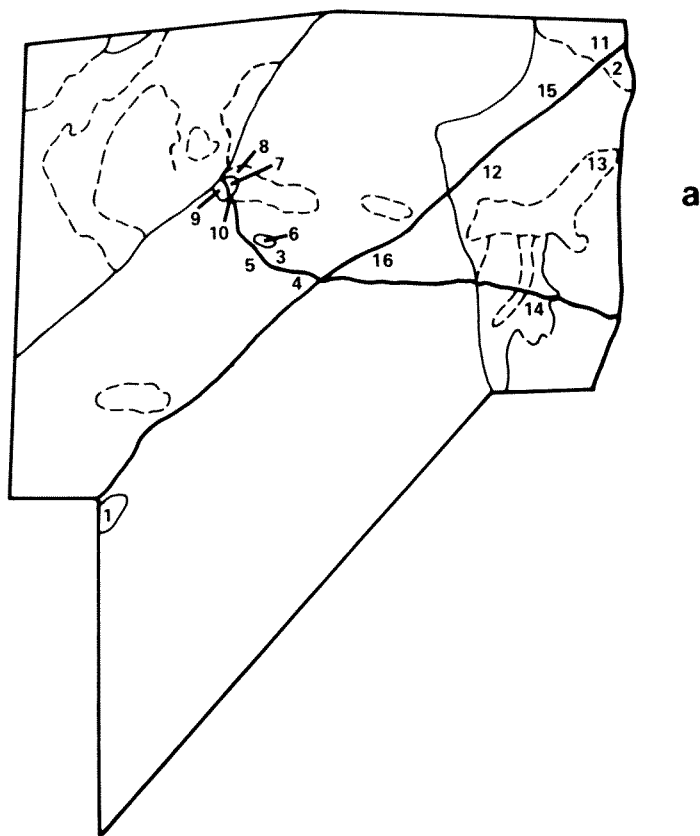


### III. MAMMALS OF TARIN ROCK AND NORTH TARIN ROCK RESERVES

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#### INTRODUCTION

Mammals were recorded in the Tarin Rock and North Tarin Rock Reserves between 16—29 May 1971 and 22 September and 4 October 1972. The annotated list of species includes mammals collected and lodged in the Western Australian Museum. Registration numbers are M 8208—8324 and M 9474—9499 for those collected in May 1971 and September 1972 respectively. Records based on sightings and owl pellet examination (see Dell and Johnstone, this publication) are included.



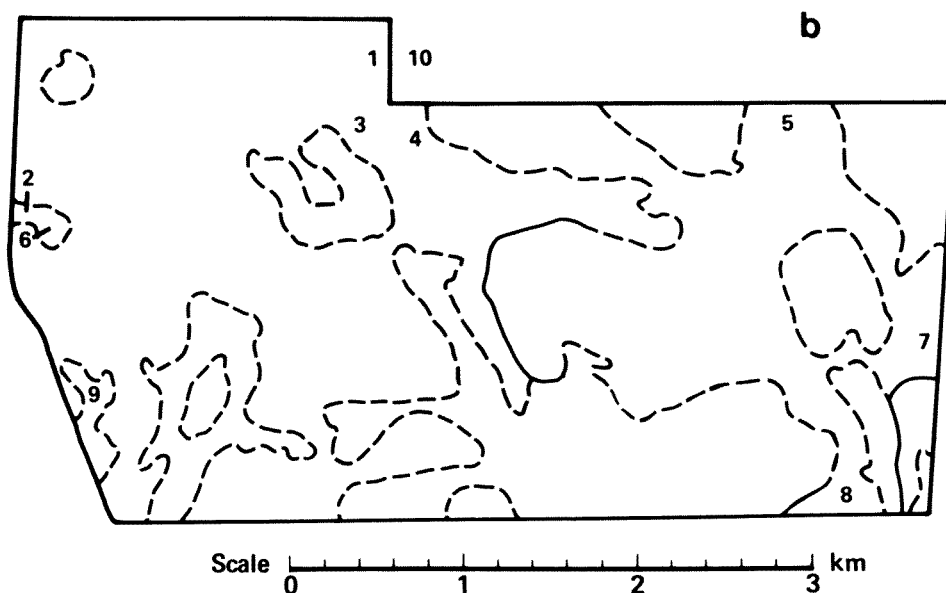


Fig. 1. Distribution of traplines, and boundaries of vegetation formations (mapped by Muir, this publication) are shown for (a) Tarin Rock Reserve, and (b) North Tarin Rock Reserve.

Mammal traps were set in all the vegetation formations in these Reserves. In May 1971 traps were deployed in straight lines of Elliott traps (Elliott Scientific Instruments, Burwood, Victoria) with dimensions 8 x 10 x 33 cm in alternative sequence with breakback ('Self-Set') traps at 10 m intervals. The number of traps per line was variable. In September 1972 a 'standard' trapline was adopted with ten of each kind of trap arranged as described above. In addition treadle-type cage traps with dimensions 30 x 40 x 12 cm ('National' design) were used. Pit traps comprising a PVC tube 60 cm long and 10 cm in diameter were used where soil conditions allowed. Sites where traplines were deployed are shown in Fig. 1. Bait used for all trapping was 'universal' based on peanut paste, rolled oats, bacon and raisins.

A description of the structure and floristics of the vegetation and soil at each trapline is given by Muir (this publication). The trapping effort for the two Reserves is tabulated in the appendix.

## ANNOTATED LIST

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

Frequently sighted in pairs or singly on both Reserves during surveys. A group of six was seen in the central burnt area of Tarin Rock Reserve on 14 September 1975.

### **Tammar Wallaby (*Macropus eugenii*)**

In May 1971 seven separate sightings were recorded at North Tarin Rock Reserve; five were 20—100 m outside the eastern boundary. None were sighted on Tarin Rock Reserve although they are reported to occur there (Marshall, 1967 Fauna Warden's report of Tarin Rock Reserve).

### **Western Brush Wallaby (*Macropus irma*)**

In May 1971, one was sighted 200 m from the eastern boundary of North Tarin Rock Reserve in regenerating *Grevillea hookeriana*. Fifteen separate sightings were made in the same area in September 1972. None were sighted on Tarin Rock Reserve although they are reported to occur there (Marshall, *ibid.*).

### **Brush-tailed Possum (*Trichosurus vulpecula*)**

In May 1971 an adult male was trapped in Tarin Rock Reserve at trapline 2.

### **Honey Possum (*Tarsipes spencerae*)**

In September 1972 an adult male and adult female were caught on North Tarin Rock Reserve near trapline 4, and a small male captured on Tarin Rock Reserve near trapline 12. All were pit-trapped. The female had four pouch young (mean crown-rump length of 3.7 mm) and were probably born early September. Kitchener and Chapman (1975) state that the period of births for this species extends at least from mid-autumn to mid-spring. Honey Possums have also been collected from nearby Kukerin in 1967 and Lake Grace in 1969.

### **Common Dunnart (*Sminthopsis murina*)**

In May 1971 one adult male was trapped in North Tarin Rock Reserve at trapline 5. Its stomach contents included unidentified plants and insects. This specimen, according to M. Archer, has peculiar dentition and resembles in morphology and colour some eastern Australian island forms.

### **Fat-tailed Dunnart (*Sminthopsis crassicaudata*)**

A few teeth of *S. crassicaudata* (identified by M. Archer) were found in pellets from Barn Owl (*Tyto alba*) (see Dell and Johnstone, this publication).

### **Western Mouse (*Pseudomys occidentalis*)**

In May 1971 two adult males were collected on Tarin Rock Reserve at trapline 12, and in September 1972 two adult females, weighing 40 and 53 g, were collected on Tarin Rock Reserve at traplines 14 and 15. The stomachs of these specimens contained macerated plant material but no insect remains. One female had four foetuses (crown-rump length from 20.6 to 22.8 mm). The other was not pregnant but three implantation scars on its uteri indicated it had bred.

### **Gould's Wattled Bat (*Chalinolobus gouldii*)**

*C. gouldii* was only collected from North Tarin Rock Reserve. In May 1971 seven males and four females were collected, and in September 1972 one male and one female. They were all shot while flying 2—4 m above a track bordering the eastern edge of the reserve. These specimens were included in a study of the reproduction of this species by Kitchener (1975) who concluded that females were monoestrous, giving birth to two young from late November or early December through to mid January. On 18 May 1971 an aggregation of at least 30 bats, including both *C. gouldii* and *Eptesicus pumilus*, were sighted at dusk, wheeling in flight over an area 200 m north of the campsite. Three *C. gouldii* and *E. pumilus* were shot from this group and their stomachs contained many winged termites and occasional microlepidopterans. This aggregation of bats may have resulted from their coming together to feed on termites that were engaged in 'colonizing' flights from the numerous termitaria on this reserve.

### **Little Bat (*Eptesicus pumilus*)**

In May 1971 one adult female was shot at North Tarin Rock Reserve (see above), and another from above the central track on Tarin Rock Reserve.

### **Lesser Long-eared Bat (*Nyctophilus geoffroyi*)**

In May 1971 an adult male was collected from beneath bark of a dead stump 5 m above the ground, near trapline 2, on Tarin Rock Reserve.

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

In May 1971, 62 mice were collected from North Tarin Rock Reserve with captures from all traplines. In September 1972 only 4 mice were caught on this Reserve from traplines 1 and 3. Similar numbers were caught at Tarin Rock Reserve in May 1971 and September 1972 (50 and 13 respectively). In May they were caught at all traplines except number 1, and in September they were caught at traplines 10, 11, 15 and 16. In September mice were less widely distributed on both Reserves and most were caught on well drained soils.

None of the adult females collected in May from North Tarin Rock or Tarin Rock Reserves were pregnant. The capture of juveniles weighing only 5 g in May suggests that breeding had only recently ceased. Most of the larger females in May were apparently anoestrous for they had straight 'thread' uteri. In September, females from both Reserves were pregnant or recently parturient; the three pregnant females had from 6—8 fetuses (crown to rump length ranging from 3.5 to 9.5 mm). The two other adult females had slightly thickened and convoluted uteri suggestive of recent pregnancy. The capture of two juveniles weighing only 8.6 and 9.3 g in September 1971 indicates some breeding in late winter.

### **European Rabbit (*Oryctolagus cuniculus*)**

None seen on either Reserve although they were frequently seen in adjacent cultivated paddocks.

## DISCUSSION

The occurrence of *Pseudomys occidentalis* on Tarin Rock Reserve is a significant discovery because the survival of this species in the wheatbelt at the time of these surveys was in doubt (Kitchener 1973). It was first described as a new species in 1951 from a specimen collected in 1930 at Tambellup, Western Australia (Ride 1970). At the time of the initial discovery at Tarin Rock only five other specimens had been collected and they were all from a small area in the South West, viz. Hatters Hill, near Lake King (1933); 12 km south of Nyabing (1953); and the 'A' class Reserve No. 25194, 30 km southeast of Tambellup (1968). Although its habitat of May 1971 was completely destroyed in February 1972 by a bush fire, it was trapped in two different vegetation associations in September 1972, indicating that it will probably survive on this Reserve.

The capture of *P. occidentalis* on two occasions at localities where the soil is shallow and has a high pebble content thought unsuitable for burrowing, suggests that this species does not inhabit deep burrow systems such as those dug by other native rodents in the wheatbelt. The *P. occidentalis* collected at Tambellup in 1968 was also associated with a shallow pebbly substrate (M. Archer, *pers. comm.*).

The *Sminthopsis murina* collected on North Tarin Rock Reserve which has dental and other characteristics not typical of the species is currently being studied.

The relative paucity of mammal species on these Reserves compared with other reserves surveyed in the wheatbelt during this programme, and previous to it, was not unexpected. Both Reserves offer little in the way of vegetation or habitat diversity.

Other mammals not collected on these Reserves but which may occur there are the Red-tailed Wambenger (*Phascogale calura*) and the Western Pigmy Possum (*Cercartetus concinnus*). Wambengers have been reported from Tarin Rock Reserve in 1967 by O. Seymour, Secretary of the Western Australian Gould League, and one has been collected from nearby Kukerin in 1960. A Pigmy Possum was also collected at Kukerin in 1964-65.

## REFERENCES

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## APPENDIX

Number of trapnights for each trapline at (a) North Tarin Rock Reserve, and (b) Tarin Rock Reserve, during May 1971 and September 1972. (BB = breakback, E = Elliott, C = cage, and P = pit trap). Location numbers refer to vegetation and soil descriptions at each trapline given by Muir (this publication). A trapnight is one trap set for 24 hours.

### (a) North Tarin Rock

Trapline no.	Location no.	Number of trapnights			
May 1971		BB	E	C	
1	4.1	88	88	22	
2	2.9	55	55	22	
2	2.5	60	60	0	
4	2.5	0	80	0	
5	2.7	88	88	33	
6	2.9	55	55	11	
7	2.37	0	100	0	
8	1.2	30	30	24	
10	3.1	72	22	22	
September 1972		BB	E	C	P
1	4.1	60	60	12	30
2	2.9	30	30	0	0
4	2.5	0	0	0	35
5	2.7	60	60	0	0
6	2.9	30	30	6	0
7	2.37	60	60	0	0
8	1.2	60	60	24	0
9	2.22	60	60	12	0
10	3.1	60	60	0	0

### (b) Tarin Rock

Trapline no.	Location no.	Number of trapnights		
May 1971		BB	E	C
1	1.5	80	80	24
2	1.2	80	80	24
3	2.16	35	35	0
4	2.17	35	35	0
5	2.16	35	35	0
6	1.8	35	35	36
7	1.9	20	20	0
8	2.35	20	20	0
9	1.1	20	16	0
10	2.14	20	16	24

Trapline no.	Location no.	Number of trapnights			
September		BB	E	C	P
1972					
10	2.14	50	50	0	0
11	1.2	20	20	0	0
12	2.11	50	50	4	50
13	1.3	50	50	16	0
14	2.19	50	50	0	0
15	2.6	50	50	0	0
16	2.18	50	50	0	0