Book Reviews

Archeology

Maya Archaeologist. J. Eric S. Thompson. University of Oklahoma Press, Norman, 1963. 301 pp. Illus. $5.

The author is perhaps the greatest contributor to our knowledge of the ancient Maya culture of Middle America. His new book brings to mind his *Rise and Fall of Maya Civilization* (1954), a prime source for specialists and laymen alike, but it is quite different from the earlier book. In Thompson's own words *Maya Archaeologist* "is not a history . . . but an account of incidents of excavation of the Maya's ancient cities [*sic*] and of contacts with their descendants. . . . the scenes are as I saw them one third of a century ago." The reader is offered entertaining reading that leads him about the Maya area as Thompson recounts the highlights of his numerous journeys into country which has since begun to change profoundly.

Thompson's method of presentation is similar to that of John L. Stephens, whose famous books of a century ago pay much attention to people, customs, and beliefs and to the difficulties of travel in remote areas. Of course, much description of ancient Maya sites and culture, as now known, is worked into the geographically oriented narrative as occasion arises. One is informed as well as entertained, but the data on the Maya are not organized as such. Many a reader will be desirous of knowing more, but there is no bibliography. There are, however, several references in the text to fuller treatments in *Rise and Fall.*

Among specialists on the Maya, Thompson is especially famous for his work on the hieroglyphic inscriptions, not only with the dates and time patterns but also with the many less well-understood noncalendric signs for which he has recently compiled a monumental catalog. A few of these hieroglyphs appear on the cover of this issue of *Science.*

Younger Mayanist readers will probably be surprised at the amount of new raw hieroglyphic material that Thompson discovered. They might note that this was not accomplished with the aid of aircraft and jeeps for travel, or with the help of bulldozers and trucks in moving excavated debris. Possibly one or two may ponder Thompson's remark "Now, with the enormous increase in knowledge, fields of specialization are so narrow that archaeologists are in mortal danger of becoming technicians."

LINTON SATTERTHWAITE
University Museum,
University of Pennsylvania

Heterocyclic Chemistry

Advances in Heterocyclic Chemistry. vol. 1. A. R. Katritzky, Ed. Academic Press, New York, 1963. xii + 476 pp. Illus. $15.

Physical Methods in Heterocyclic Chemistry. vol. 1, *Nonspectroscopic Methods* (358 pp. $12); vol. 2, *Spectroscopic Methods* (410 pp. $14). A. R. Katritzky, Ed. Academic Press New York, 1963. Illus.

These three new books on heterocyclic chemistry, all edited by A. R. Katritzky, add considerably to the literature in this important area.

Volume 1 of *Advances in Heterocyclic Chemistry* is the first of a new series of "Advances in . . .," a literary form that seems destined to spread to all areas of science. The present offering appears to be thoroughly justified, however; the magnitude and relative inhomogeneity of heterocyclic chemistry make it very reasonable to compile a series of advanced essays on special subjects. The particular value of this collection, especially for the American reader, is that all of the contributors are from outside the United States and that they write on subjects which deserve to be better known and for which no other good summaries are available.

S. Gronowitz leads off with a magnificent review of recent advances in the chemistry of thiophenes; he systematically covers the important work of the past 10 years on molecular structure, synthesis, reactions, and reactivity of thiophenes. The contributions made by Gronowitz's own group at Uppsala stand out in this review. R. M. Acheson follows with a clearly written discussion of the curious reaction of nitrogen heterocycles with acetylene dicarboxylic acid and its esters, a fascinating reaction which leads to the synthesis of a variety of other heterocyclic systems. Acheson's own laboratory was largely responsible for the elucidation of this reaction. D. Beke provides a short discussion of the structure of pseudo bases of dihydroisoquinolines, and J. Gut surveys the synthesis of aza analogs of the pyrimidine and purine bases of nucleic acids. W. L. F. Armarego presents a well-organized and thorough discussion of the chemistry of quinazolines. Finally, Katritzky and J. M. Lagowski summarize the methods of studying prototropic tautomerism of heteroaromatic compounds; following the summary they present a specific discussion of the results of these studies in six-membered heteroaromatic rings.

With the exception of a few typographical errors and some incorrect numbering, the book is carefully done. The general organic chemist will find most of these topics somewhat specialized for his taste, but his interest will certainly be aroused by many of them.

The other books are a two-volume set entitled *Physical Methods in Heterocyclic Chemistry.* Volume 1, on nonspectroscopic methods, includes discussions of ionization constants (A. Albert), heteroaromatic reactivity (J. Ridd), x-ray diffraction (W. Cochran), solubility (W. Pfleiderer), dipole moments (S. Walker), and electrochemical properties (J. Volke). Each chapter gives only the briefest introduction to theory and experimental detail and concentrates on assessing the utility of the method in research on the structure and reactivity of heterocyclic compounds. Applications are illustrated by specific examples, and the literature is generally covered through 1961. The book is only partially successful; the