Contributions to American Anthropology and History

Vol. 10, Nos. 48–51. (Publication 585.) Pp. v+186+17 plates. (Washington, D.C.: Carnegie Institution, 1949.) 4 dollars.

OF the four contributions in this volume, three deal with the Maya and the fourth with the south-west region of the United States. The first, No. 48, "The Maya Chronicles", by Alfredo Barrera Vásquez and S. G. Morley, treats of Maya history as set forth in chronicles, which have come down to us in five of the books called "Chilam Balam". These have survived in the form of seventeenth- to nineteenth-century copies of the MSS. written in Spanish characters in the Maya language, but are partly based on old hieroglyphic codexes, now lost. Mr. Barrera Vásquez has collated these sources, amending the order in some cases, and has produced an outline of the history of the Maya in northern Yucatan from the fifth to the seventeenth century. Dr. Morley adds a commentary, giving his own views of Maya history in the light of Mr. Barrera Vásquez's work. Much of this will be familiar to readers of his general work, "The Ancient Maya"; but it is valuable to have this fuller version. This contribution is of importance to all who are interested in the Maya; but the other two, by R. L. Roys, will appeal mainly to specialists.

No. 49, "Guide to the Codex Pérez", is a study of extracts made in the nineteenth century by Juan Pío Pérez from some of the books of "Chilam Balam", and No. 51, "The Prophecies for the Maya Tuns or Years in the Books of Chilam Balam of Tizimin and Mani", is a text and translation, with introduction, of the appropriate parts of those books.

Contribution No. 50, "The Pendleton Ruin", by A. V. Kidder, H. S. and C. B. Cosgrove, is an account of an excavation of a site in the extreme south-west of New Mexico belonging to a marginal variety of the Casas Grandes culture of Chihuahua, Mexico, with mention of a reconnaissance of some neighbouring sites. The work was done in 1930 and 1933, and publication has been delayed by various causes, including the death of Mr. Cosgrove. The site gave rise to the definition of the Animas Phase of the Casas Grandes culture, which is mentioned in the publications of H. S. Gladwin and others. The importance of the work lies in this and in the lack of previous work in the area.

Introduction to Chemical Thermodynamics

By Prof. Luke E. Steiner. (International Chemical Series.) Second edition. Pp. xiv+510. (New York and London: McGraw-Hill Book Co., Inc., 1948.) 36*s*.

IN this second edition of his book, Prof. L. E. Steiner has added some new material and has modified the arrangement somewhat. The section on statistical methods has been expanded into a very clear and useful chapter. The whole text is sufficiently detailed to meet the needs of all kinds of students of chemistry, and the book contains an unusual amount of information for a volume of its size.

The author has shown both originality and skill in the development of his subject. In the treatment of the First Law of Thermodynamics, energy is taken as something known, and heat and work are considered as secondary quantities in relation to it. This leads to some obscurity when the Second Law comes to be treated. The introduction to the Second Law is very clear and informative. The entropy is introduced as the coefficient of the temperature differential in the energy expression, after the manner of Gibbs; but its properties are fully developed later. This treatment, in the reviewer's opinion, leads to difficulty in relation to isothermal changes, which are particularly important in chemistry; but, apart from this, no objection can be taken to the method used by Prof. Steiner.

The applications of thermodynamics are dealt with in a very sound and detailed way, with full use of numerical data and close attention to units. There are many good numerical problems. This is a very sound and attractive book and can be recommended without reserve. J. R. P.

Alkylation of Alkanes

By Gustav Egloff and George Hulla. Vol. 1: Patents on Alkylation of Alkanes. (American Chemical Society Monograph Series, No. 107.) Pp. xiv+1138. (New York: Reinhold Publishing Corporation; London: Chapman and Hall, Ltd., 1948.) 120*s*. net.

THE chemistry of the paraffin hydrocarbons has grown enormously in recent years, chiefly owing to the study of these hydrocarbons present in petroleum. The alkylation of alkanes is of particular importance, as it is a reaction which enables one to produce branch-chain products from straight-chain hydrocarbons. This reaction thus gives a very valuable improvement in the ignition qualities of fuels for spark-ignited internal-combustion engines.

The book is the first of a three-volume treatise on the alkylation of alkanes and consists of a description and a discussion of the various patents which have been issued on this subject. Catalytic alkylation is dealt with, consideration being given to various catalysts which have been used for this purpose. There is a section dealing with the thermal alkylation of alkanes, and reactions involving the removal of alkyl radicals are also discussed.

In the two volumes to follow, it is proposed to deal with the scientific and technical publications on this subject, particularly the reports on work carried out by the oil companies during the Second World War. The complete work should be of great value as a standard reference on this subject, and will save workers in this field many hours of searching through the literature. W. W. G.

Philosophy of Nature

By Moritz Schlick. Translated by Amethe von Zeppelin. Pp. xi+136. (New York: Philosophical Library, Inc., 1949.) 3 dollars.

MORITZ SCHLICK was a leader, if not the leader, of the philosophical school known in the 1920's as the Vienna Circle. He was assassinated while on his way to lecture—an unusual death for a professor. This was in Vienna in 1936, and the assassin was a lunatic.

The book consists of an outline of a course of lectures on the concepts of natural science, compiled from MSS. left behind by Schlick. The treatment of physical concepts is clear, eminently reasonable, but elementary and much too summary. The treatment of biological concepts is perfunctory. It looks as though little of the interest of the lectures has survived in the book; a better idea of the quality of Schlick's thought can be gathered from the discussion in an appendix on "The Concept of the Atom". The publication of this book is evidently intended as an act of piety by some of Schlick's friends—a somewhat misjudged piety. A. D. RITCHIE