

Economics and sociology, L. H. Seltzer, Detroit
 Fine arts, Carleton Angell, Ann Arbor
 Forestry, S. A. Graham, Ann Arbor
 Geography, Wade DeVries, Lansing
 Geology and mineralogy, Chester B. Slawson, Ann Arbor
 History and political science, Howard B. Calderwood, Ann Arbor
 Language and literature, F. W. Peterson, Ann Arbor
 Mathematics, R. C. Shellenberger, Bay City
 Sanitary and medical science, W. L. Mallmann, East Lansing
 Psychology, W. C. Trow, Ann Arbor
 Zoology, R. A. Muttkowski, Detroit

PRESENTATION OF THE JOHN FRITZ MEDAL

THE John Fritz medal was presented to Dr. Ralph Modjeski, member of the American Society of Civil Engineers, of New York and Chicago, at the annual banquet and reception of the society in the Hotel Commodore, New York City, on the evening of January 15. Approximately six hundred members and guests of the society were present. Immediately following the dinner Mr. Harrison P. Eddy, member of the society, as master of ceremonies, presented the newly elected president of the society and three honorary members, and then resigned the chair to Bancroft Gherardi, past-president of the American Institute of Electrical Engineers, as chairman of the John Fritz Medal Board of Award.

Mr. Gherardi spoke briefly of the purposes and history of the medal and introduced Mr. J. V. W. Reynders, past-chairman of the board of award and past-president of the American Institute of Mining and Metallurgical Engineers. Mr. Reynders summarized the achievements of the twenty-five preceding medalists, in subject groups, and then outlined Dr. Modjeski's personal history and emphasized his contribution to the art of bridge building, especially during the period of construction of great bridges in the United States.

Chairman Gherardi then presented Past-President Dexter S. Kimball, of the American Society of Mechanical Engineers, as chairman of the board which made the award to Dr. Modjeski, who spoke of the great contributions to human life made by engineers and scientists in the fields of machine tools, application of power, transportation and communication. He also alluded briefly to great contributions of the sanitary engineer and of the medical research men for the benefit of public health and of the engineering educator to the general advancement of the practice of the profession.

Following his address and in accordance with established custom, Dr. Kimball, as chairman of the board, presented the medal and certificate to Dr. Modjeski for "notable achievement as an engineer of great bridges combining the principles of strength and beauty." Dr. Modjeski responded briefly, accepting the honor.

SCIENTIFIC NOTES AND NEWS

AS was reported in a recent issue of *SCIENCE*, Professor Michelson, having recovered from a serious attack of pneumonia, expects to return soon to Pasadena in order to continue by new methods his measurements of the velocity of light. The following appears in the *London Times* for January 8: "The death of Professor A. A. Michelson at the age of seventy-seven, announced at a recent meeting of the Académie des Sciences of the Institut de France, of which he was a corresponding member, deprives the scientific world of a physicist of original genius and remarkable achievement." There follows an extended obituary notice. Reference is made here to the matter in order that in so far as possible the anxiety caused by these announcements may be relieved.

A LESS serious error has occurred through the circumstance that it was cabled by the Associated Press from Stockholm that the Nobel Prize in physics had been awarded to the Duc de Broglie for his work on "Wave Mechanics." Duc Maurice de Broglie has accomplished distinguished work on X-rays, including

their diffraction by crystals and the proof of Einstein's photoelectric equation in the region of X-ray frequencies, which in the opinion of physicists would warrant the award of a Nobel Prize to him. The work on the relation between waves and particles has, however, been accomplished by the younger brother of the Duc, Louis de Broglie, and it is to him that the Nobel Prize has been awarded.

DR. J. C. ARTHUR, professor emeritus of botany at Purdue University, celebrated his eightieth birthday on January 11. At a luncheon held in his honor by the staff of the department of botany of the Agricultural Experiment Station, Dr. Arthur gave an account of the earlier work and the development of the department of which he was head from its founding in 1888 to his retirement in 1915. Since retiring Dr. Arthur has been actively engaged in a continuation of his studies of rusts, having just published a book entitled "Plant Rusts."

MONDAY, January 13, marked the twenty-fifth anniversary of Dr. P. A. Levene's connection with the

Rockefeller Institute for Medical Research. The occasion was celebrated by a luncheon at the institute, attended by the entire staff and by many former co-workers of Dr. Levene, some of whom traveled great distances to be present. Brief addresses were made by Dr. Simon Flexner, director of the institute, and by Drs. W. A. Jacobs and Alexis Carrel, of the institute staff. A handsomely bound eight-volume set of his published articles was presented to Dr. Levene, who concluded the celebration with an address on "The Aims and Tools of Organic Chemistry and Biochemistry."

DR. FRIEDRICH KÜSTNER, director emeritus of the Bonn Observatory, has been made an honorary member of the American Astronomical Society, according to the provision that permits the election of one such member each year. Seven other living astronomers have been thus honored: Dyson, Charlier, Turner, Baillaud, Eddington, Wolf and Deslandres. A correspondent writes: "Küstner is best known for his detection, in 1888, of the variation of latitude, from observations made with a zenith telescope at Berlin. His two fundamental star catalogues, carried out with the meridian circle at Bonn, are unexcelled in accuracy and thoroughness, and are universally regarded as models for this class of work. With the comparatively modest equipment of the Bonn Observatory he has carried out a long series of determinations of radial velocities, and has shown that large telescopes are not necessary to secure results of a high order of accuracy. As a by-product of this work he was the first to determine the parallax of the sun by observing radial velocities of stars."

J. B. TYRRELL, consulting mining engineer and explorer, of Toronto, has been awarded the Daly medal of the American Geographical Society for his work in geography. The presentation was made by Dr. Isaiah Bowman, of New York, director and editor of the society, at a luncheon tendered Mr. Tyrrell by Sir Francis Younghusband, the British explorer. The David Livingstone Centenary medal was previously awarded to Commander Richard E. Byrd. This medal was not awarded by the National Geographic Society as previously stated.

THE Harrison Memorial lecture before the Pharmaceutical Society of Great Britain was delivered on January 14 by Mr. P. A. W. Self, who was presented by the president of the society with the Harrison medal. This lectureship and medal were established to perpetuate the memory of Colonel E. F. Harrison, director of chemical warfare during the war, and a distinguished member of the Pharmaceutical Society. The prize founded by the Chemical Society in 1922, in memory of Colonel Harrison, has been awarded to

Dr. R. P. Linstead. This prize is awarded every three years to the chemist, under thirty years of age, who during the preceding five years has produced research work judged to be of the greatest merit and promise. The prize will be presented at the annual meeting of the Chemical Society in March.

At the Des Moines meeting of the Mathematical Association of America, the Chauvenet prize of one hundred dollars was awarded to Professor T. H. Hildebrandt, of the University of Michigan, for his paper, "The Borel Theorem and its Generalizations" in the *Bulletin* of the American Mathematical Society for 1926. This prize is awarded every three or four years for the best expository paper published in English during the period of the preceding three or four years by a member of the association.

W. T. MACCOUN, Dominion horticulturist, has been awarded the Wilder silver medal, given by the American Pomological Society annually, in recognition of his accomplishments in fruit breeding and horticulture generally.

R. HARCOURT, professor of chemistry at the Ontario Agricultural College, and A. T. Charron, assistant deputy minister of agriculture for Canada, have been honored by the French Government with the award of the Cross of Agricultural Merit. The award is the result of the visit to Canada in August, 1929, of a group of students and faculty from the National School of Agriculture at Grignon, France, and of the assistance given towards the success of that visit.

Dr. A. S. EDDINGTON, Plumian professor of astronomy at the University of Cambridge, was elected president of the Mathematical Association, London, at the annual meeting on January 6.

MR. CARL E. GRUNSKY was elected president of the American Engineering Council at the meeting held in Washington on January 10.

DR. VERNON C. ROWLAND, associate professor of general and physical diagnosis, Western Reserve University Medical School, was recently elected president of the Academy of Medicine of Cleveland.

DR. ARTHUR H. LIBBY, Boston, was elected president of the Harvard Odontological Society for the coming year at the annual banquet of the association. Dr. Leroy M. S. Miner, of Boston, was chosen president-elect.

OFFICERS of the Philosophical Society of Washington have been elected as follows: *President*, W. D. Lambert, of the U. S. Coast and Geodetic Survey; *vice-presidents*, F. E. Wright and H. L. Curtis; *corresponding secretary*, L. V. Judson; *recording secretary*, O. S. Adams; *treasurer*, N. H. Heck.

IN recognition of services rendered to the New York Academy of Medicine, Dr. Arnold C. Klebs, of Nyon, Switzerland, has been appointed consulting librarian of bibliography, and Professor B. W. Weinberger, of New York University, consulting librarian of dental literature.

MR. THOMAS A. EDISON, Mr. Clarence Lewis, and Dr. E. D. Merrill, newly elected director, were elected members of the board at a recent meeting of the trustees of the New York Botanical Garden. The present officers, excepting the secretary, Dr. Nathaniel L. Britton, retiring director-in-chief, were reelected. Dr. Merrill was elected to succeed Dr. Britton as secretary and Dr. Marshall A. Howe was chosen assistant secretary.

DR. SIDNEY W. BLISS has been appointed head of the department of biochemistry at Tulane University of Louisiana School of Medicine, New Orleans.

FRED C. MEIER, extension pathologist, Office of Cooperative Extension Work, Extension Service, has been transferred to the position of principal pathologist in charge of barberry-eradication work of the Bureau of Plant Industry. This work has been separated from the Office of Cereal Crops and Diseases, Bureau of Plant Industry, and hereafter will be developed as a separate office of the bureau. Reorganization of the work will be undertaken immediately by Mr. Meier, with the idea of developing a more definite federal and regional basis of operation, although continuing close cooperation with the thirteen spring-wheat states and with the conference for the Prevention of Grain Rust. Dr. E. C. Stakman, of the department of plant pathology and botany of the University of Minnesota, who has long been identified with the black-stem-rust problem of wheat, especially with the epidemiological and related research, will act in an advisory capacity.

DR. HARLAN H. YORK, for seven years connected with the New York State Conservation Department, has resigned to accept the chair of forest pathology at the University of Pennsylvania. Dr. York was formerly a specialist in forestry at Brown University and the University of West Virginia and is chairman of the National Shade Tree Conference.

OSCAR T. QUIMBY, chemist on the staff of the U. S. Forest Products Laboratory, assigned to experiments on the electro-endosmosis of wood, has resigned to take a position in the research division of the Procter and Gamble Company, Cincinnati.

DR. ALEXANDER NELSON, formerly superintendent of research in the Department of Agriculture in Tasmania, has been appointed lecturer in the department of botany of the University of Cambridge, and

Dr. W. H. McCrea, formerly senior scholar of Trinity College and Isaac Newton fellow in the University of Cambridge, has been appointed lecturer in the department of mathematics.

W. H. HOOVER, of the Smithsonian Institution, has returned from a three-year stay at Mount Brukkaros in South Africa, where he has been carrying on solar radiation investigations for the Smithsonian Institution and the National Geographic Society.

DR. RUDOLPH MATAS, emeritus professor of general and clinical surgery, Tulane University of Louisiana School of Medicine, has returned from a tour of Europe of several months' duration which was undertaken following his attendance at the International Congress of Surgery at Warsaw.

DR. T. SHIDO, professor in the Kyushu Imperial University, and Dr. K. Iwakawa, professor in the Niigata Imperial Medical College, left in October to familiarize themselves with medical education in America and Europe.

DR. MASAYOSHI SATO, professor of dairy chemistry, Hokkaido Imperial University, Japan, visited the United States in December on his return to Japan from a meeting of the executive committee of the International Dairy Federation held in Paris in October. The next World's Dairy Congress will be held in Copenhagen in June, 1931.

DR. S. A. WAKSMAN, soil microbiologist of the New Jersey Experiment Station, who has returned from Europe where for several months he has visited laboratories and experiment stations where microbiological work is being carried on, recently addressed the technical staff of the Bureau of Chemistry and Soils in Washington.

THE council of the University of Melbourne has appointed Dr. R. Marshall Allan to the chair of obstetrics. Dr. Allan will devote the whole of his time to the organization of teaching and research.

DR. M. MIURA, a member of the Physical and Chemical Research Institute, Tokyo, died on November 20.

DR. C.-E. A. WINSLOW, head of the department of public health at Yale Medical School and since 1927 assessor of the health committee of the League of Nations, delivered the second Aldred lecture at the Massachusetts Institute of Technology on January 17, when he discussed "Health Conservation—A Problem in Citizenship." Dr. Winslow also addressed the faculty club, speaking on "Ten Years' Work of the League of Nations."

DR. LEON J. COLE, professor of genetics at the University of Wisconsin, will give a series of lectures open to graduate students in biology during

the summer session of 1930 at Western Reserve University. These lectures will deal with two related subjects, namely, "Genetics of Populations" and "Genetics and Evolution."

J. L. ST. JOHN, state chemist and head of the division of chemistry, Agricultural Experiment Station, State College of Washington, Pullman, is arranging a trip to be undertaken by Dr. H. E. Howe, editor of *Industrial and Engineering Chemistry*, for the purpose of addressing various groups at certain educational institutions, local sections of the American Chemical Society and other audiences. It is anticipated that the tour will begin the first of February, extend through the northern tier of states to Seattle, thence south to Los Angeles, and eastward through the southwestern states, occupying in all about six weeks. Those who may be interested in this project are invited to correspond with Professor St. John.

DR. M. M. LEIGHTON, chief of the Illinois State Geological Survey, Urbana, began a series of lectures at the department of geology, Northwestern University, on December 4 and 5. Dr. Leighton had for his subject "The Weathering Characteristics of the Glacial Drift Sheets of the Mississippi Valley States." On December 5, under the auspices of the Dip and Strike Club of Northwestern University, he delivered a lecture of popular nature on "The Economic Importance of the Glacial Drift of Illinois." The series was continued on December 10 and 11, with lectures on "The Relations of the Loess Deposits to the Various

Drift Sheets and Their Chronology," and on "The Drainage of Ice Sheets and Its Influence on Morainal Building."

PROFESSOR DOUGLAS JOHNSON, of Columbia University, has recently delivered addresses in South Africa, Australia and New Zealand as follows: "The Face of the Waters," British Association, Cape Town; "Methods of Physiographic Research," geological department, University of Perth; "Studies in Shoreline Physiography," geological section of the Royal Society of New South Wales, Sydney; "Shore Problems," Royal Society of Queensland, Brisbane; "Physiography of the Atlantic Shoreline," geological section of the Philosophical Society, Wellington.

PROFESSOR P. EHRENFEST, of the University of Leiden, has accepted an invitation to participate in the Symposium on Theoretical Physics at the University of Michigan during the coming summer. In addition to giving a series of lectures, he will direct the informal conferences which accompany the lectures. Subsequently Professor Ehrenfest will visit several other universities throughout the country.

THE General Education Board, New York, has authorized grants to Duke University School of Medicine, amounting to \$300,000 over a period of five years. It is also announced by the dean that the new medical school will open on October 1, and will admit first and third year students. The school will follow the four-quarter plan.

DISCUSSION

OVERHEAD SOUNDS OF THE YELLOWSTONE LAKE REGION

IN *Nature Notes from Yellowstone Park*,¹ Mr. L. S. Morris, ranger naturalist, describes aerial sounds which were heard by himself and companions over Grebe Lake, near the canyon of the Yellowstone in the park.

After reading Mr. Morris's narrative, I looked over a communication of my own to *SCIENCE*.² I also reread the notes upon which that communication was based.

Since there are some items in these notes which were not included in the published account it seems to me, especially in view of recently awakened interest in these phenomena, to be worth while to make a record of them.

Following are all the references to overhead sounds which I find in the diary which I kept during the six

weeks of our stay in the park. I copy from the diary without making any changes in the text, such comments as seem to be called for being enclosed in parentheses.

(1) July 23 (1890). Yesterday, when (Elwood) Hofer and I were on our way to the upper (western) end of the lake (Shoshone), I heard a strange noise, which I supposed was off to the southward and echoing among the mountains. (At the time, about 8 A. M., I was seated in our Osgood canvas boat, with the oars in my hands, but not rowing. I was probably ten or twelve feet from the shore, where Hofer was seated measuring off our dredge rope, which we were going to use for a sounding line. As I remember the situation we were from twenty to thirty feet apart.) Hofer asked me what I thought it was, and where it seemed to be. I told him the apparent direction and asked him what it was. He replied that it was the most mysterious sound that was heard in the mountains. Since then we have talked about the sound a good deal in camp, and this morning heard it again very plainly. (My recollection of this event is that it occurred just after we had had breakfast, and

¹ 6: 2-4.

² First series 22: 244-6, November 3, 1893.