

Heath mouse eludes searchers

by Brent Johnson and Verna Costello





A project is under way in Western Australia to find a population of the threatened heath mouse or dayang (*Pseudomys shortridgei*) in order to study its biology and ecological requirements, and ultimately to explore ways to improve its conservation status.

In an effort to fill these knowledge gaps, the Department of Conservation and Land Management launched the new project, which saw wildlife researchers, postgraduate students and volunteers spending two weeks in November 2002 and again in March this year searching for the heath mouse in and near Fitzgerald River National Park. While traps were laid at sites where heath mice had been caught during the 1980s and 1990s, none was caught during the later trapping exercises.

During the mid-1990s, captures in these areas were highly encouraging, and as recently as early 2002, heath mice occasionally turned up in the department's Western Shield traplines in the eastern part of the park. The next step will be to search at Lake Magenta, where trapping for Western Shield has also turned up heath mice from time to time.

Lake Magenta was also the site of an investigation into trapping records and habitat types to help predict where heath mice might occur, and a few mice were, indeed, found where predicted. Departmental researchers and a postgraduate student from Murdoch University will again investigate this and other possible sites.

The heath mouse is quite stout and weighs up to 90 grams (much smaller than the similar bush rat which reaches 200 grams). It usually has light brownish-grey fur, flecked with black. The blunt-nosed face has bulging eyes and dark, hairy ears. The tail is shorter than the combined head and body. It has darker fur above, with paler fur beneath.

Female heath mice reach sexual maturity at about one year old, and are thought to produce their young in spring. In captivity, they have been known to survive for several years. Studies on this species in eastern Australia have shown that grass and seeds form most of its diet. Very little else is known, but they are believed to use nests and shallow burrows.

The heath mouse was believed to be extinct in Western Australia for more than 50 years before it was caught during a survey of the Ravensthorpe Range in 1983. These specimens were originally misidentified as bush rats. Only the discovery of fresh bone material and subsequent trapping of heath mice during a search for the threatened dibbler in Fitzgerald River National

Left facing page Heath mouse.
Photo - Jiri Lochman

Above Middle Mt Barren and Thumb Peak, in Fitzgerald River National Park.
Photo - Marie Lochman

Right Radio tracking at Fitzgerald River National Park.
Photo - Brent Johnson





Park in 1987 confirmed their existence. At the time, the species had last been recorded alive in WA in 1931. It is now known from only five locations in the southern Wheatbelt and south coastal areas of the State, and from only two conservation areas in south-western Victoria. Limited genetic analysis has been undertaken and it appears that in both States they are the same species. However, the limited studies undertaken here and in Victoria suggest that eastern states heath mice and those in Western Australia occur in different habitats, and each has different ecological requirements. This is not surprising

given the distance between their populations and the length of time they have been apart.

The heath mouse is listed as vulnerable under Commonwealth legislation. In WA, it is listed as 'fauna that is rare or likely to become extinct' and is the only threatened rodent in this State with no conservation program.

Fire is used as a management tool on several of the conservation reserves where the heath mouse persists, and mining interests are becoming an increasing presence in adjoining areas. Information is needed on these potentially limiting factors, as well as

the possible effects of introduced predators and dieback. Nevertheless, Department of Conservation and Land Management researchers are confident that, with the assistance of Murdoch University and the support of mining companies and other landholders, this study will greatly improve our knowledge and understanding of one of Australia's rarest rodents.

Above left Heath mouse.
Photo - Jiri Lochman

Above Murdoch postgraduate student Damien Cancilla happily holds a bag containing a heath mouse in Lake Magenta Nature Reserve.

Left A recently burnt site near Bandalup Hill will allow researchers to investigate the effects of fire on heath mice.
Photos - Brent Johnson



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