U. S. Reclamation Service from 1902 to 1920, has died at the age of seventy-two years.

MISS ELIZABETH H. SMITH, assistant plant pathologist at the University of California, was instantly killed in a traffic accident at Berkeley, California, on August 21.

PROFESSOR WILLIAM GRANT CRAIB, Regius professor of botany at the University of Aberdeen, a student of Oriental plants, died on September 1.

Dr. Sebastian Recasens, formerly dean of medicine at the University of Madrid, died on August 14, aged sixty-four years.

Nature reports the following deaths: Mr. W. J. Lewis Abbott, known for his contributions to the prehistory of England and collection of flint implements, aged eighty years; Mr. H. F. Tagg, for nearly forty years keeper of the museum at the Royal Botanic Garden, Edinburgh; Dr. A. W. J. MacFadden, formerly senior medical officer in charge of the Food Department of the Ministry of Health, on August 16, aged sixty-four years, and Dr. V. H. Veley, lecturer in science in the University of Oxford in 1879–1903, joint translator of "The Handbook of the Polariscope" and author of "The Micro-Organism of Faulty Rum," on August 20, aged seventy-seven years.

SCIENTIFIC NOTES AND NEWS

Dr. Rufus Cole, director of research at the hospital of the Rockefeller Institute, received in absentia the honorary degree of doctor of science from the National University of Ireland, Dublin, during the recent annual meeting of the British Medical Association.

THE Elisha Kent Kane Gold Medal of the Geographical Society of Philadelphia has been awarded to Mr. Owen Lattimore in recognition of contributions to geographical knowledge in Central Asia. The results of Mr. Lattimore's explorations accomplished in a five months' camel caravan expedition from Kweihua, on the border of Mongolia, to Urumchi in Chinese Turkestan, are to be found in his book "The Desert Road to Turkestan," published in 1928 by Subsequently Mr. and Mrs. Lattimore Methuen. spent several months in explorations in western Turkestan, returning to America by way of India. Early in October Mr. Lattimore will lecture on his investigations in Manchuria and Mongolia before the Chicago Geographical Society and at the Field Museum.

In recognition of the important assistance he has rendered to the Field Museum, Chicago, in carrying out its botanical work in the joint project with the Rockefeller Foundation, the board of trustees of the museum has elected Dr. B. P. Georges Hochreutiner, director of the Botanical Garden at Geneva, a corresponding member. This is a class of membership conferred only on scientific men or patrons of science residing in foreign countries who have rendered eminent service to the museum.

Dr. Martin Benno Schmidt, professor of pathology at Würzburg, reached his seventieth birthday on August 23.

Dr. Edward H. Kraus, professor of mineralogy and crystallography and dean of the College of Pharmacy at the University of Michigan, has been appointed dean of the College of Literature, Science and the Arts. Dr. Louis A. Hopkins, professor of mathematics, will succeed Dr. Kraus as head of the summer session. Dr. Howard B. Lewis, head of the department of physiological chemistry, has become dean of the College of Pharmacy.

Dr. Edgar Allen, formerly dean of the University of Missouri School of Medicine, takes up his work as professor of anatomy and head of the department at Yale University at the beginning of the college year. Harold Saxton Burr, professor of anatomy since 1929, Yale University School of Medicine, has been appointed E. K. Hunt professor of anatomy and head of the section of neuro-anatomy to succeed Dr. Harry Burr Ferris, who has become professor emeritus. Dr. George M. Smith has been made research associate in anatomy with the rank of associate professor. Dr. Harry M. Zimmerman, of the department, was recently promoted to an associate professorship.

Professor Otto Stern, experimental physicist and former head of the Institute of Physical Chemistry at the University of Hamburg; his assistant, Professor I. Estermann, and Professor Ernst Berl, chemist and professor at the Technical University at Darmstadt, have joined the scientific staff of the Carnegie Institute of Technology, Pittsburgh.

RECENT promotions in the science departments at the Ohio State University include the following: Dr. Laurence H. Snyder and Dr. Clarence H. Kennedy, of the department of zoology, and Dr. Albert D. Frost, of the department of ophthalmology, from associate professors to professors; Dr. David F. Miller, of the department of zoology, Dr. E. F. Almy and Dr. R. C. Burrell, of the department of agricultural chemistry, and Dr. P. B. Stockdale and Dr. W. A. P. Graham, of the department of geology, from assistant professors to associate professors; Dr. W. H. Bennett and Dr. Harald H. Nielsen, of the department of

physics, and Dr. Frank C. Starr, of the department of dentistry, from instructors to assistant professors.

Dr. GLENN G. BARTLE, of the Junior College of Kansas City, has been appointed professor of geology and head of the division of physical sciences at the newly organized University of Kansas City.

Dr. J. J. Westra, Jr., has been appointed adjunct professor of physiology at the University of Texas.

Dr. R. A. Webb has been appointed to the university chair of pathology in the school of medicine for women at the University of London.

Dr. M. Born has been appointed university lecturer in mathematics at the University of Cambridge.

Dr. CHARLES F. Roos, formerly permanent secretary of the American Association for the Advancement of Science, has been granted an indefinite furlough from fellowship by the Guggenheim Foundation to enable him to accept an appointment as specialist in economic balance for the National Recovery Administration. He assumed this office on July 27.

JOHN VAN ANTWERP MACMURRAY, director of the Walter Hines Page School of International Relations at the Johns Hopkins University, has been appointed by President Roosevelt as minister to Esthonia, Latvia and Lithuania.

FRANK F. LINDSTAEDT, who for the past seven years has been director of research for the Colloidal Products Company and the Hercules Glue Company of San Francisco, has resigned to establish in Oakland, California, a practise as consulting chemist, specializing in insecticidal and colloidal chemistry.

DR. ERNST FRÄNCKEL, professor of internal medicine at the University of Berlin, known for his research on cancer, is continuing his work in London. Westminster Hospital has placed its laboratory of pathology at his disposal.

Professor and Mrs. Einstein arrived in London on September 9. According to an Associated Press dispatch he left Belgium on account of having received reports that his life was in danger from a secret German Nazi organization.

MARCHESE GUGLIELMO MARCONI will visit the United States in early October and be the guest at a celebration in his honor at the Century of Progress in Chicago. Marchese Marconi has not visited the United States since 1927, when he attended the International Radio Conference at Washington.

THE Delaware County Institute of Science, Media, Pennsylvania, will celebrate the one hundredth anniversary of its founding on September 21.

PAUL GOODLOE McIntire, Charlottesville, Virginia,

has given to the University of Virginia School of Medicine \$75,000 for the study and treatment of mental diseases and \$100,000 for the study of cancer, the latter as a memorial to his wife.

SECURITIES with a market value in excess of \$300,000 have been transferred to Northwestern University Medical School by an anonymous donor, to be used for the advancement and improvement of the teaching of urology. The trustees have the right to invest this money and allocate the income to the designated purpose whenever it is considered sufficient to inaugurate a productive program.

REAR ADMIRAL RICHARD E. BYRD will leave Boston for the Antarctic on September 25. Two ships have been provided for the expedition, The Bear and The Pacific Fir. The latter will carry the supplies necessary for the whole trip, thus making possible greater economies, since all supplies are donated and foreign purchasing will be unnecessary. One of the two planes to be taken is a giant Condor, with a wing spread of eighty-two feet, capable of carrying twenty passengers. Victor Czegka, of Malden, Massachusetts, formerly chief warrant officer in the United States Marines, will be supply officer. Dr. Guy Shirey, of Texas, medical officer and member of General Bullard's staff during the war, will assist Mr. Czegka. He will also fill the post of medical officer and be in charge of the personnel. Harold I. June will serve as pilot and will have charge of aviation. Kenneth Rawson, of Chicago, will be navigation officer; his experience covers four trips in the Arctic. The engineer officer of the expedition will be Lieutenant-Commander Walter K. Queen. Captain Alan Innes-Taylor, of Canada, who will have charge of the sledging department, will also care for the 150 dogs that the expedition is taking south. Mr. Paul Siple, of Erie, Pennsylvania, will do biological Dr. Thomas C. Poulter, Mount Pleasant, Iowa, will go as physicist, and will carry on a study of cosmic rays. Dr. Charles Morgan, of Seminole, Texas, will go as geologist and Quinn Blackburn as surveyor. The commander of The Bear will be Captain Benedik Johannsen, of Trömso, Norway, a veteran of the last expedition. In charge of ice navigation will be Captain Hj. Fr. Gjertsen, of Oslo, Norway.

NORMAN E. A. HINDS, associate professor of geology at the University of California; C. E. Van Gundy, G. Vorbe and E. C. Doell, graduate students at the same institution, spent May, June and July at the Grand Canyon investigating the Algonkian formations, a research sponsored by the Carnegie Institution of Washington. Exposures of the earlier Algonkian Unkar strata in and near Bright Angel and

Clear Creek canyons and those of the later Chuar beds in Nankoweap and Kwagunt valleys on the east side of the Grand Canyon were mapped in detail. Entrance to the Nankoweap and Kwagunt area was made by a trail built sixty years ago for Major J. W. Powell and used by Dr. C. D. Walcott in 1880 when he studied the Algonkian of this district. Extensive suites of specimens were collected from both the Unkar and Chuar for laboratory studies of the sedimentary and igneous rocks. Mr. Van Gundy is now at the Grand Canyon mapping exposures of the Unkar on the south side of the Colorado River below Grand View and Desert View. Field work on the project will be continued in 1934. This work, with Noble's on the Shinumo Quadrangle, will complete the mapping and study of the Algonkian formations of the Grand Canyon. Professor Hinds and Mr. Van Gundy also examined exposures of the Mazatzal quartzite near Natural Bridge and Del Rio, central Arizona, and of the Apache group at Roosevelt Dam, near Globe and Miami, and in the Sierra Ancha to compare them with the Algonkian of the Grand Canyon.

THE Sun Yat-sen Institute for Advancement of Culture and Education, a new research institute, has been organized at Shanghai in memory of Sun Yat-sen. The following officers have been installed: Chairman, Board of Directors, Mr. Sun Fo (president, Legislative Yuan); Secretary General, Mr. Yeh Kung-cho (former Minister of Communications in Peiping and Minister of Railways in Nanking); Directors, Dr. Tsai Yuan-pai (president, Academia Sinica), Dr. H. H. Kung (former Minister of Industries and now president of Central Bank), General Wu Techen (mayor of Shanghai), Mr. Tai Chuan-hsien (president, Examination Yuan), Mr. Sze Liang-chai (proprietor of Shun Pao Daily News), Mr. Usang Ly (president, Chiaotung University) and Mr. Chen Hung-nien (former Vice-Minister of Railways, now president of Chinan University). These above directors, together with the chairman and the secretary general, form the presidium, but there are other directors besides these. The institute is divided into three departments: Research Department-director, J. Usang Ly, co-director, D. K. Lieu; Editorial Department—director, Sze Liang-chai, co-director, Chen Ping-ho; Business Department—director, Li Ta-chao, co-director, Li Ken. The National Government and the Shanghai City Government have promised to contribute monthly to the support of the institute. These two sums total \$650,000 a year. At present the institute has on hand a sum of approximately \$50,000. As the institute is organized in memory of Dr. Sun Yatsen, the research program will have some bearing on his teachings, such as rural economy, proper utilization of capital, local self-government, the labor question and Chinese social psychology.

THE eighteenth annual meeting of the Optical Society of America will be held from October 19 to 21 at the Inn at Buck Hill Falls, Pennsylvania. The meeting is also open to non-members. Buck Hill Falls is in the Pocono Mountains near Stroudsburg. The inn can be reached conveniently by automobile or rail from all the principal cities of the East. It has ample accommodations for the meetings, plentiful facilities for quiet recreation, including fishing, swimming, riding, tennis and golf. At the time of the meeting the autumn coloring of the woods should be at its best. In addition to the usual program of papers contributed by members on their own initiative, the meeting will include the following special features: (1) A program of invited papers on "A Century of Photography." Announcements of the complete details will be made in the final notice of the meeting, which will be mailed early in September. It is expected that the program will include papers by eminent authorities on "The History of Photography," "The Reproduction of Tone Values," "Color Photography," "The Development of the Photographic Objective," "Color Sensitivity of Photographic Materials," "The Photographic Recording of Sound," "Photographic Photometry." (2) A group of invited papers on "The Properties of Evaporated Metal Films," a subject of timely interest in the determination of the optical constants of metals and in the production of reflecting surfaces of high efficiency in various spectral regions. (3) The presentation of the Frederic Ives Medal for 1933 to R. W. Wood, professor of experimental physics, the Johns Hopkins University, at a dinner to be given in honor of Professor Wood.

DISCUSSION

OUR COMMON NUMERALS

Millions now use our common numerals daily and hence it is natural that their origin has become a subject of wide interest in this age of increasing scientific inquiries. While no universally accepted theory has yet been advanced it may be desirable to consider from time to time the latest serious efforts along this line, especially since undue confidence has frequently been expressed in the views of those who jumped at conclusions before a sufficient number of