

To Professor James William McBain, of Stanford University, \$400 for aid in determining adsorption in the air-water interface.

To Professor Charles Palache, of Harvard University, \$250 for assistance in a study of the chemical composition of the mineral, samarskite, especially with respect to its content of uranium, thorium and lead as a basis for the determination of geological age.

To Professor Gayle Scott, of Texas Christian University, \$500 for expenses in connection with a study of the stratigraphy and paleontology of the Trinity group in Texas.

To Professor A. Franklin Shull, of the University of Michigan, \$500 for use in connection with an investigation of the internal and external factors which influence wing production in aphids.

The American Academy of Arts and Sciences ordinarily makes grants from the Permanent Science Fund twice each year. The next meeting of the committee will be held on October 2, and applications for grants should be in its hands before September 10. These should be addressed to Professor E. M. East, Chairman of the Committee on the Permanent Science Fund, American Academy of Arts and Sciences, 28 Newbury Street, Boston, Massachusetts.

SCIENTIFIC NOTES AND NEWS

A DINNER in honor of Dr. Karl Pearson, to commemorate his retirement from the professorship of eugenics at the University of London, which he has held for forty-nine years, was given at University College on April 23. The Vice-Chancellor, Professor L. N. G. Filon, presided, and presented Professor Pearson with a bronze portrait plaque "in grateful commemoration of his research, teaching and inspiration," with a book containing the signatures of 267 subscribers, a Brunsviga calculating machine and a check for £440. In addition to Professor Filon, the speakers included Professor Harald Westergaard, G. Udny Yule and Professor M. Greenwood.

DR. GASTON LEON RAMON, chief of the veterinary service of the Pasteur Institute at Garches, has been appointed director of the institute at Paris in succession to the late Dr. Emile Roux.

THE honorary doctorate of the faculty of mathematics and natural science has been conferred by the University of Göttingen on Dr. Kôtarô Honda, professor of physics at Sendai, Japan.

THE honorary degree of doctor of engineering will be conferred by the Michigan College of Mining and Technology at commencement in June on Professor James Fisher, head of the department of mathematics and physics, in recognition of his many years of distinguished service in the field of engineering. Professor Fisher will deliver the commencement address.

HONORARY memberships in the Columbia University Engineering Schools Alumni Association were conferred upon Professor Thomas Henry Harrington, for forty years a member of the faculty of engineering, and on Dr. Daniel Edward Moran, consulting engineer, New York City, at the annual dinner of the association on April 28. Dr. Moran was honored on the occasion of his seventieth birthday and the fiftieth anniversary of his graduation from Columbia. President Nicholas Murray Butler and President Karl T.

Compton, of the Massachusetts Institute of Technology, were the principal speakers. A portrait of Professor Harrington, by Michael De Santis, was presented to the university.

PROFESSOR ERNEST MERRITT will retire from administrative work as head of the department of physics at Cornell University at the close of the present academic year. Professor R. C. Gibbs has been appointed chairman for the year 1934-35.

PROFESSOR W. A. SETCHELL, chairman of the department of botany of the University of California, and Dr. N. L. Gardner, associate professor of botany and curator of the herbarium, who joined the university in 1900 as assistant in botany, will retire at the end of the academic year. Dr. Setchell has been a member of the faculty for thirty-nine years.

DR. OSCAR M. SCHLOSS has resigned as professor of pediatrics at the Cornell University Medical School and as pediatrician-in-chief of New York Hospital, to resume private practice. He is to remain with the medical school as professor of clinical pediatrics and with the hospital as attending pediatrician. He also will continue his research work at the hospital. Dr. Samuel Z. Levine, now associate professor and attending pediatrician, has been appointed acting pediatrician-in-chief and acting professor of pediatrics.

DR. HARRY S. VANDIVER, associate professor of mathematics at the University of Texas, has been appointed a temporary lecturer at the Institute for Advanced Study at Princeton, while on leave from the university.

AT its twenty-first annual meeting held in New York City under the auspices of Columbia University from March 28 to 31, the American Society for Experimental Pathology elected the following officers for the year 1934-35: *President*, Dr. S. Burt Wolbach, Shattuck professor of pathological anatomy, Harvard Medical School; *Vice-president*, Dr. Oskar Klotz, pro-

fessor of pathology, University of Toronto; *Secretary-Treasurer*, Dr. Shields Warren, pathologist to the New England Deaconess Hospital and instructor in pathology, Harvard Medical School; *Councilor*, Dr. C. Phillip Miller, associate professor of medicine, University of Chicago; *Representative on the National Research Council*, Dr. Carl V. Weller, professor of pathology and director of Pathological Laboratories, University of Michigan.

FOLLOWING authorization by the council of the Society for Experimental Biology and Medicine, the Southern California Section was organized on April 24 at Los Angeles. Twenty-five members are included. Officers elected were: *Chairman*, Dr. John F. Kessel, professor of bacteriology and parasitology of the School of Medicine of the University of Southern California; *Vice-chairman*, Dr. M. T. Burrows, director of the cancer clinic of the Pasadena Hospital; *Secretary*, Dr. T. D. Beckwith, associate professor of bacteriology at the University of California at Los Angeles.

AT the annual meeting of the Boston Society of Natural History, held on May 2, the following officers were elected for 1934-1935: *President*, Charles H. Taylor; *Vice-presidents*, Nathaniel T. Kidder, Glover M. Allen, William M. Wheeler; *Secretary*, Clinton V. MacCoy; *Treasurer*, Augustus P. Loring, Jr.; *Trustees*, Thomas Barbour, John A. Blanchard, William L. W. Field, Ralph Hornblower, Frederic H. Kennard, John C. Phillips. At the same meeting the annual Walker Prize in Natural History, offered this year for the best memoir on any subject in the field of ornithology, was awarded to Vero Copner Wynne-Edwards, of McGill University, Montreal, for his paper "On the Habits and Distribution of Birds on the North Atlantic."

THE Joseph A. Capps Prize of \$500 of the Institute of Medicine of Chicago, given annually for the most meritorious investigation in medicine or the specialties of medicine completed within two years after graduation by a graduate of a Chicago medical school, has been awarded for 1933 to Dr. Gene H. Kistler, of Rush Medical College, 1931, for his paper on "Sequences of Experimental Infarction of the Femur in Rabbits."

THE Porter fellowship in physiology has been awarded by the council of the American Physiological Society to E. H. Kemp. He expects to work at Clark University next year.

WILLIAM B. MARSHALL, assistant curator of mollusks in the United States National Museum, retired from government service on April 30, at his own request, after serving for more than thirty-two years. Mr. Marshall has been given an honorary appoint-

ment, under the Smithsonian Institution, as associate in zoology at the U. S. National Museum.

DR. M. M. HOOVER, associate professor of agronomy at West Virginia University, has resigned to become regional director of the Soil Erosion Service at Spencer, W. Va.

J. C. SCHAEZNER, who has been project director of rural electrification at the University of Wisconsin, was recently appointed agricultural engineer with the Federal Power Commission. He is stationed at Washington, D. C., and has charge of a national survey of all present rural electrification, including power used for irrigation projects, with a view to outlining future possibilities.

CLYDE E. WILLIAMS has been appointed director of the Battelle Memorial Institute, Columbus, Ohio, and Dr. H. W. Gillett, chief technical adviser. Both Dr. Gillett and Mr. Williams have been associated with the institute since 1929, Dr. Gillett as director. Dr. Gillett will now devote his entire time to the scientific side of the work.

PROFESSOR WITHROW MORSE, who has spent the past two years in research at the New York State Psychiatric Institute of the Columbia Medical Center, has joined the staff of Lederle Laboratories, Inc., and will be associated with Dr. Guy W. Clark at Pearl River, N. Y.

FROM a statement recently given in SCIENCE, it would appear that the neurological unit of which Dr. Tracy Jackson Putnam has been placed in charge, was at the Massachusetts General Hospital. Dr. Putnam is at present assistant professor of neurological surgery at the Massachusetts General Hospital, but as professor of neurology at the Harvard Medical School, he will be in charge of the Neurological Unit at the Boston City Hospital.

SIR ARTHUR STANLEY EDDINGTON, Plumian professor of astronomy at the University of Cambridge, who gave the 1934 Messenger Lectures at Cornell University, sailed for Liverpool on May 6.

DR. ALEXANDER SILVERMAN, head of the department of chemistry at the University of Pittsburgh, who has been visiting Paris, arrived in New York on April 20.

THE Edgar Fahs Smith memorial lecture of the University of Pennsylvania will be given by Dr. Hugh S. Taylor, professor of chemistry at Princeton University, on May 23. Dr. Taylor will speak on "Water in Old Chemistries and New."

PROFESSOR G. H. PARKER, director of the Harvard Zoological Laboratories, delivered the annual address before the Virginia Chapter of the Sigma Xi on April 25, on "The Transmission of Neurohumors."

THE Charles E. Dohme memorial lectures for the

year 1934 were given by Dr. Donald D. Van Slyke, of the Rockefeller Institute for Medical Research, at the Johns Hopkins Medical School on April 26, 27 and 28. The titles of the lectures were "Physiology of the Amino Acids" and "Factors Controlling Urea Excretion."

DR. CHARLES R. STOCKARD, head of the department of anatomy at Cornell University Medical College, delivered on May 2 the principal address at the fifteenth annual banquet of the Beta Lambda Sigma Chapter of New York University. He spoke on "The Rôle of Internal Secretions and Inheritance in the Problem of Body Growth and Form."

DR. DEAN D. LEWIS, professor of surgery at the Johns Hopkins University and president of the American Medical Association, delivered the April lecture on the Smith-Reed-Russell series at the School of Medicine, George Washington University, on April 24, his subject being: "The Hypophysis and Its Relation to Other Glands."

DR. GEORGE B. CRESSEY, chairman of the department of geology and geography at Syracuse University, delivered the Schiff lecture at Cornell University on April 30 on "The Geographical Regions of China and their Inhabitants." In the afternoon he spoke before a geological seminar on "The Distribution and Source of Chinese Loess."

THE annual luncheon meeting of the National Parks Association will be held at the Cosmos Club, Washington, D. C., on May 14. Dr. Cloyd Heck Marvin, president of the George Washington University and president of the association, will preside. Speeches at the luncheon have been arranged as follows: "National Parks as Factors Contributing to National Ideals," Dr. John Huston Finley, editor of *The New York Times*; "New Responsibilities," Arno B. Cammerer, director of the National Park Service; "The Primitive," Dr. John C. Merriam, president of the Carnegie Institution of Washington; "The Reorganization of the National Park Service with Special Emphasis upon the Place of the National Parks in that Scheme," Albert Atwood, writer for the *Saturday Evening Post*; "The Everglades and Ouachita,"

Robert Sterling Yard, editor of the National Parks Association Publications, and "Future National Park Sites," Dr. Henry B. Ward, permanent secretary of the American Association for the Advancement of Science. The luncheon will be followed after an intermission by the annual meeting of the association.

RECENT speakers before the department of geology and geography at Northwestern University have included: Dr. Joe W. Peoples on "The Geology of the Anthracite Districts, Pennsylvania"; Dr. G. F. Loughlin, geologist in charge of Metals Section, U. S. Geological Survey, on "Recent Developments at Cripple Creek"; Dr. Thos. L. Gledhill, consulting geologist, on "The Gold Belt of Ontario"; Professor Alfred S. Romer, of the University of Chicago, on "Fossil Collecting in the Karoo Desert"; Professor Carey Croneis, of the University of Chicago, on "Micropaleontology"; Dr. Gilbert H. Cady, senior geologist of the Illinois Geological Survey, on "Fundamental Research on Coal"; Dr. M. M. Leighton, chief of the Illinois Geological Survey, on "The Industrial Significance of the State Geological Survey," and Professor D. Jerome Fisher, of the University of Chicago, on "The Origin of Petroleum."

THE pressing of a gold telegraph key, connected by direct wire to the Crosley Transmitter Plant at Mason, O., by President Roosevelt on May 2 inaugurated a six-hour program dedicating WLW, the new 500,000-watt transmitter of the Crosley Radio Corporation, which will be on the air continuously from now on with the most powerful carrier wave ever transmitted through the ether. President Roosevelt, in a message to Powel Crosley, Jr., said: "I have just pressed the key to formally open Station WLW. It has been a pleasure to do this. And may I take this opportunity to congratulate you and your staff upon the inauguration of this new radio service. I feel certain that WLW will give the people of our country and those of our neighbor nations a service managed and conducted for the greater good of us all." Congratulations, including messages from Professor Albert Einstein and Guglielmo Marconi, were received from all over the United States and from abroad.

DISCUSSION

THE EXPANSION AND CONTRACTION OF CHROMATOPHORES

THE inexactness of the expressions "expansion" and "contraction" as applied to chromatophores has long been recognized and has been clearly emphasized by Sumner and Mast in a recent discussion of reasonable substitutes for these terms.¹

What happens in an active melanophore, to take a

specific example, is that at one extreme its melanin particles are spread throughout its body and its processes and at the other they are massed near its center. The method by which this translocation is accomplished is by no means clear. It is probably due in large part to the passive transportation of the pigment particles by streaming protoplasm or as a result of pressure readjustments in the semi-fluid contents of spaces with contractile walls. But it may also be due

¹ SCIENCE, Nos. 2022, 2028, 2036, 2046.