

information. Extensive use is made of tables — some several pages long — listing records of parasites, their hosts, prevalence and intensity of infection, geographical distribution, habitat, etc. Readers will also find the reference lists at the end of each chapter particularly useful as they are arranged and subdivided according to topic.

The tables and references exemplify the changes that have occurred since the first edition was published 30 years ago. The latter was primarily concerned with documenting the presence and identity of each parasite, but these data are now largely relegated to tabular form to make way for the recent explosion in information generated by integrated multi-disciplinary studies into the role of parasitic disease in natural ecosystems and the way in which this may be modified by human intervention or climate change. The older concept that parasites in nature are so well adapted that they seldom cause disease is challenged, as many are now known to be capable of inducing disease, suffering and even death in particular circumstances. Some chapters are entirely factual while others include more philosophical passages, such as consideration of feedback linkages between hosts, parasites and habitat stability. The examples quoted to illustrate particular points are often intriguing, such as how an increase in the numbers of raccoons in parts of north-eastern America has led to a catastrophic decline in the population of the Allegheny woodrat (*Neotoma magister*). The latter caches raccoon faeces, which provide a rich source of undigested seeds. Unfortunately, they also contain eggs of a nematode parasite, *Baylisascaris procyonis*, which inhabits the raccoon's intestine. Consequently, the woodrats succumb to neural disease caused by *Baylisascaris* larvae migrating through their body tissues.

I can recommend this book to veterinary and medical parasitologists, as well as to wildlife experts, as the text impacts on all these specialities. The book provides a convenient overview of the general biology of each parasitic group and a wealth of information on specific parasites and the diseases they cause. There are also up-to-date reviews of important and topical ecological and applied issues such as *Trichinella* genotypes and the host specificity of *Giardia*. My main criticism is that many chapters, although not all, are parochial in their outlook, being concerned exclusively or predominantly with North America. Nevertheless, this long-overdue second edition is a very welcome addition to my bookshelf. Let us hope that by the time the third edition appears, rail travel between London and Liverpool will be so fast and reliable that a longer journey will be required for the pleasurable task of reviewing it.

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Infectious Diseases of Wild Mammals, 3rd Edition

Edited by E S Williams and I K Barker (2001). Published by Manson Publishing, 73 Corringham Road, London NW11 7DL, UK. E-mail: manson@man-pub.demon.co.uk. 558 pp. Hardback (ISBN 1 84076 0052). Price £75.00.

There is a growing awareness of the influence of infectious diseases on populations of wild animals and an increasing recognition that the prevalence and incidence of these diseases may be affected by human activities (eg the movement of animals from one place to another). Those infectious diseases that cause high morbidity and mortality and potentially protracted illness can result in considerable pain and distress. Thus, by introducing novel infectious agents to new populations, or by influencing the ecology of infectious agents in some other way, humans can give rise to a serious and persistent welfare problem that is not easily

controlled or eliminated. Knowledge of infectious agents' natural history, epizootiology, pathogenesis, immunity and control, and of the way in which we influence these through human activity, is important in our quest to prevent such anthropogenic harm to wildlife. The third edition of *Infectious Diseases of Wild Mammals* is an important review of this sort of information.

The book is divided into 29 chapters according to the taxonomy of the disease agent, and is in two parts: first, viral and prion diseases; and second, bacterial and mycotic diseases. The chapters are divided into sections; for example, the chapter on rabies has sections on history and hosts, distribution, etiology, transmission and epidemiology, clinical signs, pathogenesis, pathology, diagnosis, differential diagnosis, immunity, control, public health concerns, domestic animal health concerns and management implications. The book runs to over 500 pages of text and a wealth of referenced information is provided by 72 authors drawn from all over the world. The format is a little dry: there are relatively few photographs (black and white) or diagrams to illustrate points made in the text and the font is small. But this is a textbook of hard and detailed facts and is not intended as a light bedtime read.

Infectious Diseases of Wild Mammals is considerably enlarged from the second edition, reflecting the growth of scientific investigation in this field. Important additions include new entities such as transmissible spongiform encephalopathies and emerging infectious diseases such as elephant herpes virus infections, to make this a truly comprehensive text.

Not surprisingly, the book does not consider the welfare implications of the various diseases to wild animal populations because this has been a relatively recent concern for scientists. However, given the recognition that many emerging infectious diseases are attributable to human influence, a useful addition to each chapter or subsection would have been an appraisal of the respective diseases in this context. Equally important are the implications of each disease to biodiversity conservation and, although many of the authors consider the effect of a disease on population size and viability, this point is not emphasised.

Overall, *Infectious Diseases of Wild Mammals* is a tremendous book that provides a wealth of meticulously researched and referenced information, which I am sure will be widely read and used.

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Social Behaviour in Farm Animals

Edited by L J Keeling and H W Gonyou (2001). Published by CABI Publishing, CAB International, Wallingford, Oxon OX10 8DE, UK; CABI Publishing, CAB International, 10 East 40th Street, Suite 3203, New York, NY 10016, USA. 432 pp. Hardback (ISBN 0 85199 397 4). Price £60.00/\$110.00

Unless editors take a firm hand with multi-authored volumes, the results can be fragmentary and unsatisfactory. In this case, the hands of Linda Keeling and Harold Gonyou have been extremely firm, even to the extent of a page of editors' comments at the beginning of every chapter explaining what each author is writing about. The result, however, is a wonderfully coherent volume about the social behaviour of the most commonly farmed 'species' (neither 'birds' nor 'fish', of course, being species). The chapters on specific animals all cover what is known of the behaviour of their wild ancestors and what happens when our modern breeds go back to the wild. Each of these chapters covers social structure of groups, use of space and