

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

English combines the roles of clinician and medical historian in his presentation of rheumatic fever as a “moving target” for doctors, epidemiologists, laboratory scientists and public health officials who struggled to understand and treat a disease that changed rapidly and dramatically with each generation of patients.

In the eighteenth century, acute rheumatism, characterized by fever and arthritis, was a trivial disease which remitted spontaneously. At the century's end, it assumed a more sinister form, attacking the heart and subjecting its adolescent casualties to severe chest pain and distressing palpitations before they succumbed to pericarditis. During the nineteenth century, endocarditis surpassed pericarditis as the primary cardiac injury, and its association with chorea showed the brain to be an additional target. The skin and connective tissue also became involved, and tonsillitis frequently preceded the fever, joint pains, skin rashes and heart symptoms.

In the twentieth century, myocarditis turned rheumatic heart disease into a chronic, debilitating illness because it smouldered silently, often for decades. By the 1930s, up to two per cent of school age children in Britain and the USA had perceptible cardiac scars but there was already a decline in the mortality from rheumatic fever. By 1944, patients experienced mildly sore throats with minimal joint swelling, which melted away over the next decades to insignificant aches and pains. Chorea disappeared, and by the 1970s rheumatic fever was largely extinct.

During the course of its dynamic history, rheumatic fever taught bacteriologists and immunologists much about the Group A beta-hemolytic streptococcus (GABS) and the body's immunological response to infection. It taught physicians how to detect endocardial damage with the stethoscope and cardiologists how to interpret electrocardiographs in order to gauge myocardial injury during a patient's lifetime.

It taught pharmacologists the benefits of treatment with aspirin, antibiotics and cardiac glycosides. Rheumatic fever made tonsillectomy the most common operation in the United States after circumcision, and produced a generation of post-war cardiac surgeons who became adept at first repairing and then replacing mitral and aortic valves.

Rheumatic fever was diminishing in prevalence before the discoveries of sulphonamide and penicillin. It paralleled similar declines in other streptococcal-related illnesses such as scarlet fever, erysipelas and puerperal sepsis. By the 1950s, only one per cent of streptococcal throat infections progressed to rheumatic fever whether or not antibiotics were given. English believes that the streptococcus contained components which cross-reacted with different parts of the body at different times during its evolution—joints in the eighteenth century; brain, heart tissues, skin and tendons in the nineteenth. By the twentieth century, the streptococcus lost these provocative elements.

This is an accomplished, wide-ranging history which will be enjoyed by health professionals, medical historians and anyone interested in the relationship between infectious diseases and human communities. English reserves his sympathies for the children who spent months or years in convalescent homes enduring rigor-producing fevers for the treatment of chorea, radiation to the heart for myocarditis, tonsillectomies, and endless drug treatments with aspirin, digitalis, antibiotics and corticosteroids. Their travail is part of the history of rheumatic fever.

Carole Reeves,
Richmond, Surrey

Evelynn Maxine Hammonds, *Childhood's deadly scourge: the campaign to control diphtheria in New York City, 1880–1930,*