



ENDANGERED



Photo - D. Roff/Nature Focus

MARSUPIAL-MOLES

Marsupial-moles are off-white to orange and are about 125 to 160 millimetres long. Many desert Aborigines humorously refer to them as 'pensioners', because they are blind and have white hair! Genetic studies suggest that the two species of marsupial-moles represent a distinct and unique marsupial lineage at least 50 million years old and they have been placed in a separate order.

Both species inhabit desert dune-fields and sandplains. The kakarratul, or northern marsupial-mole (*Notoryctes caurinus*), is found in the Great Sandy and Gibson Deserts of Western Australia, while the itjaritjari, or southern marsupial-mole (*N. typhlops*), occurs in WA's southern deserts, and in the desert regions of South Australia and the Northern Territory. Both species live underground in sand dunes, interdunal flats and sandy soils along river flats, and occasionally come to the surface, apparently more frequently after rain. They eat insects,

particularly larvae, but will also eat larger prey including lizards. Almost nothing is known of their biology, social organisation or even how they find their way around or find each other. They seem not to have permanent burrows, but 'swim' through loose sand, seemingly at random, but presumably with some 'mole' purpose.

Around the turn of the century, European explorers and their Aboriginal guides were able to locate itjaritjari fairly often in parts of the Great Victoria Desert. In the 1920s, when at Ooldea in South Australia, Daisy Bates wrote that itjaritjari were often caught by Aborigines. Now, in the same area, none can be found. The acquisition rates of specimens of both species suggests a significant decline in abundance—especially noting the much greater levels of

human activity within the species' ranges during the last two or three decades. Added to this is our knowledge that about 90 per cent of Critical Weight Range (CWR) mammal species in the Australian arid zone have become totally or locally extinct, or have declined seriously in abundance. With weights of 40 to 70 grams, kakarratul and itjaritjari fall squarely within the CWR. Experienced mammalogists, working in many parts of the deserts over recent decades, have failed to locate more than a few individuals of each species.

Most marsupial experts now consider that kakarratul and itjaritjari have declined greatly and are endangered. Marsupial-moles, like many other Australian mammals, are presumably succumbing to predation by introduced foxes and feral cats.

Research into the conservation biology of these unique Australians is urgently needed.

by
**Andrew Burbidge
and Ken Aplin**

LANDSCOPE

VOLUME ELEVEN NO. 4 WINTER ISSUE 1996



The Perth Observatory celebrates its centenary this year, and during its 100 years' life it has played some major roles in the world of astronomy. Find out more on page 10.



The Cape Range, in north-west WA, is known for its harsh environment. But if you look a little closer you'll discover the vast 'Range of Flowers' that live there. See page 28.



In 1961, the noisy scrub-bird was rediscovered at Two Peoples Bay. In 1994, the Gilbert's potoroo turned up unexpectedly. Find out more about this haven for the lost and found on page 35.



John Forrest National Park has long been a popular picnicking spot for Perth residents, but this place of beauty has much more to offer. See page 16.



If all goes to plan, the Ord River area, will soon be known as a prime farming area for rare tropical timbers. Find out why on page 23.

FEATURES

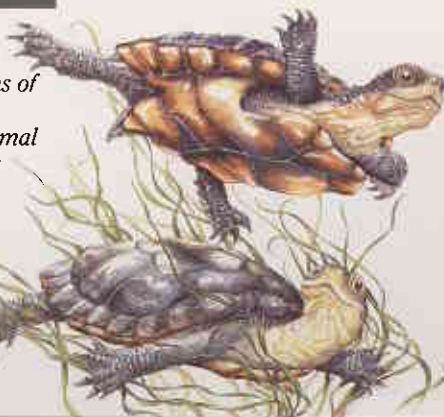
- ONE HUNDRED YEARS OF STARGAZING**
JAMES BIGGS 10
- JOHN FORREST NATIONAL PARK:
A PLACE OF BEAUTY**
GEORGE DUXBURY 16
- TROPICAL TREE FARMING**
ANDREW RADOMILJAC & MANDY CLEWS 23
- A RANGE OF FLOWERS**
GREG KEIGHERY & NEIL GIBSON 28
- TWO PEOPLES BAY:
A HAVEN FOR THE LOST AND FOUND**
ALAN DANKS 35
- WESTERN SHIELD**
CARIS BAILEY 41
- BANKING FOR THE FUTURE**
ANNE COCHRAN, ANNE KELLY & DAVID COATES 49
- REGULARS**
- IN PERSPECTIVE** 4
- BUSH TELEGRAPH** 6
- ENDANGERED MARSUPIAL-MOLES** 34
- URBAN ANTICS** 54

COVER

Fox-baiting has been shown to be a major tool in rebuilding populations of native animals. Now, scientists are embarking on a Statewide feral animal control program to help bring back native species, such as the western swamp tortoise, from the brink of extinction. The project is called 'Western Shield'.

The story is on page 41.

Illustration by Philippa Nikulinsky



Managing Editor: Ron Kawalifak

Editor: David Gough

Contributing Editors: Mandy Clews, Verna Costello, Penny Walsh, John Hunter

Scientific/technical advice: Andrew Burbidge, Ian Abbott, Paul Jones, and staff of CALM's Science & Information Division

Design and production: Maria Duthie, Sue Marais

Finished art: Gooitzen van der Meer

Illustration: Gooitzen van der Meer

Cartography: Promaco Geodraft

Marketing: Estelle de San Miguel ☎ (09) 334 0296 Fax: 334 0498

Subscription enquiries: ☎ (09) 334 0481

Colour Separation by Prepress Services

Printed in Western Australia by Lamb Print

© ISSN 0815-4465. All material copyright. No part of the contents of the publication may be reproduced without the consent of the publishers.



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