

The principal part of the book is divided into twenty-three sections, each dealing with a particular structural type. All the known alkaloids falling into the structural family are listed in order of increasing molecular weight. For each compound, the structural formula, melting point, specific rotation and plant sources are given; references to the original literature are provided for spectroscopic data and separately to relevant structural, synthetic and bio-synthetic investigations.

The lay-out is good in general and the book is easy to use, though there is a unique system of abbreviations (for example, Ph=Physical data). Most of the structural formulae are rather inelegant and old fashioned in appearance, but they are rarely ambiguous. Curiously, occasional formulae are far clearer and modern in appearance (*cf.* adlumidine *versus* bicuculline on page 136).

This book, which has been compiled by a leading figure in isoquinoline alkaloid chemistry, will prove as useful a reference work to those engaged in this field as Hesse's *Indole Alkaloids* does to those studying this other large group of alkaloids. Unfortunately, as a result of the long time involved in its publication and the volume of work in this field in the past two years, the lists are already considerably out of date. It is to be hoped that Professor Kametani will, in due course, be able to produce further editions to update this one. A more rapidly published further volume would better suit the objectives of a book of this kind, particularly if the cost could also be reduced.

J. A. JOULE

GENETICS FOR DOCTORS

An ABC of Medical Genetics

By C. O. Carter. (Reprinted from *The Lancet*, May 17 to June 28, 1969, with two additional chapters.) Pp. 94. (The Lancet: London, November 1969.) 15s.

THE title of this excellent little monograph could deceive if it is overlooked that it was first published in *The Lancet*. It is clearly intended primarily for doctors or medical research workers who want a guide to medical genetics which is short, clear and inexpensive but not entirely elementary; knowledge of Mendelian genetics and medical terminology is assumed. Bearing this in mind, the book fulfils its purpose admirably. The original chapters cover chromosome mutations, mutant genes of large effect, polygenic inheritance and common diseases, and genetic counselling. One additional chapter consists of "a formidable list of the most common single-gene-determined disorders which the paediatrician is likely to meet"; this is something not hitherto readily available cheaply, and which would alone justify purchase of this book (high marks to any doctor who can characterize a majority of the listed disorders; the overconfident might start on Stargardt's disease, Weill-Marchesani syndrome or leprochaunism).

The author writes with easy authority; depth is not sacrificed to brevity, and chapter references provide an excellent and up to date compendium of basic reading. There are one or two surprising omissions; for example, there is no mention of the Lyon hypothesis of random X-chromosome inactivation, although it is tacitly taken for granted. And there is no consideration of pharmacogenetics, which might be more relevant for practitioners than the theory of gene action (now adequately dealt with in most genetic textbooks). The book is, however, by contrast, particularly strong on the author's own interests, such as twin and familial studies and their bearing on polygenic inheritance.

The last chapter, on the control of genetically determined diseases, brings home the need for a large scale study of amniocentesis; now that this is clearly of value for the detection *in utero* both of chromosome

abnormalities and of homozygosity for certain deleterious recessive conditions, the time seems to have come for a full assessment of the risks involved, and of its feasibility as a regular diagnostic technique for eugenicists.

E. H. R. FORD

REVERED EMBRYOLOGIST

Organization and Development of the Embryo

By Ross Granville Harrison. Edited by Sally Wilens. Pp. xxiv + 290. (Yale University Press: New Haven and London, November 1969.) 135s; \$15.

ROSS HARRISON'S contributions to experimental morphology were of outstanding importance, but were offered with a diffident and, in some cases, almost a casual air. He is most widely remembered for having "invented" tissue culture in order to solve a simple, but cardinal, problem in neurogenesis. In fact, of course, he was not the inventor but the first to succeed in establishing a technique good enough to allow morphogenetic questions to be tackled *in vitro*. The method and the results were published in two preliminary papers and the whole story was only told a few years later, and with a minimum of fuss. His later work on limb polarity and on growth control was of equal intellectual importance, but its presentation was almost perversely modest. Nobody could have done more to invite under-estimation by posterity.

In 1949, towards the end of his working life, Harrison delivered the Silliman lectures but, perhaps predictably, deferred too long their writing up for publication. The present book is a posthumous substitute. It includes several of his earlier review papers (from the 1930s) on subjects cognate to the matter of the lectures. These are interspersed with, and interrupted by, additional material taken from his notes for the lectures and the pictures used to illustrate them. The result is a very handsomely produced memorial volume which contains the essence of his mature views on the major problems of animal development. One's only complaint is that the method of introducing the later material into the text is often confusing. Straight reprints of the papers with appendices would have been better.

The five principal chapters cover problems of cellular differentiation, the significance of tissue culture, neurogenesis, symmetry relations and the uses of heteroplastic grafting. A sixth chapter publishes, at last under his own name, the celebrated Harrison normal staging of *Ambystoma punctatum* which has been widely quoted in print for more than twenty years by other workers. The book ends with a brief summary chapter followed by a list of Harrison's publications.

Although this book will most please the older experimental embryologists for whom Harrison was, and rightly, a revered figure, it would be quite wrong to think that it has no present-day relevance. Most of the problems which the ingenuity of Harrison and his contemporaries exposed and clarified are with us still. D. R. NEWTH

MOVEMENTS IN PLANTS

Physiology of Plant Growth and Development

Edited by M. B. Wilkins. Pp. xxi + 695. (McGraw-Hill: Maidenhead, 1969.) 126s.

THIS volume describes itself as a textbook of whole plant physiology specifically aimed at advanced undergraduate and postgraduate students. Eighteen topics have been selected and appropriate authorities give a summary of the present state of thinking in these fields, as well as a