

occasionally omitted; no mention is made, for example, of the ordinary methods of obtaining melting-points.

It is noteworthy also that processes relating to the purification of substances for physical study are not touched upon. Accounts of the best systems of fractionation, either by distillation or crystallisation, or of distillation under reduced pressure, &c., have, it seems to us, a better right to a place in a book of this kind than, say, the chapter on glass-blowing. Again, no particular notice is taken of methods which have to be used when only a small quantity of material is available. It frequently happens that a substance can only be obtained sufficiently pure in but small quantity, and if methods of obtaining boiling-point, density, refractive index, &c. in such cases were more widely known, physical constants would no doubt be more generally estimated in the course of ordinary chemical investigations.

It is needless to state that the book is full of useful hints both on methods and apparatus, and will be indispensable to those for whom it is specially designed. It is also worthy of special recognition as being yet another effort on the part of Prof. Ostwald to place physical chemistry on a level with other departments of experimental investigation.

J. W. RODGER.

#### OUR BOOK SHELF.

*Handbook of British Hepaticæ.* By M. C. Cooke, M.A., LL.D. 1 vol. 8vo. 310 pp. 7 plates. 200 woodcuts. (London: W. H. Allen and Co., 1894.)

PROBABLY no group in the British flora has received so little attention as the Hepaticæ. This is due partly to the ordinary botanical text-books describing merely the life history of the ubiquitous *Marchantia polymorpha*, and ignoring or passing over with but scanty reference the foliaceous group. But chiefly it is due to the want of a handbook by which beginners could identify their plants and obtain references to the literature of the subject. Sir W. J. Hooker's magnificent monograph, which appeared in 1816, contained plates with copious descriptions of all the British species then known; but it is now scarce, costly, and having all the species described under one generic name, *Jungermannia*, it becomes necessary, after identifying a plant by it, to refer to some other source to ascertain the now accepted name. Hooker's "English Flora," vol. v., in dealing with the same group, divides the frondose group into several genera, but retains the generic name of *Jungermannia* for the whole of the foliaceous group.

In 1865 Dr. M. C. Cooke published, as a supplement to *Science Gossip*, a catalogue with outline figures of all the British species. This is now out of print. Since then notes scattered through various journals have formed the whole of the British literature upon the subject, except the commencement of a monograph by the late Dr. B. Carrington.

Dr. M. C. Cooke has now filled up the gap by producing a "Handbook of the British Hepaticæ," containing full descriptions of all the species, about two hundred in number, known to inhabit the British Islands. The volume opens with an introduction of 20 pp., describing the position, structure, reproduction, and subdivisions of the group. This is followed by a detailed account of the species, each arranged upon the same plan. First come the diagnostic characters, followed by copious synonymy, then the habitat, and finally a full description. Each species is also represented by an outline figure, either in the text or in one of the seven plates at the end of the

volume. A bibliography and index complete the work. The size and clearness of the type will be appreciated by those who use the book, as it should be, in conjunction with microscopical examination of specimens. Altogether a very useful work has been produced, which ought to fill a gap already too long vacant.

C. H. W.

*The Royal Natural History.* Edited by Richard Lydekker. Parts 1 and 2. (London: Frederick Warne and Co., 1893.)

YET another "Natural History." There is certainly a demand for such, and without doubt there is a supply. The work is to be in six volumes, and the parts, published monthly, will complete the series in three years. The paper and typography leave nothing to be desired. The illustrations are in almost every instance, so far as our knowledge of the published parts goes, excellent; many of them are as artistic as they are accurate; and when we add that the editor of the series is an able and well-known zoologist, there can be no doubt but that the reader or purchaser will get full value for their expenditure of time or money.

In noticing a work of this nature, when the facts are as above stated, there is but little room for criticism, and despite the shock which the first blazing sound of its advent conveyed to our senses, despite the fact that "it is not compiled or translated from foreign sources," and that "the co-operation of the Bibliographic Institutes of Leipsic and Vienna" has been secured so as to obtain "all that is best and newest among the productions of the greatest natural history publishers of Europe," we yet most heartily recommend the work to all our readers, and we anticipate that most of those who take any interest in zoology will place it on their book shelves.

Of the six volumes, as was to be expected in a work of this kind, the larger number (five) is to be devoted to the backboneed animals, and but one to the boneless crew; and of the first five volumes, two and a half will relate to the mammals, one and a half to the birds, and but one to the reptiles, amphibians, and fish. It is not at all a fair division, but then the mammals are thought to be the most generally interesting class, and we are promised a lot of information about "the larger game." The first two parts are devoted to the monkeys, and we have an account of nearly all the known species, accompanied with an immense number of illustrations. One suggestion occurred to us while reading over the account of the habits of the baboons; that when plants are referred to they should, when their scientific names are used, be quoted specifically as well as generically; thus a "very remarkable kind of West African plant" is mentioned as the "welwitschia," but the editor would never think of quoting the Anubis baboon as the "cynocephalus." We hope it will be a long time before *Welwitschia mirabilis* will be exterminated by the baboons. From a natural history stand-point there is really no such plant as an "ixia," but there are several species of the genus *Ixia*, upon the bulbous stems of which it would appear these baboons feed.

#### 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 intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

#### The Origin of Lake Basins.

I WELCOME the criticism of my article on the glacial origin of a certain class of lakes by an experienced geologist like Mr. Oldham, because it probably embodies the strongest argument that can be adduced on the other side—at all events as regards