

OUR BOOK SHELF.

John Dalton. By J. P. Millington. Pp. xii+225. (London: J. M. Dent and Co., 1906.) Price 2s. 6d. net.

THIS volume constitutes the latest addition to the series of "English Men of Science" now in course of publication by Messrs. J. M. Dent and Co., and is a concise and well-written account of the illustrious author of the atomic theory. Everything there is to tell about the old Quaker philosopher has already been told in such well-known works as the "Memoirs" of Henry and of Angus Smith, and in the lesser-known biography of Dr. Lonsdale, and all that a modern historian can do is to put together, with such literary skill as he can command, the facts of his simple, uneventful life. The publication of the "New View of Dalton's Atomic Theory" by Sir Henry Roscoe and Dr. Harden, and the criticism which the "New View" has received from Debus, might have afforded an opportunity to Mr. Millington for the exercise of his critical acumen, but Mr. Millington fails to avail himself of it, the quotation from the "Fundamental Sätze der Chemie," published two years before the appearance of the "New View," having little relevance to the matter in dispute between them.

Mr. Millington's narrative is simple and unaffected in style, befitting the character it seeks to describe. It is calculated to give the reader a just and faithful impression of a calm and beautiful life, utterly unworldly, and free from any taint of self-seeking, envy, or greed.

It might at first sight be thought there was no room for another book on Dalton, but we cannot have too much of such an example, and certainly no biographical series of "English Men of Science" would be complete which omitted his great and honoured name.

Verhandlungen der deutschen zoologischen Gesellschaft, 1906. (Leipzig: W. Engelmann, 1906.) Price 10 marks.

THIS volume contains the papers read at the sixteenth annual congress of the society held at Marburg, June 5-7, 1906. The number of subjects covered by the papers and "demonstrations" is so great that it is only possible to refer to a few. On account of being fully illustrated, special mention must be made of a communication by Prof. L. Plate on the evolution of species in the Bahama land-shells of the pupa group classed under the title of *Cerion glans*. The gradation from a large-sized, heavily-ribbed, and uniformly coloured type to a diminutive one in which the place of ribs is taken by bands of colour is admirably illustrated in the plate.

In the second paper, illustrated by a plate, Dr. F. Doflein deals with the fauna and oceanography of the Japanese coast, especially from the point of view of the dispersal of organisms; in his opinion continental barriers offer much less serious obstacles to the dispersal of marine organisms than is commonly supposed. The zoological distribution of animals also forms the subject of a paper by Dr. E. Stromer, who discusses the bearing of the recent discoveries of fossil vertebrates in the Tertiaries of Egypt on current theories as to the origin of the modern African fauna.

Considerable general interest likewise attaches to a long paper, by Prof. Simroth, on the fauna of Sardinia, which deals in considerable detail with the origin and relationships of the native breeds of domesticated animals, and brings out some noteworthy points in

connection therewith. Most of the other papers deal with subjects of interest only to specialists. It may be added that methods of modern research form the subject of the opening address to the session by Prof. Hertwig, and that at the inaugural meeting Prof. Korschelt gave an historical sketch of the rise and progress of the zoological institute of the University of Marburg.

Photograms of the Year 1906. Pp. 164. (London: Dawbarn and Ward, Ltd., n.d.) Price 2s.

IN these pages we are introduced to a series of excellent reproductions of typical photographic pictures of the year. This has been compiled by the editors and staff of the *Photogram*, and a descriptive article accompanies the series. Mr. A. C. R. Carter contributes a criticism of the two great photographic exhibitions, namely, the "Salon" and "Royal."

In addition to the above, pictorial photography is dealt with in several other essays by various writers. Thus Mr. Roland Rood writes about America, Mr. Mortimer Lamb about Canada. The year's photography in Spain is dealt with by M. Mendez Leon, while "Western Workers in the United States" is the subject of an article by M. Fayette J. Clute.

As this annual is noted chiefly for the reproduction of photographs, and in this issue the standard is excellent, it may be mentioned that the principal illustrations are reproduced by Messrs. Carl Hentschel, Ltd., and the printing by Messrs. F. W. S. Clark and Co., Ltd., on the "first quality art" paper of Messrs. John Dickinson and Co., Ltd.

One of the frontispieces is an excellent three-colour picture reproduced and printed by Hentschel-colour-type from negatives by Mr. William Gill. To those photographers who are mainly concerned with the "pictorial" branch of photography this annual will therefore prove of great interest.

Les Nombres positifs. Exposé des Théories modernes de l'Arithmétique élémentaire. By M. Stuyvaert. Pp. xii+132. (Gand: Van Goethem, 1906.) Price 3 francs.

THIS treatise certainly deserves a trial by school teachers. The author realises that there is a great gulf between arithmetic, as usually taught in schools, and the strict logic of the subject, and, at the same time, that it is impossible to teach it with complete rigour to a school class. He assumes the commutative law of addition, and then proves the elementary rules in a way which is quite sufficient for school purposes, and does not involve any fallacies which afterwards have to be renounced. The treatment of irrationals follows Dedekind; that of fractions is based upon the definition that $a/b=c/d$ if $ad=bc$. Proportion is treated in the way that is usual in France; the section on this subject would require to be expanded and illustrated by the teacher; the same is true of other articles, notably §. 13, which is unduly condensed, and where the distinction between algebraic and arithmetical divisibility is rather blurred. Many teachers will regret seeing contracted multiplication expounded by Oughtred's rule of reversing the digits of the multiplier. The rule for contracted division, though instructive, is needlessly complicated from a practical point of view; and, alas! the rule for arithmetical subtraction is given in its old-fashioned form. However, these are minor points, and it is worth while to refer to them only because the book is so attractive in other respects. Attention should be drawn to the author's way of considering fractions, which he sketches out in his preface.