

tissue fine-fibred bone becomes laid down in concentric layers, lining the canals which lodge the vascular material. This "marrow-bone" (*Markknochen*) represents the superstructure laid down upon the more ancient coarse-fibred bony foundation, perfecting its structure, and rendering it more efficient as a weight-bearer. The medullary cavity is formed by the anastomosis of the intrusive canals filled with highly vascular tissue, which forms the rudiment of the marrow.

A great deal of precise and suggestive information is given in regard to these and other matters, such as the phylogeny of the Haversian canals and the nature of epiphyseal centres of ossification.

The chief interest of the book lies in the support it gives to the growing conviction of the essential uniformity of the processes of ossification, although perhaps its author might not go so far as to admit this. G. ELLIOT SMITH.

#### OUR BOOKSHELF.

*The Story of the Five Elements.* By E. W. Edmunds and J. B. Hoblyn. (The Library of Modern Knowledge.) Pp. viii+264. (London: Cassell and Co., Ltd., 1911.) Price 2s. 6d. net.

THIS book is of a type now becoming more common, an elementary account of science intended for "the intelligent general reader who, having a genuine interest in science, is nevertheless unable to follow up any one branch of it in close detail." To write such a book successfully a sound knowledge of the subject, a gift of attractive exposition, and a good literary style are necessary. These are evinced in a very satisfactory measure by the authors of the work before us. No serious misstatement has been noticed during perusal—nothing more important than the use of "dephlogisticated" for "phlogisticated" on pp. 70 and 89. The exposition is clear, and a fresh turn is given to the story of elementary chemistry by following the track of the ancient "elements." The language is not hackneyed, nor yet aggressively unconventional. A perusal of the book will not make a chemist, but it will give a just idea of chemistry to an intelligent reader; and to an elementary student, in the shackles of a traditional text-book, it will afford a salutary relief, a breath of fresher air. A. S.

*An Introduction to Therapeutic Inoculation.* By Dr. D. W. Carmalt Jones. Pp. xiv+171. (London: Macmillan and Co., Ltd., 1911.) Price 3s. 6d. net.

THIS book, by one who is a pupil of Sir Almroth Wright and the director of the department of bacterio-therapeutics of a London hospital, may be taken as an authoritative guide to the inoculation method for the treatment of infective diseases. It is divided into two parts, the first dealing with the principles underlying the method, the second

with its practical application. Stress is rightly laid on the importance of the exact diagnosis of the nature of an infection by bacteriological methods, and it can scarcely be doubted that in the future exact diagnosis of the condition and the treatment of the infection itself will become more and more laboratory procedures, the function of the clinician being to decide if the disease is an infective one, to aid the recognition of the disease by the use of physical methods of diagnosis, to invoke laboratory methods to assist in the diagnosis, to exercise a general control over the patient, and to treat the general condition of the patient and any complications that may arise.

Full directions are given for the estimation of the opsonic index, which, in spite of adverse criticism, is considered by the author to possess considerable value for diagnosis and treatment, and for the preparation of the vaccines necessary for the inoculation treatment. Finally, the practice of inoculation in the treatment of various infections is fully considered.

R. T. H.

*The Babylonian Expedition of the University of Pennsylvania. Series A: Cuneiform Texts.* Edited by H. V. Hilprecht. Volume xxix., Part i.: Sumerian Hymns and Prayers to God (*sic!*) Nin-ib from the Temple Library of Nippur. By H. Radau. Pp. x+88+21 plates. (Philadelphia: Department of Archæology, University of Pennsylvania, 1911.)

ONE of the most interesting peoples of the ancient world was the Sumerian race, which founded the great civilisation of Babylonia. The cuneiform writing of western Asia was their invention, and the religious system of Babylon, which had so great an influence upon the Hebrew cult from which Christianity sprang, was originally theirs. Among the spoils of the American expedition to Nippur, in southern Babylonia, which are now being published under the editorship of Prof. Hilprecht, were a large number of the usual clay tablets inscribed with Sumerian hymns to the god Ninib. These are now translated and described by Herr Hugo Radau. That he has done his work well there can be no question, though we may not agree with all the conclusions he draws from his material. The non-Semitic Sumerian language, entirely different from the tongue of the Semitic Babylonians who borrowed the culture, including the script and religion, of the Sumerians, offers peculiar difficulties to the translator, and others may not always agree with the interpretation which Herr Radau gives to individual words and phrases of his texts; but the general sense of the originals is clear enough. Of the religious tone of these hymns, the best idea is to be derived from a perusal of them. We scarcely agree with the exaggerated estimates which their translator, perhaps pardonably, is often led into with regard to them, and his "macrocosmology" and "microcosmology" seem far-fetched. But of the main facts as expounded by him there is no doubt.