

Wind" is to risk courting ridicule from the average schoolboy, whose interest in this book would centre rather round its nature study than its literary study.

The value of the book as a helping hand to readers would undoubtedly be greatly enhanced by illustrations and more photographs, and one is sorry to find so little reference to the commoner birds, such as the robin, thrush, and blackbird, which may usually be seen even by the city or town child.

Dr. Tickner wisely discloses the fallibility of Nature writers, a point which will tend to inspire the child with a desire to find out for himself. In passing, attention might be directed to the inferred contradiction as to the behaviour of the tortoise in rain.

"One Touch of Nature"; though in places a little advanced for the average child-mind, is on the whole a delightful book, and should go far in helping its readers to observe things in the right way and then to describe concisely and clearly what has been observed and noted.

Fifty-two Years of Research, Observation and Publication, 1877-1920: a Life Adventure in Breadth and Depth. By Prof. Henry Fairfield Osborn. Edited by Florence Milligan. With Complete Bibliography, Chronologic and Classified by Subject, 1877-1929. Pp. xii + 160 + 9 plates. (New York and London: Charles Scribner's Sons, 1930.) 1.50 dollars.

HERE is a most impressive monument to the accomplishment of a great scientific worker. Osborn early found that "research is work of the hardest kind, requiring persistence, intelligence, and imagination", and all those qualities are necessary for a proper understanding of this skeleton of a life's work. Its main bulk is made up of a chronological and a classified list of the author's publications, 801 of them; of the share he has taken in the work of learned academies, revealed by lists of awards, degrees, and fellowships; and little space is left for a personal or intimate account of the great adventure. But the outstanding facts are clear.

The application of a two-edged discipline of detailed, intensive investigation, illumined by broad generalisations or hypotheses, has resulted, on one hand, in monographic researches on the rhinoceroses, horses, titanotheres, proboscideans, and reptilian sauropods, as well as in hundreds of lesser investigations. On the other hand, from the details have sprung a crop of 'principles', such as adaptive radiation or divergence, coincident selection, rectigradation or the predeterminate origin of new characters, allometrons or the adaptation of proportions in skull and skeleton. Osborn frankly admits that several of his principles have "gained no acceptance in the current realm of either biologic or palæontologic thought", but he is content to bide his time, believing that sound principles will finally gain universal acceptance, and that the less widely unsound ones are accepted the better.

J. R.

Chemistry.

Handbuch der anorganischen Chemie. Herausgegeben von Prof. Dr. R. Abegg, Dr. Fr. Auerbach und Prof. Dr. I. Koppel. In vier Bänden. Band 4, Abteilung 3: *Die Elemente der achten Gruppe des periodischen Systems.* Teil 2: *Eisen und seine Verbindungen.* A Lieferung 1. Pp. Axvi + A336. (Leipzig: S. Hirzel, 1931.) 40 gold marks.

THE present volume of this well-known treatise deals mainly with the physical properties of metallic iron. The atomic weight is also discussed. The spectrum, magnetic properties, crystalline form, thermal properties, electrical resistance, etc., are treated very fully, the numerical data being given in great detail. The preparation of pure iron, including electrolysis, and colloidal iron form the chemical part of the volume. The physical side is more prominently dealt with than in most of the preceding volumes of the series, and, for example in the sections on magnetism, it seems as though this aspect has been given too much prominence in a treatise on chemistry. It would probably be wiser in succeeding volumes to stress the chemistry more and to avoid expanding the series too much in the direction of pure physics, thereby adding to the size and expense to an unnecessary degree. The volume is a welcome step towards the completion of the excellent series and should be in all chemical libraries. The printing and paper are of the best quality.

The Modern Soap and Detergent Industry: a Complete Practical Treatise in Two Volumes on the Manufacture of Laundry, Toilet, Pharmaceutical, Textile, Abrasive, Scouring and Powdered Soaps. By Dr. Geoffrey Martin. Second edition, revised and enlarged. Vol. 1: *Theory and Practice of Soap Making.* Pp. xii + 76 + 37 + 34 + 53 + 13 + 100 + 64 + 4. Vol. 2: *The Manufacture of Special Soaps and Detergent Compositions.* Pp. xii + 102 + 40 + 26 + 50 + 16 + 35 + 38 + 6 + 37 + 31 + 51. (London: Crosby Lockwood and Son, 1931.) 36s. each vol.

THIS very practical and detailed treatise has been brought up to date by the author, and contains an account of all important recent advances and new patents in the soap industry. It covers British, American, and Continental practice and deals also with analysis and laboratory control. Dr. Martin's work is authoritative and will be welcomed by those interested in the soap and allied industries. It is fully illustrated and indexed.

A Life of Joseph Priestley. By Anne Holt. Pp. xviii + 221. (London: Oxford University Press, 1931.) 8s. 6d. net.

ALTHOUGH a good account of Priestley's scientific work has been given by Sir Edward Thorpe, there has been no adequate biography dealing with his many other activities. This need is, to some extent, supplied by the present work. The chapter on Priestley's chemical investigations is inadequate, but the author's intention was evidently to discuss