

Short-beaked echidna



Scientific name:

Tachyglossus aculeatus multiaculeatus

Tachyglossus = swift tongue

aculeatus = with points

multiaculeatus = with many points

The Kangaroo Island short-beaked echidna EPBC listing:
Endangered

The echidna is a small stocky animal covered by sharp spines on its back and sides. Like the platypus, it is an egg-laying mammal, known as a monotreme. They are widely distributed throughout Australia in all types of habitat from deserts to rainforests, coast to snow-capped mountains.

The Kangaroo Island echidna

The echidna population on Kangaroo Island is considered to belong to a distinct subspecies (*Tachyglossus aculeatus multiaculeatus*), which was first described by Rothschild in 1905, from a specimen in the British Museum. They have more numerous spines which are longer, thinner and paler in colour compared with the mainland subspecies.

A burrowing recluse

Echidnas are mainly solitary living. They shelter in self dug burrows, hollow logs, under piles of debris, and sometimes in cavities among tree roots. They move around feeding during the day or night, depending on temperature and season. Echidnas do not sweat or pant and are less active during the hotter months, avoiding direct heat. To keep cool they seek shady places or go for a swim.

At the snap of a twig underfoot or a whiff of human scent, the wary echidna freezes, in an attempt to avoid detection.

When suddenly disturbed in the open, the echidna often curls up into a ball of radiating spines. If on soft ground, it may sink directly downwards into the earth, using its powerful front digging claws in a rotational movement.

The greatly enlarged, curved claw on the hind paw is used as a grooming tool, to reach the skin between the long spines.



Photo credit: Dr P Rismiller

An invertebrate diet

Echidnas eat all types of invertebrates and their larvae. These include: ants, termites, beetles, spiders and earthworms. They can forage up to 18 hours a day making nose pokes and shallow (<5cm) or deep (>15cm) digs with its forepaws. Echidnas retrieve food with their sticky, saliva coated tongue that can extend up to 17cm.

From 'trains' to courtship

Many of the important ecological and reproductive studies of echidnas have been carried out on Kangaroo Island. After extensive field observations using radio transmitters attached to the animals, Peggy Rismiller and her co-workers at Pelican Lagoon Research & Wildlife Centre have solved the riddle of how echidnas mate.

From mid-May to early September, male echidnas actively search out females over great distances. A female will lead,



Natural Resources
Kangaroo Island



Government
of South Australia

followed by up to ten males, with a smaller, younger male often bringing up the rear. These courtship trains are not a family group.

Prior to mating the female lies relaxed and flat on her stomach and the male or males that formed the 'train' dig a circular trench around her. Eventually the largest male pushes the competing rivals out of this 'mating rut'. After digging more dirt out from under her tail, he lies on his side and places his tail under hers and they mate.

The pregnant female develops a rudimentary pouch, into which she lays a single egg that is incubated for about ten days before hatching. The tiny young (puggle) grow at an amazing rate, suckling milk from specialised milk developing patches on the mother's belly. At 45 days the young echidna starts developing spines and becomes too large for the mother to carry. She digs and places the puggle in a nursery burrow, returning every five days to suckle it. The young echidnas are weaned in late summer, emerging from the burrow at seven months of age. Echidnas are independent from that day forward.

There is still a great deal to learn about the life of this fascinating animal.

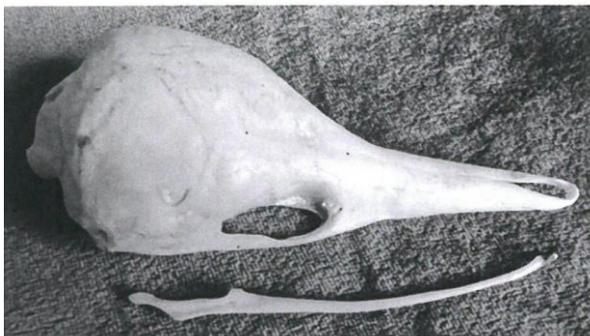


Photo credit: Dr P Rismiller

Echidna skull and lower jaw bone.

An echidna skull looks like a bird skull. The echidna beak is part of the skull and therefore quite hard, enabling it to break up logs and flip rocks while searching for food.



Photo credit: Dr P Rismiller

Echidna beak showing the tiny mouth opening and nares (nostrils).

References

- Griffiths, M. et al. (1988). Observations on free-living, lactating echidnas, *Tachyglossus aculeatus* (Monotremata: Tachyglossidae), and sucklings. *Aust. Mammal.* **11**, 135-143.
- Rismiller, P.D. and Seymour, R.S. (1991). The echidna. *Scientific American.* **2**, 96-103.
- Rismiller, P.D. and McKelvey, M.W. (2000). Frequency of breeding and recruitment in the short-beaked echidna. *Journal of Mammalogy.* **81** (1), 1-17.
- Rismiller, P.D. (1999). *The Echidna: Australia's Enigma*. Hugh Lauter Levin Associates.
- Wood Jones, F. (1925). *The Mammals of South Australia*. Government Printer, Adelaide.

For more information

Natural Resources Centre, Kangaroo Island

P (08) 8553 4444

E kinrc@sa.gov.au

www.naturalresources.sa.gov.au/kangarooisland/