
General Biology. *W. H. Johnson, R. A. Laubengayer* and *L. E. Delanney.* Henry Holt and Company, New York. 1956. x+618 pp. $6.95.

The concise coverage of up-to-date key facts and principles of biology on a simple plane is a particular outstanding feature of this book. These fundamentals are clearly presented by means of lucid text and illustrative diagrams that are both striking and realistic. A good balance is maintained in the treatment of representative plants and animals. In most cases the general arrangement of contents is designed so that laboratory and classroom work can easily be correlated.

The above features are representative of some of the major objectives set forth in the preface which are well attained. It is the opinion of the reviewer, however, that infectious diseases, immunity, etc. should be discussed together in a single chapter rather than being scattered throughout several chapters as is true in this publication. The M and N blood types should at least be mentioned in the discussion of blood groups. Otherwise, this book should be generally suited as a text for beginning students of biology at the college level, for which it is intended.

GEORGE HULL, JR.

Laboratory Manual for General Biology. *W. H. Johnson, R. A. Laubengayer* and *L. E. Delanney.* Henry Holt and Company, New York. 1956. x+174 pp. $2.75.

This manual, intended to serve as a guide for beginning students of biology at the college level, is divided into thirty-two units, each designed for a three-hour laboratory period. The organization follows that of the textbook by the same authors. In general, the materials selected for observations are suitable for the promotion of an understanding of methods, techniques, and fundamental principles of biology on the studies covered. A list of "materials and equipment needed" is given at the beginning of each unit. Directions for individual observations and demonstrations, to be set up by the instructor, are clear and concise. Directions for special preparations are given in the appendix. Most of the exercises include drawings to be labeled by the student.

In keeping with the above features, this manual should be generally appropriate for the purpose given. However, the reviewer feels that certain omissions or incomplete coverage may limit its usefulness. These include omission of exercises on the skeletal system of vertebrate animals, the classfication of plants involving the use of a key, and experiments on blood other than the study of cells. It is also felt that a more complete coverage of animal types would be desirable, though this feeling may be simply a symptom of the reviewer's zoological background.

GEORGE HULL, JR.

Your Career in Physics. *Philip Pollack.* E. P. Dutton and Co., New York. 1955. 127 pp. $2.75.

This little book is designed for two purposes. The first is to interest high school graduates in following a course of study leading to a career in physics. The second is to acquaint high school counsellors with the requirements for successful work as a professional physicist and to show them some of the opportunities which are now available.

Briefly, Mr. Pollack tries first to show the place of physics and the physicist in the world today. Then he outlines the mental, personality, and professional requirements for successful work in this field. These are followed by short discussions of the opportunities now existing in such fields as electronics, nucleonics, optometry and optical engineering, aeronautical research, biophysics, chemical physics, etc.

An appendix gives an extensive bibliography on the material covered in this book. There is also a list of colleges and universities offering programs in the fields covered. A list showing pay scales in government, university and industrial positions is given. Unfortunately, these data are for about 1951 and do not make very interesting reading when compared with the pay scales existing today.

Mr. Pollack took on a big assignment and in such a brief exposition, omissions must be made and many things considered only in terms of generalities. It is probably a good thing for an outsider to give such a nontechincal description of physics and physicists.

EDWARD S. FOSTER, JR.

Medical Effects of the Atomic Bomb in Japan. *A. W. Oughterson* and *Shields Warren*, Editors. McGraw-Hill Book Co., New York. 1956. xvi+477 pp. $8.00.

This authoratative and comprehensive presentation of the effects of the atomic bomb explosions over Hiroshima and Nagasaki is based on the six volume report of the Joint Commission for the Investigation of the effects of the Atomic Bomb in Japan. Most of the data have already been published in various specialty journals, but their incorporation in one book is a convenience for which students of this subject will be grateful.

The injurious effects of both bombs were similar and may be grouped as the result of mechanical trauma, burns, and ionizing radiation. The devastating effect of the blast is illustrated by numerous photographs. The resultant injuries were largely due to flying glass and falling debris. More serious injuries were seldom seen because the victims were killed by fires that swept the cities before rescue operations could be started.

Thermal effects among survivors were usually of the "flash" type, the result of an extremely high temperature acting for only about 3 seconds. The infra-red spectrum was strongly represented. In Hiroshima flash burns occurred to a distance of 3 miles; within 1.2 miles these burns were usually of the third degree.

The effects of the ionizing radiation (largely gamma rays) closely resembled those produced experimentally by total body irradiation of animals with x-rays. In many persons nausea and vomiting occurred within a few hours of exposure. Destruction of blood forming tissues, *e.g.*, lymphnodes and bone marrow, led to a breakdown of defense mechanisms with resultant local and generalized infections followed by death. Ulceration of the gastrointestinal tract as well as wide spread hemorrhages in the skin and viscera were a common finding.

No brief review can give an adequate account of the scope and rich detail incorporated in this book. Although some portions can be best appreciated by specialist, *e.g.*, the section on pathology, the book is strongly recommended for use as collateral reading for high school and college students in general science courses. Civil defense personnel will find the book invaluable, as will all those interested in the problems of radiology.

HANS G. SCHLUMBERGER

Electrical Interference. *A. P. Hale.* Philosophical Library, Inc., New York. 1956. vii+122 pp. $4.75.

As the author states, the literature on interference is scattered and scarce. The present monograph helps to fill the need. Although the principal message of the book is a discussion of the causes and remedies of electrical interference in radio and television reception, the subject is presented in sufficiently general terms to answer many of the problems of the laboratory worker who deals with low level, low frequency electrical information.

Conducted and radiated interferences are both dealt with in general and in practical terms. Specific consideration is given to the interference produced by various common electrical appliances.

This small volume will be of value to scientists who must handle their own problems of interference suppression.

RICHARD W. STOW