

the State and the society in which we live, the immediate and priceless blessing of social union and contentment."

**FIRST BOOK OF BOTANY:** being an Introduction to the Study of the Anatomy and Physiology of Plants, by John Hutton Balfour, F.R.S., Professor of Botany in the University of Edinburgh. London: William Collins & Sons.

Now that the Natural Sciences are rapidly taking their true place in the education of the young, it has become a well recognised necessity that schools should be able to obtain accurate elementary text-books. Publishers are beginning to manifest a keen appreciation of the revolution in educational matters which is quietly but surely taking place; and from all sides we have announcements of forthcoming manuals and text-books of Science. Professor Balfour's little book is one of a series of elementary Science-text-books in course of issue by Messrs. Collins, and its appearance is creditable to its publishers. No department of Natural Science is better fitted to be taught in schools than Botany, and there is no lack of excellent hand-books on the subject. In point of size, Dr. Balfour's work is everything that could be desired, not extending to one hundred and twenty pages, duodecimo. It is, also, in our opinion, a very wise, if somewhat novel, arrangement, that the work is made to treat exclusively of Vegetable Anatomy and Physiology—the department of classification being reserved for a second companion volume. The style is plain and clear, and the illustrations are all good. The chief defect in the book, intended as it is, exclusively, for beginners, is that the subject is treated with an excess of dry detail. Too much space in proportion is devoted to a description of the *structure* of the organs of plants; whilst far too little is said about the *functions* discharged by these organs. In other words, there are too many dry anatomical details and not enough of the equally important and much more interesting information as to the life of plants. In spite of this defect, however, the work will answer its purpose admirably in the hands of a good and thoroughly qualified teacher. It cannot be too strongly insisted, however, that the teacher constitutes as important an element in the teaching as the text-book. In the hands of one not sufficiently acquainted with the subject, and relying for his knowledge entirely upon books, Dr. Balfour's work would be likely to fall short of its object. In the hands of a really good practical botanist, on the other hand, the dry bones of this little book would be clothed with flesh, and might be presented to the learner as a living body and not as a dead skeleton. It cannot, also, be too strongly insisted upon that

Botany, to at least as great an extent as any other of the Natural Sciences, requires to be taught *practically*, if it is to be taught with any real profit to the learner. If the pupil is to be taught Botany in the dead of winter, solely by means of text-books and diagrams, he may acquire a parrot-like knowledge of a number of technical terms, but he will assuredly acquire nothing else—except, perhaps, a disgust at science in general. If, on the other hand, the leading facts of Botany are demonstrated to the beginner in the open fields, or by an appeal to actual specimens, he will be likely to gain some genuine acquaintance with the subject, along with some still more valuable knowledge of the scientific method of research, and some permanent and abiding love of nature-studies. So long as the teacher does not make his text-book the sole agent in his teaching, we can cordially recommend Dr. Balfour's little book. Its information is not imparted in the most attractive manner, but it is, at any rate, perfectly clear and entirely accurate—qualities which cannot be too highly estimated in judging of a work of this nature. As before remarked, also, it has the recommendation of great brevity, and it thus obtains a most decided advantage over the excellent text-books of Professor Asa Gray.

**THE LAND OF DESOLATION:** being a personal narrative of observation and adventure in Greenland. By Isaac J. Hayes, M. D., Gold Medallist of the Royal Geographical Society, London, and of the Société de Géographie, Paris; honorary member of the Geographical Societies of Berlin and of Italy; author of "The Open Polar Sea," "An Arctic Boat Journey," "Cast away in the Cold," etc. Illustrated. New York: Harper and Brothers.

If Dr. Hayes, arriving by night at a Greenland inn, and asking for a bed, had given all his titles, the answer to him would probably have been as it was to the Spanish Hidalgo, who gave all his names: "We haven't room for half of you." Nevertheless, his book is a pleasant, unaffected, lively little book, and gives us, very vividly, the sensations and impressions of the Land of Desolation. It is the record of a summer voyage with a party of friends in the steam yacht of Mr. William Bradford, an eminent painter of Arctic scenery. The party sought out all that was most picturesque and striking in every way—photographed the northernmost human dwelling on the globe by the light of the midnight sun, explored glaciers, saw the birth of icebergs, chased bears on the ice—*did* Greenland, in short, to their own and our satisfaction. The plum of the book—at once the most impressive scene and the most exciting adventure, is the birth of an iceberg in the fiord of Scrimtsialik. An iceberg is the extremity of a glacier,