BioOne COMPLETE

Book Review

Author: Zima, Jan

Source: Folia Zoologica, 64(2) : 183

Published By: Institute of Vertebrate Biology, Czech Academy of Sciences

URL: https://doi.org/10.25225/fozo.v64.i2.a12.2015

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Downloaded From: https://complete.bioone.org/journals/Folia-Zoologica on 29 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use

Book Review

Wilson D.E. & Mittermeier R.A. (eds.): Handbook of the mammals of the world – vol. 5, Monotremes and Marsupials. *Lynx Edicions, 2015, 799 pp. ISBN: 978-84-96553-99-6.*

Volume 5 of the Handbook of the mammals of the world includes monotremes and marsupials and covers 21 families in eight orders. Monotremes and marsupials have been grouped together traditionally as the basal lineages of extant mammals, and they were even classified in a monophyletic taxon (Marsupionta) in some older phylogenetic studies using sequencies of mitochondrial genes. However, current views give considerable support for recognizing three separate groups of living mammals, the basal lineage represents the Monotremata in Prototheria, and the derived sister groups are the marsupials in Metatheria and the placentals in Eutheria. Therefore, monotremes and marsupials are obviously not united in a single phylogenetic lineage but both taxa are also connected by their distribution pattern, testifying their Gondwanaland roots. All living monotremes are restricted to Australia and New Guinea and marsupials are found in both Australia and South America.

The monotremes comprise perhaps the most unusual of mammals and retain primitive characteristics such as egg-laying. This lineage obviously diverged from other mammals early on in evolutionary time, and some estimates would place that not long after mammals split from their reptilian ancestors. Marsupials provide the best-known examples of convergent evolution, and they include some species found in this remarkable radiation that have no counterparts anywhere in the world. Such a unique fauna rightly deserves its own volume.

The first chapter of the book is a special account on extinct marsupials. Extinct species have not been normally included in the previous volumes of the Handbook of the mammals of the world, but an exception was made in the present volume. The last century has seen a number of marsupial species go extinct, and the authors assumed important to consider these forms along with their living relatives. It could be more appropriate to place this special chapter at the beginning of the text dealing with Marsupialia.

There is some support for dividing the monotremes into two orders (Platypoda and Tachyglossa) but single order was retained in this volume. Controversies over the classification of the orders traditionally grouped as marsupial are still continuing, similarly as with almost all groups of mammals. The authors of the present volume followed the arrangement exemplified by the third edition of Mammal species of the world, published in 2005 and distinguished the orders of Didelphimorphia, Paucituberculata, Microbiotheria, Notoryctemorphia, Dasyuromorphia, Peramelemorphia, and Diprotodontia. Nevertheless, several taxonomic improvements and updates have been made within the orders. The Systematics section in each family text reviews the ongoing taxonomic work and recent research using new molecular techniques, which has revolutionized our ability to analyze evolutionary relationships. The most recently described species are included.

Authoritative species accounts are concise, giving information on morphology, distribution, reproduction, habitat, feeding, behaviour and other biological features. Each account is supported by a distribution map and superb illustrations.

The publication of this volume is the result of a great amount of collaborative hard work and dedication involving many contributors and supporters. An early support was given by the IUCN Species Survival Commission and the volume was published in association with Conservation International and IUCN. The texts of the volume were compiled by 20 authors who represent distinguished scientists in the field, and many others contributed by photos and paintings. Altogether, the volume contains 717 photographs mostly in colour, 44 plates with colour paintings of the species, and 375 distribution maps. The book is concluded with an extensive list of references (including references of scientific descriptions in a separate part) that demonstrates the comprehensive nature of the book, and the index of Latin and vernacular names.

The assemblage contained in this volume includes an amazing variety of animals adapted to the island continent and nearby islands, as well as few groups still found in South America. The graphical layout of the book is really impressive and Lynx Edicions succeeded to produce a beautiful and outstanding book. This volume thus represents a unique and essential reference source for scientists, conservationists, policy makers and the interested amateur.

Jan Zima

Downloaded From: https://complete.bioone.org/journals/Folia-Zoologica on 29 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use