

USEFUL BOOKS.

The Living Plant.

The new volume of the American Nature Series, "The Living Plant," by William F. Ganong, Ph.D., Professor of Botany in Smith College, will prove a welcome edition to our botanical literature. It is the first attempt in our literature to present to the reading public in a strong, clear, comprehensive way, the main phenomena of plant life.

The book is designed, as Professor Ganong points out in the preface, not for his "botanical colleagues," neither "as a digest of our present scientific knowledge of plant physiology for the use of experts in that subject," but "it seeks to present to all who have interest to learn, an accurate and vivid conception of the principal things in plant life."

The whole book seems designed for private reading, rather than for a class text. Even the paper and the binding suggest the library rather than the class-room. It is a book for the people by one of our most inspiring and popular teachers. Dr. Ganong needs no introduction to the teachers and general reading public of the Maritime Provinces. We predict for his book a large circulation. The layman will find it a charming substitute for romance, biography and history for many an evening reading; the student and lover of nature, most interesting accounts of the unfolding of nature's ways; and the teacher, rare models of clear, logical presentation of the main features of plant activity.

A list of the subjects treated in the eighteen chapters will help to give some idea of the attractive arrangement and scope of the work:

CHAPTER I.—The various ways in which plants appeal to the interests and minds of men.

II.—The prevalence of green color in plants, and the reason why it exists.

III.—The profound effect on the structure of plants produced by the need for exposure to light.

IV.—The kinds of work that are done by plants, and the source of their power to do it.

V.—The various substances made by plants and the uses thereof to them and to us.

VI.—The substance that is alive in plants and its many remarkable qualities.

VII.—The way plants draw into themselves the various materials they need.

VIII.—The ways in which substances are transported through plants, and finally removed therefrom.

IX.—The peculiar power possessed by plants to adjust their individual parts to their immediate surroundings.

X.—The various ways in which plants resist the hostile forces around them.

XI.—The ways in which plants perpetuate their kinds, and multiply themselves in number.

XII.—The many remarkable arrangements by which plants secure union of the sexes.

XIII.—The ways in which plants increase in size, and form their various parts.

XIV.—The orderly cycles pursued in growth, and the remarkable results of the disturbance thereof.

XV.—The many remarkable arrangements by which plants secure change of location.

XVI.—The methods of origin of new species and structures, and the causes of their fitness to the places they live in.

XVII.—The remarkable improvements made in plants by man, and the way he brings it about.

XVIII.—The physical groups into which plants naturally fall, whether by relationship or habit.

Throughout the book the author holds closely to Darwinian adaptation, and in a rather apologetic tone explains that he has "omitted a good many of the newest ideas" regarding plant life. He declares for vitalism as opposed to mechanism, "Not a supernatural vitalism of the theological type, and certainly not designed for theological needs, but a perfectly natural vitalism, based on the superior interpretive power of an hypothesis assuming the existence in Nature of an X-entity, additional to matter and energy, but of the same cosmic rank as they, and manifesting itself to our senses only through its power to keep a certain quantity of matter and energy in the continual orderly ferment we call life."

Since the author seems *so sure* of his vitalism we cannot help but wish that he had given some explanation regarding the superior interpretive power of the hypothesis mentioned above, and also some direction for finding the value of X in the X-entity.

The work is published by Henry Holt & Co., New York, 1913, and is an 8vo. volume, bound in green cloth with gold lettering, comprising xii + 478 pages, and attractively illustrated, with 178 figures, and several colored plates. Price \$3.50.

H. G. PERRY.

QUOTATIONS.

Train up thy mind to feel content:
What matters then how low thy store?
What we enjoy, and not possess
Makes rich or poor.

—W. H. Davies.