

## DUGONGS

Shark Bay and Monkey Mia are well known for their dolphins.

However, a recent survey gave some surprising results - dugongs in the area outnumbered dolphins by four to one, showing that Shark Bay had one of the largest localised dugong populations in the world.

A five-person research team recorded 10 000 dugongs in the Shark Bay area, where the animals graze on extensive seagrass beds.

Previous estimates had put the dugong population there at between two to five thousand.

Hunting has severely reduced the numbers of these quiet bottom-feeding 'sea cows' in other parts of the Indian and Pacific Ocean, so the survey's findings are particularly significant.

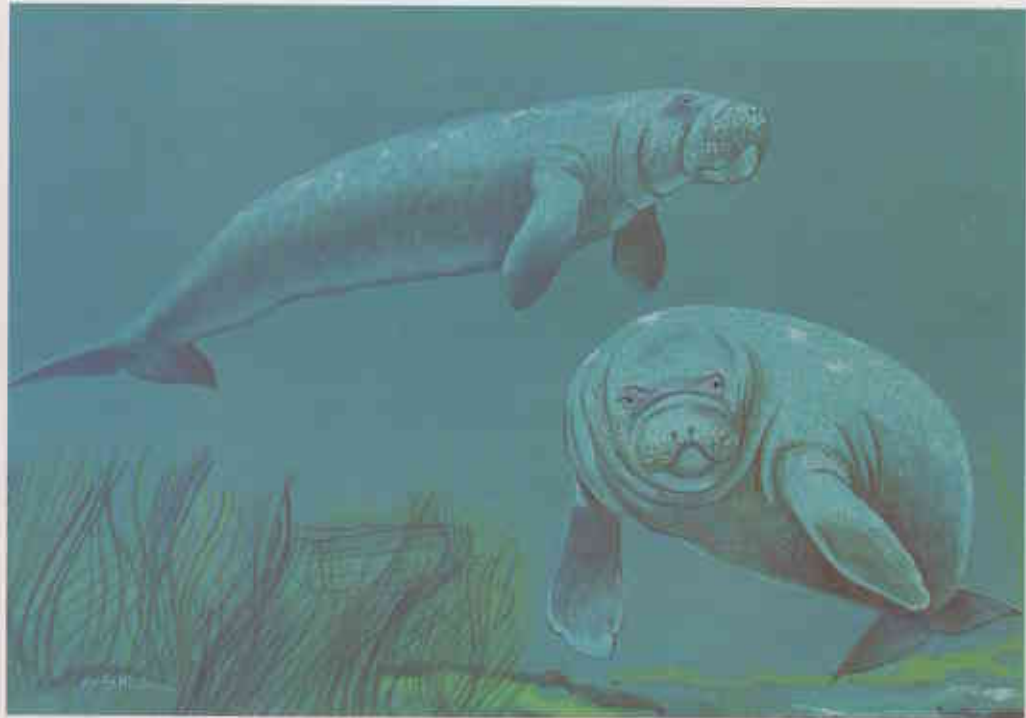
The survey was co-ordinated by CALM researcher Dr Bob Prince and directed by Dr Helene Marsh, a dugong expert from Queensland's James Cook University.

Research Assistant Keith Saalfeld and CALM's Andy Williams and Ron Shepherd formed the rest of the team.

They flew a series of transects across the bay in a light aircraft at only 450 feet.

"The dugongs were distinctive from the air - they looked just like big brown plump cows," said Ron Shepherd.

The survey changed some of the previous theories about dugong migration around Shark Bay. It became apparent that there were probably two sub-populations. One occupied the south-westerly parts of Shark Bay and there was another concentration of dugongs north-east of Cape Peron.



*The dugong's extraordinary snout is adapted for shovelling in sand and extracting the choicest plants.*

*Illustration - Sally Watson*

Dolphins, marine turtles, sharks, stingrays, humpback whales and even sea-snakes were also observed and recorded during the survey.

After spending one and a half weeks in Shark Bay the team moved to Exmouth and the Ningaloo Reef.

"The team was surprised at the large numbers of dugongs on Ningaloo Reef, as dugongs are not really thought to be reef animals and there was no prior evidence of extensive seagrass communities in the Ningaloo Reef area," said Ron.

"At Ningaloo we also spotted numerous very large brown masses that turned out to be salps, a small animal similar to a sea-squirt that lives in colonies in tens of thousands. These colonies form large spirals which a diver can swim through," he said.

"Beyond the reef, we counted an unexpectedly high number of whale sharks for this time of the year."

## RARE ORCHID

The rare Purdie's donkey orchid (*Diuris purdiei*) has been successfully propagated by Kings Park and Botanic Gardens research botanists.

Eight seedlings have so far been grown since the identification of the microfungi needed by the plant.

According to Kings Park research botanist Kingsley Dixon, the orchid is extremely difficult to grow; it produces dust-like seed and will only germinate on a special medium combined with the right fungus.

Purdie's donkey orchid is found in only eight sites in Western Australia. A new population was recently discovered by a CALM forester after an autumn burn on a reserve east of Peel Inlet.



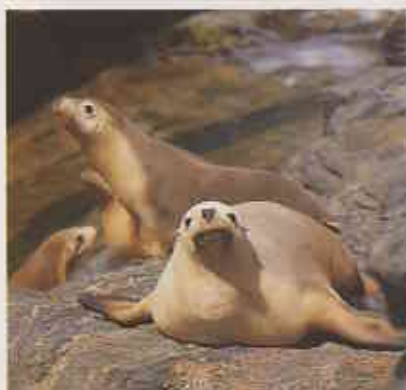
*Purdie's donkey orchid stands up to 45 cm tall and has five to 10 narrow, spirally twisting leaves.*  
*Photo - Stephen van Leeuwen*

A wildlife management program is being developed to ensure the orchid's long-term survival.

Developers who own land containing two orchid sites in the metropolitan area have provided funds for a four year research program to be run by CALM.

# LANDSCOPE

VOLUME 5 NO 2 SUMMER EDITION 1989/1990



*Dolphins, whales and seals frequently strand along the WA coast. Find out who helps them and what they do on p. 10.*



*Powerful forces have formed the rocks and land surface of WA over billions of years. See p. 48.*



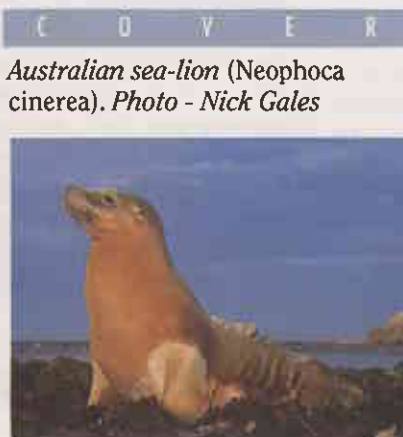
*Why are the thousands of feral camels that roam inland Australia the scourge of the desert? Turn to p. 22.*



*Explore the fascinating subterranean worlds deep beneath the earth on p. 28.*



*Inlets and rivers, towering karri and tingle forests, rugged coastline and remote wilderness areas - Walpole-Nornalup National Park has it all. See p. 15.*



*Australian sea-lion (Neophoca cinerea). Photo - Nick Gales*

## FEATURES

**SHORE SURVIVORS**  
NICK GALES, DOUG COUGHRAN & CAROLYN THOMSON ..... 10

**WALPOLE-NORNALUP...  
AN ANCIENT LAND**  
GRANT WARDELL-JOHNSON & VANESSA SMITH ..... 15

**DESERT BIGFOOT**  
ANDREW BURBIDGE ..... 22

**LIVING LIMESTONE**  
JOHN WATSON, BARBARA YORK-MAIN & BILL HUMPHREYS .... 28

**UNRAVELLING THE MYSTERIES  
OF VERTICORDIA**  
ELIZABETH GEORGE ..... 35

**SHOOTING FROM THE STARS**  
RAY BAILEY ..... 39

**PHOTO ESSAY**  
RAINBOW DESERT ..... 42

**BLAZING COMPUTERS**  
JUDI BECK ..... 46

**ROCKS OF AGES**  
GEOFFREY SHAW ..... 48

## REGULARS

**IN PERSPECTIVE** ..... 4

**BUSH TELEGRAPH** ..... 6

**ENDANGERED**  
WALPOLE WAX ..... 27

**URBAN ANTICS** ..... 54

**Managing Editor:** Ron Kawalilik  
**Editor:** Carolyn Thomson  
**Designers:** Louise Burch/Robyn Mundy  
**Production:** Karen Addison/Margaret Wilke  
**Maps:** Project Mapping, CALM  
**Advertising:** Tim Langford-Smith ☎ (09) 389 8644 Fax: 389 8266

Colour Separations by The Colour Set  
Printed in Western Australia by Kaleidoscope

© 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.