

Echidnas

Things that go bump in the night



Visitors to Avochie Cottage at Myall Park Botanic Garden have been known to report strange nocturnal happenings. In the wee hours they are sometimes awakened by snufflings, scrapings, bumps and scuffles – not exactly nerve-wracking stuff, but **WHAT IS IT?**

There's a simple answer:

Short beaked echidna *Tachyglossus aculeatus* - classified as a monotreme.

Also known as "spiny anteater" or "porcupine". The Latin name for the echidna, *Tachyglossus*, means "swift tongue".

Weight: 2-7 kg (4-15lbs) Length: 30-45cm (12-18 inches).

This icon of the Australian bush eats ants and termites. It tears apart termite mounds and digs into ant beds with strong claws, extracting prey with its long, thin, sticky tongue.

Its tongue can extend 18cm (7in) beyond the end of the snout and flicks in and out up to 100 times per minute. The tip of its tongue can bend into a U shape allowing it access to the narrow galleries of ant and termite nests. The useful stickiness of the tongue is caused by saliva the consistency of treacle.

As well as ants and termites, it eats earthworms, small beetles, and the larvae of moths and beetles. It avoids the larger biting ants; and prefers ant larvae, pupae, queens, and winged ants. It is not immune to ant bites; and merely rolls over and scratches to dislodge biting ants.

It definitely prefers termites to ants - queens and nymphs being the gourmet choice. One reason for this is that termites are easier prey (they live in larger colonies) and besides, ants have a larger proportion of their mass as non-digestible exoskeleton.

The echidna traps ants by lying on top of the mound with its tongue extended on the surface. Ants walk onto its tongue; it is just too easy – meal time can continue for hours.

Front claws are used to turn over leaf litter or rip into rotting timber, the snout to turn over soft soil, front claws to burrow into mounds – a favourite time is late winter and early spring afternoons when the queens move into the surface galleries, thus ensuring our foraging echidna greatest return for the least expenditure of energy.

A 3kg animal can put away 200 gm of ants in 10 minutes.

The echidna's coat is made up of coarse hair and spines, which are modified hairs, with a composition like that of your finger nails or rhino horn, which it uses as a defence when it is threatened.

These monotremes have no sweat glands and do not pant, so they need to shelter from the heat. Activity depends on temperature. In hot areas, it tends to feed at night; whereas in temperate areas it commonly feeds around dawn and dusk; and when it is really cold it may be active in the middle of the day.

When the weather gets cold, the echidna hibernates for 6-28 weeks of the year depending on local conditions and factors related to reproduction. Males can go into hibernation earlier than females with young; yearlings that don't breed stay longer in hibernation.

So what is a monotreme? [Greek mono = single or one; + trema, hole] thus "the lowest order of mammals that lays eggs and has a common opening for the digestive, urinary, and genital tracts". Now you know.

The Echidna is one of only two species in this very exclusive group of mammals.

Both sexes give off a pungent odour during the mating season, so it is likely that this is how males find females. "Trains" of up to 10 males may follow nose to tail after a mature female,

and males compete for females by engaging in head-to-head pushing and bumping contests where the larger animal will be the winner.

For mating, the males dig a long trench along one side of the female. They lift the female's tail end with their hind feet and place their tail under hers. Lying on their side in the trench, echidnas mate cloaca on cloaca. The echidnas then return to a solitary life style.

After a two to four week gestation period, the female lies on its back and gives birth to a leathery egg (rarely are two eggs produced). Echidna eggs are soft-shelled and similar to reptile eggs. A single egg is transferred from the cloaca to the incubation pouch (not much more than a fold of skin on its underside).

After about ten days the egg hatches - the embryo has a single egg tooth enabling it to tear open the shell.

Milk is secreted from ducts onto two circular patches on the mother's belly called the milk patch or areola. The young doesn't lick the milk from the skin but sucks it from the areola. Early in lactation, the milk is rich in iron; this is thought to be because the young are so small that their livers are not able to store enough iron to tide them over until they can forage for themselves.

A young echidna is called a *puggle*. When the puggle is too prickly to carry in the pouch, the mother leaves it in a newly-dug burrow and returns every few days to feed it. At about 6 months our young echidna emerges from the burrow at and is weaned about 4 weeks later.



Echidnas grow up to 50cm (20") in length and live for a long time (over forty years for some living in captivity).

The echidna is important in Aboriginal culture because its spines or quills are used as barbs when making spears.

It is said that echidnas do not have a "home nesting site" where they return each day. They sometimes use natural burrows such as stone caves, hollow logs or tree roots. Sometimes they dig shelters into sand hills, soft soil or under vegetation. We even find echidnas using the ground burrows of native animals such as possums and penguins (in coastal areas) or introduced mammals such as rabbit.

Having noted all this, we observe that Avochie provides a regularly favoured shelter for this very special creature.

