest tunnels, which may be up to 20 m long. The tunnels, being usually close to the soil surface, are susceptible to cave-ins if the banks are subjected to grazing or other heavy use. **CONSERVATION ASPECTS.** The Goulburn River is an important habitat for this species and the need to maintain banks free from heavy use should be considered when use of stream frontages is planned.

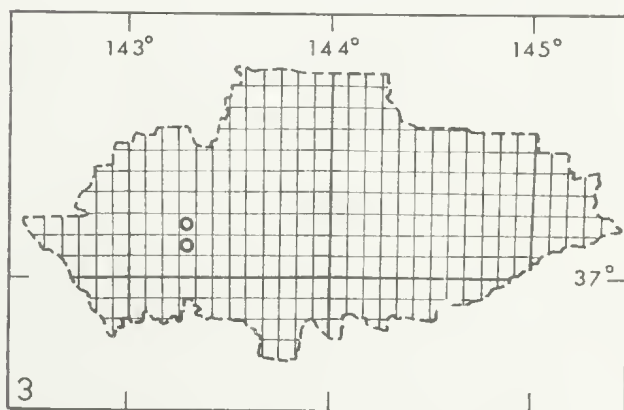


SOURCES OF INFORMATION. A3; B3; B5; F2; F3; P2; W3; W6. **MOST RECENT RECORD.** 1976 (Parnaby *pers. comm.*).

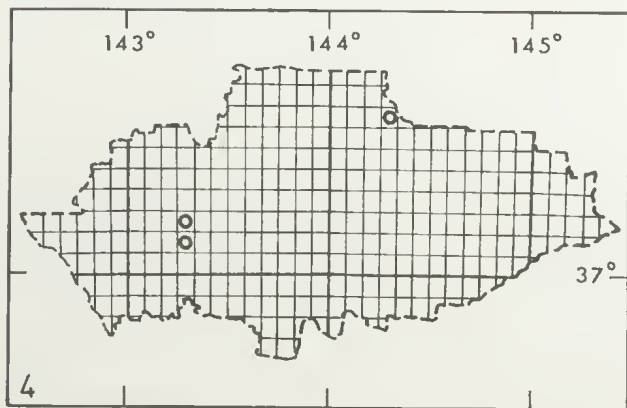
DASYURIDAE

3. *Dasyurus maculatus*. Tiger Cat.

ABUNDANCE AND DISTRIBUTION. Probably extinct in the survey area. Anecdotal evidence of its presence in the Stuart Mill area in the early 1900s was provided by R. Douglas (*pers. comm.*). Recent reports from Mt Alexander (Miller *pers. comm.*) require confirmation. **HABITAT.** Open-forest III and II. **SOURCES OF INFORMATION.** D1; M7. **MOST RECENT RECORD.** None.

4. *Dasyurus viverrinus*. Quoll.

ABUNDANCE AND DISTRIBUTION. Probably extinct in the survey area. Quolls were widespread and apparently common in Victoria at the turn of the century but are probably no longer present in the State. R. Douglas (*pers. comm.*) provided anecdotal evidence of its occur-



rence in the Stuart Mill area in the early 1900s. The species may have been present at Tang Tang Swamp near Dingee until the 1950s (Wilkinson *pers. comm.*). HABITAT. Open-forest II and woodland. SOURCES OF INFORMATION. D1; W6. MOST RECENT RECORD. None.

5. *Phascogale tapoatafa*. Tuan.

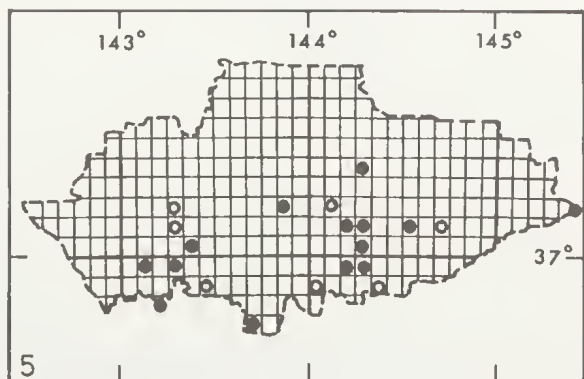
ABUNDANCE AND DISTRIBUTION. Uncommon to rare and widespread in the south, not recorded in the north. Recorded from: Landsborough; Eversly; Elmhurst; Teddington; Warrenmang; Avoca; Stuart Mill; 8 km S of Redbank; Mt Beckworth; Newstead; Castlemaine; Tarnagulla; Lockwood; Walmer Forest; Big Hill; Whipstick Forest Park; Mt Alexander; Elphinstone; Eppalock; Heathcote; Graytown; and Longwood. HABITAT. Open-forest III and II and woodland, particularly those of box or stringbark, having a grass or open shrub understorey. Requires hollow trees for nest sites. CONSERVATION ASPECTS. Woodland and open-forest were formerly much more widespread in the survey area and those remaining have been altered by timber cutting, mining and grazing. The specific effects of these changes on Tuan populations are unknown but are almost certainly deleterious. The most stable population in the survey area appears to be in the Stuart Mill area but reservations of mature woodland and open-forest habitats are urgently required throughout the area. BREEDING. A female, lactating from all 8

nipples, was trapped at Mt Alexander on 25 November 1976. SOURCES OF INFORMATION. B2 [erroneously called *Antechinus tapoatafa*]; B3; B5; C1 [as *P. penicillata*]; E1; F2; F3; F4; M4; M5; M7; P2; W3; W6. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV C16230).

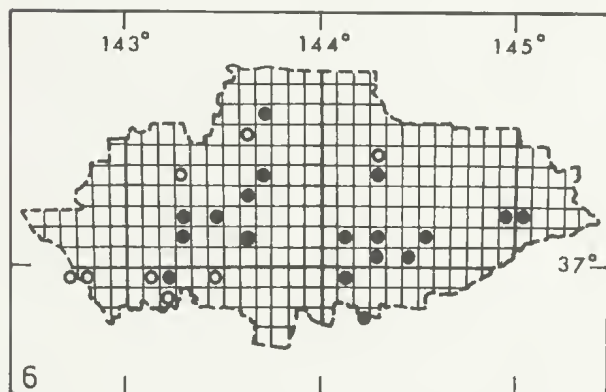
6. *Antechinus flavipes*.

Yellow-footed Antechinus.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Recorded from: Deep Lead; Stawell; Landsborough; St Arnaud; 5 km NW of Redbank; 5 km N of Glenlofty; Glenlofty; Stuart Mill; 3 km E of Stuart Mill; 8 km S of Stuart Mill; 5 km NW of Avoca; Avoca; 14 km E of Stuart Mill; Wedderburn; 4 km NW of Moliagul; 4 km WNW of Mt Hooghly; Melville Caves; 9 km SW of Korong Vale; Mt Beckworth; Tarnagulla; Lockwood; 5 km W of Muckleford 5 km SSW of Kamarooka; 26 km N of Bendigo; Whipstick Forest Park; Mandurang Forest; Vaughan; Mt Alexander; 3 km ESE of Guildford; 8 km E of Pilchers Bridge Twin Rivers; 11 km NNW of Redesdale; Rushworth State Forest; Mt Black; 9 km SW of Baillieston; and 2 km N of Graytown. During the FWD survey a total of 34 individuals was captured at 12 sites. Maximum trapping rate was 6% (14 km E of Stuart Mill). HABITAT. Open-forest II and woodland particularly where the trees are mature and have hollows for nest sites. Densities were highest in mixed *Eucalyptus leucoxylon*, *E. melliodora* and *E. sideroxylon* woodland. The greatest altitude at which the species was recorded is 520 m in the Pyrene Range. CONSERVATION ASPECTS. This species is surprisingly uncommon at many localities. The forestry practice of removing mature and over-mature trees may be partly responsible for its rarity. BREEDING. Trapping was not continuous in spring and early summer of 1975 or 1976 so little precise data were

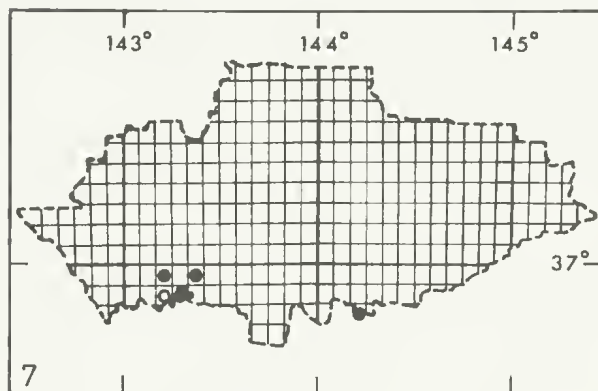


obtained. Females with pouch young were trapped on 20 September 1975 and 24 November 1976. In 1976 lactating females without pouch young were first trapped on 29 September and independent young were trapped and observed from 23 to 25 November. The number of nipples varied from 10 to 12. The number of captured males was too few to allow comment on the timing of post-mating die-off. SOURCES OF INFORMATION. B2; B3; B5; F2; F3; H1; M2; M4; M7; P2; W3; W4; W6. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV C16229).

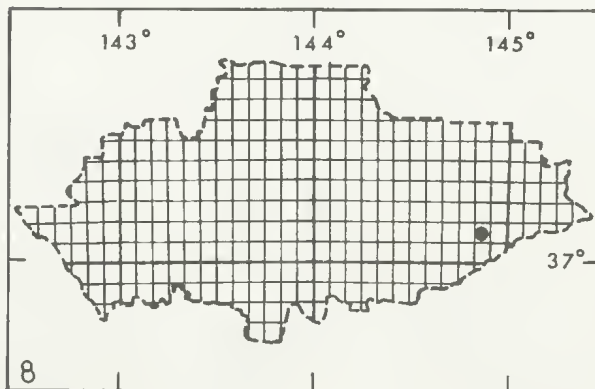


7. *Antechinus stuartii*. Brown Antechinus. ABUNDANCE AND DISTRIBUTION. Common but restricted to the south. Recorded from: Glenlofty; 6 km N of Glenlofty; the headwaters of Glenlofty Creek; headwaters of Nowhere Creek; and 3.5 km W of Percydale, all in the Pyrene Range, and from Vaughan. These localities represent the northern limit of its range in Central Victoria. During the FWD survey a total of 25 individuals was trapped at 4 sites with a maximum trapping rate of 5%. HABITAT. Open-forest III and II particularly where there is well-developed ground-cover. Recorded in gullies in *Eucalyptus viminalis*, *E. st-johnii* open-forest; in ridge-top *E. rubida* open-forest; and in mixed *E. st-johnii*, *E. microcarpa*, *E. melliodora*, *E. polyanthemos*, *E. macrohyncha* open-forest with sparse ground-cover. BREEDING. Trapping in

the Pyrene Range took place between 7 and 15 December 1976. Adult females had 9 or 10 nipples. Lactating females without pouch young were trapped from 8-14 December and independent young were trapped on 12 and 13 December. SOURCES OF INFORMATION. B5; F3; P2; W4. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV C16368).



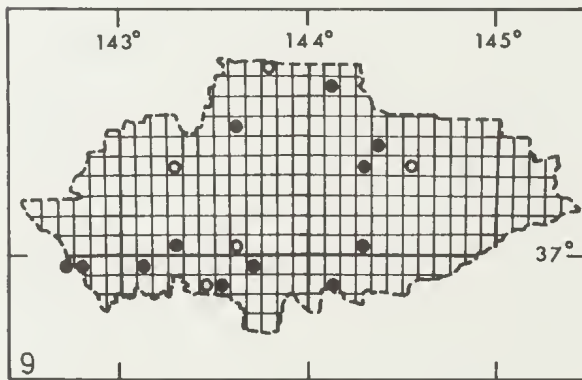
8. *Smynthopsis murina*. Mouse Dunnart. ABUNDANCE AND DISTRIBUTION. Rare and restricted. Only one record exists from the survey area: from 9 km ENE of Costerfield in 1975. HABITAT. In other parts of Victoria it is associated with dry woodland or shrubland (mallee) habitats. The specimen at Costerfield was found dead in *Eucalyptus sideroxylon* woodland having a sparse understorey. SOURCES OF INFORMATION. B5; F3. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV C15741).



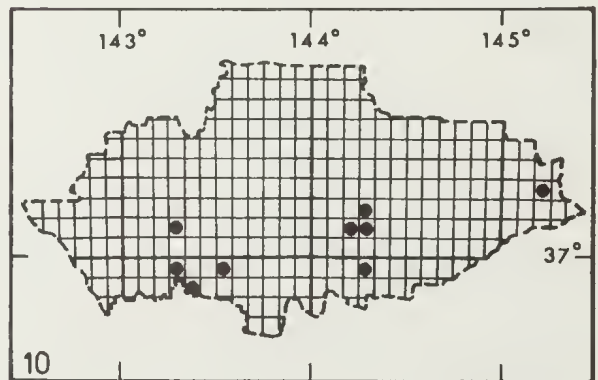
9. *Sminthopsis crassicaudata*.

Fat-tailed Dunnart.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread in the western two-thirds of the survey area; not recorded in the eastern third. Recorded from: Deep Lead; Stawell; Landsborough; St Arnaud; Avoca; 8 km S of Redbank; 5 km SW of Redbank; 1 km S of Lamplough; 11 km S of Wedderburn; Mysia; Guildford Plateau; Maryborough; Mt Alexander; Mt Hooghly; 3 km E of Calivil; Calivil; Whipstick Forest Park; Kamarooka; and Goornong. HABITAT. Grassland and grassy woodland. The native grasslands of the survey area have largely been converted to farmland where this species appears to survive well as long as rocks or logs are available for nest sites. SOURCES OF INFORMATION. B2; B3; B5; C5; D1; F2; F3; M4 [erroneously called *Antechinus macdonnellensis*]; M5; W3; W6. MOST RECENT RECORD. 1975 (NMV C15376).



South; Spring Gully; Big Hill; Bendigo; and 5 km N of Nagambie. This distribution is a result of liberations by the FWD. So far as is known, no populations remained in the survey area following the decline of this species in the late 19th and early 20th centuries. Liberations began in 1941 and are continuing. A total of 598 koalas have been liberated near Castlemaine, 18 near Avoca, 17 at Metcalf, an unknown number near Redbank and 4 on Goat Island, Nagambie. HABITAT. Open-forest III and II and woodland. Koalas have specific food requirements and only the leaves of certain eucalypts are suitable. In the survey area suitable food trees (*Eucalyptus viminalis*, *E. ovata*, *E. obliqua*, *E. goniocalyx*, *E. rubida*, *E. melliodora*, *E. camaldulensis* and *E. macrorhyncha*) occur only on the Western Highlands and foothills, and along streams where *E. camaldulensis* occurs. SOURCES OF INFORMATION. B3; B5; F2; F3; L2; M4; M5; P3; W3; W6. MOST RECENT RECORD. Observed during 1975/76 FWD survey.



PHASCOLARCTIDAE

10. *Phascolarctos cinereus*. Koala.

ABUNDANCE AND DISTRIBUTION. Uncommon and restricted to the Pyrene Range; Lower Homebush; the forest between St Arnaud and Redbank; Mt Alexander; the Bendigo region; and possibly Goat Island in the Goulburn River near Nagambie. Specific records come from: Mt Avoca; Warrenmang; Teddington Reservoir; 4 km S of Teddington Reservoir; Lower Homebush; Mt Alexander; Mandurang

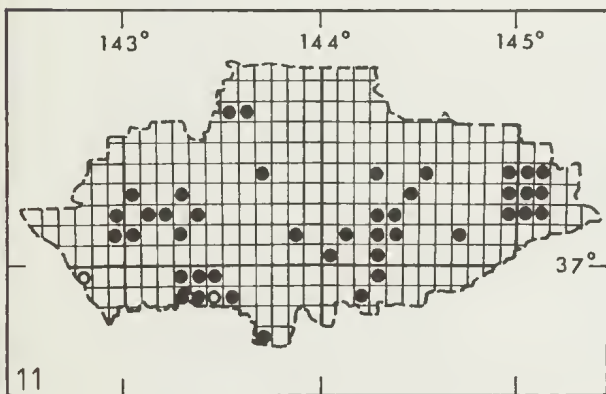
PHALANGERIDAE

11. *Trichosurus vulpecula*.

Brush-tailed Possum.

ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from: Stawell; Kingston Mine; Paradise; Rostron; Tattington; 8 km E of Stuart Mill; 5 km ENE of Kanya; 11 km N of Stuart Mill; 1 km S of Teddington Reservoir; 7 km S of

Warrenmang; Mt Warrenmang; Percydale; throughout the Pyrenees Range; Avoca; Lamplough; 7 km E of Stuart Mill; 14 km E of Stuart Mill; Whychitella Forest Park; 6 km SW of Korong Vale; Melville Caves; Mt Korong; Mt Beckworth; Eddington; Maldon; Castlemaine; Campbells Creek; 3 km W of Sedgwick; Lockwood Forest; Emu Creek; Mt Alexander; Bendigo; Whipstick Forest Park; 3 km E of Strathfieldsay; Goornong; Mt Sugarloaf; Heathcote; throughout Rushworth State Forest; Graytown; Reedy Lake State Forest; and Nagambie. HABITAT. Present wherever there are trees with suitable nest hollows; most common in woodland but also plentiful in open-forest III and II, roadside reserves and farmland with trees. SOURCES OF INFORMATION. A6; B2; B3; B5; E1; F1; F3; M2; M4; W3; W6; W7. MOST RECENT RECORD. Observed during 1975/76 FWD survey.



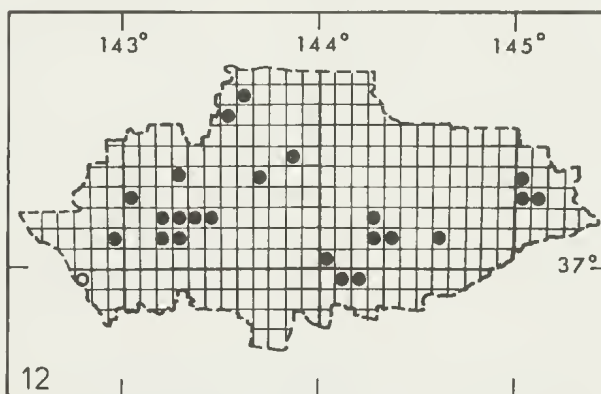
PETAURIDAE

12. *Pseudocheirus peregrinus*.

Ring-tailed Possum.

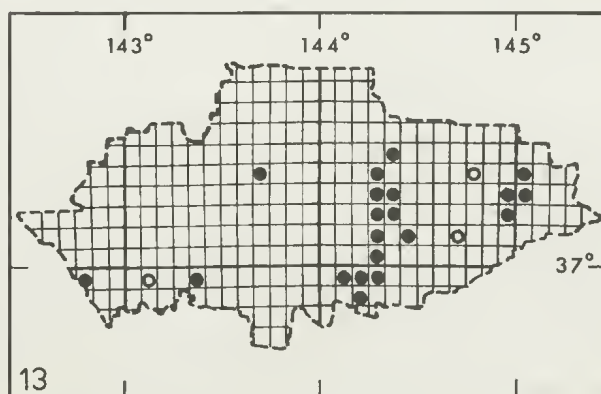
ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Recorded from: Stawell; St Arnaud; Mt Bolangum; Kingston Mine; Rostron; Teddington Reservoir; 4 km S of Teddington Reservoir; 7 km E of Stuart Mill; 13 km E of Stuart Mill; Whychitella Forest Park; Melville Caves; Inglewood; Bendigo; Emu Creek; Knowsley State Forest; Castlemaine; 3 km W of Sedgwick; Mt

Tarrengower; Maldon; 4 km W of Muckleford; Mt Ida; Whroo; and Reedy Lake State Forest. HABITAT. Open-forest III and II and woodland. Usually associated with a tall, dense shrub layer in which nests are built. The species also occurs in open-forest and woodland lacking a shrub layer, where they construct nests in hollows or clumps of dense foliage such as provided by Mistletoe (Loranthaceae). The majority of records are from *Eucalyptus microcarpa*, *E. melliodora* open-forest II and *E. camaldulensis* woodland. SOURCES OF INFORMATION. B2 [erroneously called *Trichosurus peregrinus*]; B3; B5; F3; M2; M4 [as *P. laniginosus*]; P2; S2; W3; W6; W7. MOST RECENT RECORD. 1976 (FWD 10913).



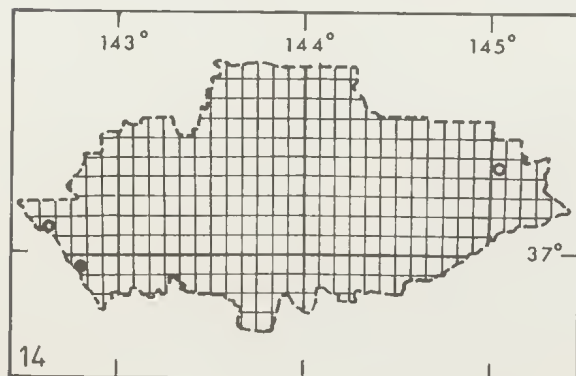
13. *Petaurus breviceps*. Sugar Glider.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Recorded from: Stawell; Landsborough; 7 km W of Avoca; Kingower; Fell Gully; 3 km W of Sedgwick; 3 km SSE of Guildford;



Spring Gully; 3 km E of Strathfieldsaye; Strathfieldsaye; Kennington; Huntly; Kamarooka; Wellsford State Forest; Muckleford Creek; Bendigo; 5 km ESE of Maldon; Mt Alexander; Eppalock; Mt Ida; Colbinabbin; and Rushworth State Forest. HABITAT. Open-forest III and II and woodland, particularly where acacias are present. Tree hollows are required for nest sites. SOURCES OF INFORMATION. B2; B3; B5; F2; F3; M2; M4; P2; W3; W6. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMVC16375).

14. *Petaurus norfolcensis*. Squirrel Glider.
ABUNDANCE AND DISTRIBUTION. Rare and restricted (localized and uncommon to rare in Victoria). Recorded from: 5 km NW of Stawell; Glenorchy; and 17.5 km S of Colbinabbin in Rushworth State Forest. HABITAT. Woodlands of *Eucalyptus microcarpa*, *E. melliodora*, *E. leucoxylon* or *E. camaldulensis* appear to be the preferred habitat in Victoria. CONSERVATION ASPECTS. Most of its preferred habitat has been cleared or altered by timber cutting, mining and grazing. Wakefield (1974) states that there is probably nothing that can be done for the Glenorchy population because its habitat has been largely destroyed. Only one authentic record is known from Rushworth State Forest and this dates from 1961. The position of this species in Victoria is precarious and reservation of the known localities is urgently required.



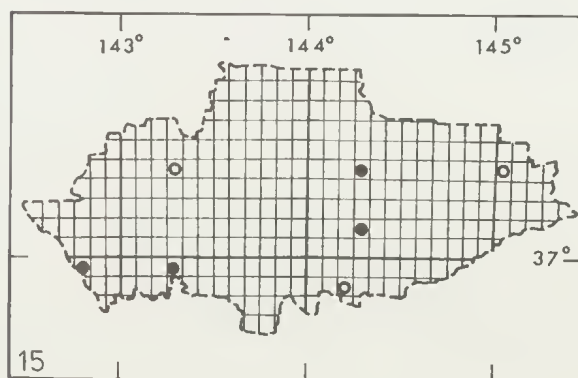
BREEDING. A female with 2 pouch young was captured 17.5 km S of Colbinabbin on 25 September 1961. SOURCES OF INFORMATION. A5; B5; F2; W2; W3. MOST RECENT RECORD. 1970 (NMV C9543).

BURRAMYIDAE

15. *Acrobates pygmaeus*.

Feather-tailed Glider.

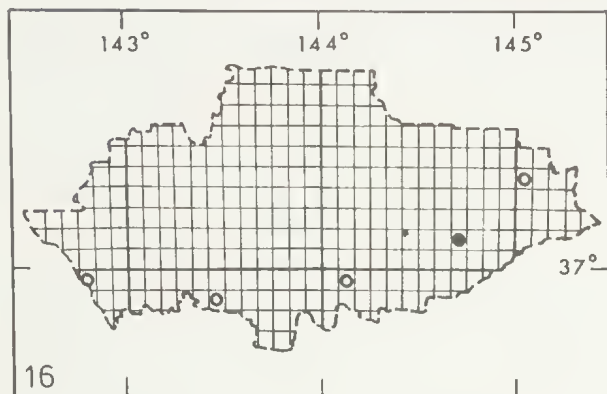
ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Recorded from: Stawell; St Arnaud; Warrenmang; Chewton; Whipstick Forest Park; Sedgewick; and Rushworth State Forest. HABITAT. Open-forest III and II and woodland. Areas with a well-developed shrub layer appear to be preferred. SOURCES OF INFORMATION. A5; B5; F2; W2; W3. MOST RECENT RECORD. 1971 (NMV C11121).



16. *Cercartetus nanus*.

Eastern Pygmy Possum.

ABUNDANCE AND DISTRIBUTION. Rare and widespread in the south, not recorded from the north. Recorded from: Stawell; Avoca; Muckleford; Mt Ida; and Rushworth State Forest. HABITAT. Open-forest III and II and woodland. Most woodlands and open-forests are suitable, particularly those with a tall, dense layer of proteaceous and myrtaceous shrubs. SOURCES OF INFORMATION. A1; A4; B5; F2; M4; W1; W3; W6. MOST RECENT RECORD. 1965 (FWD P496).

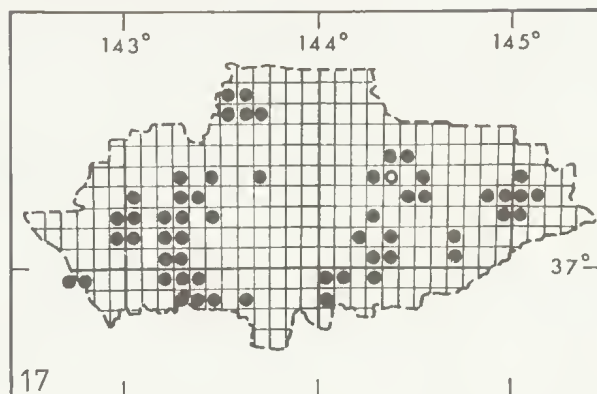


MACROPODIDAE

17. *Macropus giganteus*.

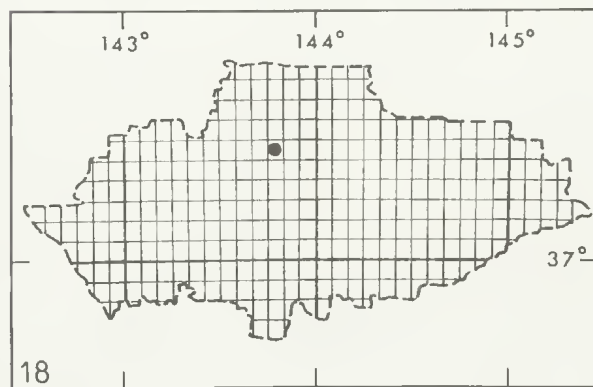
Eastern Grey Kangaroo.

ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from: Deep Lead; Stawell; Mt Bolangum; Kingston Mine; Rostron; St Arnaud; Stuart Mill; 1 km W of Teddington Reservoir; Teddington; Redbank; throughout the Pyrene Range; Percydale; Avoca; 13 km E of Stuart Mill; Logan; 9 km W of Emu; Bung Bong; 5 km ENE of Kanya; Whyehitella Forest Park; Korong Vale; Melville Caves; Maldon; 5 km W of Muckleford; Newstead; Hareourt; Mt Alexander; Big Hill; Bendigo; Emu Creek; Whipstiek Forest Park; Kamarooka Forest; Bagshot; Goornong; Axedale State Forest; 5 km W of Pilchers Bridge; Lake Eppalock; Heathcote; 6 km E of Heathcote; Graytown; and throughout Rushworth State Forest. **HABITAT.** Open-forest III and II or woodland with grass understoreys; also those with shrub understoreys and shrubland (mallee) if nearby grassland is available for grazing. **CONSERVATION ASPECTS.** The small size and isolation of many of the populations of Eastern Grey Kangaroos make them vulnerable to habitat destruction and illegal shooting. Large reserves are necessary to support viable populations. **SOURCES OF INFORMATION.** A6; B2 [as *M. major*]; B3; B5; F1; F2; F3; M2; M4 [as *M. major*]; M5; P2; W3; W6; W7. **MOST RECENT RECORD.** Collected during 1975/76 FWD survey (NMV C16892).

18. *Macropus fuliginosus*.

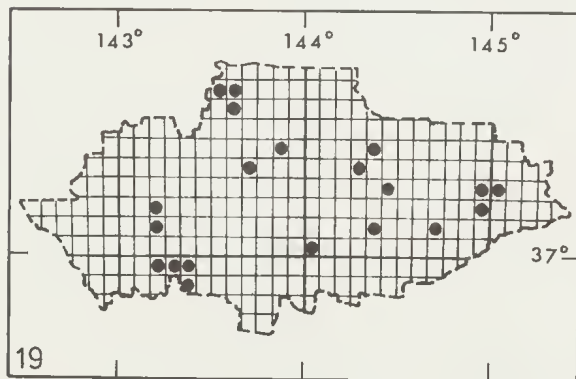
Western Grey Kangaroo.

ABUNDANCE AND DISTRIBUTION. Restricted to the north-west where it is probably uncommon. Recorded from: 4 km W of Inglewood and, as a road-killed animal, 12 km NW of Inglewood (Beleher pers. comm.). There are unconfirmed reports from the Whyehitella area (Johnson pers. comm.). **HABITAT.** Open-forest II and woodland with a grassy understorey, shrubland and grassland. **SOURCES OF INFORMATION.** B1; J2; W7. **MOST RECENT RECORD.** 1977 (NMV C17186).

19. *Wallabia bicolor*. Black Wallaby.

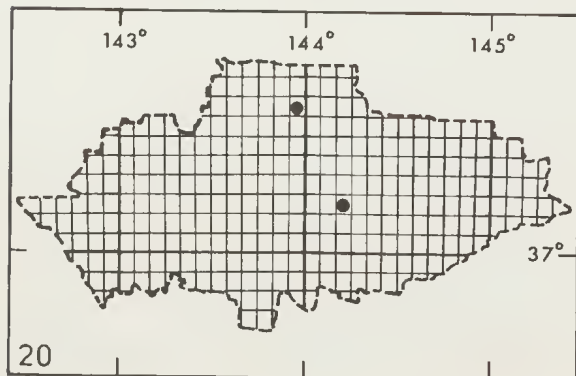
ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Locally common in the Pyrene Range and Rushworth State Forest. Recorded from: throughout the Pyrene Range; Stuart Mill; 7 km NNW of Redbank; Whyehitella Forest Park; Melville Caves; Inglewood; Maldon; Whipstiek Forest Park; Kamarooka

Forest; Axedale State Forest; Emu Creek; Heathcote; Mt Ida; and throughout Rushworth State Forest. HABITAT. Open-forest III and II and mallee. This browsing species is most common in areas having a dense shrub understorey but occurs in lower numbers where a sparse shrub understorey exists. SOURCES OF INFORMATION. A6; B2; B3; B5; F1; F2; F3; L4 [photograph p10 erroneously labelled Red-necked Wallaby]; M2; M4; P2; T1; W3; W6; W7. MOST RECENT RECORD. Observed during 1975/76 FWD surveys.



PTEROPIDAE

20. *Pteropus scapulatus*. Little Red Fruit Bat. ABUNDANCE AND DISTRIBUTION. Rare and restricted. An autumn vagrant to Central Victoria. Two records exist from the survey area; from Kangaroo Flat and Serpentine. HABITAT. Open-forest III and II, woodland and farmland. The few individuals which wander as far south as Victoria usually occur near flowering eucalypts or orchards where they feed on

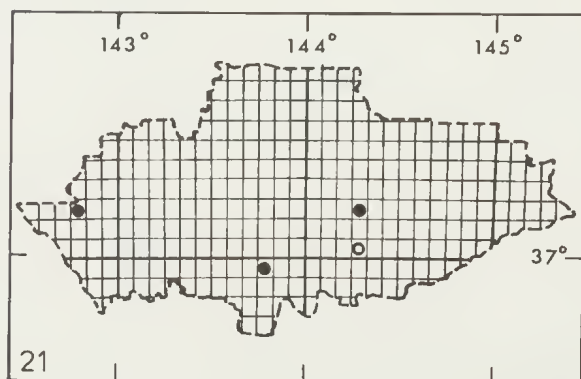


blossoms or fruit. SOURCES OF INFORMATION. B5; F2; F3. MOST RECENT RECORD. 1976 (NMV C16244).

21. *Pteropus poliocephalus*.

Grey-headed Fruit Bat.

ABUNDANCE AND DISTRIBUTION. Rare and widespread. An autumn and winter nomad to southern Victoria. Recorded from: Callawadda; Carisbrooke; Harcourt; and Bendigo. HABITAT. Open-forest, woodland and farmland. It feeds on blossoms and fruit and usually occurs near flowering eucalypts, gardens or orchards. SOURCES OF INFORMATION. B5; W6. MOST RECENT RECORD. 1973 (NMV C11723).

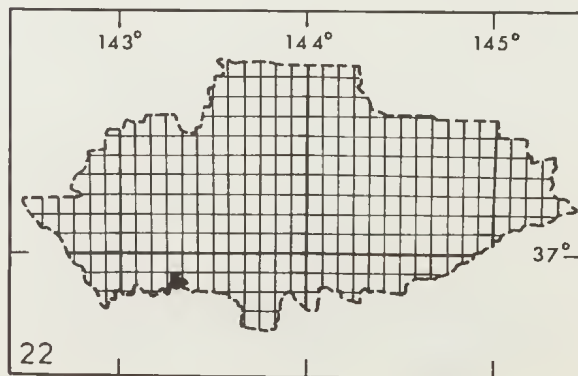


VESPERTILIONIDAE

22. *Pipistrellus tasmaniensis*.

Tasmanian Pipistrelle.

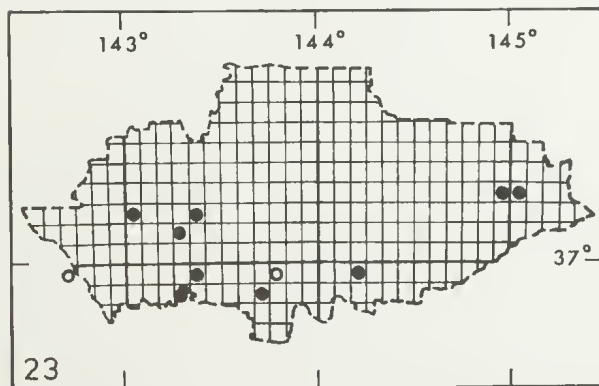
ABUNDANCE AND DISTRIBUTION. Probably common in the forests of the Western Highlands, only recorded from 7 km W of Mt Avoca in the Pyrene Range.



HABITAT. Open-forest III. **MOST RECENT RECORD.** Collected during 1975/76 FWD survey (NMV C16359).

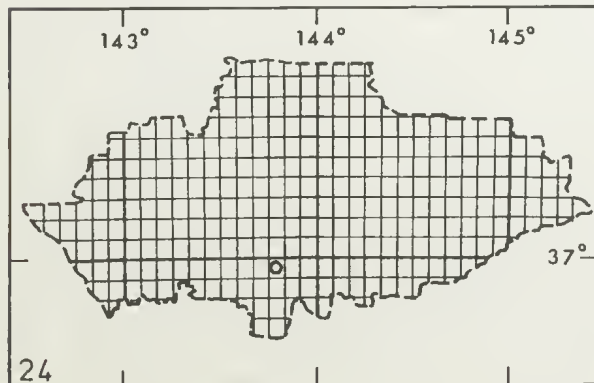
23. *Eptesicus pumilus*. Little Bat.

ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from: Deep Lead; Kingston Mine; 7 km W of Mt Avoca; 8 km W of Avoca; 7 km S of Stuart Mill; 11 km E of Stuart Mill; Carisbrooke; Castlemaine; Amherst; 10 km NNE of Graytown; and 19 km NW of Graytown. **HABITAT.** Open-forest III and II, woodland and farmland. It uses tree hollows or buildings for maternity sites. **SOURCES OF INFORMATION.** B5; F3; P2; W3; W6. **MOST RECENT RECORD.** Collected during 1975/76 FWD survey (NMV C16360).



24. *Nycticeius greyi*. Little Broad-nosed Bat.

ABUNDANCE AND DISTRIBUTION. Uncommon and possibly widespread. Recorded only from Carisbrook, which is the most south-easterly record of this species in Victoria. **HABITAT.** Drier inland areas.

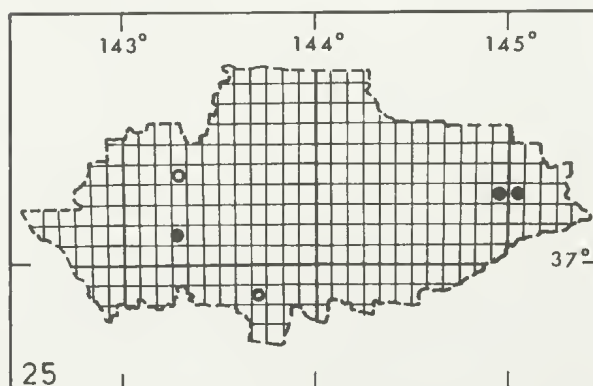


SOURCES OF INFORMATION. B5; M1 [as *N. balstoni*]; P1 [as *N. balstoni*]; R3 [as *Scoteinus balstoni*]; W3. **MOST RECENT RECORD.** 1963 (NMV 4018).

25. *Chalinolobus gouldii*.

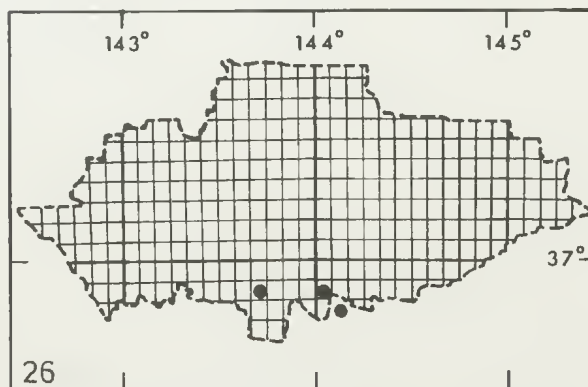
Gould's Wattle Bat.

ABUNDANCE AND DISTRIBUTION. Probably common and widespread. Recorded from: 7 km S of Stuart Mill; St Arnaud; Amherst; 2 km NW of Bailieston; and 10 km NNE of Graytown. **HABITAT.** Open-forest III and II, woodland and farmland. Uses tree hollows or buildings for maternity sites. **SOURCES OF INFORMATION.** B5; F3; P2. **MOST RECENT RECORD.** Collected during 1975/76 FWD survey. (NMV C16628).



26. *Chalinolobus morio*. Chocolate Bat.

ABUNDANCE AND DISTRIBUTION. Probably common and widespread. Recorded only from Newstead; Amherst; and Vaughan but probably occurs throughout the survey area. **HABITAT.** Open-forest III and II, woodland and farmland. Uses tree

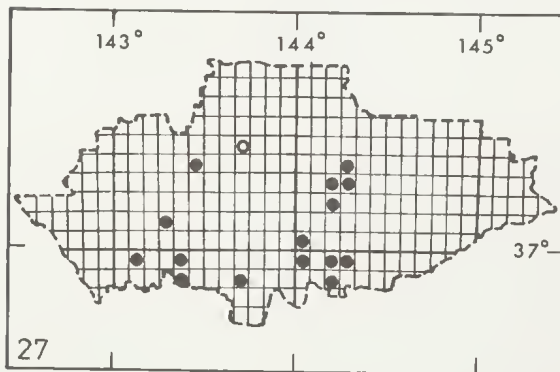


hollows or buildings for maternity sites. SOURCES OF INFORMATION. B5; P2. MOST RECENT RECORD. 1976 (NMV C16017).

27. *Nyctophilus geoffroyi*.

Lesser Long-eared Bat.

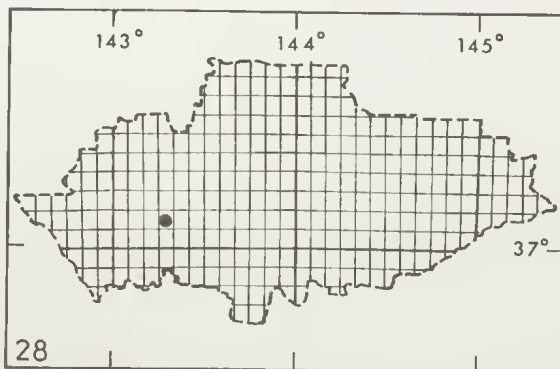
ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from: Landsborough; 7 km S of Stuart Mill; Mt Warrenmang; Logan; 8 km W of Avoca; Glenalbyn; 5 km S of Maldon; Maldon; Campbells Creek; California Gully; Vaughan; Castlemaine; Amherst; Whipstick Forest Park; Ravenswood; Big Hill; and Maiden Gully. HABITAT. Open-forest III and II, woodland and farmland. Uses tree hollows, buildings or crevices beneath bark as maternity sites. SOURCES OF INFORMATION. B3; B5; F3; P2; W3; W6. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV C16224).



28. *Nyctophilus timoriensis*.

Greater Long-eared Bat.

ABUNDANCE AND DISTRIBUTION. Probably widespread and common although re-

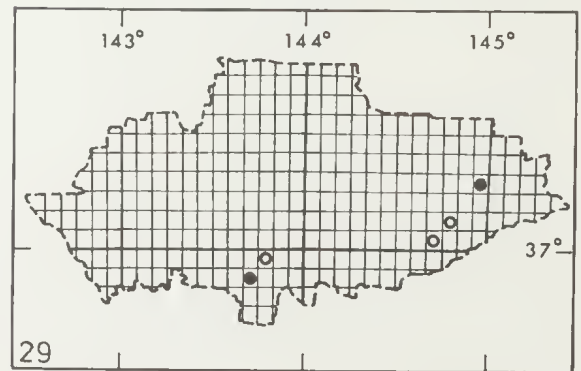


corded only from 7.5 km S of Stuart Mill. HABITAT. Open-forest III and II, woodland and grassland. SOURCES OF INFORMATION. P2; W3. MOST RECENT RECORD. 1977 (Parnaby pers. comm.).

MOLOSSIDAE

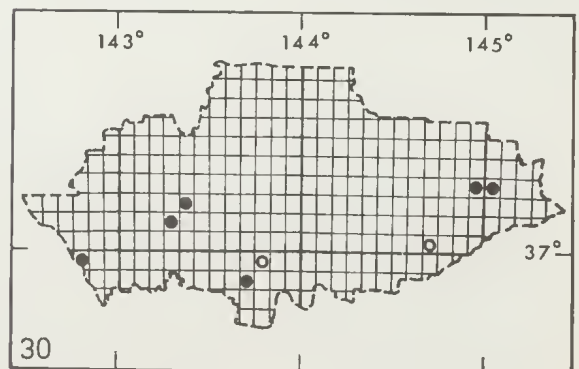
29. *Tadarida australis*. White-striped Bat.

ABUNDANCE AND DISTRIBUTION. Probably common and widespread although only recorded from: Carisbrooke; Amherst; Costerfield; Heathcote; and 10 km NNE of Graytown. HABITAT. Open-forest II, woodland and mallee fringes. Uses tree hollows as maternity sites. SOURCES OF INFORMATION. B5; F3; P2; W2. MOST RECENT RECORD. 1977 (NMV C16632).



30. *Tadarida planiceps*. Little Flat Bat.

ABUNDANCE AND DISTRIBUTION. Probably common and widespread. Recorded from: Stawell; 7 km S of Stuart Mill; 11 km E of Stuart Mill; Carisbrooke; Amherst; Heathcote; 10 km NNE of Graytown; and 2 km NW of Bailieston. HABITAT.

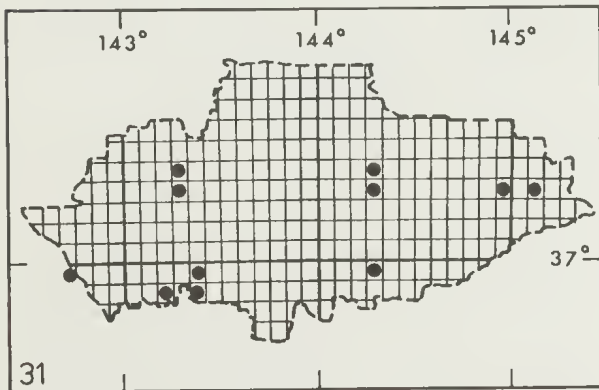


Open-forest II, woodland and mallee fringes. SOURCES OF INFORMATION. B5; F3; P1; P2; R3; W3. MOST RECENT RECORD. 1977 (NMV C16631).

LEPORIDAE

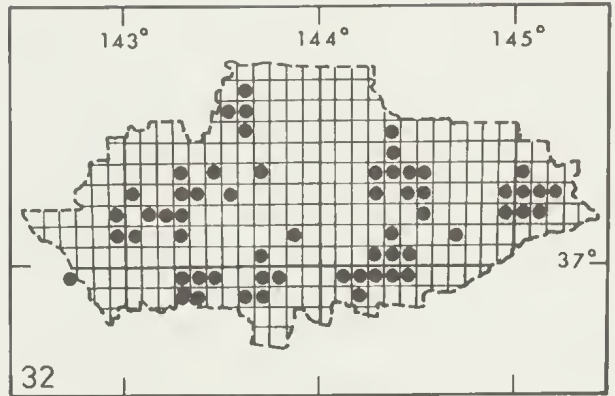
31. *Lepus europaeus*. Hare.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread, probably occurring throughout the cleared areas. Recorded from: Deep Lead; 1 km S of St Arnaud; 11 km S of St Arnaud; 2 km N of Glenlofty; 14 km W of Avoca; 10 km W of Avoca; Sugarloaf Reservoir; Mt Alexander; Whipstick Forest Park; and Reedy Lake State Forest. HABITAT. Mainly farmland but it also occurs in low numbers in open-forest or woodland with a grassy understorey. The species rests and breeds in patches of dense grass. SOURCES OF INFORMATION. F1; F3; W3; W6. MOST RECENT RECORD. Observed during 1975/76 FWD survey.



32. *Oryctolagus cuniculus*. Rabbit.

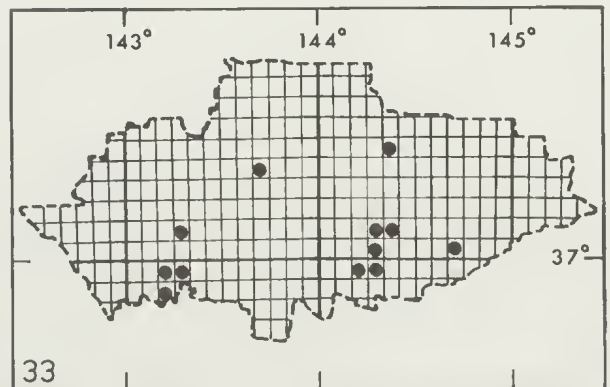
ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded throughout the survey area. HABITAT. Most terrestrial habitats. Densities are highest in unimproved grasslands and lowest in undisturbed open-forest. SOURCES OF INFORMATION. C4; F3; L3; W3. MOST RECENT RECORD. Observed during 1975/76 FWD survey.



MURIDAE

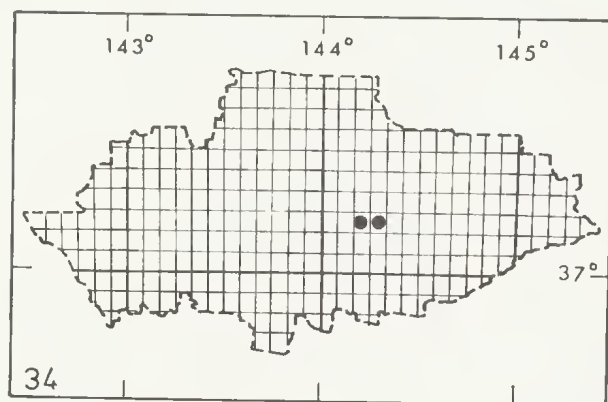
33. *Rattus rattus*. Black Rat.

ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Recorded from: Nowhere Creek and the headwaters of Nowhere Creek in the Pyrene Range; 7 km S of Warrenmang; Percydale; 0.5 km N of Teddington Reservoir; Melville Caves; Mt Alexander; Castlemaine; 2 km NW of Sedgewick; Mandurang South; Emu Creek; Kamarooka Forest; and 4 km SW of Heathcote. During the FWD survey 12 individuals were trapped at 7 sites with a maximum trapping rate of 1.5%. HABITAT. Open-forest III and II, woodland, farmland and urban areas. Densities are highest near human habitation or disturbed areas but it also occurs in little-disturbed areas. SOURCES OF INFORMATION. B3; B5; F1; F3; M2; W3. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV C16367).

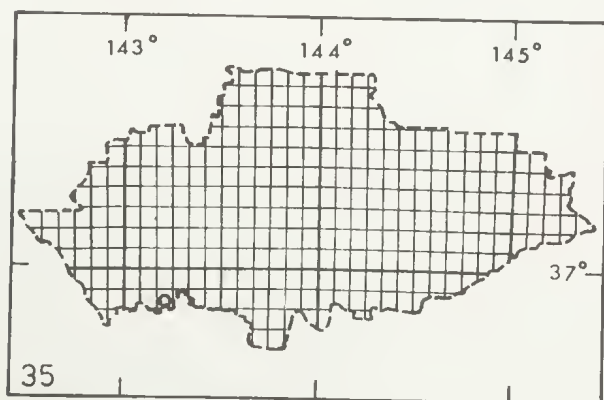


34. *Rattus norvegicus*. Sewer Rat.

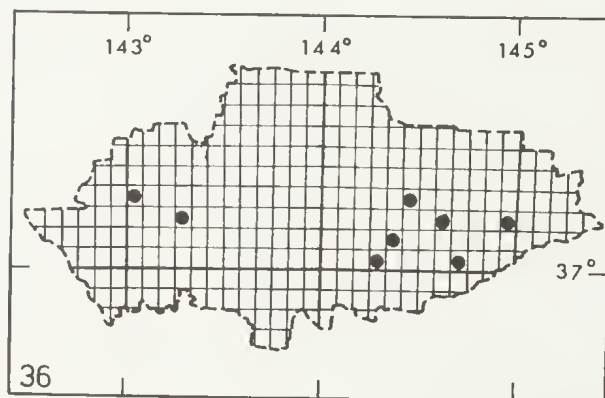
ABUNDANCE AND DISTRIBUTION. Probably uncommon; only recorded from Maiden Gully and is said to occur in the Bendigo urban area. HABITAT. Usually associated with human habitation and refuse. SOURCES OF INFORMATION. B3; W6. MOST RECENT RECORD. 1976 (FWD 11754).

35. *Rattus lutreolus*. Swamp Rat.

ABUNDANCE AND DISTRIBUTION. Probably uncommon and restricted to a small area at the southern end of the Pyrene Range near Glenlofty where it was trapped in 1962. This represents the north-west limit of its range in Victoria. HABITAT. Open-forest III and II with a dense ground-cover of grasses, sedges or heath. In the Glenlofty area such habitats are restricted to riparian or other low-lying areas. SOURCES OF INFORMATION. F2; W3. MOST RECENT RECORD. 1962 (FWD R2622).

36. *Mus musculus*. House Mouse.

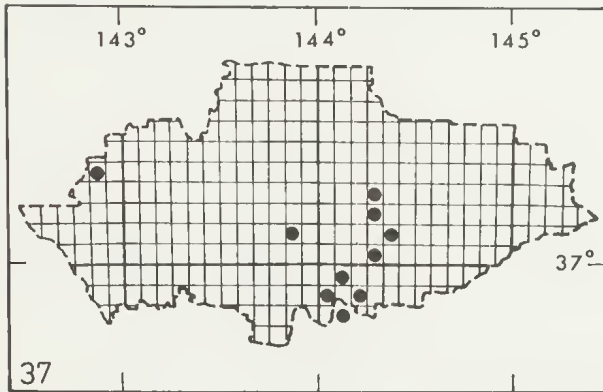
ABUNDANCE AND DISTRIBUTION. Common and widespread. Its abundance varies greatly according to availability of food. Recorded from: Mt Bolangum; 3 km E of Stuart Mill; 2 km NW of Sedgewick; Emu Creek; Mt Sugarloaf; Mt Alexander; 2 km W of Knowsley; 4 km SW of Heathcote; and Graytown. During the FWD survey 18 individuals were trapped at 4 sites with a maximum trapping rate of 4%. HABITAT. Most common in farmland and areas of human habitation although they occur in most terrestrial habitats. SOURCES OF INFORMATION. F3; M4; W3; W6. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV C16231).

37. *Hydromys chrysogaster*.

Eastern Water Rat.

ABUNDANCE AND DISTRIBUTION. Common and restricted. Recorded from: Lake Batyo Catyo; Teddington Reservoir; Baringhup; Muckleford Creek; Newstead; Cairn Curran Reservoir; 8 km SE of Castlemaine; Serpentine; Eddington; Harcourt; 3 km SW of Guildford; Emu Creek; Lake Weeroona; Lake Neangar; 2 km NW of Sedgewick; Lake Eppalock; and Nagambie. They almost certainly occur in most streams, reservoirs and irrigation channels in the survey area. HABITAT. Aquatic. Water rats occur along water courses and around the edge of lakes, farm dams and reservoirs. SOURCES

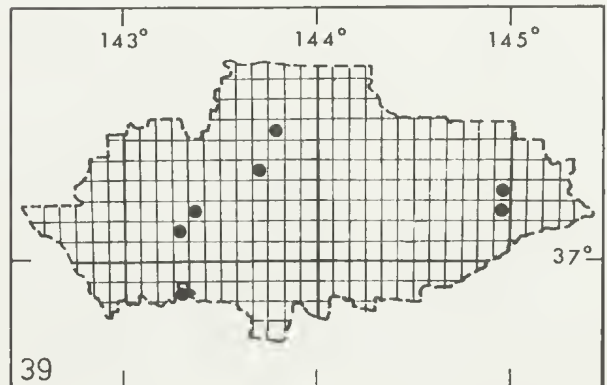
OF INFORMATION. B2; B3; B5; F3; M4; P2; W6. MOST RECENT RECORD. 1975 (NMV C16133).



FELIDAE

39. *Felis catus*. Cat.

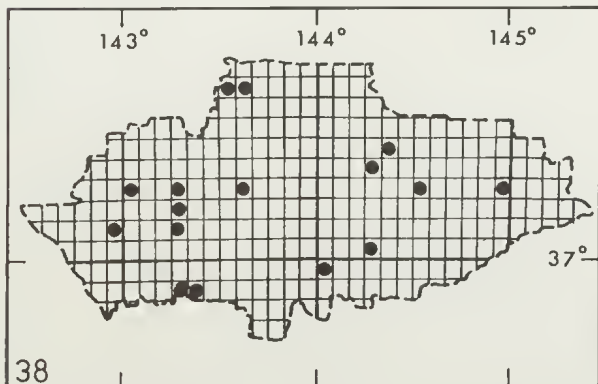
ABUNDANCE AND DISTRIBUTION. Uncommon and widespread. Free-ranging cats were observed near Glenpatrick; 5 km SW of Stuart Mill; 13 km E of Stuart Mill; Melville Caves; Graytown; and in Rushworth State Forest; and a skull was found at Mt Korong. HABITAT. Most terrestrial habitats. SOURCES OF INFORMATION. C5; F3; M4; W3. MOST RECENT RECORD. Observed during 1975/76 FWD survey.



CANIDAE

38. *Vulpes vulpes*. Fox.

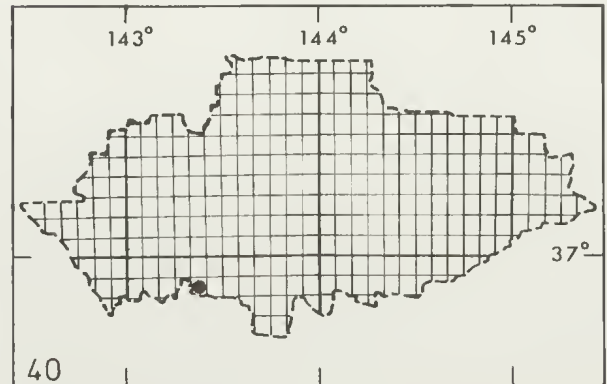
ABUNDANCE AND DISTRIBUTION. Common and widespread. Recorded from: Mt Bolangum; Kingston Mine; Nowhere Creek; between Stuart Mill and St Arnaud; Teddington Reservoir; 2 km S of Teddington Reservoir; 5 km SW of Stuart Mill; 8 km W of Avoca; Mt Moliagul; Whychitella Forest Park; Mt Alexander; Kamarooka Forest; Axedale Forest; Whipstick Forest Park; and 5 km W of Muckleford. HABITAT. Most prevalent in farmland adjoining bushland although it occurs at lower densities in most terrestrial habitats. SOURCES OF INFORMATION. A2; C4; F1; F3; L3; T1; W3; W6. MOST RECENT RECORD. Observed during 1975/76 FWD survey.



CERVIDAE

40. *Cervus unicolor*. Sambar Deer.

ABUNDANCE AND DISTRIBUTION. Rare and restricted. Small numbers have been seen in the Pyrene Range (O'Brien *pers. comm.*). HABITAT. Open-forest III and II. MOST RECENT RECORD. Observed by forestry workers during 1975.



Annotated List of Reptiles

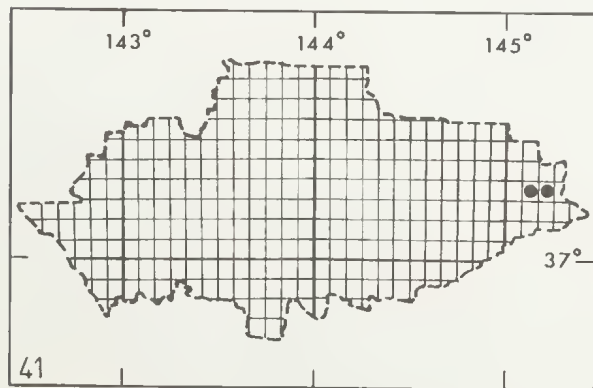
Nomenclature follows Cogger (1975) except for *Lampropholis guichenoti* which follows Greer (1974), and the description of *Leiopisma coventryi* by Rawlinson (1975), and snakes of the genus *Unechis* where we use the species recognized by Coventry (1971). Grid references to localities are given in Appendix 1.

CHELIDAE

41. *Chelodina longicollis*.

Long-necked Tortoise.

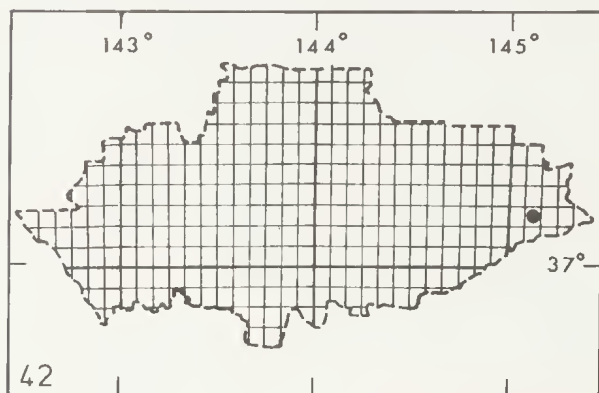
ABUNDANCE AND DISTRIBUTION. Occurs throughout, although the only specimen records are from Goulburn Weir and Reedy Lacc. HABITAT. Recorded in all types of permanent waters including rivers, lakes, farm dams and irrigation channels. Farmland and *Eucalyptus camaldulensis* woodland adjacent to aquatic habitat are used for egg-laying in spring. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV D48263).



42. *Emydura macquarii*. Murray Turtle.

ABUNDANCE AND DISTRIBUTION. Recorded from the Goulburn River at Chateau Tahbilk (Hutchinson pers. comm.). It probably occurs in the major rivers flowing into the Murray (i.e. Loddon, Campaspe and Goulburn). HABITAT. Appears to be restricted to the larger rivers.

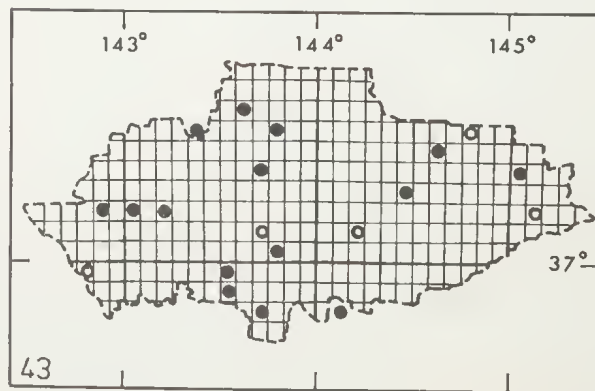
CONSERVATION ASPECTS. The impact of impoundments that change water temperatures and flood regimes is largely unknown. MOST RECENT RECORD. 1976 (Hutchinson pers. comm.).



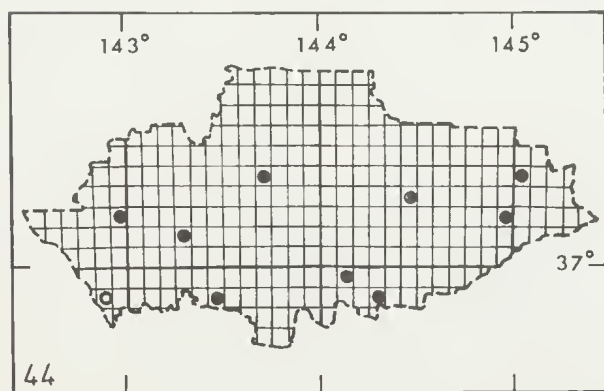
AGAMIDAE

43. *Amphibolurus barbatus*. Bearded Dragon.

ABUNDANCE AND DISTRIBUTION. Wide-spread throughout but appears to be most common in the north. Recorded from: Dunolly; Stawell; Corop West; Bendigo; Nagambie; Bet Bet; Melville Caves; Mt Korong; 8 km N of Wedderburn; Talbot; 2 km S of Rheola; Wellsford State Forest; 2 km WSW of Whroo; 9 km E of Avoca; 20 km SW of Dunolly; Mt Sugarloaf; 6 km S of Elmore; 4 km E of Coonooer Bridge; 6 km SSE of Bolangum; and 4 km NW of Stuart Mill. HABITAT. Recorded in *Eucalyptus sideroxylon* open-forest II, *E. camaldulensis* woodland, and farmland. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50329).

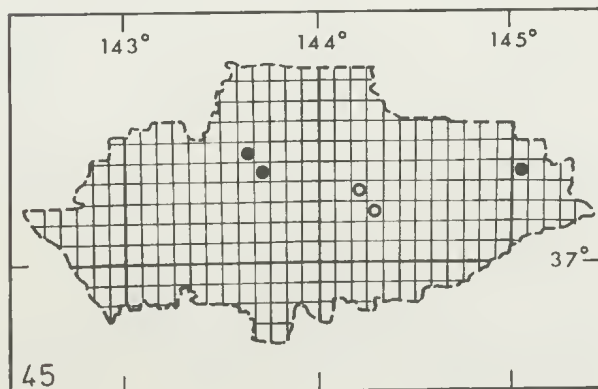


44. *Amphibolurus muricatus*. Jacky Lizard.
ABUNDANCE AND DISTRIBUTION. Wide-spread and common. Recorded from: Whroo; Melville Caves; Kingston Mine; Great Western; Mt Black; 4.5 km N of Graytown; 4 km SE of Fryerstown; 3 km SE of Rushworth; Mt Sugarloaf; 4 km W of Muckleford; 8 km S of Avoca; and 7 km SSW of Stuart Mill. HABITAT. Only recorded in open-forest II of *Eucalyptus sideroxylon* and *E. microcarpa*. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50328).



GEKKONIDAE

45. *Diplodactylus vittatus*. Wood Gecko.
ABUNDANCE AND DISTRIBUTION. Wide-spread in the north. Appears to occur in disjunct populations. Recorded from: Melville Caves; Bendigo; 9 km NNW of Eaglehawk; 7 km NW of Melville Caves; and 5 km S of Rushworth. HABITAT. Recorded in rocky outcrops in open-

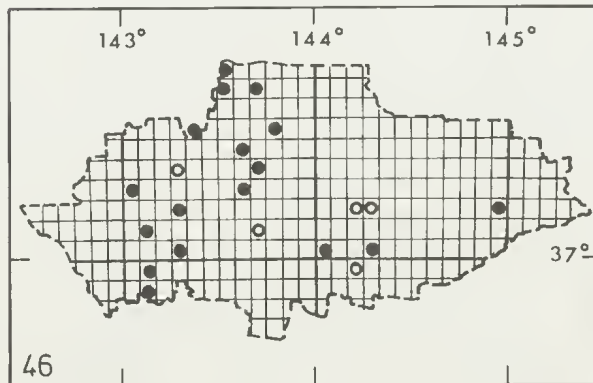


forest II and shrubland. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. 1978 (NMV D50624).

46. *Underwoodisaurus milii*.

Thick-tailed Gecko.

ABUNDANCE AND DISTRIBUTION. Wide-spread, but rarer in the south and east. Recorded from: Dunolly; Castlemaine; Bendigo; St Arnaud; Maldon; 4 km N of Buckrabanyule; Kangaroo Flat; Melville Caves; Mt Korong; 6 km SW of Whychitella; 3 km W of Borung; 10 km SW of Glenalbyn; Mt Bolangum; Mt Black; Mt Alexander; 1 km W of Landsborough; 3 km N of Crowlands; 2 km E of Navarre; Mt Moliagul; 7 km NW of Melville Caves; 4 km E of Coonooer Bridge; 7 km W of Redbank; and 2 km NW of Stuart Mill. HABITAT. Recorded mainly in rocky areas in *Eucalyptus microcarpa* woodland. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50199).

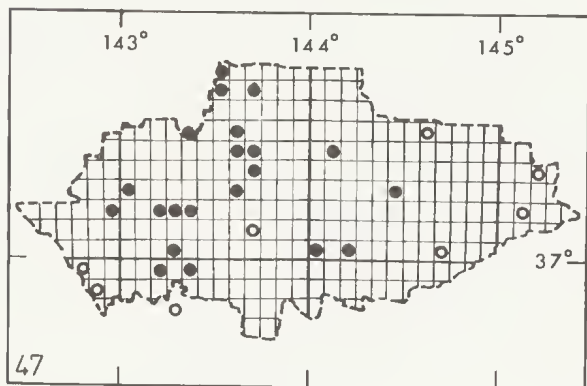


47. *Phyllodactylus marmoratus*.

Marbled Gecko.

ABUNDANCE AND DISTRIBUTION. Wide-spread and common. Recorded from: Elmore; Great Western; Elmhurst; Murchison; Stawell; Dunolly; Heathcote; Nagambie; Wedderburn; Melville Caves; Mt Bolangum; Kingston Mine; Mt Korong; 6 km SW of Whychitella; 3 km W of Borung; 5 km WNW of Korong Vale; 10 km SW of Glenalbyn; 1 km W of Mt Moliagul; 11 km E of Stuart Mill;

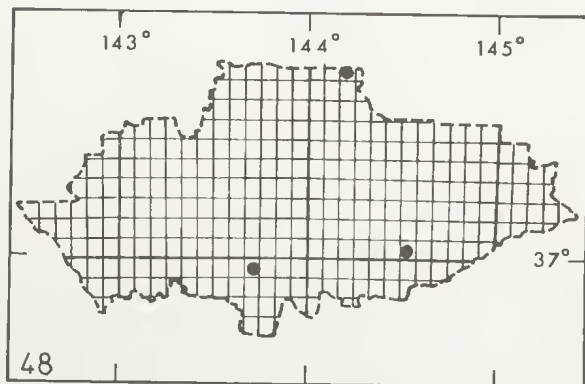
Mt Sugarloaf; Mt Alexander; 6 km W of Raywood; 8 km WNW of Avoca; Mt Tarrengower; 2 km NW of Stuart Mill; 7 km W of Redbank; 8 km W of Warrenmang; 7 km N of Glenlofty; 5 km NW of Stuart Mill; 7 km NW of Melville Caves; 4 km E of Coonooer Bridge; and 1 km S of Redbank. HABITAT. Open-forest II and woodland. Shelters beneath bark and amongst rocks. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50228).



PYGOPODIDAE

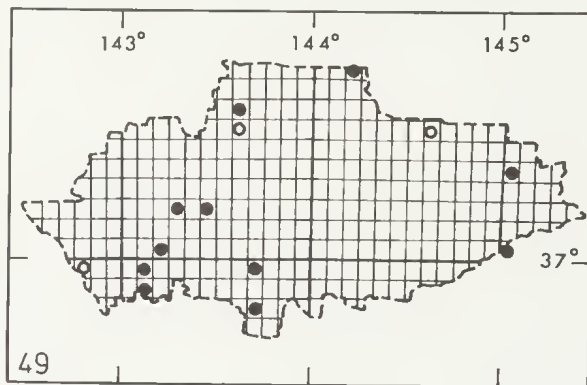
48. *Delma impar*.

ABUNDANCE AND DISTRIBUTION. Widespread and uncommon. Recorded from: Maryborough (Kluge 1974); Mia Mia; and Mitiamo. HABITAT. Appears to favour areas with a grassy ground-cover on a basalt substrate. SOURCES OF INFORMATION. K2; N1. MOST RECENT RECORD. Kluge (1974) gives no date for the Maryborough specimen; the Mia Mia specimen was collected in 1965 (NMV D15442).



49. *Delma inornata*.

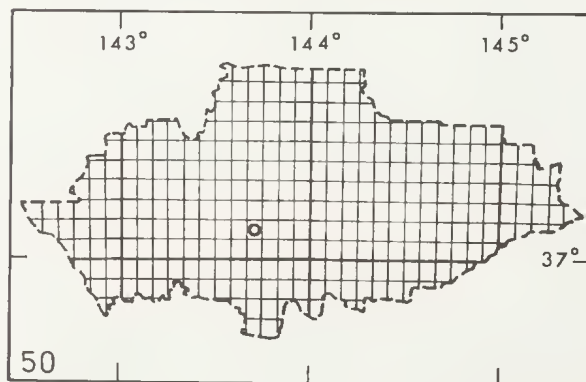
ABUNDANCE AND DISTRIBUTION. Widespread but not often found. Recorded from: Stawell; Elmore; Maryborough; Mitiamo; Puckapunyal; Talbot; Wedderburn; 5 km WNW of Korong Vale; Whroo; 13.5 km E of Stuart Mill; 1 km N of Crowlands; 1 km W of Landsborough; Barkly; and 2 km SW of Stuart Mill. HABITAT. Open-forest II and farmland. SOURCES OF INFORMATION. N1; W5. MOST RECENT RECORD. 1978 (NMV D50676).



50. *Pygopus lepidopus*.

Common Scaly-foot.

ABUNDANCE AND DISTRIBUTION. The only record is a specimen from Dunolly collected in 1895 (NMV R10928).

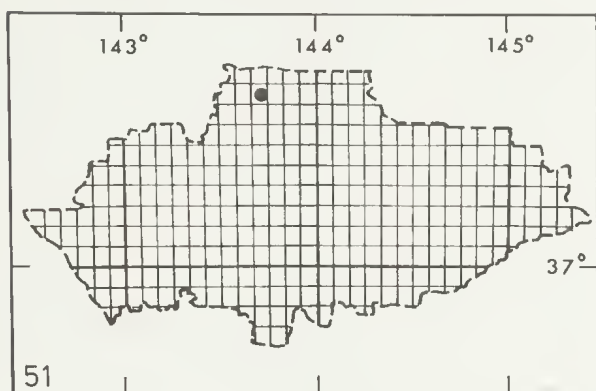


SCINCIDAE

51. *Cryptoblepharus boutoni*.

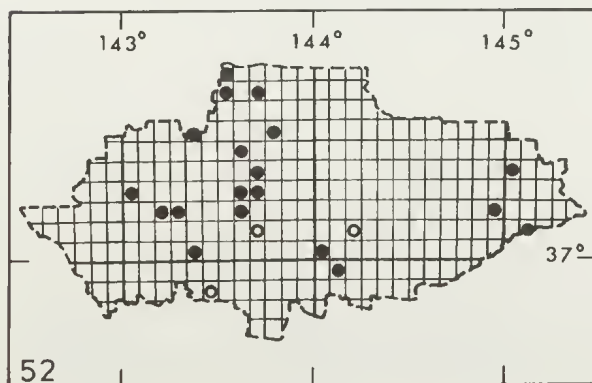
ABUNDANCE AND DISTRIBUTION. Occurs only in the north-west corner. Recorded from 4 km W of Borung. HABITAT. Wood-

land of *Eucalyptus camaldulensis*. SOURCE OF INFORMATION. N1. MOST RECENT RECORD. 1976 (NMV D48084).



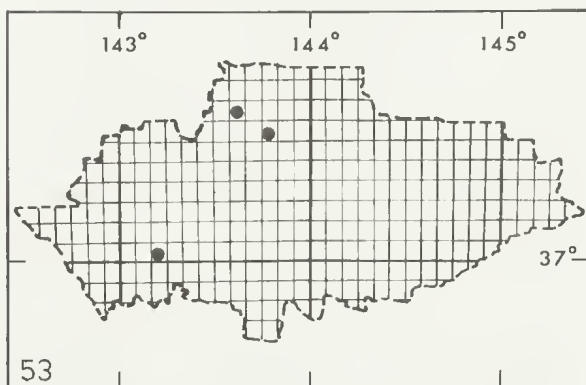
52. *Ctenotus robustus*.

ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from: Dunolly; Avoca; Ravenswood; 6 km NW of Maldon; 10 km SW of Glenalbyn; Mt Korong; 6 km SW of Whychitella; 3 km W of Borung; Mt Bolangum; 3 km WNW of Melville Caves; 5 km NE of Graytown; 8 km SSW of Nagambie; Whroo; 4 km W of Muckleford; 2.5 km NW of Maldon; Mt Tarrengower; 4 km N of Buckrabanyule; 8 km WNW of Stuart Mill; 5 km SSE of Redbank; 6 km S of Moliagul; 4 km E of Coonooer Bridge; Mt Moliagul; and 3 km ENE of Stuart Mill. HABITAT. Open-forest II of *Eucalyptus sideroxylon* and *E. microcarpa*. It shelters beneath rocks. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50306).



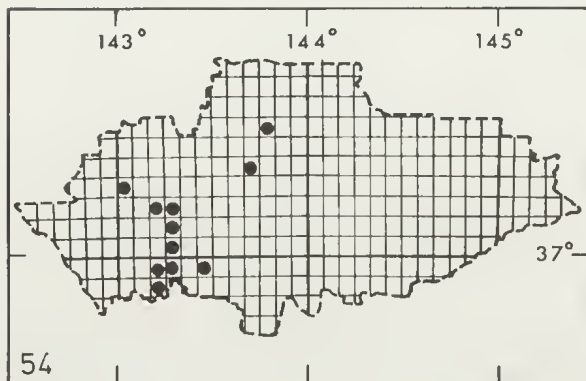
53. *Ctenotus uber*.

ABUNDANCE AND DISTRIBUTION. Occurs in the west of the survey area. Recorded from 8 km N of Wedderburn; Barkly; and Mt Korong. HABITAT. *Eucalyptus microcarpa* woodland and farmland. SOURCE OF INFORMATION. N1. MOST RECENT RECORD. 1978 (NMV D50673).



54. *Hemiergis decresiensis*.

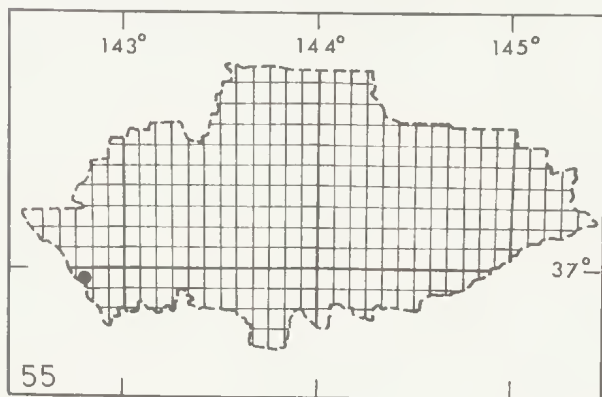
ABUNDANCE AND DISTRIBUTION. Widespread in the west of the survey area. Recorded from: Melville Caves; Mt Korong; Mt Bolangum; Stuart Mill; 8 km WNW of Stuart Mill; 7 km NNE of Glenlofty; 3 km N of Avoca; 7.5 km S of Stuart Mill; 1 km S of Redbank; 1 km NE of Mt Bolangum; 8 km W of Warrenmang; 5 km SW of Warrenmang; 7 km N of Glenlofty; 5 km NW of Stuart Mill; 3 km N of Stuart Mill; 13 km E of Landsborough; and 0.5 km E of Glenlofty. HABITAT. Appears to be restricted to areas of open-forest II and woodland with deep soil, frequently beneath de-



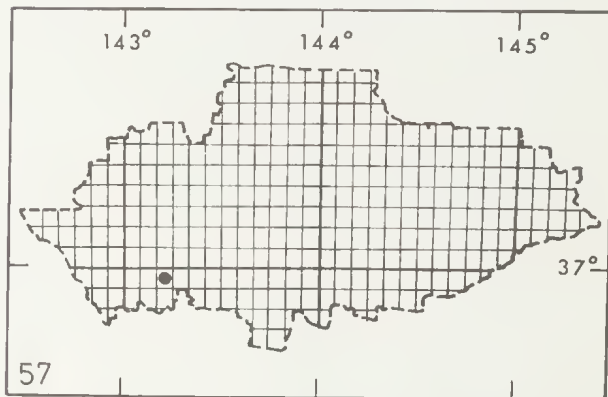
composing logs. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50267).

55. *Hemiergis peronii*.

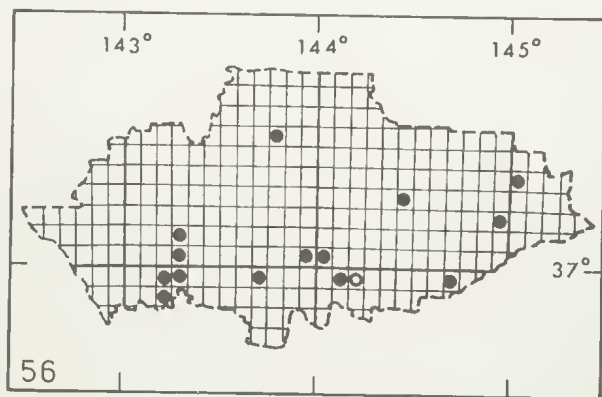
ABUNDANCE AND DISTRIBUTION. Recorded at Stawell in 1976 (NMV D48291).



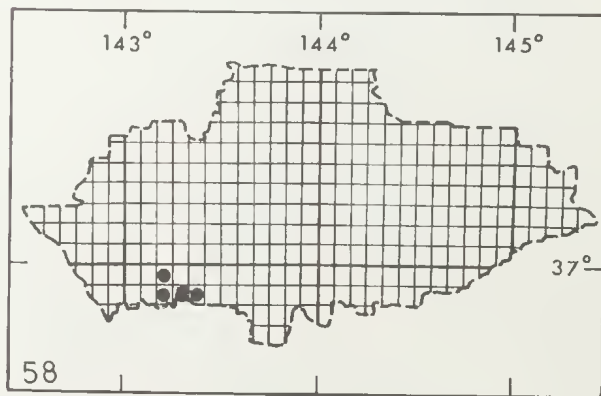
57. *Leiolopisma coventryi*. Coventry's Skink. ABUNDANCE AND DISTRIBUTION. Restricted to the Pyrene Range. Recorded from 7 km N of Glenlofty. HABITAT. Open-forest III. MOST RECENT RECORD. 1978 (NMV D50748).



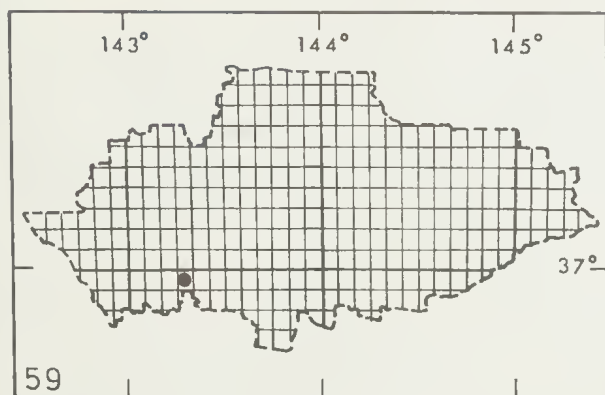
56. *Lampropholis guichenoti*. Garden Skink. ABUNDANCE AND DISTRIBUTION. Widespread and common. Appears to be more common in the south and east. Recorded from: Castlemaine; Maryborough; Whroo; Maldon; 5 km NE of Graytown; 13 km ESE of Heathcote; 3 km SE of Rushworth; Mt Sugarloaf; 4 km W of Muckleford; 5 km S of Teddington Reservoir; 5 km NE of Glenlofty; 8 km W of Warrenmang; 5 km SW of Warrenmang; 7 km N of Glenlofty; Mt Korong; Mt Tarrngower; 1 km S of Redbank; 9 km NNE of Glenlofty; and 7.5 km S of Stuart Mill. HABITAT. Recorded in all forested habitats. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50254).



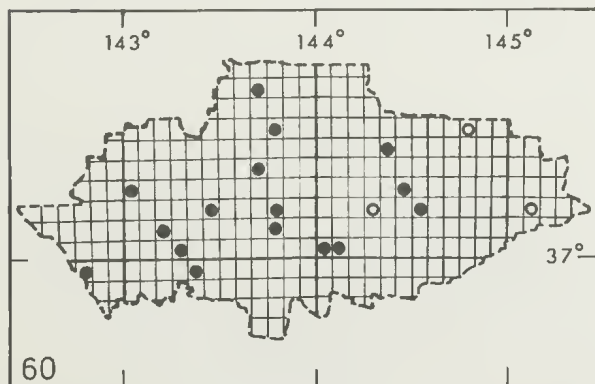
58. *Leiolopisma entrecasteauxii*. Grass Skink. ABUNDANCE AND DISTRIBUTION. Restricted to the Pyrene Range. Recorded from: 5 km NE of Glenlofty; Mt Avoca; 5 km S of Warrenmang; 7 km N of Glenlofty; and Nowhere Creek. HABITAT. Open-forest III. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. 1978 (NMV D50740).



59. *Leiolopisma trilineata*. Three-lined Skink. ABUNDANCE AND DISTRIBUTION. Restricted to the Pyrene Range. Recorded from: 7 km NNE of Glenlofty; and 13 km E of Landsborough. HABITAT. Open-forest II and III where ground-cover is sparse. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. 1978 (NMV D50262).

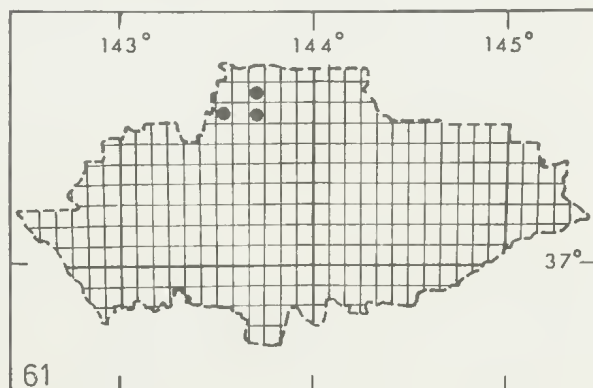
60. *Lerista bougainvillii*.

ABUNDANCE AND DISTRIBUTION. Wide-spread and common. Recorded from: Mt Bolangum; 14 km E of Stuart Mill; Stawell; Corop West; Bendigo; Nagambie; 3 km WNW of Melville Caves; Mt Korong; 3 km W of Borung; Melville Caves; Mt Sugarloaf; 7 km NW of Bagshot North; 2 km E of Maldon; 2 km W of Knowsley; 8 km WNW of Avoca; 6 km NE of Dunolly; Mt Tarrengower; 1 km S of Redbank; 2 km N of Bet Bet; 7 km W of Redbank; and 6.5 km SW of Stuart Mill. HABITAT. Recorded from open-forest II and woodland. It shelters beneath rocks and litter. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50225).

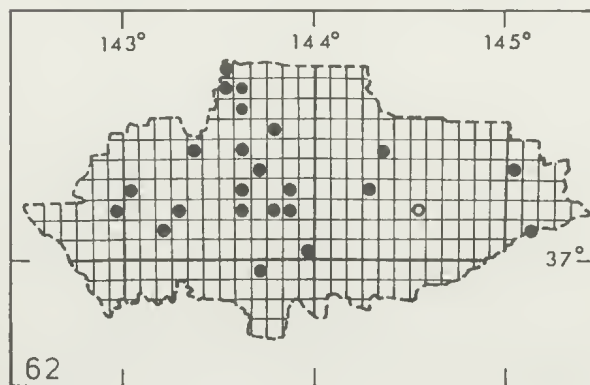
61. *Menetia greyi*.

ABUNDANCE AND DISTRIBUTION. Occurs in the north-west of the survey area. Recorded from: 4 km WNW of Korong Vale; 10 km NW of Wedderburn; and

4 km W of Borung. HABITAT. Open-forest II and shrubland. SOURCE OF INFORMATION. N1. MOST RECENT RECORD. 1976 (NMV D48214).

62. *Morethia boulengeri*.

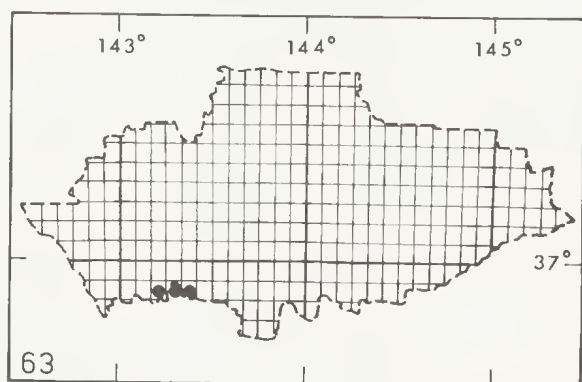
ABUNDANCE AND DISTRIBUTION. Occurs throughout the survey area except the far south. Recorded from: Axedale; 4 km N of Eaglehawk; 3 km N of Bendigo; Mt Korong; 6 km SW of Wychitella; 8 km N of Wedderburn; 5 km WNW of Korong Vale; 10 km SW of Glenalbyn; 3 km WNW of Melville Caves; Mt Bolangum; 4 km N of Buckrabanyule; Kingston Mine; Maryborough; 8 km SSW of Nagambie; Whroo; 8 km S of Rushworth; 7 km NW of Bagshot North; 2.5 km NW of Maldon; 6 km S of Moliagul; 2 km NW of Stuart Mill; 3 km N of Mt Moliagul; 4 km S of Moliagul; 1 km S of Tarnagulla; 2 km W of Llanelly; 7 km NW of Melville Caves; 1 km E of Mt Moliagul; 5 km SE of Coonooer Bridge;



and 6.5 km SW of Stuart Mill. HABITAT. Recorded from *Eucalyptus sideroxylon* and *E. microcarpa* open-forest II and shrubland (mallee). Occurs in areas with dense litter. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50309).

63. *Sphenomorphus tympanum*.

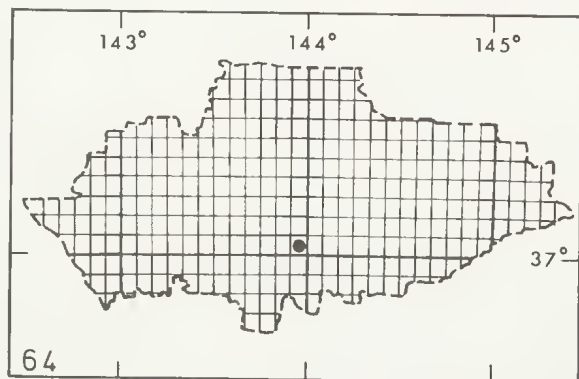
ABUNDANCE AND DISTRIBUTION. Restricted to the Pyrene Range. Recorded from: Nowhere Creek; Mt Avoca; and 5 km NE of Glenlofty. HABITAT. Only found in open-forest III. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. 1978 (NMV D50719).



64. *Egernia cunninghami*.

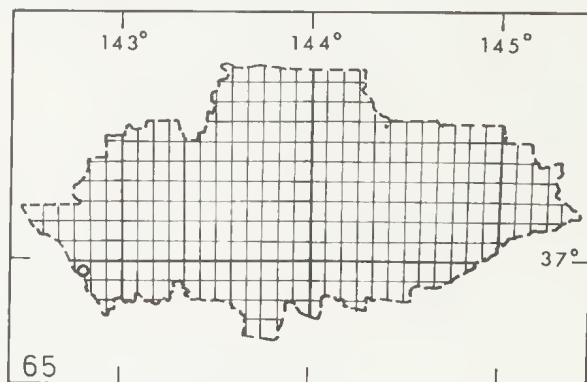
Cunningham's Skink.

ABUNDANCE AND DISTRIBUTION. Only recorded from a single colony 2.5 km NW of Maldon. HABITAT. Large rock outcrops in both forest and farmland. SOURCE OF INFORMATION. N1. MOST RECENT RECORD. 1976 (NMV D48801).



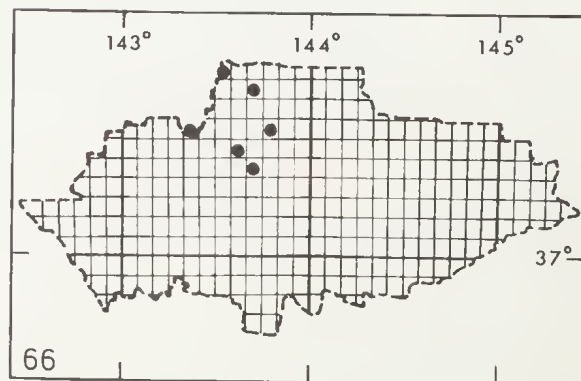
65. *Egernia saxatilis*. Black Rock Skink.

ABUNDANCE AND DISTRIBUTION. Recorded from Stawell in 1903 (NMV D3150). This specimen possibly came from the Grampians where the species is widespread (Emison *et al.* 1978). SOURCE OF INFORMATION. N1.



66. *Egernia striolata*. Tree Skink.

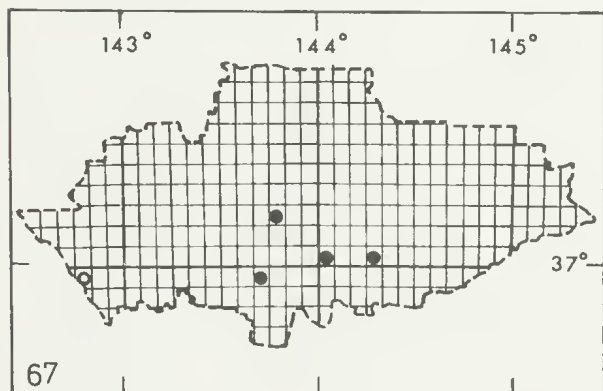
ABUNDANCE AND DISTRIBUTION. Restricted to the north. Recorded from: 3 km WNW of Melville Caves; Mt Korong; 3 km W of Borung; 10 km SW of Glenalbyn; 7 km NW of Melville Caves; 4 km E of Coonooer Bridge; and 4 km N of Buck-rabanyule. HABITAT. Only recorded from large rock outcrops in *Eucalyptus microcarpa* woodland. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. 1978 (NMV D50641).



67. *Egernia whitii*. White's Skink.

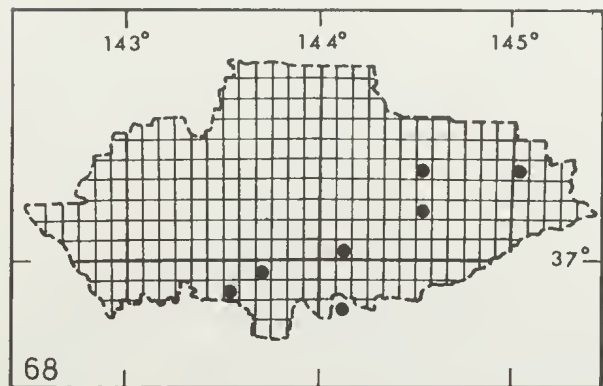
ABUNDANCE AND DISTRIBUTION. Widespread in the south and uncommon. Recorded from: Stawell; Maryborough; Mt

Alexander; 6 km NE of Dunolly; and 2.5 km NW of Maldon. HABITAT. Recorded from rock outcrops in open-forest II, woodland and farmland. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV D48668).



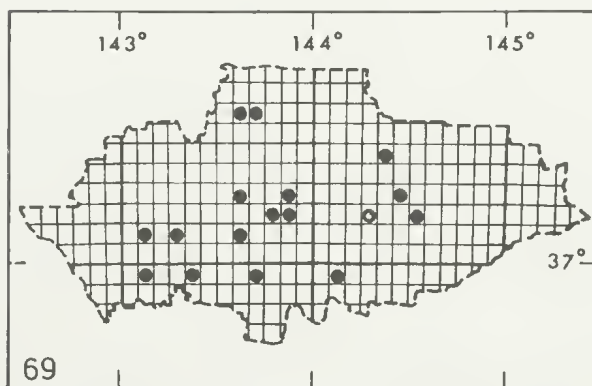
68. *Tiliqua scincoides*.

Eastern Blue-tongued Lizard. ABUNDANCE AND DISTRIBUTION. Wide-spread in the south and east. Recorded from: Maryborough; Rushworth; 3 km E of Whroo; Goornong; 2 km S of Guildford; 3 km NE of Maldon; 2 km W of Knowsley; and 9 km E of Avoca. HABITAT. Recorded in open-forest II and farmland. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV D48544).



69. *Trachydosaurus rugosus*. Shingle-back. ABUNDANCE AND DISTRIBUTION. Occurs in the central section of the survey area

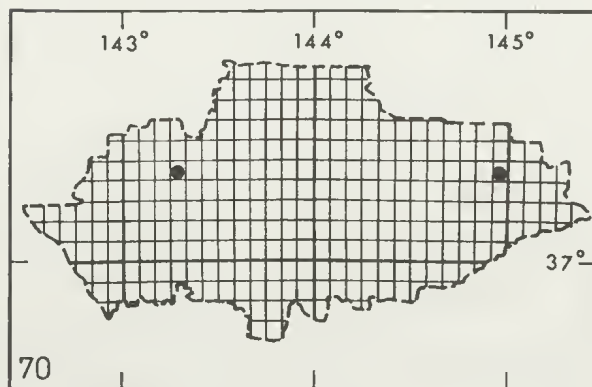
where it is common. Recorded from: Emu Creek Forest; Bendigo; Korong Vale; Laanecoorie; Wellsford State Forest; 3 km W of Muckleford; Mt Sugarloaf; 7 km NW of Bagshot North; 2 km SE of Mt Moliagul; 6 km NE of Dunolly; Adelaide Lead; 7 km SW of Korong Vale; 4.5 km SW of Stuart Mill; 2 km E of Navarre; 1 km W of Landsborough; 8 km E of Warrenmang; 2 km W of Llanelly; and 8 km S of Moliagul. HABITAT. Recorded in *Eucalyptus sideroxylon* open-forest II, shrubland and farmland. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50290).



VARANIDAE

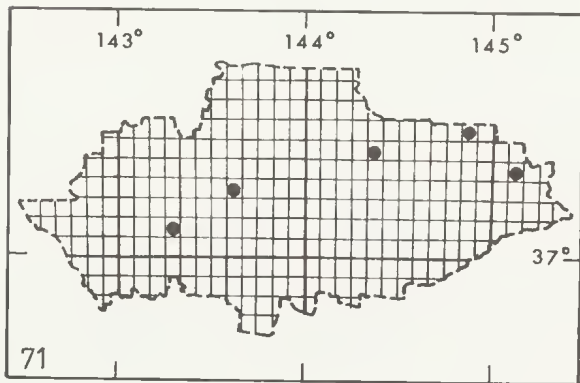
70. *Varanus gouldii*. Sand Monitor.

ABUNDANCE AND DISTRIBUTION. Wide-spread in the north and rare. Recorded from: 1 km N of St Arnaud; and 5 km WSW of Whroo. HABITAT. *Eucalyptus sideroxylon* open-forest II. SOURCE OF INFORMATION. F3. MOST RECENT RECORD. Observed during 1975/76 FWD survey.



71. *Varanus varius*. Lace Monitor.

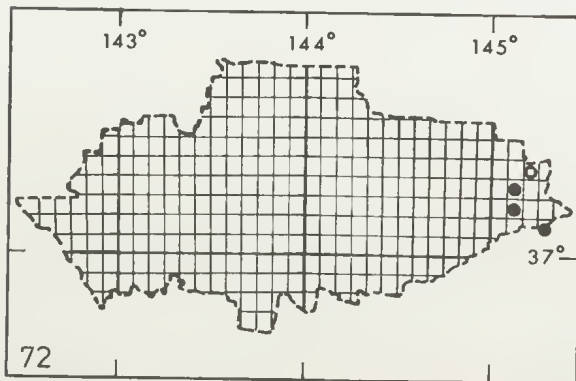
ABUNDANCE AND DISTRIBUTION. Occurs in the north but is seen infrequently. Recorded from: Mansfield Swamp; Teddington Reservoir; northern end of Kamarooka State Forest; 2 km SE of Mt Moliagul; and 9 km ENE of Whroo. HABITAT. Recorded in *Eucalyptus microcarpa* and *E. sideroxylon* open-forest II and *E. camaldulensis* woodland. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (Waters pers. comm.).



ELAPIDAE

72. *Notechis scutatus*. Eastern Tiger Snake.

ABUNDANCE AND DISTRIBUTION. All records are from the east but this species probably occurs on the floodplains of all the major rivers. Recorded from: Murchison; 9 km NW of Nagambie; 5 km NW of Nagambie; and 13 km NE of Mangalore. HABITAT. Restricted to *Eucalyptus camaldulensis* woodland and farm-

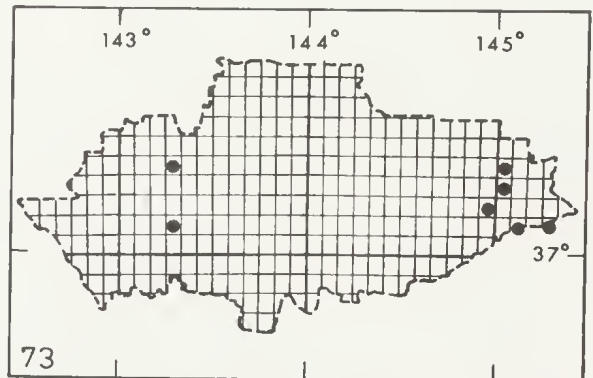


land near permanent water. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. Observed during 1975/76 FWD survey.

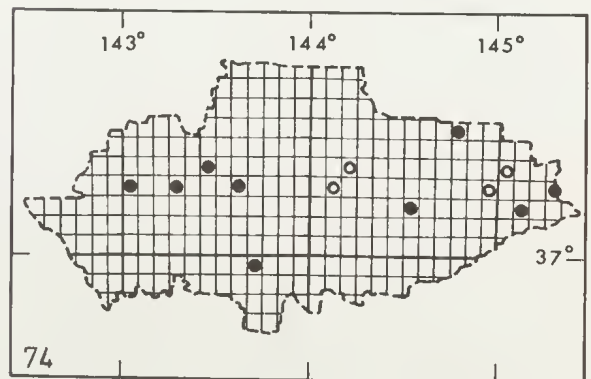
73. *Pseudechis porphyriacus*.

Red-bellied Black Snake.

ABUNDANCE AND DISTRIBUTION. Widespread, but most records are from the east where it is common. Recorded from: 5 km NE of Graytown; Whroo; 8 km SSW of Nagambie; 1 km S of St Arnaud; Bailieston; 3 km S of Whroo; Locksley; and 6 km SE of Stuart Mill. HABITAT. Recorded from *Eucalyptus sideroxylon* and *E. microcarpa* open-forest II. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1977 (Waters pers. comm.).

74. *Pseudonaja textilis*. Eastern Brown Snake.

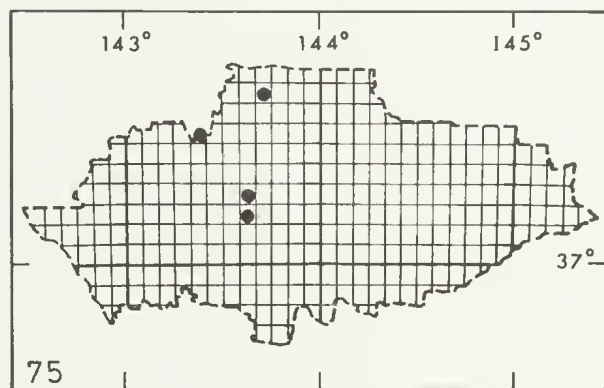
ABUNDANCE AND DISTRIBUTION. Widespread and common. Recorded from: Nagambie; Marong; Sebastion; Corop; Rushworth; Whroo; 13 km S of St Arnaud; 1 km W of Mt Moliagul; Mt



Bolangum; 15 km WNW of Nagambie; Maryborough; 5.5 km NW of Logan; and 2 km W of Knowsley. HABITAT. Occurs in all habitats except open-forest III. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. 1978 (NMV D50645).

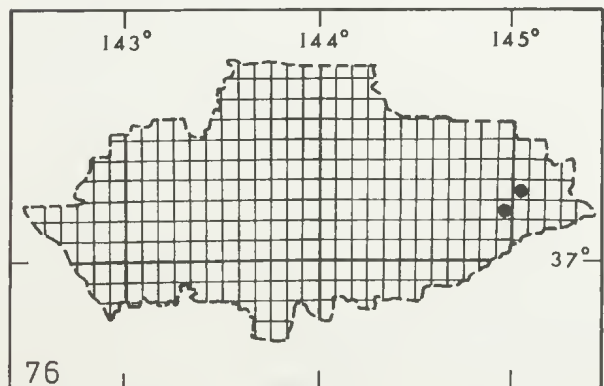
75. *Unechis brevicaudus*.

ABUNDANCE AND DISTRIBUTION. Occurs in the north-west. Recorded from: 3 km W of Borung; 4 km E of Coonooer Bridge; 4 km S of Moliagul; and 1 km W of Mt Moliagul. HABITAT. Recorded beneath rocks in farmland, shrubland and *Eucalyptus microcarpa* woodland. SOURCES OF INFORMATION. F3; N1. MOST RECENT RECORD. 1978 (NMV D50768).



76. *Unechis dwyeri*. Black-headed Snake.

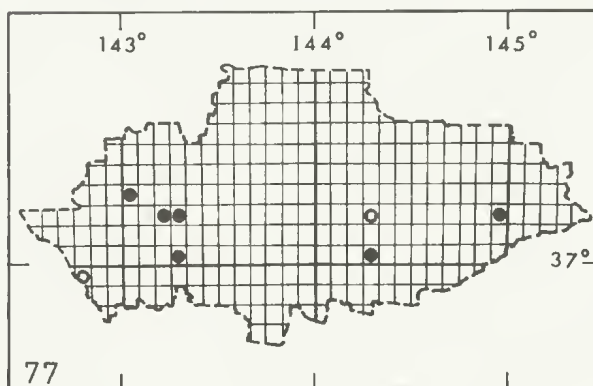
ABUNDANCE AND DISTRIBUTION. Only recorded from the far east of the survey area. Recorded from: Mt Black; and 14 km WNW of Nagambie. HABITAT. Found beneath rocks in *Eucalyptus sideroxylon*



and *E. microcarpa* open-forest II. SOURCE OF INFORMATION. F3. MOST RECENT RECORD. Collected during 1975/76 FWD survey (NMV D48017).

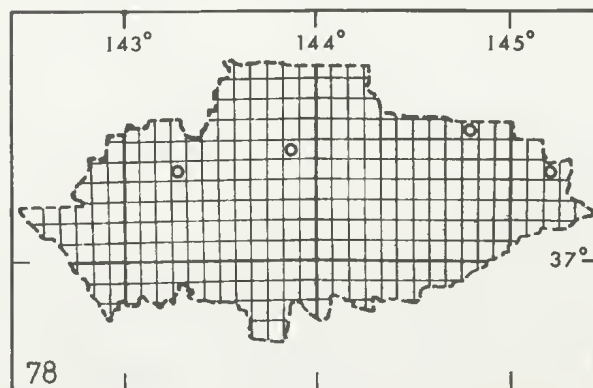
77. *Unechis flagellum*. Little Whip Snake.

ABUNDANCE AND DISTRIBUTION. Widespread in the south. Recorded from: Mt Black; Mt Bolangum; Stawell; Bendigo; Mt Alexander; 7 km W of Redbank; 12 km E of Stuart Mill; and 4 km W of Stuart Mill. HABITAT. Recorded beneath rocks in *Eucalyptus microcarpa* and *E. viminalis* woodland. SOURCES OF INFORMATION. F3; N1; W5. MOST RECENT RECORD. 1978 (NMV D50549).



78. *Vermicella annulata*. Bandy-bandy.

ABUNDANCE AND DISTRIBUTION. Probably no longer present. Formerly widespread in the north. Recorded from: Inglewood; St Arnaud; Lake Cooper; and Murchison. HABITAT. It occurred in areas that were formerly *Eucalyptus microcarpa* woodland but have since been cleared for

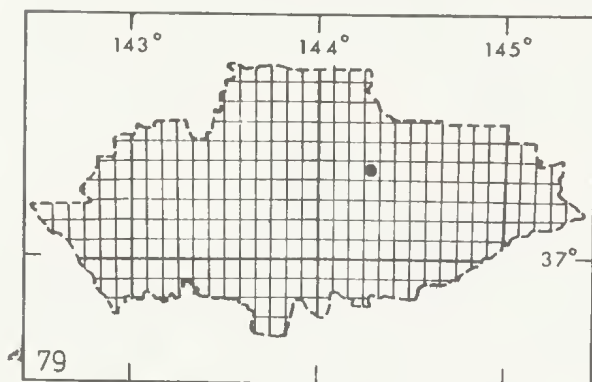


agriculture. CONSERVATION ASPECTS. All records of this species were made between 1875 and 1897 when considerable clearing was taking place. SOURCE OF INFORMATION. NI. MOST RECENT RECORD. 1897 (NMV D3625).

TYPHLOPIDAE

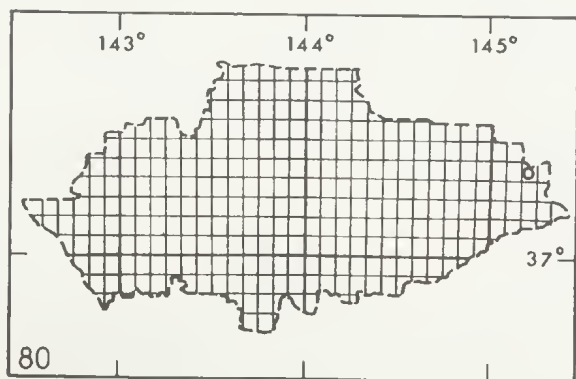
79. *Typhlina broomi*.

ABUNDANCE AND DISTRIBUTION. One sight record from the Bendigo Whipstick (King 1976). HABITAT. Open-forest II.



80. *Typhlina nigrescens*.

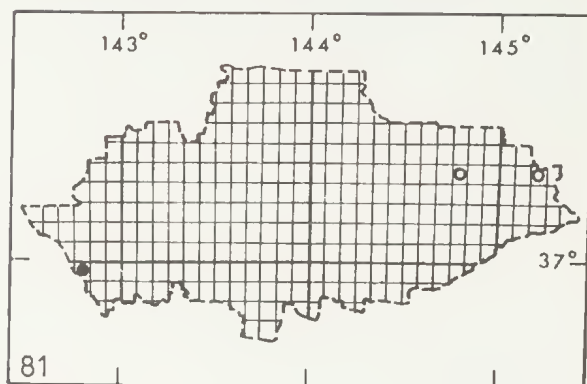
ABUNDANCE AND DISTRIBUTION. Two records only; from Murchison in 1881 and Maonilim via Murchison in 1948. HABITAT. Unknown. SOURCE OF INFORMATION. NI. MOST RECENT RECORD. 1948 (NMV D7882).



81. *Typhlina proxima*.

ABUNDANCE AND DISTRIBUTION. Widespread in the north. Reecorded from: Murchison; Maonilim via Murchison; Colbinabbin; and the Stawell area.

HABITAT. Unknown. SOURCE OF INFORMATION. NI. MOST RECENT RECORD. 1976 (NMV D48288).



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Sources of Information

Comments in square brackets were inserted by the senior author.

- A1. ANONYMOUS, 1890a. The Zoological and Acclimatization Society. *Victorian Nat.* 7: 51. [Report of a meeting on 7 July 1890 at which the presentation of 2 opossum mice from Heathcote was reported.]
- A2. ———, 1890b. The pest of Foxes in the country. *Victorian Nat.* 7: 56.
- A3. ———, 1908. Field Naturalists Club of Victoria: Exhibits. *Victorian Nat.* 24: 180. [Report of monthly meeting on 9 March 1908 at which a stuffed specimen of a Platypus from Nagambie was exhibited.]
- A4. ———, 1962. *Victorian Nat.* 79: 1 and 3. [Photograph and caption of 3 Eastern Pygmy Possums from Rushworth Forest.]
- A5. ———, 1963. *Victorian Nat.* 79: 285 and 286. [Photograph and caption of a Squirrel Glider from the Rushworth District.]
- A6. ———, 1974. Field Naturalists Club of Victoria: Mammal Survey Group, November and December Camps. *Victorian Nat.* 91: 81. [Report of a weekend camp near Heathcote.]
- A7. ARNOLD, A. H., 1977. *A review of the effects of grazing natural ecosystems in Victoria*. Dept. Crown Lands and Survey, Melb.
- B1. BELCHER, C., Fisheries and Wildlife Division, *pers. comm.*
- B2. BENDIGO FIELD NATURALISTS' CLUB, 1971. Submission by the Bendigo Field Naturalists' Club for the preservation of the Bendigo Whipstick. [Mimeographed submission to the Minister for Forests; containing a mammal list of the Bendigo Whipstick area.]
- B3. BENDIGO FIELD NATURALISTS' CLUB, Mammal Survey Group records.
- B4. BROOK, A. J., 1975. The distribution of Anuran amphibians in Victoria. *Victorian Nat.* 92: 104-120.
- B5. BRUMLEY, C. F. and S. J. EVANS, 1976. Report on the mammals of the North Central Region of Victoria. *Natn. Mus. Vict.*, Vertebrate Dept.
- B6. BUREAU OF METEOROLOGY, 1975. Climatic averages Victoria. Metric edition. AGPS.
- C1. C.B. [= Chas Barrett], 1927. Brush-tailed raiders. *Victorian Nat.* 44: 100.
- C2. CHURCHILL, D. M. and A. DE CORONA, 1972. *The distribution of Victorian plants*. The Dominion Press, Melbourne.
- C3. COGGER, H. G., 1975. *Reptiles and amphibians of Australia*. Reed, Sydney.
- C4. COMAN, BRIAN J., 1972. Some observations on the den litter of Foxes (*Vulpes vulpes* L.) in Victoria. *Victorian Nat.* 89: 231-233.
- C5. COVENTRY, A. J., National Museum of Victoria, *pers. comm.*
- C6. ———, 1971. Identification of the Black-headed Snakes (*Denisonia*) within Victoria. *Victorian Nat.* 88: 304-306.
- D1. DOUGLAS, R., farmer of Teddington, *pers. comm.*
- E1. EDWARDS, G., Dept. Crown Lands and Survey, *pers. comm.*
- E2. EMISON, W. B., J. W. PORTER, K. C. NORRIS and G. J. APPS, 1978. Survey of the vertebrate fauna in the Grampians-Edenhope area of southwestern Victoria. *Mem. Natn. Mus. Vict.* 39: 281-363.
- F1. FIELD NATURALISTS' CLUB OF VICTORIA, Mammal Survey Group survey camp reports.
- F2. FISHERIES AND WILDLIFE DIVISION, catalogue of mammal specimens collected by FWD staff held at Arthur Rylah Institute of Environmental Research.
- F3. FISHERIES AND WILDLIFE DIVISION, Wildlife Survey Unit records.
- F4. FLEAY, D., 1929. The Brush-tailed Phascogale. *Victorian Nat.* 46: 135-6.
- G1. GREER, A. E., 1974. The generic relationships of the scincid lizard genus *Leiopisma* and its relatives. *Aust. J. Zool. Suppl. Ser. No.* 31: 1-67.
- H1. HARDY, A. D., 1926. The ways of Pouched-Mouse. *Victorian Nat.* 43: 56.
- H2. HILLS, E. S., 1967. *The Physiography of Victoria*. Whitcombe and Tombs, Melbourne.
- H3. HUTCHINSON, M., Latrobe University Dept. of Zoology, *pers. comm.*
- J1. JOHNSTON, B., 1971. Some observations on the Lowan at Wychitella. *Victorian Nat.* 88: 116-7.
- J2. JOHNSTON, R., naturalist of Buckrabanyule, *pers. comm.*
- K1. KING, D. F., 1976. Whipstick Forest-Bendigo. *Geelong Nat.* 13: 13-16.
- K2. KLUGE, A. G., 1974. A taxonomic revision of the lizard family Pygopodidae. *Misc. Publs. Mus. Zool. Univ. Mich.* 147: 1-221.
- L1. LAND CONSERVATION COUNCIL OF VICTORIA, 1978. North Central Study Area Report. Government Printer, Melbourne.
- L2. LEWIS, F., 1954. The Rehabilitation of the Koala in Victoria. *Victorian Nat.* 70: 197-200.
- L3. LEWIS, C. F., 1957. Naturalists' Notebook: Wedge-tailed Eagle takes a Fox. *Victorian Nat.* 74: 89-90.
- L4. LITTLEJOHNS, R. T., 1938. The bush by night. *Victorian Nat.* 55: 3-11.
- M1. MCKEAN, JOHN L., 1966. Some new distributional records of Broad-nosed Bats (*Nycticeius* spp.). *Victorian Nat.* 83: 25-30.
- M2. MAMMAL SURVEY GROUP OF VICTORIA, survey camp reports.
- M3. MARLOW, B. J., 1968. *Marsupials of Australia*. Jacaranda Press, Brisbane.
- M4. MARYBOROUGH FIELD NATURALISTS' CLUB, 1972. Submission requesting appropriate permanent reservation of Maryborough's Box/Ironbark State Forest. [Mimeographed submission to the Minister of Forests; containing a mammal list for Maryborough.]

- M5. MAY, I., Fisheries and Wildlife Division, *pers. comm.*
- M6. MILES, G., farmer of Warrenmang, *pers. comm.*
- M7. MILLER, B., naturalist of Murrumbidgee, NSW, *pers. comm.*
- N1. NATIONAL MUSEUM OF VICTORIA, reptile collection.
- N2. NEWMAN, L. A., 1961. The box-ironbark forests of Victoria, Australia. *Forests Comm. Vict. Bull.* No. 14.
- N3. NORRIS, K. C., A. M. GILMORE and P. W. MENKHORST, 1979. The vertebrate fauna of South Gippsland. *Mem. Natn. Mus. Vict.* 40: 105-199.
- O1. O'BRIEN, D., Forests Commission of Victoria, *pers. comm.*
- P1. PARNABY, HAROLD, 1977. Bat Survey of the Daylesford Area, Victoria. *Victorian Nat.* 94: 191-197.
- P2. PARNABY, H., naturalist, formerly of Daylesford, *pers. comm.*
- P3. PARRIS, HARRY S., 1948. Koalas on the Lower Goulburn. *Victorian Nat.* 64: 192-193.
- R1. RAWLINSON, P. A., 1975. Two new lizard species from the genus *Leiopisma* (Scincidae: Lygosominae) in Southeastern Australia and Tasmania. *Mem. Natn. Mus. Vict.* 36: 1-16.
- R2. RIDE, W. D. L., 1970. *A Guide to the Native Mammals of Australia*. Oxford Univ. Press, Melbourne.
- R3. RYAN, R. M., 1966. Observations on the Broad-nosed Bat, *Scoteinus balstoni*, in Victoria. *J. Zool. Lond.* 148: 162-166.
- S1. SPECHT, R. L., 1970. Vegetation. In *The Australian Environment*. G. W. Leeper (ed.). CSIRO, Melbourne.
- S2. STEWART, H. C. E., 1949. Bird notes on Rushworth. *Victorian Nat.* 65: 234-236.
- T1. TURNER, ELIZABETH K., 1972. F.N.C.V. Excursion to Bendigo. *Victorian Nat.* 89: 119-123.
- W1. WAKEFIELD, N. A., 1963. The Australian Pigmy-possums. *Victorian Nat.* 80: 99-116.
- W2. ———, 1971. Distribution data of Victorian Mammals. *Victorian Nat.* 88: 48-50. [Supplement to a review of Ride (1970) giving additions and corrections to Ride's distribution data.]
- W3. ———, 1974. Mammals of Western Victoria. In *The Natural History of Western Victoria*. Douglas and O'Brien (eds.). Western Victorian Sub-branch, Australian Institute of Agricultural Science, Horsham, pp. 35-51.
- W4. WAKEFIELD, N. A. and R. M. WARNEKE, 1967. Some revision in Antechinus (Marsupialia)-2. *Victorian Nat.* 84: 69-99.
- W5. WATERS, R., Monash University Dept. of Zoology, *pers. comm.*
- W6. WILKINSON, H. E., naturalist of Bendigo, *pers. comm.*
- W7. WYCHITELLA FOREST PRESERVATION LEAGUE, 1972. The Wychitella Forest. Boort Standard and Quambatook Times. [Booklet published for Wychitella Forest Preservation League; containing a mammal list for Wychitella Forest.]

Appendix 1. Gazetteer of Localities

Locality	Lat.	Long.
Adelaide Lead	37 04	143 41
Amherst	37 09	143 40
Avoca	37 05	143 29
Axedale Forest	36 44	144 25
Bailieston	36 44	145 03
Bagshot	36 39	144 24
Bagshot North	36 36	144 25
Baringhup	36 59	143 58
Barkly	36 56	143 12
Bendigo	36 46	144 17
Bet Bet	36 56	143 45
Big Hill	36 51	144 15
Borong	36 18	143 45
Buckrabanyule	36 11	143 31
Bung Bong	37 06	143 34
Cairn Curran Reservoir	37 01	143 58
California Gully	36 44	144 14
Calivil	36 18	144 05
Callawadda	36 49	142 47
Campbells Creek	37 06	144 12
Carisbrook	37 03	143 49
Castlemaine	37 04	144 13
Chateau Tahbilk	36 50	145 05
Chewton	37 05	144 16
Clunes	37 18	143 47
Colbinabbin	36 35	144 48
Coonooer Bridge	36 28	143 19
Corop	36 28	144 47
Costerfield	36 52	144 48
Crowlands	37 09	143 06
Deep Lead	37 01	142 43
Dingee	36 22	144 14
Dunolly	36 52	143 44
Eaglehawk	36 44	144 15
Eddington	36 53	143 52
Elmhurst	37 11	143 15
Elmore	36 30	144 37
Elphinstone	37 06	144 20
Emu	36 44	143 27
Emu Creek	36 50	144 21
Emu Creek Forest	36 52	144 34
Eppalock	36 51	144 33
Eversley	37 11	143 10
Fell Gully	37 14	143 45
Glenalbyn	36 30	143 45
Glenlofty	37 07	143 13
Glenlofty Creek	37 05	143 14
Glenorchy	36 54	142 40
Glenpatrick	37 08	143 20
Goat Island	37 33	149 46
Goornong	36 37	144 30
Goulburn Weir	36 44	145 10
Graytown	36 49	144 57
Great Western	37 09	142 51
Guildford	37 09	144 10
Guildford Plateau	37 08	144 08
Harcourt	37 00	144 16
Heathcote	36 55	144 42
Huntly	36 40	144 20
Inglewood	36 35	143 52
Kangaroo Flat	36 48	144 15
Kanya	36 47	143 00
Kamarooka	36 28	144 21
Kamarooka Forest	36 32	144 24
Kennington	36 46	144 18

Kingower	36 37	143 45	Puckapunyal	37 00	145 03
Kingston Mine	36 50	142 58	Pyrenees Range	37 05	143 16
Knowsley	36 50	144 35	Ravenswood	36 54	144 13
Knowsley State Forest	36 50	144 33	Raywood	36 32	144 12
Korong Vale	36 21	143 42	Redbank	36 56	143 20
Laanecoorie	36 50	143 54	Redesdale	37 01	144 32
Lake Batyo Catyo	36 31	142 56	Reedy Lake State Forest	36 43	145 06
Lake Cooper	36 39	144 48	Rheola	36 39	143 42
Lake Eppalock	36 52	144 34	Rostron	36 47	143 10
Lake Neangar	36 43	144 43	Rushworth	36 35	145 01
Lake Weeroona	36 46	144 17	Rushworth State Forest	36 41	145 00
Landsborough	37 00	143 08	Sebastion	36 36	144 12
Llanelly	36 44	143 51	Sedgewick	36 53	144 19
Locksley	36 50	145 20	Serpentine	36 25	143 58
Lockwood	36 49	144 10	Spring Gully	36 48	144 17
Lockwood Forest	36 51	144 08	St Arnaud	36 37	143 16
Logan	36 37	143 28	Stanhope	36 27	144 59
Longwood	36 48	145 25	Stawell	37 03	142 47
Lower Homebush	37 02	143 02	Strathfieldsaye	36 49	144 21
Maiden Gully	36 45	144 12	Stuart Mill	36 48	143 17
Maldon	37 00	144 04	Sugarloaf Reservoir	37 06	143 24
Mandurang	36 49	144 18	Talbot	37 10	143 42
Mandurang Forest	36 50	144 17	Tarnagulla	36 46	143 50
Mandurang South	36 51	144 17	Tattington	36 47	143 07
Mangalore	36 56	145 11	Teddington	36 50	143 16
Mansfield Swamp	36 27	144 53	Teddington Reservoir	36 51	143 16
Marong	36 44	144 08	Twin Rivers	36 54	144 32
Maryborough	37 03	143 44	Vaughan	37 09	144 13
Melville Caves	36 36	143 43	Walmer Forest	37 01	144 12
Metcalfe	37 06	144 26	Warrenmang	37 03	143 18
Mia Mia	37 00	144 34	Wedderburn	36 26	143 27
Mitiamo	36 13	144 14	Wellsford	36 40	144 25
Moliagul	36 45	143 40	Wellsford State Forest	36 41	144 24
Mt Alexander	37 00	144 18	Whipstick Forest Park	36 38	144 17
Mt Avoca	37 06	143 21	Whroo	36 39	145 02
Mt Beckworth	37 19	143 43	Whychitella	36 16	143 36
Mt Black	36 47	144 59	Whychitella State Forest	36 20	143 35
Mt Bolangum	36 44	143 01			
Mt Hooghly	36 55	143 40			
Mt Ida	36 53	144 43			
Mt Korong	36 28	143 45			
Mt Moliagul	36 44	143 39			
Mt Sugarloaf	36 43	144 29			
Mt Warrenmang	37 03	143 22			
Muckleford	37 03	144 09			
Muckleford Creek	36 57	144 09			
Murchison	36 37	145 13			
Mysia	36 14	143 45			
Nagambie	36 47	145 10			
Navarre	36 54	143 07			
Newstead	37 07	144 03			
Nowhere Creek	37 08	143 18			
Paradise	36 50	143 07			
Percydale	37 03	143 24			
Pilchers Bridge	36 56	144 24			

Explanation of Plates

PLATE 1

Figure 1—Open-forest II of *Eucalyptus sideroxylon* in Rushworth State Forest.

Figure 2—Woodland of *Eucalyptus camaldulensis* in Reedy Lake State Forest.

PLATE 2

Figure 3—Rocky outcrop in the Western Highlands, habitat for many species of reptiles.

Figure 4—Tuan *Phascogale tapoatafa*, open-forest II and woodland in the Stuart Mill and Castlemaine areas support important populations of this species.



FIGURE 1



FIGURE 2



FIGURE 3



FIGURE 4