

Rapport Europées Congrès Toegepaste Electronen-microscopie, Gent, 7-10 April, 1954

Edited by G. Vandermeerssche. Pp. 359. (Gent: Rijksuniversiteit, 1954.) 500 Belg. francs.

THE Centre for Electron Microscopy of the University of Ghent organized in April 1954 the first congress devoted solely to the applications, as opposed to the fundamentals, of the subject. Previous meetings of an international nature had covered all aspects, but the rapid advance in the uses of the electron microscope justified a conference with a somewhat narrower scope. The proceedings of the congress, published with commendable speed within six months of its termination, shows that the range of topic was still very wide, while the list of authors substantiates the title "European".

Eleven papers are concerned with the electron microscope itself and special methods of operation, such as the reflexion and emission techniques and electron diffraction. Another eleven papers cover medical and biological applications: ultra-microtomy, bacteria, viruses and fibrillar structures. Only five contributions deal with metallurgical problems, confirming the general observation that this field has been the slowest to find uses for a higher resolution than the optical microscope provides. On the other hand, a new trend of the past few years is strengthened by the amount of attention paid to chemical and industrial applications. Ten papers in this group cover a wide range of materials: ceramics, greases, textile fibres, metal oxides, clays and fluorescent powders.

The volume thus presents a useful picture of the present state of applied electron microscopy. It remains only to say that speed of publication has not led to any sacrifice in quality of production; the printing, binding, and reproduction of micrographs are alike excellent. The editor, who was also in charge of the organization of the congress, must be congratulated on the fruits of his efforts.

V. E. COSLETT

An Illustrated History of Science

By Dr. F. Sherwood Taylor. Pp. xii+178. (London: William Heinemann, Ltd., 1955.) 25s. net.

AS a history of science this book increases our indebtedness to the late Dr. F. Sherwood Taylor, who did so much to present the results of intensive research in language that the ordinary reader can appreciate.

As an illustrated history of science it is unique. Based upon the 1953 Christmas Lectures at the Royal Institution, London, in which the author dealt with some of the historic experiments in natural science, it has, among others, illustrations relating to the apparatus and conduct of the experiments. These, from sketches drawn by A. R. Thompson, are built up around what could be discovered about the way of life in the times when the experiments were first made, and are not merely substitutes for photographs which might have been taken had photography been possible. They have a liveliness that makes the reader feel that he is an eye-witness of what was going on, when, for example, the Abbé Nollet felt the shock from a Leyden jar, or Sir Humphry Davy demonstrated the electric arc in 1808.

Beginning with the observations of the Egyptian priest-astronomers and the Greeks who studied science for its interest rather than its use, the author surveys the early days of experimental science and its remarkable progress during the eighteenth century,

the work of men like Faraday, Kelvin, Edison and Crookes in the nineteenth, and the past fifty years during which "so much knowledge and power have come into men's heads and hands that they cease to think of science as some specialised occupation, but are coming to regard it as a way of understanding and organising any job of work". F. J. NORTH

General Microbiology

By Prof. William G. Walter and Prof. Richard H. McBee. (Based on the original text by Prof. D. B. Swingle.) Pp. ix+345. (New York: D. Van Nostrand Company, Inc.; London: Macmillan and Co., Ltd., 1955.) 35s. net.

IN 1940 a book was published by the late Prof. D. B. Swingle, of Montana State College. It was entitled "General Bacteriology" and, as an introduction to the lower forms of life, was so well received that it was revised and issued in a second edition in 1947. Two of Swingle's successors at Montana, Profs. W. G. Walter and Prof. H. McBee, have now made a thorough revision of the earlier work and, as the title implies, have adopted a broader approach.

Some of the more recent aspects of bacterial cytology, genetics and nutrition are described to illustrate the growing importance of the study of bacteria as a means of illuminating some of the newer disciplines. A new section describes the mutual relations of micro-organisms, while chapters on pathogenic bacteria and viruses have been expanded. The book is extremely well illustrated and would form an admirable introduction to the study of microbiology for professional and lay readers. Its weakness is in the chapters dealing with applied bacteriology. The few pages on industrial microbiology, for example, are so scanty that they could profitably have been omitted to allow a wider treatment of a topic like the microbiology of milk products.

T. H. HAWKINS

Hydro-Electricity and Nature Protection

Stating the Case. Prepared by the Rt. Hon. Lord Hurcomb. (Pro Natura, Vol. 2.) Pp. 224. (Bruxelles: Union Internationale pour la Protection de la Nature, 1955.) n.p.

IN the summer of 1952 the International Union for the Protection of Nature held its third General Statutory Assembly at Caracas. A technical meeting was held at the same time which brought together two hundred experts representing thirty-two countries and five continents. One of the items discussed was "Hydro-electricity and the Protection of Nature". A volume of 550 pages containing the proceedings and the papers of the Caracas meeting appeared in 1954; but it comprised several subjects and it had also to be reproduced in three languages and principally in Spanish. As a result, the remarkable documentation on hydro-electricity that had been gathered from sixty preliminary reports, submitted to the Caracas Conference by specialists from all over the world, could not be used to the full extent of its worth.

A volume has now been prepared by the Right Hon. Lord Hurcomb, vice-president of the Union, with the aim of placing within the reach of the public as much as possible of the more important points of this documentation in an abbreviated form. Some of the papers are in French and some in English; a French summary is given of the papers published in English, and vice versa.