Diatom spermatozoid cells have been known with certainty to have a single flagellum since von Stosch's research in 1951. Patrick and Reimer, however, state that there are two flagella on microspores, although on another page they state that spermatozoid cells have one flagellum.

Unfortunately, similar errors also extend into other sections of the introduction. In the ecology section, epiphytic diatoms are explained as those living on "rocks and rooted vegetation"; aerial habitats include species that are "in the soil." One wonders what sort of environment *Navicula contenta var. biceps,* described as a "truly atomspheric species, lives in. The extensive and important publications of F. E. Round on freshwater diatom ecology are not cited. Africa is not mentioned in the discussion on geographical distribution of diatoms, a surprising omission because some of the most recent and thorough studies of diatoms have been made in Africa by Cholnoky. Also, the important publications of Cassie, Wood, and Crosby on New Zealand and Australian diatoms are not mentioned in the section on ecology of marine diatoms.

Although this book is to be welcomed as a manual for diatom determination, the errors in the introduction make it unsatisfactory as a general reference.

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Early Culture in Mexico

The state of Oaxaca, situated on the Isthmus of Tehuantepec in southern Mexico, has long been a focus of interest for anthropologists because of the many colorful Indian tribes who still live there, retaining their native languages and many of their aboriginal customs, and because of the numerous archeological sites scattered over the area. Perhaps the most spectacular of these sites are Monte Albán, the ancient headquarters of the Zapotecs and their ancestors, and Mitla, the chief burial place of the Mixtec rulers.

The first scientific work in the region was done on these two sites around the turn of the century by William Holmes, Leopoldo Batres, and Marshall Saville. These investigations, while excellent for their time, took place before the days of dirt archeology and were primarily studies of architecture and decorative design. It was not until 1930 that Alfonso Caso began his epochal work at Monte Albán. With several prominent Mexican archeologists participating, these investigations continued until 1945. The result was the establishment of a chronology for the region beginning well before the start of the Christian era, and revealing the fact that the Zapotec and the wandering Mixtec were two of the most important factors in the complicated development of Mesoamerican civilization.

For more than 20 years this pioneer work stood as an isolated island of information in the midst of a veritable sea of archeological sites of only slightly lesser importance. During the past decade, however, a great deal has been done to fill out the picture of Oaxacan prehistory and history by such men as Ignacio Bernal, John Paddock, Roberto Gallegos, and Charles Wicke, in the field of historical research, and by archeological excavations at sites such as Yagul, Zaachila, and Cuilapan. Meanwhile Caso has continued his studies of Zapotec inscriptions and Mixtec native documents. As a result of all this work we now have a satisfactory framework for the prehistory of the area.

Olmec influences are evident in the earliest periods at Monte Albán. Writing and the calendar were developed by the Zapotec and possibly diffused by them to the Maya and others. Because of the abundance of early Mixtec documents here, history merges into archeology possibly to a greater degree than in any other part of Mesoamerica.

In **Ancient Oaxaca: Discoveries in Mexican Archeology and History**, edited by John Paddock (Stanford University Press, Stanford, Calif., 1966. 432 pp., illus. $18.50), an attempt has been made to synthesize this complex body of information for the student and lay reader.

In a sense the material is not new. The book is divided into three parts. Part 1, "Mesoamerica before the Toltecs," by Jiménez Moreno, is a translation into English of an article published in 1959 in *Esplendor del México Antiguo*. This serves as a general background for the early development of the civilizations of southern Mexico and gives perspective to the total picture. It is significant that the Aztecs and Maya are scarcely mentioned.

Part 2, "Oaxaca in Ancient Mesoamerica," by Paddock, deals with the complexities and chronology of movements beginning with preceramic people in the Oaxaca area, and serves as an introduction to part 3, which consists of eight papers on specific subjects, such as native documents, genealogies, and interpretations of tomb burials. These eight papers, originally presented at a symposium on Oaxaca, were first published in 1962 in the *Acta* of the 35th Congress of Americanists. Those originally published in Spanish have been translated into English. There have been some modifications, many illustrations have been added, and the bibliography is up-to-date. The book contains 15 maps and plans, five chronological charts, and numerous plates.

Oaxaca is a key area in Mesoamerican archeology. For the first time the student may now find adequate coverage in a single book.

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History of Atomic Theory

The World of the Atom (Henry A. Boorse and Lloyd Motz, Eds.; foreword by I. I. Rabi. Basic Books, New York, 1966. Vol. 1, 885 pp.; vol. 2, 1033 pp., illus. $35) is a collection of original papers significant for the development of ideas concerning atoms. The range is fairly wide, for papers on subjects which are not directly concerned with atoms but which are necessary for the understanding of our present ideas on atoms are included—for example, Huygens' "A wave theory of light," Maxwell's "Dynamical theory of electromagnetism," an article by Michelson and Morley on their experiments, and short articles by Einstein on the special and general theory of relativity.

There are 90 sections, starting with Lucretius, including Descartes' theory of vortices, and ending with a good exposition by the editors on the role of symmetry considerations in elementary particle theory. It is very valuable to have these original sources collected in one place and all in English.

Concerning such an extensive work, differences of opinion necessarily arise as to who should be included. In general I find the selection excellent but would have included Gassendi, who reintroduced the atomic theory to science, and Boltzmann.

Each of the reprinted papers is preceded by a lengthy introduction by the editors, giving the scientific background, an overview of the paper, and a bio-