

English worker in aeronautics would have been able to supply the usual terms for "frontal resistance," "end of climb," "gigantic plane," etc.
S. BRODETSKY.

Handbook of Instructions for Collectors. Fourth edition. Pp. 222. (London: The British Museum (Natural History), 1921.) 5s.

THE present edition of this valuable little handbook contains several material alterations. Chapters have been added on the preparation of mammalian skeletons, with special notes on the collection of specimens of Cetacea, on the collecting and preservation of worms, and on alcohol and alcoholometers; while the chapters dealing with soft-bodied and other invertebrates, birds, reptiles, batrachians, fishes, and insects have been considerably modified. The trustees of the British Museum are well advised in issuing the handbook at a low price and in portable form (it measures 7 in. \times 5 in. \times $\frac{1}{2}$ in.), for it constitutes an authoritative manual of instructions on the collecting and preservation of all objects included under the comprehensive title of "natural history." The hunter of big game is told how to skin his "kills" and to preserve the pelt and skeleton to the best advantage; indeed, collectors of every kind receive instructions enabling them to render their captures of real scientific value when brought home for detailed examination. The handbook should lie on the work-table of the curator of every museum, and be in the kit-bag of everyone who is prepared during his travels to preserve objects for the enrichment of our national or other public collections. There are very few curators who will not learn something of value to their museum from these pages; and probably none who have not at one time or other been compelled regretfully to scrap material presented because the well-meaning donor has not known how to collect intelligently or to preserve usefully. In future there need be no such mistakes.

Sun, Sand, and Somals: Leaves from the Notebook of a District Commissioner in British Somaliland. By Major H. Rayne. Pp. 223 + 12 plates. (London: H. F. and G. Witherby, 1921.) 12s. 6d. net.

THE conversational style and highly amusing nature of Major Rayne's lively book by no means obscure the light that it throws on the Somali character, particularly that side of it which could be observed only by one occupying an official position similar to that of the author and largely concerned with the administration of justice and the settlement of disputes in the patriarchal fashion alone understood by the Somalis. No less interesting are the narrative portions. The description of the trek to Hargeisa is so vivid that the reader almost imagines himself one of the party. The chapter that recounts the end of the Mad Mullah illustrates the universal law of history, that when the means of force are dispelled the end of the tyrant is inevitable. An error of date has slipped into p. 214: it was at

the beginning of April, 1903, that Col. Plunkett and his force were ambushed, leaving as survivors only thirty-eight natives of the K.A.R.; Gough's action was on April 22, about a fortnight later. Since those days much more has been learned about Somaliland and its inhabitants, and it may be that the use of the word "Somals" as a collective noun for the various tribes, though not to be found in Swayne's standard work, is the modern convention.

Geology of the Non-Metallic Mineral Deposits other than Silicates. Vol. 1, *Principles of Salt Deposition.* By Amadeus W. Grabau. Pp. xvi + 435. (New York and London: McGraw-Hill Book Co., Inc., 1920.) 30s.

GEOLOGISTS owe a debt of gratitude to Dr. Grabau for the preparation and publication of this volume. It is a mine of information on the occurrence and characters of deposits of mineral salts, exclusive of silicates.

The theories which have been advanced for their formation are fairly stated, and there are ample references to the literature of the subject. The author includes in his survey not only the salts of the halogens, but sulphates, nitrates, and phosphates, as well as certain elements, oxides, and hydrates associated with them. He acknowledges the sea as the great source of salt deposits, but is inclined to give rather undue importance to the salt enclosed in marine sediments in comparison with that transported by the wind. He terms the former "connate" salts, and the latter, not very happily, "cyclic" salts. Salts due to chemical changes *in situ* are termed "meta" salts, in spite of the fact that chemists have used the prefix in more than one other distinct sense. Naturally special attention has been given to American deposits, but the other continents are not neglected, though we have been unable to find any reference to the important "Magadi" soda lakes in East Africa. An interesting account is given of the "salt domes" in different parts of the world.
J. W. E.

Bibliographie des Séries Trigonométriques: Avec un Appendice sur le Calcul des Variations. By Maurice Lecat. Pp. viii + 168. (Louvain: M. Lecat, 1921.)

A VERY considerable debt is owing to M. Lecat not only for the labour which has been put into the compilation of this most valuable bibliography, but also for undertaking the publication of it without the help of any subvention, especially at so difficult a time. The main list is in alphabetical order according to authors, and gives full bibliographical details. It appears to be remarkably complete and up to date. A second list gives the titles of all the periodicals quoted in the first. An appendix provides a supplement to a similar bibliography on the calculus of variations (published 1913-16), and refers mainly to items which have appeared in the last five years. Those who specialise in the subject of trigonometric series will find M. Lecat's work invaluable.