

The rediscovery, after 56 years, of the Heath Rat
Pseudomys shortridgei (Thomas, 1907) (Rodentia: Muridae)
in Western Australia

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The Heath Rat *Pseudomys shortridgei* (Thomas, 1907), was described from a single individual obtained by G. Shortridge in 1906 in the course of the Balston Expeditions (Shortridge 1936). The specimen was collected at "Woyaline Wells", which later became the gazetted townsite of Woyerling (32°31'S, 117°24'E). The only other specimens taken as fresh material in Western Australia were two received by the Western Australian Museum (M1389, M1406) in April and June 1931 from Joyce Savage, who lived near Buniche in the south-eastern wheat belt. The first had been caught by the family cats, presumably near the homestead on her parents' property, Roe Location 1182 at 32°52'S, 118°48'E, which is immediately south of the current Harris Nature Reserve (No. 32549). In 1961 *P. shortridgei* was discovered living in western Victoria (e.g. Seebeck 1976).

Material from surface cave deposits shows that immediately before European colonization, *P. shortridgei* had an extensive distribution (Figure 1) through the west coastal heaths and the mallees of south-western Australia, reaching to the extremities of the South-west Botanical Province of Beard (1980) (Butler and Merrilees 1971; Archer and Baynes 1973; Baynes 1982, in press). Until recently it seemed that *P. shortridgei* had disappeared from its entire Western Australian range, and it was generally regarded as extinct in the state (e.g. Cockburn 1983).

Its rediscovery comprises a typical combination of coincidence and serendipity (see Ride 1970, Chap. 2).

The first indication that *P. shortridgei* might have persisted until relatively recently, came in the form of remains of three individuals in a small owl pellet deposit found in 1984 in a dead tree by K. Bradby, south-west of Ravensthorpe and north of the Fitzgerald River National Park (Figure 1). The associated fauna was restricted to extant species. There was no indication of the precise age of the material, but it appeared unlikely to be more than a few decades old.

The next, much stronger lead arose out of the fauna survey of Fitzgerald River National Park being carried out by Chapman. In January 1987 he sent bones from

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Rediscovery of the Heath Rat

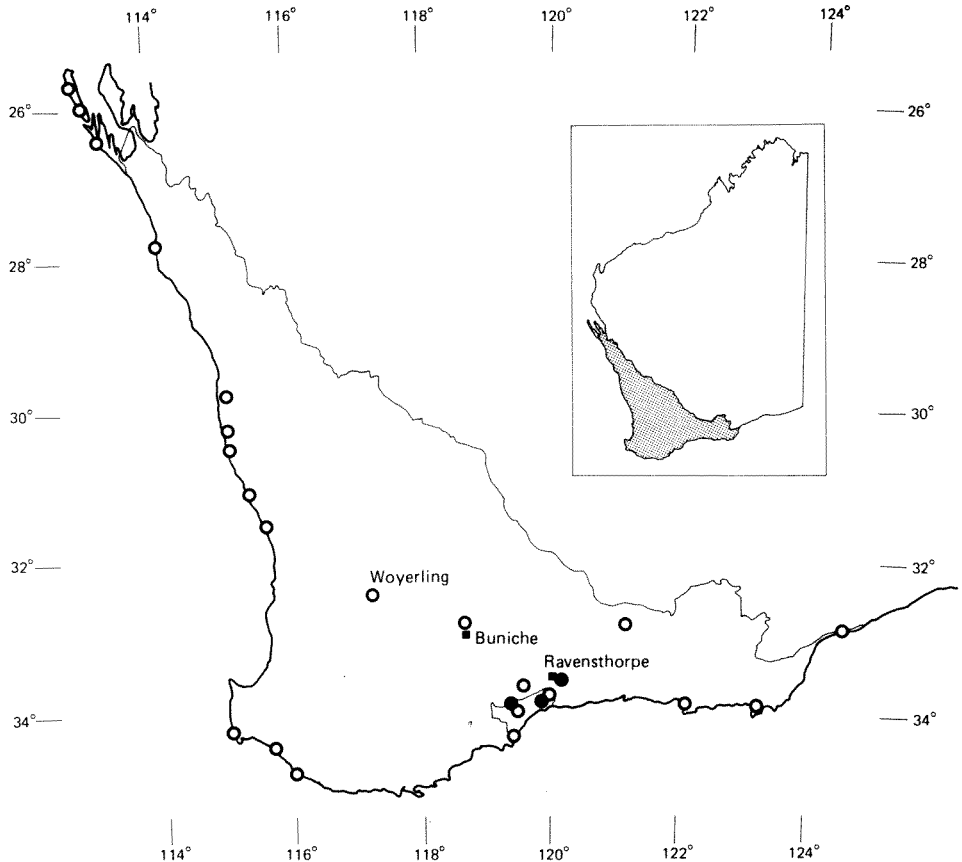


Figure 1 South-western Australia, showing the boundaries of the South-west Botanical Province of Beard (1980) and Fitzgerald River National Park, with former (open circle) and present day (closed circle) locality records of *Pseudomys shortridgei*.

some apparently fresh owl pellets from the western part of the Park to Baynes for identification. The bones are translucent white, consistent with being fresh, and include remains of a single subadult *P. shortridgei*. This discovery led to a decision to seek funding to search for a living population in the following financial year.

On Friday 13 February 1987, Chapman telephoned Baynes to ask if he was willing to identify owl pellet specimens generated by the proposed search. Later the same day, Baynes was looking through the WA Museum collection of *Rattus fuscipes* specimens in spirit for a totally unconnected reason. He wanted a well preserved specimen with an evenly scaled tail to use in redrawing the final illustration for the last of a set of keys to the mammals of Australia. Examining a specimen through the side of its glass container he noticed that the individual tail scales were more clearly visible than those on the *R. fuscipes* he had been

drawing. It then became apparent that the tail on this rat was more densely covered in hairs, and darker on the dorsal surface than the ventral; both characteristic of *Pseudomys* rather than *Rattus*. The bottle contained another *P. shortridgei* and one *R. fuscipes*. The specimens had been collected by Chapman in 1983 in the Ravensthorpe Range!

The rediscovery was undoubtedly delayed by the great similarity in external appearance of *P. shortridgei* to Western Australian individuals of *R. fuscipes*. Indeed, Joyce Savage's specimens were originally registered as *R. fuscipes* by L. Glauert, Curator of the WA Museum in 1931. Shortridge (1936) himself also noted a similarity. The Ravensthorpe Range specimens were among a series of 13 individuals retained by Chapman from among the many animals he trapped in the course of a survey of the Range (Chapman 1984), and which he identified as *R. fuscipes*. They were received at the WA Museum in 1984 and duly registered as *R. fuscipes*. Examination of the rest of the series revealed one more *P. shortridgei*. The registration numbers are M24951, M24959 and M24971. The skull was removed from M24971 to confirm the identification.

On 14 February 1987 Lynam joined Chapman in the Fitzgerald River National Park in order to live-trap Dibblers (*Parantechinus apicalis*), as part of a study of geographic variation in that species. They set out grids of Elliott traps and pit traps in mallee heath. Alerted by Baynes' discovery in the WA Museum, they carefully checked the tails of the "*Rattus fuscipes*" that entered the traps. On 18 February Lynam caught a *P. shortridgei* in an Elliott trap. The same trap had contained a *R. fuscipes* the morning before and contained another the following day. This *P. shortridgei* was retained and has been accessioned into the WA Museum collection (M26644). On 19 February Chapman pit trapped another *P. shortridgei* about 300 m away.

The Ravensthorpe Range *P. shortridgei* originated, respectively, from Chapman's traplines 7, 8 and 9, 10-12 km east of Ravensthorpe townsite. The habitats at these sites (Chapman 1984) were: Shrub Mallee over Banksia scrub over mixed Low Scrub A on gravelly fine sandy loam; mixed Low Scrub B over *Lepidosperma* Open Low Grass on fine sandy loam; and Shrub Mallee over mixed scrub over *Lepidosperma* Open Low Grass on clay loam. The habitat at both sites in the Fitzgerald River National Park is Very Open Shrub Mallee over Open Low Scrub B over Dwarf Scrub C over Dwarf Scrub D over Open Low Sedges on light brownish grey, loamy fine sand.

Pseudomys shortridgei in Victoria occurs in recently burnt heath, reaching maximum numbers when productivity is at a maximum and then disappearing (Cockburn 1983). In marked contrast, the mallee heath in which the Ravensthorpe

Acknowledgements

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