

The study of economic entomology, especially with reference to insects injurious or beneficial to agriculture, has long been zealously followed in the United States, and the writings of Harris and Fitch are well known on this side the Atlantic.

#### OUR BOOK SHELF

*The Sun.* By Amédée Guillemin. Translated by T. L. Phipson, Ph. D. Pp. 296. 58 illustrations. (Bentley.) MONSIEUR GUILLEMIN is favourably known among us by his beautiful book "The Heavens" and the present volume may be regarded as a considerable expansion of his chapters on the sun in that work, with additional matter, giving an account of the recent solar discoveries. The expansion has been very judiciously done; but the new matter introduced has been added, in too much haste and consequently the recent conquests of Science do not come out so satisfactorily as they might otherwise have done. In "The Heavens," M. Guillemin did what Frenchmen very rarely do—he took the trouble to inform himself on what was done in England, America and Germany. In the present instance he has taken his information from French sources exclusively and the result is poor.

Still, for those whose purpose it is to inform themselves on the sun generally, the book fills a gap and may be safely recommended. Mr. Phipson has done his part well—except where he has added notes and the book in its English dress is pleasant to the eye.

*Handbook of Physical Geography.* By Keith Johnston, Jun., F.R.G.S. Pp. 220. (W. and A. K. Johnston, Edinburgh and London. 1870.)

THIS is the text to accompany the altogether satisfactory half-a-crown atlas we noticed some time ago and in saying that the text is as good as the maps, we intend to convey high praise. Within the limits of somewhere about 200 pages, Mr. Johnston has contrived to give a very admirable account of the various natural phenomena with which physical geography has to deal; the facts are well and widely chosen. The style is clear and the arrangement a very model.

Of the four divisions of the book—Topography, Hydrography, Meteorology and Natural History, the two central ones possibly present evidences of the greatest care; for instance in Map 18 (the Mediterranean basin), the contour lines both of height and depth have been investigated by Mr. Johnston expressly for this work and in Map 13 (Physical Geography of Palestine) the isotherms have been worked out from observations at Alexandria, Cairo, Jerusalem, Beirut, Damascus, Aleppo and other places.

We heartily commend this book both to teachers and students.

*The Advanced Atlas:* consisting of Thirty-two Maps, containing all the Latest Discoveries and Changes in Boundaries; *The Progressive Atlas:* consisting of Thirty-two Maps—and *The Primary Atlas:* consisting of Sixteen Maps. All constructed and engraved by J. Bartholomew, F.R.G.S. (William Collins, Sons, & Co. Glasgow, Edinburgh and London.)

ALL these maps, even including the sixteen in the "Primary Atlas" which sells for sixpence, are printed in colours; their engraving is of a high order, the maps being rendered clear by a judicious omission of names. It would have been better for the young student if the boundaries between States, e.g., Turkey and Greece, had been made more decided in the "Advanced Atlas." Great care has been taken in many cases, Africa for instance, to introduce the most recent discoveries.

*Echoes in Plant and Flower Life.* By Leo H. Grindon, Lecturer on Botany at the Royal School of Medicine, Manchester. (London: Pitman, 1869.)

WE opened this little book in the hope of finding some new light thrown on the fascinating subject of Mimeticism. The writings of Mr. Darwin, Mr. Wallace, and Mr. Bates have made even the non-scientific reading public familiar with the existence of wonderful external resemblances between animals belonging often to widely different natural orders; resemblances which those writers have sought to explain on the theory of Natural Selection. Though the most remarkable instances of Mimeticism to which attention has been drawn, are chiefly to be found in the tropics, scarcely less interesting examples are furnished by certain families of our own native Hymenoptera and Diptera: even in the vegetable kingdom we need not seek far for superficial resemblances which are not underlain by any corresponding similarity of organic structure. To trace these "echoes" in plant life (why "Plant and Flower Life" we do not know), is Mr. Grindon's hobby and to say that he rides his hobby too hard is only what might perhaps be expected. There is only a very limited number of ways in which anthers can open to discharge the pollen and to call the dehiscence by recurved valves of the bay tree, an "echo" of the same method in the barberry, seems to us an instance of decidedly hard riding. Nevertheless the writer has collected together a large number of very interesting facts which will be of service to anyone who hereafter attempts a scientific explanation of these phenomena. The writer does not; we hope some one else will and he will then find this little book of some value. The style in which it is written, is not such as to commend it to the man of science. In his preface the writer says, "to be a philosophical treatise, the treatment must be æsthetic." When we find the flowers of plants described as "those sweet harp-strings which, vibrating for ever, preserve to us the melodies of ancient Eden and by which they will be floated down the ages yet to come," the treatment of the subject may be æsthetic; we can hardly admit it to be philosophical. Would Prof. Huxley or Dr. Hooker recognise the following description? "Every true naturalist enjoys a renewed puberty of the soul. While other people are young but once, he, like the cicada, in age recovers his spring-time. In this respect he is abreast of the man of genius, whose privilege, like that of the sunshine, is to weave as lovely a sky for the evening as for the morning;"

A. W. B.

*British Lichens—Lichenes Britannici;* scripsit Rev. Jacobus M. Crombie, M.A. (London: L. Reeve and Co. 1870.)

MR. CROMBIE is well-known as an indefatigable hunter after lichens and one who has added a considerable number of new species to the British flora. This little book contains a record of the habitat and distribution of the 658 species of lichens at present known as inhabitants of Great Britain and Ireland, together with references to the authorities where descriptions are to be found and the synonymy. The classification followed is that of the veteran lichenologist Nylander, to whom the work is dedicated and the whole is written in Latin. It ought to be in the hands of everyone interested in this branch of our cryptogamic flora.

A. W. B.

*Chimie Organique en 1868.—Rapport méthodique sur les progrès de la Chimie organique pure en 1868.* Par L. Micé. Large 8vo. pp. 446. (Paris: Baillière. 1869.)

WHEN we opened this work and found that the author had attempted, for the first time, what he truly designates as "neither an easy nor a glorious task" and that he intends his book to be a sufficiently concise and yet detailed annual report, a suitable "vade-mecum for a professor of high-class instruction," we formed expectations which