The Blood of Sheep: Composition and Function. Edited by M. H. Blunt. Pp. xiii+224. (Springer: Berlin and New York, 1975.) DM 72; $31.

THIS is not a haematological text: the leukocytes receive scant attention, and the platelets and coagulation do worse. Instead it is a collection of chapters by different authors on body fluids, cells, carbohydrate and lipid metabolism, minerals, hormones, genetic markers, haemoglobins, immunoglobulins and anaemias. Each chapter is a factual review with little discussion, and occasional overlap with its fellows. More discussion would have been welcome and more selective editing could perhaps have provided the space. There seems little need in a work of this kind for a description of the actions of each hormone, irrespective of what is known about its presence in the sheep. The chapters vary between crisp, direct succinctness and a lengthy struggle to be comprehensive, and each provides numerous useful references. Nevertheless, because of its layout and index the book proves difficult to use as a reference work. Such criticism should not detract from its usefulness in bringing together a great deal of very interesting material for those centres where the sheep is a major object of study, and their libraries should acquire it.
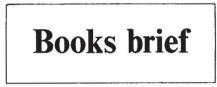
The individual worker who confines himself to a single aspect of the sheep may find it of only ephemeral interest, and it is too expensive for that. It will prove even more expensive if he injects either of the two doses of adrenaline quoted incorrectly on page 33 from two quite separate sources. Each is a 1,000 times too large.

Brian Greenwood

Optics and Its Uses. (Modern University Physics Series.) By G. F. Lothian. Pp. 218. (Van Nostrand Reinhold: New York and London, September 1975.) Cloth £7.50; Paper £3.85.

DERIVED from a lecture course, this book is an undergraduate text which includes mention of modern developments such as lasers, non-linear optics, holography, integrated optics, Fourier transform spectroscopy, fibre optics, spatial filters, and so on, as well as dealing with basic theory. In a text of this length it is impossible to cover this very wide range of topics in depth, and reference to some is almost in note form. Although the consequent large number of section and sub-section headings break the flow in places, the arrangement should be helpful to a student, enabling him to make easy reference to a particular topic. In proceeding to an honours degree it would be necessary, as the preface suggests, for a student to supplement his reading, and most chapters refer to specialised books. The reader is expected to work through examples which are contained in relevant places throughout the book. As the title indicates there is emphasis on optical instruments and equipment; and understanding these is helped by a large number of good drawings, photographs, and tables. The latter illustrate a particularly useful feature of the book in providing an unusual amount of numerical data which would not otherwise be easily available to a student.

W. J. Bates

Books brief

Lord Rutherford on the Golf Course. By F. G. Mann, Trinity College, Cambridge, UK. Pp. 33+6 plates. (Published privately.) £1.50, UK; $4.00, Overseas and US. Copies from the author.

AN accumulation of anecdotes, most, but not all, about Rutherford and golf. An absolutely bizarre story about Aston and a rice pudding. Nicely produced, but present-day prices hardly help such ventures even when published privately. □

Applied Geophysics. By W. M. Telford, L. P. Geldart, R. E. Sheriff and D. A. Keys. Pp. xvii+860. (Cambridge University: Cambridge and London, January 1976) £26.

THE book is a very good one, written and illustrated with clarity. It sets out what is done in the present day in the application of geophysics to exploration. For each method the theory is given in sufficient detail for understanding that method, with the mathematical development to support it. Implementation of the method is described, with practical examples. Further problems are given for the reader to solve, and each method has a good bibliography.

Two large sections of the book have special merit. A long chapter on the seismic method is a unified account of the sophisticated technology to which many have contributed time and money: it is almost a single line of development. By contrast the chapters on electrical, electromagnetic and related methods bring together a great diversity of methods and practice under a common theoretical and descriptive treatment. Chapters on other methods are written with the same authority and clarity; the exception is, perhaps, the chapter on well-logging. This gives the impression of being an afterthought; and it suffers by comparison with the rest.

There are a few criticisms. The writers do not distinguish everywhere between interpretation and modelling, the inverse process. Time domain sampling at 4 ms intervals does not correspond with frequency domain sampling at 250-Hz intervals (p375). The noun 'practice' is not spelt with an s.

The book should fill the requirements of university teaching and of company training programmes. It is of value to professional geophysicists who can rarely keep up with geophysical literature outside their speciality.

A. A. Fitch

An Introduction to Non-Numerical Computing. By Patrick A. V. Hall. Pp. 193. (MacDonald and Janes/ American Elsevier Computer Monographs.) £2.95.

THIS is a very competent collection of methods, algorithms and exercises divided into chapters on "Abstract Information and Algorithm Structures", "Machine Structures", "String Processing", "Files and Tables" and "Sorting". The book forms a reliable textbook of available techniques; it does not break any new ground but current thinking is well expounded. Hall's views on flow-charting are well worth noting. My only criticism is that a book on non-numerical computing should adopt a style different from mathematical texts. It is not that the mathematics is difficult—it has, in fact, been kept simple—but the flavour is still mathematical. References are also made to details of earlier chapters although the author says that the later chapters can be read in any order. The way in which the algorithms are presented also causes some difficulty, being a mixture of precise ALGOL-like instructions and English statements: but one soon adapts. The book is intended to support a second course in computing and leans heavily on ALGOL 60. Perhaps it could more usefully be based on ALGOL 68; it would appeal to a wider audience if it had been based on COBOL. The work is well illustrated and indexed. The exercises at the end of each chapter, although perhaps a little difficult for second course students, will be extremely valuable for teachers.

R. D. Parslow