

SCIENTIFIC NOTES AND NEWS

A LUNCHEON in honor of Dr. A. E. Kennelly, professor of electrical engineering at Harvard University, was recently given at the Harvard Club of Boston to mark the completion of twenty-eight years of service to the university. Dr. Kennelly is retiring from active service at the end of the present academic year. A silver loving-cup, suitably inscribed, was presented to him by his colleagues in the Harvard Engineering School. Brief remarks were made by President A. Lawrence Lowell and by Dr. Kennelly.

THE Willard Gibbs Medal of the Chicago section of the American Chemical Society will be presented to Dr. Irving Langmuir following a dinner to be given in the Palmer House, Chicago, on the evening of May 23. Dr. Langmuir's address will be on "What are Atoms Like?—How do We Know?" He will be followed by Dr. Karl T. Compton, of Princeton University, president-elect of the Massachusetts Institute of Technology. Shorter addresses will be made by President Glenn Frank, of the University of Wisconsin; Dean R. E. Heilman, of Northwestern University; Dr. Herman Bundesen, coroner of Cook County, Illinois, and Mr. Martin Insull, of the Midwest Utilities Company. The medal will be presented to Dr. Langmuir by Professor Julius Stieglitz, of the University of Chicago.

DR. JAMES G. NEEDHAM, professor of entomology at Cornell University, has been designated by the Peking Society of Natural History as the first recipient of the King Senior Memorial Gold Medal in recognition of his contributions to the knowledge of the fauna and flora of China.

VILLANOVA COLLEGE will present its 1930 Mendel Medal, awarded annually for distinguished service in the advancement of science, to Albert Francis Zahm, chief of the division of aeronautics in the Library of Congress, Washington, D. C.

MARVIN R. THOMPSON, assistant pharmacologist of the Food and Drug Administration, U. S. Department of Agriculture, is the winner of the Ebert medal awarded by the American Pharmaceutical Association. The prize goes to the author who at the annual meeting of the association presents the paper "contributing most to the science of pharmacy." Mr. Thompson, who is twenty-four years old, is the youngest man to receive this award. His subject was "The Pharmacology of Ergot."

THE Fritz Schaudinn Medal, in commemoration of the discoverer of *Spirochaeta pallida*, has been awarded for outstanding work in microbiology to Professors M. Hartmann, Berlin, F. d'Herelle, formerly of Paris, and now at Yale University, and to E.

Reichenow, Hamburg. The award was made on March 3, the twenty-fifth anniversary of the discovery of the micro-organism causing syphilis, by an international committee of jurors appointed by the Tropical Institute in Hamburg.

At a meeting of the Linnean Society of London on May 1 the president announced that the Linnean Gold Medal for 1930 had been awarded to Dr. James Peter Hill, F.R.S., professor of embryology, University College, London, and would be presented at the anniversary meeting on May 24. On the same date the Trail Award and Medal will be presented to Dr. Kathleen Bever Blackburn, of the botanical department of Armstrong College, Newcastle-on-Tyne.

AN honorary life fellowship of the Ross Institute was recently bestowed on Rai G. C. Chatterjee Bahadur, Bengal, India, for his work in malaria control.

DR. JOHN D. CLARK, professor of chemistry at the University of New Mexico, Albuquerque, has been elected president of the Southwestern Division of the American Association for the Advancement of Science.

DR. WALTER A. BASTEDO, of New York, was elected president of the United States Pharmacopoeia at the recent decennial convention in Washington. Dr. H. A. B. Dunning, of Baltimore, was elected vice-president. Among those elected to the revision committee are Dr. Reid Hunt, professor of pharmacology, and Dr. Henry Christian, professor of medicine, both of Harvard University, and Dr. C. W. Edmunds, of the University of Michigan.

DR. HENRY C. CHRISTENSEN, Chicago, secretary of the National Association of Boards of Pharmacy since 1914, was elected president of the American Pharmaceutical Association at the recent Baltimore meeting. Other officers are: E. F. Kelly, of Baltimore, *secretary*; Walter D. Adams, of Forney, Texas, *first vice-president*; D. B. R. Johnson, of Norma, Okla., *second vice-president*; C. W. Holden, of Essex Fells, N. J., *treasurer*, and Drs. H. V. Arny, New York; T. J. Bradley, Boston, and W. B. Day, Chicago, *members of the council*. The convention next year will be held in August at Miami, Florida.

J. B. FAIRBAIRN has been appointed deputy minister of agriculture for Ontario. W. B. Roadhouse, who has been deputy minister since 1912, has resigned in order to accept the chairmanship of the Ontario Agricultural Development Board.

LIEUTENANT-COLONEL FIELDING H. GARRISON who has been in the United States Medical Service since 1891 has taken up his work as head librarian of the

William H. Welch Medical Library, at the Johns Hopkins University.

DR. THOMAS G. THOMPSON, professor of chemistry at the University of Washington, was recently appointed to the directorship of the new University of Washington Oceanographical Laboratories. Dr. Thompson's appointment is effective on October 1.

DR. F. L. PICKETT, head of the department of botany at the State College of Washington, has been made dean of the graduate school.

DR. FRED GRIFFEE, biologist in plant breeding at the Maine Agricultural Experiment Station, Orono, has been made assistant director of the station. Dr. Griffiee will assist Director Warner J. Morse, who has been granted a leave of absence because of illness.

PROFESSOR A. J. OLNEY has been appointed head of the department of horticulture at the University of Kentucky to succeed the late Professor C. W. Mathews. Professor Olney, who is a graduate of Michigan State College and the University of Chicago, will be in charge of the experimental work in fruit and vegetable growing at the three experiment stations and will head the teaching of horticulture in the College of Agriculture.

DR. PAUL H. STEVENSON, associate professor of anatomy at Peking Union Medical College, will teach in the University of California summer session from June 30 to August 9, in the department of anthropology.

DR. WILLEM VAN ROYEN, of the Netherlands Chamber of Commerce, New York City, has been appointed instructor of geography in the University of Nebraska.

DR. MAX M. ELLIS, professor of physiology in the school of medicine of the University of Missouri, has been appointed regional director of investigation in the Bureau of Fisheries with the title "In Charge, Fishery Investigations, Interior Waters." He will head a staff of biologists engaged with ecological, fishery and pollution studies in the rivers of the Mississippi River drainage, but will not sever completely his connection with the university. Attention will be directed to perfecting the method of large-scale propagation of fresh-water mussels that has been developed from Dr. Ellis's experiments as a temporary investigator for the bureau since 1926.

DR. C. L. HUSKINS, research geneticist and cytologist at the John Innes Horticultural Institution, London, England, is returning to Canada about September 1, to take up his new duties as associate professor of botany at McGill University.

DR. ALEXANDER WETMORE, assistant secretary of

the Smithsonian Institution; Dr. Casey Wood, honorary associate in ornithology of the U. S. National Museum, and Harry S. Swarth, inspector of foreign birds under the Geological Survey at San Francisco, have been designated by the Department of State to represent the United States at the seventh International Ornithological Congress, which will convene at Amsterdam from June 1 to 7. The sixth congress was held at Copenhagen in 1926, at which were present representatives from thirty-two countries.

DR. GEORGE K. BURGESS, director of the Bureau of Standards, delivered an address to the Sigma Xi Club of the University of Alabama on May 7.

DR. ARTHUR D. LITTLE, president of Arthur D. Little, Inc., addressed the spring meeting of the American Iron and Steel Institute at New York on May 9, on "The Contribution of Science to the Iron and Steel Industry."

DR. LAFAYETTE B. MENDEL, Sterling professor of physiological chemistry in Yale University, gave two illustrated lectures at Cornell University on May 8 and 9, under the auspices of the Jacob H. Schiff Foundation. His subject was: "Some Relations of Diet to the Formation of Body Fat."

PROFESSOR F. K. RICHTMYER, of Cornell University, addressed two open meetings of the Gamma chapter of Sigma Pi Sigma, honorary physics fraternity, at the Pennsylvania State College, on May 6 and 7. He also spoke to the combined physics and chemistry seminars on the "X-Ray Satellites." Dr. Richtmyer was initiated as an honorary member of the fraternity during his visit.

DR. KARL F. HERZFELD, professor of physics in the Johns Hopkins University, will lecture at the Cooper Union in New York City on each Tuesday evening during the next college year. These lectures will constitute a survey of the field of modern physics and several evenings will be given to each of the following topics: Crystal structure, absorption and emission of light in the quantum theory, photochemistry, dielectric polarization and the structure of molecules, atomic structure, band spectra and the structure of gas molecules. The lectures have been arranged by the departments of chemical engineering and physics at the Cooper Union and will be open without payment of fees to those who have had the necessary mathematical preparation.

PROFESSOR ROBERT CHAMBERS, of New York University, has been invited by the Physiological Institute in Moscow to give a series of lectures and demonstrations in June on the micromanipulative technique and the physical properties of the living cell. He left for Europe on May 9. In August he will give a lec-

ture with motion pictures at the Cell Physiological Congress in Amsterdam, which meets from August 4 to 9.

PROFESSOR ROBERT H. GAULT, of Northwestern University, is giving a lecture this summer in the following foreign universities: Cambridge, Manchester, Edinburgh, Hamburg, Rostock, Halle (Nose and Ear Clinic) and Leipzig. His subject is "On the Effect of Dual (Tactual-Visual) Stimulation from Spoken Languages and an Analysis of the Effect."

THE first course of Scott Lectures was given by Dr. Niels Bohr at the University of Cambridge on May 12, 14 and 16, on "The Principles of Atomic Theory."

THE twenty-fifth anniversary of the founding of the Harvey Society, New York, was celebrated on May 15, when Dr. Rufus I. Cole gave an address on "The Progress of Medicine during the Past Twenty-five Years, as Exemplified by the Harvey Lectures." Following the lecture the "Harvey Film," prepared by Sir Thomas Lewis and Dr. H. H. Dale, was exhibited. After the meeting there was a supper at the Hotel Plaza. Dr. G. Canby Robinson presided and there were speeches by Dr. John A. Hartwell, Dr. Graham Lusk, Dr. Harvey Cushing and Dr. William H. Welch.

NINE additional chapters of Sigma Pi Sigma, national honorary physics fraternity, are being installed this spring, bringing the roll up to nineteen chapters by the end of the college year. Dr. Marsh W. White, associate professor of physics at the Pennsylvania State College and the national secretary of the society, is conducting the installations. Chapters are being established at the University of Kentucky on May 15, the University of Oklahoma on May 17, Park College on May 19, William Jewell College on May 20, Morningside College on May 21, the University of Colorado on May 22, the University of Washington on May 26, Lake Forest College on May 31 and the College of Wooster on June 2.

THE spring meeting of the Tennessee Academy of Science for 1930 was held in Chattanooga, on April 11 and 12. The meeting was well attended by members from Middle and East Tennessee, representatives of eight educational institutions from these sections of the state having papers on the program. Tennessee caves were discussed Friday afternoon in a "Cave Symposium," and on Saturday afternoon Look-out Mountain Caverns and points of scenic and historic interest in the vicinity of Chattanooga were visited. Two public lectures were given Saturday evening: "Short Wave Length Radio Demonstration," by Francis G. Slack, of Vanderbilt University, and

"Principles of Radio Broadcasting and Reception," by C. R. Fountain, of George Peabody College for Teachers. The University of Chattanooga as host for the meeting provided halls and ample facilities for the sessions and generous entertainment during intervals. The academy was privileged to have as a guest Dr. W. J. Humphreys, of the U. S. Weather Bureau, who brought greetings from the American Association for the Advancement of Science and delivered on Friday evening an illustrated public lecture on "Beauties of the Sky—Halo, Rainbow, Lightning and Every Kind of Cloud that Floats." Dr. Francis G. Slack, associate professor of physics, Vanderbilt University, was elected vice-president, in place of Dr. David W. Cornelius, who became president on the death of Dr. F. B. Dresslar, on January 19.

THE Kentucky Academy of Science held its seventeenth annual meeting at Centre College, Danville, on May 3. The president, Dr. Frank L. Rainey, delivered an address on the teaching of science in colleges of liberal arts. Papers were read on many subjects. Dr. A. M. Reese, of West Virginia University, who represented the American Association for the Advancement of Science, gave an illustrated lecture on "The Habits of the American Alligator." The officers elected were: V. F. Payne, Transylvania College, *president*; Mrs. Clara Chassell Cooper, Richmond State Normal School, *vice-president*; A. M. Peter, University of Kentucky, *secretary*; W. S. Anderson, University of Kentucky, *treasurer*; Austin R. Middleton, University of Louisville, representative in the council of the American Association for the Advancement of Science; W. R. Jillson, state geologist, Frankfort, member of the committee on publications. Centre College entertained the academy at luncheon.

THE fifteenth annual meeting of the South Dakota Academy of Science was held at Vermillion, South Dakota, on May 1 and 2. The first session was devoted to papers by the members followed by the president's address—"Incursions of the Cretaceous Sea." On the evening of May 1 a complimentary smoker was given by the local committee at the club house of the Vermillion Golf Association. After the usual academy dinner on May 2 Dr. Raymond J. Pool, of the botany department of the University of Nebraska, spoke on "Wild Life on the High Peaks of the Rockies." The following officers were elected for 1930-31: V. A. Lowry, Eastern State Teachers College, *president*; B. B. Brackett, University of South Dakota, *first vice-president*; J. H. Jensen, Northern State Teachers College of South Dakota, *second vice-president*, and A. L. Haines, University of South Dakota, *secretary-treasurer*.

A FIRE that destroyed one of the main buildings

of Georgetown College, Georgetown, Kentucky, recently, swept the biological laboratories that were located on the second and third floors. Equipment to the value of ten thousand dollars was lost. Enough microscopes were saved to enable the department to begin work immediately in the college gymnasium and no laboratory periods were missed. The department will be housed temporarily in a new building that is being erected on the campus until plans for rebuilding can be completed. The departmental library suffered the loss of files of *SCIENCE* dating back nearly twenty-five years, many books, herbaria, collections of material and files of several scientific publications. In sending this information Professor Robt. T. Hinton writes: "Any gifts of duplicate copies of *SCIENCE*, *The Scientific Monthly* and various biological publications would be greatly appreciated if institutions or individuals have them to spare."

THE new building of the School of Pharmacy of the University of Maryland was dedicated on May 10 during the meeting in Baltimore of the American Pharmaceutical Association. The ceremony was held at Old Westminster Church and most of the attending pharmacists visited the tomb of Edgar Allan Poe in the historical churchyard. Dr. Edward Kremers, director of pharmacy at the University of Wisconsin, delivered an address. State and city officials also spoke.

PROFESSOR GEORGE GRANT MACCURDY, of Yale University, director of the American School of Prehistoric Research, has received word from Dr. Hackett, who with Mr. Theodore D. McCown is representing the school in the latter's joint excavations with the British School of Archeology at Jerusalem, that dur-

ing the first ten days of April no less than 5,000 tools dating from the Aurignacian Epoch of the Old Stone Age were dug from a single cave of the group south of Haifa. Miss D. A. E. Garrod, of the British school, is in charge. The season's excavations will terminate in time for Dr. Hackett and Mr. McCown to take part in the work of the tenth annual summer term of the American School of Prehistoric Research, which will open in Paris on July 1, under the direction of Professor MacCurdy. Assisting him in the field there will be three of his former students: J. T. Russell, Jr., U. S. National Museum; V. J. Fewkes, University of Pennsylvania, and Robert Ehrlich, Harvard University.

AN American Committee for International Wild Life Protection has been formed for the purpose of cooperating in every way with existing foreign governments and institutions working for wild life conservation. This committee is made up of representatives of prominent American institutions and organizations interested in these matters, and particularly cooperating in this work with the British Society for the Preservation of the Fauna of the Empire and the Office for International Nature Protection at Brussels. The following institutions have already been elected to the American Committee: Museum of Comparative Zoology—Dr. Thomas Barbour; Field Museum of Natural History—Mr. Stanley Field; Camp Fire Club—Mr. William B. Greeley; California—Major F. R. Burnham. Executive Committee: Dr. John C. Phillips, *chairman*, for the Boone and Crockett Club; Mr. George D. Pratt, for the American Museum of Natural History; Mr. Kermit Roosevelt, for the New York Zoological Society, and Mr. Harold J. Coolidge, Jr., *secretary*, Museum of Comparative Zoology, Cambridge, Massachusetts.

DISCUSSION

THE TAU EFFECT—AN EXAMPLE OF PSYCHOLOGICAL RELATIVITY

If three spots on the back of the hand or arm are touched lightly with the point of a pencil in quick succession, two spatial intervals will be defined by the three stimulations. If one is asked to judge whether the second spatial interval is equal to, greater than or less than the first interval, it will be found that the observer's report depends more upon the time interval between stimulations than upon the actual distances between places touched. The same has been found to hold true in vision, hearing and the estimation of the extent to which the hand or arm has been moved through space. Thus, if we stimulate three spots on the skin so that the first distance is 20 mm and the second 10 mm, but the time

interval between the second and third stimulations is twice as great as that between the first and second, then the distance between the second and third spots will be judged as nearly twice as great as the first. The conditions may be reversed to give the opposite effect; *i.e.*, by making the second distance twice as long as the first, but the time interval much shorter, the judgment will be that the second distance is very much smaller than the first. While this phenomenon has been reported before in the psychological literature, it has not been labeled in such a way as to give it the independent status it deserves. I therefore propose that it be called the *Tau* effect because it obeys definite laws, can be measured and is not due to "imagination," "attention," "suggestion" or any other peculiarly mental-