A certain arbitrariness in designating degrees of assurance was necessary, and, providing the rough and provisional nature of such maps is appreciated, this method of assignment has provided some maps which have, in the main, survived the next annual stocktaking held in Holland last July.

A detailed list of variant loci with recommended abbreviations, is also included. There are some misprints, of which the most misleading is an editorial translation of P.T.C. (Phenylthio-Carbamide) to Hem.B., presumably due to confusion with plasma thromboplastin component. Anyway, the linkage noticed by Chautard should have been between P.T.C. and Kell.

This is an important reference book for those working on linkage, but its expense will exclude it from most departments with other main interests. There is, of course, almost nothing about the secure location of morbid loci, a subject as yet hardly touched by the new techniques.

J. H. EDWARDS

Nucleus and Cytoplasm, 3rd ed. By Henry Harris. (Pp. 186; figures. £4.20.) London: William Clowes. 1974.

This book is based on six lectures originally intended for senior undergraduates and postgraduates at Oxford. The declared aim is to awake an interest in the unanswered problems of cell biology, and in this it should be very successful. Evidence from such widely differing organisms as bacteria, unicellular algae, and *Drosophila*, and also from highly differentiated mammalian cells, is used in considering nucleocytoplasmic relationships. Each experiment is described in such a way that even a reader not familiar with all the technical details can still appreciate and assess the contribution made by the result to the understanding of a particular problem. The quality of the photographic plates is high and there is an extensive and useful list of references.

In this third edition much new information is included, especially recent work on the properties of messenger RNA and on cell fusion, the latter a field which was of course pioneered by Professor Harris. One of the attractions of the book is that it is the personal view of one author, and one not afraid of controversy. Inevitably there has been some selection of material, especially since the book is still relatively short—for instance the reactivation of the chick erythrocyte nucleus in the chick-mouse heterokaryon is described in great detail, whereas the regulation of synthesis of proteins characteristic of certain differentiated cells in mononucleate hybrid cells gets only a single page. As the author says, these experiments mostly involved aneuploid cell lines of unstable karyotype, so that the interpretation of the results is difficult, but perhaps his view of the potential interest of such work is unduly gloomy. The final chapter is concerned with normal differentiation. Medical readers might have hoped to find some discussion of pathological conditions such as malignancy but unfortunately this has not been included.

However, the third edition of this well known book remains an extremely readable and comprehensive sum-

mary of current knowledge, essential reading as an introduction to the field, but also probably of interest to those workers whose own experience has involved a more limited range of organisms.

SUSAN POVEY

Methods in Human Cytogenetics. Edited by H. G. Schwarzscher and U. Wolf. (Pp. xv+295; figures + tables. DM 72.00; \$29.40.) Berlin, Heidelberg, and New York: Springer. 1974.

This book which is a translation from the German version, is useful since it collects together almost all the cytological techniques that would be required by the cytogeneticist for cell culture and the processing of cells for chromosome analysis. The inclusion of two chapters on the new banding techniques is particularly welcome. However, the translator can not have been conversant with cytogenetics, with the result that occasionally a description is totally misleading, this combined with bad proof reading has made certain parts incomprehensible. The description of most simple techniques, such as making slides by the air drying method, are unnecessarily complicated and in some passages, several statements are erroneous; therefore this book is not for the novice.

The inclusion verbatim of a large part of the Report of the 1971 Paris Conference on standardization in human cytogenetics, with no comments or explanation seems a pointless exercise when the report is readily available internationally. Further serious limitations of this book are that the reasons are not given for much of the technical variations described and there is an inconsistency in providing the sources of materials and chemicals. In this type of cookery the make of a stain, for example, is important in obtaining a given result.

The authors must be recommended for their references, which are up to date with even some 1974 publications; however, there are some noticeable omissions from earlier years. I consider this book not to be worth its price.

KARIN BUCKTON

Biomathematics, vol. 5—The Genetic Structure of Populations. By A. Jacquard. (Pp. xviii+569; figures + tables. DM 96.00; \$37.00.) Berlin, Heidelberg, New York: Springer. 1974.

This is an English translation of the French edition published in 1970. The translation was made by D. and B. Charlesworth (Liverpool, England), who are both competent in the field, and is very well done. Several parts have been revised since 1970, new sections added, and there are three new chapters on human population structure and a new appendix on difference equations.

The book is essentially a mathematical and theoretical text and is for the specialist in human population genetics. There is little guidance on application. For example, the theory of estimating linkage is discussed but not how to estimate a lod score in practice. Where examples are given they are usually taken from human

genetics but their simplicity contrasts with the complex theory presented.

The merit of the book is that it presents much of population genetic theory in an alternative form, which is perhaps unfamiliar to English speaking audiences. Most of the results are derived from first principles and the proofs are clear and useful. Two theoretical forms used by French workers are explained and exploited. These are the concepts of genic and genotypic structures of the population, and the subdivision of the coefficient of relationship into its 16 logical parts. These are well described and utilized to obtain, and elaborate, some well known results. Another section which seems particularly clear and useful is on finite populations and genetic drift. The models and mathematical sophistication gradually increase throughout the book and, unfortunately, are beyond the reviewers competence.

The value of the book lies in its rather different approach and methodology and in its thorough competent review of much of the theory of population genetic structure. Despite its costs, it is a book that specialists in this field of study will not want to be without.

CHARLES SMITH

Einführung in die Immunogenetik. By Klaus Dieter Bauer. (Pp. 136; figures + tables. DM29.00.) Stuttgart: Gustav Fischer. 1973.

This monograph, published in German as one of a series from Fischer entitled 'Grundlagen der Modernen Genetik' (Foundations of Modern Genetics), aims to give a systematic presentation of human immunogenetics. Intended for biology and medical students, for research workers and medical practitioners, the book does not claim to give more than a concise outline of immunogenetics. Two introductory chapters deal with fundamental immunology and genetics, and include details of the immunological techniques specific to this branch of science. Thereafter, chapters deal with cell-surface antigen polymorphisms, particular erythrocyte antigens, soluble antigen polymorphisms—such as Gm factors and β lipoproteins—the genetics of the immune response, ontogenetic and phylogenetic aspects of immune responses, and the relationship of immunogenetics to the pathological results of incompatible transfusions, trans-

plants, and materno-fetal problems. This book presents most of the relevant information necessary for an understanding of the basic aspects of immunogenetics, it outlines principles, techniques, and brings together fields of immunogenetics often considered only in isolation. The tables and diagrams are simple, well-drawn, and descriptive; they allow unhindered access to the information and relate well to the text. The bibliography on the other hand may prove to be a disappointment to some, since as a source of references for further reading, it could have been more detailed and up to date. In spite of this, and perhaps because of it, the book succeeds in being an excellent short treatise for the beginner, in presentation, style and subject matter, without being overspecialized as many of today's monographs are. Hopefully, an English version of this book will shortly appear to supplement the knowledge of those from whom it is intended, as Dr Bauer has undoubtedly already done for his German readership.

G. M. TAYLOR

Psychiatrie. Vol. 8. *Die Erbliehen Myoklonisch-Epileptische-Dementiellen Kernsyndrome.* Edited by K. Diebold. (Pp. ix+245 figures. DM98.00.) Berlin, Heidelberg, New York: Springer. 1973.

This volume is concerned with a small area of neurology, epilepsy accompanied by dementia and myoclonus. The disorders falling into this category have long been suspected to be heterogeneous. Dr Diebold has made a careful analysis both of cases collected from the literature and also those he has ascertained from hospitals in the Federal Republic of Germany. As might have been expected, his analysis has revealed further heterogeneity, thus enabling the disorders to be more exactly classified and thereby a more accurate prognosis given for each of the diagnostic categories.

The book is carefully documented and contains a full and painstaking review of the literature with valuable new case material. It will long remain an essential volume for those concerned in research on these varieties of illness, and will be of value to neurologists for practical purposes of diagnosis and also for the instruction in genetics that will incidentally result.

R. T. C. PRATT