

The capture of a single live marsupial mole provided us with a rare opportunity to study these unique and little-known marsupials.

MARSUPIAL MOLES (*NOTORYCTES*) are the most unusual of all Australian marsupials, as they are the only marsupials that live almost entirely under ground. They seem to be restricted to the sandy desert regions of central and western Australia, and to survive there, they need to be highly adapted desert dwellers. Early researchers provided us with considerable detail about their morphological adaptations to a burrowing (fossorial) lifestyle, but we know little about their

physiological adaptations, not even their body temperature. The capture of a single live marsupial mole from Western Australia provided us with a rare opportunity to study the physiological adaptations of these unique and little-known marsupials.

Two very similar species of marsupial mole have been described: *Notoryctes typhlops* from central Australia, and *N. caurinus* from the north-west. Little is known of *N. caurinus*; even its taxonomic status is

uncertain, with many researchers treating it as synonymous with *N. typhlops*.

Notoryctes typhlops was first described in 1888 by E.C. Stirling. He noted its striking similarity with the placental golden moles (family Chrysochloridae) from southern Africa, but speculated it might be a monotreme because he could find no trace of a separate urogenital orifice in the poorly preserved specimen. This feature was found in later specimens and the marsupial nature of the mole was soon undoubt-



ed. However, the exact systematic position of marsupial moles within marsupials is still not clear, although it is apparent that they are sufficiently different from other marsupial groups to warrant separate familial status.

In 1920, the second species of marsupial mole, *Notoryctes caurinus*, was described by Oldfield Thomas from a single female caught in August 1910 at Eighty Mile Beach, on the north-west coast of Western Australia. This new species was described as being generally smaller than *N. typhlops*, having a smaller skull, a shorter and narrower muzzle, a nasal opening of lesser height, larger tympanic bullae (bone coverings of the middle ear), and smaller and fewer

BLIND DIGGERS IN THE DESERT

**BY GRAHAM THOMPSON,
PHILIP WITHERS
& ROGER SEYMOUR**



MIKE GILLAM/AUSCAPE

(Above) *Notoryctes typhlops* was reported to eat centipedes but the smaller *N. caurinus* would only eat beetle larvae.

(Right) This is the site west of Kiwirrkurra where local Aborigines reported catching marsupial moles.

teeth. But this specimen was probably not the first *N. caurinus* to have been collected by non-Aborigines. In 1907, a government surveyor by the name of Trotman caught a marsupial mole in the north-west of Western Australia; but when he asked the local Aborigines about its habits, he did not learn much. This may have been more a result of his inability to effectively communicate with the local Aborigines. Since the first descriptions of *N. caurinus* from



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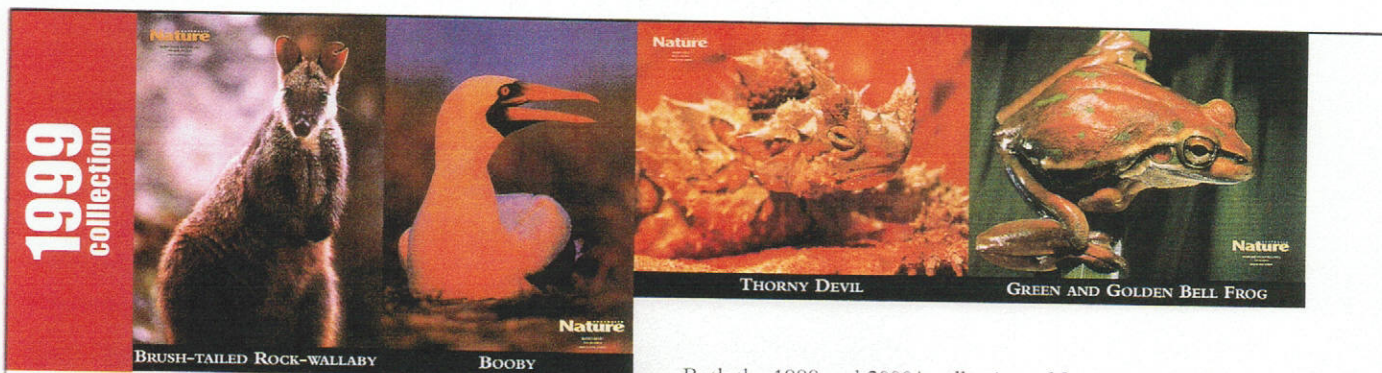
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KYLE ARMSTRONG

When placed on the sand, our captive *Notoryctes caurinus* would immediately begin to burrow.



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