

scientific societies, bound together for convenience in reference. The papers are geographical, meteorological, geological, and biological. Many of the biological papers deal with systematic lists of species, but some take a wider outlook. If one may be singled out for mention, it is that of Messrs. V. S. Summerhayes and C. S. Elton on the ecology of Spitsbergen. This should be of interest to all ecologists and all students of the polar regions. Another paper of much importance is that by Dr. K. S. Sandford on the geology of North-East Land. The collection of papers shows how much careful work can be done by a small expedition within the short space of the Arctic summer.

*The Botany of Iceland.* Edited by Dr. L. Kolderup Rosenvinge and Dr. Eug. Warming. Vol. 2, Part 2. 7: *The Fresh-water Cyanophyceæ of Iceland*, by Johs. Boye Petersen; 8: *The Aërial Algæ of Iceland*, by Johs. Boye Petersen. Pp. 249-447. (Copenhagen: J. Frimodt; London: Wheldon and Wesley, Ltd., 1928.) 8.00 kroner.

DANISH botanists are to be congratulated on the thoroughness with which they pursue the investigation of their possessions, and in no group has research been more active than in algæ. Quite apart from the masterly researches by Rosenvinge on the marine algæ of Denmark, papers on the algæ of the Faröes, Iceland, and the Danish West Indies are familiar to all algologists. The most recent treatise completes the series on the freshwater algæ of Iceland. The marine algæ of this island were dealt with by Jonsson in 1912, marine diatoms by Østrup in 1918, freshwater diatoms in 1920, and the freshwater Cyanophyceæ by J. B. Petersen in 1923. Petersen's last treatise (which, it may be explained, is bound up with his "Freshwater Cyanophyceæ" with continuous pagination, in the "Botany of Iceland" series) deals with those land species which he designates Aerial Algæ. Under this term are included all algæ which do not grow in water or are able to grow, in periods at any rate, without being immersed. In addition to the systematic list with critical notes, there is an interesting ecological account occupying 37 pages, and the work as a whole maintains the high standard of the previous publications.

*Ants, Bees and Wasps: a Record of Observations on the Habits of the Social Hymenoptera.* By Sir John Lubbock (Lord Avebury). New edition, based on seventeenth, edited and annotated by Dr. J. G. Myers. Pp. xix + 377 + 6 plates. (London: Kegan Paul and Co., Ltd.; New York: E. P. Dutton and Co., Inc., 1929.) 10s. 6d. net.

THE popularity of this book is evidenced by the fact that seventeen editions have appeared since 1882. During this period great advances in our knowledge of social insects have been made both in Europe and America. The present edition leaves Lubbock's original text unaltered, but the annotations at the end serve to acquaint the reader with the more important results of recent investigation.

In these notes (pp. 249-366) Dr. Myers has greatly enhanced the value and interest of the book, since he brings to notice many interesting facts and theories little known outside the realm of specialists. Lubbock's five coloured plates have been replaced by new ones painted by the well-known entomological artist, Mr. A. J. Enzel Terzi, whose skill is almost unsurpassed. The social Hymenoptera have attracted investigators of the highest order and their discoveries have long interested students of animal behaviour and psychology, as well as appealing to a wide circle of general readers. It is to all of these, as well as to entomologists, that we commend the new edition of this well-known volume.

A. D. I.

*Agricultural Entomology.* By D. H. Robinson and S. G. Jary. Pp. xi + 314. (London: Gerald Duckworth and Co., Ltd., 1929.) 15s. net.

THIS book is an elementary manual of insects affecting agriculture. It is divided into seven chapters dealing with the elements of morphology and classification, and twelve chapters which treat of insects of economic importance together with the principles of their control. There are also appendices on other invertebrates which are of concern to agriculturists. The book is concisely written, well illustrated, and clearly printed, and it should meet the needs of the agricultural student and also prove useful to growers and others interested in pest control.

*Vie et reproduction: notions actuelles sur les problèmes généraux de la biologie animale.* Par Prof. Max Aron. Pp. xi + 366. (Paris: Masson et Cie, 1929.) 38 francs.

To the Strasbourg school of biology we are greatly indebted for much original work, and of those who are collected round Prof. Bouin, no one has earned a greater reputation than the author of this book, which presents in a very complete fashion an introduction to the study of biology, special reference being given to the facts and theories relating to sex and to reproduction. There is no better book of its kind in the French language than this.

### Chemistry.

*Gmelin's Handbuch der anorganischen Chemie.* Achte völlig neu bearbeitete Auflage. Herausgegeben von der Deutschen Chemischen Gesellschaft. Bearbeitet von R. J. Meyer. (1) System-Nummer 21: *Natrium*. Pp. xxxiii + 992. 150 gold marks. (2) System-Nummer 31: *Radium und Isotope*. Pp. xviii + iv + 80. 15 gold marks. (Berlin: Verlag Chemie G.m.b.H., 1928.)

(1) THE enormous amount of labour which is involved in the compilation of the new edition of Gmelin's "Handbuch" may be gauged from the size of the part dealing with sodium, which extends to nearly a thousand pages of closely printed matter, in spite of the fact that it includes only such compounds as the metal forms with elements preceding it in the general scheme of the work. Thus while