- 20. State policy in forestry, by Mr. W. A. L. BAZELEY, state conservation commissioner of Massachusetts, Boston, Mass.
- 21. Forestry and rural development, by COLONEL HENRY S. GRAVES, dean of the School of Forestry, Yale University.

VI

CONSERVATION OF NATIONAL PARKS AND SCENIC RESOURCES

- 22. Our scenic resources and their practical uses, by Dr. G. F. KUNZ, president, American Scenic and Historic Preservation Society, New York City.
- 23. Our national park policy in its economic aspects, by MR. ROBERT STERLING YARD, secretary of the National Parks Association, Washington, D. C.
- 24. Conservation of waters of medicinal and healing value. (Not yet assigned).

VII

CONSERVATION OF GAME RESOURCES AND WILD LIFE

- 25. Economic aspects of game conservation, by MR. F. C. WALCOTT, fish and game commissioner, Hartford, Conn.
- 26. Conservation of our whale fisheries, by Dr. JOHN FRANKLIN CROWELL, economist, New York City.
- 27. The migratory fish problem, by DR. R. E. COKER, U. S. Bureau of Fisheries.

FREDERICK L. HOFFMAN, Secretary of Section K Wellesley Hills, Mass.

SCIENTIFIC NOTES AND NEWS

ALEXANDER GRAHAM BELL died on August 2 at his summer home in Nova Scotia. Dr. Bell was born in Edinburgh on March 3, 1847.

DR. W. J. HOLLAND, since 1898 director of the Carnegie Museum, Pittsburgh, has become director emeritus. He is succeeded in the directorship of the museum by Mr. Douglas Stewart.

PRESIDENT JOHN BRACKEN, of the Manitoba Agricultural College, Winnipeg, formerly professor of field husbandry at the University of Saskatchewan, is to be the next premier of Manitoba.

More than 500 of the pupils and friends of Professor L. Bolk, of the chair of anatomy at the University of Amsterdam, recently presented him with his portrait painted in oils.

DR. F. T. ASCHMANN, chemist to the Pennsylvania Bureau of Foods at Pittsburgh, has been elected chairman of the board of chemists of the bureau, to succeed the late Professor William Frear.

DR. W. H. BRITTAIN, provincial entomologist for Nova Scotia, has been appointed a member of the council of the American Association for the Advancement of Science, to represent the Canadian Society of Technical Agriculturists.

DR. F. P. VEITCH, of the Bureau of Chemistry has been appointed by the secretary of agriculture as a member of the special committee on government paper specifications. This committee will prepare and submit to the congressional joint committee on printing specifications for paper for public printing and binding.

DR. J. A. AMBLER has been appointed chemist in charge of the Color Laboratory of the Bureau of Chemistry. Dr. Ambler has been acting chief since the resignation of Dr. H. D. Gibbs.

DR. W. H. RANKIN, Ph.D., plant pathologist for the Dominion of Canada, has been appointed an associate in research (plant pathology) at the New York State Station, effective July 1, and will take up a special study of diseases and insects affecting raspberries, particularly in the Hudson River Valley. This work has been made possible by a special grant by the legislature. D. W. Carpenter, Ph.D., assistant professor of physical chemistry at the University of Iowa, has been appointed associate in research (chemistry), beginning on July 1. W. L. Kulp, assistant in research (biochemistry), has resigned, effective on the same date, to accept a teaching fellowship in bacteriology and biochemistry at Yale University, the vacancy being filled by the transfer of Millard G. Moore, assistant chemist.

E. E. CLAYTON, Ph.D., extension plant pathologist at the Ohio State University, has been appointed pathologist at the newly established field station on Long Island. H. C. Huckett, a graduate student at Cornell University, has been appointed associate entomologist, beginning on July 1.

MR. R. E. ZIMMERMAN, formerly director of the research laboratory of the American Sheet and Tin Plate Company, has been made assistant to the vice-president. Mr. J. W. Whetzel, formerly research associate, has been appointed manager of the research laboratory, and Mr. E. S. Taylerson, formerly physicist, is now assistant director.

MR. R. L. HOWARD, associate professor of chemistry in the Medical College of Virginia, has been awarded the research fellowship in pharmacology at Western Reserve University.

THE University of Brussels has conferred the "Docteur spécial en sciences physiologiques" on I. Newton Kugelmass, M.A. (Columbia), Ph.D. (Johns Hopkins), for his researches, "Physico-chemical studies of the mechanism of blood clotting."

DR. HENRY HANSEN, chief of the Department of Public Health of Peru, who since 1919 has been combating yellow fever there, arrived in New York on August 5 for a visit. Dr. Hansen went to Peru from the Rockefeller Institute at the request of the Peruvian government.

DR. AARON ARKIN, professor of pathology and bacteriology at the West Virginia School of Medicine, Morgantown, has been granted a year's leave of absence for study and research abroad. He will spend the year in Vienna, Berlin, Paris and London.

DR. W. P. WILSON, director of the Commercial Museum of Philadelphia, has been appointed by Governor Sproul of Pennsylvania commissioner to represent the state at the centennial of Brazil opening on September 7. He will represent also the city of Philadelphia. Dr. Wilson has in addition been appointed delegate from the Academy of Natural Sciences of Philadelphia and from the Smithsonian in Washington, by Secretary Hughes, to the Congress of Americanists meeting about the twentieth of August in Rio de Janieiro.

PROFESSOR THEODORE W. RICHARDS, of Harvard University, spoke before the Société Chimique de France on July 12 on "La signification actuelle des poids atomique." DR. T. CASPAR GILCHRIST, of Baltimore, delivered the annual oration, on the progress of dermatology, before the London Dermatological Society.

DR. WALTER B. CANNON gave an address on "What has been accomplished by animal experimentation" during the recent meetings of the Pacific Northwest Medical Association.

A LEGISLATIVE bill that recently passed the French Chamber of Deputies, as we learn from the Journal of the American Medical Association, provides for the granting of an appropriation of 3,620,000 francs to enable the state to participate in the commemoration at Strasbourg of the centenary of Pasteur. The committee delegated to inquire into the project has reported that the centenary should be celebrated not in Strasbourg alone but also in Paris and in various cities of Franche-Comté in which Pasteur lived-particularly Dôle, Lonsle-Saunier, Arbois and Besançon. The committees on public instruction and public health, after hearing M. Strauss, minister of public health, who spoke in the name of the government, reached the same conclusion and decided to request the government to modify the scope of the centenary by eliminating the two words "at Strasbourg." Acting on the suggestion of M. Deville, in turn, the municipal council of Paris has unanimously voted an appropriation of 50,000 francs for the celebration at Paris of the centenary of Pasteur.

An appeal has been made for subscriptions to a proposed memorial to Sir German Sims Woodhead, late professor of pathology in the University of Cambridge. It is proposed that the memorial shall take the form of a portrait relief in bronze, to be placed in the library of the Medical School at Cambridge, and that it shall correspond in design to those of Professor Woodhead's predecessors in the chair of pathology, the late Professors Roy and Kanthack.

PROFESSOR J. J. MACKENZIE, head of the pathological departments of the University of Toronto, died on August 1 at the age of fiftyseven years as a result of infection contracted during his experiment with the pus-forming bacteria. DR. AMBROSE ROBINSON WILLIS, who for many years taught mathematical physics at the Royal College of Science, died on June 23, at the age of seventy-two years.

DR. HARVEY CUSHING, of Harvard University, has been awarded the Charles Mickle Fellowship of the faculty of medicine of Toronto University. He has accepted the fellowship, which is for \$1,000, but has stipulated that the money shall be used to send one graduate of the University of Toronto to Harvard to work with him. The Charles Mickle Fellowship, bequeathed by the late Dr. W. J. Mickle, is the annual income from an endowment of \$25,000 and is awarded annually to the member of the medical profession anywhere who is considered to have done the most during the preceding ten years to advance sound knowledge of a practical kind in medicine. The first award was made last year to Professor I. Pawlow, of the University of Petrograd.

PROFESSOR A. SOMMERFELD, professor of mathematical physics at the University of Munich, will be in residence at the University of Wisconsin for the first semester of the coming academic year 1922-23, holding the Karl Schurz memorial professorship in the university for that period. Professor Sommerfeld is expected to give a three-hour course on "Atomic Structure" and a second three-hour course either on the "Analysis of Wave Propagation," or a three-hour course in "The General Theory of Relativity." The Karl Schurz memorial professorship in the University of Wisconsin was founded in 1910 as an exchange professorship with the German universities. The appointment of Professor Sommerfeld marks the resumption of the professorship after the interruption caused by the war. Before the days of the Civil War, Karl Schurz was a resident of Watertown, Wisconsin, and served on the board of regents of the State University. The memorial professorship was founded in recognition of his distinguished services to the state and nation.

THE following appointments have been made in the Food Research Institute of Stanford University: *Special investigators*—Wilfred Eldred, Ph.D. (Harvard), recently professor of economics at the University of Virginia, who for nearly a year has been carrying on investigations in the baking industry for the institute, and John L. Simpson, A.B. (California), who in 1919 was liaison officer of the food section of the Supreme Economic Council and chief of the A. R. A. Commission to Serbia, and in 1920 special correspondent to the New York Evening Post for eastern Europe. Research assistants-Susan S. Burr, A. B. (Vassar), A.M. (Stanford); Franklin D. Schurz, A.B., M.B.A. (Harvard); A. G. Silverman, A. B. (Harvard). Fellows-Edith Hawley, A.M. (Columbia), a graduate student at Columbia for the past two years; James N. Holsen, A.B. (Indiana), A.M. (Princeton); Olaf S. Rask, A.B., B.S. (Minnesota), a graduate student at the University of Minnesota and formerly a research chemist in the Bureau of Chemistry, U. S. Department of Agriculture; William B. Stewart, A.B. (Reed), a graduate student at the University of Illinois: and Conrad P. Wright, A.B. (Oxford), a graduate student at the University of California.

WE learn from the Journal of the American Medical Association that Dr. R. P. Strong, of the Harvard Medical School, who has just returned from his fourth trip to Panama, has announced that it has been decided to establish first divisions of bacteriology, pathology, protozoology, helminthology, biochemistry, entomology, plant pathology and animal diseases in the new Gorgas Memorial Institute of Tropical and Preventive Medicine, at Panama. These departments will be organized with laboratories for research work, particularly in connection with the study of the mode of spread of the most important infectious diseases of man and animals. There will be close cooperation between the institute and the Ancon Hospital and Leprosarium. In addition to the foregoing subjects, tropical botany and the biologic effect of sunlight will also receive attention. Provision will be made for the instruction of a limited number of students, the courses of instruction to be designed especially for those who have had laboratory training before. A limited number of research workers will also be received. Dr. Strong states that, since the president of a small South American republic, already overtaxed, had donated a memorial to an American, it was the duty of all American citizens, not only American physicians, to provide a suitable endowment fund with which to carry on the work of the institute.

THE conference of the British Museums Association has noted: "That in the opinion of the Museums Association the time has arrived when it is desirable in the interests of the country to appoint a royal commission to investigate and report upon the work of museums in relation to industries and general culture."

AT its recent meeting, the Eugenics Research Association voted that it was its sense that Germany should be granted membership on the International Eugenics Commission.

THE Canadian Horticultural Council, which was recently organized with headquarters at Ottawa, has taken steps towards the organization of a system for the registration of new varieties of plants. Through the agency of Mr. W. B. Lobjoit, controller of horticulture for Great Britain, the secretary of the Canadian Horticultural Council will be kept informed of the efforts being made not only in England but on the continent, to provide a means for the registration of horticultural plants, shrubs and trees. The secretary of the council has also got into touch with the horticultural authorities in the United States who are interested in this matter. It is expected that a conference on the subject will be arranged for during the present year.

UNIVERSITY AND EDUCATIONAL NOTES

By the will of Miss Harriet S. Hazeltine, Middlebury College receives \$25,000.

ACCORDING to the *Bulletin* of the American Mathematical Society, the title of the chair of "differential and integral calculus" in the University of Paris has been changed to "the theory of groups and the calculus of variation."

DR. MARCUS P. NEAL, assistant professor of pathology and bacteriology at the State University of Iowa College of Medicine, Iowa City, has accepted a position as professor of pathology and bacteriology at the University of Missouri School of Medicine, Columbia.

DR. LEROY S. PALMER, associate professor of agricultural biochemistry in the University of Minnesota, has been promoted to a full professorship.

S. W. GEISER, Ph.D. (Johns Hopkins), has been appointed assistant professor of zoology in Washington University, St. Louis.

F. B. ISELY, dean and professor of biology at Culver-Stockton College, Canton, Missouri, has accepted a similar position with Texas Woman's College at Fort Worth, Texas. L. S. Hopkins, of Kent, Ohio, becomes dean and professor of biology in Culver-Stockton College.

MR. ELIOTT FROST has resigned his position as director of the Industrial Management Council of the Rochester Chamber of Commerce to accept the headship of the department of psychology at the University of Rochester, the directorship of its Department of Extension, and of its Summer School.

DISCUSSION AND CORRESPOND-ENCE

THE SPECTRUM OF HELIUM IN THE EXTREME ULTRA-VIOLET

MR. FRICKE and I showed (*Phil. Mag.*, 41, May, 1921) that in the extreme ultra-violet the arc spectrum of helium probably contained but one line with a wave-length near 585 A.U.

I have recently attacked the subject again, using a vacuum spectroscope so arranged that a good vacuum could be maintained in the body of the apparatus while the discharge tube contained helium at a pressure of about a millimeter. No window was employed, the success of the device depending on the use of a very short and narrow slit and upon the suitable application of a powerful pump.

With a continuous current the line at 584.4 is of very great strength, and is accompanied by three new lines at 537.1, 522.3 and 515.7 whose intensities decrease with their wavelength and in a manner strongly suggesting a series relation. Luckily the first three members appear in the second order spectrum, a