To keep the volume a reasonable size the addition of this new matter has compelled the author to reserve for a second volume the subjects which were formerly discussed in the last two chapters, namely, life and the classification of the sciences. In other respects there is singularly little change, the author being evidently convinced that the original statement could not be improved upon. It is a pity, perhaps, that some of the more polemical sections have not been modified so as to prevent misunderstanding as to the intention of some of the earlier writers who are attacked. Prof. Pearson himself speaks of "the acceleration of A due to B," but carefully adds a footnote to guard the reader against taking the phrase in its obvious meaning. Newton and others were guilty of similar anthropomorphism, for which they are denounced. They failed to add warning footnotes, partly because they had a grand faith in the common sense of their readers, partly because they were writing a constructive scientific treatise, and not a critical grammar of science. These attacks, however, add spice to the pages of a book which excels in the clearness with which the significance of natural law is discussed.

It should be mentioned in conclusion that chapter x., on modern physical ideas, is contributed by Prof. E. Cunningham. The scope of the chapter is sufficiently indicated by the titles of a few of the sections, such as: the electromagnetic constitution of the atom, electromagnetic mass, fluid or space distribution of electricity, and the theory of relativity. The expanded second volume of this interesting work will be looked forward to with great expectations.

A BIOLOGICAL DICTIONARY.

Wörterbuch der Biologie. By Dr. Heinrich Schmidt. Pp. viii + 581. (Leipzig: Alfred Kröner, 1912.) Price 10 marks.

WRITERS on biological subjects have always used a rich vocabulary, but with the growth of information and knowledge there has arisen such a wealth of technical terms and of classificatory nomenclature that readers, and even writers themselves, are often at a loss, and it is difficult to refer an inquirer to any handy work containing an adequate glossary of terms used in anthropology, botany, and geology. Ziegler's "Zoologisches Wörterbuch" supplies the want for zoologists, and supplies it well, but there is undoubtedly room for such a dictionary as this which Dr. Schmidt has written. At a rough estimate it contains 10,000 definitions, and the labour of compiling it must have been very great, for not only are descriptive words explained but there are also many generic terms and expressions that appeal only to the advanced systematist. The derivations of the words are not given.

Use, and use alone, can test the value of this dictionary. So far as we have been able to determine its accuracy and inclusiveness, the work has stood the test very well. As an example of the unexpectedly interesting information afforded in dealing with arid or forbidding names, we select "Lebensdauer." Under this heading a most interesting summary is given of the relative longevity of plants and animals. We are told on the authority of Hesse's work, "Tierbau und Tierleben," that an earthworm lives ten years, a leech twenty or even twenty-seven years, a pond mussel twelve years, a (fresh-water) pearl mussel fifty to a hundred years. Most of the definitions we have examined seem well arranged, though here and there a little inaccuracy has crept in. For example, under "body-cavity" we are told that a true coelom is well-developed in limulus, spiders, millipedes, and insects, whereas, of course, the well-developed cavity in these animals is not a true coelom at all.

The terms used in classification seem needlessly numerous, and are sometimes very unhappily expressed. Protozoa, for example, are divided into "Cytomorphæ" and "Cytoideæ," a new and abominable classification. Certain cases of omission have occurred in the course of a few days' use. The term "lipoids," about which so much is heard just at present, might have been included. The class of pigments known as lipochromes is left out, whilst the melanins are included. But these considerations are of small account in comparison with the mass of successful definitions which testify to the author's tireless researches. A few illustrations are given, and a geological table is added as an appendix.

OUR BOOKSHELF.

Links with the Past in the Plant World. By Prof. A. C. Seward, F.R.S. Pp. ix + 142. (Cambridge: University Press, 1911.) Price 1s. net.

THE object of this neat little volume is best explained in the author's words. "I hope," he says, "that I may succeed in attracting some of my readers who are already interested in living plants to the study of plants of former ages." The book is likely to fulfil its purpose. Without attempting any serious discussion of evolutionary theories, the author brings home to the reader the deep interest of a number of problems in the history of plants and their distribution.

The introductory chapter begins with the always attractive subject of the longevity of trees, and explains very clearly how a tree grows