

Book reviews

BETTONGS, POTOROOS AND THE MUSKY RAT-KANGAROO

By Andrew Claridge, John Seebeck and Randy Rose
2007. Published by CSIRO Publishing, Melbourne, Australia.
192 pp. Paperback, \$AU39.95, ISBN 9780643093416.

The Hypsiprymnodontidae and Potoroidae represent the up-and-down in Australian fauna survival as no other mammalian group. Since European settlement, at least two species have become extinct, several others have critical status, but at least one has been the subject of a very successful management and recovery project. In subfossil remains, impressive parts of what are supposed to be carnivorous giant rat-kangaroos have been found. Potoroinae have been the focus of research in reproductive biology and fire ecology, and several of them have also featured medical research.

This is a separate volume on Potoroinae, to correct the rather 'macropodocentric' impression. The book has been compiled by three very competent experts, among them the late John Seebeck. It contains information on their ecological role (one might even consider them ecosystems engineer species), the quite numerous characteristics that make them non-macropodids, evolution, diet and nutrition, reproduction and a specific chapter on field methods, which explains how one gets to know these interesting animals.

The book contains lots of pictures (black and white and colour), graphics, drawings, and other supporting information. A worthy effort!

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NATIVE MICE AND RATS

By Bill Breed and Fred Ford
2007. Published by CSIRO Publishing, Melbourne, Australia.
200 pp. Paperback, \$AU39.95, ISBN 9780643091665.

The biology of Australia's endemic rodents is now covered in a volume of the Australian Natural History Series. The book is well illustrated with excellent black and white and colour pictures, numerous drawings of morphological structures, tables and graphs referring to life history and reproductive data, ecology and conservation, distribution maps and other supporting material.

It is definitely a good idea to start such a volume with a standardised format of species' accounts, and then draw together the information into topical chapters instead of putting biodiversity on the backburner by including species lists into an appendix, as so often happens. As most species are quite small and nocturnal, finding enough information for 14 pages on social organisation is definitely laudable. Apart from that, no single chapter shall be mentioned – all are worth reading! As the book draws together information from many different areas, the inclusion of a glossary and 10 pages of literature are very helpful.

As about 25% of Australia's endemic mammals are murine rodents, this definitely is an important addition to any library on Australians vertebrates.

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MEDICINE OF AUSTRALIAN MAMMALS

By Larry Vogelnest and Rupert Woods
2008. Published by CSIRO Publishing, Melbourne, Australia.
704 pp. Hardback, \$AU195, ISBN 9780643091504.

Zoologists play a crucial role in disease surveillance of wildlife populations. They are likely to be on the forefront of detecting wild species declines and disease outbreaks. They often routinely collect samples, such as blood or serum, which may become invaluable aids in the epidemiological investigation of emerging diseases. Collaborations between researchers in the zoological field and those in the veterinary field are invaluable. However, the study of health and disease in wild animal populations will further benefit from an increased understanding by zoological and veterinary researchers of each others' field. In the past, most of the information available on diseases of Australian mammals was strewn across a number of different publications, most notably the *Proceedings of the Post Graduate Foundation in Veterinary Science of the University of Sydney* and the various editions of Fowler's *Zoo and Wild Animal Medicine*. It is therefore a great relief, and achievement by the editors, to see much of this information collated in a single book. *Medicine of Australian Mammals* covers a lot of ground, providing the reader with information on a great array of topics related to the health of both free-ranging and captive wildlife species. The chapter authors of this book read like the 'who's who' of Australian wildlife veterinarians, with the addition of a number of wildlife disease research workers. While this book appears to be primarily aimed at veterinarians, workers in other wildlife-related fields, especially those with an interest in population health or involved in species recovery and translocation, are likely to find much useful information.

The initial chapters of the book discuss general veterinary considerations for the treatment and rehabilitation of wildlife, orphaned marsupial young, marine mammal strandings and health investigations (with detailed information on necropsy techniques). The main body of the book contains information on specific groups, or species, of Australian mammals, resulting in the following chapters: echidnas; platypuses; macropods; koalas; wombats; dasyurids; numbats; gliders and possums; bandicoots and bilbies; bats; rodents; dingoes; pinnipeds; cetaceans; and dugongs. Each chapter begins with brief notes on the anatomy and physiology of the group, rearing of orphaned young and husbandry of captive animals. This is followed by detailed information on specific medical conditions, some short notes on surgical considerations, haematological and serum biochemical values, and drug formularies. There are four appendices, including a checklist of mammal species (both scientific and common names), a short guide to parasite identification and a summary of the most common and important parasites found in each mammal group, a list of product sources and a guide to abbreviations used in the book. The index is 20 pages long and is arranged by common name of the animal species and group, as well as some of the more common disease groups or agents.

The first chapter discusses in some detail the fundamental principles associated with the care and release of 'rescued'

wildlife. However, most of the principles can be equally applied to captive breeding and relocation or translocation programs and are therefore of great interest for those involved in such programs. Because most 'rescued' animals are released back into the same population or area they were found in, there is perhaps not as much emphasis on the need to assess the health status of the resident population as may be required in a translocation program. The chart on care requirements for orphaned marsupials in the second chapter is excellent, and the same chapter also provides a useful overview of milk products available for hand-rearing. The third chapter is a reproduction of Rose's (2007) *Wildlife Health Investigation Manual*, and for those who do not have a copy of the manual, this is a very thorough and useful resource for collecting any health-related samples from wildlife, especially in the field, or performing post-mortem examinations. Rose's motto for fieldwork: 'Above all, do no harm', referring to the need to prevent the spread of infectious disease to or between wildlife populations, is equally pertinent to ecological and disease fields. The selection of animal groupings for the following chapters makes good biological sense, although the size of individual chapters is not necessarily proportional to the number of species covered in it. That, however, is not so much a reflection on space allocation as on the heterogeneous nature of our understanding of Australian mammal medicine. This is perhaps most obvious when contrasting the chapter on dugongs (12 pages), where the words 'little information is available on dugongs' reappear under the majority of subheadings, with the chapter on koalas (100 pages), which contains very detailed information on a large range of diseases. While the koala chapter may be on the edge of being almost too exhaustive within the framework of this book, it contains some very useful charts on condition scoring, tooth wear, detailed and up-to-date information on chlamyphilosis and an extensive drug formulary for the species. One problem facing the editor of any medical textbook is the decision as to whether to group diseases by body system, aetiology or both. It appears that in *Medicine of Australian Mammals* the decision was made to group them under both headings. This was handled with differing success by the various chapter authors, and there is significant repetition of information under the two headings in at least one chapter. However, in most cases, the authors solved the problem well by mentioning the disease briefly under one heading (e.g. body system) and providing all the details under the other (e.g. aetiology). There is some marked overlap between the information provided on parasites in the species chapters and Appendix 2. Perhaps a checklist of parasites species within the species chapters, while restricting the information in the Appendix to some general comments on parasite identification techniques would have been one way of avoiding this. Generally, however, the medical information contained in each chapter is relevant and accurate, with a very small number of errors or inconsistencies. The haematological and serum biochemical values provided in each chapter vary between means with standard deviation and ranges. However, given the variety of sources this data originates from, including previously unpublished in-house values from zoological collections, this inconsistency would not be easy to solve. In any case, the values will provide very useful guidelines complementing the data in Clark's (2004) *Haematology of Australian Mammals*.

Throughout the book, the illustrations are of high quality, useful and easy to interpret. The handling illustrations will be of particularly good use to anyone working with smaller and medium-sized Australian mammals. The font size is appropriate and headings and subheadings stand out well. There are some minor variations between chapters in the order of subheadings, but they are not significant enough to cause confusion. One useful addition might have been the inclusion of chapter numbers in the running title at the top right hand of each page. This would have made it quicker to find other chapters referred to in the text. The binding and paper quality of the book are good and it should be reasonably resistant even in the field (although its weight may preclude taking it on trips on foot). Bibliographies are listed at the end of each chapter, and contain a mixture of up-to-date and older references. In addition, most chapters contain a significant number of 'personal comment' citations. There are few spelling mistakes, and only minor inconsistencies in terminology.

The editors of *Medicine of Australian Mammals* clearly wanted to make this book a comprehensive text for anyone involved in the veterinary care or health assessment of Australian mammals, and that goal was achieved. If anything, it occasionally succumbs to repeating information more often than necessary. It is a great resource for those with an interest in the health of not only captive, but also free-ranging populations of Australian wildlife.

References

- Clark, P. (2004). 'Haematology of Australian Mammals.' (CSIRO Publishing: Melbourne.)
 Rose, K. (2007). 'Wildlife Health Investigation Manual.' (Zoological Parks Board of New South Wales: Sydney.)

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Books received for review

Persons wishing to prepare a review of these books should contact the Editor.

- Richard E. MacMillen, and Barbara J. MacMillen (2007). *Meanderings in the Bush: Natural History Explorations in Outback Australia*. 223 pp. [This book is dedicated to the memory of Russell Baudinette (1945–2004). Proceeds from the sale of the book will help support The Russell Baudinette Travel Scholarship for Ph.D. students of Animal Physiology and Ecology at Adelaide University.]
 Sue Churchill (2009). *Australian Bats* (Second Edition). Allen & Unwin Publishing. 255 pp. [This is basically an identification (field) guide to all 75 species of bats in Australia.]
 Stephen Jackson (2007). *Koala: Origins of an Icon*. Allen & Unwin Publishing. 337 pp.
 Ann Moyal (2008). *Koala: A Historical Biography*. CSIRO Publishing. 246 pp.
 John Bannister (2008). *Great Whales*. CSIRO Publishing. 141 pp.
 Michael Augée, Brett Gooden, and Anne Musser (2006). *Echidna: Extraordinary Egg-Laying Mammal*. CSIRO Publishing. 136 pp.