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produced a thorough and sensible study which will become the standard reference work on *garum* and salted fish in the Roman world. There is now no excuse for ignoring their dietary importance in the ancient world, and it is to be hoped that Curtis or someone else will take the study of this aspect further.

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JENS PEDER HART HANSEN, JØRGEN MELDGAARD, and JØRGEN NORDQVIST (eds), *The Greenland mummies*, London, British Museum Press, 1991, pp. 192, illus., £14.95 (0-7141-2500-8).

The Greenland mummies, first published simultaneously in Danish and Greenlandic in 1985, is a most handsome and readable book, lavishly illustrated, and of interest to the specialist anthropologist and non-specialist alike. It recounts the discovery and scientific investigation of the bodies of six women and two children of Inuit culture buried in 1475. They were members of a small community at Qilakitsoq, a settlement on the western coast of Greenland, 450 km north of the Arctic circle. The finding of the mummies in October 1979 by two brothers out ptarmigan hunting is told in an absorbing account that one of them wrote to a friend. The professional investigation of the graves is also described in a personal way that involves the reader in the excitement of the event.

This is followed by a discussion on dating technique and the process whereby the bodies were preserved (mainly of interest to the amateur) and a most significant chapter is devoted to the scientific investigation of the mummies. Routine physical anthropological examination was carried out, and extensive use made of clinical X-radiography. The precise determination of adult ages by this method does somewhat stretch credibility, and for the specialist more explanation would have been of interest. But the reproduction of the X-rays is excellent, and the range of palaeopathological lesions exhibited is extensive, including a child with Down's syndrome and Perthes disease. A most interesting skull radiograph is reproduced of a female mummy 11/8, which shows numerous erosive bone lesions, and it is suggested that these are metastatic carcinomatous deposits. Unfortunately the preservation of her soft tissues was poor, so the authors are unable to suggest a possible primary neoplasm in this case; breast carcinoma seems likely. Dental disease in the mummies is analysed and the chewing of sealskin is proposed to account for attrition. It was also found that all the bodies were infested with head lice and at least one had intestinal pinworm infestation. Tissue typing was carried out and interesting proposals regarding family relationships of the mummified bodies are made. This is an exciting new field of investigation in preserved soft tissue. No firm conclusions could be drawn on the cause of death.

There is much fascinating information in this book ranging from contemporary Inuit ideas on death and burial ritual, to tattooing, clothes, and living conditions in fifteenth-century western Greenland in general. I highly recommend it.

Keith Manchester, University of Bradford

JOHN SNOW MD, *On narcotism by the inhalation of vapours*, Introductory essay by Dr Richard Ellis, London and New York, Royal Society of Medicine Services Ltd., 1991, pp. xxvii, 112, £20.00 (1-85315-158-0).

Dr Richard Ellis, who has made many notable contributions to the early history of anaesthetics, has collected and published in a facsimile edition the series of eighteen papers by John Snow that appeared in the *London Medical Gazette* between May 1848 and December 1851. In an introductory essay he analyses their subsequent publishing history as three separate, and now rare, booklets, and continues with an account of Snow's involvement in the development of general anaesthesia. Within one month of the administration of the first general anaesthetic in England, Snow had successfully applied John Dalton's concept of saturated

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vapour pressure to the construction of an ether vaporizer and to the control of the strength of the vapour. He had quickly realized that the concentration was entirely temperature-dependent, and during the first three weeks of 1847 he confirmed the accuracy of Dalton's 1808 table of the SVP of ether, published his own version, and demonstrated his purpose-built vaporizer. In October 1847 he published his largely clinical textbook *On the inhalation of the vapour of ether*.

These papers contain a wealth of clinical observation, presented with such immediacy as to directly involve the reader in the events described. They record also Snow's subsequent researches into the fundamentals of anaesthetics, which virtually set an agenda to which we are still working, and included such "modern" topics as the uptake and mode of action of anaesthetics, and the relation of potency to blood solubility. All this work was performed not in some well-equipped university laboratory, but at his lodgings in Frith Street.

Snow's writings reached their peak in the last two papers, which demonstrate his erudition and provide evidence of his very wide reading. In December 1850, having shown that anaesthetized animals exhale less carbon dioxide, Snow deduced that anaesthetics act by interfering with oxygen usage in the body, and wrote perceptively about the difference between anaesthesia and asphyxia. Only a few examples of the riches in these papers can be mentioned; but while these will be understood by any anaesthetist today, for a fuller appreciation of Snow's achievement some understanding is necessary of the physics, chemistry, and physiology of his times.

The book is beautifully produced, and easily readable, the original page size having been enlarged, and Dr Ellis has provided a valuable index. Once again the specialty is greatly indebted to him for making an early classic readily accessible, one that is an essential supplement to Snow's posthumously published masterpiece, *On chloroform and other anaesthetics*.

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LISA ROSNER, *Medical education in the age of improvement: Edinburgh students and apprentices 1760–1826*, Edinburgh University Press, 1991, pp. 273, £30.00 (0–7486–0245–3)

This is the sort of book that should have been written thirty years ago. Lack of computers and, more significantly, of a statistically informed, rigorous social history precluded the possibility at that time. Had this book been available then, its analyses would have been an invaluable aid to many of the studies of Scottish Enlightenment science and medicine which have appeared over the last two decades. Rosner's book is a quantitative examination of students taking medical courses in Edinburgh from 1760, when matriculation records first appeared, to 1826, when the Royal Commission on Scottish Universities descended on Edinburgh. The story is not just a presentation of statistics. These form the backbone of a well told tale of the institutional and social life of medical students in Edinburgh. None of the evidence demands a thorough reinterpretation of the history of Edinburgh medicine as currently perceived, but it all adds substantial weight to what were formerly conjectures. Rosner shows, for example, not only that students attended Edinburgh in order to become either gentleman physicians or manual practitioners, but that these distinctions flourished among the students themselves. She shows too, as historians in other areas have increasingly been recognizing, how immensely important were the demands of colonialism and war in the eighteenth century; in this case in shaping medical education. Recent work which has stressed the importance of the rise of surgery in the late eighteenth century also receives support from her account. Rosner plots the remarkable success of the Edinburgh surgeons in promoting medical education in the city. She shows that, by 1800, they virtually controlled a second school of medicine. The intellectual history of Edinburgh medicine is not addressed. Clearly this is integral to the story, yet such attention would have required doubling the length of the volume. This is good history, well written, and a significant contribution to Scottish Enlightenment and medical historical studies.

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