

An inspection of the plates and reference to the text show how valuable an aid they afford to the student in the recognition of the species.

The continuation of the work will be looked for with desire and hope by all interested in this beautiful family of microscopic algæ.

*Crops, their Characteristics and their Cultivation.*

By Primrose McConnell. Pp. xii+115. (London: Cassell and Co., Ltd., 1908.) Price 1s. net.

THE author of this little book is one of the few present-day farmers who are also writers, and he has given us an admirable account of the crops commonly cultivated, which cannot fail to be valuable both to the agricultural student and the practical man. The first two chapters are devoted to the general conditions necessary for plant growth, and to those conditions which, though not essential, are favourable, and therefore complied with in practice. Then follow descriptions of the various crops arranged under their agricultural headings, viz. cereals, pulses, forage crops, root crops, and grasses. The last two chapters deal respectively with the manuring of crops and with their common pests.

The book is well up to date in practical matters. The author notes the growing tendency to depart from strict rule in the matter of rotations, and to grow whatever pays best at the moment, provided always there is a change of crop. He also observes that improved methods of cultivation and the use of labour-saving machinery have made it possible to grow wheat at prices impossible thirty years ago, and he anticipates a revival of wheat cultivation in England. Most of those who have studied the problem will agree with the author here.

On the scientific side the author tends to take a rather more definite position than the evidence justifies, e.g. in his account of nitrification, of the acid excreted by roots, and of the reason why certain crops require certain manures rather than others; but otherwise the book is very free from errors, and can be cordially recommended to all interested in the subject.

*The Moths of the British Isles.* By Richard South.

Second Series, comprising the Families Noctuidæ to Hepialidæ; with accurately coloured figures of every Species, and many Varieties; also drawings of Eggs, Caterpillars, Chrysalids, and Food-plants. Pp. vi+376; 159 plates, 20 text-figures. (London and New York: Frederick Warne and Co., 1908.) Price 7s. 6d. net.

THE present volume concludes Mr. South's excellent synopsis of the British Macro-lepidoptera, which occupies three volumes, one of butterflies and one of moths having appeared previously. We have already spoken favourably of the earlier volumes, and it is now our pleasing duty to say that there is no falling-off in the execution of the text and plates of the volume before us. Little attempt is made to describe the perfect insects; and indeed a good figure is in many cases sufficient for the identification of many insects; but the range of variation is usually indicated, and caterpillars, habits and localities are usually recorded in detail. As before, we have usually coloured figures of moths on one side of a plate, and plain ones of caterpillars and chrysalids on the other; but sometimes, as in plate 146, which represents *Zygænidæ*, we have coloured figures of moths on both sides. The figures are usually excellent, but in the case of the emeralds they are unsatisfactory, the figures coming out rather under-coloured, which we suppose is due to some deficiency in the colour-

printing. The letterpress is very good and up-to-date, but we do not notice on pp. 55 and 56 any reference to the two specimens of *Thalpochares parva* taken by Dr. Battersby at Torquay in 1859.

In conclusion, we may say that English names for butterflies and moths, which were always reprobated by Stainton, have been coming into general use lately, and most of the popular books now issued give them equal prominence with the Latin names. W. F. K.

*Les Stations lacustres d'Europe aux Ages de la Pierre et du Bronze.* By Dr. Robert Munro. French edition by Dr. Paul Rodet. Pp. 295. (Paris: Schleicher Frères, 1908.) Price 12 francs.

THIS is an excellent translation into French of the classical work of Dr. Munro on "The Lake Dwellings of Europe," reviewed in NATURE, February 12, 1891. The French edition is not so extensive as the original work. It deals only with lake dwellings of the Stone age and of the Bronze age, the chapters relating to lake dwellings of the Iron age, to the *terramara* of North Italy, to the *terpen* of Holland, and to the *craannogs* of the British Isles being omitted. Several valuable additions have, however, been made to the French edition which make it a very complete, up-to-date compendium of the Stone and Bronze age lake dwellings of Europe. Among these additions we note a map of the lake dwellings surrounding the Alps prepared by M. Adrien de Mortillet, and a map of the lake dwellings of Lake Bienna discriminating between those of the Stone, Copper, Bronze, and Iron age.

Paragraphs are added by the translator giving a description of discoveries that have been made since the date of publication of the original work in 1890. It is to be regretted that the translator has not brought up to date Perrin's statistics of bronze objects from Lake Bourget.

An interesting table is given of the analysis of bronzes from the lake dwellings, and we note that many of them contain small percentages of lead, nickle, cobalt, iron, silver, antimony, and zinc. These foreign substances may be of some value in helping to trace the provenance of the ores used by these prehistoric peoples for their metallurgical operations.

*Les Progrès récents de l'Astronomie.* By Prof. P. Stroobant. Pp. 98; illustrated. (Brussels: M. Hayez, 112 rue de Louvain, 1908.)

ALL who are interested in the progress of astronomical knowledge should welcome Prof. Stroobant's most useful summary, now issued separately as an extract from "L'Annuaire astronomique de l'Observatoire royal de Belgique."

This small volume is nearly three times the size of its predecessor, and contains a *résumé* of practically all the important astronomical discoveries and advances made during the year 1907. In the first section we get an account of the solar work, including notes on the re-determinations of the sun's rotation period and parallax; then follows a summary of the observations of the transit of Mercury, which is illustrated by a pair of photographs arranged for the stereoscope, a duplicate, detachable plate being included to obviate the necessity of defacing the book.

The observations of the planets, of comets, of variable and double stars, &c., are also discussed, and the book concludes with various notes on such subjects as stellar distances, nebulæ, refraction, and the variation of latitude. The section dealing with comets is illustrated by two excellent photographs of Daniel's comet, taken by Prof. Wolf at Heidelberg.

W. E. ROLSTON.