Books and Monographs

Genetic Markers in Human Blood. By Eloise R. Giblett. (Pp. xxvii + 629; illustrated + tables. 85s.) Oxford: Blackwell Scientific Publications. 1969.

Too often, when a book is published which attempts to cover such a wide field as this one, it is written by a large number of authors of varying competence, with much overlap and even contradiction between their contributions, or if it is written by one author it bears evidence of uncritical use of scissors and paste on abstracts. The present book is remarkable as the work of a single author who has succeeded in covering a very wide field, with a vast and rapidly growing literature, and has yet succeeded in maintaining an eminently readable style while omitting nothing of importance which could conceivably come within the scope of the title. She has assessed every fact or alleged fact critically, and shown its relation with the whole known genetic picture. The main text covers the literature with remarkable completeness up to about the end of 1967, and an addendum brings it up to September 1968.

Every known class of genetic factors which could be used as markers is dealt with, beginning with the immunoglobulin systems, Gm and Inv. These are followed by the haptoglobins, to the study of which the author has made important contributions, the transferrins, and numerous other plasma protein factors: the Gc types, the beta-lipoproteins, pseudocholinesterases, alkaline phosphatases, and several other factors of less immediate importance.

The second part of the book, on the genetic markers in the blood cells, begins with the red cell antigens or conventional blood groups. For a full account the reader is referred to the book of Race and Sanger, but the present account (57 pages of text and 21 of references) covers these factors very fully from the standpoint of genetic polymorphism. The haemoglobins, also, have been the subject of a number of comprehensive books, but here again the whole subject is admirably summarized from the genetic point of view. The very full account of the red cell isoenzymes brings up to date and extensively supplements the monograph of Beckman published in 1966.

For every system described, the account of the genetics is backed by a section on methods of testing. These sections, while necessarily brief, contain all that is needed for investigators other than beginners, and for the latter references are given to sources of more detailed and elementary instructions.

The author finally sums up her own conclusions in a chapter on 'Contributions of blood genetic markers to studies of human biology', which is followed by the stop-press addenda already mentioned.

There is a comprehensive index; the book is well printed on good paper; misprints are few. This is one of those rare books that can be recommended without reserve. It should be in the hands of all human biologists, of every kind, geneticists, haematologists, immunologists, biochemists, and anthropologists. The clinician too, despite the many excellent books on human genetics now available and specifically addressed to him, will here find much that is new and stimulating. In setting the price at 85s. for 656 pages, remarkably low by recent regrettably high standards, the publishers have clearly taken a chance on the acceptability of the book to large numbers of individual readers, and they deserve to achieve a wide circulation: too many publishers today will not take such a risk, and books which would be of great value to individual research workers are so priced that only libraries can afford them.

One has, however, an uncomfortable fear that, in another three or four years, when a new edition will certainly be needed, the subject will have grown to a size beyond the possibility of treatment of one author, even of the ability and extraordinary industry of Dr. Giblett—for it is the unified authorship which gives the book much of its value.

A. S. MOURANT

Episomes. By Allan M. Campbell. (Pp. xiii + 193; illustrated + tables. 94s.) London: Harper & Row. 1969.

Few aspects of microbial genetics have been more exciting and thought provoking than the discovery and study of episomes, a class of genetic elements which can exist alternatively as chromosomal segments or as freely-replicating extrachromosomal fragments. Episomes, or at least the bacterial resistance transfer factors which share many of the same properties, are now recognized as being of tremendous importance in connexion with the growing problem of bacterial resistance to antibiotics. The properties of episomes also suggest fruitful analogies with various unorthodox genetic situations in higher organisms including virus-induced transformation of animal cells and the mutable and transposable 'controlling elements' associated with high mutability in maize.

The time was ripe for a monograph, and nobody was better equipped to write one than Dr. Campbell, who as well as being one of the most brilliant experimentalists