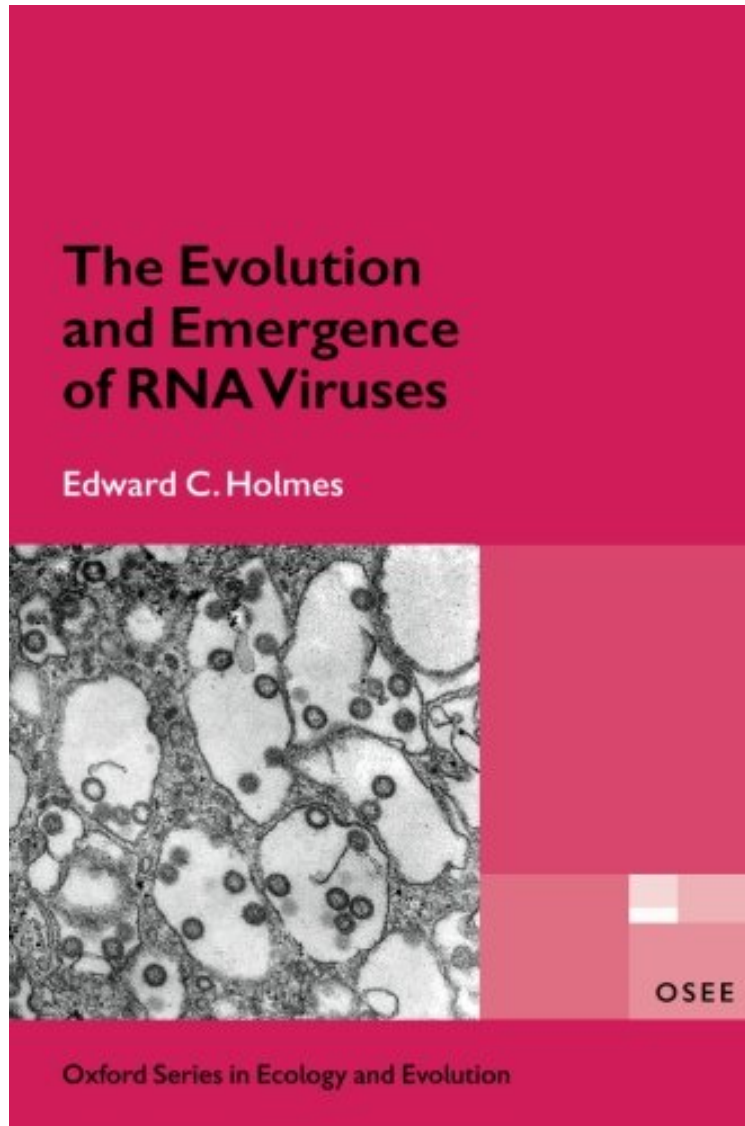


(Download) The Evolution and Emergence of RNA Viruses (Oxford Series in Ecology and Evolution)

## The Evolution and Emergence of RNA Viruses (Oxford Series in Ecology and Evolution)

*Edward C. Holmes*

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**Edward C. Holmes : The Evolution and Emergence of RNA Viruses (Oxford Series in Ecology and Evolution)** before purchasing it in order to gage whether or not it would be worth my time, and all praised The Evolution and Emergence of RNA Viruses (Oxford Series in Ecology and Evolution):

8 of 8 people found the following review helpful. Thorough Introduction to Viral Evolution and Emergence By Mr. G. Phage This book is a tour de force introduction to the field of emerging RNA viruses by one of the world's leading

experts in virus evolution. The book progresses rapidly from concise chapters on RNA virus biology, origins and microevolution to detailed discussions of RNA virus macroevolution, (contentious) quasi-species concepts, phylogeography and patterns of RNA virus emergence. Though each chapter may stand alone as a significant contribution, the succession of chapters provides a strong logical framework for understanding the observed epidemiological patterns of RNA emergence. This narrative structure culminates in a series of case studies of emerging RNA viruses that are a fitting conclusion to a book that ties together the molecular evolution of RNA viruses with their emergence and epidemiological dynamics. In sum, any biologist interested in evolution and/or RNA viruses, from novices to experts, would benefit from and enjoy reading this claret-colored addition to the OUP catalog.

RNA viruses provide unique insights into the patterns and processes of evolutionary change in real time. The study of viral evolution is especially topical given the growing awareness that emerging and re-emerging diseases (most of which are caused by RNA viruses) represent a major threat to public health. However, while the study of viral evolution has developed rapidly in the last 30 years, relatively little attention has been directed toward linking work on the mechanisms of viral evolution within cells or individual hosts, to the epidemiological outcomes of these processes. This novel book fills this gap by considering the patterns and processes of viral evolution across their entire range of spatial and temporal scales. *The Evolution and Emergence of RNA Viruses* provides a comprehensive overview of RNA virus evolution. This is the first book to link mechanisms of viral evolution to epidemiological outcomes, incorporating case studies in RNA virus emergence and evolution using topical examples such as influenza, HIV, dengue fever, and rabies. It reveals the underlying evolutionary processes by which emerging viruses cross species boundaries and spread in new hosts.

"A useful addition to the bookshelves of academicians and researchers. The combination of topical examples, appropriate and useful diagrams, and manageable scope are also sure to attract young researchers and graduate-level students. Holmes manages to bring together evolutionary biology, epidemiology, virology, disease ecology, and population genetics in a clear and concise way. The book highlights the results of new computational phylogenetic approaches that have been applied to viruses and the potential they have for elucidating the mechanisms of viral evolution, which will hopefully encourage more research in the future."--*Systematic Biology*"The aim of *The Oxford Series in Ecology and Evolution* is to stimulate ideas in new research fields, and *The Evolution and Emergence of RNA Viruses* is an excellent addition to this series."--*TREE*"Impressive...I recommend it to those who have knowledge of and interest in the molecular biology of RNA viruses."--Brian W. J. Mahy, *Emerging Infectious Diseases*"A volume that will be essential for any student of RNA virus diversity and evolution."--*Quarterly of Biology*

About the Author Edward C. Holmes is Professor of Biology and Eberly College of Science Distinguished Senior Scholar at The Pennsylvania State University. He has authored over 200 scientific publications and in 2003 was awarded the Scientific Medal for 'Achievement in Research by a Zoologist Under the Age of 40' by the Zoological Society of London for his work on evolutionary biology and bioinformatics. He is also co-author of a highly regarded text book in molecular evolution and phylogenetics. His research sits at the interface of four disciplines - evolutionary biology, genomics, infectious disease and bioinformatics - and for the last 20 years he has been involved in the development and use of a variety of computational techniques to reveal the fundamental patterns and processes of evolutionary change in viruses.