wrote a lot, using a simple and effective style. He died suddenly, in his prime, but not before producing work of lasting importance in two separate fields, anaesthesiology and epidemiology. He has a blue plaque in London and a society commemorating his name. Nevertheless, David Shephard's is the first full-length biography of this remarkable Victorian general practitioner.

Part of the reason for this undoubtedly is the absence of any collection of his correspondence and other private papers. Even the archives of people with whom he might be expected to have corresponded, such as Edwin Chadwick, are silent. The one exception are the three volumes of Snow's Case Books, held in the Library of the Royal College of Physicians of London, and recently transcribed and magnificently edited by the late Richard Ellis (*Medical History*, Supplement No. 14, 1994). The poignant dedication of Shephard's biography is a paste-over In Memoriam to Ellis and Roderick Calverley, two anaesthetists cut off in 1995, also in their primes.

Shephard has made good use of the Case Books, although Ellis's editorial apparatus and greater familiarity with Snow's handwriting were not available to him. The Case Books allow Shephard to comment on Snow's anaesthetic and general practice. For the most part, however, Shephard confines himself to Snow's published writings and what they say about his evolving ideas on the nature and mode of spread of cholera, and on the science and art of anaesthesia. His bibliography of Snow's writings is a full one, and every publication gets at least a mention. The discussion of Snow's epidemiological investigations during the 1854 cholera outbreak in London is especially cogent, for it goes beyond Snow's classic work around Broad Street, Soho, and his comparison of the cholera incidence in houses supplied by two different water companies, to scrutinize the immediate reception of Snow's findings. Shephard emphasizes that Snow never believed that contaminated water was the sole mode whereby cholera is spread (soiled bedding could be equally as effective), and provides a sound analysis of the evidence Snow gathered in arguing that cholera is essentially a disease of the bowels, rather than of the blood. Not surprisingly, Shephard (himself an anaesthetist) has plenty to say about the other string to Snow's bow.

Occasionally, the lack of direct evidence leads Shephard to unnecessary poetic licence, and some of Snow's contemporaries are not treated as seriously or as fully as they deserve. Around the fringes, there are a few lapses: William Wilberforce was not MP for York when Snow was born, and nonconformists did not have a monopoly on evangelicalism. Erwin Ackerknecht's name is consistently misspelt. Nevertheless, we now have a full-length biography of Snow, and a good one. And if the book, as an object, is a rather poor thing, at least the price is right.

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Joseph Lester, *E Ray Lankester and the making of modern British biology*, ed. Peter J Bowler, BSHS Monographs 10, Faringdon, Oxon, British Society for the History of Science, 1995, pp. 220, illus., £9.00, $17.00 (0–906450–11–X).

Ray Lankester, knight, the eminent, many-sided and controversial British biologist who rose to the high position of Director of the British Museum of Natural History, and was well known in his day for his popular scientific writings (often first published in newspapers, and then in books such as *From an easy chair* (1908) and *Science from an easy chair* (1910)), has long merited a biography. One has at last appeared from the pen of a retired Manchester schoolmaster, Joe Lester, now over ninety. Lester—who, like Lankester, was much interested in microscopy—began his studies of his "hero" back in the 1950s, when he was kindly allowed access to the Lankester papers by the biologist's descendants. But, although the main body of the text was written some thirty years ago, it appears that the project languished. Now, with the assistance of Peter

Bowler, who has done a general editorial job on the text and written Chapter 7 ('The anatomist and evolutionist'), as well as revising some other parts of the book, it appears after its long gestation. The publication is greatly to be welcomed.

Lankester must have been a fascinating character. Portly in build (somewhat resembling the younger Churchill), he came from a well-heeled family with scientific interests. Educated at St Paul's School, Downing, and Christ Church, he had already published a scientific communication (a letter to *The Geologist* on *Pteraspis*) at the age of sixteen. He took a first at Oxford, and then proceeded to postgraduate research on the Continent, being particularly influenced by his experiences at the Naples Marine Research Institute. For the rest of his career, Lankester was inclined to rail against the British establishment, and repeatedly compared the system of higher education in England unfavourably with that in Germany. He once wrote that "[a]n overwhelming majority of the young men who go as students to ... [Oxford and Cambridge] have no intention of studying anything"; and that "[t]he inefficiency of the old universities is to a large extent the cause of the neglect and ignorance of science in the well-to-do class."

Lankester was, then, a somewhat radical figure; but his brilliance as a lecturer and a writer, and his flow of significant research findings, made him impossible to ignore, and at different times he occupied chairs at Oxford (where he was a Fellow of Merton), Edinburgh (for but two weeks before he resigned, to the embarrassment of those who had supported his application), and University College, London. To an extent, Lankester's essays made him the distinguished precursor of science writers such as Stephen J Gould. He was knighted on his retirement from the Museum; but his obituarist, Gavin de Beer, opined that Lankester was "not suited to administrative work".

As biologist, Lankester was perhaps best known for his recognition that king crabs were related to spiders. But he did much work on marine biology, embryology (with attention given to the changes in body cavities during development), parasitology, the colours of organisms, etc. He argued for Darwinian theory *contra* Lamarckism, but held nevertheless that all characters were partly inherited and partly acquired. He was active in the British Association and was instrumental in the foundation of the Plymouth laboratory of the Marine Biological Association. Lankester was editor of the *Quarterly Journal of Microscopical Science*. His positive attitude towards the idea of eoliths and the work of J Reid Moir appears, when viewed with good whiggish retrospectivity, to have been an unfortunate error. But it was one that was commonly made at that time. Lankester was a friend of H G Wells, and knew Marx.

So now, at last, we have a biography of this fascinating and influential man—one who did not suffer fools gladly—who, as Bowler points out, came a little too late to be involved in the early, well-known, Darwinian controversies, and a little too early to be part of twentieth-century, post-Mendelian biology. (But this puts him at the centre of the period that Bowler has made his own for the study of the history of British biology.) Despite his obvious qualities, Lankester made enemies as well as friends.

Lester and Bowler have done their job well. Although, as I understand from Professor Bowler, there is more archival material of interest to historians than has been used in the book, we already have "a rattling good story", and one that does credit to all concerned.

It is interesting to compare Bowler's Chapter 7 with the rest of the book. It has the polish of the professional historian of science. Lester's prose is a little more rough hewn. But I liked it no less. The biography puts the spotlight on a man who has for long been neglected, and although some warts thereby become evident, we now have a most important piece of the historical jigsaw for British biology in the second half of the nineteenth century.

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