



ENDANGERED!



THE WESTERN MOUSE

While the endangered status of many of our marsupial species is relatively well known, many native rodents are also under threat. One of these is the western mouse (*Pseudomys occidentalis*). First collected near Tambellup in 1930, it was not recognised and named as a new species until 1951. Today, it is known from only 12 isolated locations, scattered over the south-west in a roughly triangular area between Hyden, Cranbrook and Ravensthorpe. Sub-fossil bone fragments have been found in cave deposits along the Western and South Australian coasts. Sites range from north of Jurien Bay, south to Margaret River, and east across the Nullarbor Plain to the Eyre Peninsula and Kangaroo Island, indicating a more extensive range in the past.

The western mouse is one of the largest of the *Pseudomys* species with adults weighing between 30 and 70 grams. It is distinguished from other native rodents by its dark-grey and yellowish-buff fur with black guard hairs above, grey-white fur below and distinctive dark hairs on the upper two-thirds of the tail.

Reproduction occurs from late June to late November. Females usually have three to four young, housed in a nesting chamber within a deep burrow system. Juveniles emerge in spring when food resources are abundant. The population size varies between seasons, years and vegetation types, but there are generally one to seven animals per hectare.

Radio-tracking has shown that up to 10 animals share a burrow system, with individuals frequenting a number of different burrows over a series of nights. The species is largely nocturnal and may move at least half a kilometre in a night.

The western mouse is also semi-arboreal, climbing small shrubs to obtain food. Its omnivorous diet consists largely of fibrous plant material, flowers (*Acacia* and *Hibbertia*) and invertebrates. It eats seeds and immature fruit directly from vegetation. The quandong (*Santalum accuminatum*) and various sedge species are also thought to be important food sources. Stores of quandong nuts (more

than 200) have been found under dense shrubs - probably communal feeding areas. The nuts are chewed to extract the kernel, which contains high levels of protein and oils.

Recent studies by the Department of Conservation and Land Management (CALM), supported by the World Wide Fund for Nature (WWF), suggest the species is very selective in its habitat, preferring long-unburnt vegetation (30 to 50 years) on sandy clay to sandy loam soils. Vegetation varies between shrublands, mallees and occasionally woodlands. Dominant plants include species of *Eucalyptus*, *Isopogon*, *Acacia*, *Allocasuarina* and *Melaleuca*.

All records of the western mouse are from isolated and semi-isolated nature reserves and national parks, the smallest being only 200 hectares. These populations are probably fragmented and restricted to the preferred habitat types. This pattern of distribution has made the western mouse vulnerable to local extinction from factors such as the clearance of suitable habitat, competition from introduced herbivores, wildfires, and predation by foxes and cats.

BY LEIGH WHISSON

Photo - Babs and Bert Wells

LANDSCOPE

VOLUME EIGHT NO. 3 AUTUMN ISSUE 1993



'Where there's fire there's smoke'. We look at one of the lesser known and misunderstood products of bushfires on page 10.



Banksias and blackboys are normally associated with the sandplains of the coast and wheatbelt rather than the Great Victoria Desert. See page 22.



The mountains of the Stirling Range are a refuge harbouring many ancient species of spiders. Spider expert Barbara York Main shows us some of them on page 28.



The disappearance of the Zuytdorp remained a mystery for many years. The story of its rediscovery and the formation of the Zuytdorp Nature Reserve is on page 42.



A new book, Perth Outdoors, aims to encourage people to get outdoors and enjoy nature and to learn more about Perth's unique natural communities. See page 35.

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The palisade spider (Neohomogona stirlingi) is endemic to the Stirling and Porongurup Ranges. It builds a shallow burrow with an open entrance surrounded by a palisade, or collar of leaves and twigs, which may project several centimetres above the ground or litter.

The illustration is by Philippa Nikulinsky.



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Cartography: CALM Land Information Branch

Colour Separation by Prepress Services

Printed in Western Australia by Lamb Print

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Published by Dr S Shea, Executive Director
Department of Conservation and Land Management,
50 Hayman Road, Como, Western Australia 6152.