

### Collected Papers on Metallurgical Analysis by the Spectrograph

Edited by D. M. Smith. Pp. xi + 162. (London: British Non-Ferrous Metals Research Association, 1945.) 21s.

THIS volume comprises a representative selection made by Mr. D. M. Smith of papers submitted to the spectrographic panels set up by the British Non-ferrous Metals Research Association. The result of this selection is a volume from which spectrographers may derive helpful guidance in the correct choice of analytical methods for the routine examination of aluminium, lead, zinc, copper and platinum and their alloys. Photographic plate calibration and processing have also not been overlooked.

Special mention should be made of the contribution from the laboratories of the British Aluminium Company, Ltd., on the analysis of aluminium and its alloys. This paper is much more comprehensive than most of the others which are included in the volume, and the results are likely to be as valuable to spectrographers dealing with the analysis of aluminium alloys as the work of Barker and his collaborators has been to those dealing with the analysis of steels.

The reviewer has noted that nearly all of the work reported has been carried out with conventional D.C. arc and condensed spark circuits. This emphasizes the fact that while much attention has been given to variations due to metallurgical sampling and to photographic techniques, by no means so much attention has been given, in spectrographic work in Great Britain, to the other major source of inaccuracy, namely, the spectrographic source. The investigation of source characteristics forms one of the terms of reference of the General Research Panel of the B.N.F.M.R.A., and the reviewer feels that the value of the present volume would have been considerably enhanced had it been possible to include reports on work within the scope of this Panel, which has no significant representation in the book. A. H. S.

### Qualitative Inorganic Microanalysis

A Short Elementary Course. By Ronald Belcher and Dr. Cecil L. Wilson. Pp. viii + 68. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1946.) 2s. 6d.

THE authors of this small text-book believe that the adoption of micro-methods of qualitative analysis would be furthered if the subject could be presented in a simple way which would enable junior students to take up the method with a minimum of special apparatus and with a possibility of success. Most of the apparatus required, apart from a centrifuge, can be made by the student, suitable directions being given. Modern tests and separations are described, and the instructions are clear and adequate, no theory being introduced. The course can be regarded either as supplementary to a normal course of qualitative analysis, or as providing first instruction in the latter, when it may be reckoned to occupy a twelve weeks course of three hours a week. The apparatus is illustrated by clear and effective diagrams, and schemes for routine analysis are given.

All teachers interested in micro-analysis, whether in school or more advanced laboratories, will find this a useful and interesting book, and the subject is one which young students will probably find attractive. One of the troubles of the teacher of qualitative analysis is the tendency to dirty and untidy work in the laboratory, and it is certain that the use of micro-methods would put an end to this. The

training would be valuable, and altogether the authors seem to have made out a good case for the use of such methods as standard practice. The book is well printed and bound in limp covers, and the price is very reasonable.

### The Adventure of Youth

The Psychology of Adolescence and its Bearing on the Extension and Reform of Adolescent Education. By Dr. Olive A. Wheeler. Pp. ix + 212. (Bickley: University of London Press, Ltd., 1945.) 6s. net.

IN planning extensions and reforms of adolescent education, most local education authorities have become fully aware that they can only be prepared by exact knowledge and sympathetic understanding of the needs of youth. In this book, which is an extension of and natural successor to her earlier work on this subject, Prof. Wheeler surveys the characteristic developments of, and variations among, adolescents. A careful survey is made of existing provisions for adolescent education and the service of youth in Britain, and the extensions and reforms which are now projected are treated to a critical examination based on facts built up during the author's long experience in this field. Internal problems like those of the curriculum, educational and vocational guidance, methods of discipline and teaching, and the religious and moral education of adolescents are also subjected to close scrutiny, and means of solving them are suggested. Like its predecessor, this valuable book supports the view that Prof. Wheeler is one of our foremost authorities on the education of the adolescent. T. H. HAWKINS

### Friends in Fur and Feather

By Frances Pitt. Pp. 208 + 49 plates. (London: Country Life, Ltd.) 12s. 6d. net.

A NEW book on animals by Frances Pitt needs a little more by way of comment than bringing it to the attention of all who have read her earlier stories of animals. This one, the story of all her many pets over many years, is worthy to take its place with any she has written because it offers so much to the animal-lover and not a little to the student of animal behaviour. At this stage of the peace it may be a little ungracious to complain of the production itself. Yet Frances Pitt has written such a delightful book, which will long find a place on many shelves, that it seems a pity better paper could not have been found for the text. The photographs, taken by the author, are, on the other hand, well produced.

### The British Journal Photographic Almanac and Photographer's Daily Companion, 1946

Edited by Arthur J. Dalladay. Pp. 412 + 31 plates. (London: Henry Greenwood and Co. Ltd., 1946.) 3s. 6d. net (paper), 5s. net (cloth).

THE latest edition of this well-known almanac carries all the features which have made it so useful in the past—features such as tables and formulae, legal and commercial information and very full advertisements of current materials and apparatus—but continued paper shortage has limited a number of sections. J. Allan Cash, whose work for the British Council is well known, writes on "Industrial Photography with Miniature Cameras", while other contributed articles of interest to readers of *Nature* are "The Photography of Lepidoptera", by Edward Richardson, and "Films for Children in Education and Entertainment", by Mary Field.