

A baby echidna conserves its energy

A very young echidna nestles in the warmth of its mother's pouch, but after a period of somewhere between 50 and 80 days it gets too big.

At this age, the little echidna is still far too small to fend for itself, and it still depends on its mother's milk for food. So the mother echidna leaves her young in a burrow in the ground and comes back and feeds it now and then.

Nobody knows how long a young echidna can go between feeds, but Dr Mervyn Griffiths of the CSIRO Division of Wildlife Research came across one that survived 16 days without food or water—a very long time

indeed for the suckling young of a mammal. It achieved this by dropping its body temperature and becoming torpid, in much the same way as many small mammals hibernate.

Dr Griffiths found this out by a lucky coincidence. A Canberra resident out rabbiting on a nearby property dug out a very small echidna from what appeared to be a rabbit breeding stop late one October. He handed the little animal over to Dr Griffiths, who returned it to the stop. Unfortunately this had been badly damaged by the digging, so he had to make some repairs. He observed the

echidna for the next 16 days, taking it out of its burrow for weighing and the temperature checking only.

By comparing it with similar young ones that he had reared in the laboratory, Dr Griffiths concluded that it was a suckling recently dropped from its mother's pouch. It was well haired, had very short spines, and was incapable of moving about and feeding itself.

On the first day it weighed 474 grams, and the temperature of its cloaca—its combined anus, water outlet, and reproductive passage—was 28.5°C. It had dug itself a little burrow downwards from the stop, and was about 30 cm underground.

By day 4, it had become torpid, and its cloacal temperature had dropped to 12.8°. However, on the 6th day it had apparently spontaneously aroused itself and its cloacal temperature had risen to 27.2°. On both days the surrounding soil temperature had been 12.8°.

After this the little animal became torpid again, its cloacal temperature remaining in the range of 12.8–14°.

On the 17th day Dr Griffiths removed it from the burrow and warmed it up. It accepted milk, which it drank from a spoon.

During the 16 days of observations its body weight had dropped from 474 grams to 410 grams. Daily records



A young echidna.

of its body weight suggested that its mother had not fed it throughout the period. Yet it still seemed none the worse for wear.

Australian *Tachyglossus*.
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