

correct name, nor for where to refer to for information about it.

It can thus be well understood, even by those who never had the good fortune to know Forbes, that the loss of such a man was keenly felt by his numerous friends and fellow-workers. Soon after his death, in 1883, it was resolved, at a meeting of the Zoological Club, that some sort of memorial of him should be carried out. After due consideration of the question it was unanimously determined by the Committee to whom the subject was referred that the best scheme would be the republication of Forbes's numerous papers in a connected form. This had been the course adopted in the case of Garrod, who had preceded Forbes in the Prosectorship of the Zoological Society of London. It was found that Forbes's contributions to science would make a volume of about the same size as the scientific papers of Garrod, and would not, it was believed, be of inferior interest.

The memorial volume, prepared and issued under these circumstances, contains sixty-seven papers published by Forbes in different periodicals from 1875 to 1882. The original illustrations have been in every case reproduced, and to increase the usefulness of the reprint, exact references to the paging of the original articles are added in the margin. At the end of the volume is given Forbes' last journal, reprinted from the *Ibis* for 1883, and containing a most interesting account of his observations during his fatal expedition up the Niger. Forbes died at Shonga, one of the stations of the United African Company on that malarious river, on January 14, 1883. Up to two days before his death the entries in the journal are in his own writing. The fatal termination of his illness, recorded by another hand, concludes the volume.

OUR BOOK SHELF

Elementary Algebra for Schools. By H. S. Hall, B.A., and S. R. Knight, B.A. (Macmillan, 1885.)

THIS is, in our opinion, the best *elementary* Algebra for school use. It is the combined work of two teachers who have had considerable experience of actual school teaching, aided by the advice of such men as the present Head of Clifton College, and so successfully grapples with difficulties which our present text-books in use, from their authors lacking such experience, ignore or slightly touch upon. Up to the point to which the subject is carried in this volume, it is treated with sufficient completeness for ordinary school purposes: the last four chapters present a somewhat concise account of ratio, proportion, and the progressions, which, however, covers enough ground for the ordinary examinations which schoolboys have to encounter. The authors propose to treat these parts in fuller detail in a *Higher Algebra*, which they are preparing. We do not propose to examine the book at any length, but confidently recommend it to mathematical teachers, who, we feel sure, will find it the best book of its kind for teaching purposes. Many subjects of interest are also treated of, and a vast collection of (3500) examples will furnish ample exercise for the boys, and save the teacher the trouble of concocting illustrations of the best methods. Answers are furnished at the end, so that those teachers who do not care that their pupils should have them handy, may have them sewn up.

Key to the Elements of Euclid. By J. S. Mackay, M.A. (W. and R. Chambers, 1885.)

THIS is a most valuable pendant to the edition of the "Elements" which we recently had occasion to notice so

favourably. It is a book of nearly the same size as the "Elements" and yet contains, in consequence of the general omission of diagrams, solutions of the very large collection of admirable deductions which Mr. Mackay collected for the student in that work. De Morgan's words, quoted in the short preface, furnish ample ground for the omission of figures: "I am satisfied, from sufficient trial, that when proper description of the diagram is given in the text, the person who draws his own diagram from the text will arrive at the author's meaning in half the time which is employed by another to whom the successive appearance of the parts is prevented by his seeing the whole from the beginning."

The Essentials of Histology. By E. A. Schäfer. (London: Longmans, Green and Co., 1885.)

THIS will prove a useful book for students. It is arranged in forty-two lessons and appendix. Each lesson commences with a short statement of methods for the microscopic examination of the tissue described in the lesson. All simple tissues and organs are thus passed in review, and their most essential characters are succinctly described and illustrated. It is to be regretted that Prof. Schäfer has deviated from the customary plan of giving some kind of reference both for the text and the illustrations. The latter are mostly taken from Prof. Schäfer's portion of Quain's Anatomy, and their original source, although mentioned in Quain's, is here omitted.

An index at the end of the book would be a desirable addition.

E. KLEIN

An Atlas of Practical Elementary Biology. By G. B. Howes. (London: Macmillan, 1885.)

THE anatomical drawings of Mr. Howes have for some years been well known in all laboratories where animal morphology is taught. In his "Atlas of Elementary Biology" he has now published a very complete series of figures illustrating the chief of those animal and vegetable types which are generally given to students in their first session. The need for such a work as this is well known to every one who has any experience of biological teaching; and the name of its author is a sufficient guarantee of the careful accuracy and artistic excellence of the drawings it contains. The low price at which a student's text-book must necessarily be sold has precluded the use of colour, which might in a few cases have given some additional clearness to the figures; but all that could be done with black and white has been done, and every figure is evidently a faithful copy of an actual dissection, such as a student may reasonably hope to repeat for himself.

In the case of every animal chosen, a series of drawings showing the gross anatomy of the adult is followed by a few illustrations of the minute structure of its tissues, and of its main developmental features.

The drawings of adult anatomy are throughout excellent; the others, though the size of the work has somewhat restricted their number, will probably suffice for most of the needs of commencing students. It is however to be regretted that there is no figure showing the minute structure of the gill in Anodon, and also that Mr. Howes has not been able to accept Spencer's statement as to the conversion of the frog's blastopore into the permanent anus.

The botanical portion of the Atlas contains an admirable series of figures, showing the structure of the plants described in Huxley and Martin's well-known text-book, and completes a work which cannot fail to be of the greatest service both to teachers and to students of biology.

W. F. R. W.