



Resource Notes

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PARALLEL ADAPTATIONS – NUMBAT AND ECHIDNA

Australia has only two kinds of animal that feed exclusively on ants and termites. The Numbat of Western Australia mainly eats termites, and

the Echidna, found all over Australia, feeds on ants or termites or both, depending on their availability.



Although the small, active Numbat, with its long bottlebrush tail and attractively striped coloration appears very different from the heavy, slow, spiny Echidna, the two animals have some very important similarities. Both have long, pointed snouts housing very long tongues that can shoot rapidly in and out. Both have very large salivary glands for their size and abnormally long bony palates. Numbat teeth are poorly developed, while Echidnas have no teeth at all.

These similarities, of course, are all to do with feeding. Most termites and ants excavate underground passages or galleries so they can travel between

their nests and their feeding sites. Numbats and Echidnas dig up these galleries and feed on the occupants, using their long, agile, sticky tongues to lick them up.

If these two kinds of animals share so many common features, does this mean that they are related? In all other ways, Numbats, which are marsupials, most closely resemble the carnivorous marsupials, like Quolls (native cats), Dibblers and Tasmanian Devils. Echidnas lay eggs and suckle their young after hatching, so they are monotremes, like the Platypus.

Numbats and Echidnas, then, are not closely related. Their long tongues, long snouts, peculiar teeth and large salivary glands are parallel adaptations that have developed separately to deal with a similar diet.

Written by Tony Friend, who in 1981 began a study of the Numbat's ecology as part of a long-term program to secure the survival of this rare animal.

