

priated by the state legislature for the maintenance and extension of this equipment, and it is believed that the same liberal policy will be continued.

By offering these research fellowships at \$500, and throwing them open to graduates of both American and foreign universities, the station hopes to secure a picked body of men imbued with the true spirit of genuine investigators who will do graduate work of high grade. It is expected that valuable results will accrue to the station, and that a body of experts will be developed, some of whom may be attached later to the regular corps of station investigators. A circular giving full information will soon be issued, and can be obtained upon application to the director of the Engineering Experiment Station, Urbana, Illinois.

L. P. BRECKENRIDGE,

Director of the Engineering Experiment Station.

UNIVERSITY OF ILLINOIS,

URBANA, ILL.,

February 23, 1907

THE CARNEGIE INSTITUTE

MR. ANDREW CARNEGIE on April 6 notified the president and board of trustees of the Pittsburgh Carnegie Institute that he was sending them \$6,000,000. Of this amount \$5,000,000 is United States Steel Corporation 5 per cent. bonds and \$1,000,000 in cash. The cash is to be used in erecting more technical school buildings. The bonds are an endowment. One million dollars is to be added to the endowment of \$2,000,000 already given the schools, and the other \$4,000,000 is to be added to the institute's present \$2,000,000 endowment.

In his letter, as published in the daily papers, Mr. Carnegie says:

The director and teachers of the Technical Schools participate in the pension fund established by me for the advancement of learning, and this should be availed of. Those of the other departments do not. A pension system is, therefore, to be established for them out of the endowment fund; after the death of the recipient the pension to be continued to the widow in all cases where needed.

I desire gratefully to acknowledge my unpayable indebtedness to yourself and the trustees for services which have resulted in such complete triumph. My highest hopes will be realized if the future yields such golden harvest as the past.

As we have already announced, the dedication of the new building of the institute, erected by Mr. Carnegie at the cost of \$5,000,000, will take place on the afternoon of April 11, and will be attended by many distinguished guests from Europe and the United States. The program which has been arranged in connection with the ceremonies will last for three days. In addition to a reception and inspection of the buildings on Thursday morning and a concert in the evening, there will be on Friday a reception at the Carnegie Technical Schools, a presentation of addresses, and in the afternoon speeches by distinguished guests and in the evening a dinner by the trustees in honor of Mr. and Mrs. Carnegie and invited guests. On Saturday morning honorary degrees will be conferred on foreign guests by the Western University of Pennsylvania, and in the afternoon there will be an excursion on the river and a visit to the Homestead Steel works of the Carnegie Steel Company.

SCIENTIFIC NOTES AND NEWS

THE spring meeting of the council of the American Association for the Advancement of Science will be held in the Assembly Hall of the Cosmos Club, Washington, D. C., on the afternoon of April 17, 1907, at 4:45 P.M.

THE annual session of the National Academy of Sciences will be held in Washington, D. C., beginning on Tuesday, April 16, at 11 A.M. The place of meeting will be the National Museum.

THE American Philosophical Society will hold its annual meeting at Philadelphia on April 18, 19 and 20.

DR. GEORGE OTIS SMITH has been appointed director of the U. S. Geological Survey to fill the vacancy caused by the election of Dr. Charles D. Walcott to the secretaryship of the Smithsonian Institution. Dr. Smith received the bachelor of arts degree from Colby College in 1893, and the doctorate of philosophy

from the Johns Hopkins University in 1906, in which year he was appointed assistant geologist to the Geological Survey, being made geologist in 1901. He has had charge of the geological work in New England, and is now geologist in charge of petrology.

ON March 13, a banquet was tendered to Dr. Charles D. Walcott, by the members of the U. S. Geological Survey, on the occasion of his resignation as director to become secretary of the Smithsonian Institution. Two hundred and forty-four persons were present. Colonel H. C. Rizer presided, and addresses were made by the following men: Mr. Bailey Willis for the geologic branch, Mr. W. M. Beaman for the topographic branch, Mr. M. O. Leighton for the water resources branch, Mr. S. J. Kübel for the division of engraving, and Mr. F. H. Newell for the reclamation service. Dr. Charles B. Dudley spoke of the fuel-testing work of the Geological Survey. A letter from Mr. Arnold Hague was read, as also a telegram from Mr. Henry Gannett. Mr. Gifford Pinchot paid a tribute to Mr. Walcott in relation to the forestry work of the government. The closing address was by the Hon. James R. Garfield, secretary of the interior.

LORD LISTER celebrated his eightieth birthday on April 5. Congratulations were received from all parts of the world, and a committee acquainted him with the plan to republish his scientific papers.

M. JULES TANNERY, professor of differential and integral calculus at the Sorbonne, has been elected a member of the Paris Academy of Sciences.

PROFESSOR J. BURKITT WEBB, of the chair of mathematics and mechanics, and Professor William E. Geyer, of the chair of physics, of the Stevens Institute of Technology, will retire from active service at the close of the present academic year.

PROFESSOR W. O. CROSBY, in charge of the work in economic geology in the Massachusetts Institute of Technology, will retire from active teaching at the end of this year on the Carnegie Foundation for the Advancement of Teaching. As student and teacher, Professor

Crosby has been connected with the Institute of Technology continuously for a period of thirty-six years, and the connection is to continue; but the time heretofore given to routine instruction will now be devoted to research.

OFFICERS of the Michigan Academy of Sciences have been elected as follows: *President*, Mark S. W. Jefferson, State Normal School, Ypsilanti; *secretary and treasurer*, E. E. Bogue, Michigan Agricultural College; *assistant secretary*, Walter G. Sackett, Michigan Agricultural College; *librarian*, G. P. Burns, Ann Arbor; *vice-president, botany section*, W. E. Praeger, Kalamazoo; *zoology*, A. G. Ruthven, Ann Arbor; *geology*, Professor E. H. Krauss, Ann Arbor; *sanitary science*, J. G. Cummings, Ann Arbor.

PROFESSOR W. M. DAVIS, of the department of geology and geography and dean of the graduate school, will represent Harvard University at the dedication of the new building of the Carnegie Institute in Pittsburgh.

PROFESSOR CARL HESS, of Würzburg, will be a guest of the section on ophthalmology of the American Medical Association at the Atlantic City meeting in June. He comes in April to deliver lectures before the universities of Pennsylvania, Chicago and New York.

DR. HERBERT J. WEBBER, chief of the Division of Plant Breeding Investigations of the Department of Agriculture, assumed last week the duties of the chair of plant biology at Cornell University.

DR. J. W. BLANKINSHIP, recently professor of botany at the Montana Agricultural College, is now connected with the Missouri Botanical Garden, St. Louis, Mo.

MR. C. W. GILMORE, of the National Museum, under a grant just approved by the secretary of the Smithsonian Institution, will be sent to Alaska to undertake paleontological explorations with a special view to securing specimens of fossil mammals. Continuing his work over two seasons, 1907 and 1908, he will confine his explorations mainly to the Yukon Basin region southeast of Norton Sound, and to the Buckland River region southeast of Kotzebue Sound. Mr. Madren, who was Mr.

Gilmore's predecessor in the Alaskan field, found many remains of mammoth, large bison and horses of a peculiar type.

PROFESSORS R. T. JACKSON and J. B. WOODWORTH, of the department of geology and geography of Harvard University, will conduct a paleontological and geological excursion to Yorktown, Va., during the April recess, leaving Boston on Friday night, April 12.

DR. SCHILLING, head of the department of tropical hygiene in the Berlin Institute of Infectious Diseases, has been granted by the government eight months leave of absence in order that he may pursue researches on immunization against tsetse fly disease. In the course of his work he will make an expedition to the Congo.

DR. JOSEPH LARMOR, Lucasian professor of mathematics at Cambridge University and secretary of the Royal Society, presented an address before the Washington Academy of Sciences, on April 2, 1907, on 'Modern Views of the Ultimate Structure of Matter.' It was discussed by Professor F. W. Clarke, of the U. S. Geological Survey, and Professor A. G. Webster, of Clark University.

MR. ELIHU ROOT, Secretary of State, has accepted the invitation of Yale University to deliver the annual Dodge course of lectures on 'The Responsibilities of Citizenship.' He will speak on May 13, 14, 20 and 21.

DR. L. A. BAUER gave an address, illustrated by lantern slides, before the Society of Arts of the Massachusetts Institute of Technology at Boston on March 28 on 'Recent Results of Terrestrial Magnetic Observations.'

LORD AVEBURY will preside at the annual *soirée* of the Selborne Society, which will be held in the halls of the Civil Service Commission on April 26. Illustrated addresses will be given, and there will be a display of microscopes and objects of interest.

M. EDOUARD HOSPITALIER, professor of electrotechnic at Paris, has died at the age of fifty-four years.

THE death is also announced of Dr. Rudolf Aderhold, director of the Biological Institute

for Agriculture and Forestry at Berlin, at the age of forty-two years.

ON May 8, there will be civil service examination for the positions of laboratory assistant and assistant physicist and laboratory assistant and assistant chemist in the Bureau of Standards, the salaries varying from \$900 to \$1,600.

THE third regular meeting of the Botanists of the Central States was held at the University of Wisconsin, Madison, Wisconsin, March 28-30. There was a representative attendance of botanists at the meeting, and a number of papers were read. One session was devoted to the demonstration of microscopic preparations. Professor F. C. Newcombe, of the University of Michigan, the retiring president read an address entitled 'A Need in Botanical Science in America.' Professor T. H. Macbride, of the University of Iowa, was elected president for the ensuing year.

THE seventy-ninth Congress of German Men of Science and Physicians will be held at Dresden this year from September 15 to 21.

UNDER the auspices of the University of Illinois, a commission has been organized for the purpose of conducting experiments on the effect on the consumer of the preservatives in common use in food stuffs, especially meats. The work will be done under the direction of Professor H. S. Grindley, of the department of physiological chemistry of the university, and with him on the commission are R. H. Chittenden, professor of physiological chemistry, Yale University; J. J. Abel, professor of pharmacology, Johns Hopkins University, and A. P. Mathews, professor of physiological chemistry, University of Chicago. The expense of the investigations is to be borne in part by the university and in part by some of the beef-packing houses of Chicago.

MR. FRANK LEVERETT and other members of the United States Geological Survey are authors of two papers on flowing wells and municipal water supplies of the southern peninsula of Michigan. The results of their studies, so far as they apply to the southern counties, are embodied in Water-Supply and Irrigation Paper No. 182; so far as they apply

to the middle and northern counties, in Water-Supply and Irrigation Paper No. 183, both of which are free publications. In the course of glacial investigations made under the direction of Professor T. C. Chamberlin during the last five years, Mr. Leverett collected a large amount of data on water supplies. These investigations resulted in a partial acquaintance with conditions in about 200 separate flowing-well districts and brought out matters of such exceptional importance that arrangements were made to examine each of the flowing-well districts in the state sufficiently to determine its essential characteristics, present state of development, and probable capacity for future development. It was arranged also that attention should be given to the quality of various classes of waters, both surface and underground, as well as water supplies of the cities and villages. By special arrangement with Dr. A. C. Lane, the state geologist, the large amount of material which had accumulated at his office relative to other classes of water supply was embodied in these reports.

UNIVERSITY AND EDUCATIONAL NEWS

By the will of Mr. William C. Eggleston, Yale University has received \$100,000 as an additional endowment for the library. By the Ross legacy the university has \$75,000 for maintenance in addition to the sum of about \$200,000 used for the building. Yale University has also received about \$95,000 as residuary legatee, after the death of his widow, of the late William L. McLane.

MR. BENJAMIN THAW, of Pittsburg, has given \$50,000 to the fund for the new building of the Western University of Pennsylvania.

WE regret to learn that the Macdonald engineering building of McGill University was completely destroyed by fire on April 5, involving a loss of about \$750,000, of which \$450,000 is covered by insurance.

THE College of the City of New York will celebrate the sixtieth anniversary of its foundation on May 7.

THE University of Iowa will this year celebrate the sixtieth anniversary of its founda-

tion. Secretary Taft will give the commencement address on June 12.

THE University of Berlin will celebrate the centenary of its foundation in the autumn of 1910. As part of the ceremonies a monument will be unveiled in memory of its first rector, Johann Gottlieb Fichte, the philosopher.

THE Divinity School of Yale University has proposed changes in its curriculum, its scope and its relations to other departments which have been adopted by the corporation. The new curriculum provides, in addition to the regularly recognized courses of theological study, two other main groups of electives in which the study of Hebrew is not required for the degree of B.D. Sciences and philosophy are to be specialized in one of these groups of study and elementary law and sociology in the other. These subjects will be pursued by the divinity students for the most part in other departments of the university.

PROFESSOR B. E. FERNOW, lately called to the professorship of forestry at State College, Pennsylvania, which he had temporarily accepted, has been appointed dean of the Faculty of Forestry at the University of Toronto. It is proposed to organize the most complete system of forestry education on this continent, the university undergoing now a reorganization and broadening of its policy generally. It is expected that a large forest reservation will be set aside for use of the school, and university extension work of the broadest kind is contemplated.

AT Teachers College, Columbia University, Dr. Maurice A. Bigelow has been promoted from adjunct professor to professor of biology.

THE vacancy in the chair of biology in Lake Forest College, caused by the removal of Professor James G. Needham to Cornell University, has been filled by the election of Dr. Cornelius Betten, previously assistant professor in the same department.

MR. W. MUIR EDWARDS, lecturer in mathematics and civil engineering at McGill University, has been appointed assistant professor of civil engineering.