Folkers lectures series. His wife, also a chemist, accompanied him; she is an authority on use of the spectroscope. The couple is now at the University of Wisconsin, where Erdtman is participating in a similarly endowed Folkers lecture series.

LINUS PAULING, chairman of the division of chemistry and chemical engineering at California Institute of Technology, will be George A. Miller lecturer in chemistry at the University of Illinois this spring. The lectures are scheduled for 5, 6, 12, 13, and 20 Apr. and 1, 3, and 4 May.

The late JAMES F. RINEHART, pathologist in the University of California School of Medicine, was honored by a symposium meeting of the Society for Experimental Biology and Medicine in San Francisco on 15 Feb. Henry Moon, associate professor of pathology, was chairman of the session, at which nine papers were delivered by former colleagues. Rinehart inspired much of the work that was presented, especially in the field of hardening of the arteries.

EDWARD L. SIMONS, a research associate in the analytical chemistry unit of the General Electric Research Laboratory, Schenectady, N.Y., has been selected to receive the National Association of Corrosion Engineers junior award for 1955. The award is given for the best paper published during the year in the NACE monthly periodical *Corrosion* by an author under 35 years of age. Simons' paper, "Sodium sulfate in gas turbines," dealt with metallurgical problems encountered in gas turbines that burn residual fuels. Coauthors of the paper were GEORGE V. BROWNING and H. A. LIEBHAFSKY, who are also with General Electric.

WALLACE J. MURRAY retired on 30 Dec. as an active staff member of Arthur D. Little, Inc., where he has served for 35 years. He will continue his association with the company as a consultant.

Murray received a B.S. in chemical engineering from Massachusetts Institute of Technology and a D.Sc. in physical chemistry from the University of Geneva, Geneva, Switzerland. Before joining A. D. Little in 1920, he taught at M.I.T. and at Northwestern University, was in the Chemical Warfare Service during World War I, and was employed by two chemical companies.

Murray, who holds more than 15 patents either as an individual or jointly, has cooperated on a wide variety of research projects that have involved original work with petrochemicals, pharmaceutical chemistry, and dyestuffs. He has frequently served as an expert witness in court cases involving industrial research. A charter member of the American Association of Textile Chemists and Colorists and a member of numerous professional associations, Murray is known for his translations into English of technical papers written in German, French, Italian, Russian, Swedish, Dutch, and Spanish.

W. DUNCAN RANNIE, professor of mechanical engineering at California Institute of Technology, has been appointed the institute's new Robert H. Goddard professor of jet propulsion. The Goddard professorships are the principal posts in the jet propulsion centers that were established at C.I.T. and at Princeton University by the Daniel and Florence Guggenheim Foundation. Rannie is the second Goddard professor at C.I.T. His predecessor was Hsue-Shen Tsien, who resigned last June to return to his native China.

EUGENE P. PEDERGRASS, professor of radiology at the University of Pennsylvania School of Medicine, and SAMUEL W. DONALDSON of Ann Arbor, Mich., have each been awarded the gold medal of the American College of Radiology.

JOHN A. HIPPLE, director of the Mineral Industries Experiment Station and assistant dean of the College of Mineral Industries at Pennsylvania State University, has been elected vice president and director of research of North American Philips Company, Inc. He succeeds O. S. DUFFENDACK as director of the Philips Laboratories at Irvington-on-Hudson, N.Y., and will join the staff about 1 May. Duffendack, who has reached retirement age, will continue for this year as a member of the board of directors of North American Philips and as a consultant to Philips Laboratories.

HENRY H. HAUSNER, an expert in powder metallurgy and in the construction of atomic power plants, has received the Stevens Institute of Technology Powder Metallurgy achievement award for 1956. Hausner is general manager of the Penn-Texas Corporation's nuclear engineering division.

JOSEPH J. GEORGE, superintendent of meteorology for Eastern Air Lines, Inc., has received the American Meteorological Society's first annual award for outstanding contributions to applied meteorology. Established by the Weather Corporation of America, the $500 award will be made yearly to acknowledge acheivement either in the direct application of meteorological or climatological knowledge to the fulfillment of industrial or agricultural needs, or in the research and development of scientific knowledge that can meet such needs. The prize may be awarded to any professional member of the society.

Hughes Aircraft Company has announced the appointment of two physicists to the staff of its Research and Development Laboratories. They are JOHN W. CLARK, former director of the nuclear electronics division of Litton Industries, Inc., and SAMUEL W. LICHTMAN, who has been head of the missile laboratory division of the Naval Ordnance Laboratory, Corona, Calif.

LYNN S. BEEDLE, chairman of the structural metals division at Lehigh University, has been named recipient of the first research award of the American Society of Civil Engineers. The award is given in recognition of "experimental and theoretical investigations into the fundamental nature of residual stress in structural steel."

ALBERT W. FRIEND, technical consultant of Bala-Cynwyd, Pa., received the second annual award of the National Electronics Conference last fall for his paper "The use of powdered iron in television deflecting circuits," which was presented in 1946. This work was judged a contribution of major importance to the advancement of electronics.

Recent Deaths

EDWIN J. BEVAN, Ventnor, N.J.; 73; retired mechanical engineer for the Bethlehem Steel Corporation; 8 Feb.

CLINTON T. BISSELL, Montclair, N.J.; 82; retired civil engineer; 16 Feb.

GEORGE W. BRAINERD, Pasadena, Calif.; 47; associate professor of anthropology at the University of California, Los Angeles; authority on early civilizations of Mexico; 15 Feb.

ELDRIDGE H. CAMPBELL, Loudonville, N.Y.; 55; chairman of the department of surgery at Albany Medical College; neurosurgeon who contributed much to the surgery of intracranial aneurysms; 15 Feb.

FREDERICK GAY CARTER, Shaker Heights, Ohio; 67; former president of the American Hospital Association and leading authority in hospital administration; 19 Feb.

H. HOLLAND DE JONG, Osawatomie, Kans.; 61; director of research and education at Kansas State Hospital; internationally known for his research in producing symptoms of mental illness in animals; 16 Feb.

EDWARD J. KENDRICKS, San

Antonio, Tex.; 56; commandant of the Air Force School of Aviation Medicine; 17 Feb.

EDWIN A. LAWRENCE, Indianapolis, Ind.; 45; professor of surgery and cancer research at the Indiana University School of Medicine; 21 Feb.

JAMES B. MACELWANE, Saint Louis, Mo.; 72; geophysicist and dean of the Saint Louis University Institute of Technology; president of the American Geophysical Union; organizer of the Jesuit Seismological Association; vice president of AAAS section E in 1934; 15 Feb.

MEGHNAD SAHA, Calcutta, India; 62; nuclear physicist; director of the Nuclear Physics Institute; dean of science at Calcutta University; 16 Feb.

HANS J. SCHWARTZ, New York, N.Y.; 79; professor emeritus of dermatology at Cornell Medical School; 15 Feb.

MICHAEL M. WASSERMAN, New York, N.Y.; 73; assistant bacteriologist at Beth Israel Hospital; 20 Feb.

ROLLAND J. WHITACRE, Cleveland, Ohio; 46; president of the American Board of Anethesiology and an internationally known specialist in that field; 16 Feb.

ALFRED M. WYMAN, Lebanon, Conn.; 78; retired civil engineer; 14 Feb.

Education

■ DePaul University, in cooperation with Illinois Institute of Technology, has introduced a combined liberal arts-engineering program. The 5-year program, which will lead to the degrees of bachelor of arts and bachelor of science in engineering, begins next September.

■ Seven professional master's degrees in engineering have been authorized by the Cornell University trustees and will be offered by the Cornell Graduate School in a program beginning next fall. Through an engineering division in the Graduate School, Cornell will grant master's degrees in chemical, civil, electrical, industrial, mechanical, and metallurgical engineering, and in engineering physics. The university will continue to grant M.S. and Ph.D. degrees in engineering.

The professional programs are aimed especially at two groups—graduate engineers employed in industry, and outstanding students just finishing engineering school. For admission a student must hold a bachelor's degree from a recognized school of engineering or science, or have completed 4 years in Cornell's College of Engineering.

A newly created engineering division of the Graduate School, consisting of the graduate faculty in engineering, will have general control over the advanced professional degree work. Each student will work out his program with a faculty adviser in his particular division of interest. Information on the program may be obtained from the Graduate School, Day Hall, Ithaca, N.Y.

■ Physicians from all over the United States are invited to attend an Armed Forces Institute of Pathology postgraduate course on diseases of the heart to be held in Washington, D.C., 14–17 May. The course will be open to a total of 425 civilian and armed services physicians. Civilians who desire to attend may apply to the Director, Armed Forces Institute of Pathology, Washington 25, D.C. Medical men in the armed forces should apply through normal military channels.

■ The American Chemical Society's Examinations Committee has announced two new tests for the 1956 testing program. A new test in organic chemistry, Form MB, has been prepared by the Organic Subcommittee under the chairmanship of Bernard A. Nelson, of Wheaton College. This is a test for the brief courses usually given in one semester.

The General Chemistry Subcommittee under the chairmanship of Donald D. Wright, of Brooklyn College, has prepared a new test in general chemistry, Form M. It consists of a section on information, one on application of principles, and one on equations and problems.

Further information and copies of all the tests may be obtained from Theodore A. Ashford, St. Louis University, St. Louis 4, Mo. These tests are available to members of the faculty of higher educational institutions. Please use official stationery and use the official channels of the college when making inquiries. A limited number of copies of older examinations is also available.

■ A tracer laboratory is being established in Cornell University's zoology department with the help of a $20,000 grant from the National Science Foundation. William A. Wimsatt and his assistants will use the laboratory for detailed studies on the physiological make-up of bats and other mammals. The grant will contribute toward laboratory equipment and a 3-year research program.

One special piece of equipment, designed by Wimsatt, is a portable "cave" for hibernating bats that has a separate section for subjects that have been injected with radioisotopes. The insulated box will have the same 40-degree temperature and high humidity as the natural cave environment. Other laboratory equipment will include Geiger and scintillation counters, facilities for storing radioactive material, and a darkroom for developing autoradiographs.

The Cornell laboratory will be used to study several problems concerning hibernating mammals that have never been thoroughly investigated. One project will be devoted to the connection between the bat's superior resistance to radiation damage and its low metabolic rate during hibernation. Other studies will be on the development of thyroid function in the unborn bat and on the way pregnant mammals transmit immunity against diseases to their offspring.

■ The University of Maryland has announced that the Institute of Acarology's summer session will be held 16 July–3 Aug. The course provides an opportunity for entomologists, parasitologists, zoologists, and advanced biology students to study mites and ticks. For information write to G. Anastos, Department of Zoology, University of Maryland, College Park, Md.

Grants, Fellowships, and Awards

■ The Leukemia Society, Inc., will award grants to support research projects on leukemia for the year 1956–57. Various amounts will be awarded depending upon the requirements of the investigators.

Applications may be made throughout the year; however, in order to be reviewed at the meetings of the selection committee that will take place on 1 June and 1 Sept. they should be received *not later than 15 May* and *15 Aug.*, respectively. For information, write to the Leukemia Society, Inc., 67 Wall St., New York 5.

■ The most serious difficulty encountered by the Russell Sage Foundation in its work for more effective collaboration between the social sciences and the professional services is the scarcity of trained personnel. In order to help meet this shortage, the foundation offers postdoctoral residencies in operating agencies or professional schools for the purpose of providing qualified sociologists, social psychologists, and anthropologists with specialized training and experience relevant to professional practice in health or welfare.

Applicants are eligible for consideration for appointment if they (i) have received the doctorate or will have completed all requirements for the doctorate in sociology, social psychology, or anthropology before the date on which the requested residency is to begin; (ii) are not more than 35 years of age; (iii) have records that clearly indicate superior ability; and (iv) are definitely interested in careers involving behavioral