

As regards the figures that accompany the work itself, it is a matter for regret that they cannot be commended. Few objects are more difficult to draw or require more skill in their delineation than do the shells of mollusca, and the amateur is rarely able to do them justice. The want of finish in the present instance is all the more noticeable from the contrast they afford to the rest of the "get up" of the work, which is admirable.

These shortcomings are not thus dwelt on in any captious spirit, but are pointed out in the friendly hope that a future edition of the work may shortly be forthcoming, in which the defects of the present one, compiled under great difficulties and at much disadvantage, may be made good and a really complete catalogue result.

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OUR BOOK SHELF.

The Framework of Chemistry. Part I. By W. M. Williams, M.A. (London: George Bell and Sons, 1892.)

THIS is the first part of a book which has been specially written as a supplement to the oral lessons and experimental demonstrations given by a teacher. It is intended to contain nothing but what is absolutely necessary to give definite and precise impressions regarding the salient points of the lessons, all details relating to laboratory manipulation being omitted. The more important introductory facts, divested of theoretical considerations, are first discussed, then come "atoms and molecules," treated in an elementary fashion and leading the way to the explanation of the use of symbols and formulæ.

How the system adopted by the author will work out can only be ascertained when the other parts are to hand. So far as the information in the present volume goes, it is to a great extent useful and clearly stated.

Objection may be taken to the classification of solutions as mechanical and chemical, for, were it for no other reason, it is still a disputed point whether any solution may be considered a mixture.

The concise style of the book lends itself to incomplete statements. For instance, to say that one of the oxides of carbon "contains exactly twice as much oxygen as the other," is hardly accurate; a constant quantity of carbon is essential to the accurate conception of the facts. The most serious blunder made by the author lies in the confusion of force and energy. This is manifest in statements involving the conversion of "chemical force" into an "equivalent amount of heat" or of "electrical force," and culminates in the assertion that "Force, like matter, cannot be destroyed."

The Beauties of Nature, and the Wonders of the World we Live In. By the Right Hon. Sir John Lubbock, Bart. M.P., F.R.S. (London: Macmillan and Co., 1892.)

So many writers of the present day adopt a pessimistic tone that a pleasant impression is always produced by Sir John Lubbock's genial and imperturbable optimism. In the present volume he undertakes to show how many sources of interest men might find in the world around them, if they would only take the trouble to train themselves to appreciate the scientific significance of ordinary facts. He begins with a study of animal life, and has much that is fresh and suggestive to say about various aspects of the subject. Then there are chapters on plant life, woods and fields, mountains, water, rivers and lakes, the sea, and the starry heavens. The volume is written in the clear, frank style with which all readers of Sir John Lubbock's books are familiar, and it ought

to do much to foster among the class to which he appeals habits of careful and exact observation. His readers have the satisfaction of knowing that of the many things they may learn from him none will afterwards have to be unlearned.

Algebra for Beginners. By H. S. Hall and S. R. Knight. (London: Macmillan & Co. 1892.)

THIS work is intended as an "easy introduction" to the author's "Elementary Algebra for Schools," and, besides being treated on lines similar to those of the last-mentioned book, is published in a cheaper form. The idea throughout seems to have been to present the beginner with the practical side of the subject, and with this intention the examples are made as interesting as such examples can be. The usual sequence has not here been strictly adhered to; but a beginner will find that he will still be able to reach the "as far as quadratic equations" limit. It is needless to say that the explanations are stated in clear and simple language, while the examples are all new. That this book will be widely used is undoubted, for it will form an excellent forerunner to the more advanced one referred to above.

Introduction to Physiological Psychology. By Dr. Theodor Ziehen. Translated by C. C. van Liew and Dr. Otto Beyer. (London: Swan Sonnenschein and Co. 1892.)

IN reviewing the book of which this is a translation (NATURE, vol. xlv. p. 145), we pointed out that such a book was badly wanted in English. We are glad, therefore, to welcome a translation of Dr. Ziehen's work, which will serve well as an introduction to the new science of physiological psychology.

LETTERS TO THE EDITOR.

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The *Volucella* as Examples of Aggressive Mimicry.

AN interesting point in the *Volucella* as examples of aggressive mimicry is the fact that they were first used to support the teleological theories of an earlier day, and were subsequently claimed by natural selection. Thus Messrs. Kirby and Spence speak of them (Second Edition, 1817, vol. ii., p. 223) as affording "a beautiful instance of the wisdom of Providence in adapting means to their end;" and after describing the resemblance of the flies to the bees, they continue, "Thus has the Author of nature provided that they may enter these nests and deposit their eggs undiscovered. Did these intruders venture themselves amongst the humble-bees in a less kindred form, their lives would probably pay the forfeit of their presumption." In this theory of Providence it is hard to see where the bees come in. In 1867, A. R. Wallace published an article on "Mimicry and other Protective Resemblances among Animals," which was in 1875 republished in his "Essays on Natural Selection." In this essay (p. 75 of the volume) he spoke of this interpretation as the only case in which an example of mimicry had been "thought to be useful, and to have been designed as a means to a definite and intelligible purpose." He accepts it as a product of natural selection, and since that time it has been constantly used as a well-known example of this principle, so well known, indeed, that the history of it became unnecessary in any publication where space was an object.

I neither originated the principle of aggressive mimicry nor the *Volucella* as examples of it, although I accepted, and still accept, both. Under these circumstances I must, in justice to Kirby and Spence and A. R. Wallace, repudiate the discovery of a significance I should have been proud to have made, but which was made, as a matter of fact, about half a century before I was born. It is only fair to these writers to say this, for Mr. Bateson, although mentioning Kirby and Spence, seems