SCIENTIFIC NOTES AND NEWS

PROFESSOR ROGER ADAMS, head of the department of chemistry at the University of Illinois, has been elected president of the American Chemical Society for 1935. On January 1, Dr. Charles L. Reese, retired chemical director of E. I. du Pont de Nemours and Company, Inc., Wilmington, Delaware, will become president, serving through 1934. He succeeds Professor Arthur B. Lamb, of Harvard University, president for 1933.

ACCORDING to a United Press dispatch from Vatican City, Dr. George David Birkhoff, professor of mathematics at Harvard University, has been awarded a prize of 10,000 lire ($825) donated by Pope Pius XI in an international competition for the best book on "Systems for Solution of Differential Equations." The award was made during exercises inaugurating the new Pontifical Hall of Science on December 17.

DR. DEXTER S. KIMBALL, dean of the College of Engineering at Cornell University, on December 6 was awarded the Worcester Reed Warner Medal of the American Society of Mechanical Engineers for distinguished contributions to the field of industrial economics. Dean Kimball recently received the Lamme Medal of the Society for the Promotion of Engineering Education.

THE Planck Medal has been awarded to Dr. Werner Heisenberg, professor of theoretical physics at Leipzig.

DR. KARL SUDHOFF, professor of the history of medicine and of the natural sciences at Leipzig, celebrated his eightieth birthday on November 26.

THE following have been elected foreign members of the Geological Society of London: Professor Ray S. Bassler, of the U. S. National Museum; Dr. Arthur L. Day, of the Geophysical Laboratory, Washington; Professor Carl F. Kolderup, of the University of Bergen. The following foreign correspondents were also elected: Professor Michele Gortani, of the Royal University of Bologna; Dr. J. S. Lee, of the National Research Institute of Geology, Shanghai; Professor F. L. Ransome, of the California Institute of Technology, and Professor H. Yabe, of the Tôhoku Imperial University, Sendai, Japan.

AT the opening ceremonies of the academic year at the University of Montpellier, France, the degree of doctor *honoris causa* was conferred on Professor Douglas Johnson, professor of physiography at Columbia University.

THE degree of D.Sc. was conferred on Professor Arthur Thomson, who is shortly resigning from Dr. Lee's chair of anatomy, at the convocation of the University of Oxford on November 28.

THE University of Strasbourg has conferred the degree of doctor *honoris causa* on Dr. P. Zeeman, professor of physics at the University of Amsterdam.

THE Faculty Board of Physics and Chemistry of the University of Cambridge has appointed Professor W. Heisenberg, of the University of Leipzig, to be Scott Lecturer for 1934, and Professor G. von Hevesy, of the University of Freiburg, to be Scott Lecturer for 1935.

PROFESSOR WILLIS LINN JEPSON, of the department of botany of the University of California, has been appointed faculty lecturer for 1934. Appointment as faculty research lecturer at the University of California is the highest recognition that members of the faculty can give to one of their number for his contributions to knowledge.

THE *Journal* of the American Medical Association reports that Dr. Max A. Goldstein, founder and director of the Central Institute for the Deaf, St. Louis, was recently presented with the second annual St. Louis Award "in recognition of his achievements and research in dealing with the problems of the deaf." The award, $1,000 in cash and a certificate, is made each year to "the resident of metropolitan St. Louis who contributed the most outstanding service to the development or performed such service as to bring honor to the community."

IN celebration of the twenty-fifth anniversary of his coming to the faculty of the University of California, Professor W. B. Herms, professor of parasitology and entomologist in the experimental station, was recently given a banquet. More than 115 guests attended the celebration, which was arranged by the members of the division of entomology and parasitology. Professor E. O. Essig presided as toastmaster, and the speakers represented various activities in which Professor Herms is interested. At the close of the program he was presented with a portfolio bound in silver, containing 150 letters of greeting from former pupils and colleagues. On behalf of the guests Miss Florence M. Frost presented Mrs. Herms with a silver coffee service.

ALBERT E. MARSHALL, a consulting engineer of New York City, was elected president, and Dr. Harry A. Curtis, Knoxville, Tennessee, chief chemical engineer of the Tennessee Valley Authority, was elected vice-president of the American Institute of Chemical Engineers at their twenty-sixth annual meeting held on December 12 at Roanoke, Virginia.

DR. J. V. N. DORR, president of the Dorr Company, was elected president of the Chemical Engineering

Equipment Institute at its first annual meeting recently held at The Chemists' Club, New York. H. D. Miles, president of the Buffalo Foundry and Machine Company, who has served as president of the institute during its formative period, was elected vice-president of the organization for the fiscal year 1933–34.

DR. R. E. ROSE, director of the Technical Laboratory of E. I. du Pont de Nemours and Company, Inc., was reelected president at the recent annual meeting of the American Association of Textile Chemists and Colorists.

AT the anniversary meeting of the Mineralogical Society, London, held on November 9, Sir Thomas Holland was elected president and Sir William H. Bragg and Mr. Arthur Russell were elected vice-presidents.

THE following officers were elected at the annual general meeting of the London Mathematical Society held on November 16: *President,* Professor G. N. Watson; *Vice-Presidents,* Professor A. C. Dixon, Professor G. H. Hardy, Professor G. F. J. Temple.

DR. SHIRLEY W. WYNNE, commissioner of health of New York City since 1928, will retire on December 31.

DR. WALTER ALBERT JESSUP, president of the State University of Iowa, has been appointed president of the Carnegie Foundation for the Advancement of Teaching to succeed the late Dr. Henry Suzzallo.

HENRY ALBERT HARRIS has been elected professor of anatomy at the University of Cambridge as from October 1, 1934, in succession to Professor J. T. Wilson, fellow of St. John's College, who will retire on that date.

H. E. TUNNICLIFFE, Gonville and Caius College, Cambridge, has been appointed university lecturer in the department of physiology for three years. Dr. G. A. Millikan, Trinity College, son of Dr. Robert A. Millikan, has been appointed university demonstrator for the same period.

THE title of emeritus professor of psychology in the University of London has been conferred on Dr. Beatrice Edgell, on her retirement from the professorship of psychology at Bedford College.

DR. RAYMOND FUESS, National Research Council fellow now at the University of Leipzig, has been appointed assistant professor of chemistry at Brown University.

DR. CHARLES H. HERTY has been appointed a deputy administrator in the National Recovery Administration and assigned to Division 3, in charge of codes for the chemical industries.

Industrial and Engineering Chemistry reports that Louis Ehrenfeld has joined the staff of the Wahl-Henius Institute of Chicago in the capacity of assistant to the director. He has resigned his full-time work with the Museum of Science and Industry in Chicago, but is continuing his connection with it as curator of chemistry and is devoting a portion of his time toward directing the activities of the chemistry department, which was formerly under his active management.

DR. ROSS G. HARRISON, Sterling professor of biology at Yale University, delivered the third Harvey Lecture of the season at the New York Academy of Medicine on December 14. His subject was "Heteroplastic Grafting in Embryology."

DR. HERBERT M. EVANS, of the University of California, will give the fourth course of the Morris Herzstein Lectures. The lectures, under the provisions of the will of the late Dr. Morris Herzstein, of San Francisco, are held under the auspices of the University of California and of Stanford University. This year they will be given at San Francisco on January 29 and 31 and February 2. Dr. Evans, who is Morris Herzstein professor of biology and director of the Institute of Experimental Biology in the University of California, will speak on "The Internal Secretions of the Anterior Lobe of the Pituitary Gland."

DR. WILLIAM K. GREGORY, professor of paleontology at Columbia University and curator of comparative anatomy and ichthyology at the American Museum of Natural History, will read a paper on "A Half Century of Trituberculy, the Cope-Osborn Theory of Dental Evolution" before the stated meeting of the American Philosophical Society, Philadelphia, on January 5 at 8:15 P. M.

DR. EDWARD WIGHT WASHBURN, chief chemist of the Bureau of Standards, delivered a lecture on December 6 before the District of Columbia Chapter of the Society of Sigma Xi on "Heavy Water."

DR. G. KINGSLEY NOBLE, curator of herpetology and experimental biology in the American Museum of Natural History, spoke on December 8 before a meeting of the Westchester Institute of Sciences held at the Boyce Thompson Institute for Plant Research, on "The Biology of Animal Courtship."

THE annual Gross lecture of the Pathological Society of Philadelphia was given on the evening of December 14 by Dr. Alwin M. Pappenheimer on "Certain Nutritional Disorders of Laboratory Animals."

SIR JAMES JEANS will give the six Children's Christmas lectures this year at the Royal Society of

London. The title of the series is "Through Space and Time."

THE course of twelve Swiney lectures of the British Museum of Natural History is being given this year by Dr. R. M. Craig, of the University of Edinburgh. The general subject is "Geology in the Service of Man."

PROFESSOR KERR GRANT delivered his presidential address on "The Place and Value of Physical Science in the Modern State" at the fourth conference of Australian physicists and astronomers, which was held in Melbourne from August 15 to 18.

SIGMA PI SIGMA, honorary physics society, will this year hold its annual mid-winter luncheon at the Hotel Continental, Cambridge, Massachusetts, at 12:30 on Friday, December 29.

AT the September meeting of the International Association of Scientific Hydrology an International Commission on Snow was organized and the two commissions on snow and glaciers were requested to delimit the fields of activity for each. Professor Dr. Paul Mercanton, of Lausanne, Switzerland, is the new president of the International Commission on Glaciers. Dr. J. E. Church, of Haverford College, was selected as president and organizer of the new commission on snow. The personnel will not be selected until the exact field of its activity has been determined and the question settled as to whether seasonal ice shall be included. However, selections will ultimately be made from the southern countries of Argentina, Australia and India, as well as from the better known snow countries of the northern zone, where snow has become an important asset both for irrigation and for power.

THE new physics building, now under construction on the main campus of Washington University (St. Louis), has been named for Wayman Crow, who conceived and secured the charter for the university. The cornerstone was laid informally and without any ceremony on the morning of November 29. Mr. Crow showed his special interest in physics by giving $25,000 in 1875 to endow a professorship in that science. Part of the $700,000 received from two anonymous donors last summer to erect the new building and endow the department of physics will be used to enlarge and perpetuate this original fund for the Wayman Crow professorship, now held by Dr. Arthur L. Hughes.

THE centennial of the voyage of the *Beagle* will be observed next March when a group of scientific men will erect on Chatham Island, in the Galapagos group off the coast of Ecuador, a monument to the memory of Charles Darwin. The Darwin Memorial Expedition, which will erect the monument, is composed of fifteen men and two women, including scientific men from a number of universities and other institutions, under the directorship of Dr. Wolfgang von Hagen. The members planned to leave San Francisco early this month in the three-masted schooner *Golden Gate*. Their itinerary will take them down the west coast of South America, with stops at Chatham and other islands, and up the east coast of the continent. Every country except Paraguay will be visited. In addition to erecting the Darwin monument, the expedition will spend two and a half years in research, making studies in archeology, zoology, botany, ethnology and other subjects in Central and South America and neighboring islands.

AT a recent dinner attended by many engineers, the Carbide and Carbon Chemicals Corporation, a unit of the Union Carbide and Carbon Corporation, was presented with the first award for chemical achievement ever to be given to a company rather than to an individual. The award was made at the Chemists' Club, New York City, by *Chemical and Metallurgical Engineering,* published by the McGraw-Hill Company. It was given "in recognition of meritorious contributions to the advance of the industry and profession, made possible through a broader participation by the chemical engineer in the affairs of the process industries."

SUITABLE plants for home aquaria will be the feature of a special exhibit in the Museum Building at the New York Botanical Garden. Twenty or more tanks, containing both native and tropical plants in great variety, besides a number of fish, will comprise the display, which is believed to be the first of its kind ever given anywhere. It will be open to visitors on Christmas and New Year's day, and all other holidays while it is in progress. Different combinations of aquatic vegetation will be shown in the tanks, on the outside of which will be labels designating the botanical name and the place where each species of plant is native. This is being done with a special view to assist people seeking ideas for their own aquaria. Material for the exhibit, which is expected to last about three months, is being contributed by numerous growers and private collectors of aquatic plants.

IT is announced by the American Society of Municipal Engineers that work for 4,000 professional engineers will be provided by the United States Coast and Geodetic Survey, through the Civil Works Administration.

THE Soil Erosion Service, a new branch in the Interior Department operating with a $5,000,000 allotment from the Public Works Administration, is ready to proceed with actual field work of controlling soil

erosion on a number of large representative areas scattered throughout the country. The size of these demonstration areas will range from about 100,000 acres to 15,000,000 acres in the instance of the project to be undertaken on the Navajo Indian Reservation. The areas thus far selected lie in the Piedmont Plateau of South Carolina, the Black Belt of central Texas, the Palouse Wheat Belt of Washington and Idaho, southwestern Wisconsin, the Corn Belt of north-central Missouri and south-central Iowa, central Illinois and the Red Plains of central Oklahoma, with the Navajo project covering large areas in Arizona, New Mexico and Utah. Several other watersheds have been tentatively selected. On these first of the regional projects to be taken up every practical measure for controlling erosion will be used, according to the adaptability of the different kinds of land.

THE London *Times* reports that the first of a series of annual conferences was opened in Entebbe on November 23 to devise means for coordinating research work on the tsetse fly, trypanosomiasis (sleeping sickness), and general medical research in East Africa. It was under the chairmanship of Dr. Kauntze, director of the medical service in Uganda, and was attended by the directors of the medical services of Kenya and Tanganyika and the directors of the veterinary services of Uganda and Tanganyika, the director of tsetse research in Tanganyika, a medical officer from Nyasaland, and Dr. Fontana, from the Belgian Congo. The governor, in opening the proceedings, said that the summoning of these conferences had been decided on at the Governor's Conference, and their primary object was not to exchange information but to consider methods by which the knowledge of individual officials could be placed at the disposal of officials holding corresponding positions in other territories. The governor extended a special welcome to Dr. Fontana.

DISCUSSION

RAMAN SPECTRUM OF HEAVY WATER

THE Raman spectrum of heavy water has been obtained by 2,536 excitation of 8 cubic centimeters of 18 per cent. heavy water in a quartz tube 35 cms in length in contact with a quartz mercury vacuum tube. Two Raman bands were obtained with an intensity ratio of one to four, the new one having a mean wavelength of 2711 A.U. due to water molecules containing one atom of heavy hydrogen. The frequency difference was 2549, against 3420 for ordinary water. Van Vleck and Cross[1] have calculated a Raman frequency difference of 2720 for heavy water *vapor*, but a lower value is to be expected for the liquid, which Dieke has calculated as agreeing with my value within 4 per cent.

The new Raman band extended from λ 2694 to 2721 with a maximum intensity at 2711. This value is more nearly correct than the value 2713 given in a letter to *Nature* with an exposure of 16 hours. There appeared to be a slight indication of the band due to molecules containing two atoms of heavy hydrogen, but the faint continuous background made any certain measurements impossible. An exposure of 80 minutes recorded the new band with a density equal to that of the band of frequency difference 3420 made with an exposure of 20 minutes.

The heavy water used in this experiment was prepared by the electrolytic method by John W. Murray, of the chemistry department.

R. W. WOOD

THE JOHNS HOPKINS UNIVERSITY
DECEMBER 14

[1] *Jour. of Chem. Physics*, June, 1933.

BLOOD GROUPING BY MEANS OF PRESERVED MUSCLE

THE agglutinogens A and B which condition specific agglutination of human erythrocytes by the isoagglutinins α and β have been found by previous workers (by means of adsorption technique) to be present in practically every cell of the body. They also occur in solution in certain body fluids. Since they are heat stable and resist aging, they have been utilized in typing old blood stains and even in determining the blood groups of persons from the dried saliva on a cigarette butt or on the flap of an envelope.

The present writers have shown that dried human muscle can also be used for this purpose, and that even material preserved at necropsy and now several years old can be shown to contain agglutinogens in conformity to the previously determined blood groups. The technique, which has now been tested on numerous samples, can be applied to as little as 0.05 g of dried material, and it is possible for a person practised in the method to make consistently reliable determinations.

It is thought that the method might have occasional medicolegal applications, and work is now in progress to investigate if the agglutinogens can be demonstrated in mummified material, in spite of its great age. Information thus obtained might be of some value in archeology, as in identifying certain specimens. Details will be published elsewhere.

WILLIAM C. BOYD
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