Of Mice, Men and Microbes: Hantavirus

David R. Harper and Andrea S. Meyer

At the end of the Second World War, the discovery of penicillin convinced many that antibiotics, together with immunization and improved public health measures, would prove the death-knell of infections. In the intervening 45 years, however, only one infectious disease has been conquered—smallpox. As the twentieth century draws to a close infectious diseases are now the leading cause of death worldwide. Not only do we face our old adversaries—tuberculosis, malaria, Staphylococcus aureus, antibiotic resistance, but new ones as well—HIV, Legionella, Campylobacter, Marburg and Ebola and other viruses, including hantavirus. Only recently in April 1999 Malaysian and American scientists confirmed that a previously unknown form of Hendra virus was responsible for an epidemic in the Negri-Sembilan region of Malaysia resulting in more than 100 deaths and the devastation of the pig-farming industry.

Of Mice, Men and Microbes is a riveting detective story of the events following an outbreak of an unknown disease in an area of the American South West—known as the Four Corners—in May 1993: an unknown origin, random selection of victims, who suffered severe pain, and rapid death occurred in 60% of its victims, with no treatment and no cure. The authors have put together a compelling account of the events during 1993 that led to the Sin Nombre hantavirus outbreak. Subsequent epidemiological investigations by the Indian Health Service was to confirm cases of the same disease as far back as 1978 with convincing clinical evidence of cases even in 1959. None of these cases had been identified as a ‘new disease’.

This book examines the investigation into the outbreak and the subsequent identification of Peromyscus maniculatus, the deer mouse, as the primary host of Sin Nombre virus, with whom it lives in harmony. In the USA Sin Nombre has been responsible for 190 of 196 cases of hantavirus pulmonary syndrome. The colour photographs give the reader some idea of the beauty of this desert landscape. The middle chapters are devoted to the history of hantavirus and also viruses in general. The authors knock on the head the suggestion voiced in Scientific American that “Four Corners’ Victims [were] Biowar casualties”. There is a good description and definition of hantavirus pulmonary syndrome and the appropriate clinical management and preventative measures available. Further reading, in addition to listing other textbooks, give the reader a variety of websites and descriptions of their contents.

The authors, one a scientist, the other a journalist, have produced an excellent read for the expert and non-expert alike. The message is quite clear: the potential threat to public health from new and old infections will continue. We must therefore ensure a long-term commitment now to ensure we possess the capacity to deal with not only the current problems posed by emerging infectious diseases, but also those in the future.

R. C. Spencer
Head of Bacteriology, Bristol Public Health Laboratory, Level 8, Bristol Royal Infirmary, Marlborough Street, Bristol BS2 8HW, UK