In view of the wartime requirements of the nation, particular attention is being given to investigations in connection with such minerals as have a direct bearing on the war effort. The work of the bureau is largely directed toward the extension of the gold-mining industry, which provides foreign credits, and toward an evaluation of resources in petroleum, an increased domestic supply of which is necessary to limit dependence on foreign sources. Investigations will be made also of deposits of many of the so-called war minerals, such as chromium, manganese, molybdenum and tungsten.

Twenty-six parties will be engaged in geological surveys and investigations, and eleven in topographical mapping. In addition, two topographical parties will be employed on supervisory work. Of the geological parties, three will be in British Columbia, five in Alberta, one in Saskatchewan, two in Manitoba, two in Ontario, four in Quebec, one in New Brunswick, one in New Brunswick and Nova Scotia, one in Nova Scotia, one in Yukon and three in the Northwest Territories. Two other parties will be employed on the general investigation of deposits of war minerals, one in British Columbia and Yukon and the other in the rest of Canada.

The topographical mapping program for 1940 will be devoted entirely to surveys in the foothills district of Alberta, which is now of such importance as a potential source of petroleum supplies. Ten topographical parties, one control party and two supervisory parties will operate in this district.

THE COOK OBSERVATORY

PLANS to proceed at once with continuation of the astronomical work begun by the late Gustavus Wynne Cook, the Philadelphia industrialist and amateur astronomer, who died on June 4, have been announced by the University of Pennsylvania. The work will be done with the astronomical equipment assembled and used by Dr. Cook in his private observatory at Wynnewood, Pa., which has been bequeathed to the university.

At the time of his death, Dr. Cook was engaged in making a photographic map of the Milky Way region. In preparation for this work he acquired in 1936 an astrographic telescope, said to be the largest in the world. A little more than half of the Milky Way section has already been photographed and its completion will be one of the immediate objectives of the observatory.

Dr. Charles P. Olivier, Flower professor of astronomy at the university and director of the Flower Observatory at Highland Park, who will direct the new program, has announced that Dr. P. H. Taylor, who has worked with him for the past four years, will work full time, and that in addition three part-time astronomers have been added to the staff. These include I. M. Levitt and L. I. Tabor, who were associated with Dr. Cook for several years, and Dr. Roy K. Marshall, a member of the staff of the Franklin Institute. Mr. Levitt, also a member of the staff of the institute and a former student of Dr. Olivier, will continue the work he has been doing with the spectrohelioscope at the Cook Observatory, cooperating in an international project for the study of solar eruptions. Mr. Tabor, who has been in charge of the work with the astrographic camera, will carry forward the work of mapping the Milky Way.

The work of the observatory will be continued for the present on the Cook estate in Wynnewood. This will permit certain lines of investigation to go forward without interruption. The program will be coordinated with that of the Flower Observatory and the equipment eventually will be placed with that of the Flower Observatory at some suitable location. The Cook unit will maintain its integrity and the name of Dr. Cook will be perpetuated. He is said to have spent approximately $200,000 on equipment for his observatory.

The bequest includes two buildings—a "sun house" and a "star house"—in addition to the equipment they contain. The largest telescope in the collection is a 28½-inch reflector, which will be used for the study of stellar spectra for the solution of special problems. There are also, in addition to the astrographic telescope and the spectrohelioscope, a 15-inch horizontal refracting telescope and a new Schmidt Camera of 14 inches aperture.

THE ILLINOIS-INDIANA SECTION OF THE SOCIETY FOR THE PROMOTION OF ENGINEERING EDUCATION

The Illinois-Indiana Section of the Society for the Promotion of Engineering Education held its annual meeting at the University of Notre Dame on April 21 with an attendance of nearly two hundred. After the Rev. J. Hugh O'Donnell, C.S.C., president of the university, welcomed the group, the Rev. John J. Cavanaugh, C.S.C., who is vice-president of the university, spoke on "Intellectual and Moral Education at Notre Dame," pointing out that Notre Dame is primarily concerned with the intellectual development of the student, but at the same time it integrates the religious and intellectual elements in higher education. Dean D. C. Jackson, Jr., of the College of Engineering, discussed "Engineering and Religion" and emphasized that "definite attention to integrating an intellectual study of religious principles and convictions into the engineering curricula is essential for the best progress of the progression of engineering in its broadening scope in approaching social problems in the future." Professor F. G. Seulberger, director of industrial relations at Northwestern University, gave an interest-

ing description of the plans for the new Northwestern Technological Institute. The section had two outside speakers: W. S. James, chief engineer of the Studebaker Corporation, and T. A. Boyd, director of development for General Motors Corporation. Mr. James pointed out that in industry the demand is for engineers well grounded in the fundamentals (physics, chemistry and mathematics) which should be taught throughout the entire undergraduate course in terms of their application to all types of engineering. Drawing upon his broad industrial experience for illustrations, Mr. Boyd emphasized the importance, regardless of the type of engineering studied, of pursuing the research method in all subjects.

The following officers of the section were elected for 1940–41: *Chairman,* W. A. Knapp, assistant dean of engineering, Purdue University; *Secretary,* George A. Maney, Northwestern University; *Members of the Executive Committee,* J. G. Potter, Armour Institute of Technology; L. F. Stauder, University of Notre Dame; P. G. Andres, Lewis Institute; H. A. Moench, Rose Polytechnic Institute, and F. L. Ehasz, University of Illinois.

OFFICERS OF THE AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

DR. R. W. SORENSEN, professor of electrical engineering and head of the department of electrical engineering at the California Institute of Technology, was elected president of the American Institute of Electrical Engineers for the year beginning August 1, as announced at the annual meeting held in Swampscott, Mass., during the summer convention of the institute. The other officers elected were: *Vice-presidents,* Everett S. Lee, Schenectady, N. Y.; J. W. Barker, New York; K. L. Hansen, Milwaukee; J. L. Hamilton, St. Louis; A. LeRoy Taylor, Salt Lake City; *Directors,* T. F. Barton, New York; M. S. Coover, Ames; R. G. Warner, New Haven; *National Treasurer,* W. I. Slichter, New York (reelected).

These officers together with the following hold-over officers will constitute the Board of Directors for the next administrative year beginning on August 1: F. Malcolm Farmer (retiring president), New York; C. R. Beardsley, New York; V. Bush, Washington, D. C.; M. Eldredge, Memphis; R. E. Hellmund, East Pittsburgh; H. W. Hitchcock, Los Angeles; F. H. Lane, Chicago; L. R. Mapes, Chicago; F. R. Maxwell, Jr., University, Ala.; F. J. Meyer, Oklahoma City; H. S. Osborne, New York; John C. Parker, New York; D. C. Prince, Schenectady; C. T. Sinclair, Pittsburgh; J. M. Thomson, Toronto; A. L. Turner, Omaha.

The annual report of the Board of Directors, presented at the meeting, showed a total membership on April 30 of 17,213. In addition to two national conventions and three district meetings, 2,047 meetings were held during the year by the local organizations of the institute in the principal cities and educational institutions in the United States, Canada and Mexico.

H. H. HENLINE,
National Secretary

RECENT DEATHS

DR. RALPH MODJESKI, civil engineer of New York City, known especially for his work as designer and consultant in bridge construction, died on June 26 at the age of seventy-nine years.

DR. FERMEN L. PICKETT, since 1930 dean of the Graduate School and for twenty-three years head of the department of botany at Washington State College, died on June 27 at the age of fifty-nine years.

JAMES HENRY FLEMING, of Toronto, past president of the American Ornithological Union and owner of a private museum of birds, died on June 27. He was sixty-seven years old. Mr. Fleming had been honorary curator of ornithology of the National Museum of Canada for twenty-seven years and since 1927 of the Royal Ontario Museum of Zoology.

DR. ALFRED FOWLER, the British astronomer, from 1923 to 1934 Yarrow research professor of the Royal Society, London, died on June 25 at the age of seventy-two years.

DR. AUGUSTUS EDWARD HOUGH LOVE, professor of natural philosophy at the University of Oxford, died on June 5 at the age of seventy-seven years.

ROBERT MACFARLANE CHAPIN, chief of the Biochemic Division of the Bureau of Animal Industry of the U. S. Department of Agriculture, died on May 6. He was sixty-two years of age. A correspondent writes: "A native of Massachusetts, Mr. Chapin was graduated from Amherst College in 1897. He took post-graduate work and served as instructor in chemistry until entering the service of the bureau in 1907. There he engaged in biochemical research relating largely to the development and standardization of disinfectants, livestock dips and related products. He was associated for many years with Dr. M. Dorset, discoverer of anti-hog-cholera serum, whom he succeeded as chief of the Biochemic Division in 1935. Since that time he has directed a wide range of research and service activities, including the preparation of tuberculin used in the nation-wide campaign to eradicate bovine tuberculosis, and also supervision of the stained antigen used extensively for the control of pullorum disease of poultry. Mr. Chapin was the author of numerous publications and collaborated with other investigators in many productive research studies."