



Book review

HUME, I. D.: **Marsupial Nutrition**. Cambridge: Cambridge University Press 1999. 434 pp., 93 line-diagrams, 39 half-tones. Paperback. US\$ 54.95. ISBN 0 521 59555 X.

The reader will hopefully allow the reviewer to do some calculations first before starting with the review, although this might not be a strictly "professional" approach: The present book, as a sequel to "Digestive Physiology and Nutrition of Marsupials" by the same author, which was published in 1982, increased considering the number of pages by approximately 70% and the number of papers cited in the references increased by approximately 90%! As the author himself writes in the preface, this remarkable expansion of knowledge during the last two decades is due to intensified research efforts that have gone into marsupials other than kangaroos. Additionally, authors dealing with South American marsupials have contributed considerably to information on marsupial nutrition, which are meticulously presented here to the impressed reader.

In a detailed introductory chapter the author deals with general physiological and nutritional aspects under the title "Metabolic rates and nutrient requirements". In this important section the frame for all consecutive chapters is supplied: The concept of nutritional niches, significance of metabolic rates, energy requirements for maintenance, aspects of food intake, torpor and hibernation as it can be found in some marsupials, as well as requirements of, e.g., water and protein.

The following chapter deals with carnivorous marsupials, such as American caenolestids, some didelphid species and the only representative of the microbiotheriids, *Dromiciops australis*, or colocolos, as well as Australasian Dasyuridae. In the next

chapter HUME presents omnivorous marsupials, such as the American Didelphidae and Australasian Peramelidae, Peroryctidae, Burramyidae, Petauridae, and Acrobatidae. Two chapters deal with hindgut fermenters; one with wombats and the second with arboreal folivores, such as tree kangaroos, the koala (*Phascolarctidae*) and phalangers as well as pseudocheirids (ring-tails). The following three chapters present foregut-fermenters, such as the Macropodidae (kangaroos and wallabies) and Potoroidae (rat kangaroos). All these chapters are clearly organised, well-written, instructively illustrated (diagrams and half-tones) and full of biological information!

Having been informed about the diversity of the digestive tract, its function and about nutritional and physiological aspects in the Marsupialia, the biologically interested reader expects information and comments on how this richness in species and differentiations came into existence. The reader is not disappointed. HUME presents outlines of the Gondwanian origins of American and Australasian marsupials and discusses their likely foraging and digestive differentiation. He makes clear that his presentation in this part of the book is speculative.

After a relatively short "Future directions", an appendix compiles the classification of marsupials. When browsing through this list, serious deviations from the modern taxonomic reference published by WILSON and REEDER (1993) in association with the American Society of Mammalogists, could not be detected by the present reviewer. 51 (!) pages of references show the remarkable number of publications, on which the book of I. D. HUME is based. An index of 17 pages makes the information presented in this book readily accessible.

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Digitale Literatur/Digital Literature

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Artikel/Article: [Book review 320](#)