

Batting for Victoria

By Trevor Speirs

Well before the last call of the Laughing Kookaburra signals the end of the daylight hours in the Wombat Forest, a small nocturnal mammal will be hitting the airwaves in the pursuit of a feed. Any venture into the Wombat at night, colder months excepted, will not go by without an encounter with one of the forest's micro-bats. While "encounter" might be stretching the point a little, if you are in the forest as dusk approaches, a micro-bat will almost certainly be flying close by. These micro-bats' incredible echo-location abilities always keeps them from tangling with an unsuspecting midnight Rambler, although they can get quite close at times. This part of the world is home to about eleven species of micro-bats, and like our nocturnal birds, bats need a safe, secluded daytime roost to retreat to after their nightly activities.



Eastern False Pipistrelle Bat *Falsistrellus tasmaniensis*
Photography © Gayle Osborne.

Of all the Wombat micro-bats, all but one species use either tree hollows, loose bark, buildings or other man-made structures for roosting. Some like the Chocolate Wattled Bat *Chalinolobus morio* and Eastern False Pipistrelle *Falsistrellus tasmaniensis* will also use caves, culverts and under bridges as well as tree hollows etc, but it is only the Eastern Bent-wing Bat *Miniopterus orianae oceanensis* that exclusively roosts in subterranean structures such as caves, mine adits or tunnels. The Eastern Bent-wing Bat is also the only Wombat bat that is on the threatened species list, being classified critically endangered under the Flora and Fauna Guarantee Act 1988.

The biology of the Eastern Bent-wing Bat is most interesting indeed. Although occurring along Australia's eastern mainland, the Victorian population breeds exclusively in a large maternity cave in Gippsland in late autumn to early winter. Although females fall pregnant immediately following mating, the period of gestation can be over seven months due to the female entering hibernation through the colder months. This trait of a long, over-wintering gestation and periods of torpor, is common with many of Victoria's bats. When juvenile eastern bent-wings reach

independence the following autumn, most will leave the Gippsland maternity cave, with the young bats travelling distances of up to 300 kilometres from their birth place. It will be these and non-breeding males that will probably make up the majority of bats found in the Wombat.

With this area's history of gold mining, the forest has more than a few tunnels and mining adits offering these bats a potential home. Tunnels are chosen that provide the right thermal conditions; cold areas in winter to assist when in torpor and warmer spots in summer that enable the bats to activate quickly at dusk. Probably as important for the Eastern Bent-wing Bat in the Wombat is access to roost sites. While there are still a number of accessible tunnels and adits, there are quite a few others that aren't. When mining activity ceases, often a steel grate or door is placed at the mine entrance. This is possibly a legal requirement and while this stops people entering and potentially coming to harm, the door's grid spacing is so small it also keeps eastern bent-wings out.

There is one such mine in the western part of the Wombat that had Eastern Bent-wing Bats roosting in

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Lesser Long-eared Bat *Nyctophilus geoffroyi*.
Photography © Gayle Osborne.

it about a decade ago but now has a gate preventing any possible bat access. There are several mines around Blackwood, one the subject of recent community opposition, that also have barriers at their entrance, again blocking any bats looking for a potential roost site. There has been research undertaken by bat experts such as Dr Lindy Lumsden, which provides guidelines for relevant authorities whereby “windows” can be inserted into these steel doors. These windows need to be the correct height above ground as well as the right dimensions to enable comfortable bat movements and I believe the information is readily available and should be acted upon by the relevant authorities. These are critically endangered mammals after all.

Bent-wing bats are very sensitive to disturbance and interference, even if unintended, and this is especially

so when they have entered their winter hibernation. At this time of year when roosting in the coldest part of a mine or tunnel, a bat's body temperature drops low enough to enable it to slowly conserve its fat deposits which have been built up over summer and autumn. Should a bat be disturbed by a flashlight or worse, it might be shaken from its slumber and once activated can quickly use up these reserves of body fat, putting its life at risk.

While bats can get some negative press at times, or worse, flying foxes being shot, without them we really would have something to complain about. Crops would be constantly under attack by a myriad of insects and our lives would be intolerable with mosquitoes, midges, flies etc. making everyday existence a merry hell. With some species of micro-bats eating as many as 600 mozzies a night as well many other moths and various arthropods, these small,

amazing mammals really do play an invaluable role in both our world and the natural world. ■

References

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Large Forest Bat *Vespardelus darlingtonia*. Photography © Gayle Osborne.