Book Reviews

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The Assessment of Population Affinities in Man.

Edited by J. S. Weiner and J. Huizinga. (Pp. xii + 224; figures + tables. £6.00.) London: Oxford University Press. 1972.

This book is the record of a symposium held at Utrecht in 1969 under the auspices of the Human Adaptability Section of the International Biological Programme (IBP) and the Wenner-Gren Foundation. The organizers were fortunate in bringing together many of the world's leading authorities on population distance statistics and their interpretation, and one of the most valuable features of the meeting must have been the discussions between the leaders of different schools of thought. It is therefore much to be regretted that the book contains no record of these discussions. There is some compensation for this in the fact that the authors, in revising their individual papers, have clearly had access to those of their colleagues, so that there is fairly full cross-referencing between them.

It is no doubt inevitable, but is in some ways unfortunate, that the first few chapters on methods are purely theoretical, as this may discourage the biologist who is not a statistician, but needs to use statistics, from reading on. The later chapters, in which the various methods are applied to observational data, are the ones which will show the persistent reader what the book is all about, and he may then wish to go back to the earlier chapters for fuller accounts and criticisms of the methods used. Perhaps the most useful chapter for such a reader will be that by Hiernaux on 'The analysis of multivariate biological distances between human populations: principles and application to sub-Saharan Africa'. Being both a practical medical biologist and a competent statistician he has assessed the various distance statistics in a way which, while perhaps less rigorous, will be more understandable to the biologist than the purely mathematical approach of the introduction. Such readers would be well advised to follow up some of his bibliographical references to his own fuller treatments of this subject, one of which is in English.

The various sets of data which are analysed show what a large variety of criteria are now being applied in comparative population studies: blood groups and a wide range of other hereditary blood factors; dermatoglyphics; anatomical measurements; glottochronology. Clearly, however, most of the authors, where they have not exclusively used their own data, have had difficulty in finding comparable populations all of which have been tested for the same set of factors.

Most of the observations used were made before the IBP became fully operative; one of the most valuable

features of the latter has been to stimulate the use of uniform sets of genetical and other criteria in population studies, so that it is now becoming possible to compare populations on a much broader basis than it was even as recently as 1969.

The present book is essentially statistical, and while it contains a great deal of new and interesting data, mainly genetical, on a wide variety of populations, it deals only incidentally with their physiological meaning. The IBP has produced a relatively enormous amount of data of a similar kind. These are now being analysed and assessed in terms of human evolution and adaptation to the environment. The IBP itself has not been primarily a medical exercise, but it will now be followed up by new programmes of investigation such as Man and Biology (MAB) and a study of the human response to the urban environment. In these, the environmental and genetical aspects of disease will receive new attention, especially from the population or epidemiological aspect. Here the methods of population study evolved under IBP auspices will have a fresh application, and the present book will be a valuable guide.

A. E. MOURANT

Auto-Immunity and Auto-Immune Disease.

By Sir MacFarlane Burnet. (Pp. 243; figures + tables. £4.25.) Lancaster: Medical and Technical. 1972.

A reviewer should be impartial, and I must therefore confess at the outset to being a longstanding Burnet addict. I always await the next Burnet with pleasurable anticipation and have never been disappointed. Burnet is the great theoretician of modern immunology, and he is to immunology what Fred Hoyle is to astronomy. Burnet has always stressed the importance of genetic principles in immunology such that 'much immunology and many aspect of pathology are concerned basically with the population genetics and dynamics of the circulating cells of the body'.

His recurring theme has been the differentiation between 'self' and 'not self' and the immunological mechanisms which allow this distinction to be made. These control mechanisms occasionally break down leading to immunological attacks on self components, and hence auto-immune disease has always been one of Burnet's major interests. This admirable and well produced book surveys the field of auto-immunity including the pathogenesis and clinical features of the main auto-immune diseases, and it also provides valuable summaries of current immunological concepts.

Burnet suggests that auto-immune disease is caused by