undergraduate level. It will also greatly stimulate research workers in the field of evolutionary genetics, but in itself will not contribute greatly to their knowledge. The book should certainly be in all libraries used by biology students.

P. M. SHEPPARD

Essentials of Medical Genetics. Charles G. Crispens Jr. (Pp. xii+213; figures+tables. $9.95.) New York: Harper and Row. 1971.

This book is derived from an introductory course of lectures in medical genetics given at the University of Maryland and the Université de Sherbrooke Faculté de Médecine. The author states that his intention is to emphasize the interrelationships of old and new knowledge and of basic science with clinical genetics. It is a very personal book with a racy style but its language would not appeal to everyone. Some passages are more appropriate to lectures—eg, the reminder that a Hardy-Weinberg is not a sports car! It was written for the preclinical student and in general the basic aspects are covered fully. However, the clinical side is less adequate and the connection with information already presented is not handled well. Indeed if the student were to refer to it again in his clinical years, he would find a number of dubious statements which could mislead him. Diabetes mellitus is attributed to an autosomal recessive gene with reduced penetrance, and rheumatoid arthritis as appearing to have a genetic aetiology. The important problem for medical students of drug sensitivity is relegated to a footnote.

Despite the word 'essentials' in the title of the book, definitions sometimes include highly technical data and full details of methods are given in the text. In several places comprehensive coverage has been attempted instead of the selection of one or two informative examples which would have been more appropriate in a book of this type. There are useful selected references for further reading by the interested student and historical landmarks are well covered. It is refreshing, too, to see the challenge of unsolved problems presented for the consideration of the student. Questions with their answers are provided at the end of each chapter.

The first 4 of the 12 chapters cover Mendelian inheritance—its cytological basis, microbial genetics, and the chemistry of heredity. The next 4 are concerned with gene transmission, chromosomal aberrations, population genetics, and inborn errors of metabolism. Immunogenetics, blood groups, the haemoglobinopathies, and the interactions of nature and nurture provide the topics for the remaining chapters.

Only a few points can be singled out for comment. Map units and percentage crossing over are not by definition identical. It is difficult to understand why the first pedigree chart should be a sex-limited autosomal dominant trait, though the diagram illustrates well the symbols used. Only reciprocal translocations are described but are not referred to again under the cri-du-chat syndrome. G group translocations are mentioned without indicating that these are Robertsonian and without commenting on the differing frequency in familial and sporadic examples of Down's syndrome. When discussing inborn errors of metabolism, the comparison between Neurospora and man is not fully developed, nor is the brilliant anticipation by Sir Archibald Garrod of Beadle and Tatum stressed. Sir Archibald was not strictly a paediatrician but a physician. Included in the tables of inborn errors, which should serve as useful summaries, are statements such as nephrogenic diabetes insipidus—? autosomal dominant. There is a useful section on the problems involved in transplantation. Ten of the less well known blood groups are mentioned including Xg, which is dismissed in 3 lines. It is true that it is not important clinically but its genetic significance is not discussed anywhere. The often confused haemoglobinopathies and the thalassaemias are as clearly distinguished. Most of the final chapter is devoted to twin studies while the medically far more important congenital malformations are dealt with only briefly.

This is a disappointing book which does not live up to its initial promise. If a further edition is produced, revision by a clinical geneticist or physician, and considerable pruning could improve it. Even apart from its cost ($9.95), this book cannot be recommended unreservedly.

A. W. JOHNSTON

The Distribution of the Blood Groups in the United Kingdom. By Ada C. Kopeć. (Oxford Monographs on Medical Genetics.) (Pp. ix+146; figures +tables. £8·50.) London: Oxford University Press. 1970.

British research workers interested in the biology of the blood groups have been waiting for this book for a long time, and it fulfils all their expectations. For nearly 20 years it has been realized that in England there can be remarkable variations in the frequency of the ABO blood groups over quite small distances. For instance, it was known that there was a significant difference in the level of group O between Liverpool, on one bank of the Mersey, and the towns on the other bank, whilst the St Helens and Ormskirk districts, only 10 miles from Liverpool, were also significantly different from Liverpool and from each other. This heterogeneity has led to uncertainty about the appropriateness of controls used in the study of the relationship of blood groups with disease and physiological characters. This volume sets out the blood group frequencies found amongst blood donors in every Post Town and Postal District (of larger cities) in the whole of Great Britain and Northern Ireland, a total of 1927 unit-areas. It is, therefore, now possible to compile a much more satisfactory control based on the domicile of the patients.

The data have been compiled from the records of the 13 Blood Transfusion Centres of the United Kingdom, and total over 500,000 volunteers. Only new donors were included in an attempt to have really random samples representative of the local populations. Those who knew their blood group when enrolling were ex-