They do not usually aim to be comprehensive, so that theoretical aspects are often kept to a minimum. Secondly, there are the more comprehensive texts designed to supplement a full lecture course in human genetics of at least one term, and where the appeal is mainly to science undergraduates. This book clearly belongs to the latter category, and of similar texts currently available, this is one of the best and most up to date in my opinion.

The first edition appeared in 1971 and this new edition retains the same overall organisation though much new information has been included, especially in the general areas of somatic cell genetics, biochemical genetics, and the application of genetic knowledge in the field of prevention through counselling and prenatal diagnosis. The book is divided into six parts: cytogenetics, Mendelism, methods of genetic inference (including segregation analysis), problems of multiple loci (including linkage), polymorphisms, and finally genetic counselling (including prenatal diagnosis). Thus, the arrangement is a little different from most conventional texts, and perhaps the emphasis is more on pedigree analysis and the more mathematical aspects of human genetics than in some other undergraduate texts, but it is nevertheless highly readable.

It is well illustrated and well documented, with over 2000 references, and each chapter concludes with a list of suggested exercises.

This is an attractive book and I would recommend it as a suitable text for an M.Sc. or intercalated B.Sc. course in human genetics.

A. E. H. Emery

The Eukaryotic Chromosome
By C. J. Bostock and A. T. Sumner.
(Pp. viii + 520; Figures + Tables. US $79.95;
Dfl. 195.00.) Amsterdam: Elsevier/North Holland. 1977.

The authors’ aim in writing this book was to bring together in a compact, but comprehensive, form the current available information on the eukaryotic chromosome. They have succeeded admirably in their objective and have produced an excellent book.

The opening chapter gives a brief historical account of how the concept of the chromosome was developed in the late 1870s, ending with an exposition of contemporary knowledge, ideas, and problems.

In the following five chapters, the DNA, RNA, and chromosomal proteins are described in terms of their structure, functions, and molecular interaction with each other. Other sections of the book cover the interphase nucleus and the mitotic and meiotic processes. Two separate chapters are dedicated to the polytene and lambrush chromosomes. The substructure of chromosomes, as revealed by a variety of banding techniques, is discussed, together with the methods in use of locating genes and DNA sequences. The last two chapters deal with the mechanisms of damage and repair, concluding with an interpretation of the current hypothesis on the genetic function of the various DNA sequences, how these are organised, and the way in which the DNA is packaged in the chromosomes.

The book is pleasing to read and its presentation is of a high standard. An extensive list of references is given, so there is the opportunity to explore further into those subjects which are outside the specialty of the reader. In conclusion, this book can help to provide a broader spectrum of knowledge needed by many workers in the field of genetics, cytotaxonomy, genetics, and cell biology.

Marina Seabright