

reach the Zoological Institute at Lund. From there they have been distributed to more than a hundred specialists in about twenty countries, and the results of their findings are to be published in a work of eight volumes under the title: "South African Animal Life". Three of these volumes have already appeared. Vol. 1 contains an introduction by Bertil Hanström, a short history of Swedish exploration of South African animal life during two hundred years, by Per Brinck, and a list of localities investigated by the expedition, by Per Brinck and Gustaf Rudebeck. Chapters 3-6 deal with Turbellaria, Solifugae, scorpions and Pedipalpi, Pseudoscorpionida, and a monograph on the whirligig beetles. Seventeen chapters on the Symphyla, Chilopoda and Insecta, and a first chapter on birds form the contents of Vol. 2, and Vol. 3 deals with a further eighteen insect groups, besides two chapters devoted to the Ixodoidea, and the Proterospionophora among the Diplopoda.

In the interest of speedy publication of the material, accounts of the various groups will appear as they are completed and not in systematic order. From the first three volumes it is abundantly clear that the series will make important contributions to our knowledge of the taxonomy and distribution of South African terrestrial and freshwater invertebrates and also vertebrates, as well as to the solution of the problems of the development, evolution, and age of the relic fauna of the southern part of the African Continent. The volumes are excellently produced, and are well illustrated by clear line drawings, maps and photographs. It is naturally impossible in this context to scrutinize the taxonomic merits of the individual contributions. Short articles on the zoogeography and ecology of groups, keys and check lists, and extensive bibliographies, add to the value of the taxonomic accounts.

We are witnessing here the birth of a faunistic work of great importance which, I am certain, will become a classic in its field. A courageous enterprise, inspired, no doubt, by Linnaean tradition, it sprung from an idea which occurred to Prof. Hanström while on a visit to South Africa for the purpose of collecting mammalian material for endocrinological studies. Collections of invertebrates made during field excursions convinced him of the justification for a special expedition equipped with modern ideas and tools, and after his return he succeeded in organizing an enterprise on which collectors, taxonomists and editors alike are to be congratulated.

O. LOWENSTEIN

OXINE AND ITS DERIVATIVES

Oxine and its Derivatives

By R. G. W. Hollingshead. Vol. 3: Derivatives of Oxine—Part 1. Pp. vi+617-896+16. Vol. 4: Derivatives of Oxine—Part 2. Pp. vi+897-1211+41. (London: Butterworths Scientific Publications, 1956.) 42s. each volume.

THESE two volumes bring to completion a work of over 1,200 pages on 8-hydroxyquinoline (oxine) and its derivatives. This substance, known since 1880, was not used as an analytical reagent until forty-five years later. A short monograph on its use was published by Berg in 1933 and many original papers have been written in recent years. The preceding two volumes which appeared in 1954 gave an exhaustive account of the reagent and of its

behaviour with almost every metal and in great detail. The main use of oxine is as a precipitant for aluminium, magnesium and zinc, but innumerable other applications in analysis were reviewed, some of which may stand the test of time. The author had preferred to include everything rather than to make a critical selection.

The third and fourth volumes, which have now appeared, are devoted to derivatives of 8-hydroxyquinoline, including its salts. Analytical applications are less numerous in these volumes, which are very largely concerned with descriptive organic chemistry. 8-Hydroxyquinoline, its salts and various derivatives have proved useful as bactericides, amoebicides and fungicides, and a chapter is finally devoted to a survey of theories and experiments on their mode of action in these respects.

The author is to be congratulated on a magnificent work of compilation. The volumes are excellently produced, with a subject-index to each volume, and in Volume 4 there is also a patent index and an index of authors. It is perhaps regrettable that a combined subject-index was not provided. The references to the literature include items extending into 1956. However, much of the descriptive chemistry, which greatly adds to the bulk of these two volumes, might have been curtailed or omitted, for any research worker in this field would certainly consult the original papers. The question may be asked: Can we afford publication on this scale about every organic compound which has practical applications? G. M. BENNETT

THERMOCHEMISTRY

Experimental Thermochemistry

Measurement of Heats of Reaction. Edited by Frederick D. Rossini. (Prepared under the International Union of Pure and Applied Chemistry by the Sub-Commission on Experimental Thermochemistry.) Pp. xv+326. (New York: Interscience Publishers, Inc.; London: Interscience Publishers, Ltd., 1956.) 7.80 dollars.

THIS book, which is written by experts for experts, deals chiefly with organic compounds; inorganic substances are scarcely discussed. The volume opens with a chapter entitled "General Principles of Modern Thermochemistry", taken mostly from "Chemical Thermodynamics", by F. D. Rossini (1950), and closes with a chapter by the same author entitled "Assignment of Uncertainties to Thermochemical Data", taken from Rossini and Deming (*J. Wash. Acad. Sci.*, 29, 416; 1939). The other twelve chapters which contain original contributions discuss fundamental constants; the calibration of calorimeters for flame and bomb reactions; standard states and corrections; and the combustion of organic oxygen, nitrogen, sulphur, chlorine, bromine and iodine compounds. Reactions other than combustion are treated in ten pages while the micro-calorimetry of slow phenomena occupies fifty pages. A brief section deals with physicochemical standards for thermochemistry and the book ends with an inadequate subject-index of two pages containing references to ninety-nine items.

A beginner will not find here sufficient drawings or descriptions of apparatus to enable him to start work. Indeed he would search this book in vain for a description of the exact conditions necessary to ensure complete combustion when he calibrates his bomb