

the problems raised by the war and to placing the industrial resources of the country in a position to meet the conditions that will arise after the war has been under consideration by the government and by representatives of science and industry for some time, as it was felt that it was more desirable to follow the example of the British government in this matter.

The question was fully discussed at the meetings of the Royal Society of Canada in May, 1916, and a deputation of this society waited upon the Honorable Sir George E. Foster, minister of trade and commerce, and the Honorable Sir Thomas White, minister of finance, to place the services of the society at the disposal of the government and to recommend the appointment of an advisory committee for the furtherance of industrial research. The matter had already been considered by the minister of trade and commerce and action was promised.

Sir George Foster held a number of conferences with representative men of science and industry, and as a result of his report to the government definite action was decided upon in June by order-in-council. In his memorandum he pointed out "the urgent need of organizing, mobilizing and economizing the existing resources of scientific and industrial research in Canada with the purpose of utilizing waste products, discovering new processes—mechanical, chemical and metallurgical—and developing into useful adjuncts to industry and commerce the unused natural resources of Canada."

SCIENTIFIC NOTES AND NEWS

THE president and council of the Royal Society have made the following awards: A Royal Medal to Dr. John Scott Haldane, F.R.S., for his services to chemical physiology, more especially in reference to the chemical changes of respiration. A Royal Medal to Professor Hector Munro Macdonald, F.R.S., for his contributions to mathematical physics. The Copley Medal to Sir James Dewar, F.R.S., for his investigations in physical chemistry, and more especially his researches on

the liquefaction of gases. The Rumford Medal to Professor William Henry Bragg, F.R.S., for his researches in X-ray radiation. The Davy Medal to M. le Prof. Henri Louis le Chatelier, For.Mem.R.S., for his researches in chemistry. The Darwin Medal to Professor Yves Delage, for his researches in zoology and botany. The Sylvester Medal to M. Jean Gaston Darboux, For.Mem.R.S., for his contributions to mathematical science. The Hughes Medal to Professor Elihu Thomson for his researches in experimental electricity.

THE Stockholm correspondent of the *Morning Post*, as quoted in *Nature*, states that the Nobel prize for physiology for 1916 will probably be awarded to Professor H. J. Hamburger, of Groningen University. It is stated that the Swedish Academy of Sciences has decided not to award this year the Nobel prizes for physics and chemistry.

PRESENT and former students of Professor E. B. Wilson will give a dinner in his honor in New York on the evening of December 28. Former students of Professor Wilson, whether at Columbia or elsewhere, who have failed to receive an announcement of the dinner, can obtain full particulars by addressing Professor Gary N. Calkins, Columbia University.

PROFESSOR S. A. MITCHELL, director of the Leander McCormick Observatory of the University of Virginia, has been appointed by Columbia University special Ernest Kempton Adams research fellow for a period of five years. This award comes as an extension of the regular Adams fellowship held by Professor Mitchell for the years 1914-16. The research undertaken was the determination of the parallaxes of the fixed stars by photography with the 26-inch McCormick refractor. Already the distances of one hundred stars have been determined.

OWING to ill health, Mr. H. W. Henshaw has resigned his position as chief of the Bureau of Biological Survey, Department of Agriculture, dating from December 1. Mr. Henshaw has been connected with the Department of Agriculture since 1905, serving as assistant chief of the bureau until 1910, and

then as chief. During this period the survey has grown rapidly. In order that the bureau may continue to have the benefit of Mr. Henshaw's knowledge and experience he will retain official connection with it as consulting biologist. Mr. E. W. Nelson, who has been on the scientific staff of the bureau since 1890 and assistant chief since 1914, has been appointed to succeed Mr. Henshaw as chief of the bureau.

As has been already noted in *SCIENCE*, meetings of the Geological Society of America and the American Paleontological Society will be held in the Education Building, Albany, on December 27, 28 and 29. The address of the president of the Geological Society, Dr. John M. Clarke, is on "The Philosophy of Geology and the Order of Research." That of the president of the Paleontological Society, Dr. Rudolf Ruedemann, is on "Persistent Paleontological Types." There will be public addresses by Dr. George Otis Smith, director of the U. S. Geological Survey, on "Geology and Public Service," and by Professor Richard S. Lull, of Yale University, on "The Pulse of Life." There will be symposia on "The Geology of Petroleum" and on "The Interpretation of Sedimentary Rocks."

THE Section of Agriculture of the American Association for the Advancement of Science will hold its session on the afternoon of December 27, at 2 o'clock, in the Brinckerhoff Theater, Barnard College, Columbia University. At this session the address of the retiring vice-president of the section, Dean Eugene Davenport, of the University of Illinois, will be delivered on the subject of "The Outlook for Agriculture." The subject will be further considered in a symposium on the general topic of "The Adjustment of Science to Practise in Agriculture." This will be presented under the following four heads: (1) Some Factors lying between Scientific Results and the Farm, by Dr. H. J. Wheeler, of Boston; (2) Limitations of Science to Progress in Agriculture, by Dr. J. G. Lipman, director of the New Jersey Experiment Stations; (3) Economic Factors as affecting the Applications of Science, by Dr.

G. F. Warren, of the College of Agriculture at Cornell University; and (4) Regional conditions as determining the Type of Agricultural Inquiry, by Director B. Youngblood, of the Texas Experiment Station. The divisions of the subject will be treated in a semi-popular manner, rather than in their strictly technical aspects, and the discussion will not be restricted to any particular department of agricultural science. The purpose is to make the program one of general interest. There will be opportunity for free discussion.

THROUGH the courtesy of the American Museum of Natural History and in connection with the convocation week meetings (December 26-30) of the American Association for the Advancement of Science, the New York sections of the American Chemical Society, chairman, Dr. J. Merritt Matthews; The American Electrochemical Society, chairman, Dr. G. Colin Fink; The Society of Chemical Industry, chairman, Dr. Jerome Alexander; and The Museums of the Peaceful Arts, acting president, Dr. George F. Kunz, are planning an exhibition on preparedness, to be shown on the fourth floor of the museum building. The exhibit will consist of a set of the native elements belonging to the American Museum of Natural History; a collection of all the known elements; electrochemical products, nitrogen products from the air; coal-tar derivatives; and explosives—the new chemistry of preparedness developed during the past two years. The exhibit will be shown during the convocation week and for one month thereafter to the public. Dr. George F. Kunz is chairman of the exhibition committee. Scientific research will be shown in a special exhibit dealing with the life and work of Pasteur. Letters, manuscripts, pictures or other memorabilia which might be of interest in this connection are greatly desired for this purpose. Any one having material that would add to the Pasteur exhibit is requested to communicate with Professor C.-E. A. Winslow, curator of public health, American Museum of Natural History, 77th Street and Central Park West, New York City, who is chairman of this special branch of the committee.

AN expedition in the interests of the Smithsonian Institution will leave shortly for the French Congo and certain of the neighboring parts of West Africa. It will be known as the "Collins-Garner Congo Expedition, in the Interests of the Smithsonian Institution," and will be headed by Mr. Alfred M. Collins, of Philadelphia, a well-known explorer and sportsman, who has made several trips to Africa and other regions in search of big game. Richard L. Garner, of New York, who has already made extensive investigations concerning the apes and monkeys of Central Africa, is manager of the expedition. The other members of the party are: Professor Charles W. Furlong, of Boston, scientist, artist and explorer, and Mr. Charles R. W. Aschemeier, of Washington, who represents the Smithsonian Institution as collector of natural history specimens for the United States National Museum. It is expected that Mr. Garner and Mr. Aschemeier will start for Bordeaux as soon as the outfit is ready, probably on December 9, and that Mr. Collins and Professor Furlong will follow about March 1, 1917.

THE London *Times* states that a survey party, led by the geologists Messrs. Talbot and Clarke, has been attacked by blacks between Laverton and Warburton ranges, western Australia. Mr. Johnstone, a member of the party, received a severe spear wound in the thigh, and Mr. Talbot was speared through the arm.

DR. R. RUGGLES GATES, who had planned to spend the winter in research work at the New York Botanical Garden, has decided to return shortly to England to enlist in the British army.

MR. F. A. McLAUGHLIN, instructor in botany at the Massachusetts Agricultural College, has been granted a year's leave of absence for graduate study at the University of Chicago.

THE Botanical Society of Washington has elected the following officers for the ensuing year: *President*, Mr. T. H. Kearney; *Vice-president*, Mr. Edgar L. Brown; *Recording Secretary*, Mr. Charles E. Chambliss; *Corresponding Secretary*, Dr. H. L. Shantz; *Treasurer*, Mr. F. R. Farrell. Mr. A. S. Hitchcock

was nominated by the society for the position of vice-president of the Washington Academy of Sciences.

THE Anthropological Society of Philadelphia has resumed its regular meetings for its fourth year, with Dr. W. Max Müller as president and Mr. E. P. Wilkins as secretary. The society now has twenty members, as follows: R. T. Aitken, G. Annear, B. S. Brumbaugh, D. W. Berkey, E. Chiera, Wm. Churchill, M. M. Dorizas, F. Edgerton, R. H. Ferris, E. W. Hawkes, W. W. Hyde, H. D. Jones, J. E. Mason, W. Max Müller, L. E. Sabary, W. H. Schoff, F. G. Speck, R. J. Weitlaner, E. P. Wilkins, S. Williams. The first meeting of the year was held on November 18, Dr. Müller presenting a paper on "The Humorous Experiences of an Africanist."

PROFESSOR JOHN M. COULTER, of the University of Chicago, lectured in the Sigma Xi circuit, including the universities of Kansas and Missouri, from November 13-16. Two lectures were given at each university, the titles being "The Ideals of Science," and "Inheritance and Response."

DR. RICHARD C. CABOT, of Boston, is giving a series of lectures under the auspices of the Social Service Corporation of Baltimore, on "The Social Aspects of Public Health Work in the United States," including industrial, educational, moral and religious and governmental aspects.

PROFESSOR HEINRICH RIES, of the department of geology, Cornell University, is giving a course of ten lectures on non-metallic products in the course on economic geology at Columbia University.

THE College of Liberal Arts and Sciences of the University of Illinois has announced a series of assemblies for 1916-17 that will consider recent developments in science. On last Thursday evening the first of these was held, at which Professor Joel Stebbins spoke on "Measuring the Light of Stars." The second will be held on December 14, the speaker of the occasion being Professor Jacob Kunz, who will speak on "Recent Light on the Ultimate Constitution of Matter." The third, January 11,

will be addressed by Professor R. C. Tolman on "The Theory of Relativity." The fourth, February 15, will be addressed by Professor C. S. Hottes on "Some Recent Advances in the Physiology of the Cell" and the fifth on March 15, will be addressed by Professor G. M. Whipple on "Recent Development in Mental Testing." The speakers are all from the University of Illinois.

THE following lectures were recently given at Oberlin College, under the auspices of the department of zoology: "The Maturation and Fertilization of the Eggs of *Nereis*," by Dr. Omer Van der Stricht, of the University of Ghent (now at Western Reserve University, Cleveland); and "The Significance of the Egyptian Mummy," by Professor T. Wingate Todd, head of the department of anatomy at Western Reserve University Medical School.

At the Lowell Institute (Boston), on Tuesday and Friday evenings beginning Tuesday, December 5, a course of six lectures is being given by George Sarton, D.Sc., editor of *Isis* and lecturer on the history and philosophy of science at Harvard University. The course is on science and civilization in the time of Leonardo da Vinci, the titles of the lectures being:

1. "The Age of Leonardo."
2. "The Place of the Earth in the Universe."
3. "Geographical Discoveries."
4. "Progress in Physics and Chemistry."
5. "Progress in Biology and Medicine."
6. "The New Humanism."

FIVE lectures will be given at the Royal College of Surgeons of England in December by Dr. E. Mellanby, acting superintendent of the Brown Animal Sanatory Institution, on the part played in disease by water, salts and other simple substances.

THE Swiney Lectures on Geology on "The Mineral Resources of Europe" have been delivered by Dr. J. S. Flett, at the Royal Society of Arts, London.

THE Kelvin lecture was delivered before the Institution of Electrical Engineers, London, on November 9 by Dr. Alexander Russell, who explained how, in many fields of fundamental importance to the electrical engineer, Lord

Kelvin's work had provided the basis on which his successors had built.

FREDERICK J. HAMILTON MERRILL, director of the New York State Museum from 1894 to 1904 and New York state geologist from 1899 to 1904, later a consulting geologist and mining expert in New York City, Arizona and California, died in Los Angeles on November 29, in his fifty-fifth year.

NEWTON B. PIERCE, formerly plant pathologist for the U. S. government for the Pacific coast region, and more recently private collector and breeder of rare plants, died at his home in Santa Ana, Calif., the thirteenth of last October, aged sixty years.

SIR HIRAM STEVENS MAXIM, the distinguished inventor, died in England on November 24.

MR. CHARLES SMITH, master of Sidney Sussex College, Cambridge and the author of works on mathematics, died on November 13, at the age of seventy-two years.

PROFESSOR H. M. WAYNFORTH, until recently professor of engineering in King's College, London, died on November 5, aged forty-nine years.

HENRIK MOHN, the distinguished Norwegian meteorologist, died on September 12 at Christiania, aged eighty-one years.

MEMBERS of Section E, Geology and Geography, of the American Association for the Advancement of Science, are requested to forward titles and abstracts of papers to be read at the New York meeting, to Dr. George F. Kay, Iowa City, Ia., not later than December 12.

THE Sullivant Moss Society will hold its twelfth meeting on Friday, December 29, at Barnard College, Columbia University, in connection with the convocation-week meetings of the American Association for the Advancement of Science.

UNIVERSITY AND EDUCATIONAL NEWS

GOVERNOR EDWARD F. DUNNE and Dr. S. W. Stratton, director of the Bureau of Standards, are among the speakers that will give addresses on the occasion of the dedication of the new ceramics building at the University of