31—of last year, and this is awkward. We stupidly begin our year at an arbitrary and unreasonable time. It is as if we passed the solstice without recognizing it, and only began our year when, ten days late, we first noticed the lengthened day. But the quarters are reasonable divisions, marked with astronomical precision, and not to be designated by terms already in use with a different meaning.

I resent the arrogance of those who say that the everyday and historic meaning of a common word is wrong. They are like those small girls who read Emerson's poem, "The Mountain and the Squirrel," in their fourth readers, and noted that he referred to the squirrel as bun. They announced at once that we were wrong in using bunny to call our pet rabbit. We grant now that the solstice comes on June 21, and we know what the word means. We do not think the solstice marks the advent of summer, and we will not use the word summer to denote the third quarter of the year.

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SCIENTIFIC BOOKS

SIR JOHN CUNNINGHAM MCLENNAN

Sir John Cunningham McLennan, a Memoir. By H. H. LANGTON. With a chapter on his scientific work by E. F. BURTON. Toronto: University of Toronto Press. 1939. $2.50.

THE biography of a scientist and a man of great achievements is always welcome and of interest. In this age of the dominance of physical science (a true luxury age for the physicist) in the light of things that have been and perhaps in the light of the days to come, the biography of a man like Sir John is of more than passing interest. Very few of the modern generations of physicists realize what were the conditions in our laboratories in the western hemisphere less than fifty years ago. It is to the sterling leadership, the untiring enterprise and zeal and the scientific idealism of men like Sir John C. McLennan that we owe the present status of research and learning in North America. Starting in an impoverished and lay community with no support and little encouragement Sir John in some thirty years educated this community to a true appreciation of science, built one of the leading physical research laboratories in North America and contributed his share to the fund of knowledge. How this was done and how Sir John himself developed as a physicist is covered in the first chapters of the book, which essentially mark episodes in his life under the titles, "Early Life," "The Department of Physics," "The Alumni Association" and "The Physics Laboratory." The subsequent episodes in this rich and active life are "The War," "Research, Public and Academic Activities after the War" and "The Last Years." In view of the present world situation the relations of science to national defense as illustrated by the activities of Sir John furnish valuable reading. It may be of interest to point out that the magnetic mine so much discussed in recent months was invented and developed as an anti-submarine measure by Sir John. With these mines placed in defensive positions there were gotten one enemy cruiser, three destroyers, three mine sweepers and two submarines. Incidentally, one of these submarines had successfully negotiated all defenses in the entrance to Scapa Flow only to blow up on Sir John's magnetically controlled mine, thus saving the fleet anchored there serious losses.

An Appendix by Professor E. F. Burton lists the scientific achievements of Sir John. Of these the most valuable were some of his early researches on electrical discharge in gases, the discovery of the earth's penetrating radiation and the isolation by means of an ice ionization chamber on Lake Erie of what is now called the cosmic radiation, the studies on spectra and ionization potentials, the successful construction of the world's second cryogenic laboratory and his discovery of the origin of the green auroral line. In a final Appendix there is a complete list of Sir John's published works.

The biography is historically accurate and well documented. The style is terse but readable, the material is well organized, and the contents are largely factual. No attempt at character analysis is made, although a chapter entitled "Characteristics" describes Sir John in terms of the author's impressions and quotations from his contemporaries.

LEONARD B. LOEB

THE MICROSCOPE

The Microscope. By ROY M. ALLEN. iv + 286 pp. 82 figs. 17 plates. New York: D. Van Nostrand Company, Inc. 1940. $3.00.

BOOKS dealing solely with the microscope in general are fairly numerous; those that cover the subject and further attempt to describe methods of preparing materials for microscopical examination are less common. The text under review belongs in the latter category despite the statement in the preface that it is "devoted wholly to the theory and manipulation" of the microscope. Actually, however, only 177 of the 286 pages are strictly devoted to microscopes and their operation.

The author, a consulting microscopist and former president of the New York Microscopical Society, ex-

plains in considerable but not belabored detail the optical principles involved in the construction and operation of all the different types of microscopes. The explanations are designed for persons possessed of little knowledge of the optical and mathematical laws involved and are clearly understandable. The information presented has been derived from many sources, and the book thus constitutes a useful and handy reference manual. Instruments of American manufacture are almost exclusively discussed.

In the preface the claim is further made that "the methods and techniques of mounting described represent actual practice originated and developed in the author's own laboratory." The sections devoted to petrological and metallurgical procedures are good, but those dealing with biological materials are somewhat disappointing. The invaluable microtechnique journal, *Stain Technology,* is nowhere mentioned; it is unfortunate that the author could not have utilized it as a source for more modern and dependable methods.

While perusing this book and comparing it with others of a similar nature, the reviewer was struck by the fact that none of these texts has ever achieved a real and satisfactory balance in the treatment of the two phases of the subject. It is a somewhat curious fact that the writers of all such texts seem to be better grounded in the theory and operation of the microscope than in the principles and procedures of general microtechnique. Discussions of technical methods have always been inadequate, lopsided and oftentimes prejudiced.

The book is excellently printed on a thick white stock. The language is somewhat stilted and occasionally makes difficult reading. A few sentences whose meaning is incomprehensible occur (*e.g.,* the last sentence of the second paragraph on page 179). Although it is a minor point in a book apparently intended primarily for amateur microscopists desiring to know more about their instruments, citation of scientific names and terminology does not consistently follow accepted usage. For example, on page 217 are found "spiragyra" and "mycellium." And there is the statement that the staining solution of Heidenhain's iron hematoxylin is "a saturated solution of hematoxylin in water, which requires a week or two to reach saturation" (p. 228).

There is a clearly reproduced color frontispiece and 17 plates of photomicrographs, mostly, as might be expected, of diatoms. Appended is a bibliography of selected references, a glossary of microscopical terms and an index.

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SOCIETIES AND MEETINGS

THE ALABAMA ACADEMY OF SCIENCE

UNDER the auspices of President George D. Palmer, of the School of Chemistry, Metallurgy and Ceramics of the University of Alabama, the Alabama Academy of Science held its seventeenth annual meeting at Birmingham-Southern College, Birmingham, on March 29 and 30, with an attendance of over one hundred and twenty-five members and many visitors. The progressive Alabama Junior Academy of Science held its eighth annual meeting at the same time and place, Artie Belle Pirtle, Sidney Lanier High School, Montgomery, presiding, attended by one hundred and ninety-four delegates from twenty-seven high schools.

The usual executive and business meetings were held on Friday, and the scientific papers were presented in two sessions, on Friday afternoon and Saturday morning, and in four sections, the four vice-presidents serving as section chairmen. These were, respectively, S. R. Damon, Biology and Medical Science, State Department of Health, Montgomery; I. M. Hostetter, Chemistry, Physics and Mathematics, Howard College, Birmingham; A. J. Westland, Geology, Anthropology and Archeology, Spring Hill College, Mobile; and E. D. Emigh, Industry, Economics and Geography, Weather Bureau, Montgomery. A demonstration on the induction of ovulation by pituitary stimulation, showing the use of this technique in teaching and research, was given in Ramsay Hall by C. M. Pomerat, chairman, Department of Biology, University, as was one on plastics and synthetics by the president. Junior Academy exhibits were held in the same building. All business sessions were held in Munger Hall. A complimentary luncheon was tendered the scientists by the college in the cafeteria, and a tea was given for members of both academies and visitors in the Stockham Building. At the annual banquet, Walter B. Jones, director, Alabama Department of Conservation, Montgomery, served as the very able toastmaster. He later presented to the academy "The Ivory-Billed Woodpecker," a motion picture film, at the joint session in the evening over which he presided. This was held in Munger Auditorium. George R. Stuart, assistant to the president of the college, gave the address of welcome, and the response was made by S. J. Lloyd, dean of the School of Chemistry, Metallurgy and Ceramics, University, and acting state geologist. Dr. Palmer's presidential address was entitled "Scientific Research, the Hope of the South."

One morning and two afternoon field trips for the