

meeting beginning on August 6, include the following:

Sir William H. Bragg, Quain professor of physics, London University, will deliver the presidential address before Section A on Monday, August 11, and will contribute to the joint discussion between Sections A and B on "Crystal structure."

J. H. Jeans, secretary of the Royal Society, formerly Halley lecturer in Oxford University, and professor of applied mathematics at Princeton, will speak on "Relativity."

A. S. Eddington, professor of astronomy in the University of Cambridge and director of the observatory, will also speak on "Relativity."

J. Jackson, from the Royal Observatory, and E. A. Milne, of the department of astrophysics of Cambridge, will speak on "Star motions."

Lord Rayleigh will speak on "The scattering of light."

R. H. Fowler, Trinity College, Cambridge, will speak on "Quanta."

J. W. McBain, professor of physical chemistry, University of Bristol, will take part in joint discussion on "Colloidal solutions" between the Mathematical and Chemistry Sections, and will also take part in a discussion on Photochemistry which has been arranged to take place at Saskatoon in the course of the western excursion.

G. I. Taylor, lecturer in mathematics in Trinity College, Cambridge, will take part in a joint discussion on "Aeronautics" between the Sections on Engineering and Physical Sciences.

Sir Napier Shaw, professor of meteorology at the Royal College of Science, and president of the International Meteorological Committee, will contribute to the program of the subsection of meteorology.

Harold Jeffreys, Cambridge, will contribute with L. F. Richardson, London, to the joint session in the subsection of meteorology.

E. T. Whittaker, professor of mathematics in Edinburgh.

A. O. Rankine, professor of physics in Imperial College of Science and Technology, recorder of Section A.

H. R. Hassé, professor of mathematics in the University of Bristol, one of the secretaries of Section A.

A. N. Tyndall, professor of physics, University of Bristol, secretary of Section A.

R. A. Giblett, one of the secretaries of Section A.

W. L. Bragg, Langworthy professor of physics in Victoria College, Manchester.

A. Fowler, professor of astrophysics, Royal College of Science, general secretary of the International Astronomical Union.

Sir R. T. Glazebrook, professor of aviation in the Imperial College of Technology, chairman of the Aeronautical Research Committee, recently director of National Physics Laboratory.

Major Percy A. MacMahon, formerly deputy warden of the standards, Board of Trade; general secretary of the British Association; 1902-14; president of the Royal Astronomical Society, 1917.

Sir Ernest Rutherford, professor of experimental physics and director of the Cavendish Laboratory, Cambridge University.

G. Udney Yule, lecturer on statistics, Cambridge University.

H. William Young, professor of pure mathematics, University of Wales.

Sir R. H. Rew, treasurer of the international statistical institute.

Vito Volterra, professor of mathematics and physics, University of Rome.

SCIENTIFIC NOTES AND NEWS

FOUR hundred and thirty British members have already signified their intention of attending the Toronto meeting of the British Association from August 6 to 13. During the meeting, popular lectures in the different sections will be given in the afternoon at 5 p. m., for members of the association. Several citizens' lectures will be given in the evening, as well as two or three lectures for children. The inaugural general meeting will be held on Wednesday, August 6, in the Convocation Hall of the University of Toronto. At this meeting Professor Sir Ernest Rutherford, F. R. S., will hand over the presidency of the association to Major General Sir David Bruce, who will then deliver his presidential address entitled "Advances made in the knowledge of disease with special reference to methods developed during the war."

AMONG eight busts unveiled in the colonnade of the Hall of Fame of New York University on May 13 were two of men of science. The bust of Joseph Henry, by Mr. John Flannagan, was presented by Mr. Edwin Wilbur Rice, Jr., on behalf of the American Institution of Electrical Engineers. It was unveiled by Mr. Thomas A. Edison and received by Colonel John J. Carty. The bust of William Thomas Green Morton, by Helen Farnsworth Mears, was presented by Dr. George David Stewart on behalf of the fellows of the American College of Surgeons. It was unveiled by Mr. Bowditch Morton, grandson of Dr. Morton, and received by Dr. William W. Keen.

DR. EDMUND BEECHER WILSON, Da Costa professor of zoology in Columbia University, has been elected a foreign member of the Paris Academy of Sciences, in the Anatomical and Zoological section, succeeding the late Dr. Jacques Loeb. Professor Wilson was elected on the first ballot, receiving 44 of the 47 votes cast.

THE gold medal of the British Medical Association has been awarded to Dr. Henry Britten Brackenbury for his distinguished services to the association and to the medical profession.

R. S. WILLIAMS, administrative assistant of the New York Botanical Garden, has been elected president of the Sullivant Moss Society.

DR. G. L. WENDT, formerly of the University of

Chicago and now director of research with the Standard Oil Company of Indiana, was recently elected chairman of the Chicago section of the American Chemical Society.

THE Anthropological Society of Washington announces the reelection of the following officers at the regular meeting of April 15: *President*, Truman Michelson; *Vice-president*, J. P. Herrington; *Treasurer*, J. N. B. Hewitt; due to the resignation of M. W. Stirling as secretary the Reverend John Cooper was elected to fill the vacancy.

J. C. PEARSON, who has been for more than twelve years chief of the cement section of the Bureau of Standards, has resigned to accept a position with the Lehigh Portland Cement Co., with headquarters at Allentown, Pa.

JOSEPH HYDE PRATT, who resigned on March 1 as director of the State Geological and Economic Survey of North Carolina, a position he had held since 1906, is now president of Western North Carolina, Inc., an inter-country association formed for the purpose of advertising and developing the resources and material and social possibilities of the mountain section of the state.

DR. FLORENCE B. SEIBERT has for the second time been appointed a research fellow of the William T. Porter Fellowship for physiological research administered under the auspices of the American Physiological Society. She will pursue her research work in the laboratories of Dr. H. Gideon Wells, at the University of Chicago.

DR. R. E. STRADLING, head of the department of civil engineering, architecture and building in the Technical College, Bradford, England, has been appointed director of research of the building materials and construction research board of the Government Department of Scientific and Industrial Research, London.

ENGINEER-CAPTAIN E. C. SMITH, R.N. (retired), who is well known as a lecturer and writer on the history of engineering, has been appointed guide-lecturer at the Science Museum, South Kensington.

DR. GEORG GOTTSTEIN, professor of surgery in the University of Breslau and director of the medical department of the Prussian ministry of public welfare, retired on April 1, on reaching the age limit.

DR. ARTHUR W. GILBERT, Commissioner of Agriculture in Massachusetts, from 1911 to 1917, professor at Cornell University, was appointed by the Secretary of State to head the American delegation to the meeting of the general assembly of the Institute of Agriculture, which was held in Rome on May 2.

PROFESSOR ARTHUR A. ALLEN, of Cornell Uni-

versity, who is now absent on leave, is completing a five-weeks' study of the bird life around Houston, Texas, Galveston Island, in the Gulf Coast district. He reports that he has found seventy kinds of birds not found in New York, his entire list including 144 species.

GERRIT S. MILLER, JR., curator of the division of mammals of the National Museum, left Washington in April for a visit to some of the islands of the Lesser Antilles. Dr. Miller expects to make collections of the flora and fauna of the islands.

H. C. FULLER, of the Institute of Industrial Research, Washington, D. C., sailed for Europe on May 3. He expects to spend about two months in France and Italy and will attend the Fourth Congress of Industrial Chemistry at Bordeaux on June 15, as a delegate from the American Chemical Society. He will also attend the International Union of Pure and Applied Chemistry at Copenhagen from June 26 to July 1, as a representative of the National Research Council.

PROFESSOR H. H. WHETZEL, of Cornell University, and Dr. F. D. Kern, of the Pennsylvania State College, will make in June a mycological collecting trip to Porto Rico. An effort will be made to cover those parts of the island not before touched by mycologists, and the results will be available for the "Botany of Porto Rico and the Virgin Islands" being prepared by the New York Botanical Garden and the New York Academy of Sciences.

SIR D'ARCY POWER, consulting surgeon, St. Bartholomew's Hospital, London, and vice-president of the Royal College of Surgeons, recently arrived in the United States to take the place of exchange professor in the Medical School of Harvard University. On April 21, he addressed the Boston Medical History Club.

DR. THOMAS HUNT MORGAN, of Columbia University, delivered on May 9 the ninth Mellon lecture before the school of medicine of the University of Pittsburgh, on "Human inheritance."

DR. SAMUEL W. STRATTON, president of the Massachusetts Institute of Technology, will deliver the Phi Beta Kappa oration at the commencement exercises of Harvard University.

DR. EDMUND C. SANFORD, head of the department of psychology at Clark University, will deliver the commencement address on June 16.

DR. H. A. SPOEHR, of the laboratory of plant physiology of the Carnegie Institution, gave an illustrated lecture in Washington on May 1, entitled "Sunlight, the prime-mover of civilization."

THE following public lectures were given on May 2,

9 and 16, under the auspices of the Department of Physics of Harvard University: "The modern steam locomotive," Professor Harvey N. Davis, consulting engineer, U. S. Bureau of Mines, since 1921; "Vibrations on high frequency with application of radiotelegraphy," with demonstrations, by Professor George W. Pierce, director of the Cruft High Tension Electrical Laboratory; "Electricity in illuminations," by Professor Harry E. Clifford, Gordon McKay professor of electrical engineering in the university.

At the celebration of the jubilee of the Physical Society of London, Sir Richard Paget delivered a lecture arranged by the Society of Electrical Engineers on "The Nature of Speech."

THE Oliver-Sharpey Lectures at the Royal College of Physicians of London were given by Professor A. V. Hill, F.R.S., of University College, London, on April 29 and May 1. The first lecture was on the recovery process in the isolated muscle, and the second on the recovery process in man.

DR. F. W. ASTON, fellow of Trinity College, Cambridge, is to deliver the annual address before the Institute of Metals on June 4. The subject will be "Atoms and Isotopes."

SIR WILLIAM M. BAYLISS, professor of general physiology in University College, London, has been elected a corresponding member of the Royal Academy of Medicine, Brussels.

A SPECIAL meeting in memory of the late Dr. Paul Ehrlich, on the seventieth anniversary of his birth, was held in the Kitasato Institute for Infectious Diseases, on March 14, under the auspices of Dr. S. Hata and Baron Kitasato, coworkers with Ehrlich.

HEINRICH O. HOFMAN, professor emeritus of mining and metallurgy at the Massachusetts Institute of Technology, died on April 28, at the age of sixty-six years.

LINDON WALLACE BATES, engineer of Mt. Lebanon, N. Y., who is known for his work on waterways, died in Paris on April 22.

PRINCE ROLAND BONAPARTE, for many years president of the French Geographical Society and a free member of the Paris Academy of Sciences, died on April 14, aged sixty-five years.

DR. NELSON ANNANDALE, director of the Zoological Survey of India, died in Calcutta on April 10, aged forty-eight years.

PROFESSOR G. A. J. COLE, F. R. S., professor of geology at the Royal College of Science for Ireland and director of the Geological Survey of Ireland, died on April 21, aged sixty-four years.

MAJOR FRANCIS WILLIAM CRAGG, the well-known entomological expert, who had been investigating typhus and relapsing fevers, recently left Kasauli for Lahore, where typhus is prevalent, in order to study the disease. He contracted the disease himself and died on April 23. For some time past Major Cragg had been assistant director of the Central Research Institute at Kasauli.

DR. NORMAN BRIDGE has subscribed \$150,000 to a fund of three million dollars which is being collected for the Southwest Museum of Art, Los Angeles.

It is planned to establish a national academy of pharmacy representing the American Pharmaceutical Association, the National Association of Retail Druggists, the National Wholesale Druggists' Association, the American Pharmaceutical Manufacturers' Association, the American Drug Manufacturers' Association, the American Conference of Pharmaceutical Faculties, the National Association of Boards of Pharmacy and the Proprietary Associations. A provisional charter has been granted by the State of New York. It is planned to erect a three-story building, which shall be the home of the drug profession. The structure will contain a complete library, a research laboratory, a staff of pharmaceutical technicians, legal experts to scrutinize legislation and an employment bureau.

STUDIES are being made of Indian psychology, covering intelligence, achievement, will-temperament, musical talent and color preference, by the Bureau of Educational Research of the University of Denver, under the auspices of Dr. Thomas R. Garth. This spring, three expeditions have been sent out, one investigation conducted by a graduate student at Chilocco, Oklahoma, another in Santa Fé and Albuquerque and the third on the Ute and Navajo reservations in Colorado and New Mexico.

A TELEGRAM from Dr. Philip S. Smith, of the U. S. Geological Survey, who is in charge of the expedition which left the northern outpost of Alaska at Tanana on February 17, has been received by the Interior Department, having been relayed by team drivers. The message, which was dated March 29, states that passes through the mountains into the northern Arctic drainage and location of the headwaters of rivers in the Northern Alaskan wilderness embraced within Naval Petroleum Reserve No. 4 have been discovered. The party planned to descend from the headwaters of newly located rivers in canoes when the ice breaks up. On the date of the message, the party was exploring the region near the northern limit of timber north of the Arctic Mountains and extending their surveys down the Colville River.

THE annual report of the Zoological Society of London, just received, shows that the society is proceeding with the publication of volume 59 (for 1922) of the *Zoological Record*, and has arranged for the compilation of the materials for volumes 60 and 61 (literature of 1923 and 1924). The society is willing to lose as much as £500 a year on the undertaking, but further losses must be made up in other ways if the service is to be continued. The donations received up to December 31 amount to £624. 3s. 4d., of which £150 is contributed by the British Museum of Natural History, £100 by the Royal Society, £50 each by the British Association and the Entomological Society of London, and smaller amounts by other societies and individuals. The largest amounts from America are £25 from Mr. T. Barbour, of the Museum of Comparative Zoology; £22. 4s. 6d. from the University of Michigan; £23. 0s. 4d. from the Academy of Natural Sciences of Philadelphia; and £16. 0s. 0d. from the Entomological Society of America. The Zoological Society has made a donation of £100 to a fund for the purchase of the Farne Islands as a permanent sanctuary for birds.

WE learn from the *Journal* of the American Medical Association that a recommendation that a general health survey of Philadelphia be made "as a necessary preliminary to the sesqui-centennial celebration" was made April 1 to the public health administration section of the American Public Health Association in a report presented by Murray P. Horwood, assistant professor of biology and public health at the Massachusetts Institute of Technology. He has made an exhaustive study of health conditions in Philadelphia and in the report includes thirty-one recommendations for improvement in city methods of fighting infectious diseases. The sesqui-centennial health survey is intended to eliminate the possibility of contagion to the hundreds of thousands of visitors who are expected to visit Philadelphia in the summer of 1926.

ADOPTION of metric units of weights and measures in merchandising will be a topic of discussion before the convention of the Chamber of Commerce of the United States, to be held at Cleveland in May. On May 5 the metric issue will be prominent, the national council being called upon to advise whether the pending metric referendum shall be submitted to nationwide vote of American business organizations. A year of study and conference was devoted to world standardization by the metric committee of the Chamber of Commerce of the United States, and its report will be the basis of the vote. Japan and Russia in 1921 adopted metric units for commercial use, and China is also gradually standardizing on the metric measures. All the civilized world is now on the metric basis, except the United States and the British Commonwealths. The Congress of Chambers of Com-

merce of the British Commonwealths voted overwhelmingly for adoption of the metric units, and American business men are expected to do likewise.

THROUGH the generosity of the Association of Apparatus Makers of the United States, the *Journal of the Optical Society and Review of Scientific Instruments* announces a prize of \$250 for the best paper on scientific instruments and methods presented between May 1 and December 31, for publication in the instrument section of the journal. The *Journal* publishes in the instrument section original articles describing new instruments or new methods for research or instruction in any branch of science such as physics, chemistry, astronomy or biology. The prize will be awarded by a committee to be appointed by the National Research Council. Manuscripts should be sent to the following: Paul D. Foote, editor-in-chief, Bureau of Standards, Washington, D. C., or F. K. Richtmyer, managing editor, Rockefeller Hall, Ithaca, N. Y.

ON account of the conflict between the meeting of the next (Fourteenth) International Geological Congress, to be held at Madrid in the spring of 1925, and the meeting of the Geographic Congress which is to take place in Cairo at the same time, the Spanish government has decided to postpone its entertainment of the International Geological Congress until the spring of 1926, when the geologists will be convened in Madrid by invitation of the Spanish government.

A CORRESPONDENT writes: "Mr. E. B. Starr, manager of the Celite Company at Lompoc, California, lately discovered a skeleton of a huge animal embedded in the Miocene diatom deposits. This was secured for Stanford University by Eric Jordan and William Olmstead, students in geology. The skeleton seems to be that of an extinct sea-cow, probably new to science. It is 14 feet long, with a small, hard head, and great ribs, three inches in diameter."

UNIVERSITY AND EDUCATIONAL NOTES

THE Rockefeller Institution has offered, subject to the consent of the municipal council, to build and thoroughly equip a laboratory for the school of physiology and biology of the University of Copenhagen, under the direction of Professor August Krogh.

PRESIDENT KENYON L. BUTTERFIELD, of the Massachusetts Agricultural College, has for the second time been offered the presidency of the Michigan Agricultural College.

DR. W. W. CHARTERS has been appointed dean of the graduate school of the University of Pittsburgh. Professor J. F. L. Raschen, at his own request, has been relieved of the executive work of the graduate school, which he has carried for the past seven years.