

Geophysical Union, and to elect officers. The meetings were well attended and several of the sections reported gratifying progress in their respective fields.

The delegates selected to represent the Union and its sections at the Rome meetings are:

Geodesy: Wm. Bowie, United States Coast and Geodetic Survey, Washington, D. C.

Seismology: Harry Fielding Reid, Johns Hopkins University, Baltimore, Md.

Meteorology: H. H. Kimball, United States Weather Bureau, Washington, D. C.

Terrestrial Magnetism and Atmospheric Electricity: L. A. Bauer, Carnegie Institution, Washington, D. C.

Physical Oceanography: G. W. Littlehales, Hydrographic Office, Washington, D. C.

Volcanology: H. S. Washington, Geophysical Laboratory, Washington, D. C.

The officers, as of July 1, 1922, are:

The Union: L. A. Bauer, *chairman*; A. L. Day, *vice-chairman*; Wm. Bowie, *secretary*.

Geodesy: John F. Hayford, *chairman*; R. L. Faris, *vice-chairman*; N. L. Bowen, *secretary*.

Seismology: W. J. Humphreys, *chairman*; J. B. Woodworth, *vice-chairman*; D. L. Hazard, *secretary*.

Meteorology: E. H. Bowie, *chairman*; R. DeC. Ward, *vice-chairman*; A. J. Henry, *secretary*.

Terrestrial Magnetism and Atmospheric Electricity: W. F. G. Swann, *chairman*; L. A. Bauer, *vice-chairman*; J. A. Fleming, *secretary*.

Physical Oceanography: J. P. Ault, *chairman*; G. W. Littlehales, *vice-chairman*; W. E. Parker, *secretary*.

Volcanology: L. H. Adams, *chairman*; T. A. Jaggar, *vice-chairman*; R. B. Sosman, *secretary*.

Geophysical Chemistry: H. S. Washington, *chairman*; Whitman Cross, *vice-chairman*; R. B. Sosman, *secretary*.

W. J. HUMPHREYS,  
*Secretary for the Union*

#### LECTURES ON LIGHT AND THE CONSTITUTION OF MATTER AT THE UNIVERSITY OF WISCONSIN

PROFESSOR H. A. LORENTZ, of Leiden, Holland, is delivering a series of four lectures on the general subject of Light and the Constitution of Matter at the University of Wisconsin from March 20 to 27. Following the lectures, on March 30, 31, and April 1, a colloquium, on

the "Fundamental concepts of electro-dynamics and of the electron theory," will be held in his honor. As shown in the following program, the papers presented will summarize the present status in various fields with especial reference to the unsolved problems and the relation between theory and experiment. Dr. Lorentz will respond to each, and general discussion will be invited. The university extends a cordial invitations to attend both the lectures and the colloquium to all persons interested.

#### Program:

##### THURSDAY, MARCH 30

*The experimental basis for the laws of electro-dynamic action:* W. F. G. SWANN, University of Minnesota.

*Astrophysical evidence concerning radiant energy:* HARLOW SHAPLEY, Harvard Observatory.

*Deduction of the laws of electro-dynamics from the relativity principle:* LEIGH PAGE, Yale University.

*Analytical formulation of electro-magnetic theory through the field concept:* MAX MASON, University of Wisconsin.

##### FRIDAY, MARCH 31

*The rotating earth as a reference system for light propagation:* L. SILBERSTEIN, Research Laboratory, Eastman Kodak Company.

*Application of statistical mechanics to electron theory:* A. C. LUNN, University of Chicago.

*Scattering of light and resonance radiation in relation to optical theories:* R. W. WOOD, Johns Hopkins University.

*Thermal radiation,—a discussion of recent experimental results:* C. E. MENDENHALL, University of Wisconsin.

##### SATURDAY, APRIL 1

*Electron theory of metals, volume phenomena:* P. W. BRIDGMAN, Harvard University.

*Electron theory of metals, surface phenomena:* K. T. COMPTON, Princeton University.

#### SCIENTIFIC NOTES AND NEWS

DR. FRANK SCHLESINGER, director of the Yale Observatory, has been elected chairman of the American delegation to the meeting of the International Astronomical Union that opens at Rome on May 2. Other members of the delegation are Messrs. Aitken, Curtis, Lee, Miller, Russell, St. John, Seares and Shapley.

DR. H. FOSTER BAIN, director of the Bureau

of Mines, was elected president of the Joseph A. Holmes Safety Association at its annual meeting at Washington, D. C., last week. Dr. Charles D. Walcott, secretary of the Smithsonian Institution, was named first vice-president, and Mr. Samuel Gompers, president of the American Federation of Labor, second vice-president. Mr. George S. Rice, chief mining engineer of the bureau, and Mr. James Lord, of the mining department of the American Federation of Labor, were elected directors.

WILLIAM M. CORSE, general manager of the Monel Metal Corporation, will take active charge of the division of research extension of The National Research Council on April 1, succeeding Dr. H. E. Howe, now editor of *The Journal of Industrial and Engineering Chemistry*.

O. M. BUTLER has resigned his position as assistant director of The Forest Products Laboratory, in order to accept the position of director of technical activities of the American Forestry Association.

THE nominating committee of the Harvard Alumni Association has selected Dr. William Sidney Thayer, Baltimore, former president of the Association of American Physicians, and Dr. Herbert Charles Moffitt, San Francisco, professor of medicine, University of California, as candidates for the Harvard board of overseers.

MRS. ANNA BOTSFORD COMSTOCK, who retired in September from a professorship of entomology at Cornell University, has been nominated for election as alumni trustee.

THE University of London labor party has adopted as its parliamentary candidate, Dr. W. H. R. Rivers, F. R. S., praelector in natural science, St. John's College, Cambridge. Mr. Sidney Webb, the candidate at the last election, who is standing for another constituency, proposed the adoption of Dr. Rivers, and among those who spoke in his support was Sir Arthur Newsholme, who described Dr. Rivers as the most advanced and original anthropologist in England.

PROFESSOR F. G. HOPKINS and Dr. W. H. R. Rivers have been elected members of the Athenæum Club for "distinguished eminence in science."

DR. WOLFGANG KÖHLER has been appointed director of the Berlin Psychological Laboratory, to fill the vacancy caused by the retirement of Professor Stumpf.

PROFESSOR W. W. WATTS, F. R. S., has been appointed representative of the University of London at the International Geographical Congress to be held in Brussels next August.

DR. A. W. PORTER, D. Sc., F. R. S., has been appointed a member of the council of the British Photographic Research Association.

FRANK R. ELDRED, for many years chief chemist and director of the scientific division of Eli Lilly and Company, and Frederick C. Atkinson, chemical director of the American Hominy Company, have organized the firm of Eldred and Atkinson, consulting chemists and engineers, with offices in New York City.

DR. CHARLES A. CULVER, formerly in charge of the physics department of Beloit College, Wisconsin, was recently elected president of the Radio Research Club of Canada.

THE Board of Regents of the University of Minnesota have granted Professor F. L. Washburn, of the division of entomology and zoology, a six months' sabbatical furlough to collect insects in certain islands of Polynesia. Expenses of the trip are not paid by the university, but are provided for through private funds and interest in the work on the part of a group of business and professional men in Minneapolis. Mr. Washburn will make collections on Tahiti, Murea, probably the Marquesans and possibly in the Cook group. The collection will be the property of the university.

DR. FRANCIS W. PEABODY, assistant professor of medicine at Harvard University, who was recently appointed director of the Thorndike Memorial Institute, who has been acting in an advisory capacity and holding clinics for the department of medicine of the Peking Union Medical College during the first tri-

mester, has left for home. On his way back, he will visit the medical schools of the Shantung Christian University at Tsi-nen-fu and of the Yale-in-China mission at Changsha.

DR. WILLIAM BOWIE gave recently two lectures to the students of Lehigh University; one was on the subject of "isostasy" for the geological students, and the other "the work of the Coast and Geodetic Survey" before the students' civil engineering society.

PROFESSOR G. ELLIOT SMITH recently delivered the Montgomery lecture before the Royal College of Surgeons of Ireland on the "Influence of Vision in the Development of Man's Intellectual Powers." Professor Smith also lectured to the Royal Zoological Society of Ireland on "Our Rude Ancestors."

ON March 2, Professor H. M. Lefroy delivered the first of two lectures at the Royal Institution on (I) "The Menace of the Insect Pest" and (II) "The Balance of Life in Relation to Insect Pest Control." On March 4, Sir Ernest Rutherford began a course of six lectures on "Radio activity."

At the meeting of the Royal Society, held on March 9, the Bakerian lecture was delivered by Professor T. R. Merton and Mr. S. Barratt. The lecture was entitled "The Spectrum of Hydrogen."

THE British Institution of Electrical Engineers began the celebration of its jubilee on February 21, when at its house on the Victoria Embankment Professor J. A. Fleming gave a lecture on "Michael Faraday and the Foundations of Electrical Engineering." Many of Faraday's original experiments were repeated, and on the lecture table were some of the original apparatus he employed, lent by the Royal Institution, where all his work was done. The Science Museum at South Kensington also lent models and examples of early electrical machines.

DR. CHARLES W. WAIDNER, chief physicist of the Bureau of Standards, known for his studies of temperatures and heat measurements, died at his home in Washington on March 11.

BOYNTON WELLS McFARLAND, assistant pro-

fessor of chemistry at Yale University, died at his home in New Haven on Monday, March 13, after a brief illness.

DR. FRITZ HENNINGS, professor of railway construction at the Zürich Technical High School, died on February 2, at the age of eighty-three years.

PROFESSOR C. B. ATWELL writes: "It is our sad duty to announce the death, on March 4, of Associate Professor William Logan Woodburn, who for twelve years has been our colleague in the department of botany at Northwestern University. Born near Bloomington, Indiana, in 1882, he prepared for college in the near-by high school, completed the course for A. B. at the University of Indiana in 1908, was elected to the honorary societies of Phi Beta Kappa and Sigma Xi, acquired the master's degree by graduate work in 1909, and the doctorate of philosophy in 1912 at the same institution. During his twelve years at Northwestern University, he proved himself to be a conscientious, enthusiastic, and inspiring teacher, and a loyal, unselfish and sympathetic colleague. As an investigator he carried to successful completion and publication several valuable research problems in cytology, largely along the line of spermatogenesis in liverworts and mosses."

A CORRESPONDENT writes: "The death of Thomas Edward Clark, who in his early days was much interested in science, occurred at Los Angeles, California, on November 27, 1921, where he had resided for many years. Dr. Clark was born in Tyringham, Massachusetts, a small hamlet in the Berkshire Hills, on September 29, 1828. He received the degree of A. B. from New York University in 1849, B. S. from Harvard in 1854, Ph. D. from Göttingen in 1857. In 1859 he held the chair of chemistry at Williams College. He received the degree of M. D. from the College of Physicians and Surgeons in New York in 1866, and practised medicine for a few years in New York City. Following his retirement from the practise of medicine, he spent several years in Europe, largely in France and Italy. Upon his return he purchased a ranch in Kan-

where he resided for a few years, from which he retired to a life of leisure at Los Angeles, California. He was a fellow of the American Academy of Arts and Sciences, Boston, and of the Academy of Natural Science, Philadelphia. Dr. Clark descended from a stock noted for its production of naturalists, among them we find such names as Jackson, Orton, Kingsley. He was a brother of Henry James Clark, who was formerly associated with Agassiz at Harvard, and distinguished for his work on the invertebrata, etc. Their father, Henry Porter Clark, married Abigail Jackson Orton. He was a Swedenborgian minister but retired early in life. He was a lifelong friend of the Rev. Henry James, father of Henry and William James, who was likewise a Swedenborgian."

THE International Union of Pure and Applied Chemistry will hold a meeting in Lyons, France, from June 27 to 30.

THE American Pharmaceutical Association has available a sum amounting to \$360 which will be expended after October 1 for the encouragement of research. Investigators desiring financial aid in their work should communicate before June 1 with Professor H. V. Army, Chairman A. Ph. A. Research Committee, 115 West 68th Street, New York, giving their past record and outlining the particular line of work for which the grant is desired.

THE United States Civil Service Commission announces an examination for ordnance engineer, qualified in optics. A vacancy at Frankfort Arsenal, Philadelphia, Pa., at \$4,000 a year, is to be filled. The work will consist of the supervision of the design and manufacture of optical systems for military instruments, as well as investigating optical problems relating to such instruments. Competitors will not be required to report for examination at any place, but will be rated on physical ability 10 points, and on education and experience 90 points.

In order to promote original research relative to the fungicidal and insecticidal properties of sulphur and the effects of sunlight, temperature and moisture on its action, the Crop

Protection Institute expects to offer two fellowships yielding an income of \$2,500 each. Training in chemistry and plant physiology is a prerequisite, and candidates should have demonstrated ability to undertake research efforts of a high type. Applications, accompanied by reprints of scientific articles and letters of recommendation, should be made immediately to the Crop Protection Institute, National Research Council, Washington, D. C. A statement explaining the purposes and scope of the projects and selection of research laboratory may be obtained on application.

UNDER stress of the economic conditions that the war has placed on Austria, the well known Zoologisch-Botanische Gesellschaft finds it necessary to part with some of its scientific collections as a means of maintaining its existence. A recent letter from Dr. Hans Neumayer, the general secretary of the society, to Professor Wm. Trelease, of the University of Illinois, asks that American botanists be informed of that fact that a collection of about 12,000 mosses, comprising over 1,000 species and collected by Schimper, de Notaris and other men famed in this branch of botany, is offered for sale. Detailed information may be obtained from the secretary of the Gesellschaft, at Vienna, and offers for its purchase may be addressed to him.

The first volume of a series of translations and reprints to be known as *Psychology Classics* is in press and will appear shortly. The series is to be edited by Professor Knight Dunlap, and published by the Williams and Wilkins Company in Baltimore. The first volume contains a translation, by Miss Istar A. Haupt, of Lange's monograph on *The Emotions*, with reprintings of William James's article, "What is an Emotion?", for *Mind* and his chapter on "The Emotions" from the *Principles of Psychology*. In order to facilitate the preparation of further translations and reprints, the royalties from these volumes will be matched by an equal amount by the Williams and Wilkins Company, the fund so constituted to be deposited with the treasurer of the Johns Hopkins University, and will be applied solely to the defraying of clerical and

other necessary expenses of such preparation. The editor requests suggestions concerning future volumes, and cooperation in their production.

### UNIVERSITY AND EDUCATIONAL NOTES

AMONG appropriations announced by the General Education Board are: Northwestern University, toward \$2,000,000, \$600,000; Boston University, Boston, Mass., toward \$1,500,000, \$400,000; Illinois Wesleyan University, toward \$400,000, \$135,000; New York University, \$500,000, toward \$1,500,000; for the discharge of its outstanding obligations, \$500,000.

DR. FREDERICK L. HOFFMAN has accepted the position of dean of what will probably be known as the "Graduate School of Applied Business Science, of the Babson Institute, at Wellesley Hills, Mass. Dr. Hoffman will continue his connection with the Prudential Life Insurance Company as consulting statistician, and will hereafter divide his time as may best meet the needs of his new work. In his new position he is expected to develop the business education for officers and managers of industrial undertakings, including insurance. The plans under way include an entire group of new buildings, and a museum of industrial products and processes. Dr. Hoffman will make his future home at Wellesley Hills.

DR. SIMEON BURT WOLBACH has been appointed Shattuck professor of pathologic anatomy in the Harvard Medical School, to fill the vacancy caused by the retirement of Dr. William T. Councilman.

LEIGH PAGE, Ph.D., assistant professor of physics in Yale University, has been promoted to be professor of mathematical sciences beginning with the academic year 1922-23, with assignment to the Sheffield Scientific School.

THE chair of mining at Sheffield University, vacant by the death of Professor F. E. Armstrong, has been filled by the appointment of Mr. Douglas Hay.

DR. HENRI CLAUDE has been appointed professor of mental diseases in the Paris Faculty

of Medicine in succession to the late Dr. Ernest Dupré.

### DISCUSSION AND CORRESPONDENCE

#### THE VOTE ON THE EVOLUTION BILL IN THE KENTUCKY STATE LEGISLATURE

ON March 9, the lower house of the Kentucky legislature, contrary to what was expected, took the anti-evolution bill (the one carrying a heavy fine and jail sentence for a violation of its provisions) out of the hands of the committee and put it to vote. Not since the memorable election of William A. Bradley to the Senate in 1908 has there been in the legislature such intense interest in the result of a ballot. As names were called the majority for and against saw-sawed with narrow margins, and there was much scurrying hither and thither by the advocates and opponents of the bill for the purpose of finding and dragging in their respective absentees for the vote. It was like a neck and neck horse race, and Kentuckians do dearly love a horse race. The final ballot resulted in 41 votes for the measure and 42 against.

An analysis of the vote above recorded shows that with the legislative district taken as a unit and computing the percentage of illiteracy on the basis of the male population, twenty-one years old and upward, in each, the advocates of the bill represented an illiteracy of 13.5 per cent., and the opponents of the bill an illiteracy of 10.7 per cent. The illiteracy of the state as a whole computed on the same basis is 11.3 per cent.

In view of the closeness of the vote on this measure and what an analysis of it reveals as to the forces which were backing its passage, the proposal that the content of teaching in the state universities shall be dictated by legislative enactment, as advocated by Mr. Bryan, is fraught with interesting possibilities.

As interesting incidents connected with the final attempt to pass this anti-evolution measure, are the following:

Two persons, not members of the assembly, were permitted to address the house on the measure, President McVey of the university against it and Rev. Noel Gaines, of Frank-