

Handbuch der Astrophysik

Herausgegeben von G. Eberhard, A. Kohlschütter, H. Ludendorff. Band 7: Ergänzungsband, Berücksichtigend die Literatur bis Ende 1934, nebst einem Generalregister des Gesamtwerkes. Pp. ix+756. (Berlin: Julius Springer, 1936.) 129 gold marks.

THE previous volumes of this "Handbook" came out during the course of the years 1928-33. As the articles were mostly undated, the general effect was ragged. This supplementary volume serves three purposes. It gives a common date, the end of 1934, up to which the literature of the separate branches has been considered by the writers of the articles, it covers the recent developments of the subject-matter and it fills gaps in the earlier discussions.

The same subdivisions of each chapter are followed as in the earlier volumes, new items being indicated by placing letters *a, b, c*, after the number of a paragraph. The practice of different contributors in distinguishing new topics from additional or supplementary material has varied; still, the affixed letters do direct attention to the most recent developments in the subject. It is significant that in the section on photometry there are 48 new paragraphs and only 18 supplementary ones. In this section there is no reference to recent work on the profiles and central intensities of spectral lines; these are only referred to in the appropriate sections dealing with the sun and the stars, but in view of the amount of work done since 1929, one would have expected some notes in the section on spectral photometry.

It is impossible to mention all the thirty articles in a short notice, but we can note in that by Dr. Wurm on band spectra an interesting new section on astrophysical applications. In two articles, on the "Thermodynamics of the Stars and Pulsation Theory" and on "The Ionization in the Atmospheres of Celestial Bodies", Dr. Bengt Strömgren has given a full account of recent work on stellar interiors and radiation, having to blend in his treatment references to the articles of Prof. Milne and Prof. Pannekoek in the earlier volumes.

In rounding off various topics and in giving a combined subject-index, this supplementary volume adds appreciably to the value of the earlier parts of the "Handbook", and the editors are to be congratulated on bringing a long and arduous task to a worthy conclusion.

The Earth's Magnetism

By Prof. S. Chapman. (Methuen's Monographs on Physical Subjects.) Pp. xi+116. (London: Methuen and Co., Ltd., 1936.) 3s. 6d. net.

THE phenomena comprised under the general head "Terrestrial Magnetism" are important, and their explanation is still far from complete. A concise account of present knowledge of the subject was needed. From the hand of one who himself has contributed largely to recent advances such an account is doubly welcome.

In his small monograph, "The Earth's Magnetism", Prof. Chapman has attempted at least to touch upon all material points, leaving amplification of details

and theory to a more extended treatise which is already planned. A relatively large amount of information is given, however, about effects of solar and even of lunar origin, the existence of which has been demonstrated by laborious statistical treatment of observatory records and could not otherwise be revealed. The inclusion of a number of illustrative diagrams is helpful in this section. The author's terse and graphic style matches the compact form in which the subject is presented. Readers will find themselves carried on from page to page with absorbing interest.

A few typographical errors in formulæ await correction in subsequent editions; while the method of measuring horizontal force by the Schuster-Smith coil-magnetometer, described on page 7, should be restated, as it differs in a fundamental particular from the method actually proposed by Schuster and employed in the instrument. W. M. W.

Annual Survey of American Chemistry

Vol. 10, 1935. Edited by Clarence J. West. (Published for the National Research Council.) Pp. 487. (New York: Reinhold Publishing Corporation; London: Chapman and Hall, Ltd., 1936.) 25s. net.

THIS volume presents an interesting view of the progress made in certain branches of pure and applied chemistry in the United States during 1935. The fact, however, that it deals only with the work of one nation, limits its usefulness as a guide to the advancement made in any particular subject, and leads perhaps to a somewhat distorted view. Nevertheless, it provides an excellent résumé of the activities of American chemists, and moreover supplies a comprehensive bibliography of their work.

The subject matter is divided into twenty-five chapters, each compiled by an expert in the topic under review. For the most part, these are well written, interesting and readable, even although the space available necessitates considerable compression and permits of only a brief summary of the many contributions made in each section. Thirteen of the chapters deal with pure chemistry while the remainder are devoted to industrial chemistry. Included in the latter is a chapter on chemical economics which, like one or two other sections, covers a longer period than one year. G. R. D.

The Little Wolf:

a Story of the Coyote of the Rocky Mountains. By Wendell and Lucie Chapman. Pp. xii + 140 + 31 plates. (London: Charles Scribner's Sons, Ltd., 1936.) 6s. net.

No one can have travelled in the western States of America without having become more or less acquainted with the coyote. But whether one has done so or not makes little difference to the enjoyment of this book, which is a true piece of nature study at its best. The authors have spent years in the uninhabited sections of the western part of the United States and Canada, and have been able to make friends with the shyest of wild creatures, observing them at work and play, and finally enlisting the help of the camera. Both the story and the illustrations are excellent.