OUR BOOK SHELF

Die Weich- und Schaltiere gemeinfasslich Dargestellt. Von Prof. Ed. von Martens. (Leipzig: G. Feytag; Prag: F. Tempsky, 1883.)

"CONCHOLOGY is ris!" was the pithy remark of the lamented Edward Forbes, made in his cheery way about forty years ago, when Mr. James Smith of Jordan Hill directed his attention to the arctic nature of some fossil shells in the Clyde district. Capt. Brown, however, had previously but unconsciously published the same hypothesis, which has been lately confirmed and extended by the discoveries of Messrs. Steele and Scott at Glasgow. Since the above remark was made by Forbes the study of the Mollusca has in a general point of view marvellously increased and become popularised by innumerable publications. We have now no fewer than six periodical works on the subject, English, French, Belgian, German, Italian, and American, besides four most useful manuals in English, French, German, and American. The German and latest manual, now before me, has been written by an experienced conchologist whose father (Georg von Martens) was favourably known to science nearly sixty years ago by his "Reise nach Venedig." The present author may therefore be considered an hereditary naturalist.

The manual of Prof. von Martens differs from that of Dr. Paul Fischer ("Manuel de Conchyliologie") which is in course of publication, as well as from Woodward's "Manual," in its plan and popular mode of treatment, although all these works are equally good. The present treatise on the soft or naked and shelly Mollusks forms a small octavo handbook of 327 pages, and is illustrated by 205 figures. The principal contents of the work are as follows:—

(1) Names and position in zoology; (2) The shell in general; (3) Organic structure of the Mollusca; (4) Cephalopods; (5) Univalve shells, Nudibranchs, Heteropoda, Pteropoda, and Solenoconchia; (6) Bivalves; (7) Habitat and geographical distribution; (8) Enemies and use of the Mollusca. The illustrations are excellent; they are not arranged in plates, as in the manuals of Woodward and Fischer, but are dispersed throughout the work in their appropriate places by way of explanation. This is in some respects an improvement, although it causes an unnecessary repetition of the same figures. For instance *Margaritana margaritifera* (why not *Unio margaritifer?*) is figured three times in pp. 196, 221, and 311.

The curious varieties or monstrosities of *Planorbis multiformis*, a tertiary shell from Steinheim, are well shown in Fig. 128. I am very glad to see that the author is by no means addicted to an excessive multiplication of genera and species, which is the normal failing of so many Continental conchologists, especially in the land and freshwater shells. In the Pteropoda he has rightly adopted Pallas's generic name *Clione* (1767-1774) for *C. borealis*, instead of Müller's name *Clio* (1776), which Fischer has used in the reverse sense. *Clio* of Linné (founded on Browne's genus and Jamaican species) is wrongly represented in the manuals of Fischer and von Martens by *Cleodora* of Lamarck. As no review or notice of any book is regarded as complete or satisfactory without a dash of criticism, however slight, I would venture to suggest a few corrigenda for the next edition. It is impossible to distinguish *Helix hortensis* from *H. nemoralis*, except as a variety, the former being more northern and the latter more southern in geographical distribution. *Hyalæa* of Lamarck (1810) ought to be *Cavolina* of Gioeni (1783) and Abildgaard (1791), not of Bruguière (1792); *Loripes* is not a synonym of *Lucina*, but a distinct genus, and *Sphærium* is a much older name than *Cyclas*. But I make these few remarks more for the consideration of the author than from any pretence on my part to be a judge. I can heartily and conscientiously recommend this manual not only to the scientific but to the ordinary class of readers. J. GWYN JEFFREYS

Notes on Qualitative Analysis, Concise and Explanatory. By H. G. H. Fenton. (Cambridge University Press, 1883.)

THESE are ordinary tables of reactions of the "more common metals and acids," and also of some of the "more common organic bodies." The organic bodies include carbohydrates and a few alkaloids.

It is very strange that the farce of common and rare elements is still maintained in nearly all the tables and books on qualitative analysis. Surely such elements as titanium and tungsten and molybdenum and selenium or lithium are common enough, at any rate in laboratories, to have a place given to them in analysis books, not to mention thallium, glucinum, and cerium, which do occur in minerals, to the no small mystification of the poor student crammed up with tables of analyses of "common metals." There are rather too many empty pages in these "Notes," and the size is inconveniently large for working with on a laboratory bench.

Practical Chemistry, with Notes and Questions on Theoretical Chemistry. By William Ripper, Science Master, Sheffield Board School. (London: Isbister, 1883.)

THESE notes and questions, mostly questions, have been, as the author explains, compiled to prepare students and teachers for the examinations of the Science and Art Department. It is to be regretted that such books are required, for although, as the author states in his preface, the arrangement may have been very successful in "passing" students, it is questionable whether the information and knowledge obtained are of such a nature as to be valuable afterwards. The book is well adapted for its purpose, that of cramming.

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.*

[*The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to insure the appearance even of communications containing interesting and novel facts.*]

The Matter of Space

WILL you permit me to express my thanks to Prof. Herschel for his flattering review of my paper on "The Matter of Space," in NATURE, vol. xxvii. p. 349? It is certainly gratifying to find that the views which I deduced from the ordinary relations of moving matter are confirmed by the results of mathematical analysis, and it is a source of satisfaction to me to have called forth such a studied and thorough treatment of the subject as Prof. Herschel has given it. I cannot but retain my view of the unity in character of all substance, to which he objects, yet in that respect our opinions diverge but slightly, since I replace ether with excessively disintegrated matter, and he considers the particles of ponderable matter to consist of aggregates of ethereal substance. An ether whose condensation yields particled matter answers all the requirements of unity of substance.

As the subject is under discussion, there are some further points in the motor relations of particles which it may be well to indicate. It is highly improbable that the molecules of matter, even if it be in the state of a rare gas, wander at will, constantly changing their relations of position to other molecules. More probably there is very little independent change of place, each molecule being usually held as a close prisoner in a nest of surrounding molecules. The grouping of molecules may be changed by the action of external agencies, but a new molecular equilibrium tends to be quickly established. Such seems the general tendency of nature. If some of the molecules in a mass of substance have an independent motion, friction soon disseminates that motion, and brings them into harmonious conformity with