

therapeutical uses of massage in affections of the skin, of the muscles, in rheumatism, sprains, dislocations and fractures, disorders of digestion, anæmia, obesity, nervous affections, insomnia, heart diseases, and in many other maladies in which mechanical manipulations, intelligently and skilfully employed, have been proved to be efficacious after other means of treatment have failed.

The author gives, throughout his work, succinct and practical directions, which will prove of the greatest use to those practitioners who have had no experience of a treatment which is now generally accepted in the medical profession as one of the most useful in therapeutics.

OUR BOOK SHELF.

Catalogue of the Fossil Bryozoa in the Department of Geology, British Museum (Natural History). The Jurassic Bryozoa. By J. W. Gregory, D.Sc., F.G.S., F.Z.S. Pp. 239; pl. xi. (London: 1896.)

THIS catalogue is a valuable addition to the twenty-two monographs which have already been devoted to the various groups of fossils preserved in the Geological Department of the Natural History Museum. The Trustees of the British Museum have earned the gratitude of palæontologists, and of naturalists generally, by bringing together such a wealth of information upon the fine collections under Dr. Henry Woodward's care.

In an introduction, Dr. Gregory discusses the problem of tubular fossils, the affinities, and the structure of Bryozoa, the terminology of the shells of the Cyclostomata and Trepostomata, and the value of generic divisions in the latter order. In this section, the differences of opinion between those who attribute generic value to trivial differences, and those who prefer to restrict the number of genera, are described. The discussion of transitions traced in groups of Cyclostomata, leads to the examination of the question whether there are really genera and species among Cyclostomatous Bryozoa. Taking the genera *Diastopora* and *Berenicea* as exemplifying the real value of zoarial characters in the order, they seem to support the admission that "there are no true genera among Cyclostomata, but only certain convenient, but artificial, groups of species. . . . I therefore accept the terms *Stomatopora*, *Proboscina*, &c., as names for convenient groups, which are not altogether artificial, but which are not genera in the sense in which that term can be used among Echinoidea and Mammals. They could be better described as circuli than as genera."

From the subject of generic divisions, Dr. Gregory passes to specific groups and individual variations. The comparison of the forms of Bryozoa that lived in successive geological periods, appear not to lend support to Mr. Bateson's views as to discontinuous variation. "The general evidence of the fossil specimens," says Dr. Gregory, "and the great difference of opinion as to the range of specific variation between those who multiply species indefinitely, and those who place Silurian and recent individuals in the same species—tend to show that most of the forms of Cyclostomata have arisen by slow, imperceptible, continuous variation."

With the exception of two species (both members of the order Cheilostomata), all the Jurassic Bryozoa belong to the order Cyclostomata. This order is classified by Dr. Gregory into four sub-orders, viz.: I. Articulata; II. Tubulata; III. Dactylethrata; IV. Cancellata. The first of these groups is not represented in the Jurassic, and species of the fourth group do not appear until the Cretaceous period. The names of the second, third, and fourth groups are based upon zoecial structure, while the subdivisions of the groups depend upon zoarial characters.

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From the foregoing outline of the teachings of Dr. Gregory's examination of the Bryozoa of Jurassic times, it will be concluded that the catalogue furnishes facts of distinct value in working out the evolution of the class. Eleven plates, containing many admirable drawings of the species described, have been prepared for the catalogue by Miss G. M. Woodward. These, with the careful determinations and critical introduction, make the catalogue not only most acceptable to all palæontologists, but also of the greatest interest to systematic zoologists.

Water Supply (considered principally from a Sanitary Standpoint). By Wm. P. Mason. Pp. 504. (New York: John Wiley and Sons. London: Chapman and Hall, Ltd., 1896.)

THIS is an unusually interesting treatise on a technical subject, about which so much has been already written, and the author is to be congratulated on the large amount of new information which he has succeeded in compressing into a comparatively small volume without rendering it heavy and unreadable. The book is full of facts gathered from the most varied sources, so that even the expert in this department of knowledge will find it a convenient work of reference, whilst it may also be perused with great profit by that large and ever-increasing body of laymen who, as medical men, members of local boards, landlords, and the like, are supposed to have some acquaintance with this subject, and whose responsibilities in this connection are generally out of all proportion to their knowledge. Prof. Mason has collected the results of the principal investigations bearing on the sanitary aspects of water supply, made both in Europe and America, and European readers should be specially grateful to him for the lucid and concise manner in which he has summarised and abstracted the important transatlantic labours in this direction, and the original description of which is only to be found in comparatively inaccessible and exceptionally voluminous writings of an official character. There are many points in connection with the sanitary aspects of water supply, on which, as is well known, the most conflicting opinions are prevalent amongst experts, and not the least commendable feature in this work is the impartiality and fairness with which the author has marshalled and reviewed the evidence adduced by the contending parties.

Botany for Beginners. By Henry Edmonds, B.Sc. Pp. 117. (Longmans, Green, and Co., 1896.)

THE author hopes that this little botany primer "may be the means of exciting an interest in the subject in the minds of the young." He is a teacher, and should therefore know that a multitude of new names is the reverse of exciting to young students, yet this is how the definitions are crowded in on page 3: "They [certain leaves] are spoken of as **radical** leaves (Latin, *radix*, a root). Others are attached to the stem, and are described as **cauline** (Latin, *caulis*, a stem). The radical and lower cauline leaves possess a stalk, or, as it is called, a **petiole**. This attaches the flattened part, or **blade**, to the stem. The upper cauline leaves have no such stalk, the blade being immediately attached to the stem, or **sessile**." And again on page 5: "Each of these is called a **carpel**, while the group of carpels is termed the **pistil**. Each carpel consists of a swollen portion, the **ovary**; on top of this there is a little head, the **stigma**." This is all very well, and the language of botany must, of course, be learned at some stage or other; but, at the same time, the designations follow one another so closely, that the pupils who use the volume as a reading-book will get bewildered.

The book is not, however, without its good points. It is liberally illustrated, the descriptions refer to common British flowers, and a few simple experiments are introduced to exemplify the functions of the different organs of plants. A good teacher may make the lessons in the book interesting, but of themselves they are not very inspiring.