In praise of bats

When roosting, bats of most of the smaller species cluster together for warmth. These are common sheath-tailed bats, *Taphozous georgianus*.

Without a great deal of searching, bats can be found in just about every part of Australia. Most people don't bother to look. They are content to note a shape flitting around a street light or skimming over water. If a bat should happen to fly into their home in pursuit of insects they quickly make it unwelcome.

Perhaps the explanation is that bats have been traditionally regarded as evil, fearful, or unclean creatures, sharing the same public regard as snakes, spiders, and frogs. Along with these other maligned animals, bats feature in much superstitious folklore.

But vampires are not to be found in Australia and, according to the authors of the recently published 'Bats of Eastern Australia', our bats deserve closer attention. Mr Leslie Hall of the Anatomy Department of Queensland University and Mr Greg Richards of the CSIRO Division of Wildlife Research regard bats as fascinating animals that have adapted beautifully to their ecological niches.

Eastern Australia contains at least 55 species, each with its own habitat, diet, and life history. Two of them—*Macroderma gigas* (the ghost bat) and *Rhinonicteris aurantius* (the orange horseshoe bat) are from genera found only in this country.

The authors believe the first step towards appreciating these animals is to be able to identify them. 'Bats of Eastern Australia', the 12th in the Queensland Museum series, enables anybody to do just that. It features simple keys to easily recognized external features, photographs, diagrams, and distribution maps.

The eastern horseshoe bat, *Rhinolophus megaphyllus*. It inhabits the coast and ranges between Cape York and eastern Victoria.

A few species are readily identifiable from a distance, but most require closer inspection.

Bats belong to the order Chiroptera, which means 'hand-winged'. The wings have the same underlying structure as our arms and hands and give the animal the distinction of being the only mammal capable of flight (as opposed to gliding).

Bats in the sub-order Megachiroptera are all fruit-, blossom-, or nectar-feeders. The larger bats, such as flying foxes or fruit bats, are included here, as well as several small blossom bats. They have large eyes and simple oval ears, and their faces resemble those of small foxes or dogs. They use their excellent night vision and sense of smell to locate food.

On the other hand, bats in the sub-order Microchiroptera are all small to medium-sized, and stick strictly to eating insects — except for the ghost bat, which eats other bats, birds, lizards, and frogs. They usually have complex-shaped ears and all use echo-location for navigating and to detect and catch small insects.

The authors warn that in the last two decades the number and sizes of Australian bat colonies have been declining. Several large nursery colonies are in danger of extinction due to quarrying and other human disturbance.

Yet bats play an important role in plant pollination and in the regulation of insect numbers. It is essential that they, and their habitat, be preserved and properly managed, the authors state.

Bats are protected fauna and permission is needed to handle them. Disturbance of a bat colony (usually numbering some dozens, but occasionally reaching hundreds of thousands in some species) can harm pregnant or hibernating bats.

The booklet is available from the Queensland Museum, price $1.00 (plus 30 cents postage). The authors would be pleased to answer queries or receive additional information on these mysterious but neglected creatures of the night.

Postscript: Two members of the Darwin Laboratories of the Division of Wildlife Research, Mr John McKean and Mr Gordon Friend, report the discovery of a new species of bat in the *Victorian Naturalist*, 1979, **96**, 239–41. They call the bat, found at Kapalga in the Alligator Rivers region of Arnhem Land, *Taphozous kapalgensis*.