

Pulp and Paper

Chemistry and Chemical Technology. By James P. Casey. Vol. 2: Papermaking. Second edition, revised and enlarged. Pp. xxiii+581-1249+147. (New York: Interscience Publishers, Inc.; London: Interscience Publishers, Ltd., 1960.) 188s.

THE scope of the second volume of this work is indicated in the review of Volume 1 (*Nature*, 190, 380; 1961). Much the same general comments apply to Volume 2. Thus, British readers will be surprised at the absence from the chapter on fibre bonding of any reference to the important 1957 Cambridge symposium on that subject.

However, this should not be allowed to detract from a recognition of the general excellence and high standard of this work as a whole. It contains a tremendous amount of information of a fundamental nature covering paper-making operations from stock preparation to supercalendering, and taking in water usage and disposal, microbiological considerations and beater and wet-end additives.

Incidentally, it is completely self-contained in its subject-matter, so that there is no necessity to possess Volume 1 in order to derive the fullest benefit from Volume 2. This fact may appeal to many in Britain who are more interested in paper making than in pulping and to whom the cost of these books must appear very high.

JULIUS GRANT

Gas Chromatography Abstracts, 1958

Pp. vii+262. 42s.

Gas Chromatography Abstracts, 1959

Pp. ix+164. 42s.

Edited by C. E. H. Knapman, assisted by C. G. Scott. Sponsored by the Gas Chromatography Discussion Group associated with the Hydrocarbon Research Group of the Institute of Petroleum. (London: Butterworths Scientific Publications, 1960.)

THE two volumes of gas chromatography abstracts have been sponsored and prepared for publication by the Gas Chromatography Abstract Editorial Committee of the Gas Chromatography Discussion Group. The first is a combination of bibliographies compiled independently by three members of the Committee and covers the literature until the end of 1958. The 1,468 abstracts are listed alphabetically according to the first author. Considering the somewhat limited resources, reliance has had to be placed on abstracting journals particularly in connexion with foreign publications. This cannot be said of the second volume, which is compiled from abstracts obtained from 28 abstractors who between them have covered more than 110 journals. Although no precise date is given, the 717 abstracts in this volume appear to cover the literature until the end of 1959.

The abstracts in both volumes, although short (averaging 30-50 words), are very concise and to the point. Easy reference is made possible by author and subject indexes, the latter in particular being most comprehensive, enabling a complete survey of the literature on any topic to be carried out with great rapidity. Although the difficulties of compiling works of this type must be very great, few errors appear to have crept in. One criticism, however, is the frequent omission of any indication of the language of the article abstracted.

These volumes were compiled by the voluntary efforts of gas chromatographers, who, seeing a need

for an efficient abstracting system, pooled their resources and produced their own. Their achievement deserves the highest praise and will certainly be welcomed by many wishing to keep abreast of this rapidly expanding field.

A. GOLDFP

South African Animal Life

Results of the Lund University Expedition in 1950-1951, Vol. 7. Edited by Bertil Hanström, Per Brinck, and Gustaf Rudebeck. Pp. 488. (Stockholm: Almqvist and Wiksell, 1960.) 75 Sw.kr.

VOLUME 7 of *South African Animal Life*, in which results of the Lund University Expedition (1950-51) are reported, maintains the high standards of the previous volumes in this series. Groups dealt with are preponderantly from among the Coleoptera, Diptera, Hymenoptera and Hemiptera. There are also chapters on the Oligochaeta, Decapoda, Crustacea and on the Isoptera. The authors are again recruited from many countries and seats of learning, and of the twenty-seven articles three are written in French, eight in German and sixteen in English.

O. LOWENSTEIN

A Collection of Tables and Nomograms for the Processing of Observations made on Artificial Earth Satellites

By I. D. Zhongolovich and V. M. Amelin. (Mathematical Tables, Vol. 12.) Issued by the Institute of Theoretical Astronomy, Academy of Sciences of the U.S.S.R. Pp. iv+188. (London and New York: Pergamon Press, 1961.) 100s. net.

THIS volume is a welcome addition to the very few existing mathematical tables which are designed to help in the calculation of artificial satellite orbits. The main table gives the true anomaly and the ratio of radial distance to semi-major axis, for a complete range of values of both mean anomaly (at 1° intervals) and eccentricity (from 0 to 0.76 at intervals of 0.01). Other tables give period and semi-major axis in terms of the mean angular motion, solutions of the equations used in calculating geocentric latitude and longitude, and the main secular perturbations of orbits. Finally, there are nomograms to determine the angle of elevation of a satellite. The intervals of tabulation and the number of figures in the tabulated quantities have been well chosen, and the layout of the tables is pleasing.

The tables themselves have been reproduced from the Russian original by a photographic process, and only the 10 introductory pages needed translating. Despite its minimal contribution to the subject-matter, the Pergamon Press has chosen to charge £5 for the volume, although it was advertised at 70s. This high price would be more justifiable if the 10 introductory pages were perfect, but they are not. There are irritating errors, such as the inconsistency of printing the symbol v as a Greek ν in the introduction but not in the tables. Also, the translation is at times sadly deficient. For example, the key sentence defining the units—"n is expressed in degrees per mean solar day and is given to 0.01 min. . ."—is nonsensical because of the omission (after 'day') of some 15 words, which give the tabulation interval for n and state that the orbital period is in minutes. These shortcomings do not, however, seriously mar the value of the volume to the specialist.

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