of the most important features. The volume is illustrated by numerous and beautifully executed text figures of anatomy and patterning, as well as by eight more exquisitely drawn plates in colour and eleven plates of photographs. Together with the charming and fanciful (if not strictly relevant) vignettes which terminate some of the chapters, they make the work one of artistic as well as scientific importance. It is a critical and masterly account with a good bibliography of a difficult subject by one of the world's greatest experts who, although he has shown himself sympathetic with the demands of the modern schools of physiology and ecology, is not one of those who take lightly the responsibilities of the systematist.

A. K. TOTTON.

Short Notices

Methods of Air Analysis. By Prof. J. S. Haldane and J. Ivon Graham. (Griffin's Scientific Text-Books.) Fourth edition, revised throughout and enlarged. Pp. vii+176. (London: Charles Griffin and Co., Ltd., 1935.) 7*s*. 6*d*. net.

ALTHOUGH it is twenty-three years since Dr. Haldane's little book was first published, the methods and apparatus which he has described with such minute attention to detail are still in everyday use for the examination of air and mine gases. With the collaboration of Mr. J. Ivon Graham, the fourth edition has now been enlarged and admirably brought up to date without changing the general character of the book.

Owing to the toxicity of carbon monoxide, much attention has been directed of late years to the determination of very small quantities of this gas, for which purpose the portable and laboratory types of apparatus used in the Mining Research Laboratory, Birmingham, and capable of detecting 0·0005 per cent are recommended.

From the point of view of safety in mines, the new chapter dealing with the application of gas analysis to the detection of spontaneous combustion is of particular interest; the authors state that the analytical method is capable of greater sensitivity than the older one depending on smell.

Another trend in the technique of gas analysis has been the development of specialised instruments such as the Hartridge reversion spectroscope and the Katz recorder for carbon monoxide, the McLuckie apparatus for inflammable gases, and the Owens dust collector, to mention only a few of those described in the present volume. F. R. E.

Handbook of Chemistry: a Reference Volume for all requiring Ready Access to Chemical and Physical Data used in Laboratory Work and Manufacturing. Compiled and edited by Prof. Norbert Adolph Lange, assisted by Gordon M. Forker. With an Appendix of Mathematical Tables and Formulas, by Prof. Richard Stevens Burington. Pp. xiv+1265–248+29. (Sandusky, Ohio: Handbook Publishers, Inc., 1934.) 6 dollars.

THE present reviewer has kept this handbook beside him for several months and has put it to the test repeatedly. It has met the requirements on every occasion, in chemical matters as well as in purely mathematical.

One of the best sections of the book comprises the 234 pages dealing with 4,452 organic compounds, for each of which is given a 'Beilstein' reference, in addition to the usual information. This reference is a particularly useful feature as it enables the reader to find at once the page in the enormous and unwieldy Beilstein where he can obtain further information. The section on inorganic compounds extending to 112 pages is also very useful.

In addition to the data given in the tables just mentioned, all the more important properties are given tables to themselves, and when only a limited list of substances is mentioned, the reader is directed where he can find a more complete list.

Among the interesting and novel features are: changes in atomic weights from 1894 until 1933; a large table of alloys (including heat- and corrosion-resisting alloys); classification of crystals; organic reagents for inorganic analysis; laboratory solutions; hazardous chemicals and their handling. There is a wealth of data covering not only a very wide field of pure chemistry (physical, inorganic and organic) but also every conceivable section of applied chemistry. The information is also brought well up to date.

It is impossible to give a complete catalogue of all the subjects treated in this valuable handbook, but great care seems to have been taken to make the information as complete and accurate as possible. Further, considerable attention has been paid to the arrangement of the details, which will be found very convenient.

The Complete Book of British Butterflies. By F. W. Frohawk. Pp. 384+32 plates. (London and Melbourne: Ward, Lock and Co., Ltd., 1934.) 10*s*. 6*d*. net.

IT is now nearly thirty years since South's "Butterflies of the British Isles" was first published, and this, in its successive editions, has remained the best book on the subject both for the beginner and the more advanced collector. In 1929, Mr. Frohawk brought out his "Natural History of the British Butterflies", but the price of this was beyond most pockets. Mr. Frohawk has now challenged the supremacy of South's book by re-issuing, in a cheaper form, the essential illustrations from his larger book with good descriptions of all stages of the insects and excellent biological notes. All the illustrations and the greater part of the letterpress are the original work of the