

oratory of the Case School, and on Tuesday in the amphitheater of the institute of pathology of the university. There are forty-one papers on the scientific program.

Dr. Harlow Shapley, director of Harvard College Observatory, will give on Monday evening an address entitled "Variation and Evolution among the Stars." This lecture is complimentary to the citizens of Cleveland, and the public is invited. The dinner for members and guests, including ladies, will be held at Wade Park Manor on Tuesday evening. Dr. W. W. Campbell, president of the academy, will preside and will make a short address. There will be short addresses by President Leutner, of Western Reserve University, and by President Wickenden, of the Case School of Applied Science. The Mary Clark Thompson Medal, awarded for important services to geology and paleontology, will be presented to Charles Schuchert of Yale University. The presentation and address will be made by Dr. David White, chairman of the committee on the Mary Clark Thompson Fund, and the response will be made by Dr. Schuchert. Teas, complimentary to members and guests, will be given in the Cleveland Museum of Art and the Hamann Museum, School of Medicine, Western Reserve University.

The various laboratories and museums of all departments of Case School of Applied Science and of Western Reserve University will welcome visitors at any time during the meetings. Special invitations have been extended to members and guests by the directors of the Cleveland Museum of Art and of the Natural History Museum.

Upon special invitation, arrangements have been made for three optional visits on Wednesday afternoon. These are:

(1) The Warner & Swasey Company, 5701 Carnegie Avenue. Members and their guests are invited to visit the works of The Warner & Swasey Company. Machinery, including turret lathes, will be shown both in operation and in process of manufacture. Astronomical equipment will likewise be shown including a scale-model and parts of the MacDonald telescope for the University of Texas. A feature will be the Optical Shop where the 82-inch mirror and a 58-inch flat are being ground.

(2) Research Laboratories of The Cleveland Clinic Foundation, 2040 East 93rd Street. The following demonstrations will be on view: 1. Two methods for the detection of mitogenetic radiation: a. Geiger electron counter. b. Yeast method. 2. Measurement of Roentgen Rays and Gamma Rays in "roentgens." Demonstration of instruments. 3. Emission of radiation during the oxidation of proteins measured with: a. Thermopile and radiation filters; b. Photocell and amplifier. 4. Methods of preparing and assaying the hormones of the pituitary, of the thyroid gland and of the gonads. 5. Studies in the comparative anatomy of the energy system.

(3) Nela Park, The General Electric Company. Nela Park is located just south of Euclid Avenue, three and a half miles east of University Circle. There will be visits to the Lamp Development Laboratory and the Engineering Laboratories of the Incandescent Lamp Department of the General Electric Company and to the General Electric Institute. The institute includes demonstrations and displays of the most recent developments in lighting practise for all purposes and displays of new electrical equipment for the home. A visit to the glass-bulb factory of the General Electric Company, a short distance from Nela Park, will conclude the program.

If desired, arrangements will be made upon request at the registration desk, so that individuals may, by shortening the time of stay, visit two of these institutions on Wednesday afternoon. Those desiring transportation are requested to register for the visit selected before noon of Wednesday.

SCIENTIFIC NOTES AND NEWS

DR. LEO H. BAEKELAND, honorary professor of chemical engineering at Columbia University, will receive the degree of doctor *honoris causa* of the faculty of applied science of the Université Libre, Brussels, at the centenary celebration of the university on November 19.

At the meeting of the New York Academy of Medicine on November 8 honorary fellows were elected as follows: Dr. William Henry Howell, formerly director of the School of Hygiene and Public Health of the Johns Hopkins University; Sir Humphry Davy Rolleston, from 1925 to 1932 Regius professor of physic at the University of Cambridge, vice-president of the British Medical Association and a past-president of the Royal College of Physicians; Dr. August

Krogh, professor of animal physiology at the University of Copenhagen; Dr. Claude Regaud, of the Pasteur Institute and the Curie Foundation, and Dr. Frederick George Novy, professor of bacteriology at the University of Michigan and chairman of the executive committee of the Medical School.

THE Chemical Industry Medal for 1934 was presented on November 9 to Dr. Floyd J. Metzger, vice-president in charge of research and development of the Air Reduction Company and director of research of the U. S. Industrial Alcohol Company and of the U. S. Industrial Chemical Company, in recognition of the valuable results of research in the field of gases, which has been carried out under his direction. Dr. M. C. Whitaker outlined the accomplishments leading

to the award, and Dr. Arthur D. Little, of Cambridge, Mass., presented the medal in behalf of the Society of Chemical Industry, of which he is a past-president. Dr. Metzger's medal address was entitled "Traces from Tons."

THE Cardinal Newman Award of the Newman Foundation was presented on November 7 at the University of Illinois to Dr. Robert A. Millikan, of the California Institute of Technology. Dr. John A. O'Brien, director of the foundation, presided. The citation read: "The Cardinal Newman award is conferred each year upon some person who has rendered some contribution to the enrichment of human life. For recognition in the field of physical science the Newman award is hereby conferred upon Robert Andrews Millikan." This is the first time that the award, established in 1929, has been made to a scientific man.

DR. FREDERICK MARK BECKET, president of Union Carbide and Carbon Research Laboratories, Inc., has been elected to honorary membership in the Electrochemical Society "for conspicuous service to the advancement of electrochemistry."

THE Flavelle Medal of the Royal Society of Canada was presented at the recent annual meeting to Louis Vessot King. M. Gérin, in making the citation, said: "The Flavelle Medal is awarded to Louis Vessot King, the most brilliant mathematical physicist that Canada has produced. Dr. King was born in Toronto in 1886 and educated at McGill and Cambridge Universities. He was elected a fellow of this society in 1915 and a fellow of the Royal Society of London in 1924. He has been a member of the staff of McGill University since 1910 and Macdonald professor of physics there since 1920. No Canadian has displayed greater originality or versatility in his scientific work than Dr. King, for he has won international fame as a mathematician, physicist and engineer. He is a worthy disciple of the school of Kelvin and Rayleigh. Some of the fields in which he has won distinction are electrodynamics, kinetic theory, particularly in the study of the properties of solar and sky radiation and in that of the molecular scattering of light; hot wire anemometry; fog signal machinery and the numerical calculation of elliptic functions and integrals. The mathematical work of Dr. King is characterized by the elegance and economy of the methods used."

DR. MARSTON MORSE, professor of mathematics at Harvard University, has accepted a call to a professorship of mathematics at the Institute for Advanced Study at Princeton, New Jersey. His associates in the School of Mathematics of the institute will be the present permanent group, namely, Drs. Albert Einstein, Oswald Veblen, James Waddell Alexander, John von Neumann and Hermann Weyl.

WE regret to learn that Dr. Edwin Brant Frost, director emeritus of the Yerkes Observatory, is seriously ill at the Billings Memorial Hospital in Chicago.

DR. C. L. ROADHOUSE, head of the division of dairy industry of the University of California, has been elected president of the American Dairy Science Association, and Dr. H. A. Ruehe, professor and head of the department of dairy husbandry of the University of Illinois, has been elected vice-president; these two officers, together with the following, comprise the board of directors: O. F. Hunziker, Chicago; L. A. Rogers, U. S. Department of Agriculture; M. Mortensen, Iowa State College, and A. C. Dahlberg, editor of the *Journal of Dairy Science*.

W. STARLING BURGESS, designer of the *Enterprise* and *Rainbow*, the successful defenders in the last two international yacht races for the America's Cup, has been appointed a special lecturer at the Massachusetts Institute of Technology. Mr. Burgess, who will be attached to the department of mechanical engineering, goes to the institute for the latter part of the academic year.

DR. EARL J. KING, since 1930 assistant professor of medical research and director of the sub-department of biochemistry at the Banting Institute, University of Toronto, has become reader in pathological chemistry at the British Post-Graduate Medical School, London.

AT St. Bartholomew's Hospital Medical College, London, Dr. L. J. Witts, since 1929 assistant physician to Guy's Hospital, has been appointed professor of medicine, and Dr. Geoffrey Hadfield, since 1933 professor of pathology in the University of Bristol, has been appointed professor of pathology.

BARNET D. VAN BUREN, director of the Bureau of Plant Industry, New York State Department of Agriculture and Markets, will retire on December 1. He has served the department for thirty-four years.

DR. ALFRED A. BIELSCHOWSKY, until recently professor of ophthalmology and chief of the eye clinic at the University of Breslau, plans to spend six months in research on abnormalities of vision in the department of physiological optics at the Dartmouth Medical School.

DR. CHESTER W. EMMONS, associate in mycology at Columbia University, is spending the winter at the School of Tropical Medicine at San Juan, Puerto Rico, investigating the various pathogenic fungi. Dr. Emmons, in collaboration with Dr. Arturo L. Carrión, will be especially interested in cromoblastomycosis and other rare dermatological conditions that occur on the Island of Puerto Rico.

PROFESSOR GEORGE PLUMER BURNS, head of the department of botany at the University of Vermont, has been granted six months' leave of absence. He has left for an extended trip through the southern and central United States, after which he plans to carry forward his work on chlorophyll at the University of California.

DR. JOHN CHORNYAK, of the Graduate School of Neurology and Psychiatry of the University of Pennsylvania, will be a laboratory guest of the Wistar Institute of Anatomy during the coming year. He plans to make a study of the cell layers of the cortex in the series of human brains in the collection of the institute.

PROFESSOR A. L. MELANDER, head of the department of biology at the College of the City of New York, has leave of absence which he plans to spend as a guest investigator at the University of California Citrus Experiment Station at Riverside.

DR. HARRY S. LADD, research associate in geology at the University of Rochester, has returned after completing seven months' field work in the Lau Islands (eastern Fiji). A report on the geology of the area studied will be prepared during the coming year.

THE Cutter lecture on preventive medicine was given by Dr. Charles Sidney Burwell, professor of medicine at the Vanderbilt University School of Medicine, Nashville, on November 8, at the Harvard Medical School, Amphitheater Building E. The subject was "The Prevention or Postponement of Death from Heart Failure."

DR. J. PARSONS SCHAEFFER, professor of anatomy and director of the Daniel Baugh Institute of Anatomy of the Jefferson Medical College, gave a lecture on the Schiff Foundation at Cornell University on November 2, on "Human Constitution and Some of Its Practical Problems."

DR. GUSTAV EGLOFF, director of research of the Universal Oil Products Company, will deliver a series of lectures before five local sections of the American Chemical Society on successive days beginning on November 26 as follows: University of Kentucky, "Modern Refining and Products from Crude Oil"; Vanderbilt University, "Synthesis in the Oil Industry"; University of Tennessee, "Motor Fuels and Lubricating Oils"; Kingsport, Tennessee, "Modern Products from Petroleum," and Roanoke, Virginia, "Synthesis in the Oil Industry."

THE twenty-fifth anniversary of the founding of the National Committee for Mental Hygiene was commemorated at a dinner given in New York City on November 14. The program was as follows: "Twenty-Five Years of Work," Arthur H. Ruggles, M.D., presiding, president of the National Committee for Men-

tal Hygiene; "The Beginnings," Adolf Meyer, M.D., professor of psychiatry at the Johns Hopkins University School of Medicine; physician-in-chief of the Henry Phipps Psychiatric Clinic at the Johns Hopkins Hospital; "Mental Hygiene and Education," Dr. James R. Angell, president of Yale University; "Recent Developments and Future Plans," Clarence M. Hincks, M.D., general director of the National Committee for Mental Hygiene; "Mental Hygiene and Public Health," Dr. M. J. Rosenau, professor of preventive medicine and hygiene at the Harvard Medical School; "The Cause," Dr. Jacob Gould Schurman, formerly president of Cornell University and formerly Ambassador to Germany; "Some Intimate Remarks," Clifford W. Beers, founder and secretary of the National Committee for Mental Hygiene.

THE Society of American Bacteriologists will hold its annual meeting in Chicago, Ill., from December 27 to 29, under the presidency of Dr. M. J. Rosenau, of the Harvard Medical School. The scientific program will include groups of papers on the chemistry of antigens and antibodies, bacterial allergy and pathogenic streptococci, and in food, dairy and soil bacteriology. Round-table discussions will be held on the filterable forms of bacteria, biological changes in organic matter in nature, classification of streptococci and teaching bacteriology.

THE next annual meeting of the Federation of American Societies for Experimental Biology, comprising the American Physiological Society, The American Society of Biological Chemists, the American Society for Pharmacology and Experimental Therapeutics and the American Society for Experimental Pathology, will be held in Detroit, Michigan, from April 10 to 13, 1935. Dr. F. W. Hartman, of the Henry Ford Hospital, is chairman of the local committee. The second annual meeting of the American Institute of Nutrition will be held in Detroit on April 10, preceding the meeting of the federation.

THE fourteenth annual meeting of the Highway Research Board will be held in Washington, D. C., at the building of the National Academy of Sciences and the National Research Council on Thursday and Friday, December 6 and 7.

THE annual dinner of the Linnean Society of London was held at the Hotel Washington on October 18. According to *Nature*, the president, Dr. W. T. Calman, was in the chair, and the official guests were Sir Richard and Lady Gregory, and Dr. G. F. Herbert Smith. Following the dinner, a reception was held by the president and Mrs. Calman in the rooms of the society at Burlington House. Dr. J. F. G. Wheeler, director of the Bermuda Marine Biological Station, gave a lecture, illustrated with colored lan-

tern slides, on the natural history of Bermuda. A number of zoological and botanical exhibits were shown in the library, including a series of manuscripts and printed documents, from the society's archives, relating to the younger Linnæus, and to his visit to England in 1781-82.

THE *Journal* of the American Medical Association states that a number of internships will be available on July 1, 1935, to medical students graduating in that year. There will be first-year internships, the salary of which is \$79 per month plus quarters, subsistence and laundry, second-year positions with a salary of \$93.25 per month plus quarters, subsistence and laundry. Applications should be addressed to the U. S. Public Health Service, Washington, D. C.

THE U. S. Civil Service Commission announces an open competitive examination for the position of junior parasitologist for the Bureau of Animal Industry, Department of Agriculture. At present there is a vacancy with headquarters at Beltsville, Md., in which the department wishes to place a woman. Both men and women will be admitted to the examination, however. The duties are to conduct research in animal parasitology, and the salary will be \$2,000 a year, subject to the usual deductions. Applications must be on file with the commission at Washington before November 26.

AN expedition for the Academy of Natural Sciences of Philadelphia, under the direction of Brooke Dolan, of Philadelphia, has left Yachow, Sze-chwan Province, China, for a year's survey of zoological areas and boundaries in eastern Tibet, and the collection of birds and mammals for the Academy's Free Natural History Museum at 19th and the Parkway. Particular efforts will be exerted toward obtaining material for habitat group displays of such characteristic Tibetan animals as wild yak, wild horse, Tibetan grizzly, Ammon sheep, white-lipped stag and snow leopard. Motion picture photography of the wild game is also planned for aiding in erecting the groups, and to record wild animal behavior. Topographical surveys of several high mountain chains will also be carried on. In eastern Kuku-nor, within the great southeast bend of the Upper Yellow River, stands Amneh-ma-chin, a dazzling snow peak of unsurveyed altitude. It is the hope of the expedition to survey this peak, thought to be over 27,000 feet

high. The party includes Ernst Schaefer, of the University of Göttingen, who was with Mr. Dolan on the first West China Expedition of the academy in 1931. Marion H. Duncan is with the party as adviser and caravan leader. The route planned is *via* Ts-tsien-lu to Li-tang and Batang, where the expedition will winter and establish a permanent base. The return trip is projected across country to Sung-pan, Chengtu, Chungking and down the Yangtze River to Shanghai in the autumn of 1935. As in 1931, Mr. Dolan's party is working in conjunction with the Metropolitan Museum of the Academia Sinica in Nanking, and is receiving the cooperation of Dr. Tsai Yaen Pei, its president, and of Dr. Chi Ping, of the Science Society of China.

Nature states that the opening of the Maison de la Chimie on October 20 in Paris marks the completion of the first step towards a comprehensive scheme of centralization of chemical bibliography and other scientific activities. The Maison de la Chimie had its origin in the celebration of the centenary of Marcellin Berthelot in 1927, when a sum of twenty-five million francs was collected by international subscription. The French Government presented a historic building—the house of La Rochefoucauld—d'Estissac, rue St. Dominique, near the Chamber of Deputies. This has been reconstructed and extended to house a library equipped with the latest facilities. Large halls for meetings of scientific societies and congresses have also been provided. Indeed, this is a special feature of the project, and the opening of the building by M. Lebrun, President of the Republic, was followed by the holding therein of the fourteenth Congress of Industrial Chemistry (October 21-27). M. Jean Gérard, administrator of the Maison de la Chimie and secretary of the International Union of Pure and Applied Chemistry, hopes to develop the present center into a "Maison de la Science" where international congresses in all scientific fields can meet and be assured of the services of a staff accustomed to the organization of congresses. All those who have attended international gatherings know that the standard of efficiency with which they are run varies considerably, and that a little more attention paid to the purely technical part of their organization would often add considerably to their scientific value. We may therefore wish M. Gérard all the success that his plans deserve.

DISCUSSION

GEOLOGY AND ARCHEOLOGY AS BORDER SCIENCES

WHEN Professor R. A. Daly delivered the Silliman lectures at Yale University last winter he reminded

his audience of the fact that there is a field of study which lies between the realms of the geological and archeological sciences. Professor Daly pointed out that much is to be expected in the near future from