

partment of soils and geology in the University of Maryland.

Maryland was the first state to start soil survey work and the first to complete it. The work was started under Professor Milton Whitney and completed under Dr. McCall.

Dr. McCall received his B.Sc. degree from the Ohio State University in 1900 and his Ph.D. from the Johns Hopkins in 1916. He is a member of the Society of Agronomy, the American Association for the Advancement of Science, the Society for the Promotion of the Agricultural Science, and of many other scientific and agricultural organizations. He was executive secretary of the First International Congress of Soil Science recently held in Washington, and has been active in promoting soil science as a writer and investigator.

The new Bureau of Chemistry and Soils combines the research divisions of the old Bureau of Chemistry, the Bureau of Soils, and the Fixed Nitrogen Research Laboratory. The regulatory work formerly carried on by the Bureau of Chemistry has been combined with the regulatory work in the Insecticide and Fungicide Board and all will be administered in the new Food, Drug and Insecticide Administration.

The Civil Service Commission recently held an examination for the position of chief and assistant chief of the newly created bureau. From the list of eligibles the secretary of agriculture expects soon to select the permanent head. Dr. Browne has expressed a desire to devote his energies to chemical research, but has consented to handle the general administrative work temporarily.

SCIENTIFIC NOTES AND NEWS

DR. ELIAKIM HASTINGS MOORE, professor of mathematics in the University of Chicago, a past president of the American Association for the Advancement of Science, has received the degree of doctor of science from the University of Kansas. Northwestern University, where Dr. Moore was formerly professor of mathematics, also conferred on him the doctorate of science as "a productive scholar whose publications are marked by their originality, finished character and far-reaching significance; the recognized leader among American mathematicians."

THE University of Michigan on the occasion of the recent commencement conferred the degree of doctor of science on Dr. Alexander Ziwet, for many years professor of mathematics in the university and professor emeritus since 1925; and on Dr. Willis Rodney Whitney, since 1901 director of the research laboratories of the General Electric Company.

DR. JAMES M. ANDERS, professor of medicine in the University of Pennsylvania, received the degree of doctor of science on the occasion of the commencement exercises of Bowdoin College.

DR. ALEXIS CARREL, of the Rockefeller Institute for Medical Research, has been elected correspondent of the Paris Academy of Sciences in the department of medicine and surgery.

AT Princeton University Professor Edwin Grant Conklin has been appointed Henry Fairfield Osborn research professor of biology; Professor K. T. Compton, Cyrus Fogg Brackett research professor of physics, and Professor Hugh Scott Taylor, David B. Jones research professor of chemistry.

PROFESSOR F. G. DONNAN, professor of general chemistry in the University of London, has been elected a member of the Royal Academy of Sciences of Amsterdam, filling the vacancy caused by the death of Professor C. Golgi, of Pavia.

THE University of Oxford conferred the honorary degree of D.Sc. upon Sir Robert Hadfield, Bart., and Dr. Richard Willstätter, professor of chemistry in the University of Munich, on June 30.

Nature reports that the Senatus Academicus of the University of Edinburgh has agreed to offer the degree of doctor of laws to the following, for conferment at the special graduation ceremonial on July 20, on the occasion of the visit to Edinburgh of the British Medical Association: Lord Dawson, of Penn, physician in ordinary to His Majesty the King; Dr. A. Donald (Manchester); Dr. C. E. Douglas (Cupar); Sir William Hale-White (London); Mr. R. G. Hogarth (Nottingham); Dr. W. Hunter (London); Dr. T. H. Milroy (Belfast); Sir Berkeley Moynihan, Bart. (Leeds); Sir J. H. Parsons (London); Sir Humphry Rolleston, Bart. (Cambridge); Dr. G. F. Still (London); Mr. W. Trotter (London); Sir Almroth Wright (London); Professor Vittorio Ascoli, professor of clinical medicine, Rome; M. Jules Bordet, director of the Pasteur Institute, Brussels; Dr. Harvey Cushing, professor of surgery, Harvard University; Dr. C. L. Dana, professor of nervous diseases, Cornell University; Professor Knud Faber, professor of medicine, University of Copenhagen; Dr. Jan van der Hoeve, professor of ophthalmology, University of Leyden; Dr. Otto Meyerhoff, professor of physiology, University of Berlin; Dr. Otto Naegeli, professor of medicine, University of Zurich; Dr. W. S. Thayer, professor emeritus of medicine, Johns Hopkins University, and M. T. M. Tuffier, Academy of Medicine, Paris.

THE International Anesthesia Research Society presented on May 16 to Dr. Arno B. Luckhardt, professor

of physiology, University of Chicago, and T. Bailey Carter, D.Sc., a scroll of recognition in appreciation of "meritorious research in anesthesia and analgesia, and for prolonged, untiring and resultful experimental laboratory studies of the biochemistry and pharmacophysiology of ethylene, as well as such splendid cooperation of pure with applied science as enabled the surgeons, specialists and anesthetists of the Presbyterian Hospital (Chicago) to rapidly establish the clinical use of ethylene as a new and valuable routine method of anesthesia for the benefit of suffering humanity."

THE Cross of Knight of the Czechoslovak Order of the White Lion, a decoration for citizens of foreign states in appreciation of their services rendered on behalf of Czechoslovakia, has been awarded to the following American engineers by the Czechoslovakian Government: Professor Joseph W. Roe, head of the Department of Industrial Engineering, New York University; Calvin W. Rice, secretary of the American Society of Mechanical Engineers; Alfred D. Flinn, director of the Engineering Foundation, New York; Lawrence W. Wallace, executive secretary of the American Engineering Council, Washington; H. S. Person, managing director of the Taylor Society, New York, and Morris L. Cooke, an industrial engineer of Philadelphia.

DR. JOHN JOHNSTON, previously chairman of the department of chemistry of Yale University, on July 1 took up his work as head of the new research department of the United States Steel Corporation. He intends to spend several months visiting various plants and studying metallurgical problems and practices, after which he will organize an adequate research laboratory. It has not yet been determined where it will be established.

PROFESSOR ARCHIBALD VIVIAN HILL, F.R.S., who recently returned to England after having lectured during a semester in Cornell University, has been elected honorary fellow of King's College, Cambridge.

SIR RICHARD T. GLAZEBROOK, formerly director of the British National Physical Laboratory, has been appointed a member of the Advisory Council for Scientific and Industrial Research.

DR. DONALD B. VAN SLYKE, of the Rockefeller Institute for Medical Research, has been elected president of the Harvey Society for the ensuing year.

THE recently elected officers of the American Society of Plant Physiologists for the year 1927-28 are: *President*, Charles A. Shull; *vice-president*, William E. Tottingham. The *secretary-treasurer*, elected last year for a term of two years, is Scott V. Eaton.

AT the annual meeting during the last week in June of the Society for the Promotion of Engineering Education at the University of Maine the following officers were elected: *President*, R. L. Sackett, Pennsylvania State College; *vice-presidents*, C. E. Magnusson, University of Washington, T. E. French, Ohio State University; *secretary*, F. L. Bishop, University of Pittsburgh; *treasurer*, W. O. Wiley, of Messrs. John Wiley and Sons.

DR. GEORGE K. BURGESS, director of the Bureau of Standards, was elected president at the twentieth National Conference on Weights and Measures held at the Bureau of Standards from May 24 to 27.

PROFESSOR G. S. WHITBY, of McGill University, has been elected president of the Canadian Institute of Chemistry for 1927-8.

PROFESSOR THEODORE W. RICHARDS, of Harvard University, and Professor James F. Norris, of the Massachusetts Institute of Technology, have been appointed honorary chairman and honorary vice-chairman, respectively, of the committee in charge of the seventy-sixth meeting of the American Chemical Society, which will be held in September, 1928, at Swampscott, Mass., under the auspices of the Northeastern Section. The general chairman is Dr. Gustavus J. Esselen, Jr., vice-president of Skinner, Sherman and Esselen, Inc., Boston, Mass., and the executive secretary is Professor Lester F. Hamilton, of the Massachusetts Institute of Technology.

AT the recent Annual Convention of the Association of Cereal Chemists held in Omaha the following officers were elected: *President*, Mr. Leslie R. Olsen, The International Milling Co., Minneapolis, Minn.; *vice-president*, Mr. C. E. Mangels, North Dakota Agricultural College, Fargo, N. D.; *secretary-treasurer*, Mr. R. K. Durham, The Rodney Milling Co., Huntzinger Bldg., Kansas City, Mo.; *editor of Cereal Chemistry*, Dr. C. H. Bailey, University Farm, St. Paul, Minn.; *business manager*, Mr. C. G. Ferrari, University Farm, St. Paul, Minn. Mr. Roland J. Clark was appointed by Mr. Olsen as chairman of the Association's Committee on Publicity.

AT a meeting of the Board of National Research Fellowships on May 27 and 28, the following additional appointments were made: *Reappointments*: Bacteriology, Albert Haldane Gee; Botany, R. E. Girton, L. Joseph Klotz and Lewis E. Wehmeyer; Psychology, Harry R. De Silva, M. F. Metfessel, R. H. Seashore; Zoology, C. Dale Beers, Margaret R. Murray, E. A. Swenson and R. L. Zwemer. *New Appointments*: Botany, James M. Fife, Frederick H. Frost and M. B. Linford; Psychology, C. P. Heinlein and Louis William Max; Zoology, F. W. Appel, D.

R. Briggs, F. J. Brinley, Robert H. Luce and Jack Schultz.

DR. P. W. ZIMMERMAN, dean of the College of Agriculture at the University of Maryland, has accepted a position on the staff of the Boyce Thompson Institute for Plant Research at Yonkers, New York. He will have charge of the experimental work in vegetative propagation. Propagation problems have become very urgent for American nurserymen and horticulturists, especially in view of the quarantine which will be in full operation by 1930.

R. H. BELL, who has been assistant director of agricultural extension work at State College, has been appointed director of the Bureau of Plant Industry in the Pennsylvania Department of Agriculture at Harrisburg.

DR. RALPH C. P. TRUITT, director of the department for the prevention of delinquency of the National Committee for Mental Hygiene, has been appointed director of the clinic of the Mental Hygiene Society of Maryland, to which a grant of \$23,000 was recently made by the Commonwealth Fund.

MISS RUTH ATWATER, who for the last four years has had charge of the foods courses at Skidmore College, Saratoga Springs, New York, serving during the last year as director of the department of home economics, has been appointed director of the Bureau of Home Economics of the National Canners Association.

DR. CHARLES G. ABBOT left Washington on June 1 for Mt. Wilson, California, where he will continue his work on the stellar energy spectra, and on the solar cooker. He will probably return about October 1.

THE Tropical Plant Research Foundation has undertaken an investigation of the physiology, bark anatomy, and latex flow of the sapodilla tree and tapping problems connected with the production of chicle, supported by the Chicle Development Company of New York. Dr. John S. Karling, of the department of botany of Columbia University, is leaving for British Honduras to carry on the field work.

PROFESSOR JOHN W. HARSHBERGER, professor of botany in the University of Pennsylvania, sailed for South America on July 2, to conduct botanical study on the vegetation of that country. He will visit the tropical rain forest, the Araucaria forest of Brazil, the pampa of Argentina, the high Andes of Chili, the Antarctic forest of southern Chili, and on his return homeward, attention will be given to the lomas of the west coast of Peru.

DR. O. A. REINKING, pathologist of the United Fruit Company, Boston, has returned to the United

States after two and one half years of exploration in the Philippine Islands, Southern Asia, India, Indo-Malaysia and Australasia relative to securing disease resistant varieties of bananas.

PROFESSOR DR. A. FUJINAMI, of the Kyoto Imperial University, has been appointed as exchange professor and has left Japan for South America to study sanitary conditions in Brazil.

DR. Y. SATA, formerly president of the Osaka Medical College, has been nominated exchange professor to Germany, and will give lectures on tuberculosis in several universities there. He also carries several reels of films produced by the education department showing ancient Japanese martial arts.

SIR FREDERICK KENYON delivered the Romanes lecture of the University of Oxford on June 17. He took as his subject "Museums and National Life."

DR. J. L. COLLINS, of the division of genetics, University of California, has returned from Vancouver, British Columbia, where he was invited by the Canadian Society of Technical Agriculturists to deliver two lectures on Experimental Genetics and Genetics in its Relation to Breeding.

DR. JOHN B. DEAVER, Philadelphia, was guest of honor at the dinner of Medico-Surgical Society of New York, on May 21, when he spoke on "Preventive Measures against Gastric Ulcer and Malignancy."

DR. CHARLES E. ST. JOHN recently gave a lecture on "The Evidence and the Bearing of the Theory of General Relativity" at Amherst College, and at Cornell University under the Schiff Foundation. He also spoke before the Physical Colloquium of Cornell University on "Some Characteristics of Solar and Stellar Atmosphere."

THE fiftieth annual convention of the Pennsylvania Forestry Association met at West Chester on June 28, under the presidency of Dr. Henry S. Drinker, president-emeritus of Lehigh University.

MR. GEORGE EASTMAN, of Rochester, has given \$1,500,000 to establish a dental dispensary in London, England, which will be associated with the Royal Free Hospital. It probably will be much like the Rochester Dental Dispensary, Rochester, N. Y. The agreement provides that the British friends of the project raise funds to defray the running expenses of the institution. The activities of the dispensary are to be confined to a definite district in London which has a population of about 600,000, mostly poor and middle class persons.

MR. J. PIERPONT MORGAN and Mr. William H. Mattieson have provided funds for a world survey of epidemic encephalitis. With this object in view, a commission has been appointed consisting of Dr. Haven Emerson, professor of public health administration, Columbia University College of Physicians and Surgeons; Dr. Frederick P. Gay, professor of bacteriology, Columbia University College of Physicians and Surgeons; Dr. William H. Park, director, bureau of laboratories, New York City Health Department; Dr. Josephine B. Neal, director of research.

A 1,750-ACRE forest tract, situated not far from Ithaca, has been given to Cornell University by the heirs of Mathias H. Arnot, of Elmira. The tract will be under the supervision and management of the department of forestry of the university and will be used for purposes of research, demonstration and instruction. The major part of the tract is in Schuyler County, although its northern end is in Tompkins County. It lies in the watershed of the Susquehanna River.

A FIELD meeting of the Southern California Rift Club was held on Sunday, May 29, in the Narrows of the Cajon Pass between the San Gabriel Mountains on the west and the San Bernardino Mountains on the east. It was attended by over a hundred members and friends of the club, and was called to order by the president, Dr. Levi F. Noble, who introduced Professor J. P. Buwalda, of the California Institute of Technology, at Pasadena. Professor Buwalda gave a general account of the great San Andreas rift belt, which traverses the pass obliquely from west-northwest to east-southeast, and on which a displacement in the San Francisco region caused the earthquake of 1906; he emphasized the numerous sub-parallel faults which the belt includes in its width of a mile or more, and explained that, in consequence of complex movements upon them, many great slices and slabs of rock, more or less crusted by the pressure and friction to which they have been subjected during their displacement, are now found in discordant relation to each other and to the rock on either side of the belt. Professor W. M. Davis, of Harvard University, next spoke with especial regard to the contrast between rifts of the San Andreas type, which have nearly rectilinear traces, and on which movements with a large horizontal movement seem to predominate, and rifts of the Wasatch type, traces of which show a succession of concave bights separated by cusps and on which movements with a large vertical component prevail. Professor Davis also called attention to the importance of establishing monuments on the two sides of

certain rifts at selected points, in order that future displacements may be detected. After a picnic lunch, Dr. Noble led the party up the nearby mountain slope, whence the course of the rift for several miles in both directions was pointed out, and where several great rock slabs of diverse composition and of large displacement in the rift belt were examined.

THE first zoological garden for Prague is to be established in Troja, one of the outer suburbs. Plans for the completion of the buildings extend over many years; but the exhibition of birds and animals is to be completed as soon as possible. Funds for this enterprise are being obtained partly by the formation of a company and partly by state aid. The total is estimated at about 2,000,000 crowns.

THE authorities of the Province of Saskatchewan are making arrangements for the preparation of a comprehensive geological air survey of the northern part of that province, according to advices to the Department of Commerce from Assistant Trade Commissioner W. J. Donnelly, at Montreal. The project, it is said, will be undertaken for the purpose of determining the mineral wealth of the district to be surveyed and, when the maps are completed, the mineralized areas will be indicated as an aid to prospectors interested in that region.

PRESIDENT COOLIDGE, by recent executive order, has set aside nine tracts of land in Alaska as game and bird preserves. Certain areas along the Alaska Railroad have been set aside as a preserve and breeding ground for muskrats and beavers, and a tract of 14 square miles about the government hotel at Curry, Alaska, which is also on the railroad, a refuge for the protection of wild birds and game and fur-bearing animals. In the area at Curry fishing will be regulated by the secretary of commerce; and the hunting and trapping of birds and game and fur-bearing animals, other than brown and grizzly bears, wolves and wolverines, will be permitted only under regulations to be prescribed by the secretary of agriculture, in accordance with the Alaska game law.

THE report of the committee presided over by Lord Lovat, which was appointed by the British Colonial Office Conference to make recommendations in regard to the establishment of a Colonial Scientific and Research Service, has been issued. The cost of such a service is estimated to be £175,000 a year. The committee proposes that a council should be set up under a chairman appointed by the Secretary of State for the Colonies, a director and deputy director and the following members: The director of the Royal Botanic Gardens, Kew; the director of the Imperial Bureau of Entomology; the director of the Imperial

Bureau of Mycology; a chemist; a representative of veterinary science; a representative of the Imperial Institute; a representative of the Colonial Office, and a representative of the Empire Marketing Board. The principal functions of the council would be to administer a Colonial Agricultural Research Service, which would include an Empire chain of research stations maintaining *liaison* with the Empire Marketing Board, the creation of a clearing house of information and the organization of a "pool" of scientific workers.

UNIVERSITY AND EDUCATIONAL NOTES

THE Massachusetts Institute of Technology is named residuary legatee in the will of Henry P. Talbot, professor of chemistry, who died on June 18. Mrs. Talbot receives \$20,000, and is to have the income from the remainder and use of the home at 273 Otis street. At her death the trust is to be terminated and after \$83,000 in private bequests are paid the institute is to receive the residue. While use of the money is not restricted, it is suggested that a part or the whole be used to assist junior instructors to attend meetings of societies representing their professions.

YALE UNIVERSITY receives a bequest, said to amount to nearly \$500,000 under the will of Charles Colebrook Sherman, the income to be paid to Mrs. Sherman until her death or remarriage, when it is to be used for the maintenance of a fellowship. Mr. Sherman also left his library to the university.

AN additional gift of \$250,000 for the building of the George Herbert Jones Chemistry Laboratory has been made to the University of Chicago by Mr. Jones. In December Mr. Jones gave the university \$415,000 for the chemistry building which is to bear his name, and his added gift will make possible a larger structure, with consequent extension of facilities.

REORGANIZATION of the school of engineering at Oregon State Agricultural College has been effected by the board of regents with the establishment of an engineering experiment station and additional graduate work. Dean G. A. Covell, for thirty-four years a member of the state college faculty and head of the school of engineering since its establishment, has been made director of the experiment station and dean of the graduate work. S. H. Graf, professor of mechanics and materials, will be associate director. Harry S. Rogers, professor of hydraulics and irrigation engineering, formerly of the University of Washington, but for the last six years a member of the

Oregon Agricultural College staff, has been advanced to the deanship of the undergraduate school.

AT the recent dedicatory exercises of the Montgomery Ward Memorial Building of Northwestern University Medical School, Dr. L. B. Arey was installed as the first incumbent of the Robert Laughlin Rea professorship of anatomy. This chair was established by Mrs. Mollie Manlove Rea in memory of her distinguished husband, who was held by his contemporaries as the foremost anatomical teacher of his time in the west. Dr. Sam L. Clark, assistant professor of histology and neuroanatomy at Washington University Medical School, has accepted an appointment as assistant professor of anatomy.

DR. EZRA J. KRAUS, professor of botany in the University of Wisconsin, has joined the faculty of botany in the University of Chicago.

DR. BURTON M. VARNEY, of the U. S. Weather Bureau, has resigned from the assistant editorship of the *Monthly Weather Review* to accept an associate professorship in geography in the University of California at Los Angeles.

THE department of neuroanatomy and histology of the Washington University School of Medicine which was established in 1924 has been reunited with the department of anatomy, the union to take effect during the year 1928. Dr. Robert J. Terry, professor of anatomy, will be in charge of the reorganized department.

A. S. BESICOVITCH, of the University of Leningrad, has been appointed university lecturer in mathematics at the University of Cambridge for three years.

DISCUSSION

THE CHATTANOOGAN AGE OF THE BIG STONE GAP SHALE OF SOUTHWESTERN VIRGINIA

IN 1924¹ the writer called attention to the fact that the Chattanooga black shale in the type area, Chattanooga and vicinity, Tennessee, is divisible into three parts: (1) an upper, thin black shale, (2) a central, gray clay shale, and (3) a lower, thicker black shale. The outcrops of the shale were traced continuously to Lafollette, Tennessee, and Cumberland Gap, Virginia-Tennessee, where the tripartite division was again found. Last summer the writer was able, through the generosity of a grant from the Smith Fund of the University of North Carolina, to trace the Chattanooga shale from Cumberland Gap to the type locality of the Big Stone Gap shale at Big Stone Gap, Virginia. As a result of this study the following facts were brought out:

¹ *Amer. Jour. Sci.* (5) 7, 1924, pp. 24-26, 30.