

## IV Vertebrate Fauna

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The vertebrate species occurring in the vicinity of Banjawarn (BW) survey area (27°47'S, 121°39'E) were documented during three survey periods, in May 1979, February 1980 and October 1981. Location of the Study Area is shown on Figure 1, and the position of sampling sites are shown on Figure 3. Representative specimens of most reptile and amphibian and mammal species were collected and are lodged in the Western Australian Museum.

The sampling of vertebrate fauna in the Eastern Goldfields was designed to place greater emphasis on more complex Study Areas in the south-west of the region and less emphasis on those in the north (Biological Surveys Committee 1984). Consequently, only one survey area was located in the Duketon-Sir Samuel Study Area. The methods of survey are documented by Biological Surveys Committee (1984).

The vegetation site numbers, field codes, locality co-ordinates, vegetation type, and details of the faunal sampling periods of the sampling sites are shown in Table 1. In addition opportunistic recordings and collections were made throughout the survey area and adjacent regions. Visits were made on two trips to Pundin Rockhole (27°41'40"S, 121°53'10"E) adjacent to the Neckersgat Range, to collect bird data, mist-net and shoot for bats and collect aquatic and terrestrial invertebrates. Collections were made of reptiles from the granite tors (27°58'S, 121°10'E) on Weebo Station in February 1980 and a visit was made to Wilgan's Swamp during the same survey period to document waterbirds occurring in the ephemeral swamps after heavy rain. Numerous sightings and collections were made in the extensively and heavily grazed areas surrounding wells.

Nomenclature in this report is as follows: amphibians (Tyler *et al.* 1984), reptiles (Storr *et al.* 1981, 1983, 1986), birds (Storr & Johnstone 1979) and mammals (Strahan 1983) except where more recent revisions have made nomenclatural changes.

The efficacy of sampling for the herpetofauna is shown on Figure 4. It is to be expected that additional species of reptiles should be encountered in the survey area, although the extensive rains of February 1980 probably allowed a complete documentation of amphibians.

Figure 5 shows the accumulation of species and individuals for all bird data collected at Banjawarn. It indicates that the census study sites (quadrats) included 49 species (70%) of the total recorded for the area. The total species count shows that there was an accumulation of species during the three survey periods but only five species (7%) being added on the final survey. Despite having a high percentage of all species (70%) the quadrats included 1637 bird individuals or only 29% of the total of 5626 individuals recorded for the area. Thus the quadrat sample sites were well representative of the avifauna of the area. Additional bird species may be expected in the quadrat areas with further sampling as indicated by the continuing accumulation of species in Figure 6.

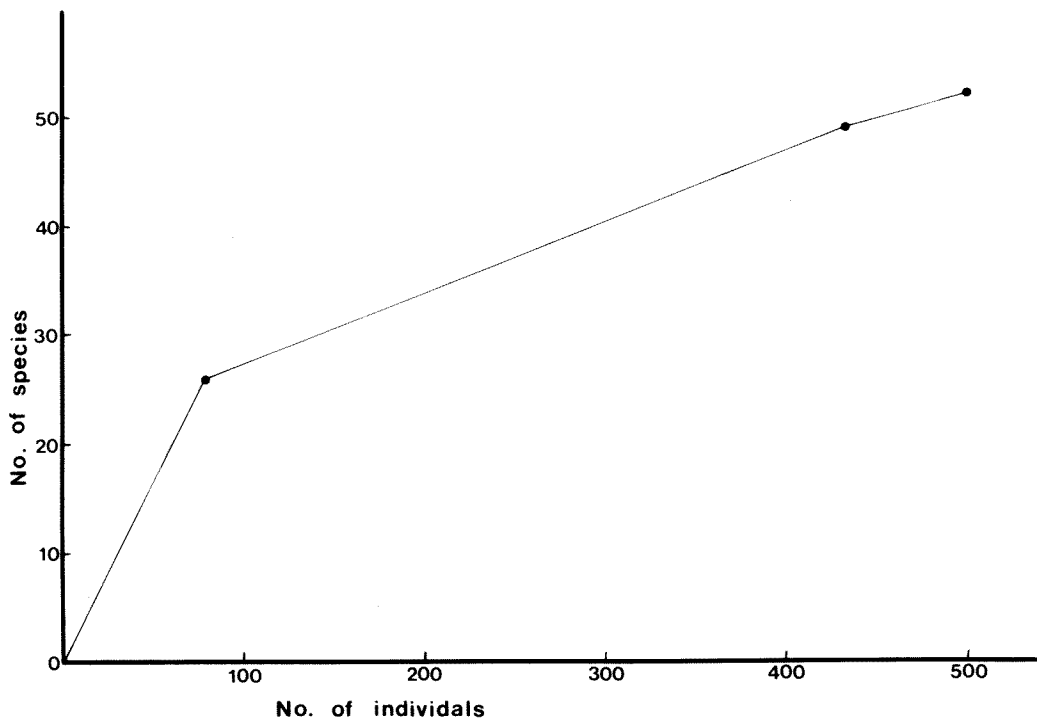
### **Amphibians and Reptiles**

Five species of amphibian and 46 species of reptile were recorded in the Study Area during the three sampling periods (Table 2). Representative specimens of these species

**Table 1.** Fauna Sampling Sites of the Banjawarn (BW) Survey Area

| Site No.              | Field No.<br>BW | Site Coordinates |            | Vegetation  | Fauna Survey |           |           |           |
|-----------------------|-----------------|------------------|------------|---|--------------|-----------|-----------|-----------|
|                       |                 | Lat (°S)         | Long (°E)  |   | FP<br>123    | TL<br>123 | BQ<br>123 | OP<br>123 |
| DRAINAGE LINE (C)     |                 |                  |            |   |              |           |           |           |
| DS2                   | R5 B5 M5        | 27°47'00"        | 121°39'25" | <i>Eucalyptus camaldulensis</i><br>Low Woodland         | XXX          | XXX       | XXX       | XXX       |
| SALT LAKE FEATURE (L) |                 |                  |            |   |              |           |           |           |
| DS9                   | R1 B1 M1        | 27°47'50"        | 121°39'95" | <i>Halosarcia halocnemoides</i><br>Low Shrubland        | XXX          | XXX       | XXX       | XXX       |
| DS10                  | R3 B3 M3        | 27°47'25"        | 121°39'25" | <i>Triodia plurinervata</i><br>Hummock Grassland        | XXX          | XXX       | XXX       | XXX       |
| BROAD VALLEY (V)      |                 |                  |            |   |              |           |           |           |
| DS17                  | B6 M6           | 27°46'50"        | 121°40'45" | <i>Eucalyptus oleosa</i><br>Low Woodland                |              | XXX       | XXX       | XXX       |
| DS18                  | R2 B2 M2        | 27°48'05"        | 121°40'05" | <i>Acacia aneura</i> / <i>E. oleosa</i><br>Low Woodland | XXX          | XXX       | XXX       | XXX       |
| DS21                  | R4 B4 M4        | 27°47'55"        | 121°40'55" | <i>Acacia aneura</i><br>Low Woodland                    | XXX          | XXX       | XXX       | XXX       |
| DS21a                 | R6              | 27°46'55"        | 121°39'45" | <i>Eragrostis eriopoda</i><br>Low Grassland             | XX           |           |           | XXX       |

Field No.: R = reptile, B = bird, M = mammal. Fauna Survey: FP = fenced pitline, TL = trapline, BQ = bird quadrant, OP = opportunistic records; numbers indicate period of survey, 1 = May 1979, 2 = February 1980, 3 = October 1981. Site numbers ending in a lower case letter differ from typical vegetation sites as exemplified by 'comments' under the site number in Appendix I.



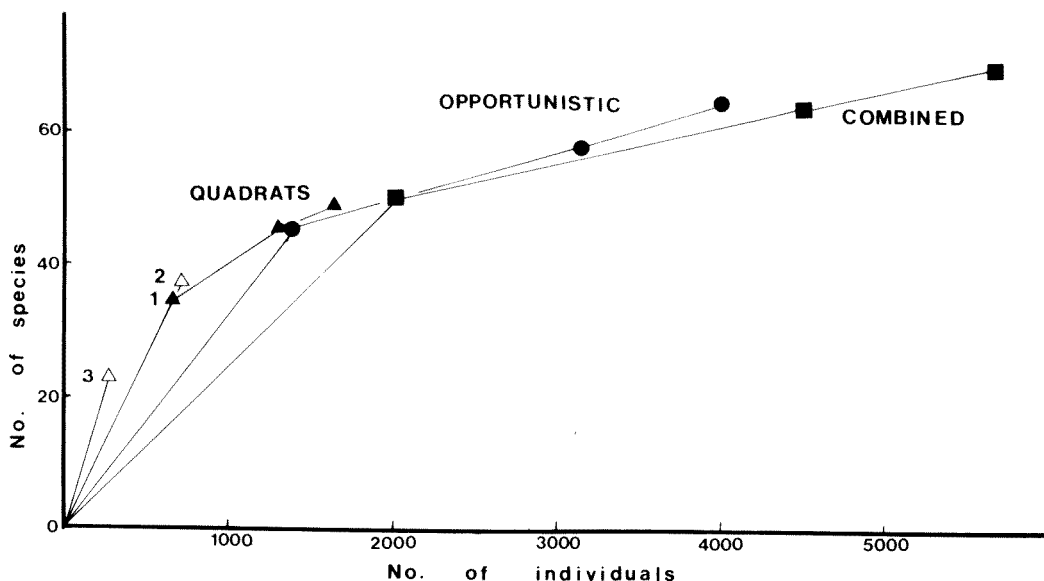
**Figure 4:** Number of reptile and amphibian species and the number of individuals caught at Banjarn (BW) study sites. Data are accumulated for the three study periods.

for May 1979 (R66005-66042), February 1980 (R69138-69446) and October 1981 (R74731-74797) are lodged in the collections of the Western Australian Museum.

Extensive heavy rain and flooding provided an excellent opportunity to document the amphibians of the Study Area in February 1980. The five species probably represent the entire assemblage of the region; no amphibians had been recorded previously. In excess of 60 individuals of three species were removed from a single pit line one morning during February 1980. The local flooding in February 1980 also indicated that the Flat-shelled Tortoise, *Chelodina steindachneri*, was common in Vickers Creek.

The reptiles of the Study Area are characteristically Eremaean with few species at the extremes of their range and none unique to the region. Species at the northerly extremes of their range are *Diplodactylus squarrosus* and *Ctenophorus fordi*, those at the southerly end are *Ctenopus grandis* and *Varanus eremius* while *Ramphotyphlops hamatus* is at the eastern end of its range. Several species have been collected prior, or subsequent, to our surveys but were not recorded by us, *Morelia stimsoni stimsoni*, *Denisonia fasciata*, *Pseudechis butleri*, *Diplodactylus wellingtonae*, *Underwoodisaurus milii*, taking to 51 the number of species known from the Study Area.

The granite tors on Weebo were the only locality where *Egernia formosa* and



**Figure 5:** The cumulative number of bird species and number of individuals recorded for the three study periods at Banjarn (BW). Data collected on bird quadrats are indicated separately for each study period (1,2,3) and combined as quadrat totals. Data collected opportunistically is indicated separately and also combined with quadrat data.

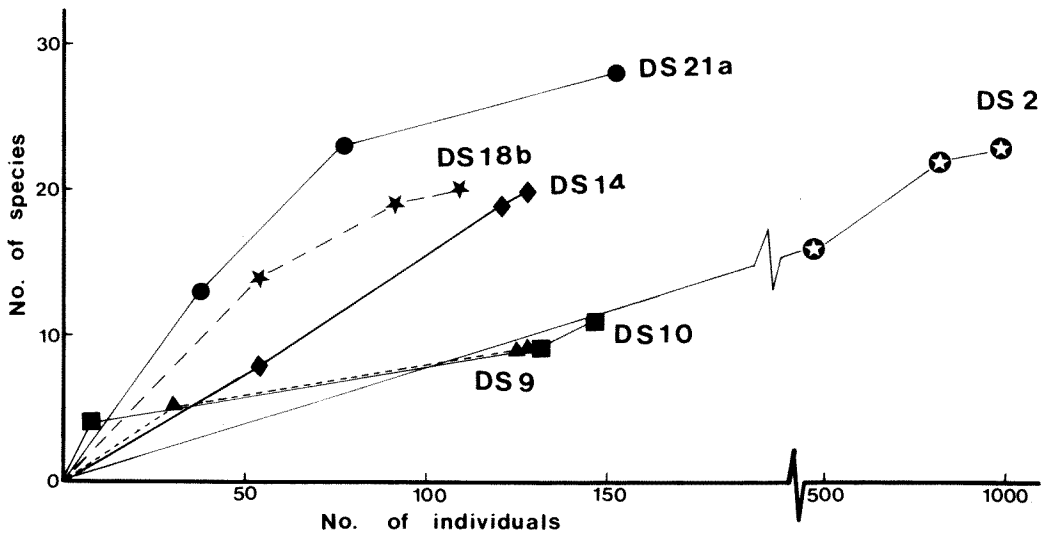
*Ctenophorus caudicinctus* were recorded in the Study Area although these saxicoline species probably occur on rocky outcrops throughout.

The habitat with the richest herpetofauna was DS18 where 19 species were recorded from Mallee/*Triodia*. Habitats dominated by mulga also had relatively rich herpetofaunal assemblages. Around Gum Well two species of *Gehyra* were found sympatrically, with *G. purpurascens* occupying the mallees and *G. variegata* the shrubs.

### Birds

A total of 70 species of birds comprising 32 non-passerines and 38 passerines was recorded during the Banjarn survey. Table 3 lists these species and indicates the number of sightings and total number of individuals in each vegetation type sampled during each survey.

A notable feature is the high number of non-passerine individuals compared to elsewhere in the Goldfields. At Banjarn the nine granivores *Turnix velox*, *Phaps chalcoptera*, *Ocyphaps lophotes*, *Platycercus zonarius*, *P. varius*, *Neophema bourkii*, *Melopsittacus undulatus*, *Nymphicus hollandicus* and *Cacatua roseicapilla* constitute 90.7% of all non-passerines. Some of these species, especially *P. chalcoptera*, *O. lophotes*, *P. zonarius*, *N. hollandicus* and *C. roseicapilla*, are opportunistic commensals with man.



**Figure 6:** The accumulation during the three study periods of number of bird species and total number of individuals at each of the census quadrats at Banjawarn (BW).

Irregular often heavy rains results in prolific grass seeding which provides a rich food resource during ripening and after being shed. Pastoral activity has encouraged this growth of grass at the expense of woody shrubs and trees. Coupled with this are numerous stock drinking troughs which provide permanent drinking water within easy flying distance from food. It is likely, therefore, that the present high number of granivorous non-passerines is partly a result of pastoral activity in the area. This reflects the comments by Johnston & Klitz (1977) who maintain that in certain situations the locally most abundant birds are commensals which add considerably to the total biomass.

Because the highly mobile granivorous non-passerines move between feeding, drinking, roosting and breeding areas they show little preference for specific habitat types. In addition the low number of other non-passerines precludes any comment on correlations between habitat preferences.

The 38 passerine species comprised 3232 individuals. Two resident species, the foliage gleaning *Smicrornis brevirostris* and the secondary nectarivore *Manorina flavigula* constituted 24% of the total passerine individuals. Another resident, the ground and tussock zone insectivore *Malurus leucopterus* was also common. Migratory or nomadic species which were common included *Pardalotus striatus*, *Certhionyx variegatus*, *Ephianura tricolor* and *Corvus bennetti*; these represented 32% of the total passerine assemblage. Movements of *Pardalotus striatus* in the goldfields has been reviewed by Dell (1984) who indicated the presence at Banjawan of both wintering southern birds *P. s. westraliensis* and arid zone *P. s. murchisoni*.

Table 3 indicates that the *Acacia aneura* Low Woodland (DS21) had the highest number of passerine species. The *Halosarcia halocnemoides* association (DS9) and the *Triodia plurinervata* association (DS10) had the lowest number of species. The *Eucalyptus camaldulensis* woodland (DS2) had fewer passerine species than did the *A. aneura* associations but had 5 times the total number of individuals. A large proportion of individuals in DS2 were the resident foliage gleaning insectivore *Smicrornis brevirostris* and the migratory *Pardalotus striatus*.

Fifteen species were recorded breeding at Banjawarn. In May 1979 the following data were recorded: *Cacatua roseicapilla* at least 20 pairs were occupying nest hollows between 27-31 May, *Melopsittacus undulatus* feeding young in c. 10 nests on 27, 28, 29, 31 May, *Petroica goodenovii* males in territorial conflict on 28 May, *Pardalotus striatus* pair at nest hollow on 27 and 29 May, *Poephila guttata* 4 downy chicks on 29 May. In October 1981 the following data were recorded: *Accipiter cirrocephalus* adult feeding chicks on 11 October, *Acanthiza chrysorrhoa* feeding chicks on 11 October, *Cracticus tibicen* feeding chicks on 11 October, *Cracticus nigrogularis* incubating on 13 October. In February 1980 the following data were recorded: *Cacatua roseicapilla* adult feeding another on 24 February, *Coracina novaehollandiae* incubating on 26 February, *Malurus leucopterus* several nuptial plumaged males chasing females on 24 February, *Acanthiza chrysorrhoa* building nest on 24 February, *Manorina flavigula* building nest on 26 February, *Epthianura tricolor* 3 eggs on 25 February, 2 eggs on 25 February, *Cracticus nigrogularis* building nests on 22 and 27 February, *Grallina cyanoleuca* incubating on 24 February.

The 70 species recorded at Banjawarn are all within their known ranges (Storr 1985). The Study Area is located near the south-western edge of the mid-eastern interior of Western Australia where birdlife is considerably richer than the more arid, relatively waterless areas to the north-east. Natural rockholes and pools along Vickers Creek have been considerably augmented by abundant stock-watering facilities which have allowed some species, especially granivores, to expand in numbers.

At Wigan's Swamp in February 1980 the following birds were recorded: *Petroica goodenovii*, *Cuculus pallidus*, *Anas gibberifrons*, *Malurus leucopterus*, *Grallina cyanoleuca*, *Meliphaga virescens*, *Ptilonorhynchus maculatus*, *Anthus novaeseelandiae*, *Corvus bennetti* and *Podiceps novaehollandiae*.

### **Mammals**

Twenty-one species of mammals were collected or recorded from the Study Area (Table 4). Representative specimens of the small ground mammals and bats for May 1979 (M17597-17618), February 1980 (M17825-903) and October 1981 (M20216-51) are lodged in the collections of the Western Australian Museum.

Although few mammal species have been recorded from the area previously it appears that no species are at the limits of their range or are unique to the area.

No tracks of dingoes, *Canis familiaris*, or foxes, *Vulpes vulpes*, were noted during the surveys of the Study Area although fresh tracks and an observation of a feral cat, *Felis*

**Table 2.** Amphibians and reptiles at Banjawarn (BW) survey area indicating number of species and individuals caught in each sample site. The first figure indicates the number caught in fenced pit lines; the second figure indicates the number caught opportunistically; single figures indicate opportunistic collecting only. Numbers for the three survey periods are combined. Vegetation types are listed in Table 3 and described in Appendix I.

| Landform Code<br>Vegetation Code (DS)    | C<br>2 | L<br>9 | L<br>10 | V<br>17 | V<br>18 | V<br>21 | V<br>21a | Wells | Pundin | Weebo |
|--|--------|--------|---------|---------|---------|---------|----------|-------|--------|-------|
| <b>HYLIDAE</b>                           |        |        |         |         |         |         |          |       |        |       |
| <i>Cyclorana maini</i>                   | 4/0    |        | 1/0     |         |         | 2/0     |          | 2     | 1      |       |
| <b>LEPTODACTYLIDAE</b>                   |        |        |         |         |         |         |          |       |        |       |
| <i>Limnodynastes spenceri</i>            |        |        | 5/1     |         |         |         |          | 3     |        |       |
| <i>Neobatrachus kunapalari</i>           |        |        |         |         | 1/0     |         |          |       |        |       |
| <i>Neobatrachus</i> sp.                  | 2/0    | 2/0    | 12/0    |         | 17/0    | 64/0    | 43/2     | 3     | 3      |       |
| <i>N. wilsmorei</i>                      |        |        | 1/0     |         | 4/1     | 8/0     | 2/0      |       |        |       |
| <b>CHELUIDAE</b>                         |        |        |         |         |         |         |          |       |        |       |
| <i>Chelodina steindachneri</i>           | 0/1    |        |         |         |         |         |          |       |        |       |
| <b>GEKKONIDAE</b>                        |        |        |         |         |         |         |          |       |        |       |
| <i>Diplodactylus conspicillatus</i>      |        |        |         |         | 3/0     | 13/2    | 3/0      |       |        |       |
| <i>D. elderi</i>                         |        |        |         |         | 1/0     |         | 7/3      |       |        |       |
| <i>D. pulcher</i>                        |        |        |         |         |         |         |          |       | 2      |       |
| <i>D. squarrosus</i>                     |        | 15/3   |         |         |         |         |          |       |        |       |
| <i>Gehyra purpurascens</i>               |        |        |         | 3       |         |         |          | 10    |        |       |
| <i>G. variegata</i>                      | 1/3    | 2/1    |         | 1       | 2/0     | 0/3     | 0/1      | 7     | 5      |       |
| <i>Heteronotia binoei</i>                | 0/1    |        |         |         | 1/0     |         |          | 3     |        |       |
| <i>Nephrurus vertebralis</i>             | 1/0    |        |         |         |         |         |          |       |        |       |
| <i>Rhynchoedura ornata</i>               | 2/0    |        | 1/1     | 1       | 2/1     | 2/4     |          |       |        |       |
| <b>PYGOPODIDAE</b>                       |        |        |         |         |         |         |          |       |        |       |
| <i>Delma butleri</i>                     |        |        |         |         | 1/0     |         | 0/1      |       |        |       |
| <i>Lialis burtonis</i>                   |        |        |         | 1       | 2/0     | 0/1     | 1        |       |        |       |
| <i>Pygopus nigriceps</i>                 |        |        |         |         | 1/0     |         |          |       |        |       |
| <b>AGAMIDAE</b>                          |        |        |         |         |         |         |          |       |        |       |
| <i>Ctenophorus caudicinctus mensarum</i> |        |        |         |         |         |         |          |       | 8      |       |
| <i>C. fordi</i>                          |        | 13/6   | 2/12    |         |         |         |          |       |        |       |
| <i>C. inermis</i>                        | 1/0    |        | 1/1     |         |         |         | 1/1      | 5     |        | 1     |
| <i>C. isolepis gularis</i>               |        |        |         | 1       | 1/3     |         |          |       |        |       |
| <i>C. reticulatus</i>                    |        |        |         |         |         |         |          |       |        |       |
| <i>C. salinarum</i>                      |        | 2/4    |         |         |         |         |          |       | 1      |       |
| <i>Moloch horridus</i>                   |        |        | 1/0     |         | 1/1     | 0/1     | 1/0      |       |        |       |
| <i>Pogona minor</i>                      | 1/1    |        | 0/1     |         |         |         |          |       |        |       |
| <b>SCINCIDAE</b>                         |        |        |         |         |         |         |          |       |        |       |
| <i>Ctenotus atlas</i>                    |        |        | 1/0     |         |         |         |          |       |        |       |
| <i>C. grandis</i>                        |        |        |         | 1       | 0/1     |         |          |       |        |       |
| <i>C. helenae</i>                        |        |        | 3/3     |         | 4/0     |         | 1/0      |       |        |       |
| <i>C. leonhardii</i>                     | 1/0    | 1/1    | 5/0     |         | 1/0     | 10/6    | 1/0      |       | 2      | 1     |
| <i>C. quattuordecimlineatus</i>          |        |        | 1/0     |         | 4/1     |         |          |       |        |       |
| <i>C. schomburgkii</i>                   |        |        |         |         |         | 2/1     |          |       |        |       |

Table 2 (cont).

|                                |      |     |     |     |     |     |   |
|--------------------------------|------|-----|-----|-----|-----|-----|---|
| <i>Egernia depressa</i>        |      |     |     |     |     | 2   |   |
| <i>E. formosa</i>              |      |     |     |     |     |     | 2 |
| <i>E. inornata</i>             |      |     |     | 1/0 | 1/0 |     |   |
| <i>E. striata</i>              |      |     |     |     | 1/0 |     |   |
| <i>Lerista desertorum</i>      | 2/0  |     | 5   |     |     | 0/2 | 4 |
| <i>L. muelleri</i>             | 2/0  | 0/2 | 1   |     |     |     | 4 |
| <i>Menetia greyii</i>          |      |     |     |     |     | 1/0 |   |
| <i>Morethia butleri</i>        |      |     |     |     |     |     | 1 |
| VARANIDAE                      |      |     |     |     |     |     |   |
| <i>Varanus caudolineatus</i>   |      |     |     |     | 1/1 | 1/0 |   |
| <i>V. eremius</i>              |      |     |     | 3/1 |     |     |   |
| <i>V. giganteus</i>            |      |     |     |     |     |     | 1 |
| <i>V. gouldii</i>              |      |     | 0/1 |     | 1/0 |     |   |
| <i>V. panoptes</i>             |      |     |     |     |     |     | 1 |
| <i>V. tristis</i>              | 0/1  |     |     |     |     |     |   |
| TYPHLOPIDAE                    |      |     |     |     |     |     |   |
| <i>Ramphotyphlops hamatus</i>  |      | 2/0 | 1/0 | 1/0 | 1/0 | 1/0 |   |
| <i>R. waitii</i>               |      |     | 2/0 |     |     |     |   |
| ELAPIDAE                       |      |     |     |     |     |     |   |
| <i>Pseudonaja modesta</i>      |      |     |     |     |     | 0/1 |   |
| <i>P. nuchalis</i>             |      |     |     |     | 1/0 |     |   |
| <i>Vermicella semifasciata</i> | 1/0  |     |     |     | 1/0 |     |   |
| Frogs                          | 2(1) | 1   | 4   | 2   | 3   | 2   |   |
| Lizards                        | 10   | 6   | 10  | 16  | 10  | 12  |   |
| Snakes                         | 1    | 1   | 2   | 1   | 3   | 2   |   |
| TOTAL                          | 14   | 8   | 16  | 19  | 16  | 16  |   |

*catus*, were made. The entire Study Area is heavily grazed by sheep, while goats were widespread and common during the October trip. Sheep tracks and grazing were more obvious in areas without spinifex but occurred throughout all sampling sites. Rabbits were infrequently observed and few warrens and dung piles were noted.

Bats were mist-netted in large numbers over tanks or adjacent to their overflows, however the richness of this assemblage in the Study Area is low, only 4 species were recorded.

The dasyurids form the largest group of small ground mammals with seven species recorded. Four of these species occurred sympatrically in the samphire flats of DS9. Banjarn is the only site sampled by the W.A. Museum in the Eastern Goldfields where *Antechinomys laniger* was collected, one individual being trapped in an Elliott trap on top of a 5 m cliff adjacent to Vickers Creek.



**Table 3.** List of birds at Banjarn survey site indicating numbers seen in each sample site. The intensive study sites (quadrats) are shown in the first columns followed by opportunistic observations. The top number indicates the total number of individuals, the lower number the number of observations. The three survey periods (May 1979, February 1980 and October 1981) are indicated as column 1, 2 and 3 respectively for each sample site. The number of observation days for the quadrat data was 5 and for the opportunistic data was 7 for each sample period. x indicates recorded > 50 m from quadrat in same vegetation while quadrat data was being recorded.

|                                 | QUADRATS |     |      |      |      |      | OPPORTUNISTIC |     |      |      |      |      |  | Alluvial Flats | Mills | Casuarina Woodland |
|---------------------------------|----------|-----|------|------|------|------|---------------|-----|------|------|------|------|--|----------------|-------|--------------------|
|                                 | DS2      | DS9 | DS10 | DS17 | DS18 | DS21 | DS2           | DS9 | DS10 | DS17 | DS18 | DS21 |  |                |       |                    |
| CASUARIIDAE                     |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| <i>Dromaius novaehollandiae</i> |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       | 7                  |
| Emu                             |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       | 1                  |
| PODICIPEDIDAE                   |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| <i>Podiceps polocephalus</i>    |          |     |      |      |      |      | 2             |     |      |      |      |      |  |                |       |                    |
| Hoary-headed Grebe              |          |     |      |      |      |      | 1             |     |      |      |      |      |  |                |       |                    |
| ARDEIDAE                        |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| <i>Ardea pacifica</i>           |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       | 1                  |
| Pacific Heron                   |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       | 1                  |
| <i>Ardea novaehollandiae</i>    | 1        |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| White-faced Heron               | 1        |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| ANATIDAE                        |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| <i>Tadorna tadornoides</i>      |          |     | x    |      |      |      | 8             | 5   | 2*   |      |      |      |  |                |       |                    |
| Mountain Duck                   |          |     |      |      |      |      | 4             | 2   | 1    |      |      |      |  |                |       |                    |
| <i>Anas gibberifrons</i>        | 10       |     |      |      |      |      | 31            |     |      |      |      |      |  |                |       |                    |
| Grey Teal                       | 5        |     |      |      |      |      | 8             |     |      |      |      |      |  |                |       |                    |
| <i>Chenonetta jubata</i>        | 13       |     |      |      |      |      | 24            |     |      |      |      |      |  |                | 7     |                    |
| Wood Duck                       | 2        |     |      |      |      |      | 7             |     |      |      |      |      |  |                | 1     |                    |
| ACCIPITRIDAE                    |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| <i>Haliastur sphenurus</i>      | 1        | x   |      | x    |      |      | 2             | 3   |      | 2    |      |      |  |                |       |                    |
| Whistling Kite                  | 1        |     |      |      |      |      | 2             | 3   |      | 2    |      |      |  |                |       |                    |
| <i>Accipiter fasciatus</i>      |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| Brown Goshawk                   |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| <i>Accipiter cirrocephalus</i>  | 1        | 1   |      |      |      |      |               | 4   |      |      |      |      |  |                |       |                    |
| Collared Sparrowhawk            | 1        | 1   |      |      |      |      |               | 4h  |      |      |      |      |  |                |       |                    |
| <i>Aquila morphnoides</i>       |          | x   |      |      |      |      | 2             | 1   |      |      |      |      |  |                |       |                    |
| Little Eagle                    |          |     |      |      |      |      | 1             | 1   |      |      |      |      |  |                |       |                    |
| <i>Aquila audax</i>             |          |     |      |      | x    |      |               | 1   |      |      |      |      |  |                |       |                    |
| Wedge-tailed Eagle              |          |     |      |      |      |      |               | 1   |      |      |      |      |  |                |       |                    |
| FALCONIDAE                      |          |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| <i>Falco peregrinus</i>         |          |     |      |      |      |      |               | 1   |      |      |      |      |  |                |       |                    |
| Peregrine Falcon                |          |     |      |      |      |      |               | 1   |      |      |      |      |  |                |       |                    |
| <i>Falco longipennis</i>        | 2        |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |
| Australian Hobby                | 2        |     |      |      |      |      |               |     |      |      |      |      |  |                |       |                    |

Table 3 (cont).

|   | QUADRATS            |        |        |          |                |         | OPPORTUNISTIC        |              |                |        |          |                | Alluvial Flats     | Mills             | Casuarina Woodland |                 |            |
|---|---------------------|--------|--------|----------|----------------|---------|----------------------|--------------|----------------|--------|----------|----------------|--------------------|-------------------|--------------------|-----------------|------------|
|   | DS2                 | DS9    | DS10   | DS17     | DS18           | DS21    | DS2                  | DS9          | DS10           | DS17   | DS18     | DS21           |                    |                   |                    |                 |            |
| <i>Falco berigora</i><br>Brown Falcon                     |                     |        |        |          |                |         |                      | 1<br>1       |                |        |          |                |                    |                   |                    |                 |            |
| <i>Falco cenchroides</i><br>Australian Kestrel            | 3<br>3              |        |        | x        |                |         | 1<br>1               | 1<br>1       | 1<br>1         |        |          |                |                    |                   |                    |                 |            |
| TURNICIDAE  |                     |        |        |          |                |         |                      |              |                |        |          |                |                    |                   |                    |                 |            |
| <i>Turnix velox</i><br>Little Button-quail                |                     | 1<br>1 |        |          | 1<br>1         |         |                      |              |                |        |          | 1<br>1         |                    |                   |                    |                 |            |
| CHARADRIIDAE  |                     |        |        |          |                |         |                      |              |                |        |          |                |                    |                   |                    |                 |            |
| <i>Vanellus tricolor</i><br>Banded Plover                 | x                   |        |        |          |                |         | 1<br>1               |              |                |        |          |                |                    | 9<br>2            |                    |                 |            |
| COLUMBIDAE  |                     |        |        |          |                |         |                      |              |                |        |          |                |                    |                   |                    |                 |            |
| <i>Phaps chaloptera</i><br>Common Bronzewing              |                     |        |        |          |                | 2<br>1  |                      |              |                |        |          | 2<br>1         |                    | 2 5 47<br>1 3 .5  |                    |                 |            |
| <i>Ocyphaps lophotes</i><br>Crested Pigeon                | 18<br>4             |        |        | 3<br>2   | 5 1 1<br>1 1 1 | 11<br>7 | 4<br>1               |              |                |        |          | 30<br>1        | 1 2 11<br>1 1 3    | 16 11<br>1 4      | 10 16<br>6 5       | 7 77<br>3 18    | 5<br>3     |
| PSITTACIDAE   |                     |        |        |          |                |         |                      |              |                |        |          |                |                    |                   |                    |                 |            |
| <i>Platyercus zonarius</i><br>Ring-necked Parrot          | 16 42 6<br>8 23 3   |        |        |          | 2 x 2<br>1 1   | x<br>2  | 7 3 56<br>2 2 12     |              |                |        |          |                | 1 2 2 5<br>1 1 1 2 | 1 8 6<br>1 3 2    | 9<br>5             | 11 11<br>3 4    | 3 3<br>1 1 |
| <i>Platyercus varius</i><br>Mulga Parrot                  |                     |        |        |          |                |         |                      |              |                |        |          |                |                    |                   |                    | 2<br>1          |            |
| <i>Neophema bourkii</i><br>Bourke's Parrot                |                     |        |        |          |                | 9<br>3  |                      |              |                |        |          |                |                    |                   |                    | 2<br>7<br>2     |            |
| <i>Melopsittacus undulatus</i><br>Budgerigar              | 74 4<br>15 1        | x x    | x x    | x 5<br>1 | x x            | x x     | 280 12<br>72c        | 36 27<br>5 4 | 37• 1•<br>3 1  | 2<br>1 | 42<br>8e | 107 14<br>7e.3 |                    |                   | 2<br>1             |                 |            |
| <i>Nymphicus hollandicus</i><br>Cockatiel                 | x 9<br>2            | x      | x x    |          | 16 x<br>1      |         | 1 13<br>1 2          | 17<br>2      | 11• 33•<br>1 2 |        |          | 4 7<br>3 1     | 3<br>1             |                   |                    |                 |            |
| <i>Cacatua roseicapilla</i><br>Galah                      | 24 96 30<br>11 41 8 |        | x x    | x        | 4 5<br>2 1     |         | 176 68 47<br>81 12 9 | 4<br>2       | 5• 23<br>1 5   | 2<br>1 |          | 4 32<br>2 2    | 47 2<br>9 1        | 60 16 18<br>6 3 1 | 18<br>1            | 9 6 15<br>1 3 1 |            |
| CUCULIDAE   |                     |        |        |          |                |         |                      |              |                |        |          |                |                    |                   |                    |                 |            |
| <i>Cuculus pallidus</i><br>Pallid Cuckoo                  |                     |        |        |          |                |         | 1<br>1               |              |                |        |          | 1 2<br>1 2     |                    |                   |                    | 2               |            |
| <i>Chrysococcyx basalis</i><br>Horsefield's Bronze Cuckoo |                     | 2<br>1 | 1<br>1 |          | x              | 5<br>4  | 1<br>1               | 3<br>3       | 4<br>4         |        | 2<br>2   | 1<br>1         |                    |                   |                    |                 |            |
| PODARGIDAE  |                     |        |        |          |                |         |                      |              |                |        |          |                |                    |                   |                    |                 |            |
| <i>Podargus strigoides</i><br>Tawny Frogmouth             |                     |        |        |          |                |         |                      |              |                |        |          | 1<br>1         | 1<br>1             |                   |                    |                 |            |

Table 3 (cont).

|                                   | QUADRATS |     |      |       |       |       | OPPORTUNISTIC |     |         |       |       |      | Alluvial<br>Flats | Mills | Casuarina<br>Woodland |     |
|-----------------------------------|----------|-----|------|-------|-------|-------|---------------|-----|---------|-------|-------|------|-------------------|-------|-----------------------|-----|
|                                   | DS2      | DS9 | DS10 | DS17  | DS18  | DS21  | DS2           | DS9 | DS10    | DS17  | DS18  | DS21 |                   |       |                       |     |
| AEGOTHELIDAE                      |          |     |      |       |       |       |               |     |         |       |       |      |                   |       |                       |     |
| <i>Aegotheles cristatus</i>       |          |     |      | x     |       | 1     |               |     |         | 1     |       | 5 2  |                   |       |                       | 1   |
| Australian Owllet-nightjar        |          |     |      |       |       | 1     |               |     |         | 1     |       | 3 2  |                   |       |                       | 1   |
| CAPRIMULGIDAE                     |          |     |      |       |       |       |               |     |         |       |       |      |                   |       |                       |     |
| <i>Eurostopodus argus</i>         |          |     |      |       |       |       |               |     | 1       |       |       | 2    |                   |       |                       |     |
| Spotted Nightjar                  |          |     |      |       |       |       |               |     | 1 2     |       |       |      |                   |       |                       |     |
| ALCEDINIDAE                       |          |     |      |       |       |       |               |     |         |       |       |      |                   |       |                       |     |
| <i>Halcyon perrhopygia</i>        |          |     |      |       |       |       |               |     |         |       |       |      |                   |       | 1                     |     |
| Red-backed Kingfisher             |          |     |      |       |       |       |               |     |         |       |       |      |                   |       | 1                     |     |
| HIRUNDINIDAE                      |          |     |      |       |       |       |               |     |         |       |       |      |                   |       |                       |     |
| <i>Hirundo nigricans</i>          |          |     |      |       |       |       |               |     |         |       |       |      |                   |       | 5                     |     |
| Tree Martin                       |          |     |      |       |       |       |               |     |         |       |       |      |                   |       | 1                     |     |
| MOTACILLIDAE                      |          |     |      |       |       |       |               |     |         |       |       |      |                   |       |                       |     |
| <i>Anthus novaeseelandiae</i>     |          | 7 7 | 6    |       |       |       |               |     | 14 3 12 | 1 2   |       |      | 4 3               |       |                       | 3 1 |
| Richard's Pipit                   |          | 2 5 | 6    |       |       |       |               |     | 5 2 9   | 1 2   |       |      | 1 3               |       |                       | 2 1 |
| CAMPEPHAGIDAE                     |          |     |      |       |       |       |               |     |         |       |       |      |                   |       |                       |     |
| <i>Coracina maxima</i>            |          |     |      |       |       |       |               |     |         |       |       |      | 4                 |       |                       | 6 2 |
| Ground Cuckoo-shrike              |          |     |      |       |       |       |               |     |         |       |       |      | 1                 |       |                       | 2 1 |
| <i>Coracina novaehollandiae</i>   | 11       |     |      | x 3   | x x   | 1 2 1 | 2 7           |     | 2 2 2   | 2 2 2 | 2 6   |      |                   | 3     | 5                     |     |
| Black-faced Cuckoo-shrike         | 6        |     |      | 3     |       | 1 2 1 | 1b 2          |     | 1 1 2   | 2 2 1 | 2 5   |      |                   | 1     | 2                     |     |
| PACHYCEPHALIDAE                   |          |     |      |       |       |       |               |     |         |       |       |      |                   |       |                       |     |
| <i>Petroica goodenovii</i>        | 3        | 1   | 1    | 3 1   | 7     | 4 2 6 | 1             |     | 1 2     |       | 6 1 3 |      |                   |       |                       |     |
| Red-capped Robin                  | 2        | 1   | 1    | 2 1   | 5     | 4 2 3 | 1             |     | 1 1     |       | 6 1 3 |      |                   |       |                       |     |
| <i>Petroica cucullata</i>         |          |     | 1    | 4     |       | x     |               |     |         |       | 6 1   |      |                   |       |                       |     |
| Hooded Robin                      |          |     | 1    | 2     |       |       |               |     |         |       | 3 1   |      |                   |       |                       |     |
| <i>Pachycephala rufiventris</i>   | 7        |     |      | 2 1   |       | 4 2 2 | 2             |     | 2 1     | 1 1   | 1 3 3 |      |                   |       |                       |     |
| Rufous Whistler                   | 5        |     |      | 2 1   |       | 4 2 2 | 2             |     | 2 1     | 1 1   | 1 3 2 |      |                   |       |                       |     |
| <i>Oreoica gutturalis</i>         |          |     |      | x 2 1 | 1 x 1 | 1 3 2 |               |     | 1 3     | 2 1 1 | 7 2   |      |                   |       |                       | 1   |
| Crested Bellbird                  |          |     |      | 1 1   | 1 1   | 1 3 2 |               |     | 1 3     | 2 1 1 | 7 2   |      |                   |       |                       | 1   |
| MONARCHIDAE                       |          |     |      |       |       |       |               |     |         |       |       |      |                   |       |                       |     |
| <i>Rhipidura leucophrys</i>       |          |     |      | 1 1   |       | 2 1   | 2             |     |         | 1 1   | 2     |      |                   | 2     | 2                     | 1 1 |
| Willie Wagtail                    |          |     |      | 1 1   |       | 2 1   | 1             |     |         | 1 1   | 2     |      |                   | 2     | 2                     | 1 1 |
| ORTHONYCHIDAE                     |          |     |      |       |       |       |               |     |         |       |       |      |                   |       |                       |     |
| <i>Pomatostomus superciliosus</i> |          |     |      |       |       |       |               |     |         |       | 4     |      |                   |       |                       |     |
| White-browed Babbler              |          |     |      |       |       |       |               |     |         |       | 1     |      |                   |       |                       |     |

Table 3 (cont).

|                                 | QUADRATS  |        |         |         |       |       | OPPORTUNISTIC |     |      |       |       |      | Alluvial Flats | Mills | Casuarina Woodland |      |
|---------------------------------|-----------|--------|---------|---------|-------|-------|---------------|-----|------|-------|-------|------|----------------|-------|--------------------|------|
|                                 | DS2       | DS9    | DS10    | DS17    | DS18  | DS21  | DS2           | DS9 | DS10 | DS17  | DS18  | DS21 |                |       |                    |      |
| ACANTHIZIDAE                    |           |        |         |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| <i>Gerygone fusca</i>           | 15        |        |         | 1       |       |       | 3             |     |      |       |       |      |                |       |                    |      |
| Western Flyeater                | 11        |        |         | 1       |       |       | 3             |     |      |       |       |      |                |       |                    |      |
| <i>Smicromis brevirostris</i>   | 131 75 28 |        |         | 22 23 3 | x 1   |       | 56 29 23      |     |      | 7 8 8 | 4     |      |                |       |                    |      |
| Weebill                         | 37 25 11  |        |         | 8 10 2  | 1     |       | 18 9 10       |     |      | 2 3 4 | 2     |      |                |       |                    |      |
| <i>Acanthiza apicalis</i>       |           |        |         |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| Broad-tailed Thornbill          |           |        |         |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| <i>Acanthiza uropygialis</i>    |           |        |         | 2       |       | 11 16 |               |     |      |       |       |      |                |       |                    |      |
| Chestnut-rumped Thornbill       |           |        |         | 1       |       | 4 5   |               |     |      |       |       |      | 3 7            | 3 2   |                    | 3    |
| <i>Acanthiza chrysorrhoa</i>    | 8 17 5    |        |         |         |       |       | x 3           |     |      |       |       |      | 1 3            | 1 1   |                    | 1a   |
| Yellow-rumped Thornbill         | 4 8 3     |        |         |         |       |       | 1             |     |      |       |       |      | 2              | 3     |                    | 2    |
| <i>Sericornis fuliginosus</i>   |           | 3      |         |         |       |       |               |     |      |       |       |      | 1              | 1     |                    | 1    |
| Calamanthus                     |           | 2      |         |         |       |       |               |     |      |       |       |      | 1              | 1     |                    |      |
| MALURIDAE                       |           |        |         |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| <i>Malurus leucopterus</i>      |           | 9 55 2 | 1 92 10 |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| White-winged Fairy-wren         |           | 4 18 1 | 1 26 5  |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| SYLVIIDAE                       |           |        |         |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| <i>Cincloramphus cruralis</i>   |           | 2      | 12      |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| Brown Songlark                  |           | 1      | 4       |         |       |       |               |     |      |       |       |      |                | 16    |                    |      |
| CLIMACTERIDAE                   |           |        |         |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| <i>Chmacteris affinis</i>       |           |        |         | 2       | 2 4 2 | 1     |               |     |      |       |       |      | 5              | 1 1   |                    |      |
| White-browed Tree-creeper       |           |        |         | 1       | 2 3 2 | 1     |               |     |      |       |       |      | 4              | 1 1   |                    |      |
| DICAEIDAE                       |           |        |         |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| <i>Dicaeum hirundinaceum</i>    | x x       |        |         | x       | 2 2   | x     | 1             |     |      | 2 1   | 1 1   |      |                |       | 2                  |      |
| Mistletoebird                   |           |        |         |         | 2 2   |       | 1             |     |      | 2 1   | 1 1   |      |                |       | 1                  |      |
| PARDALOTIDAE                    |           |        |         |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| <i>Pardalotus striatus</i>      | 127 6 4   |        |         | 1       | x     |       | 42 5 4        |     |      | 3     | 6     |      |                |       |                    |      |
| Striated Pardalote              | 30 4 4    |        |         | 1       |       |       | 15 3 3        |     |      | 2     | 1     |      |                |       |                    |      |
| MELIPHAGIDAE                    |           |        |         |         |       |       |               |     |      |       |       |      |                |       |                    |      |
| <i>Meliphaga virescens</i>      |           |        |         | x 6     | 2 x x | 1 1   | 1             |     | 1    | 1     | 1 1   | 18   |                | 2 1   |                    | 4    |
| Singing Honeyeater              |           |        |         | 6       | 2     | 1 1   | 1             |     | 1    | 1     | 1 1   | 13   |                | 2 1   |                    | 2    |
| <i>Certhionyx variegatus</i>    |           |        |         | 2       | 1     | 3     |               |     |      | 19    | 6     | 20   |                |       |                    | 35   |
| Pied Honeyeater                 |           |        |         | 2       | 1     | 2     |               |     |      | 3     | 1     | 5    |                |       |                    | 9    |
| <i>Phylidonyris albilrons</i>   |           |        | x       | x 2     | 2 1   | 1 2   |               |     | 1    |       | 1 1   | 3 1  |                |       |                    |      |
| White-fronted Honeyeater        |           |        |         | 1       | 2 1   | 1 2   |               |     | 1    |       | 1 1   | 3 1  |                |       |                    |      |
| <i>Manorina flavigula</i>       | 41 22 58  |        |         | x 11 x  | 2 3 x | 2 3 1 | 34 32 49      |     |      | 19 2  | 7 2 3 | 3    |                |       |                    | 18 7 |
| Yellow-throated Miner           | 5 9 14    |        |         | 3       | 1 2   | 1 2   | 4 4 10        |     |      | 4 1   | 3 1 2 | 2    |                |       |                    | 5 1  |
| <i>Acanthagenys rufogularis</i> | x         |        |         | 17 1    | 1 x   | 8 2   | 2             | 2   | 2    | 1     | 3 2   | 3 4  | 7 7            |       |                    |      |
| Spiny-checked Honeyeater        |           |        |         | 3 1     | 1     | 3 2   | 1             | 1   | 1    | 1     | 1 2   | 3 3  | 5 4            |       |                    |      |

Table 3 (cont).

|   | QUADRATS        |             |            |              |                |                 | OPPORTUNISTIC    |               |         |             |                |                | Alluvial Flats | Mills              | Casuarina Woodland |        |
|---|-----------------|-------------|------------|--------------|----------------|-----------------|------------------|---------------|---------|-------------|----------------|----------------|----------------|--------------------|--------------------|--------|
|   | DS2             | DS9         | DS10       | DS17         | DS18           | DS21            | DS2              | DS9           | DS10    | DS17        | DS18           | DS21           |                |                    |                    |        |
| <i>Epthanura aurifrons</i><br>Orange Chat             |                 | 8<br>5      | 8<br>3     |              |                |                 |                  | 6<br>3        |         |             |                |                |                |                    |                    |        |
| <i>Epthanura tricolor</i><br>Crimson Chat             |                 | 6 19<br>1 4 | x          | x            | 4<br>1         | x 2<br>1        |                  | 19<br>9f      | 8<br>4  | 10<br>1o    |                | 26<br>7c       |                | 100<br>1           | 4<br>2             |        |
| <b>PLOCEIDAE</b>                                      |                 |             |            |              |                |                 |                  |               |         |             |                |                |                |                    |                    |        |
| <i>Poephila guttata</i><br>Zebra Finch                |                 | 7 x<br>2c   | 4 4<br>1 1 |              | 6<br>1         | 6<br>1          |                  | 8 12<br>2 1   |         |             | 2<br>1         | 8 8<br>1 1     |                | 20 4 19<br>3j 1 4j |                    |        |
| <b>GRALLINIDAE</b>                                    |                 |             |            |              |                |                 |                  |               |         |             |                |                |                |                    |                    |        |
| <i>Grallina cyanoleuca</i><br>Magpie-lark             | 1 x<br>1        |             |            |              |                |                 | 1 9 6<br>1 4 3   |               |         |             |                |                |                |                    | 8 10<br>5 7j       |        |
| <b>ARTAMIDAE</b>                                      |                 |             |            |              |                |                 |                  |               |         |             |                |                |                |                    |                    |        |
| <i>Artamus cinereus</i><br>Black-faced Woodswallow    | x               |             | 4<br>2     | x 4 1<br>2 1 | 5 9 1<br>1 3 1 | 5 2 15<br>2 2 7 | 2<br>1           | 4 1<br>1 1    | 4<br>3  | 12 1<br>2 1 | 8 4<br>2 2     | 7 8<br>4 3     |                | 2<br>1             | 1<br>1             |        |
| <i>Artamus personatus</i><br>Masked Woodswallow       |                 | x           | 1<br>1     | x            |                |                 |                  | 20<br>1•      |         | 10<br>1•    |                | 2<br>1         |                |                    |                    |        |
| <b>CRACTICIDAE</b>                                    |                 |             |            |              |                |                 |                  |               |         |             |                |                |                |                    |                    |        |
| <i>Cracticus torquatus</i><br>Grey Butcherbird        |                 | x           |            | 1<br>1       | x x            |                 | 1 1 2<br>1 1 2   |               |         |             | 1 4 1<br>1 4 1 | 1<br>1         |                |                    |                    | 3<br>3 |
| <i>Cracticus nigrogularis</i><br>Pied Butcherbird     | 5 11 7<br>5 6 6 | x           |            | x x          | x 7 5<br>4 5   | x x 2<br>1      | 15 2 15<br>7 1 7 | 3<br>1        | 2<br>2  | 7 2<br>5 1  | 6 6 4<br>4 4 3 | 3 6 2<br>2 5 2 | 3<br>2         | 2<br>2             | 13 2<br>6g 2       |        |
| <i>Cracticus tibicen</i><br>Australian Magpie         | x 4 1<br>3 1    |             |            |              |                |                 | 7 6 13<br>4 3 6  |               |         |             |                |                | 5 1<br>3 1     | 7 2<br>2 1         |                    |        |
| <b>PARADISAEIDAE</b>                                  |                 |             |            |              |                |                 |                  |               |         |             |                |                |                |                    |                    |        |
| <i>Ptilonorhynchus maculatus</i><br>Spotted Bowerbird |                 |             |            | x            |                | x               |                  |               | 4<br>2  |             |                | 4<br>3         |                | 2 1<br>1 1         |                    |        |
| <b>CORVIDAE</b>                                       |                 |             |            |              |                |                 |                  |               |         |             |                |                |                |                    |                    |        |
| <i>Corvus orru</i><br>Australian Crow                 | x x x           | x           |            |              | x              |                 | 3 1 11<br>2 1 7  | 1<br>1        | 1<br>1  |             | 2<br>1         |                | 4 1<br>2 1     | 2 2 10<br>1 1 5    | 4<br>2             |        |
| <i>Corvus bennetti</i><br>Little Crow                 | x 37<br>2       |             | x          | x x          | x 1<br>1       | x               | 24 168<br>4 6    | 8 26<br>1• 1• | 15<br>1 | 6 40<br>3 1 | 12 2<br>4 1    | 38 10<br>8 1•  | 165<br>5       |                    |                    |        |

- = Overhead only
- a = Includes adults with young
- c = Nestlings not included in count
- g = Nest building
- h = Breeding data not specified
- j = Old nests nearby

**Table 4.** List of mammals recorded at Banjarn (BW) indicating number trapped in each sample site. Tracks are indicated by T, C indicates skeletal material, and animal sightings by S ( $S_1 = <5$ ;  $S_2 = 5-10$ ;  $S_3 = >10$  individuals). Totals for the three survey periods (March 1979, October and July 1981) are combined.

| Landform Code                      | C     | L     | L     | V     | V     | V     | V     | Wells | Pundin | Weebo |
|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|
| Vegetation Code (DS)               |       | 2     | 9     | 10    | 17    | 18    | 21    | 21a   |        |       |
| <b>DASYURIDAE</b>                  |       |       |       |       |       |       |       |       |        |       |
| <i>Antechinomys laniger</i>        |       |       |       |       |       |       |       |       |        | 1     |
| <i>Ningau ridei</i>                |       | 4     | 7     |       | 8     | 2     | 2     |       |        |       |
| <i>Sminthopsis crassicaudata</i>   |       |       | 3     |       |       |       |       |       |        |       |
| <i>S. dolichura</i>                | 1     |       |       |       | 1     |       |       |       |        |       |
| <i>S. hirtipes</i>                 |       |       | 1     |       |       |       |       | 1     |        |       |
| <i>S. macroura</i>                 |       | 1     |       |       |       | 2     |       |       |        |       |
| <i>S. ooldea</i>                   | 1     |       |       |       |       | 2     |       |       |        |       |
| <i>S. sp.</i>                      | 1     | 1     |       |       |       |       |       |       |        |       |
| <b>MACROPODIDAE</b>                |       |       |       |       |       |       |       |       |        |       |
| <i>Macropus robustus</i>           |       | $S_2$ |       |       | $S_2$ | $S_3$ |       | $S_3$ | $S_1$  |       |
| <i>M. rufus</i>                    |       | $S_1$ |       | $S_1$ | $S_1$ | $S_1$ |       | $S_1$ | $S_2$  | $S_1$ |
| <b>VESPERTILIONIDAE</b>            |       |       |       |       |       |       |       |       |        |       |
| <i>Chalinolobus gouldii</i>        |       |       | 5     |       |       |       |       |       | 2      | 1     |
| <i>Eptesicus regulus</i>           |       |       |       |       |       |       |       |       | 2      |       |
| <i>Scotorepens greyii</i>          |       |       |       |       |       |       |       |       | 10     |       |
| <i>Nyctophilus geoffroyi</i>       |       |       | 4     |       |       |       |       |       | 28     |       |
| <b>MURIDAE</b>                     |       |       |       |       |       |       |       |       |        |       |
| <i>Mus musculus</i>                | 2     | 2     | 3     |       |       |       |       |       |        |       |
| <i>Notomys alexis</i>              |       |       |       |       | 1     | 1     |       |       |        |       |
| <i>Pseudomys hermannsburgensis</i> |       |       | 7     | 7     |       | 3     | 3     |       |        |       |
| <b>FELIDAE</b>                     |       |       |       |       |       |       |       |       |        |       |
| <i>Felis catus</i>                 |       | T     |       |       | $S_1$ |       |       |       |        |       |
| <b>BOVIDAE</b>                     |       |       |       |       |       |       |       |       |        |       |
| <i>Bos taurus</i>                  | T     |       |       |       |       |       |       | $S_1$ |        |       |
| <i>Capra hircus</i>                | $S_3$ | $S_1$ | $S_1$ |       | $S_3$ | $S_3$ | $S_3$ | $S_3$ | $S_3$  |       |
| <i>Ovis aries</i>                  | $S_3$ | $S_3$ | $S_3$ | $S_3$ | $S_3$ | $S_3$ | $S_3$ | $S_3$ | $S_3$  |       |
| <b>LEPORIDAE</b>                   |       |       |       |       |       |       |       |       |        |       |
| <i>Oryctolagus cuniculus</i>       | $S_1$ |       |       |       |       |       |       |       |        |       |