

of the university as distinct from its architectural effects is little harmed. The most effective part of its architecture, the inner arcades with their Spanish arches and towers, is wholly undisturbed.

D. S. J.

REPORT OF THE STANFORD UNIVERSITY ENGINEERS
ON THE INJURIES TO THE CLASS ROOMS AND
LABORATORIES FROM THE EARTHQUAKE
OF APRIL 18, 1906.

AFTER a careful examination of the buildings used for university purposes, including Roble and Encina Halls, we find that the damage from the recent earthquake is much less than was anticipated.

The buildings of the inner quadrangle, the one-story buildings of the outer quadrangle (with one exception), the zoology building, the physiology building, the assembly hall, the library, the old engineering building, the machine shop, the foundry and the mechanical laboratory are substantially intact and can be used after a few minor repairs.

The four corner two-story buildings and the small one-story physics building of the outer quadrangle, the forge shop, the woodworking shop and the chemistry building will require partial rebuilding of some of the walls.

In Encina Hall the south walls of the east and west wings will require partial reconstruction, also those portions injured by the two falling stone chimneys. The fall of one of the chimneys, which tore through the floors to the basement, caused the death of one student. Aside from the damage noted above the building as a whole is uninjured and perfectly safe.

The damage to Roble Hall is confined to the two holes torn in the floors by the falling chimneys. The remainder of the building shows practically no evidence of having passed through an earthquake.

In the opinion of the committee, such of the buildings mentioned above as are necessary for carrying on the university work can easily be made ready for occupancy and safe use in time for the opening of the university on August 23.

Our full and detailed examination of the buildings from foundation to roof shows that the actual damage to their stability is less

than might be inferred from external appearances.

Signed by the committee:

CHARLES B. WING, structural engineer,
WILLIAM F. DURAND, mechanical engineer,
ARTHUR B. CLARK, architect,
CHARLES E. HODGES, architect,
CHARLES D. MARX, civil engineer, *ch'man.*

SCIENTIFIC NOTES AND NEWS.

AT the Washington meeting of the American Physical Society it was decided to hold the next meeting in Ithaca, N. Y., in conjunction with the meeting there of the American Association for the Advancement of Science, beginning on June 29. At this time also the new physical laboratory of Cornell University, which has just been completed, will be formally dedicated.

THE additional appropriation of \$5,000 for the agricultural experiment stations, provided by the Adams bill, has now been paid. This bill increased the present appropriation of the agricultural stations under the Hatch and Morrill acts by \$5,000 for the year ending next June, and by an additional \$2,000 annually above the amount of the preceding year for the next five years. At the end of the five years this will amount to an increase of \$15,000, bringing the total appropriation to each experiment station to \$30,000 annually. The funds are to be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, with due regard to the varying conditions and needs of the states in which the stations are located.

THE *Osservatore Romano* officially announces that the Rev. John George Hagen, director of the observatory at Georgetown University, is in Rome and will be appointed director of the Vatican Observatory.

PROFESSOR FLORIAN CAJORI, dean of the Engineering School and professor of mathematics in Colorado College, has recently been elected a member of the Italian Mathematical Society—Circolo Matematico di Palermo. Professor Cajori has about finished his researches on

the history of arithmetic, algebra, theory of equations and theory of numbers from the period 1759 to 1799, and the results will soon be published in Volume IV. of Professor Cantor's 'Vorlesungen über Geschichte der Mathematik.'

IN honor of Professor Trendelenburg, of Leipzig, the German Medical Society arranged a special meeting at the Academy of Medicine, New York City, on April 30. Professor Trendelenburg delivered an address.

MR. A. LAWRENCE ROTCH, director of the Blue Hill Meteorological Observatory, has commenced a fourth series of experiments with *ballons-sondes* at St. Louis, from which it is hoped to determine the seasonal change of temperature at great heights in the free air. This investigation is being conducted with a grant from the Hodgkins fund, held by the Smithsonian Institution.

DR. FREDERICK G. NOVY, professor of bacteriology in the University of Michigan, and Professor A. Laveran, of the Pasteur Institute, Paris, are the official speakers on the subject 'Preventive Inoculations against Protozoal Diseases' before the Section on Pathology and Bacteriology of the Lisbon International Congress of Medicine.

MR. D. BRAINARD SPOONER, a graduate of Stanford University, now in Leipzig, has been appointed by the British government director of archeological investigations in northwest India.

DR. C. K. EDMUNDS, professor of physics and electrical engineering, Christian College, Macao, China, made magnetic observations during the winter vacation under the auspices of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington at ten stations in southeastern China and on the Island of Hainan.

MR. EDGAR R. WAITE, zoologist in the Australian Museum at Sydney, has been appointed curator of the Canterbury Museum at Christchurch, New Zealand.

A MESSAGE from Dr. Sven Hedin, the Swedish explorer, dated April 10, announces his arrival in Seistan after an extremely in-

teresting journey *via* Jandak, Turoot, Khur, Tabbas, Naiband and Neh, in the course of which he crossed the Dasht-i-Kavir, the Great Salt Desert, three times. The explorer says he is in splendid health, and has collected material for a great work on eastern Persia. He has made a map of 162 sheets, has taken hundreds of photographs and sketches, and has formed a collection of specimens of rocks.

PROFESSOR HUGO DE VRIES delivered last week the third Spencer Trask lecture at the New York City College, his subject being 'Association of Characters in Plant Breeding.'

PROFESSOR ERNEST RUTHERFORD, of McGill University, is to deliver the following lectures at the University of Illinois: April 30, 'Cathode and Röntgen Rays'; May 1, 'Electronic Theory of Matter'; May 2, 'Radioactive Substances and their Radiations'; May 3, 'Passage of Electricity through Gases'; May 4, 'Radium and its Transformations'; May 5, 'Radioactive State of the Earth and Atmosphere.'

WE regret to record the death, on April 13, of Walter F. R. Weldon, F.R.S., Linacre professor of comparative anatomy at Oxford University, and well known for his zoological researches, at the age of forty-five years.

THE United States Civil Service Commission announces examinations as follows: On May 16, to fill such vacancies as may occur in the positions of laboratory assistant, assistant physicist, and assistant chemist in the Bureau of Standards, at salaries varying from \$900 to \$1,600 per annum, and vacancies as they may occur in any branch of the service requiring similar qualifications. On June 6, in the position of assistant in the laboratory, \$1,200 per annum, Bureau of the Mint, Treasury Department, and similar vacancies as they may occur. On June 6-7, six vacancies in the position of aid in the Coast and Geodetic Survey, at \$720 per annum each, and similar vacancies as they may occur in that survey. As the commission has experienced considerable difficulty in securing suitable candidates to meet the needs of the service, qualified persons are urged to enter this examination.

THE laboratories of the Rockefeller Institute for Medical Research at Avenue A and East Sixty-sixth Street, New York City, will be opened on May 11, at 4 P.M. Addresses will be made by President Charles W. Eliot, of Harvard University; President Nicholas Murray Butler, of Columbia University; Dr. William H. Welch, president of the board of directors, and Dr. Luther E. Holt, secretary of the board of directors.

THERE will be a scientific exhibit at the Harvard Medical School in connection with the approaching Boston meeting of the American Medical Association. Those who are willing to contribute to this exhibit should write either to Dr. F. B. Wynn, Indianapolis, or to Dr. W. T. Councilman, Boston.

THE New York Section of the Society of Chemical Industry will devote the meeting of Friday evening, May 25, to a symposium on color photography, at which meeting any new facts or specimens as examples of this new method of illustrating can be presented by applying to the secretary, Dr. H. Schweitzer, 128 Duane Street, New York City, or to Dr. George F. Kunz, 405 Fifth Avenue.

Nature states that on behalf of the family of the late Professor Manuelli, of Modena, Herr T. Waitzfelder has presented the Munich Museum with an interesting collection, in which are some original pieces of apparatus used by Galvani and other Italian investigators, together with some pieces of alchemistic apparatus.

A *Congrès de l'Alliance française et des Sociétés de Géographie* will be held at Marseilles in the middle of next September, under the presidency of M. Charles Roux. The congress is to be held at the National Colonial Exhibition at Marseilles, which is open from April 15 to November 15.

ON April 17 the free alcohol bill was passed by the House of Representatives by a vote of 224 to 7.

THE State Cancer Laboratory, Buffalo, will receive this year \$21,000 from the state, \$3,000 of which will be devoted to meet the deficit of last year.

FOREIGN exchanges state that a sum of \$150,000 has been voted for the building of the new observatory at Bergedorf, with a further sum of \$75,000, spread over two years, for equipment.

ANNOUNCEMENTS of the work offered at the Lake Laboratory of the Ohio State University have recently been issued and show some decided additions to those previously available. The staff of instructors has been increased to seven, and includes besides the director Professor F. L. Landacre, O.S.U.; Dr. W. E. Kellicott, Barnard College, Columbia University; Professor L. B. Walton, Kenyon College; Professor Malcolm Stickney, Denison University; Professor E. L. Rice, Ohio Wesleyan University, and Mrs. Harriet Gilbert, Painesville High School. Courses in general zoology, embryology, entomology, ichthyology, ornithology, invertebrate morphology, experimental zoology, vertebrate comparative anatomy and research work in zoology, general botany, ecology and special courses in botany. The laboratory also offers free tables to investigators who are prepared to do independent work. The courses of instruction open on June 25 and close on August 3, but investigators may use the laboratory for additional time if desired. For detailed information as to courses or copies of the announcement, application should be made to the director, Professor Herbert Osborn, Columbus, Ohio.

Two parties consisting of 105 junior engineering students of the University of Wisconsin spent the Easter recess visiting a large number of the important electrical and machinery plants in the east and the west. The western party, consisting of seventy-five students, inspected Chicago and Milwaukee car shops, electric plants, street railway and lighting power stations, foundries, ship yards and telephone exchanges, and similar works at Lockport and Joliet. The eastern party of thirty made a tour of the electrical power stations at Niagara Falls and Buffalo; the Westinghouse electrical machine and air brake plant; the Nernst Electrical Lamp Co., Pittsburg; the Brooks Locomotive works, at

Dunkirk; and the Homestead and McKeesport iron mills and furnaces.

A RECENT paper by A. W. Rogers, director of the Geological Survey of Cape Colony, South Africa, on the 'Campbell Rand and Griquatown series in Hay' (Trans. Geol. Soc. S. Africa, IX., 1906, pp. 1-9) gives among other things an account of a newly discovered series of glacial beds in the Griquatown series. The boulders included have beautifully striated surfaces, and the deposit itself is characterized as a very well developed glacial till, often thoroughly indurated, so that the boulders can not be broken from it. This deposit is of more ancient date than the Permian Dwyka formation, and is probably of early Paleozoic time; thus adding another curious problem to South African geology.

UNIVERSITY AND EDUCATIONAL NEWS.

It is proposed, in connection with the opening next September of the new laboratories of the Harvard Medical School in Boston, to inaugurate a new system of advanced instruction in the medical sciences, designed especially to meet the needs of those desiring to pursue any of these branches as a profession. The system includes the organization of a new department of comparative anatomy, which has been placed in charge of Dr. Charles S. Minot, whose appointment was recently announced in this journal. The instruction in this department will be confined for the present at least to electives for fourth-year medical students and for graduates. The position of instructor in comparative anatomy has been established with a salary of probably \$1,200. Candidates for this appointment should apply to Dr. Charles S. Minot, Harvard Medical School. The instructor will have charge of animal dissection, and will be expected to carry on original research subject to the approval of the head of the laboratory. The field of research will not be prescribed. The investigations already planned are in the domain of the comparative morphology of vertebrates. The laboratory is large and will be well equipped and furnished with a good working library.

There will be special facilities for work in comparative embryology.

THE board of trustees of the Connecticut Agricultural College has authorized the executive committee of the board to receive and accept the Edwin Gilbert bequest consisting of a farm of 350 acres at Georgetown, Conn., together with a fund of \$60,000 for the maintenance of the farm. The tract of land is to be used for experimental purposes in connection with the work of the agricultural college, but it is not intended in any sense to establish a branch of the college at Georgetown.

MR. LE ROY ABRAMS, assistant curator of the division of plants, U. S. National Museum, has been appointed assistant professor of systematic botany at Stanford University. Dr. E. C. Franklin, associate professor, has been promoted to a full professorship of organic chemistry and Dr. H. S. Blichfeldt has been promoted to an associate professorship of mathematics.

DAVID SAMUEL SNEDDEN, associate professor of education in Leland Stanford Junior University, has been appointed adjunct professor of educational administration in Teachers College, Columbia University; Dr. Kate Gordon, associate professor of psychology in Mt. Holyoke College, has been appointed instructor in educational psychology, and Miss Jean Broadhurst, of the Trenton (N. J.) Normal School, instructor in nature study.

THE board of regents of the University of Nebraska has made the following promotions: G. R. Chatburn, professor of applied mechanics; E. L. Hinman, professor of philosophy; Benton Dales, associate professor of chemistry; J. H. Gain, associate professor of animal husbandry; R. A. Lyman, assistant professor of pharmacodynamics; L. W. Chase, assistant professor of farm mechanics; F. D. Barker, adjunct professor of zoology; G. A. Loveland, assistant professor of meteorology. Professor H. R. Smith has been appointed head of the department of animal husbandry; Professor T. L. Lyon has been made professor of agronomy in the Agricultural Experiment Station, and F. D. Heald, professor of agricultural botany.