

in Argentina and Algeria, d'Herelle by chance studied diseases of locusts: studies which were perhaps the first recorded examples of a deliberate search for specific infections to be used for biological control of insect pests.

Remaining chapters are largely concerned with well-known aspects of d'Herelle's bacteriophage work, with one exception. Following his departure, not without a certain bitterness after controversies with colleagues at the Pasteur Institute and later at Yale, he left Yale in 1933. In that year he accepted an offer to join Georgiy Eliava at the Tiflis (Tbilisi) Bacteriological Institute, soon to spawn a new specialist All-Union Bacteriophage Institute, there to pursue his research on therapeutic applications of bacteriophage. Eliava had worked with d'Herelle at the Pasteur Institute in the early 1920s, and had become a friend. When d'Herelle left Yale under something of a cloud, to put it mildly, in 1933, Russia with its "new scientific socialism", and collaboration with Eliava on his own pet subject of bacteriophage therapy, seemed a golden opportunity. But the Stalinist purges were about to begin, and Eliava was caught up in the reign of terror and executed in 1937. It was the end of d'Herelle's flirtation with the powers of the USSR, although after his precipitate departure phage research and clinical studies of phage therapy continued in Russia, with encouraging results it was claimed. Today researchers in the West are tentatively renewing studies of phage therapy in the wake of development of resistance to antibiotics, especially in hospital infections.

The blurb's claim that d'Herelle's work "established the foundation for the later work of Max Delbrück and the Phage Group in molecular biology" is somewhat at odds with the author's final conclusion that although bacteriophage became "the organism of the molecular biological revolution", the largely self-taught d'Herelle never took much interest in physiological chemistry, and even less in the development

of molecular biological sciences. On the other hand, Summers in his preface stated that not only phage, but also the experimental techniques devised by d'Herelle, are still "central to molecular biology as well as to the new fields of biotechnology and genetic engineering". It is left to the reader to sort out the evidence and weigh up the degree of admiration deserved by the work of d'Herelle. In spite of the author's best efforts, this is a biography which leaves one with limited sympathy for its protagonist.

Lise Wilkinson,

The Wellcome Trust Centre for the History of Medicine at UCL

**Desmond King-Hele**, *Erasmus Darwin: a life of unequalled achievement*, London, Giles de la Mare, 1999, pp. x, 422, illus., £24.00 (paperback 1-900357-08-9).

Everyone should have a hobby. For over thirty years, Desmond King-Hele has made himself the authority on the remarkably productive and controversial life of Erasmus Darwin (1731–1802). It would appear from this latest biography that King-Hele has managed to trace every scrap of a hint of the illustrious Enlightenment physician, poet, inventor, and natural philosopher. It is Darwin, King-Hele suggests, who is a figure in Joseph Wright's stunning painting *An experiment with a bird in an air pump* (1767–8). Here begins a host of speculations that diminish what might have been an informative study of a great natural philosopher. King-Hele admits, although not until half way through his tome, that he is avoiding some of the taboos of modern historians of science who might eschew assertions of Darwin's prescience. This appears to have provided the author with licence for an unbridled whiggism. King-Hele seems to believe that the merit of a thinker is in the anticipation of modernity.

## Book Reviews

This is a book swarming with anachronism among which are a complaint about bad spelling allegedly common at the time (p. 9), the observations that Darwin's work reveals his potential to be the "first male feminist" (p. 167) (a particular obsession to which King-Hele often returns), that Darwin was "ahead of his time" in seizing on the rapid growth rates of cannabis which, if made into paper, might reduce British timber imports (p. 253), and (among the best) Darwin's interest in the intrepid aeronauts who launched balloons and thus transformed their adventures into a prognostication of the "inter-planetary flights of the 1970s and after" (p. 187). Likewise, King-Hele assumes much about the talents of James Watt, one of Darwin's closest friends. Among the Lunar Society, Darwin and Watt were both regarded as inventors of much technical genius, but the notion that Watt was essentially "an engineer and not a chemist" (p. 154) is unsustainable. Both Watt and Darwin had many chemical enthusiasms. In Watt's case these were revealed in his own associations with Dr Thomas Beddoes and their search for a chemical means of curing consumption. Similarly, Darwin's interest in electrotherapy is overdrawn here. Darwin's concerns were that of many physicians desperate to alleviate the suffering of their patients. As the author of *Zoonomia*, Darwin is here given kudos for the apparent "prediction of the future importance of electricity, at a time when it was thought of only as a toy" (p. 290). In fact, many then championed electricity as a useful therapeutic, among them Darwin's friend Thomas Beddoes. Similarly, Darwin's apparent biological disciple, Dr Robert Thornton, was also a great London practitioner of pneumatic medicine.

There are many disappointments in this book which, while full of insights into Darwin's domestic politics, tells us surprisingly little of a man known as a notorious democrat and who counted among his friends many proponents of republicanism. Much mention is also made

of James Keir, for example, but nothing of his politics. Indeed, such views mattered as Joseph Priestley discovered to his dismay when a Birmingham mob destroyed his house and laboratory. Likewise, Darwin apparently shared democratic sensibilities with Josiah Wedgwood and with the radical Beddoes. But those looking for insight here will find a historiographical naiveté which proposes the Lunar Society member Thomas Day as "the most political" of the group (p. 115). This is surely a stunning revelation amongst a group including Keir and Priestley. Likewise, it is surprising to learn that the origin of the Priestley riots was never clarified, which proposition seems to ignore not only Keir's published views but those of historians like John Money.

Nevertheless, it is clear that Darwin did share the radical views of many of his contemporaries notably that, after the French Revolution degenerated, America appeared the only safe place. Certainly, this was a view sustained by the emigration of Priestley among many others. Many, however, stayed and took the risks of Painite repression. It is certainly not the case, as King-Hele asserts, that Beddoes kept out of politics. If anything, he continued to publish pamphlets and challenged the laws banning so-called seditious gatherings. King-Hele writes neither for historians of science nor of medicine but rather for "modern non-medical readers" (p. 289). Apparently so.

Larry Stewart,  
University of Saskatchewan

**Peter C English**, *Rheumatic fever in America and Britain: a biological, epidemiological, and medical history*, New Brunswick, Rutgers University Press, 1999, pp. xx, 257, illus., \$50.00 (hardback 0-8135-2710-4).

In this fascinating, accessible account of the evolution of an infectious disease, Peter