Infectious Diseases of Wild Rodents

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BOOK REVIEW

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The following reviews express the opinions of the individual author(s) regarding the value of the book's content for Journal of Wildlife Diseases readers. The reviews are subjective assessments and do not necessarily reflect the opinions of the editors, nor do they establish any official policy of the Wildlife Disease Association.

Infectious Diseases of Wild Rodents. By Dennis Padovan, Corvus Publishing Company, 6021 South Shore Rd., Anacortes, Washington 98221-8915, USA. 2006. 348 pp. ISBN 0-9760885-2-5. U.S. $110.00 (hardback).

Review by Robert G. McLean

Infectious Diseases of Wild Rodents is a collection of reference material on a wide variety of infectious diseases documented in rodent species throughout the world. Editorially, this was a massive undertaking to provide a comprehensive and systematic coverage of the information on so many rodent species and infectious diseases in one volume. Although the information is not presented in much detail, the breadth of coverage makes this a good reference book for those interested in rodent diseases throughout the world. The information is presented in two different formats: disease information in the first part of the book is arranged by rodent species, and in the second part, by infectious diseases.

The first five sections contain lists of specific rodent genera and species from five continents and the infectious diseases found in them. This is followed by 18 sections on individual families of viral infections in wild rodents, 18 sections on specific infectious bacterial disease agents or groups of bacterial diseases, and six sections on fungal infections. Unfortunately, infectious parasitic diseases are not included. The book is well-indexed by rodent species and by specific diseases. Each section includes a number of references depending upon the availability of information; diseases of North American rodents have the most references (344), and Coronaviruses of rodents have the fewest references (7). The sources of the references vary from original publications to reference articles, chapters, or books. The index is organized by rodent genera and common names, and by disease or pathogen name, or genus and species of pathogen.

In the first part of the book, the rodent material is arranged by continent and within these sections, by family and genus of rodent. The amount of information for each genus or species of rodent varies depending upon how common the rodents are. Padovan includes the distribution of the rodents, some limited taxonomy, and a little information on behavior and habitat associations. The rodent information is followed by evidence of isolation of disease agents from, or specific antibody in, each rodent species and limited information on the disease. For some of the rodent species, the information is very brief. For example, "a hantavirus (Family Bunyaviridae) has been found in northern birch mice (*Sicista betulina*) in Russia"; the citation for this is a book chapter. For more common rodents, such as species in the *Peromyscus* genus, there are multiple tables listing the disease agents found in each species and several pages of summary information about the diseases found in these rodent species. The descriptions appear to be accurate and the taxonomy of the rodents and pathogens correct. There are some redundancies in the descriptions of the rodent species that are unnecessary, for example, the statement, "*Yersinia pestis*, the cause of plague," is repeated for multiple rodent descriptions instead of using the common name of plague following its original appearance.

The larger, second part of the book is arranged in three sections on viral infections of wild rodents, bacterial infections in wild rodents, and fungal infections in wild rodents. Each section is subdivided by families of viruses, by groups or specific bacterial species, and by groups or types of pathogenic fungi. The diseases or disease pathogens are listed in the subdivisions by taxonomic or geographic groups or pathogenic type. The type of information presented varies with the disease, its public health importance, and the amount of information available. A large number of diseases or disease agents are listed, from obscure diseases like Saint-Floris virus from the Central African Republic to many common diseases of North America. For some of the common rodent pathogens, such as arenaviruses, hantaviruses, plague, Lyme disease, and leptospirosis, the author presents a more detailed review of the diseases and the various rodent species involved as hosts. The author includes facts on the biological characteristics of the disease agent, disease history,

clinical manifestations of the disease in humans and animals, ecology and epidemiology, vectors, distribution, rodent susceptibility, etc. A good history of plague in the United States is provided, along with the biology and ecology of the disease. For most of the other rodent diseases, there are from one to multiple paragraphs of disease description for each. However, a number of tables are included with many of the disease descriptions listing individual rodent species related to information on rodent susceptibility, enzootic region or geographical distribution, enzootic hosts, vector type, evidence of infection, number of cases, pathogen species or serotype, and human disease. Not all tables have the same type or amount of information, but the tables alone are valuable reference sources.

This book is a good reference for students, teachers, and scientists seeking knowledge about which diseases infect various rodents on different continents. *Infectious Diseases of Wild Rodents* also provides information about the natural history and epidemiology of these diseases. Except for a few diseases that are covered in more detail, the reference book is less useful in learning about the rodent species or about particular infectious diseases.

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