

dealing with the comparative chemistry of the various fuels.

The author has succeeded in being comprehensive without undue prolixity. Every important piece of work seems to be mentioned, and references are given to the whole of the modern literature, both in German and other languages, up to the early part of the current year. Matters of purely historic interest are purposely omitted. One feature perhaps lending itself to criticism is the almost complete absence of graphs, which in many places might advantageously have been introduced to summarise experimental data.

The book is well printed and bound. The price is unfortunately high, but the coal chemist cannot afford to dispense with it. It is to be hoped that an English translation will be published.

R. WIGGINTON.

Short Reviews.

Handbuch der vergleichenden Stratigraphie Deutschlands. Herausgegeben von der Preussischen Geologischen Landesanstalt. *Alluvium.* Schriftleitung, J. Stoller. Unter Mitwirkung von K. von Bülow und W. Dienemann. Pp. xii + 424. (Berlin: Gebrüder Borntraeger, 1931.) 30 gold marks.

In this "Handbuch", issued under the auspices of the Prussian Geological Survey in association with other German surveys, it is proposed to furnish a complete account of the German stratigraphical succession. The distribution, especially with regard to facies, the petrography, palæontology, tectonics, economics, and the whole genesis of each geological formation are to be described; where possible, geological maps are to accompany each volume. The "Handbuch" is to be completed in twelve volumes, of which this on alluvium is the first. The other volumes are to deal with Diluvium, Tertiary, Cretaceous, Jurassic, Trias, Zechstein, Rothliegendes, Carboniferous, Devonian, Silurian-Cambrian, and Crystalline Schists. The publication of a work of this scope is obviously an event of first-class importance in the study of European geology.

Fourteen authors have contributed to the present volume, "Alluvium"; their work has been collated by the late Prof. Jakob Stoller, with the help of K. v. Bülow and W. Dienemann. All deposits formed since the melting of the last ice-sheet come within the scope of this volume. The treatment is based upon the facies classification of v. Bülow—marine, freshwater, continental. The North Sea and Baltic marshes and coastal deposits form the first facies, lacustrine and fluviatile deposits the second, whilst in the third are grouped dunes, calc-sinters, peat, and landslips and related deposits. The origin, distribution, and petrography of each type are exhaustively discussed. The flora and fauna of 'Alluvium'—in the sense used in this work—are employed in the elucidation of the climate of

the time. The volume ends with a summary of the products of economic value derived from the alluvium. Lengthy bibliographies are appended to each section.

A large folding table, by v. Bülow, gives the classification and correlation of the various types of deposits considered in this work, with their corresponding floral, faunistic, and archæological characteristics.

Paläoklimatologie. Von Dr. Fritz Kerner-Marilaun. Pp. viii + 512. (Berlin: Gebrüder Borntraeger, 1930.) 39 gold marks.

DR. KERNER-MARILAUN, an Austrian mining geologist, has since 1895 issued a long series of papers on former climates, and his contributions have been marked by recognition of the uncertainty of evidence on which reliance was once firmly placed, and by ingenuity in the application of many different lines of investigation. In the present work he has summarised the nature of the available evidence and discussed its value.

The book is divided into six parts, as follows: the various kinds of evidence as to former climates; the character of established ancient climates; their causes, including elevation above sea-level, distribution of land and water, the influence of latitude, the wandering of the poles and variations of latitude, fluctuations in solar radiation, and the influence of sunspots and volcanic dust; methods of estimation of climatic factors (or thermogeographical analysis); the evidence of palæogeography and geochronology; and finally, consideration of the various theories of former climatic changes. The work consists mainly of a statement and discussion of the principles of palæometeorology, and its chief value is as a summary of the conflicting hypotheses rather than an exposition by the author of his own conclusions.

The book uses a highly technical terminology and fortunately thirty-one of the author's own terms are explained in a glossary: eight of them deal with the evaluation of the evidence. The author quotes a large number of authorities, but without references; sometimes a clue is provided by mention of the date, but as a rule the author's name only is given. The lack of references is a serious defect, especially having in view the scattered nature of the evidence—botanical, geographical, geological, and physical. The index is also poor and incomplete.

Integrative Psychology: a Study of Unit Response. By William M. Marston and C. Daly King and Elizabeth H. Marston. (International Library of Psychology, Philosophy and Scientific Method.) Pp. xvi + 558. (London: Kegan Paul and Co., Ltd.; New York: Harcourt, Brace and Co., 1931.) 21s. net.

"INTEGRATIVE PSYCHOLOGY" stands midway between the classical school of introspection and psychoanalysis. It claims to organise the subject matter of psychology and to give its adherents practical knowledge about themselves, applicable to the personal problems of their everyday lives.