recent literature as well as of some of the earlier papers on the subjects. Abstracts and some statistical tables are given from the selected works. Each section includes a portion of the Danish data on that particular subject and gives appropriate references to more detailed tables in the companion volume 2, *Basic Tables,* which is intended for those who are interested in the demography of cancer.

The review volume consists mostly of demographic studies that bear on the etiology of cancer. It is a veritable gold mine of autopsy statistics relating to cancer, the prevalence of the disease, mortality statistics in general, and morbidity statistics. A particularly useful section on aspects of genetics and statistics includes pedigree studies and cancer studies in twins. The various types of cancer are then discussed, and data, arranged according to sites of the lesions, are presented. Etiologic factors are considered in relation to the different types of tumors. Data on the most important types of cancer are presented in graph form. Extensive statistical data from the scientific literature are presented and compared with new data from Denmark. The latter would have been more readily useful had they been given more consideration in the text.

The one criticism that might be made is that the choice of published material for reference seems somewhat spotty. However, the mass of publications on cancer is so great that one must be highly selective in citing references.

Clemmesen has rendered a great service to those interested in cancer statistics and has clearly demonstrated the value of a comprehensive cancer registry.

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Symposium on Teaching Genetics

Teaching Genetics in School and University. C. D. Darlington and A. D. Bradshaw, Ed. Oliver and Boyd, London; Philosophical Library, New York, 1964. x + 121 pp. Illus. $7.50.

For the teacher of genetics, the main values of this small book, which is composed of the contributions to a symposium held in England (and asserted by the editors in their introduction to have aroused great interest) and some additional notes, are in the concise statements by experts on particular kinds of genetic material about how their materials can be used in teaching laboratories. For example, in a section on bacteria and bacteriophages, Clowes outlines "some simple experiments with bacteria and phage which can be carried out with a minimum apparatus, and which are illustrative either of general genetic concepts or of principles so far novel to these systems, but which are likely to have far-reaching implications." Basic apparatus is listed, and brief directions are given for genetic fine structure analysis, mapping with multisite mutants, and studying complementation, spontaneous mutation, chemical mutagenesis, and oriented genetic transfer.

Bevan gives the principles of transduction in bacteria and experimental procedures for its demonstration. Pateman describes genetic studies with *Neurospora, Aspergillus,* and *Sordaria* and, with Woods, outlines the use of yeast for teaching practical genetics. A general statement on a course in biometrical genetics, by Jinks, precedes Thoday's practical exercise in quantitative genetics, using counts of chaetae in four stocks of *Drosophila.* Falconer identifies uses for mice in demonstrating segregation, factor interactions, and developmental genetics. Rees, Lewis and John, and Wylie, in successive notes, describe teaching cytology, demonstrating chromosome behavior, and material for practical cytology. There is a brief chapter by Ockey on peripheral blood cultures of human chromosomes and a note on human blood groups by Mourant.

Darlington's description of his "genetic garden," illustrating the origins of species, breeding systems, mutation, variegation, and graft-hybrids, as well as multipurpose plants, is of considerable interest. There are brief notes that list seedling characteristics in several plants and illustrate leaf markings in white clover, the latter providing useful material for demonstration of multiple allelic series, and an attractive note by Pusey on cyanogenesis in white clover, a system that through simple biochemical tests relates genes to enzymes controlled by two different loci and is adaptable to studies of population samples from different sites.

Three teaching projects with *Antirrhinum* are outlined by Bradshaw, and a *Drosophila* population cage for class experiments is described by Whittington. A model of a bivalent at metaphase I of meiosis, useful in "practical examinations," is described briefly by Whittington.

A list of sources of materials with an index of addresses, practically all in the British Isles, identification of two good chromosome films, and a brief list of books on the teaching of genetics are also provided. Two chapters, one on genetics teaching in the universities (which deals mainly with the problems of whether or not there should be a genetics department and, if so, how it should be oriented) and another on genetics in schools, are of some interest but probably of less relevance in the American context. Although it would be difficult to defend the assertion, made on the dust jacket, that all this is "indispensable for those who wish to teach more accurately, more vividly, and—more easily," many teachers of laboratory courses in genetics may find material of interest in this book.

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Mathematics

Theory of Functions of a Complex Variable. vol. 1. A. I. Markushevich. Translated from the Russian by Richard A. Silverman. Prentice-Hall, Englewood Cliffs, N.J., 1965. xvi + 459 pp. Illus. $16.

In many ways this is a good book for the beginner in complex function theory. With the exception of some chapter introductions that are loosely connected and vague, it is well written. The material is aimed at the student who has completed a standard course in advanced calculus.

The main body of each chapter is thorough, and the chapters are sprinkled with many well-chosen and completely worked examples. At the end of each chapter there is a section of well-selected problems. The author attempts to be rigorous, but at the same time he attempts to give the reader an

intuitive feeling of what is taking place. At times, in the proofs of theorems, rigor is stressed in dealing with certain concepts whereas the concept itself was not introduced with the rigor that is required.

Theory of Functions of a Complex Variable, the first in a three-volume series, is definitely designed to be used as a textbook. It contains 18 chapters, of which the first is an introduction that has little to do with what follows. Chapter 2 deals with complex numbers, which are introduced sketchily in terms of geometry and complex algebra. In chapters 3, 4, 5, and 6 much of the ground work is laid for the rest of the book. Such topics as limits, continuity, set theory, and topological properties are discussed. The rudiments of complex function theory in the study of analyticity and conformal mapping are discussed in chapters 7 and 8. The topics ordinarily treated in a first course in complex function theory are considered in the rest of the book. Special care has been taken in the study of multi-valued functions, a subject that is often slighted. The latter chapters, on power series, contain valuable material, some of which is more advanced than that presented in many textbooks but which is here presented in a lucid manner.

All things considered, this book will be a valuable addition to the library of any beginner in complex function theory.

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Teaching Monograph Series

Molecular Biology of the Gene. J. D. Watson. Benjamin, New York, 1965. xxii + 494 pp. Illus. Paper, $5.95; cloth, $10.

Watson's *Molecular Biology of the Gene* is intended to be a new sort of text for beginning biology students, but it has extraordinary value for sophisticates as well. Designed to initiate into biology "the biologists of the future," the book first provides background in biochemistry, physical chemistry, microbiology, and genetics (both classical and microbial); on this background, the second half of the book develops the molecular biology of the gene—chiefly replication, mutation, transcription, translation, regulation, and differentiation. Since the book grew out of lectures given as *part* of an introductory biology course, it is presumably intended to be a text for only part of a course. Written and illustrated with brilliant clarity and simplicity, with excitement and enthusiasm, the book is nevertheless uncompromising in its intellectual appeal. The logic of discovery and how theory is advanced by the interplay of experiment and thought dominate the narrative. As a rule, Watson presents current molecular doctrine as firmly established. Yet in the last chapter (on cancer) he entertains the possibility of major exceptions to the central DNA-RNA-protein dogma. The debatable aspects of current doctrine are seldom mentioned. After all, these aspects are likely to be decided before today's beginning students become mature investigators. For these students it is more important to have their attention called to virtually complete voids in present knowledge which are likely to be still voids but hopefully ready for fruitful attack when the time comes for the students to select and attack problems. Such voids in knowledge are frequently and forcefully set before the reader, and they come as challenging guides to opportunities for discovery.

My only major objection to the book is the multitude of statements such as "it was immediately obvious that" or "it automatically followed that." In hindsight, this may be true; but it was seldom (or to very few) "immediately obvious" at the time. Would it not be depressing to potential investigators to compare such blitzkrieg operations with the usual tempo of their own progress in thought?

Watson's experience apparently justifies assuming that the book is suited to the level of the beginning biology student at Harvard. I doubt however whether the average of all such biology students could cope with all of its loaded contents, in spite of its clarity and simplicity. For the capable and prepared minority who could, the text would doubtless be a tremendously exciting and valuable experience. From the way the educational wind is blowing, this minority may be expected to grow disproportionately in the years ahead. Watson's text may be considered as a pioneering and immensely successful effort to serve the advanced guard of a new generation of biology students (and teachers).

As I mentioned at the start of the review, this beginning text also has extraordinary value for sophisticates. Even if the reader knew in advance every fact and idea, which few probably would, he would profit greatly from Watson's comprehensive perspective, from the way he has integrated the background of physical science and biology with molecular biology, from his vision of the relation of molecular and classical approaches to the great problems of biology, from his spotting of the important unknowns, and from his imaginative guesses about them. These are the qualities of the book, far greater than the many trivial errors which will doubtless be corrected, that stimulated me to load the margins of my copy with notes. I am therefore convinced that many graduate students, teachers, and researchers in biology, microbiology, genetics, and biochemistry would share my own reaction to the book. When a textbook for beginners can so stimulate and excite veterans, it is indeed a most remarkable book.

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New Books

General

The Archaeology of New York State. William A. Ritchie. Published for the American Museum of Natural History by the Natural History Press, Garden City, N.Y., 1965. 379 pp. Illus. $12.50.

The Assistant Medical Officer. The training of the medical auxiliary in developing countries. Edwin F. Rosinski and Frederick J. Spencer. Univ. of North Carolina Press, Chapel Hill, 1965. 213 pp. Illus. $6.

Bibliography of Vitamin E. vol. 6, 1960–1964. Compiled by Wilma F. Kujawski. Research Laboratories, Distillation Products Industries (Eastman Kodak Company), Rochester, N.Y., 1965. Unpaged. Paper, $3. Approximately 1884 papers are listed.

The Biology of Viruses. Kenneth M. Smith. Oxford Univ. Press, New York, 1965. 152 pp. Illus. $2. Home University Library of Modern Knowledge, edited by Michael Abercrombie and A. D. Woozley.

Albert Einstein: The Man and His Theories. Hilaire Cuny. Translated from the French edition (Paris, 1962) by Mervyn Savill. Eriksson, New York, 1965. 175 pp. Illus. $5.

Encounter with the Future. Fred Hoyle. Trident Press, New York, 1965. 128 pp. $4.95. The Credo Series, edited by Ruth Nanda Anshen.

An Essay on the Causes of the Variety of Complexion and Figure in the Human Species. Samuel Stanhope Smith. Winthrop D. Jordan, Ed. Harvard Univ. Press, Cambridge, Mass., 1965. 345 pp. $5.95. Reprint of the enlarged version, 1810.

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