and the Atom—Wave Motion—Sound—Light—Communication — Illumination — Refrigeration. Such a book would be expected to proceed from the conjoined efforts of many professors, or if from one, then from the occupant of a chair in General Science and Engineering or in "Natural Philosophy" of the eighteenth-century sense. Mr. Gray is designated as an Associate Professor of Physics (in the University of Akron) but I suspect and hope that his lectures range over a wider field.

The style is conversational, at times even chatty, with flashes of humor. Among the sections which I found most readable are the chapters on the solar system, the passages on the atmosphere and on weather (tucked away in the chapter oddly entitled "Factors Which Change the Surface of the Earth"), the chapters on fuels, on alloys and on synthetics including plastics, and that entitled "Heat Engines" and devoted largely to the automobile. Another reader would probably make another selection, depending upon the distribution of his interests and of his ignorances: it would be difficult to find a reviewer capable of making an impartial judgment, for he would have to bring an equal interest and an equal state of knowledge to every subject, and probably no such person exists.

There is a rather depressing joke to the effect that an encyclopaedia is a book of which one likes the treatment of every subject except one's own. The errors which I find in the treatment of physics do not vitiate the book, but they do suggest that in the to-be-hoped-for second edition each part should be submitted to the inspection of a narrower expert. Cohesive forces between molecules do *not* vary inversely as the square of the distance; a liquid may be denser than the solid into which it freezes; the constituents of a mixture do not boil off individually and completely at the respective temperatures at which they would boil if pure; Franklin's kite experiment is now regarded by the historians as a myth; the reason given for believing that e/m is the same for all electrons is not a valid reason; the nuclear atom-model was invented by Rutherford and also by Nagaoka, but not by Bohr; there are several natural radioactive substances lighter than lead, and *all* elements can be obtained in radioactive forms, not "just a few." I could go on like this, but do not wish to leave the impression that the flaws are more numerous than the right statements, a danger which reviewers often incur. The difficulty is that correct statements are not news.

Some passages which I marked for favorable quotation are: the very timely reference to the 1886 Commissioner of Labor who stated "in his annual report that . . . the next fifty years would see no such advance as the previous half century"; the clever definition of plastics, including the phrase "only man can make a plastic"; the definition of force in the words: "Our purposes in this discussion will be adequately served if we define force simply as 'push or pull.' The fact that the definition contains only words of one syllable may keep it from sounding very impressive, but it covers the ground satisfactorily." And again: "An individual whom we describe as having a great deal of energy is one whom we think of as being able to accomplish a lot. Very much the same idea is involved in the scientific definition which states 'Energy is the capacity for doing work.'" And to terminate: "Radio-active disintegration is somewhat as though a large brick factory building should shoot out a lot of bricks and become a theater, which after a time would emit more bricks and settle down into a dwelling-house, which later on would repeat the procedure and continue its existence as a hamburg stand."

I hope that these remarks and quotations will entice many to read this book. It remains to be said that there are many striking photographs, and that for the benefit of those who wish to test their absorptive powers and their memories the author has supplied after each of the chapters a multitude of questions, classified as "Discussion," "Multiple-Choice," and "True-False."

KARL K. DARROW

SOCIETIES AND MEETINGS

THE KANSAS ACADEMY OF SCIENCE

THE seventy-fifth annual meeting of the Kansas Academy of Science was held at Lawrence, Kansas, on April 10, with Dr. Raymond H. Wheeler, University of Kansas, Lawrence, Kansas, presiding. The affiliated society, The Kansas Entomological Society, met with the Academy. Other state societies which held their meetings in cooperation with the Academy were The Kansas Association of Teachers of Mathematics and the Kansas Chapter of The Mathematical Association of America.

This was the Diamond Jubilee Meeting of the society, the first meeting having been held in 1868. Originally it had been the intention to celebrate this milestone along the lines of the Golden Anniversary held in Lawrence in 1918, but such plans were abandoned and this meeting, shortened to one day, was conducted in a conservative manner. The goal was a vigorous, effective meeting to maintain the virility of the organization without handicap to the war effort.

During the morning, section meetings were held for Biology Teachers, Botany, Chemistry, Geology,

Physics, Psychology and Zoology. No attempt was made to hold a section of the Junior Academy but local chapters had been encouraged to hold meetings at which the outstanding demonstrations, papers and exhibits were selected. These were brought to the state meeting and judged.

Saturday afternoon was devoted to a symposium on "Science and the War Effort," in which nine persons qualified to represent their respective fields, related the activities of that field to the war. The following fields were represented: Agriculture by Dean L. E. Call, Kansas State College; Bacteriology and Medicine by Dr. Noble P. Sherwood, University of Kansas; Botany by Dr. Paul B. Sears, Oberlin College; Chemistry by Dr. John W. Greene, Kansas State College; Entomology by Dr. H. B. Hungerford, University of Kansas; Geology by Dr. John C. Frye and C. Philip Kaiser, State Geological Survey; Physics by Dr. J. Howard McMillen, Kansas State College; Psychology by Dr. H. B. Reed, Fort Hays Kansas State College; Zoology by Dr. John Breukelman, Kansas State Teachers College, Emporia. The society plans to publish these talks in the current volume of its Transactions.

The Constitution was amended to add two sections. The first decreed that the Academy shall have a librarian to be elected annually; the second that the chairman of the Junior Academy of Science shall be elected for a period of three years and be a member of the Executive Council.

The annual banquet was held on Saturday evening, President Harvey A. Zinszer presiding as toastmaster. The address of welcome was given by Chancellor Deane W. Malott of the University of Kansas. A program in keeping with the spirit of the meeting was conducted. Dr. E. S. Riggs, formerly of the Field Museum of Natural History, an honorary member, gave a word of congratulation to the society from this group; and greetings were voiced by Dr. Julius T. Willard, formerly dean of science at Kansas State College, for the life members. The secretary read the names of 20 persons who had been annual members for 20 years or more that had been elected to life membership to commemorate this milestone in the history of the society. Many of these persons were present at the banquet. Dr. Raymond H. Wheeler, the retiring president, read numerous messages from older life members who were unable to be present and then gave the address of the retiring president entitled, "Climate and Human Behavior History."

The banquet was followed by the annual public meeting. The program for this occasion consisted of an invitational address by Dr. Paul B. Sears, head of the department of botany of Oberlin College, and a noted ecologist. His subject was, "The Ecology of Peace." It was a timely discourse at this stage of our war torn world.

TABLE I

SECTION RECORD, WITH PAST AND FUTURE OFFICERS—LAWRENCE MEETING

Name of section	Chairman for 1943	No. papers on program	No. persons attending	Chairman for 1944
Biology Teachers	Sherwin B. Griswold	4	15	J. Ralph Wells
Botany	Andrew Riegel	15	30	S. M. Pady
Chemistry	J. Wilbert Chappell	13	45	Worth A. Fletcher
Geology	H. T. U. Smith	10	15	W. H. Schoewe
Kansas Entomological Society	H. B. Hungerford	9	35	Robert Bugbee
Kansas Chapter of Math. Assoc. of Am.	C. F. Lewis	9	55	Paul Eberhart
Kansas Assoc. of Teachers of Math.	Daniel B. Pease	9	55	H. H. Bishop
Physics	W. D. Bemmels	8	26	C. V. Kent
Psychology	O. W. Alm	11	32	Maurice C. Moggie
Zoology	Jacob Uhrich	17	34	Dorothea S. Franzen

The Academy registration was 185. The reports from the section chairmen on their sections is presented herewith in Table I.

The next annual meeting of the Academy will be held at the Washburn Municipal University of Topeka if plans can be perfected to that end; otherwise at Kansas State College, Manhattan, Kansas.

The following officers were elected for the next year and meeting: President, Harvey A. Zinszer, Fort Hays Kansas State College; President-elect, L. D. Bushnell, Kansas State College; Vice-president, John W. Breukelman, Kansas State Teachers College, Emporia; Secretary, John C. Frazier, Kansas State College; Treasurer, F. W. Albertson, Fort Hays Kansas State College; additional Executive Council members, R. H. Wheeler, University of Kansas; Claude Hibbard, University of Kansas; A. C. Carpenter, Ottawa; and Edith Beach, High School, Lawrence. W. J. Baumgartner of the University of Kansas was re-elected Managing Editor of the *Transactions* for a period of three years. Paul Murphy of K.S.T.C., Pittsburg, was elected an Associate Editor for a term of three years. Roger C. Smith of Kansas State College was re-elected as delegate to the academy conference for one year. Donald J. Ameel of Kansas State College was re-elected Librarian. Miss Edith Beach of Lawrence High School was elected secretary of the Junior Academy for a three year term.

JOHN C. FRAZIER,
Secretary

MANHATTAN, KANSAS