

Book Reviews

Canadian paleontologist, who conducted extensive researches in Nova Scotia and eventually came to play a leading role in the foundation of McGill University. He was a fundamentalist Presbyterian and opposed the Darwinian vision of a universe based on chance. The striking feature of the work is the evidence it gives for the migration of the organized resistance to materialist evolutionism from Scotland to Canada. In his defence of "sudden outbursts" of new life forms of various geological stages, and his particular interest in *Eozoon Canadense* (a giant foraminifer), Dawson occupies a recognizable position in the wider evolutionary debate. For a ghost stalks these pages, that of Hugh Miller, and no student of evolutionary ideas can fail to respond to the echoes that this reprint brings of a time when science and belief were so deeply intermingled.

ALLEN G. DEBUS, *The chemical philosophy. Paracelsian science and medicine in the sixteenth and seventeenth centuries*, New York, Science History Publications; Edinburgh University Press, 1977, 2 vols., 8vo, pp. xv, 606, illus., \$60.00.

There has, so far, been little attempt by historians to survey the full breadth of chemical philosophy from the death of Paracelsus in 1541 to Boyle's *Sceptical chymist* of 1661. It is Professor Debus's purpose to do just this, and although his discussion of this approach to nature and medicine is incomplete, it goes a very long way to rectify the neglect of an essential component of late sixteenth- and seventeenth-century medicine and biology.

Obviously, Debus has had to be selective in his references to individuals, and whilst admitting an absence in his text of an adequate handling of the external or socio-economic factors influencing any scientific advancement, he is to be applauded for pointing out that a full understanding and analysis of them must be based on the scientific and philosophical background. Would that purveyors of social historical material would approach more frequently their topics in this laudable fashion!

The seven chapters deal with the following: 'Chemistry and nature in the Renaissance'; 'The chemical philosophy'; 'The Paracelsian debates'; 'The synthesis of Robert Fludd'; 'The broken chain: the Helmontian restatement of the chemical philosophy'; 'The chemical philosophy in transition: nature, education, and state'; 'The chemical philosophy in transition: towards a new chemistry and medicine'.

A good deal of material already in print is included here, but it will be of the greatest value to have it collected together. Professor Debus's impeccable scholarship is evident throughout, and the volumes are well illustrated. The only criticism relates to the pallor of the print. It is also perhaps curious that the 'Preface' is dated January 1, 1974 and the book was published on 23 December 1977.

GAMINI SALGADO, *The Elizabethan underworld*, London, Dent, 1977, 8vo, pp. 221, illus., £5.50.

Professor Salgado gives a fascinating account of the discharged soldiers, beggars, thieves, cripples, tricksters, prostitutes, card-sharpers, and others who inhabited the underworld of Elizabethan London, and preyed on respectable citizens and foreigners. Throughout Britain the local fairs, the roads, and provincial cities also had their quota of similar individuals. The author draws on a variety of contemporary

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literature to describe these people and their various activities, with a diversity of illustrations. He also deals with witches, astrologers, alchemists, and with Bridewell and Bedlam. There is, therefore, a good deal of interesting material here for those who are interested in sixteenth-century medicine. It is, however, a pity that the text is not documented, and the section, 'A note on books', occupies only two pages.

JANE O'HARA-MAY, *Elizabethan Dyetary of health*, Lawrence, Kansas, Coronado Press, 1977, 8vo, pp. 415, illus., \$18.50.

Dr. O'Hara-May is one of the small group of historians of medicine who are dealing with a vast and important area of medical history. At the moment, this is inadequately explored and many topics remain unresearched. Until now, one of these was an aspect of Elizabethan life which has received little attention despite the proliferation of Elizabethan studies during the last two or three decades. As the author points out, medicine of the period in general, and in particular the large amount of health advice to be found in sixteenth- and seventeenth-century English books, has so far been neglected. Her objective, therefore, is to provide a summary of contemporary ideas concerning the preservation of health appearing in books published between 1500 and 1699, but originating in ancient writings. It is, however, by no means a list of dietary suggestions. In addition to being well versed in modern nutritional science, Dr. O'Hara-May has a wide and deep knowledge of the history of medicine and science, and it is against a background of medical theory that she sets out her scholarly survey. In the first part of the book the more general aspects of dietary advice are given, and in the second, individual foods, beverages, herbs, spices, etc., receive attention. In a postscript a most useful and fascinating comparison is made between Elizabethan and modern approaches to diet. As well as copious end-notes, there are lists of primary and secondary sources.

Dr. O'Hara-May must be congratulated for having prepared an original and pioneering treatise of high scholarship, which represents an important contribution to a part of the history of medicine where much more research is needed.

FRANKLIN H. PORTUGAL and JACK S. COHEN, *A century of DNA. A history of the discovery of the structure and function of the genetic substance*, Cambridge, Mass., and London, Massachusetts Institute of Technology Press, 1977, 8vo, pp. xiii, 384, illus., £12.25.

Watson and Crick's double helical model of the DNA molecule was the culmination of decades of research, extending back to the isolation of "nuclein" in 1869 by Miescher. This book tells the absorbing story by dealing mainly with the experimental research, the ideas, and the men concerned with them. It seems that the lengthy period of gestation was simply due to a lack of adequate techniques and technology.

On the whole, the authors give a fair and dispassionate account, which is based on oral as well as literary sources. The narrative is readily readable, despite the complex nature of the material, and there is full documentation of sources. The book can, therefore, be strongly recommended as an accurate survey of one of the most outstanding biological advances of the century.