NEWS and Notes

Wendell Latimer has resigned as dean of the College of Chemistry at the University of California to devote his full time to nuclear research. Dr. Latimer will be succeeded by **Joel Hildebrand**, who has been both chairman of the Department of Chemistry and dean of the College of Letters and Science.

Alex J. Steigman is now serving as consultant in clinical epidemiology for the National Foundation for Infantile Paralysis, in New York City, where he will conduct field work in early diagnosis, management, and epidemiologic investigations of poliomyelitis. During a recent two-year period as senior fellow in pediatrics with the National Research Council, Dr. Steigman conducted investigations in poliomyelitis at the Children's Hospital Research Foundation, in Cincinnati, Ohio.

Bernard B. Watson, associate professor of physics at Temple University, has been appointed specialist for physics in the Office of Education of the Federal Security Agency.

Paul R. Trumpler, engineer at the centrifugal engineering department of the Clark Brothers Company of Olean, New York, has been appointed professor of mechanical engineering at Illinois Institute of Technology.

John F. Fulton, Sterling Professor of Physiology, has been appointed Rosenbach Fellow in Bibliography for 1949–50 at the University of Pennsylvania. Dr. Fulton will deliver three lectures on "The Great Medical Bibliographers" on February 2, 9, and 16, 1950.

Ward Pigman, head of the organic chemistry group at the Institute of Paper Chemistry, Appleton, Wisconsin, has been appointed associate professor of biochemistry at the Medical College and Dental School of the University of Alabama, Birmingham.

William A. Ritchie, curator of anthropology at the Rochester Museum of Arts and Sciences, has been appointed senior scientist in archaeology at the New York State Science Service and the New York State Museum. Dr. Ritchie is the author of *The pre-Iroquoian occupations of New York State*, which was awarded the A. Cressy Morrison Prize in Natural Science in 1943 by the New York Academy of Science.

James F. Bonner, professor of biology at California Institute of Technology, **Karl Hamner**, University of California plant physiologist, and **William Albrecht**, professor of soil science at the University of Missouri, are attending the Commonwealth Agricultural Specialists Conference in Australia.

F. Gray Butcher, entomologist with the North Dakota Agricultural College, has accepted an appointment as assistant professor of zoology at the University of Miami, Coral Gables. Dr. Butcher will teach courses in economic entomology and conduct research on horticultural pests of the area.

Richard Crutchfield, chairman of the Department of Psychology at Swarthmore College, will spend the academic year as visiting professor at the University of California at Berkeley. **William C. H. Prentice** has been made associate professor and acting chairman of the Swarthmore department.

Visitors to U. S.

D. Hans F. Häusler, of the Department of Pharmacology, University of Graf, Austria, returned home on August 16 after spending three months at medical centers in this country and Canada. Dr. Hausler's visit was sponsored by the Rockefeller Foundation.

Pedro Regules, ear, nose, and throat specialist from Montevideo, is spending a month here. Dr. Regules will visit the army hospitals at Philadelphia and New York.

Recent visitors at the National Bureau of Standards included **K. H. Chen**, instructor at the National Institute of Health, Central Hospital, Nanking, China; **P. M. Millman**, astronomer, Dominion Observatory, Department of Mines and Resources, Ottawa, Canada; **Henrik Nordenfelt**, engineer from Stockholm, Sweden; **Henry G. Sutton**, director, Sutton Tool and Gauge Manufacturing Company, Ltd., Victoria, Australia; **Gilbert Raes**, head of the Textile Laboratory, University of Ghent, Belgium; **J. Shone**, physician with the Ministry of Health, Andrews Memorial Hospital, Kingston, Jamaica; and **Jack Hampton Willis**, advisor on manufacturers' problems, with the Australian Wool Realization Commission, Australia.

George Addison, plant geneticist in the Instituto Agronomico do Norte, Belem, Para, Brazil, is visiting here for six weeks to consult with American geneticists. Mr. Addison will spend a week conferring with officers of the Department of Agriculture in Washington and will then tour northern and eastern states.

Grants and Awards

The American Institute of Nutrition announces that nominations are now being solicited for the 1950 **Mead Johnson and Company B-Complex Award**, the **Borden Award in Nutrition**, and the **Osborne and Mendel Award**, to be presented at the annual meeting of the institute next spring. These three $1,000 awards are made annually.

The Mead Johnson Award is given to the laboratory or clinical research worker in the U. S. or Canada responsible for the publication during the previous calendar year of the best scientific report dealing with the field of the B-complex vitamins. The Borden Award is given to U. S. or Canadian investigators in recognition of distinctive research emphasizing the nutritive significance of milk or dairy product components. It is made primarily for the publication of specific papers but may be given for important contributions over an extended period of time and may be divided between two or more investigators. The Osborne and Mendel Award is given to the investigator who has made the most significant published contribution in

the year preceding the annual meeting or who has published a series of contemporary papers of outstanding merit. All nominations must be in the hands of the Nominating Committee by *January 15, 1950*. The nominations, which can be made by anyone, should be accompanied by data relative to the research of the nominee. Membership in the institute is not a requirement for eligibility.

The National Research Council of Ottawa, Canada, has awarded two **Merck post-doctoral fellowships** in the natural sciences for 1949–50. The grants have been made to D. A. I. Goring, of the Department of Physical Chemistry at McGill University, who will study colloid science at Cambridge University, England; and M. J. Miller, of the Institute of Parasitology at Macdonald College, Canada, who will continue his research in medical parasitology and clinical tropical medicine at the School of Tropical Medicine, University of Calcutta, India.

Smith, Kline and French Laboratories, Philadelphia, has awarded traveling fellowships of $5,000 each to Edward B. Ferguson, Jr., of Tulane University, and Charles J. Kensler, of Cornell University. Dr. Ferguson will study the physiology of the kidney at Cambridge University, and Dr. Kensler will conduct pharmacological research at Oxford University.

Colleges and Universities

The University of Notre Dame's radiation chemistry project, formerly supported in part by the Office of Naval Research, will from now on be operated under the auspices of the Atomic Energy Commission. The project is devoted entirely to solution of fundamental problems in radiation chemistry and will handle none of the technological features involved. Fields now under investigation include the effects of high energy radiation on ionic solids and on organic compounds and solutions, the mechanism of chemical processes involving nuclear recoil, and radiation chemical monitoring. Studies on aqueous systems and protophotosynthesis are planned. Training of workers is an important part of the program. Faculty members who will direct work in the project include Milton Burton, Andrew J. Boyle, William H. Hamill, John L. Magee, and Russell R. Williams, Jr.

The University of Maryland and the **Naval Ordnance Laboratory** will establish an Institute of Fluid Dynamics and Applied Mathematics at the university this fall. Directors of the institute will be Kampe de Ferriet, of the University of Lille, now a consultant to NOL, and Alexander Weinstein, member of the NOL Mechanics Division.

Meetings and Elections

From June 22 to June 28, 1949, the University of Denver was host to a group of physicists who gathered in Idaho Springs, Colorado, near the Inter-University High Altitude Laboratory at Echo Lake, for a **Symposium on Cosmic Rays.** The meeting was remarkable for the attendance, for the number and importance of the papers presented, and, not least, for the excellent organization, due mainly to Profs. Cohn and Iona of the University of Denver.

The discussions centered on four major subjects, namely (1) properties of mesons (discussion leaders: Anderson and Brode); (2) nuclear interactions of cosmic rays (discussion leader: Rossi); (3) primary radiation (discussion leaders: Wheeler and Schein); and (4) air showers (discussion leaders: Bethe and Greisen). Reports on previous investigations concerning these various subjects had been prepared by the discussion leaders and distributed to the participants, so that the work of the conference could be focused on the most recent developments.

During the discussion on the properties of mesons, Barkas reviewed the results obtained at Berkeley on mesons produced artificially by means of the cyclotron and the synchrotron. He presented tentative data on cross sections for meson production by α-particles, protons, neutrons, and γ-rays of different energies, as well as the latest values for the masses of the π- and the μ-meson (215 and 285 electron masses respectively) and for the mean life of the μ-meson (0.63×10^{-8} sec). Among the results concerning "natural" μ-mesons, one may mention a new mass determination by Anderson, based upon the measurement of the maximum energy of their decay electrons, which gave a value of 217 electron masses.

Much of the discussion on nuclear interactions of cosmic rays centered on such questions as the cross sections of various elements for these interactions and the nature of the secondary products. Many of the physicists attending the meeting described new experimental results, obtained at mountain altitudes or with balloon and rocket experiments and bearing more or less directly on these questions. During the discussion, a number of interesting and spectacular pictures were presented, obtained both with the cloud chamber method and by means of the newly developed photographic emulsions that are sensitive to particles with minimum ionization. Some remarkable pictures by Peters and Bradt were presented, showing the disruption of heavy primary cosmic ray particles in their collisions with nuclei of elements contained in photographic emulsions and some cloud chamber pictures of Tinlot and Gregory, showing the production of high energy photons in the interactions of cosmic ray neutrons with nuclei of lead and aluminum.

The first part of the discussion on the primary radiation concerned geomagnetic effects, with special emphasis on the latitude variation of the nucleonic component of cosmic rays and of the heavy primary particles. The second part of the discussion dealt mostly with experimental results on the nature of primary cosmic rays obtained by means of rocket and balloon experiments. From these results it appears that between 80 and 90 percent of the primary rays are protons, the rest being heavier nuclei, mainly helium nuclei (Peters, Nye). No appreciable number of electrons or photons seem to be present in the primary radiation Hulsizer, Nye).

During the discussion on air showers, Cocconi and others described recent experimental results concerning the relative abundance

and the spatial distribution of the various kinds of particles (electrons, mesons, nucleons) that form these showers. Blatt presented some new developments in the theory of the lateral distribution of the electronic component. Bethe suggested a tentative theoretical picture for the development of an air shower, describing it as a chain of nuclear interactions initiated by the arrival upon the atmosphere of an extremely energetic proton. Each nuclear interaction gives rise to several secondary nucleons, π-mesons, and neutral mesons. The neutral mesons immediately decay into photons, which then undergo cascade multiplication.

BRUNO ROSSI

The Society for Applied Spectroscopy will meet October 4 at 8 p.m. at the Socony-Vacuum Training Center, 63 Park Row, New York City. Ralph H. Muller, of New York University, will speak on "Instrumental Methods of Analysis."

The 34th Annual Meeting of the Optical Society of America will be held at the Hotel Statler, Buffalo, New York, on October 27–29, 1949. The program includes a symposium on microscopy and invited papers on the following subjects: "Electron Microscopy," by L. Marton, National Bureau of Standards; "Infrared and Raman Spectra of Crystals," by Donald F. Horning, Brown University; "Analysis of Segregates in Alloys," by J. Convey, Canadian Bureau of Mines; "Spectrochemical Research in the Union of South Africa," by A. Strasheim, National Physical Laboratory, Pretoria, South Africa; "The Eye and the Camera," by George Wald, Harvard University; and "High Precision Measurements with Simple Equipment," by A. C. S. van Heel, Technical University, Delft, Holland.

A conference on mechanisms and evaluation of antiseptic activity will be held in New York City October 28–29 under the auspices of the Biology Section of the New York Academy of Sciences. The Friday afternoon sessions will be devoted to the antibiotics, Friday evening to quaternary ammonium compounds and other chemicals characterized by high surface activity, and Saturday morning to the halogens, mercurials, alcohols, and other agents, as well as high temperature. Attendance will be limited to members of the academy and invited guests. Scientists interested in participating may obtain further information from Mrs. Eunice Thomas Miner, Executive Director, New York Academy of Sciences, Central Park West at 79th Street, New York 24, New York.

The Second Annual Nucleonics Symposium, sponsored by the Institute of Radio Engineers and the American Institute of Electrical Engineers, will be held at the Hotel Commodore in New York City on October 31–November 2. The program will include a round-table discussion on "Evaluation of Radiation Hazards," and an address by Karl T. Compton, chairman of the Research and Development Board of the National Military Establishment.

The Fluid Dynamics Division of the American Physical Society will hold a symposium at the University of Virginia December 28–30 on "Irreversible Processes in Fluid Dynamics." Five half-day sessions will be devoted to energy transport and exchange, viscous and plastic flows, mass transport and fluctuation, entropy changes in irreversible processes, and energy transfers in shock, flame, and detonation fronts. In addition there will be one half-day session for contributed papers. Requests for accommodations by nonmembers should be sent to the Secretary, School of Physics, Rouss Physical Laboratory, University of Virginia, Charlottesville, Virginia, as soon as possible.

The Chemistry Section of the AAAS will hold its annual meeting in New York City on Friday and Saturday, December 30 and 31, in the Statler Hotel. Two symposia are being planned, one by George Glocker, of the State University of Iowa, on "Progress in Chemistry," and another by Robert S. Shelton, of the William S. Merrel Company, on "Some Recent Advances in Medicinal Chemistry." Papers for a general session are solicited. Titles and abstracts should be sent to Dr. E. F. Degering, Department of Chemistry and Chemical Engineering, Armour Research Foundation, Technology Center, Chicago 16, on or before *October 1.*

The American Society of Mammalogists, at its 29th annual meeting in Washington, D. C., elected the following officers: president, Tracy I. Storer, University of California; vice-presidents, Lee R. Dice, University of Michigan, and William J. Hamilton, Jr., Cornell University; corresponding secretary, Donald F. Hoffmeister, University of Illinois; recording secretary, Robert T. Orr, California Academy of Science; treasurer, Viola S. Schantz, U. S. Fish and Wildlife Service; and editor, William H. Burt, University of Michigan.

At a recent meeting of the Board of Trustees of the **Worcester Foundation for Experimental Biology,** Charles B. Huggins, professor of surgery at the University of Chicago, George W. Calver, of the U. S. Navy, and Ralph F. Gow, executive vice-president of the Norton Company were elected trustees for a term of four years.

The American Society for Metals has elected the following officers for the coming year: president, Arthur E. Focke, research metallurgist for the Diamond Chain Company, Indianapolis, Indiana; vice president, Walter E. Jominy, staff engineer at the Chrysler Corporation.

Deaths

George Hugh Henderson, 56, O. E. Smith Professor of Physics, Dalhousie University, Halifax, Nova Scotia, died on June 19 en route to New Brunswick on a fishing trip. Professor Henderson was well known for his researches in radioactivity and in the study of pleochroic halos. He was a fellow of the Royal Society of London and of the Royal Society of Canada.

Carlos G. Bates, 64, a fellow of the Society of American Foresters and veteran of 42 years of research work in the U. S. Forest Service, died

of a heart attack at his home in St. Paul on July 22. Since 1928 Dr. Bates had been attached to the Lake States Forest Experiment Station in St. Paul.

Donche Kostov, 52, biologist, died at his home in Sofia, Bulgaria on August 10 after a long illness. He had been working on a Bulgarian translation of the works of Michurin, the Soviet biologist, at the request of the Bulgarian government.

John Frederick Speck, 29, research associate in the Department of Biochemistry at the University of Chicago, died August 18 in an accident while mountain climbing in the French-Italian Alps. Dr. Speck was on leave of absence from the University of Chicago and had been a Rockefeller Fellow in the Nobel Institute at Stockholm, Sweden, since last fall.

Frank Thone, 58, biology editor of Science Service, died August 25 of a heart attack in Washington, D. C. A specialist in plant ecology, Dr. Thone joined the staff of Science Service in 1924. In 1946 he received a Westinghouse award for distinguished science writing. He was the author of *Trees and flowers of Yellowstone National Park* and *The microscopic world.*

A new periodical, *Angiology, The Journal of Peripheral Vascular Diseases,* will begin publication in February 1950. Saul S. Samuels, chief of the Department of Peripheral Arterial Diseases, Stuyvesant Polyclinic Hospital, New York City, will be editor-in-chief. Among associate editors in the U. S. are Alton Ochsnev, of Tulane University; Keith Grimson, of Duke University; Leo Loewe, of Long Island Medical College; D. W. Kramer, of Jefferson Medical College; and Gerald Pratt, of New York University Medical School. The journal will be published by the Williams and Wilkins Company and sold at a subscription price of $8.00 a year.

The Japanese Journal of Experimental Medicine, which, until it ceased publication in October 1941, was the most important English language journal of Japanese medicine, resumed publication with Volume 20, No. 1, March 1, 1949. The Army Medical Library has a few extra copies of this volume for distribution upon request to interested libraries that did not receive it.

Recently Received—

Research Today: New Research in Antibiotics. (Spring issue.) Issued by Lilly Research Laboratories, Eli Lilly and Company, Indianapolis 6, Ind.

Critical Requirements for Research Personnel: A Study of Observed Behaviors of Personnel in Research Laboratories. American Institute for Research, Pittsburgh, Pa.

Fishery Statistics of the United States 1945. (Statistical Digest No. 18, Fish and Wildlife Service, published in 1949.) For sale by Supt. of Documents, U. S. Government Printing Office, Washington 25, D. C. at $1.50.

Symposium on Thermodynamics. (Sponsored by the International Union of Pure and Applied Physics. Held in Brussels, January 1948.) In French and English. Printed by J. & R. Sennac, Paris IXe, France.

Studies in Experimental Zoology: Regeneration, Experimental Embryology, Endocrinology by A. Elizabeth Adams. (3rd. ed.) Order from Edwards Brothers, Inc., Ann Arbor, Mich.

Anais da Associação Química do Brasil. Publicados trimestralmente by Associacao Quimica do Brasil, Caixa, 1815, S. Paulo, Brazil.

Institute of Metals (reprints from March 1949 *Journal*): Constitution of Aluminum-Copper-Magnesium Alloys; Crystallite Theory of Strength of Metals; Relation between the Degree of Order and the Lattice Parameter of Cu_3Au; and Pure Platinum, of High Recrystallization Temperature, Produced by Power Metallurgy. Institute of Metals, London (S.W.1), England.

Tables of Scattering Functions for Spherical Particles (National Bureau of Standards Applied Mathematics Series #4). Obtainable from Supt. of Documents, U. S. Government Printing Office, Washington 25, D. C. 45¢ a copy.

Diet in Relation to Reproduction and the Viability of the Young (Part I): Rats and Other Laboratory Animals, by F. C. Russell. (Commonwealth Bureau of Animal Nutrition, tech. comm. 16.) Order from Central Sales Branch, Commonwealth Agricultural Bureaux, Penglais, Aberystwyth, Gt. Britain. Price 6/– sterling.

List of Scientific Papers published in the Middle East, compiled by Unesco's Science Cooperation Office, Cairo, Egypt.

Bibliography on Sprays by Kalman J. DeJuhasz. Published by The Texas Company, Refining Dept., Technical and Research Div., 135 E. 42nd Street, N. Y.

Make Plans for—

The Board of Governors of the National Speleological Society will meet October 1 at the American Museum of Natural History, New York City.

Electron Microscope Society of America, annual meeting, October 6–8, National Bureau of Standards, Washington, D. C.

Society of American Foresters, national meeting, October 11–13, Olympic Hotel, Seattle, Washington.

American Standards Society, 31st annual meeting, October 11–14, Waldorf-Astoria Hotel, New York City.

Electrochemical Society, 96th annual convention, October 12–15, La Salle Hotel, Chicago, Illinois.

Correction: It was erroneously stated in the August 26 issue of *Science* (p. 220) that the December 29 AAAS symposium on *Botany in the Service of Mankind* would be held at the Hotel Statler. The session will be held in the Winter Garden of the Hotel McAlpin.