

A Bibliography of the Research in Tissue Culture, 1884 to 1950

(An Index to the Literature of the Living Cell Cultivated in Vitro.) Prepared by Margaret R. Murray and Gertrude Kopech. Vol. 1: A-K. Pp. xxviii+840. Vol. 2: L-Z. Pp. 841-1742. (New York: Academic Press, Inc.; London: Academic Books, Ltd., 1953.) 24 dollars the set.

THIS monumental bibliography of the literature on tissue culture, which occupies two large volumes, is indeed a remarkable achievement. The plan to produce this work was conceived in 1946 at the Hershey Conference and has been sponsored throughout by the Tissue Culture Commission, which was founded at this meeting, and by its successor, the Tissue Culture Association. When the scheme was first launched, the vast size of the literature was not fully realized, and the authors and sponsors had to surmount many unforeseen difficulties, both financial and editorial, before the project was at length completed.

In the preface, tissue culture is defined as "the maintenance of isolated portions of multicellular organisms in artificial containers outside the individual for considerable periods of time". To prepare the book, "29,000 articles were read in their entirety"—a truly horrifying thought—and, from these, 15,000 were selected as being covered by the definition; this number was expanded by excellent cross-indexing to 86,000 entries.

It is astonishing to discover how much work has been done by means of the tissue culture technique in a wide variety of fields. To have this exhaustive collection of references assembled in one book, however large, is a blessing not only to all those who use the method, but also to many others who are concerned with the information provided by experiments on tissue cultures. The authors are to be warmly congratulated on the scholarly way in which they have accomplished their formidable task, and they can rest assured that grateful colleagues throughout the world will "arise up and call [them] blessed".

Journal of the Institute of Metals

Vol. 80, 1951-52. Editor: N. B. Vaughan. Pp. xvi+728+113 plates. (London: Institute of Metals, 1952.)

THE present volume is the first to appear in the enlarged size (11 in. × 9 in.). This new format has enabled diagrams and photographs to be reproduced more satisfactorily; but the volume of 728 pages weighs more than 5½ lb. and is too heavy for convenient handling, while its cloth binding is insufficiently strong to stand up to normal laboratory or library use. The volume contains seventy-seven papers, and a further disadvantage of this large size is that a single reader in a library immobilizes seventy-six papers besides the one he is consulting. It is to be hoped, therefore, that future volumes will be smaller and published at more frequent intervals.

Except for its inconvenient weight, the volume is excellent. It is well and clearly printed, and the standard of reproduction of tables, diagrams and photographs is admirable. The papers cover a wide range of subjects, and the majority can be read from the point of view of general scientific interest, quite apart from industrial applications. Work on the structure of metals and alloys is prominent, and the volume includes the presidential address by Dr. C. J. Smithells, the twenty-second Autumn Lecture on "Electrochemistry and the Science of Metals" by Prof.

R. Piontelli, and the forty-second May Lecture by Dr. J. J. P. Staudinger on "The Place of Plastics in the Order of Matter". There are also a summary of a discussion on metal economics and a symposium on equipment for the thermal treatment of non-ferrous metals and alloys. W. HUME-ROTHERY

Synthetic Organic Chemistry

By Romeo B. Wagner and Prof. Harry D. Zook. Pp. xii+887. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1953.) 92s. net.

THIS comprehensive work aims at giving a concise summary of the chief synthetic methods used in organic chemistry for preparing compounds of single and dual function. For this purpose the authors have undertaken an exhaustive examination of twenty of the leading journals and books dealing with organic chemistry from 1919 to 1950.

The thirty-nine chapters bear such headings as acetylenic compounds, halides, lactones, isocyanates, amines, imines, hydrazines, diazo and diazonium compounds, and sulphonic acids. As an illustrative example, Chapter 24, dealing with amines, adduces forty methods for preparing this type, including the reduction, or the hydrolysis, of various other types; degradation of amides, acyl azides and hydroxamic acids; ring dehydrogenation; and various ways of applying Grignard reagents. A short discussion, with copious references for each method, is followed by twelve tables which summarize the preparative methods, yields and physical properties of some seven hundred individual compounds listed under the heads of amines, diamines, olefinic and acetylenic amines, halo- and hydroxy-amines, amino-ethers, -aldehydes, -ketones, -acids, -esters and -cyanides. The chapter closes with a list of 561 references to original sources finding mention in it.

The enormous amount of information in this time-saving compendium is set out clearly and systematically, the book is well printed, and it can be commended to organic chemists and biochemists as a reliable and up-to-date guide through the maze of modern synthetic methods. JOHN READ

The Heron

By Frank A. Lowe. (New Naturalist Special Volume.) Pp. xiii+177+9 plates. (London: William Collins, Sons and Co., Ltd., 1954.) 18s. net.

BOOKS about birds continue to come from the publishers in steady numbers and are evidence of the ever-growing appreciation of ornithology. In "The Heron" Mr. F. A. Lowe has written an interesting monograph and an excellent addition to the "New Naturalist" series of volumes. Based on long observation of the heron breeding colony in Dam Wood, Lancashire, his book ranges over world distribution and populations, breeding biology, the mechanics of flight and dispersal, the heron in history and folk-lore, etc. It is a painstaking and thorough survey, written in an unpretentious style, that will be read with pleasure alike by the experienced ornithologist and the recent recruit to the ranks of bird-lovers.

The illustrations range from maps and diagrams to photographs taken in the wild, and include as frontispiece a photograph in colour of a heron at its nest. Where all are so excellent, it seems invidious to carp; but it would certainly have been pleasing had it been possible to include one or two heron portraits by outstanding artists, including an example of the heron in Japanese art. FRANCES PITT