
Review by Thomas M. Yuill

If you have ever wondered how the field of virology, especially arbovirology, and the diseases these viruses cause evolved, Charles Calisher pulls back the veil to reveal those histories. He does so with historical accuracy and with a human face, amply illustrated by photographs and written in a readable style. Side bars with Calisher’s personal anecdotes accrued over his long and productive career add spice. There are 16 chapters, an extensive list of suggested readings, and an appendix of investigators. The book will be of interest to readers of the Journal of Wildlife Diseases because there is extensive coverage of viruses that affect wild birds and mammals. I only wish that it contained an index of the viruses mentioned. But that would have made a long book longer, and one can usually find the viruses of interest through the themes given in the table of contents.

In Chapter 1, Calisher starts at the very beginning—the birth of virology in the 1890s—when infectious agents were shown to pass through filters that retained bacteria and other pathogenic agents. The causative agents of foot and mouth disease and myxomatosis of rabbits, both animal diseases, were the first pathogens identified as viruses. Discovery of viruses causing human disease came later.

The story of yellow fever is a highlight of the book. In Chapter 2, Calisher describes the social and economic impacts that yellow fever had in the Americas historically. The extensive outbreaks in the US and in tropical regions of the Americas gave rise to theories and speculation which, although seemingly reasonable in the context of the 1700s and 1800s, may seem absurd today. In the first decade of the 1900s some insightful and imaginative investigators speculated that yellow fever virus was mosquito transmitted, and experiments involving human volunteers confirmed the hypothesis. Several volunteers, including some of the investigators themselves, died establishing that ground-breaking concept as fact. This launched the beginning of research and understanding of the natural history and health consequences of arthropod-borne viruses and the infections they cause.

The yellow fever story continues in Chapters 3 and 4, with additional mention in subsequent chapters. Important advances propelled yellow fever understanding and served as examples for the study of other viruses and the diseases they cause. The Rockefeller Foundation and the Yellow Fever Commission played a seminal role in use of animal models, study of outbreaks in South and Central America and the Caribbean in the 1920s and 1930s, and recognition of the sylvan (forest–jungle) cycle of maintenance and transmission involving wild, nonhuman primates and sylvan mosquitoes; all remain important today. Other studies unraveled the more-complex virus maintenance and transmission cycle in Africa. In Chapter 4, Calisher describes the development of laboratory techniques essential to understanding virus