

## GENETICS AND CYTOLOGY

### Advances in Genetics

Vol. 2. Edited by M. Demerec. Pp. viii+373. (New York: Academic Press, Inc.; London: H. K. Lewis and Co., Ltd., 1948.) 7.50 dollars.

### Essentials of General Cytology

By Dr. R. A. R. Gresson, including 4 Chapters on Plant Cytology, by Helena Heslop Clark. (Edinburgh University Publications: Science and Mathematics, No. 2.) Pp. ix+184. (Edinburgh and London: Oliver and Boyd, Ltd., 1948.) 21s. net.

### Introduction to Genetics and Cytogenetics

By Robert Parkes Riley. Pp. xii+596. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1948.) 30s. net.

THESE three books attempt to solve the problem of disseminating information in the rapidly changing fields of genetics and cytology. They do so with varying success. "Advances in Genetics" is a notable experiment. The discussion by Mayr on what species mean in Nature is original and should stimulate systematists who have not realized the equally constructive and destructive effects of experimental method. Dahlberg's account of human population deals with more familiar ideas. Sears on wheat and Heston on cancer have given practical and useful summaries. Catcheside on radiations is comprehensive but, it seems, indecisive on fundamentals. Hughes Schrader on the coccids is not quite new enough or genetic enough for such a book. Caspari on cytoplasmic inheritance covers very fully the work on *Epilobium* by Michaelis and Lehmann, and on *Oenothera* by Schwemmler. These are analytically the least final parts of the story, and they remain as confused as ever. Such a volume is of some value to a few workers. If care were taken to secure coherent summaries and critical arguments from the reviewers, it would be of much value to many workers.

The work of Dr. R. A. R. Gresson on cytology has been written by only two authors, but might, indeed, like the "Advances in Genetics", have been the work of seven. The studies of animal and plant cells, of mitochondria and chromosomes, of the cell and of its functions in heredity are a largely disconnected compilation. Indeed, from this account they would appear to have little business with one another or with life in general, and the author seems to be particularly concerned with those bodies, like the Golgi element (as it is now called), the business of which is unknown. In the circumstances, it is not surprising that development and differentiation scarcely make a showing. There are some excellent photographs and diagrams, but who could guess from this book what had happened in cytology in the last thirty years?

H. P. Riley's text-book of genetics gives in thirty chapters a survey of the subject. Apart from *Oenothera* and cytoplasmic inheritance, it is reasonably up to date. Its point of view is close to the earth, practical and often superficial. Like many other American books on genetics, it is copiously illustrated in a way that will appeal to the very young. It is suitable for the middle forms of schools.

It is indeed remarkable that in the United States, where as much good genetic research is carried out as in all the rest of the world together, no searching, profound, and original account of the subject as a whole has been written for a generation. And only one or two attempts have been made. C. D. DARLINGTON

## THE STORY OF PHYSICS

### Half-Hours with Great Scientists

The Story of Physics. By Dr. Charles G. Fraser. Pp. xx+527. (Toronto: University of Toronto Press; New York: Reinhold Publishing Corporation; London: Oxford University Press, 1948.) 32s. 6d. net.

THE present age is sometimes called the Scientific Age. This does not imply that every member of the community is an expert scientist—far from it. It does mean, however, that the labours of the scientists have given the age certain features which influence the life of every citizen to some degree. Accordingly it is desirable that as many as possible should have some understanding of the scientists' work, of their aims, their point of view, and their methods." This quotation forms the first paragraph of the author's preface, and the book itself is a tribute to the skill with which Dr. C. G. Fraser has succeeded in providing a readable survey of mankind's debt to physicists.

The method employed is calculated to arouse genuine interest, and the personal and historical background, introduced naturally—especially by numerous quotations from the literature of science—adds to the value of the work as a record of human achievement. The limitation of this volume to "the Story of Physics" allows scope for considerable detail and variety within its five hundred pages.

Instead of a continuous story of physics as a whole, the author has developed chronologically a number of themes—mechanics, acoustics, optics, thermics, electricity and magnetism. Each theme is appropriately introduced by interesting references to pre-history, ancient and classical science, followed by medieval and modern studies, particular attention being paid to recent developments. This treatment by themes proves effective and gives ample opportunity for including names which in a shorter and more general survey have inevitably to be omitted.

The volume is well illustrated and produced, and provides the general reader with an interesting account of the various branches of physics. Original sources are given as footnotes, and a comprehensive index enhances the value of Dr. Fraser's work as a useful book of reference. H. D. ANTHONY

## MALTHUS MODERNIZED

### Road to Survival

By William Vogt. Pp. xvi + 335. (London: Victor Gollancz, Ltd., 1949.) 15s. net.

THE world is sick"—not just from war, nor from the physical disfigurements and social derangements which so far, in the twentieth century, have given a turbulence which Mr. William Vogt regards as symptomatic of a gross ecological disbalance of man and his environment. The author is chief of the Conservation Section of the Pan-American Union; his ornithological studies have led him to approach social problems with a broad ecological view, and his travels and investigations have shown him regions of the world in which the varying states of technological development and of environmental equilibrium impose a dangerous disharmony on the whole. His purpose