

## The life and death of smallpox

Authors: Ian Glynn, Jenifer Glynn  
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The white horse of the Apocalypse — pestilence — is by definition a symbol of disease. Few communicable diseases appear to qualify as suitable candidates — cholera, plague, epidemic typhus, or perhaps HIV infection. (But these were arrivistes awaiting “civilized” societies before they struck and spread.) As Ian and Jenifer Glynn chronicle in this book, smallpox is a good choice for Armageddon’s harbinger, since it is a disease of antiquity whose impact on humankind far surpassed other epidemic diseases. Despite its alleged natural extinction, smallpox may forever loom as a terrible threat for generations to come. In this book, the authors eloquently describe and trace this hearty double stranded DNA virus, which evolved from a mammalian virus (perhaps camelpox) over eons; it has scarified people from pre-history through to recent times, and, as they point out, may conceivably do so again in the future.

Ian Glynn, a neurophysiologist, has previously written a heady but readable book on the thinking process; Jenifer Glynn, an historian, has previously written a biography of a Victorian publisher and edited a series of turn-of-the-century letters. Her knowledge of and access to obscure historical works on epidemics and the numerous observations on smallpox, variolation and vaccinations are clearly evident. Why the authors chose this disease is not explained nor is how they may have divided their research agendas, but these questions are moot since the book is a seamless, exciting, refreshingly original work seeded with fascinating facts and lore about smallpox. It supersedes many older, fusty treatises and most other recent books that discuss either limited times and locales where smallpox struck or how it might be transmuted into a weapon.

Over the last quarter of a century there has been a surge in popular historical accounts of major infectious diseases, particularly smallpox. A search at amazon.com for books published from 1979 (the year of extinction) up

to the present found approximately 100 with smallpox in their titles. Not surprisingly, most of these were written over the last five to ten years. So, what makes this new book an original and worthy read?

*The life and death of smallpox* is a kaleidoscopic 288-page work that is pleasing, colourful, complex, and full of surprises. Unlike other books on smallpox (or other diseases with ancient lineages), it is not unduly Eurocentric in its approach. While the narrative follows a time line, one reads about European epidemics alongside companion accounts about Africa, the Middle East, Asia, and the Americas. These accounts are accompanied by numerous references and footnotes. And, when the topic does involve Europe (particularly Edward Jenner’s England), citations and correspondences are supported in delicious detail. The authors rely on many letters and documents, sometimes choosing to editorialize on their content or question the wisdom of their writers. Often when a particular individual is identified, he/she is accompanied by a mini-biography that may have little to do with smallpox but is always fascinating in content (Charles Marle de la Condamine, while collecting cinchona seeds in the Amazon region first heard about the benefits of inoculation from Portuguese missionaries and later published them in a memoir; Daniel Bernoulli used calculus and the laws of chance to estimate smallpox mortality rates in France; Abraham Lincoln developed symptoms of smallpox a few hours after delivering his Gettysburg address; and as a youngster Wolfgang Amadeus Mozart survived the disease, although his sister did not.)

Controversies surrounding indiscriminate use of variolation may have been justified by earlier physicians and statesmen, but it is surprising to read about the Jennerian epigones and nay sayers who created the cognitive dissonance surrounding vaccination practices that has endured for over two hundred years following Jenner’s discovery. The very origin of anti-immunization efforts began with these anti-vaccinationists. It resonates with another familiar note associated with today’s measles–mumps–rubella vaccine/autism debate and other, more established concerns about adverse immunization reactions. The dispute surrounding vaccination continued in

Europe, the Americas and elsewhere throughout the nineteenth and twentieth centuries, despite the shockingly large numbers of victims who died from smallpox. The authors document dozens of situations around the world where the absolute numbers of ill and dead are quite sobering.

The final three chapters of the book address the campaign that was planned to lead to the demise of smallpox in East Africa and the Indian subcontinent. A map of India is used to demonstrate the electric speed of spread of smallpox — from Jamshedpur in the state of Bihar to other parts of the country, but a map of other Indian states and Bangladesh might have been helpful in orienting the reader to the common borders these territories shared with each other in those last few years of eradication efforts. The detailed strategy and final implementation of WHO’s tactics in India, then Ethiopia, are reviewed as well as the peri- and post-eradication concerns: continued active surveillance mechanisms, newer vaccine candidates and antiviral agents, and the growing realization of what natural eradication might mean to the world — the advent of biowarfare (BW) and bioterrorism (BT). While the book might be considered a graphic obituary for a sociopath, the authors suggest that its title could easily be *The life and death* and possible resurrection of *smallpox* if the pathogen were to be used as a BT agent. This affords the authors an opportunity to provide a brief overview of BW/BT agents actually used or created for use by various nations over the millennia. Although most readers may have heard many of these stories before, they fit snugly into a recent update on today’s emergency planning and response efforts against smallpox and other biological weapons of mass destruction. It is also pointed out that the vaccinia virus offers many other exciting opportunities as a vehicle for delivering cancer treatment and developing other immunizing agents. The authors clearly enjoy their chosen topic, as well as Dr Jenner and his discovery. Their book is a pleasure to read, but readers should be warned that the authors’ enthusiasm is quite infectious. ■

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