Evolutionsprozesse. Einzelvorgänge im Wandel der Organismen. Grundbegriffe der modernen Biologie. Band 2. By G. Ledyard Stebbins. (Pp. viii+188; 75 figures. DM. 26.) Stuttgart: Gustav Fischer. 1968.

This book, which originally appeared in 1966 under the English title 'Process of Organic Evolution' (Prentice-Hall, Inc., U.S.A.), is now available in German. It contains basic information on the theory of evolution, variability, mutation and mutation rates, population genetic, and differentiation of populations. This information is related to reproductive isolation and development of the species, of racial differences within the species, and of species as distinct from populations. The main trends of evolution are discussed and conclusions drawn from fossils; the development of higher types of animals and the rates of trends in evolution are also considered. The last chapter deals with the evolution of man, ancient fossils of man, the structure of human population, and selection in human evolution, including the evolution of culture and cultural interests. This little volume ends with questions for thought and discussions and recommended literature; it can be readily recommended not only to undergraduate and post-graduate students but also to senior workers, who would enjoy the concentrated and authoritative collection of facts relating to evolution.

H. LEHMANN

A Dictionary of Genetics. By Robert C. King. (Pp. 291; illustrated. 34s.) London: Oxford University Press. 1968.

A Glossary of Genetics and Cytogenetics. Classical and Molecular. 3rd completely revised edition. By Rigomar Rieger, Arnd Michaelis, and Melvin M. Green. (Pp. 507; 90 figures. 140s.) London: Allen and Unwin; Berlin, Springer. 1968.

A Dictionary of Genetics by Robert C. King, aims at defining the many terms commonly met in the genetics literature. Seeing that genetics draws widely on the biological and physical sciences, many of the terms defined are of a general character. This is shown by such entries as A°, capon, cancer, canis familiaris, coffea arabica, haemoglobin Heidelberg man, half-life, Mendeleev's table, pre-cambrian, Tisselius apparatus, thrombin, vitamin, and x-radiation. The genetic terms themselves are up to date: condon, transfer, translation, and RNA readily take their place among the older designations. Most of the definitions are short, but there are also many larger entries, and these too are frequently of a general character with a predominance of biochemical data. A useful historical survey of the development of genetics, and a list of genetics periodicals appear among the appendices.

The scope of *A Glossary of Genetics and Cytogenetics* is both narrower and deeper. Its authors stress that present-day genetics—with its seemingly widely separated branches: classical and molecular, microbial and human, cytogenetics and population genetics—has a complex and

rapidly developing terminology which goes well beyond dictionary definitions. Their glossary is designed for the student and the research worker seeking for classification and historical accuracy. Some terms are, therefore, merely defined while others are described at such length as to include experimental data and references. All the terms—there are some 2500 entries—are strictly genetical, and this text, with its illustrations and planned imbalance in definitions, is a substantial addition to the literature on genetics; it is an up-to-date and authoritative reference book, well worthy of a place in a departmental library. A point of bibliographical interest is that this book is described as a third edition. This is correct for the German version of which editions appeared in 1954 and 1958: the present volume—printed in Germany—is the first English edition.

ARNOLD SORSBY

Biophysical Technique as Applied to Cell Biology.

By J. Chayen and E. F. Denby. (Pp. x+172; illustrated. 35s.) London: Methuen; New York: Barnes & Noble. 1968.

This small volume (one of Methuen's Monographs on Biological Subjects: General editor, Kenneth Mellanby) covers a wide range of biophysical techniques, which are considered in varying detail. The first chapter deals with the physical nature of light and theoretical aspects of microscopy, and the second with atomic structure and the interaction of light and matter, thus providing the theoretical background to much of what follows (the non-mathematical reader may find the first chapter rather difficult going). The book is rounded off by an appendix dealing with practical aspects of light microscopy. In between are chapters on polarizing, interference, fluorescence, and electron microscopy (the last two are dealt with only briefly), and on spectrophotometry and microspectrophotometry which are considered in some detail. Other chapters relate to the physical properties of protoplasm (viscosity, pH, and electrical properties), the measurement of the respiration of cells, and the use of isotopes and x-rays as analytical tools.

The authors, both of whom have worked in the Wheatstone Physics Laboratory at King's College, London, in the past, succeed in presenting a great deal of information in a readable fashion, and this book is recommended to those seeking an interesting introduction to the subject, as well as a useful source of references for further reading.

A little lack of attention to detail in correcting drafts or proofs is evident. The captions for the two parts of Fig. 3.1 have been interchanged. In a section of chapter 2 dealing with the Beer-Lambert law, the formula is given incorrectly (E equals $\log I_0/I_1$, not $\log I_0/\log I_1$ as stated). Rather unnecessarily, the law is again described in chapter 7 (where the formula is given correctly); here, however, it is merely called 'the basic law of spectrophotometry', and anyone looking up the 'Beer-Lambert law' in the index is referred only to chapter 2.

N. B. ATKIN