

NATIONAL PARKS AND WILDLIFE SERIES No. 2

**MAMMALS AND BIRDS OF MILLMERRAN SHIRE,
SOUTH-EAST QUEENSLAND**

by T. H. KIRKPATRICK, M.Sc., Ph.D.; AND P. J. AMOS, Q.D.A.H.

SUMMARY

A survey of the mammals and birds of the Millmerran Shire made during 1971-72 is described. Totals of 26 species of mammals and 125 species of birds are recorded from the area, together with notes on habitat preferences and measures of abundance.

I. INTRODUCTION

A survey of the mammals and birds of the Millmerran Shire was begun in late 1971. The Shire is situated on the Darling Downs in south-eastern Queensland and lies between the 27°S and 29°S parallels and 50°E and 52°E meridians. The two largest towns are Millmerran, which is centrally located, and Cecil Plains which is in the north of the Shire. The total area of the Shire is approximately 4500 km², of which approximately 20% is devoted to cultivation; 110 000 ha are within State forestry reserves.

The natural boundaries of the Shire are the north branch of the Condamine River in the north and the Herries Range in the east. The major topographical features are two ranges—a line of low hills running approximately through the middle of the Shire southwards to the southern boundary, and the Herries Range, which runs from the south-east. These ranges border the main catchments which supply the Condamine River in the north-east, the Weir River in the west and Canning Creek in the South. All streams except the Condamine River flow intermittently.

Soils of the area have been mapped (Skerman and Allen 1952), and are of five main geological units. In the north-east, alluvium overlaying the Walloon coal measures forms black earths and the adjacent box alluvial soil. The western part consists of Blythsedale sandstone which forms the solodic soils of that region. In the southern-central part of the Shire, the Walloon coal measures support the brigalow area south of Millmerran. Bundamba sandstones are in the south-east which is predominantly box country. Undifferentiated Palaeozoic material forms the traprock country of the extreme south-east. Small areas of tertiary basalt are found also to the south and west of Millmerran.

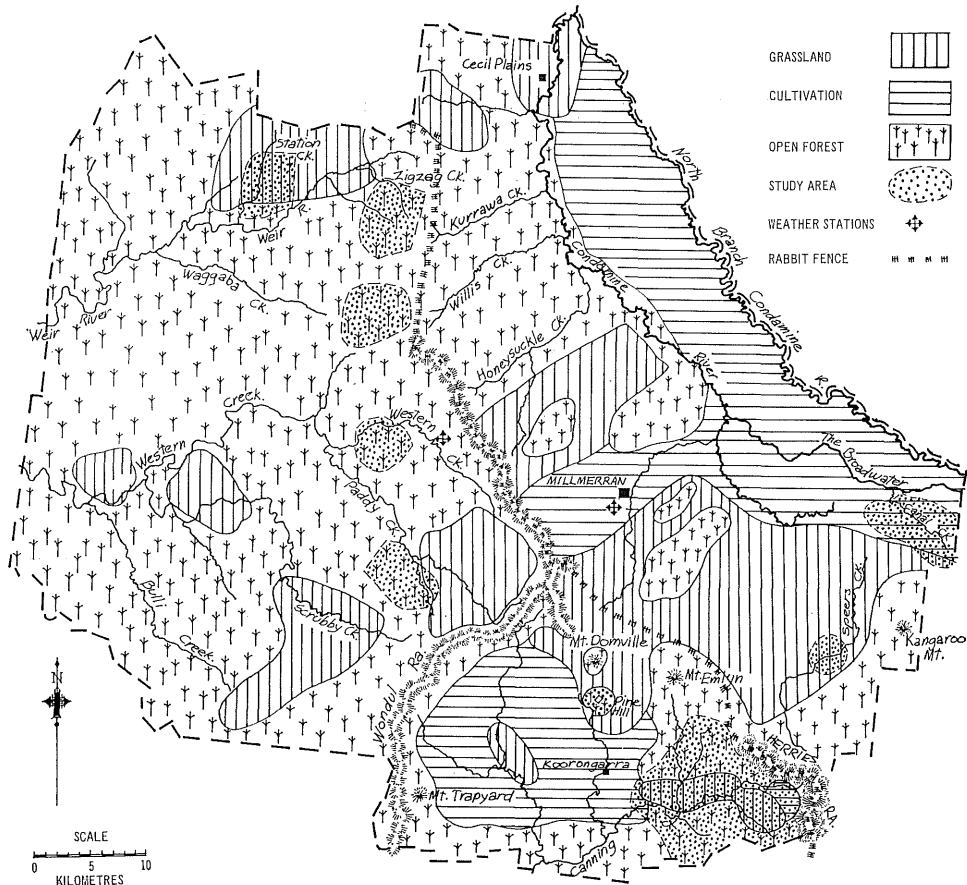


Figure 1.—The Millmerran Shire fauna survey area, 1971-72. Areas of intensive study are stippled.

Natural vegetation of the Shire (figure 1) is mainly an open eucalypt forest, largely poplar box (*Eucalyptus populnea* F. Muell.), with remnants of a previously extensive area of brigalow (*Acacia harpophylla* F. Muell ex Benth.), most of which has now been cleared for agriculture. Extensive areas of cypress pine (*Callitris columellaris* F. Muell.) also occur on sandy ridges.

All forestry reserves, which are largely natural stands of cypress pines, are fauna sanctuaries under the *Fauna Conservation Act* 1974. Controlled burning in these reserves occurs only in the course of establishing fire breaks, and a large amount of dead wood has built up in these forests. Other fauna sanctuaries have been listed (Roff 1962). There is no national park in the Shire.

Monthly rainfalls for the years 1971-72 registered at Western Creek and Millmerran are given in figure 2. Temperature data recorded at Dalby are also given in figure 2 and these were used because no reliable information was available for the Shire.

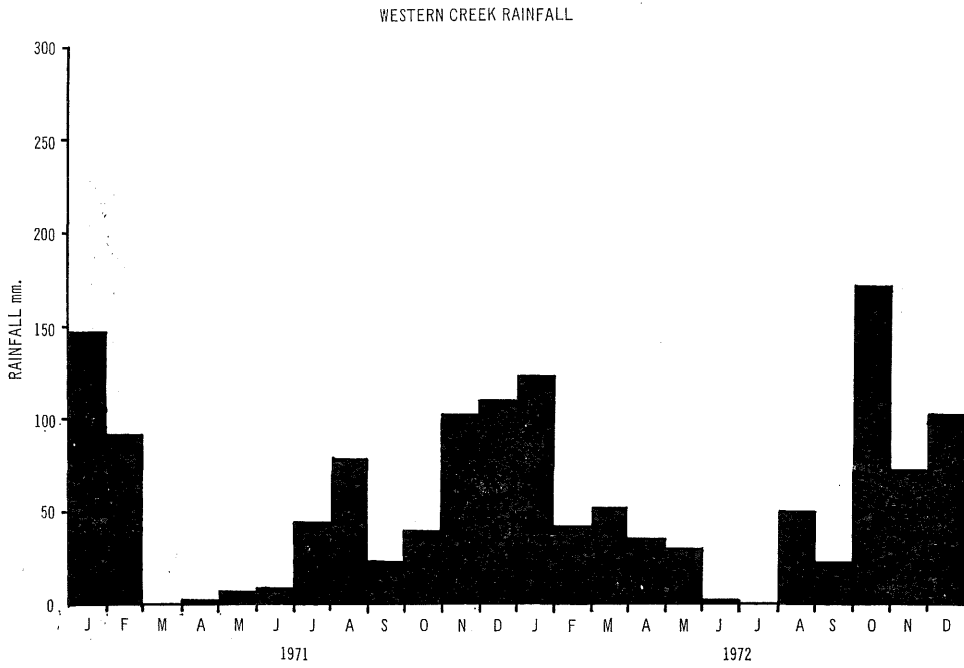


Figure 2

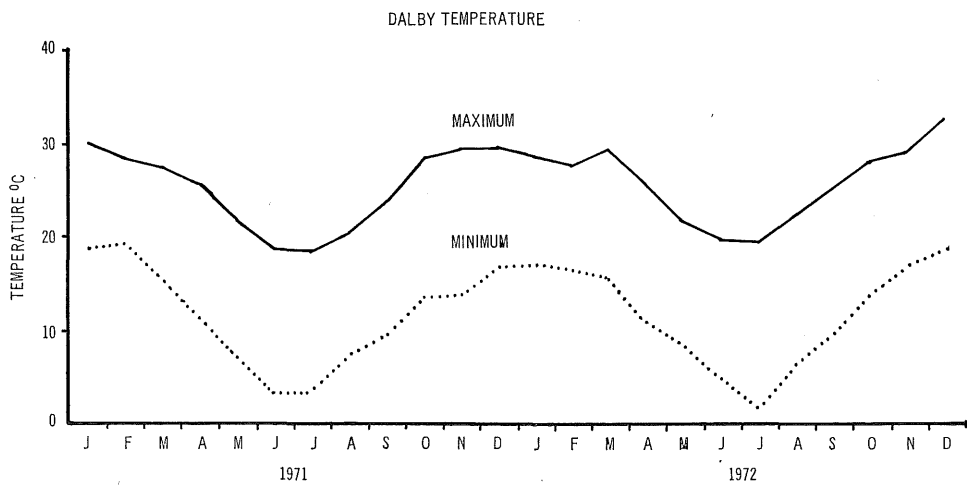


Figure 2 (Caption on next page).

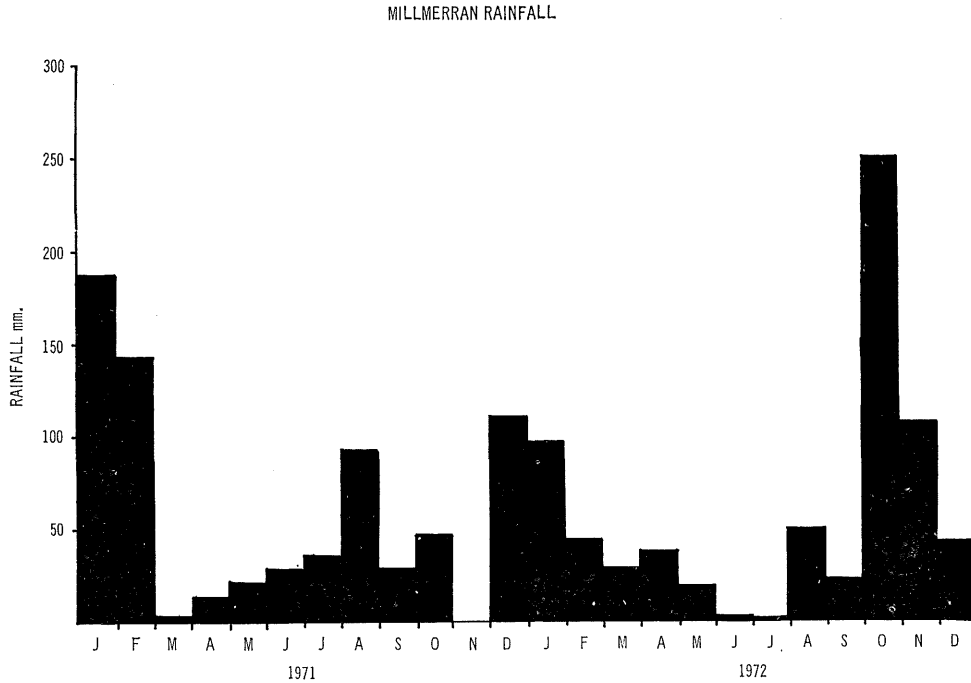


Figure 2.—Monthly total rainfalls recorded at Western Creek and Millmerran and mean maximum and minimum temperatures recorded at Dalby in 1971-72.

II. METHODS

The habitat types recognized for the purpose of the survey were open forest, grassland, cultivation, freshwaters and urban areas. Locations in each of the main habitat types were selected for intensive study. The remainder of the Shire was covered less intensively to establish any difference from the studied areas. Traverses were made through these areas during daylight and at night with the aid of a spotlight.

Collection of both mammals and birds was undertaken with rifles and shotguns except for those species that were readily identified. Break-back and folding aluminium traps baited with leather soaked in linseed oil were also used. A number of live-traps were set in lines at selected sites and inspected daily during trapping periods lasting from 5 to 7 days. Nocturnal species such as bats were taken with the aid of a shotgun and spotlight at night. Specimens of all species collected were deposited either at the Queensland Museum or stored at the National Parks and Wildlife Service Southern Regional Centre, Hermitage.

Frequency ratings were given following the system of Kirkpatrick (1966), based on numbers observed and collected during each visit to, or trapping period in, any habitat type as follows—

- Abundant : usually large numbers.
- Common : always at least once, often more.
- Uncommon : not every visit, but more than twice during survey.
- Scarce : not more than twice during the survey.

No estimate of status is provided for a number of hard-to-collect species found to be present but for which an extensive search could not be made. The rating occasional is provided for some birds where presence in either small or large numbers was recorded at irregular intervals.

III. RESULTS

Species collected, together with habitat and estimated status for each habitat type, are listed below. An asterisk indicates that the record is based on sightings only.

Names for mammals mainly follow Iredale and Troughton (1934); all Chiroptera were identified by the Queensland Museum. Bird names are based on Lavery (1969).

MAMMALS

Monotremata

- **Ornithorhynchus anatinus* (Shaw and Nodder). Platypus. (Freshwaters and streams), one sighting only.
- **Tachyglossus aculeatus* (Shaw and Nodder). Spiny ant-eater. Open forest, common (localized).

Marsupialia

- **Sminthopsis ?murina* (Waterhouse). Common marsupial-mouse. Open forest, one specimen collected and escaped.
- Trichosurus vulpecula* (Kerr). Common brush-tailed possum. Open forest, abundant.
- **Phascolarctos cinereus* (Goldfuss). Koala. Open forest (near rivers), uncommon.
- **Petrogale penicillata* (Griffith, Smith and Pidgeon). Brush-tailed rock-wallaby. Open forest (rocky slopes of ranges), uncommon.
- Wallabia bicolor* (Desmarest). Black-tailed wallaby. Open forest, uncommon.
- Macropus rufogriseus* (Desmarest). Red-necked wallaby. Open forest, abundant.
- Macropus dorsalis* (Gray). Black-striped wallaby. Open forest, common.
- Macropus parryi* (Bennett). Whiptail wallaby. Open forest, scarce.
- Macropus robustus* Gould. Wallaroo. Open forest (on ridges), uncommon.
- **Macropus giganteus* Shaw. Grey kangaroo. Open forest, abundant.

Eutheria

- Taphozous flaviventris* Peters. Yellow-bellied sheath-tailed bat. Open forest, abundant.
- Eptesicus pumilis* (Gray). Little bat. Open forest, uncommon.
- Chalinobus gouldii* (Gray). Gould's bat. Open forest, common.
- Nycticeius greyii* (Gould). Little broad-nosed bat. Open forest, two specimens collected.
- Miniopterus shreibersii* (Kuhl). Bent-winged bat. Open forest, one specimen collected.
- Tadarida planiceps* (Peters). Little mastiff bat. Open forest, two specimens collected.

- Hydromys chrysogaster* Geoffroy. Water rat. Freshwaters (rivers and streams), common.
- Mus musculus* L. House mouse. Open forest, grassland and urban areas, abundant.
- Rattus rattus* L. Ship rat. Freshwaters (margins), open forest and grassland, abundant.
- Lepus europaeus* Pallas. Hare. Grassland and cultivation, common.
- Oryctolagus cuniculus* (L.). Rabbit. Open forest and grassland, abundant.
- Vulpes vulpes* (L.). Fox. Open forest, common.
- Felis catus* (L.). Feral cat. All habitat types, common.
- Sus scrofa* L. Feral pig. Open forest, uncommon.

BIRDS

- **Dromaius novaehollandiae* (Latham). Emu. Open forest and grassland, uncommon.
- **Tachybaptus novaehollandiae* (Stephens). Little grebe. Freshwaters, common.
- **Pelecanus conspicillatus* Temminck. Australian pelican. Freshwater, occasional.
- **Phalacrocorax sulcirostris* (Brandt). Little black cormorant. Freshwaters, uncommon.
- **Phalacrocorax melanoleucos* (Vieillot). Little pied cormorant. Freshwaters, uncommon.
- **Ardea pacifica* Latham. White necked heron. Freshwaters, abundant.
- **Ardea novaehollandiae* Latham. White-faced heron. Freshwaters and cultivation, abundant.
- **Egretta alba* (L.), White egret. Freshwaters, uncommon.
- **Threskiornis molucca* (Cuvier). Australian white ibis. Freshwaters and adjacent areas, uncommon.
- **Threskiornis spinicollis* (Jameson). Straw-necked ibis. Grassland and cultivation, uncommon.
- **Platalea regia* Gould. Royal spoonbill. Freshwaters (margins), uncommon.
- **Platalea flavipes* Gould. Yellow-billed spoonbill. Freshwaters (margins), uncommon.
- **Dendrocygna eytoni* (Eyton). Grass whistling-duck. Freshwaters (margins), occasional.
- **Anas superciliosa* Gmelin. Black duck. Freshwaters, common.
- **Anas rhynchotis* Latham. Shoveler. Freshwaters, occasional.
- Chenonetta jubata* (Latham). Maned wood duck. Freshwaters, abundant.
- **Aythya australis* (Eyton). White-eyed duck. Freshwaters, uncommon.
- **Elanus notatus* Gould. Black-shouldered kite. Cultivation, grassland and adjacent habitat types, common.
- **Haliastur sphenurus* (Vieillot). Whistling eagle. Open forest and grassland, uncommon.
- Aquila audax* (Latham). Wedge-tailed eagle. Open forest and grassland, common.
- **Falco peregrinus* Tunstall. Peregrine falcon. Open forest and grassland, uncommon.

- Falco cenchroides* Vigors and Horsfield. Nankeen kestrel. Grassland, cultivation and adjacent open forest, abundant.
- **Falco berigora* Vigors and Horsfield. Brown hawk. Grassland, cultivation and adjacent open forest, uncommon.
- Coturnix ypsilophorus* Bosc. Brown quail. Grassland, uncommon.
- Turnix varia* (Latham). Painted button-quail. Open forest, common.
- **Gallinula tenebrosa* Gould. Dusky moorhen. Freshwaters, uncommon.
- **Vanellus novaehollandiae* Stephens. Spur-winged plover. Freshwaters (margins) and grassland, abundant.
- **Vanellus tricolor* (Vieillot). Banded plover. Grassland and cultivation, uncommon.
- **Charadrius melanops* (Vieillot). Black-fronted dotterel. Freshwaters (margins), uncommon.
- **Columba livia* Gmelin. Feral pigeon. Grassland and urban areas, common.
- Geopelia humeralis* (Temminck). Bar-shouldered dove. Open forest and grassland, abundant.
- Geopelia striata* (L.) Peaceful dove. Open forest and grassland, abundant.
- Geopelia cuneata* (Latham). Diamond dove. Open forest, uncommon.
- **Phaps chalcoptera* (Latham). Common bronzewing. Open forest, grassland and cultivation, abundant.
- **Ocyphaps lophotes* (Temminck). Crested pigeon. Open forest, grassland and cultivation, abundant.
- **Geophaps scripta* (Temminck). Squatter pigeon. Open forest, uncommon.
- Trichoglossus chlorolepidotus* (Kuhl). Scaly-breasted lorikeet. Open forest (near creeks), uncommon.
- Glossopsitta pusilla* (Shaw). Little lorikeet. Open forest, common.
- **Cacatua galerita* (Latham). Sulphur-crested cockatoo. Open forest and cultivation, common.
- **Cacatua roseicapilla* (Vieillot). Galah. Open forest, grassland and cultivation, abundant.
- **Nymphicus hollandicus* (Kerr). Cockatiel. Open forest, grassland and cultivation, abundant.
- **Aprosmictus erythropterus* (Gmelin). Red-winged parrot. Grassland, uncommon.
- **Platycercus eximius* (Shaw). Eastern rosella. Open forest, grassland and cultivation, abundant.
- **Platycercus adscitus* (Latham). Pale-headed rosella. Open forest, grassland and cultivation, abundant.
- **Psephotus haematogaster* (Gould). Blue bonnet. Grassland, scarce.
- **Psephotus haematonotus* (Gould). Red-backed parrot. Grassland, common.
- **Neophema pulchella* (Shaw). Turquoise parrot. Open forest, common.
- **Melopsittacus undulatus* (Shaw). Budgerygah. Open forest, grassland and freshwaters, common.
- Chrysococcyx basalis* (Horsfield). Horsfield bronze cuckoo. Grassland, scarce.
- Ninox novaeseelandiae* (Gmelin). Boobook owl. Open forest, common.
- Podargus strigoides* (Latham). Tawny frogmouth. Open forest, abundant.

- **Eurostopodus guttatus* (Vigors and Horsfield). White-throated nightjar. Open forest, scarce.
- **Chaetura caudacuta* (Latham). Spine-tailed swift. Open forest, uncommon.
- **Apus pacificus* (Latham). Fork-tailed swift. Open forest, common.
- **Dacelo novaeguineae* (Hermann). Laughing kookaburra. Open forest and grassland, abundant.
- Halcyon pyrrhopygia* Gould. Red-backed kingfisher. Open forest, uncommon.
- Halcyon sancta* Vigors and Horsfield. Sacred kingfisher. Open forest, uncommon.
- Merops ornatus* Latham. Rainbow-bird. Open forest, uncommon.
- Eurystomus orientalis* (L.) Eastern broad-billed roller. Open forest, common.
- Petrochelidon ariel* (Gould). Fairy martin. Grassland (and under nearby bridges), common.
- Anthus novaeseelandiae* (Gmelin). Australian pipit. Grassland, abundant.
- Coracina novaehollandiae* (Gmelin). Black-faced cuckoo-shrike. Open forest and grassland, abundant.
- Lalage sueurii* (Vieillot). White-winged triller. Open forest, common.
- Cinclosoma punctatum* (Shaw). Spotted quail-thrush. Open forest, uncommon.
- Pomatostomus temporalis* (Vigors and Horsfield). Grey-crowned babbler. Open forest, common.
- Gerygone olivacea* (Gould). White-throated warbler. Open forest, uncommon.
- Malurus cyaneus* (Latham). Superb blue wren. Open forest (near creeks), abundant.
- Smicrornis brevirostris* (Gould). Weebill. Open forest, common.
- Aphelocephala leucopsis* (Gould). Whiteface. Open forest, uncommon.
- Acanthiza lineata* Gould. Striated thornbill. Open forest, uncommon.
- Acanthiza pusilla* (Shaw). Brown thornbill. Open forest, uncommon.
- Acanthiza reguloides* Vigors and Horsfield. Buff-tailed thornbill. Open forest, uncommon.
- Acanthiza chrysorrhoa* (Quoy and Gaimard). Yellow-tailed thornbill. Open forest, common.
- Chthonicola sagittata* (Latham). Speckled warbler. Open forest, common.
- Cincloramphus mathewsi* Iredale. Rufous songlark. Open forest, uncommon.
- Megalurus timoriensis* Wallace. Tawny grassbird. Grassland (near creeks), uncommon.
- Microeca leucophaea* (Latham). Jacky winter. Open forest and grassland, abundant.
- Petroica goodenovii* (Vigors and Horsfield). Red-capped robin. Open forest, one specimen collected.
- Petroica cucullata* (Latham). Hooded robin. Open forest and grassland, common.
- Eopsaltria australis* (Shaw). Yellow robin. Open forest, uncommon.
- Myiagra cyanoleuca* (Vieillot). Satin flycatcher. Open forest, scarce.
- Myiagra inquieta* (Latham). Restless flycatcher. Open forest, abundant.
- Pachycephala rufiventris* (Latham). Rufous whistler. Open forest, common.

- Rhipidura fuliginosa* (Sparman). Grey fantail. Open forest, uncommon.
- Rhipidura rufifrons* (Latham). Rufous fantail. Open forest, occasional.
- Rhipidura leucophrys* (Latham). Willie wagtail. Open forest, grassland and freshwaters (along creeks), abundant.
- Neositta chrysoptera* (Latham). Orange-winged sittella. Open forest, common.
- Climacteris picumnus* Temminck and Laugier. Brown tree-creeper. Open forest, common.
- Climacteris leucophaea* (Latham). White-throated tree-creeper. Open forest, common.
- Dicaeum hirundinaceum* (Shaw and Nodder). Mistletoe bird. Grassland, common.
- Pardalotus punctatus* (Shaw and Nodder). Spotted pardalote. Open forest, common.
- Pardalotus substriatus* (Mathews). Striated pardalote. Open forest, common.
- Pardalotus melanocephalus* Gould. Black-headed pardalote. Open forest, uncommon.
- Zosterops lateralis* (Latham). Grey-breasted silveryeye. Open forest, uncommon.
- Melithreptus lunatus* (Vieillot). White-naped honeyeater. Open forest, uncommon.
- Plectorhyncha lanceolata* Gould. Striped honeyeater. Open forest, common.
- Lichmera indistincta* (Vigors and Horsfield). Brown honeyeater. Open forest, uncommon.
- Meliphaga fusca* Gould. Fuscous honeyeater. Open forest, uncommon.
- Meliphaga chrysops* (Latham). Yellow-faced honeyeater. Open forest, abundant.
- Meliphaga leucotis* (Latham). White-eared honeyeater. Open forest, uncommon.
- Meliphaga penicillata* Gould. White-plumed honeyeater. Open forest and grassland, abundant.
- Myzantha melanocephala* (Latham). Noisy miner. Open forest, abundant.
- Acanthagenys rufogularis* Gould. Spiny-cheeked honeyeater. Open forest, uncommon.
- Entomyzon cyanotis* (Latham). Blue-faced honeyeater. Open forest, uncommon.
- Philemon corniculatus* (Latham). Noisy friar bird. Open forest, abundant.
- Philemon citreogularis* (Gould). Little friar bird. Open forest, common.
- Emblema guttata* (Shaw). Diamond firetail. Grassland, open forest and edges of cultivation, abundant.
- **Poephila guttata* (Vieillot). Zebra finch. Open forest and adjacent cultivation, uncommon.
- Poephila bichenovii* (Vigors and Horsfield). Banded finch. Open forest, grassland and cultivation, abundant.
- Aidemosyne modesta* (Gould). Plum-headed finch. Open forest and grassland, uncommon.
- Passer domesticus* (L.). House sparrow. Urban areas and nearby habitat types, abundant.
- Sturnus vulgaris* (L.). Starling. Grassland, cultivation and urban areas, common.
- Oriolus sagittatus* (Latham). Olive-backed oriole. Open forest, uncommon.

- **Grallina cyanoleuca* (Latham). Magpie lark. Open forest and grassland, abundant.
- Corcorax, melanorhamphos* (Vieillot). White-winged chough. Open forest, abundant.
- **Struthidea cinerea* Gould. Apostle bird. Open forest, abundant.
- Artamus superciliosus* (Gould). White-browed wood-swallow. Open forest, uncommon.
- Artamus cyanopterus* (Latham). Dusky wood-swallow. Open forest, abundant.
- Artamus minor* Vieillot. Little wood-swallow. Open forest, uncommon.
- Cracticus torquatus* (Latham). Grey butcher-bird. Open forest and cultivation, abundant.
- **Cracticus nigrogularis* (Gould). Pied butcher-bird. Open forest and grassland, abundant.
- **Gymnorhina tibicen* (Latham). Black-backed magpie. Open forest, grassland and cultivation, abundant.
- **Strepera graculina* (White). Pied currawong. Open forest and urban areas, common.
- **Corvus orru* Bonaparte. Australian crow. All habitat types, abundant.
- **Corvus coronoides* Vigors and Horsfield. Australian raven. All habitat types, abundant.

IV. DISCUSSION

This survey was undertaken as part of a programme to compile the distributions, habitat preferences and relative abundances of the fauna of Queensland.

Of the 26 mammal and 125 bird species recorded, few were unexpected. The little mastiff bat, identified from two specimens, is a new record for this part of Queensland, although it is not possible to define its status in the district from the data collected.

Of particular interest was the small number of species recorded compared with other similar surveys. The district is far enough west of the Great Dividing Range to preclude conditions suitable for characteristic coastal fauna, and far enough east of the arid inland not to include any of the species usually of this zone. The mammal and bird fauna of this common-place district thus appears to consist only of widespread species with broad habitat requirements. The possibility cannot be overlooked, however, that some losses have been caused by European settlement that began in 1863 and has resulted in the removal of practically all of the brigalow in the Shire to make way for agriculture and pasture development.

The introduction of sheep and cattle, rabbits, ship rats, house mice, and other exotic animals would undoubtedly have intensified effects on the native fauna. It is evident, from precise descriptions provided by older residents, that the bridled nail-tailed wallaby (*Onychogalea fraenata* (Gould)) occurred in the brigalow areas of the district as recently as 30 years ago; an intensive search during this survey failed to locate it. Species for which more recent eye-witness accounts were provided by local inhabitants included the tiger cat (*Dasyurus maculatus* (Kerr)) and the rufous rat-kangaroo (*Aepyprymnus rufescens* (Gray)); neither species appears to have been common and these may continue to be

present in small numbers. These species are probably in the same category as the whiptail wallaby which was included following one sighting and the production of a recently-collected skin by a resident.

Water-birds are not well represented in the survey and this is due to the overall sparsity of permanent surface water. As observed elsewhere (Kirkpatrick and Searle 1976), most water-birds range widely over the Australian continent and to record the presence of such species on any area of water is largely a combination of time and persistent observation; the duration of this survey was insufficient to provide the opportunities to record occasional visits of many species.

The mammal and bird fauna of the Millmerran Shire is relatively poor. Although it clearly has been impoverished to some extent by European settlement, the absence of many of the distinctive components of the Australia fauna is probably related more to the location of the area and its lack of physiological diversity.

V. ACKNOWLEDGEMENTS

Messrs. C. M. Weaver, D. G. McGreevy and B. C. Lawrie, National Parks and Wildlife Service, assisted in collecting. Many identifications were provided by the Queensland Museum. Rainfall and temperature data were supplied by the Commonwealth Bureau of Meteorology. This assistance is gratefully acknowledged.

REFERENCES

- IREDALE, T., and TROUGHTON, E. LEG. (1934).—A check list of the mammals recorded from Australia. *Mem. Aust. Mus.* 6:1-20.
- KIRKPATRICK, T. H. (1966).—Mammals, birds and reptiles of the Warwick district, Queensland. I. Introduction and mammals. *Qd. J. agric. Anim. Sci.* 23:591-8.
- KIRKPATRICK, T. H. and SEARLE, A. K. (1975).—Mammals and birds of the Stanthorpe Shire, south-east Queensland. *Qd. J. agric. Anim. Sci.* 34:109-121.
- LAVERY, H. J. (1969).—*List of Birds in Queensland*. (Winston Churchill Memorial Trust: Canberra).
- ROFF, C. (1962).—*Queensland Fauna Sanctuaries*. (Department of Agriculture and Stock: Brisbane).
- SKERMAN, P. J. and ALLEN, G. H. (1952).—In *Rep. Qd. Bur. Invest. Ld. Water Resources for 1952*.

(Received for publication 14 January 1976)

The authors are officers of Research and Planning Branch, Queensland National Parks and Wildlife Service (formerly Fauna Conservation Branch, Department of Primary Industries), stationed at the Hermitage Research Station near Warwick, Q. 4370.