

F. Randolph, of the United States Department of Agriculture and Cornell University.

Following the presentation of the award at the

luncheon, Dr. Novy will give an address on "Some Results of Microscopic Research Which have been of Significance for Human Welfare."—*A Correspondent.*

SCIENTIFIC NOTES AND NEWS

THE retirement is announced of Dr. T. Wayland Vaughan, director of the Scripps Institution of Oceanography of the University of California. He will be succeeded by Dr. Harald Ulrik Sverdrup, Norwegian oceanographer and meteorologist, since 1928 research associate of the Carnegie Institution of Washington. Dr. Sverdrup has spent a number of years in the Arctic, having been a member of the Norwegian North Pole expeditions on the *Maud*, from 1917 to 1925.

DR. RICHARD GOLDSCHMIDT, formerly department head at the Kaiser Wilhelm Institute for Biology in Dahlem, Germany, has been appointed to a professorship in the department of zoology of the University of California. As has been noted in SCIENCE, Dr. Charles Atwood Kofoid, for many years head of the department, retires at the close of the present academic year.

DR. WILLIAM E. CASTLE, of Harvard University, has retired and will become professor emeritus in September. Dr. Castle was appointed instructor in zoology in 1897 and became professor in 1908.

THE retirement is announced of Dr. Edward R. Cary, professor of geodesy and road engineering at the Rensselaer Polytechnic Institute. He has been a member of the faculty for forty-eight years.

DR. CHARLES MURRAY, head of veterinary research at Iowa State College, has been appointed acting dean of the Division of Veterinary Medicine, thus filling the vacancy created by the death of Dean C. H. Stange.

DR. H. J. MULLER, who has been on leave of absence for the past four years, has resigned from the faculty of the University of Texas. He has spent the last three years with the Russian Academy of Science, now at Moscow, and plans to continue his work in that institution.

DR. PETER DEBYE, professor of experimental physics at the University of Leipzig, has been called to a professorship in the University of Berlin.

THE honorary degree of LL.D. of the University of St. Andrews will be conferred at the graduation ceremonial to be held in June on Dr. J. E. Littlewood, Rouse Ball professor of mathematics at the University of Cambridge, and on Dr. E. W. Reed, emeritus professor of physiology at University College, Dundee.

ON the occasion of the visit of the British Medical

Association to the University of Oxford the honorary doctorate of science will be conferred on Sir George Newman, formerly chief medical officer of the British Ministry of Health; on Sir Cuthbert Wallace, of the Radium Commission, president of the Royal College of Surgeons; on Sir Henry Dale, director of the British National Institute for Medical Research; on Sir Walter Langdon Brown, formerly regius professor of physic at the University of Cambridge; on Dr. Robert Hutchison, consulting physician, London; and on Dr. Charles Singer, professor of the history of medicine at the University of London.

THE Royal College of Physicians, London, has elected to fellowship Sir Frederick Banting, professor of medical research at the University of Toronto; Dr. Robert T. Leiper, Courtauld professor of helminthology at the University of London, and Dr. Havelock Ellis.

THE honorary degree of doctor of engineering was conferred on E. T. Stannard, president of the Kennebec Copper Corporation, and on Louis S. Cates, president of the Phelps Dodge Corporation and a vice-president of the American Institute of Mining and Metallurgical Engineers, at the fiftieth anniversary graduation exercises on June 4 of the Michigan College of Mining and Technology, Houghton. Mr. Stannard gave the commencement address.

THE Lamme Medal, presented each year during the commencement of the Ohio State University in recognition of achievement in engineering, has been awarded to Ervin G. Bailey, vice-president and director of the Babcock and Wilcox Company of New York, manufacturers of water-tube boilers.

THE Henry Laurence Gantt Gold Medal of the American Management Association has been awarded "for distinguished achievement in industrial management as a service to the community" to Morris E. Leeds, president of the Leeds and Northrup Company, Philadelphia, Pa. This medal has been given annually since 1929 by the Institute of Management, the research group of the association, to individuals selected by a committee of award, half of whom are appointed by the institute and half by the American Society of Mechanical Engineers. Last year the recipient was Arthur H. Young, vice-president in charge of industrial relations of the United States Steel Corporation. The presentation medal to Mr. Leeds was

made at a dinner on June 4 at the Hotel Astor, New York, by Henry S. Dennison, president of the Dennison Manufacturing Company, Framingham, Mass., who was awarded the Gantt Medal in 1932. Harold B. Bergen, president of the institute, will preside.

Industrial and Engineering Chemistry writes that Erik Nielsen, research chemist at the Miner Laboratories, Chicago, Ill., has received notification from Denmark that he has been awarded a prize by the Industriraadet. Certain members of the Industriraadet have furnished funds to serve as prizes for the best suggestions with regard to increase of gainful employment of Danish workmen by means of new uses for Danish materials. In competition with 463 other contestants, Mr. Nielsen was awarded the 3,000-crown third prize for a suggestion pertaining to industrial use of apple pectin.

PROFESSOR M. T. MUNN has been put in charge of a new research division, to be known as the Division of Seed Investigations, which has been established at the New York State Experiment Station at Geneva. The division will handle the official seed inspection and will conduct researches into the physiology of germination, various phases of the problem of seed-borne diseases and other investigations pertaining to seeds.

PROFESSOR EUGENE D. MONTILLON, of the department of landscape architecture at Cornell University, has been appointed to the Ithaca City Planning Commission, succeeding Dean Dexter S. Kimball, of the College of Engineering, who has resigned. Dr. Ralph S. Hosmer, professor of forestry, is chairman of the commission.

DR. OTTO EGGERT, professor of geodesy at the University of Berlin, has been appointed director of the Geodetic Institute at Potsdam to succeed Dr. Ernst Kohlschütter.

GRANTS from the Committee on Scientific Research of the American Medical Association have been made to Dr. Philip Levine, bacteriologist at the Beth Israel Hospital, Newark, N. J., to aid him in his work on the "Specific Action of Bacteriophage in the Dysentery Group"; to Dr. Fae Donat Wood, of the department of zoology of the University of California at Los Angeles, toward a study of the distribution and virulence of *Trypanosoma cruzi*, the causative agent of American human trypanosomiasis in the southwestern United States, and to Dr. Robert H. Gault, director of the American Institute for the Deaf-Blind, for the continuance of work on the vibro-tactile senses.

DR. LUDWIG PINCUSSEN, formerly head of the biological laboratory of the Urban Hospital in Berlin, has been appointed research associate in the department of physiology of the Department of Medicine of the

University of Illinois, on a grant supplied by the Wander Company. He will work on the problem of chemical changes in relation to senescence, with particular reference to the influence of nutritional factors.

A COMMITTEE on the hygiene of housing, under the chairmanship of Professor C.-E. A. Winslow, of Yale University, has been created by the American Public Health Association. Other members of the committee include Rollo H. Britten, senior statistician, U. S. Public Health Service, Washington, secretary; A. R. Clas, director of housing, Federal Emergency Administration of Public Works; Colonel J. I. Connolly, of the Chicago Department of Health; Robert L. Davison, director of housing research, John B. Pierce Foundation, New York City; J. André Foulhoux, architect, New York City; Miss Greta Gray, University of Southern California; Dr. James E. Ives, senior physicist, U. S. Public Health Service, and H. A. Whittaker, sanitary engineer, State Department of Health, Minneapolis. This committee will cooperate with groups interested in the hygiene of housing through the Health Section of the League of Nations.

THE twenty-third, or Templeton Crocker, expedition of the department of tropical research of the New York Zoological Society has returned. It was carried on under the directorship of Dr. William Beebe, who, together with three members of his staff, John Teevan, Miss Jocelyn Crane and George Swanson, were invited by Mr. Templeton Crocker as guests on his yacht *Zaca*. Two months were spent in the Pacific with prolonged stops at Cape San Lucas, Inez Bay in the Gulf of California and Clarion Island. Special objects of research were tunas, whale sharks, intensive dredging on the Punta Arena and Gorda Banks and as types of isolated oceanic islands, comparison of Clarion with Bermuda.

The Harvard Alumni Bulletin states that Dr. Thomas A. Jaggar, chief of the Section of Volcanology of the U. S. Geological Survey and now stationed at Kilauea Observatory, Hawaii National Park, has been invited by the Royal Society of London to accompany a mission to Montserrat, an island in the West Indies, in connection with the earthquake developments there. He started for the island several weeks ago, going by way of San Francisco, Jamaica and the Virgin Islands. He expects to be away about two months and to return to Hawaii by way of the state of Washington.

DR. T. G. YUNCKER, professor of botany at DePauw University, is conducting an expedition to central Honduras this summer for the purpose of making plant collections. Assisting him will be Ray Dawson, graduate student in botany at Yale University, and Howard Youse, senior botany student at DePauw.

The party plans to land at Puerto Cortez, then proceed to Siguatepeque below Lake Yojoa, where several weeks will be spent collecting about Lake Yojoa and in the mountains about Siguatepeque.

DR. JAMES W. JOBLING, of the department of pathology of the College of Physicians and Surgeons, was in Puerto Rico during the month of April as representative of Columbia University at the annual meeting of the Special Board of Trustees of the School of Tropical Medicine at San Juan. Dr. C. U. Lee, of Peking Union Medical College, is now in Puerto Rico, where he plans to carry out certain investigations in diseases caused by parasites.

DR. E. C. AUCHTER, assistant chief of the Bureau of Plant Industry and principal horticulturist in charge, Division of Fruit and Vegetable Crops and Diseases, U. S. Department of Agriculture, addressed the chapter of Sigma Xi at Cornell University at the annual banquet on May 20, following the initiation of the newly elected members. His subject was: "Plant Research in the Department of Agriculture."

DR. MELVILLE J. HERSKOVITS, professor of anthropology at Northwestern University, addressed the University of Cincinnati chapter of Sigma Xi on "Race and Human Heredity" on May 19, on the occasion of the initiation meeting.

DR. GUY STANTON FORD, dean of the Graduate School of the University of Minnesota, and Dr. F. K. Richtmyer, dean of the Graduate School of Cornell University, were the principal speakers at the twenty-fifth anniversary of the Graduate School of the Ohio State University. Dr. William McPherson, professor of chemistry, has been dean of the school since its establishment. At the dinner in the evening Dr. George W. Rightmire, president of the university, was toastmaster. The speakers were Dean Fernandus Payne, of Indiana University, for the Association of American Universities; President Edmund D. Soper, of Ohio Wesleyan University, for the Ohio College Association, and Dean Daniel Luther Evans, of the College of Wooster, for the doctors of philosophy of Ohio State University.

A SYMPOSIUM on "Scientific Aspects of Flood Control," sponsored by the Ecological Society of America jointly with the American Association for the Advancement of Science, will be held in the Strong Auditorium of the University of Rochester at 3:00 P. M. on June 18. Dr. E. G. Conklin, president of the association, will introduce the presiding officer, Dr. W. S. Cooper, president of the Ecological Society. The field will be covered by three speakers, as follows: Dr. F. A. Silcox, chief, National Forest Service, "Forests and Flood Prevention"; Dr. W. C. Lowdermilk, associate chief,

U. S. Soil Conservation Service, "Agricultural Land Use and Floods"; Dr. Morris L. Cooke, administrator, Rural Electrification Administration, "On the Relations of Engineering Science to Flood Control."

THE annual meeting of the American Society of Zoologists will be held with the American Association for the Advancement of Science in Atlantic City on Tuesday, Wednesday and Thursday, December 29, 30 and 31. Professor H. B. Goodrich, the secretary, writes: "This is a change from the original plan to meet in Washington. Investigations made by the American Association for the Advancement of Science indicated that in view of the early date of the national presidential inauguration it would be desirable to shift all scientific meetings elsewhere. A symposium on 'Studies in Experimental Populations' will be held on Tuesday afternoon. The annual dinner is scheduled for Wednesday evening. A number of special discussion sections in addition to the regular program are being arranged."

THE twenty-fifth congress of the Italian Society for the Advancement of Science will be held this autumn at Tripoli, under the presidency of Marshal Balbo, Governor of Libya.

Nature reports that the eighth International Congress of Theoretical and Applied Limnology, which was to have been held in Paris this year, has been postponed until 1937, when the world exhibition will take place.

THE series of meetings to be held under the auspices of the International Standards Association in Budapest this summer will take place during the two weeks beginning on August 31 and not on September 14, as tentatively announced.

THE second congress of the International Association for the Study of Solar, Terrestrial and Cosmic Radiations will be held at La Malou, Hérault, on July 15, 16 and 17.

APPLICATIONS must be on file with the U. S. Civil Service Commission, at Washington, D. C., not later than June 22 for the position of principal biochemist in the Bureau of Chemistry and Soils of the Department of Agriculture at a salary of \$5,600 a year. Vacancies in this position in Washington, D. C., and in the field, and in positions requiring similar qualifications will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer or promotion. The salary named above is subject to a deduction of 3½ per cent. toward a retirement annuity. Competitors will not be required to report for examination at any place, but will be rated on their education and experience on a scale of 100.

IN cooperation with the Federal Office of Education, the Smithsonian Institution on Sunday, June 7, will inaugurate a series of radio broadcasts in the form of dramatic sketches dealing with its current scientific investigations and with the natural history, historical and other material in its collections.

THE first number of the new *Journal of Symbolic Logic* has recently appeared. The editors are Professors A. Church, of the department of mathematics at Princeton University, and C. H. Langford, of the department of philosophy at the University of Michigan. The journal is published by the Association for Symbolic Logic, whose secretary is Professor C. A. Baylis, of Brown University, and provides a means of contact between mathematicians and philosophers working in the field of symbolic logic.

The *St. Louis Post-Dispatch* states that a federal grant of about \$12,000 a year to St. Louis County, in connection with the proposed reorganization of the County Health Department, has been approved by the United States Public Health Service. First steps under the plan will be appointment by the County Court of a new county health officer, who will supersede the present health commissioner, Dr. Edwin L. Sheahan; a director of sanitation and a superintendent of public health nurses, all of whom must be approved by the

state and federal health services. Their salaries, paid from the grant, will be about \$5,000 a year for the health officer; \$3,200 for the director of sanitation and \$2,400 for the superintendent of nurses. Each will receive also \$600 a year for transportation expenses. On appointment, the three new officers will undertake the reorganization of the department according to standards fixed by the federal service. It is also reported that an additional \$8,000 to \$10,000 probably will be made available to the county by Washington University, which plans to open a department of public health in the medical school, probably next September, which would use the reorganized County Health Department as a training ground for students.

It is reported in the daily press that the Swedish government plans to erect in Stockholm a medical center the cost of which is estimated at \$10,000,000. It is stated that the main building will be H-shaped, with a roof for sun bathing, and will be seven stories high. It will contain operating theaters, lecture halls, wards and laboratories. In addition there will be a children's hospital, a building for psychiatry, rheumatism and cancer clinics, a swimming pool, football grounds, tennis courts, a church, concert halls, and home for staff doctors, students and nurses. The plans were originated in 1931 and work on roads and excavations started in 1932.

DISCUSSION

IS GEOLOGY A SCIENCE?

THE position of geology in relation to the sciences is an anomalous one. The so-called physical and biological sciences can be readily arranged in linear fashion passing from mathematics through astronomy, astro-physics, physics, chemistry and biology to anthropology, with the various branches of each clustered around a central position. Where, in this family of sciences, does geology logically belong? It is considered by some to belong in the physical science division, but its precise position is not obvious. In truth, by its use of facts and techniques from other sciences, geology is related, along part of its common boundary, to each of the fundamental sciences, and might, because of its dedication to learning the history of the earth, be placed in a central position, with the others around it. On the contrary, it may be judged by some as not strictly a member of the true family line, but merely a sort of peripatetic relative, going the rounds of more respectable abodes.

The writer has been led to wonder if the latter figure does not really represent a too common conception. He has seen a number of substantial histories of science in which geology is scarcely mentioned or, if mentioned at all, is named only in discussing some

special theory, such as organic evolution, isostasy or the use of radioactive substances in determining the age of the earth. If there is a good history of science which deals with the growth of methods and understanding in geology at a length comparable to that bestowed on the other sciences, a reference to it would be appreciated. Of course there are several good histories of geology itself or of one or more of its branches.

Geology is primarily a field science, and despite its borrowing of methods from other sciences, its main reliance for learning the history of the earth is the collection, classification and logical interpretation of terrestrial facts, these mostly simple unembellished facts about kinds and relationships of rocks. Growth of science in the last few decades has involved an increasing precision and scope of laboratory measurements made on the greatly increased variety of materials and objects available for study. Compared to the swift change of some of the stunts of one decade into the standard procedures of the next in many of the sciences, the progress of geology is a plodding one, both figuratively and literally.

The doctoral candidate in physics works in an institutionally provided laboratory, often capably or bril-