Viruses: A Very Short Introduction

Dorothy H. Crawford
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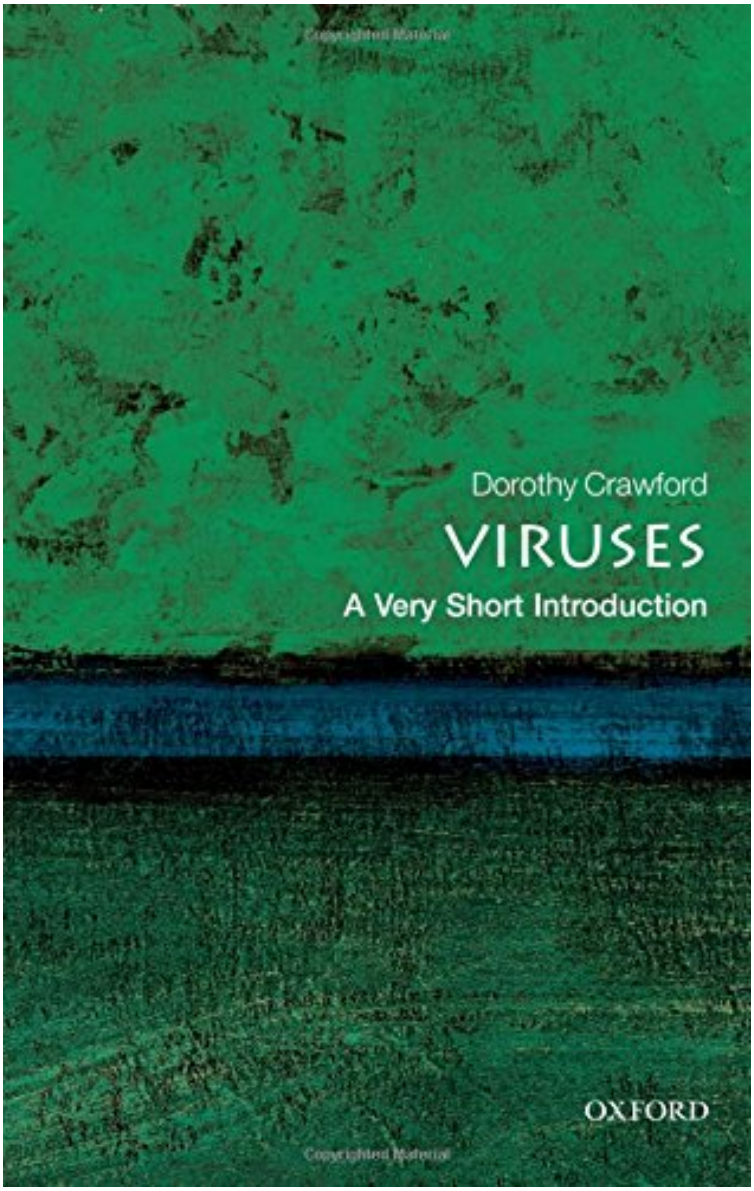

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Dorothy H. Crawford : Viruses: A Very Short Introduction before purchasing it in order to gage whether or not it would be worth my time, and all praised Viruses: A Very Short Introduction:

11 of 11 people found the following review helpful. A stimulating introduction to the most abundant form of microbe on EarthBy ealovittThis is my second 'Very Short Introduction' book, and I've found them to be both well-written and factual. Plus they're the perfect size to store in my purse for those long, boring sit-downs in the doctor's waiting room

(not to mention the long boring lie-downs in the examination room).'Viruses' started out with slight misstep--it placed Antonie van Leeuwenhoek in the 16th century--but as far as I could tell, the rest of the book is error-free. It is made up of a series of detective stories: the discovery of disease-causing microbes that were able to pass through bacteria-trapping filters; the detection of emerging virus infections such as SARS; the discovery of viruses that cause tumors; and of course, the research on methods of preventing or ameliorating viral infections.The question as to whether viruses are alive always provokes a lively discussion. According to this author: "Because virus particles are inert, without the ability to generate energy or manufacture proteins independently, they are not generally regarded as living organisms." She is obviously on the side of viruses as non-living, able to reproduce only after hijacking a living cell's internal machinery. Different types of viruses are described and classified, one of the biggest differences being whether the virus has an RNA or a DNA genome. The RNA viruses tend to mutate much more quickly, including such infamous examples as measles and HIV.Only a very small number of viruses cause diseases in animals and plants. In the chapter "Viruses are everywhere" the author states: "It is now clear that viruses form a huge biomass of enormous variety and complexity in the environment, the whole being aptly termed the 'virosphere'...Microbes are by far the most abundant life form on Earth. Globally, there are about 5x10 (to the 30th power) bacteria, and viruses are at least 10 times more common." It is estimated that there are 100 million different types of viruses! In this 'Very Short Introduction' there is only room for a brief discussion on the ecological impact of viruses, but the author presents some fascinating examples: the role of viruses in Earth's carbon cycle; the way some species of aphid use viruses to protect themselves from parasitic wasps; and the natural cycle of cholera.I highly recommend this book as a stimulating introduction to the most abundant form of microbe (living or not) on Earth.9 of 9 people found the following review helpful. Just What I NeededBy Rodger ShepherdIt has been over 40 years since I took microbiology in medical school. Since them I have accumulated fragments of new information. I needed an overview that would bring these fragments together in a coherent contemporary framework and fill in the big gaps. This book did exactly that for me. Furthermore the book is easy to read. I think that I will reread it to improve my retention of the material that was new to me.16 of 16 people found the following review helpful. Great IntroductionBy JamesThis is a great book for people like me, an engineer with no biology background whatsoever. Never took a biology class. But, I can read.If you want a short but reasonably complete introduction into viruses, this is a great book. You won't be a virology expert, but you do get a feel for what kinds of viruses exist and how they spread. Lots of good information.It's not really Viruses for Dummies. If you're reasonably intelligent and can supplement with some Wikipedia searches, you'll gain a lot of information into viruses and how they work.

In recent years, the world has witnessed dramatic outbreaks of such dangerous viruses such as HIV, Hanta, swine flu, SARS, and Lassa fever. In this Very Short Introduction, eminent biologist and popular science writer Dorothy Crawford offers a fascinating portrait of these infinitesimally small but often highly dangerous creatures. Crawford first relates how viruses were discovered and she unravels the intricate structures of tiny parasites that are by far the most abundant life forms on the planet. Analyzing the threat of viral infections, Crawford recounts stories of renowned killer viruses such as Ebola and rabies as well as the less known bat-borne Nipah and Hendra viruses. She identifies wild animals as the source of the most recent pandemics, detailing the reasons behind the present increase in potentially fatal infections, and evaluating the evidence that suggests that long term viruses can eventually lead to cancer. Finally, Crawford looks to the future to ask whether we can ever live in harmony with viruses, and considers ways to prevent the emergence of new and devastating viruses.

"Anyone with a curious mind who wants to boost his or her scientific literacy will enjoy Viruses: A Very Short Introduction. In bite-sized fashion, baseline knowledge gets built and feeds the curious mind, just a taste; it is strangely sweet." - New York Journal of BooksAbout the AuthorDorothy H. Crawford is Emeritus Professor of Medical Microbiology and Honorary Assistant Principal for Public Understanding of Medicine at the University of Edinburgh.