

which are not of insect origin, are Fungi." *Agaricus melleus* and many species of *Polyporus* are too well known as parasites, and in the tropics coriaceous leaves of evergreen plants are victims to the attacks of parasitic lichens and algæ; lichens are mentioned, as the author holds to his previous view, that these are entirely distinct from fungi, giving a summary of his views on this subject.

We should look elsewhere in vain for anything approaching the amount of information contained in the section devoted to the geographical distribution of fungi, a chapter which indicates not only what has been done, but also what remains to be done.

A noteworthy feature of the book is the full bibliography given at the end of each chapter, treating of the special subject dealt with. There is also a glossary explaining the scientific terms adopted. The index might with advantage have been fuller. The numerous illustrations have in most instances done service before, but nevertheless serve to elucidate the text; and on the whole it may be said that no one aspiring to the study of fungi from the systematic standpoint, can afford to ignore the present work.

GEO. MASSEE.

#### OUR BOOK SHELF.

*Rambles in Japan, the Land of the Rising Sun.* By H. B. Tristram, D.D., LL.D., F.R.S. With forty-five illustrations by Edward Whymper, from sketches and photographs. (London: The Religious Tract Society, 1895.)

CANON TRISTRAM has done well in putting together this record of a visit to Japan, which, although not "recent" when measured by the rapidity of the present march of Japanese history, occurred only a few years ago. The object of the visit was mainly to study the working of Christian missions on the spot; and this is a welcome fact, because it ensures an audience for what the author has to say, who cannot but profit greatly from the acute observations and calm judgments which he records. While making no pretensions to scientific treatment, Canon Tristram's book is to the average run of tourist twaddle on Japan, as a good novel is to a "penny dreadful." It is truthful, well-written, and inspires confidence. Under the guidance of his daughter, who as a missionary had acquired the Japanese language, Dr. Tristram visited some parts of the islands remote from the tourist-track, although all well-known to European residents in Japan. His instincts as a field-naturalist kept him on the alert for all that was to be seen of animal and plant life; and although we fear the precipitancy with which he yielded to temptation in the matter of ivory-carvings and rare china, must have told on his natural history collections, he seems to have brought back a good many plants, insects and birds.

A great number of interesting facts and phenomena are touched upon. The wonderful results of fancy gardening in Tokyo in dwarfing and grafting, seem to culminate in a maple-tree with seven large branches, the foliage of each having a different tint, varying from copper-colour to greenish-white. The art of the Japanese in domesticating such sensitive birds as robins, titmice and warblers, is cited as an instance of the great sympathy for nature which distinguishes the Japanese. Dr. Tristram found that the localities of many of the birds, brought to the seaports for sale, were wrongly described on the labels which were affixed in Europe, and he instances one case in which a species found only in the forests of Nikko, from 3000 to 8000 feet above the sea, had its habitat given as Yokohama. The author is in-

clined to rank Fujisan second in beauty to the Peak of Tenerife, and he remarks that no Japanese artist would think of painting this much-portrayed mountain from nature, but always from the paintings of the "old masters" of Japanese art. Richly wooded as Japan is, the universality of the use of charcoal as a domestic fuel has necessitated special forest-legislation, based on the strict system of re-planting practised in Germany. Although Dr. Tristram necessarily depended much on second-hand information, he avoids the familiar pitfalls of the uneducated writer, and but for a printer's error in the population of Nagoya, there seems little wanting in the way of accuracy.

The illustrations add greatly to the interest of the book; but while all of them are worthy of the name they bear, it is almost with a feeling of shock that one reads "Whymper" on several ordinary half-tone process blocks.

*A Manual of Botany.* By Prof. J. Reynolds Green, F.R.S., Sc.D., F.L.S. Vol. I. Morphology and Anatomy. Pp. x + 398. (London: J. and A. Churchill, 1895.)

PROF. GREEN has set himself a difficult task in attempting to put new wine into old bottles. Bentley's book, on which the present work is based, was admirable in its time, but to-day it strikes one as being somewhat inflexible both in style and ideas. It is true that in the volume before us there is a great deal of very useful information, which is put better and more clearly than elsewhere; in fact some of the subjects are so well treated, that we cannot help regretting that Prof. Green did not see his way to give us an altogether original work.

We notice, however, with regret, that the morphology of the inflorescence is here somewhat hazy, and it seems a pity that Eichler and Gray were not more closely followed, since their views, especially those advanced by the former, are certainly the most philosophical, as well as the most lucid and comprehensive of any which have as yet been put forward. The treatment accorded to the stele does not strike us very favourably; the student may be well forgiven if he abandons all attempts to understand the complex and apparently irreconcilable ideas embodied in the expressions "monostely" and "polystely" respectively.

The position of the axis should have been marked in the floral diagrams, as without it, one fails to recognise the correct orientation of the parts of the flower. This need is the more obvious in cases where the actual position of the axis varies in figures on the same page, as in Figs. 248 and 250, in which it falls above and at the side respectively.

But notwithstanding these faults, the book provides, on the whole, a clear and comprehensive account of the structure of plants.

*Rope Driving.* By John F. Flather, Ph.B., M.M.E. Pp. 230, and figs. 92. (New York: John Wiley and Sons. London: Chapman and Hall, Limited, 1895.)

THIS is a handy little book on the transmission of power by means of rope gearing; it contains a large amount of sound information on the various arrangements of driving gear, and their design, the best speeds at which ropes should be run, and the tension to which they should be exposed. The reasons of decay and means of preservation of ropes are succinctly dealt with; as also are the relative advantages of cotton and manilla hemp ropes when worked under different conditions. The book is certainly worthy of a place in any technical library, as the subject is one which is daily engaging increased attention, affecting as it does the efficient driving of mills, factories, and electric installations, and the transmission of motive power to places more or less isolated from its source.