

BOOK REVIEWS

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Bat Rabies and Other Lyssavirus Infections. By Denny G Constantine, U.S. Geological Survey Circular 1329, Reston Virginia. 2009. 68 pp. ISBN 978-1-4113-2259-2. Available free.

Review by Charles E. Rupprecht

After the cataclysm of World War II, the American troops returned home, the baby boom ushered in a new generation of inquiring minds, and major advances in the prevention and control of infectious diseases began anew. Not the least of these concerns was rabies. Utilizing the concept of herd immunity and the application of safe and effective veterinary vaccines, canine rabies in the USA fell from more than 8,000 cases in 1944 to fewer than 700 by 1960. The epidemiologic luxury afforded by this significant progress in domestic animal rabies control allowed a primary focus on the surveillance of wildlife rabies. Although rabies in carnivores, such as foxes and skunks, had been recorded for centuries, the idea of rabies in bats was heretical before 1900. This US Geological Survey (USGS) circular on bat rabies places this subject in broad perspective for anyone interested in the history of wildlife diseases. The author, Denny Constantine, is a pioneer in the field, considered by many to be the “father of bat rabies,” and instrumental in defining many of our basic concepts of this disease throughout the 20th century.

This circular is lavishly illustrated with color photographs, easy to understand graphs, tables and charts, and interesting sidebar highlight boxes that provide curious personal asides to the primary text. Contents are logically arranged and simple to navigate. The Foreword is written by the notable Milt Friend, first director of the USGS National Wildlife Health Center and no stranger to the wildlife disease community. The multidisciplinary nature of the contributing authorities in the Acknowledgments is demonstrative of the international scope of the author over the past 50 yr. A colorful Overview sets a historical and cultural perspective on the likely origins of these agents, associations with bats over time and

space, and a cultural interlude that weaves mythologic tales of werewolves and vampires into a real world microbiologic tapestry. Additional topics include: etiologic agents; global distribution; disease patterns and trends; examples of bat species susceptibility; diagnostic issues; bat and viral ecology, including interspecies interactions, migration, hibernation, roost settings, and sociobiologic attributes that may favor viral transmission and disease perpetuation. The work concludes with a practical discussion on disease prevention and control in humans and other animals. Eight pages of cited references provide a potpourri of peer-reviewed literature, books, chapters, serials, abstracts, reports, and internet offerings. A simple four-page glossary is useful for those unfamiliar with technical terms (e.g., exsanguination, megachiroptera, speleologist, etc.). Several appendices appear at the end of the book for general reference. Appendices A and B are summaries of bat species reported in the USA and elsewhere in the Americas, respectively. Appendix C lists the taxonomic assignments and common names applied to specific bats in the text. Appendix D provides a cited list of global lyssavirus occurrences by bat taxon and locality from 1958 through 2006. Appendix E describes selected examples of the clinical course of human infections with bat lyssaviruses from 1932 to 1996, and includes cases acquired in Africa, Asia, Australia, and North and South America.

Overall, this work is suitable in tone as a basic introduction on bats and rabies for undergraduates and the general public alike. Constantine presents the material in a fairly simple, straightforward manner, generally free of jargon. Certainly, throughout the text, one could nitpick and take issue with certain terminology, such as the assignment of “symptomatology” when describing rabid bats instead of clinical signs, disease “persistence” instead of perpetuation (in comparative virologic terms), and so on, but these are more subjective, purist points to ponder and largely irrelevant to most readers. The only “major” critique is the same as can be leveled at any comprehensive work that encompasses a major focus today in the internet age, but