

text and it is illustrated by clear, illuminating text-figures. On the technical side it maintains or rather exceeds the high standard set by the first edition, and those who are familiar with the latter will recognize that this in indeed praise. On the whole a praiseworthy judgment has been exercised in what has been included and what omitted, and also between the old "Parker and Haswell" and

the changes necessitated by more modern ideas in zoology. The book is intended for the general student who studies zoology, whether in the university or elsewhere, for two years or so beyond the general first-year course. For this purpose it is excellent and will doubtless maintain the success of its predecessor and enhance its fame.

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## A HISTORY OF BIOLOGY

### Biology in the Making

By Emily Eveleth Snyder. Pp. xii + 539. (New York and London: McGraw-Hill Book Co., Inc., 1940.) 18s.

**H**OW is it that we know so much of the structure and life habits of dinosaurs and other prehistoric monsters? Why is it that scurvy, the eighteenth century scourge of seamen and others is scarcely known to-day? How was the relationship between insects and diseases discovered? How did Mendel discover the now well-known laws of heredity? Why is it that to-day surgery is comparatively safe whereas at one time about 90 per cent of the patients died of blood-poisoning?

These are only a few of the many questions in biology and such allied sciences as agriculture, medicine and hygiene which might easily be asked by almost anyone, and the teaching of biology will not be perfected until it makes it possible for almost any secondary school student to answer them. The answers can only be found by studying the history of the science. This view is obviously held also by Miss Snyder, and she has given her valuable aid to teachers and students in a book of absorbing interest by means of which they can trace the development in biological discovery, not by so many facts but (as she says) "as the product of real men whose lives for one reason or another make them outstanding in their fields".

The text is written with such compelling style that it is not necessary to have any former knowledge of biology in order to follow the history of biological discovery. The illustrations are a novel feature of the book. Nearly a hundred portraits of biologists and medical men adorn the pages. Some are especially pleasing studies and many have, so far as we know, never been reproduced in a text-book of this standard before. They range from Aristotle through such well-known men of science as Leeuwenhoek, Linnæus, Lyell, Agassiz,

Darwin, Pavlov, Galton, Bateson and Ross to the more modern workers such as Davenport, Gowland Hopkins, Conant, Blakeslee, A. V. Hill, Starling, Banting, Sherrington, Carrel, and so forth. The inclusion of the work and portraits of so many present-day workers marks the book as a distinct contribution to biological teaching. In the past few years, commendable efforts have been made to bring in the outstanding points of the history of any science by means of portrait studies; but most books seem to shun including the study of outstanding present-day workers. Other illustrations also do much to give the subject life and emphasize humanistic features of biological science. Some taken at random are: Gesner in his museum; Linnæus in his garden; consulting room of a physician of the Middle Ages; Jenner vaccinating a boy; Pasteur in his laboratory (the author stimulates the imagination in this case by reproducing the artist's impression of Pasteur in his laboratory and also a photograph from the film in which Paul Muni took the part of Pasteur; it is a pity these two are not on facing pages, since one is very much struck by the faithful reproduction in the film version); surgeon of the eighteenth century; Hales's experiment at Newgate Prison; Beebe's bathysphere.

Hints for further reading are given at the end of every chapter. At the end of the book there is a chronological list of nineteen pages. We think this would have been more valuable for reference had it been alphabetical instead of chronological. This list is followed by a glossary and the glossary by an extensive bibliography.

Many non-biologists will find this book of absorbing interest, but we would strongly recommend it to all teachers of biology in schools. Those students who have read a good School Certificate text-book in biology and this book simultaneously will leave school with a very broad outlook on biology and its important applications to human life and affairs.