

prepared over camp fire. Study was made while traveling of the animals, birds and plants, the nature of the country and the character of the soil, and lectures were given each day. The party left Oberlin on June 20 and returned on August 27 all in good health and reporting a most successful and enjoyable trip. For next summer a different trip is planned, through Colorado and Estes Park to California and the Yosemite.

It is stated in *Nature* that the Swedish Academy of Science has reported favorably on a request by Professor J. G. Andersson, formerly director of the Swedish Geological Survey, for a government grant of 90,000 kroner towards scientific researches and collections in China, where Dr. Andersson is now geological adviser to the Chinese government. It is hoped that the Swedish Riksmuseum will thus receive rich collections in paleontology, prehistory and zoology, but, to comply with conditions laid down by Professors Andersson and Witman, the fossil vertebrates will go to Upsala.

DR. JAMES R. ANGELL, on leave of absence as head of the department of psychology and dean of the faculties of the University of Chicago, now chairman of the National Research Council, recently visited the Carnegie Institute of Technology, Pittsburgh, and conferred with several members of the faculty who are particularly interested in the progress of research. In the afternoon, Dr. Angell addressed the faculty and graduate students of the division of applied psychology.

At the meeting of the Section on Medical History of the College of Physicians of Philadelphia, held on November 15, Lieutenant Colonel Fielding H. Garrison, M. C., U. S. Army, Washington, D. C., and Dr. Edward C. Streeter, Boston, presented a paper on "Sculpture and Paintings as Modes of Anatomical Expression."

THE president, Professor James Ward, of Cambridge University, delivered the inaugural address before the Aristotelian Society on November 3 on the subject "In the beginning . . ." The congress which the society arranges annually will be held next year at

Oxford in September, and the French Philosophical Society will take part.

A COURSE of twelve Swiney lectures on "Geology and Mineral Resources of the British Possessions in Africa" will be given at the Imperial College of Science and Technology, London, by Dr. J. D. Falconer, on November 10 and later.

THE tablets in memory of Lord Lister, executed for University College by Professor Harvard Thomas, were unveiled on November 11, by Sir George Makins, president of the Royal College of Surgeons, and Sir J. J. Thomson, president of the Royal Society. The Duke of Bedford, president of the Lister Memorial Committee, presided.

DR. WILLIAM G. BISSELL, bacteriologist and sanitary expert, died on November 14, at the age of forty-nine years. He was director of the laboratories of the Buffalo Health Department for twenty-five years and past president of the New York State Sanitary Officers' Association. Since his graduation from the medical department of the University of Buffalo in 1892 he had practised there.

THE National Academy of Medicine and the Surgical Society of Rio de Janeiro is compiling a catalogue of all medical publications that have appeared in Brazil within the past hundred years. This catalogue will be distributed at the celebration of the Centenary of Independence which is to be held in 1920. A Congress of Medicine will be held at the same time in Rio de Janeiro under the direction of Professor Fernando Magalhaes, president of the Medical and Surgical Association.

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#### UNIVERSITY AND EDUCATIONAL NEWS

By the terms of the will of Dr. Henry K. Oliver, Harvard University receives funds for a department of hygiene.

THE French minister of public instruction has introduced in parliament a bill covering an appropriation of 12,126,000 francs for the benefit of the universities, to be used in the

construction of new buildings, for repairs to old buildings, and for the installing of scientific equipment. The minister of public instruction also requests 900,000 francs to complete the construction work at the Institute of Applied Chemistry; 5,243,000 francs for the extension of the work of the departments of chemistry; 800,000 francs for the enlargement of the Radium Institute, and 1,500,000 francs for the construction of a laboratory of physical chemistry.

THE organization of the new department of hygiene and preventive medicine at Cornell University has been completed, the following appointments to the staff having been made: Dr. Haven Emerson, professor of hygiene and preventive medicine, and director of the department; Dr. James Stevenson Allen, assistant professor of hygiene and preventive medicine, and assistant director of the department; Dr. Frank C. Balderry, medical adviser; Drs. J. Ralph Harris, Lawrence B. Chenowith, Richard Kimpton, Claude E. Case and John A. Herring, assistant medical advisers for men and Drs. Margaret D. Baker and Katherine Porter, assistant medical advisers for women.

DR. ELI KENNERLY MARSHALL, JR., Washington, D. C., formerly associate professor of pharmacology in Johns Hopkins University, has been appointed head of the department of pharmacology at Washington University Medical School. Other appointments are A. W. L. Bray, associate in anatomy; Alfred C. Kolls, associate in pharmacology; Edgar Allen, instructor in anatomy and Edward A. Doisy, instructor in biological chemistry.

DR. EMIL GOETSCH, formerly resident surgeon of the Peter Bent Brigham Hospital, Roxbury, Massachusetts, has been appointed head of the surgical department of Long Island College, New York.

PROFESSOR HOWARD E. SIMPSON, associate professor of geology and physiography at the University of North Dakota, has been promoted to a professorship of geographic geology.

MR. B. MOUAT JONES, assistant professor of chemistry in the Imperial College of Science and Technology, London, has been elected to the chair of chemistry in the University College of Wales, Aberystwyth, in succession to Professor Alex. Findlay.

#### DISCUSSION AND CORRESPONDENCE A HELIUM SERIES IN THE EXTREME ULTRA-VIOLET

It has been shown that the helium series first discovered in a terrestrial source by Fowler can be represented by the formula

$$\nu = 109750 \left( \frac{1}{\left(\frac{n_1}{2}\right)^2} - \frac{1}{\left(\frac{n_2}{2}\right)^2} \right);$$

where  $n_1$  has the value of 3 or 4<sup>1</sup>

If  $n_1$  be given the value 2, and  $n_2$  the successive value 3, 4 and 5, lines result at wave-length 1640.1, 1214.9 and 1084.7. My previous investigations of the helium spectrum did not afford much evidence as to the existence of these lines;<sup>2</sup> a recent search, however, has been more successful. With a powerful disruptive discharge in helium, a sharp, fairly strong line appears at 1640.2; no trace of it is found in hydrogen under the same electrical condition and it does not occur in helium when the discharge circuit is free from capacity. Under the same violently disruptive condition the line at 1216, always present in helium and hydrogen, develops a satellite on its more refrangible side, this satellite is not well resolved, but its wave-length appears to be about 1215.1. The region that should be occupied by 1084.7 is obscured by a strong pair at 1085, probably due to an impurity.

Owing to the difficulties of vacuum spectroscopy it is perhaps unwise to claim that the evidence in this case is conclusive. I regard it as very probable, however, that two members of this series in helium have been found in the extreme ultra-violet.

THEODORE LYMAN

HARVARD UNIVERSITY,  
October 25, 1919

<sup>1</sup> Evans, *Phil. Mag.*, 29, p. 284, 1915.

<sup>2</sup> *Astrophys. Jour.*, 43, p. 92, 1916.