surgeons as the authority on this subject. For seven years the college has had a committee working on this phase of the cancer problem, and has collected nearly a thousand cases of bone tumors with complete records. All these cases have been accurately and repeatedly studied by the members of the committee.

Another phase of the cancer problem has been among the activities of the college through its Committee on the Treatment of Malignant Diseases with Radium and X-ray. A study has been made to compare the results of the treatment of cancer of different parts by surgery, radium and X-ray. Already reports have been issued on five-year cures of cancer of three parts of the body, namely, the uterus, the breast and the mouth—which enable surgeons to estimate the relative value of the different forms of treatment.

SCIENTIFIC NOTES AND NEWS

Dr. WILLIAM H. WRIGHT, astronomer of the Lick Observatory, University of California, has been awarded the Janssen gold medal of the Paris Academy of Sciences for his studies of the atmosphere of Mars and other planets.

The Edison gold medal for achievement in electrical science has been awarded by the American Institute of Electrical Engineers to Dr. Frank B. Jewett, president of the Bell Telephone Laboratories and vice-president of the American Telephone and Telegraph Company, for his pioneer research and development work in connection with the theory and practice of voice transmission. The medal, which is awarded annually, was presented to Dr. Jewett on January 30, during the winter convention of the institute in New York.

THE Physical Society of London has awarded the sixth Duddell memorial medal to Dr. Charles Edouard Guillaume, the director of the Bureau International des Poids et Mesures, Sèvres. The medal is awarded annually for the advancement of knowledge by the invention or design of scientific instruments or by the discovery of material used in their construction. Dr. Guillaume is known for the invention of three metallic alloys—invar, elinvar and platinite. He received the Nobel prize for physics in 1920.

The Elisha Kent Kane medal of the Geographical Society of Philadelphia has been awarded to Dr. Roy Chapman Andrews, of the American Museum of Natural History in New York, in recognition of his contributions to scientific travel and the additions his expeditions have made to the geographical knowledge of Central Asia. The Kane medal is the highest award given by the society and in recent years has been bestowed upon Peary, Amundsen, Shackelton,

Stefansson, Hassenein Bey and Byrd. The medal was conferred by the president, Henry S. Bryant, on the evening of January 21, at the Bellevue-Stratford Hotel, when Dr. Andrews described the discoveries of the expedition and the results of his work.

Professor Thomas Barbour, director of the Harvard University Museum and of the Museum of Comparative Zoology, has been elected one of the twenty-five foreign members of the Zoological Society of London.

Honorary membership in the American Society of Civil Engineers was at the recent New York meeting conferred on J. Waldo Smith, consulting engineer of the Board of Water Supply of New York. There are now sixteen honorary members.

PRESIDENT WALLACE W. ATWOOD, president of Clark University and director of the school of geography, has received the diploma from the Swedish Anthropological and Geographical Society, to which he has recently been elected as foreign member.

The medal of the American Institute of Chemists for "noteworthy and outstanding service to the science of chemistry and the profession of chemist in America" has been awarded to Mr. and Mrs. Francis P. Garvan. The presentation will be made at the annual meeting of the institute in May. The speakers on that occasion will be Honorable John W. Davis, representing the legal profession; Dr. John J. Abel, of the Johns Hopkins University, representing the medical profession, and Dr. John H. Finley, of the New York *Times*, representing the general public. Dr. Charles H. Herty will preside and Dr. Finley will make the presentation. Mr. and Mrs. Garvan will respond.

George Gustav Heye, director of the Museum of the American Indian, New York City, which he founded, has been awarded the honorary degree of doctor of philosophy by the University of Hamburg.

Professor Anson Marston, dean of engineering in the Iowa State College, was elected president of the American Society of Civil Engineers at the New York meeting which opened on January 16. He succeeds Mr. Lincoln Bush, of New York.

At the New York meeting of the American Astronomical Society the following nominations were approved by the council: Vice-president, R. G. Aitken; Secretary, R. S. Dugan; Treasurer, Benjamin Boss; Councillors, E. S. King, F. H. Seares; Member of the Division of Physical Science of the National Research Council, S. A. Mitchell. Election will be held at the forty-second meeting, which is to take place in Ottawa next summer.

Dr. H. E. Erdman, professor of agricultural economics in the University of California College of Agriculture, was elected president of the American Farm Economic Association, at its annual meeting held during the holidays in Chicago.

Paul Judson, of Kinderhook, for the past year vice-president of the New York State Horticultural Society, was elected to the presidency at the recent Rochester meeting.

At the annual meeting of the Ohio State Dental Society, in Toledo, on December 4, Dr. William J. Gies, professor of biological chemistry at Columbia University, was awarded the Callahan gold medal, which is given annually to "a person who has made a contribution to dental science of very exceptional value," and delivered an address on "the place of dentistry in a program of better health service." On December 18 he delivered an address of similar import in Chicago at a meeting of the Chicago Dental Society; and again, on January 10, in Providence, at a meeting of the Rhode Island State Dental Society.

WHILE attending the meetings of the Society of American Bacteriologists in Richmond during Christmas week Professor Leo F. Rettger, of the laboratory of general bacteriology of Yale University, was tendered a luncheon by thirteen of his former students who had received the degree of doctor of philosophy under his guidance.

Dr. A. D. Power, professor of physics and director of radio research at Lawrence College, has resigned to conduct scientific research for the improvement of radio vacuum tubes at the Bloomfield, New Jersey, branch of the Westinghouse Lamp Company.

Dr. M. C. Merrill, editorial chief of publications of the U. S. Department of Agriculture, has been appointed chief of publications of the department, the former positions of editorial chief and chief of publications having been combined. The new position will therefore carry both editorial and administrative work.

Professor William Brown, of the department of aeronautics at the Massachusetts Institute of Technology, has been appointed technical assistant to Lieutenant James H. Doolittle, who is in charge of the full-flight laboratory of the Daniel Guggenheim Fund for the Promotion of Aeronautics, at present carrying on experiments in all-weather flying.

Dr. N. A. MICHELS, associate professor of anatomy at Creighton University School of Medicine, Omaha, Nebraska, has recently been named American editor of the Italian journal *Haematologica* published in Pavia. American manuscripts on blood should be sent to the Creighton address. A grant of \$500 was

made to Professor Michels last summer by the American Medical Society for continued research on perivascular infiltrations.

OWEN D. Young has accepted appointment on an advisory board formed by the regents of the University of the State of New York to take up a project for a new building to house the New York State Museum.

THOMAS A. EDISON has left for Fort Myers, Florida, where he is continuing his work on rubber. He will celebrate his eighty-second birthday on February 11. Mr. Edison occupies a new laboratory. The old building, in which the experiments were made on modern electric light globes, was removed last summer to the Detroit Museum of American History.

THE Swarthmore expedition under the leadership of Dr. John A. Miller, professor of astronomy, left on January 15 for Takengon, Sumatra, in order to prepare for an eclipse of the sun on May 9. This is the fifth expedition sponsored by the Sproul Observatory of Swarthmore College.

Dr. Francis G. Benedict, director of the nutrition laboratory of the Carnegie Institution of Washington, Boston, recently left the United States for a six months' tour in Europe, where he will visit various research institutions and particularly physiological laboratories conducting studies on basal metabolism and related subjects. An address on "The latest investigations of the nutrition laboratory on the metabolism of men and animals" was to be given by him on January 19 before the Société Scientifique d'Hygiène Alimentaire in Paris. After leaving Paris, Dr. Benedict, accompanied by Mrs. Benedict, will travel through many of the other European countries, returning to the United States about the first of July.

Dr. Antonin Precentel, professor of otology, rhinology and laryngology in the Faculty of Medicine of Charles University, at Prague, will arrive in the United States in February for a visit of five months. His purpose is to study the organization and equipment of American clinics in connection with his special branch of medicine, and he intends to visit New York, Boston, Philadelphia, Baltimore, Washington, Buffalo, Rochester, Cleveland and St. Louis. He will probably be available for a few lectures on some special subject. While in New York Dr. Precechtel will make his headquarters at the Institute of International Education, 2 West 45th Street.

Dr. CLARENCE F. JONES, of the Clark School of Geography, has returned from a field season in South America, where he has been at work for about six months. His studies have been chiefly in Colombia, Venezuela and the Guianas. He will begin regular residence work at the university on February 4.

Dr. J. Hartmann has left La Plata to return to Göttingen on account of the expiration of his contract with the University of La Plata. Professor Bernhard H. Dawson was placed in charge of the observatory until such time as Ing. Félix Aguilar can assume the directorship. Ing. Aguilar has for several years been chief of the geodetic division of the Instituto Geográfico Militar in Buenos Aires, but was a member of the observatory staff from 1905 to 1920 and its director for the last two years of that interval.

Dr. REGINALD G. HARRIS, director of the Biological Laboratory at Cold Spring Harbor, recently sailed for Europe, where he will spend three months visiting marine laboratories and research laboratories in England, France, Germany, Austria and Italy.

Dr. E. B. Wilson, professor of vital statistics in the Harvard School of Public Health, was a recent visitor at the Scripps Institution of Oceanography, University of California, where he conferred with the scientific staff on research problems.

Dr. Andrey Avinoff, of the department of zoology of the University of Pittsburgh and director of the Carnegie Museum, gave an address on "Some Zoogeographical Relationships of the Old and New World," and Dr. Forest Foraker gave an address on "The Psychological Basis for some Geometric Postulates" at a meeting of the Sigma Xi Alumni Association of the University of Pittsburgh on January 22.

Dr. H. S. Reed, plant physiologist at the citrus experiment station of the University of California at Riverside, delivered an address entitled "The Nature of the Growth Process" before the Society of Sigma Xi at Columbia, Missouri, January 7. Dr. Reed was formerly a member of the faculty of the University of Missouri and was a charter member of the Missouri Chapter of Sigma Xi.

PROFESSOR W. H. LONGLEY, of Goucher College, Baltimore, lectured at Duke University on the "Animals of Coral Reefs," on January 12.

Professor H. T. Stetson, of the Harvard Astronomical Laboratory, gave a lecture on "Sun-spots and Correlated Phenomena" at the University of Vermont, on January 15.

Dr. H. S. Jennings, professor of zoology at the Johns Hopkins University, served as visiting lecturer for the present year at the University of Texas. He delivered his series of lectures during the week of January 7 to 12. The titles were as follows: "Biological Fallacies and Human Affairs"; "Inheritance of Environmental Effects in Protozoa—Injurious

Effects"; "What Can we Hope from Eugenics?"; "Inheritance of Environmental Effects in Protozoa—Adaptive Changes and the Problem of their Permanence"; "Variations Not Due to Environment—Occurrence and Inheritance." Professor Jennings opened on January 16 the series of public university lectures at the Southern Methodist University, Dallas, with a lecture on "What Can we Expect from Eugenics?"

Dr. Joseph Goldberger, of the U. S. Public Health Service, known for his studies of pellagra, died on January 17 at the age of fifty-four years.

Dr. Harrison Gray Dyar, custodian of Lepidoptera in the United States National Museum, a leading authority on American mosquitoes, died on January 22 at the age of sixty-two years.

Dr. Edward H. Griffin, professor of the history of philosophy and the dean of the college at the Johns Hopkins University from 1889 until his retirement in 1915, died on January 23 at the age of eighty-five years.

JOHN HYDE, statistician and geographer, from 1897 to 1905 chief of the bureau of statistics of the U. S. Department of Agriculture, died on January 18 at the age of eighty-one years.

Dr. George W. Tannreuther, associate professor of zoology in the University of Missouri, died on December 14 at New Carlisle, Ohio.

Dr. Louis T. Dem. Sajous, assistant professor of endocrinology in the medical school of the University of Pennsylvania, died on January 16, at the age of forty-two years.

DAVID FÜRSTENBERG died in Philadelphia on January 13, in his eighty-second year. Born in Prussia he came to America in 1869 from Berlin. He was a pioneer grower of roses.

SIR WILLIAM BOYD DAWKINS, the well-known British geologist, formerly professor of geology and paleontology at the University of Manchester, died on January 15 at the age of ninety-one years.

The U. S. Civil Service Commission announces an examination for physical chemist (qualified in ferrous metallurgy) at \$3,800 a year, and for associate physical chemist (qualified in ferrous metallurgy) at \$3,200 a year. Applications must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than February 6, 1929. This position would be for work under the direction of Dr. C. H. Herty, Jr. Dr. Herty is in charge of the section for ferrous metallurgy, which is conducting research on the physical chemistry of steel making, in cooperation with the

iron and steel industries of the Pittsburgh district and the Carnegie Institute of Technology. Examinations for which applications must be on file by January 23 are: toxicologist, \$3,800, to \$4,000 a year; associate toxicologist, \$3,200 to \$3,700 a year; assistant toxicologist, \$2,600 to \$3,100 a year.

The non-magnetic yacht Carnegie reported her arrival at Callao, Peru, on January 14. Because of a storm and loss of an anchor the vessel left Easter Island on December 12. Unfavorable winds drove her south from her course as planned to 40° south latitude in longitude about 95° west. Captain Ault reports excellent observational results since leaving Easter Island. Twenty-three bottom samples were obtained on the trip from Balboa to Callao; those from Easter Island to longitude 95° west were red clay with volcanic mud. It is expected that the Carnegie will sail from Callao for Papeete, Tahiti, on February 3.

THE Ohio Academy of Science under the presidency of Professor Jas. S. Hine, of the Ohio State University, will hold its thirty-ninth annual meeting with Wittenberg College, Springfield, Ohio, on April 26 and 27. Special effort is to be made to get as many of the living charter members present at this meeting as possible in order to show them special honor.

The problems of forestry in New England are to be discussed at the Third New England Forestry Congress, which will meet at Hartford, Conn., on February 1 and 2. Markets for lumber and pulpwood, forest protection, forests and outdoor recreation, flood and waterpower problems, are the topics arranged for discussion. Among the speakers will be Paul Redington, chief of the U. S. Biological Survey; L. F. Kneipp, of the U. S. Forest Service; Harris A. Reynolds, secretary of the Massachusetts Forestry Association; T. S. Woolsey, Jr., president of the Connecticut Forest and Park Association, and A. F. Hawes, state forester of Connecticut.

A MEMBER of the board of directors of the Long Island Biological Association has recently offered to contribute \$7,500 annually for five years toward biological research to be carried on throughout the year at the Biological Laboratory at Cold Spring Harbor. This is part of a fund of \$30,000 per year which is being raised for work in addition to that which is already provided for, and which involves \$55,000 annually.

THE first unit of the Hopkins Marine Station of Stanford University, Pacific Grove, California, has been named, by the board of trustees of the university, The Alexander Agassiz Laboratory. The second unit, completed last July, is The Jacques Loeb Lab-

oratory. The research work of the Agassiz Laboratory is mainly in oceanic biology and oceanography. A hydrobiological survey of the Monterey Bay region in collaboration with the California State Fish and Game Commission is in progress. Activities at the Jacques Loeb Laboratory are concerned with marine bacteriology, physiology, experimental morphology, biochemistry and biophysics. Early registration is desirable by investigators who wish facilities at either laboratory. As space is limited preference will be given those whose research requires marine material.

A GIFT of \$270,000 by John D. Rockefeller and a maintenance income by the Laura Spelman Rockefeller Memorial Foundation has been provided for the establishment and upkeep of a research institute and graduate students' training school in anthropology at the University of Chicago. Headquarters of the project will be in Santa Fe, N. M., where the Southwest Museum will be located as a laboratory for professional anthropologists and a working base for field training for graduate students. The controlling board will consist of Dr. Fay-Cooper Cole, of the University of Chicago; Dr. A. V. Kidder, of the Carnegie Institute; Dr. Rowland Dixon, of Harvard University, and Dr. A. L. Kroeber, of the University of California.

DURING the fifth year of the Ella Sachs Plotz Foundation for the Advancement of Scientific Investigation, forty-three applications for grants were received by the trustees, twenty-nine of which came from eleven different countries in Europe, Asia and South America, the remaining fourteen coming from the United States. The total number of grants made during this year was twenty-one. Twelve of the new grants were made to scientists in countries outside of the United States. In the five years of its existence, the foundation has made seventy-three grants ranging in value from \$300 to \$1,000 and investigators have been aided in the United States, Great Britain, France, Germany, Austria, Hungary, Switzerland, Italy, Sweden, Esthonia, Czechoslovakia, Poland, Chile and Syria. Three of the investigations made in 1928 bear on the general subject of nephritis and in each of the four preceding years there were four grants for work in this same field. Other general subjects, especially internal secretion and infection, have been favored by grants in successive years, but not to so great a degree as nephritis. Applications for grants to be held during the year 1929-1930 should be in the hands of the Executive Committee before May 15, 1929. Applications should include statements as to the character of the proposed research, the amount of money requested and the objects for which the money is to be expended and should be sent to Dr. Joseph C. Aub. Huntington Memorial Hospital, Boston, Massachusetts.

AT a meeting held in New York on December 27 a new scientific society, The Acoustical Society of America, was formed, to bring together workers of all branches of pure and applied acoustics. Among its activities will be the provision of a medium of publication for papers on acoustics, for which there is acute need; such papers have hitherto been widely scattered. Elected to temporary office were: President-Dr. Harvey Fletcher, of the Bell Telephone Laboratories; vice-president—Professor V. O. Knudsen, of the University of California; secretary—Wallace Waterfall, of the Celotex Company; treasurer-C. F. Stoddard, of the American Piano Company. A committee was appointed by Dr. Fletcher to consider the details of organization, and the first regular meeting was set for some time in April at the Bell Telephone Laboratories. There were present forty of the leading authorities on acoustics, among whom were Professor D. C. Miller, of the Case School of Applied Science; Professor F. A. Saunders, of Harvard University; J. P. Maxfield, of the Victor Talking Machine Company; R. V. Parsons, of the Johns Manville Company, and Professor F. R. Watson, of the University of Illinois. After the meeting the members of the new society were entertained at luncheon by Dr. H. D. Arnold, director of research of the Bell Telephone Laboratories.

Dr. Francisco Maria Fernandez, Cuban secretary of sanitation, has been elected president of the Pan-American Medical Association for 1929. Panama City was selected for the second congress of the association next year. The date will not be made public for the present. The Panama government made the offer through Dr. Jaime de la Guardia, delegate from Panama. Dr. J. W. Valentine, urologist of New York, was chosen president-elect for 1931. Among the vice-presidents elected were Dr. William J. Mayo, of Rochester, Minnesota, and Dr. Llewellys Barker, of Baltimore, Dr. Conrad Berens was reelected secretary and Dr. Lee M. Hurd, treasurer. It is expected that the Gorgas Memorial Laboratory for Tropical Research will be functioning when the Pan-American Congress meets in Panama next year. Dr. Herbert Clark, selected to take charge of the laboratory work, will make preparations for the installation of equipment in the building offered by the Panama government.

THE Municipal Court of Philadelphia has relinquished its claim to the Parkway site, bounded by 21st, 22nd, Race and Wood Streets, in favor of Franklin Institute. It is planned to erect on this site a building as memorial to Benjamin Franklin to cost \$4,000,000.

MR. AND MRS. GEORGE H. Roos, San Francisco, have given the University of California \$100,000 in

memory of Mrs. Roos's parents, J. J. and Nettie Mack, to be used in the medical school for the study of cancer and surgical diseases of the chest. Only the interest will be used for research. The fund, which will be known as the J. J. and Nettie Mack Memorial Foundation, will be governed by a committee of the medical faculty. The Hooper Foundation will cooperate in this work.

ELLIS L. PHILLIPS, president of the Long Island Lighting Company, has given \$100,000 to the Leonard Wood Memorial for the Eradication of Leprosy.

UNIVERSITY AND EDUCATIONAL NOTES

ARRANGEMENTS have been completed whereby the Department of Zoology at the University of Texas will have \$135,000 to be used in the development of graduate instruction and research during the next eight years. Approximately one half of this sum will be given by the General Education Board; the rest will be raised by the university. The zoological staff plans to use a portion of this fund for technical assistance and for fellowships.

A GIFT of \$100,000 has been made by Dr. and Mrs. Wilbur W. Beckett to the endowment fund of the school of medicine of the University of Southern California.

The will of Henry C. Munger, of Plainfield, N. J., provides charitable bequests of \$960,000. Mount Holyoke receives \$200,000 and Northfield School, \$100,000.

Paul F. Williams, an engineer and business executive of Chicago, has established the Paul F. Williams Research Fellowship Fund for the promotion of scientific research at Purdue University. This fund provides for several one thousand dollar annual research fellowships. At least two of these will be available for physical research in the Graduate School of the School of Science.

George H. Lamson, head of the zoological department of the Connecticut Agricultural College, has been appointed dean of the division of agricultural science, vice Dr. E. W. Sinnott, whose resignation was recently announced.

The resignation of Dr. Clarence Cook Little as president of the University of Michigan was presented to the Board of Regents on January 21. The board adopted a resolution of regret. In his letter of resignation Dr. Little says: "My methods of handling situations dealing with the interests of private donors, political interests, local interests and alumni interests are not consistent with the policies the board of regents deem wise."