

temperatures agrees remarkably closely with the curve of sun-spot frequency. There are about  $2^{\circ}$  in mean maximum temperature between the maximum and minimum of the sun-spot curve. The rainfall curve also accords as a whole remarkably closely with the sun-spot curve, but from the middle of 1887 to the middle of 1890 the rainfall was less than it should have been, and from the middle of 1891 to the end of 1895 it was greater than it should have been. These irregularities are interesting because in 1892 it was assumed that the curve would recover its position, and a smaller rainfall for the next few years was predicted, but 1893 proved to be unusually wet.

#### CLIMATE OF WESTERN AUSTRALIA.

CLIMATOLOGISTS will give the latest publication from the Perth Observatory a warm welcome, for it is the first comprehensive report on the climate of western Australia. Annual meteorological summaries have been issued since 1876, but the present volume comprises a selection and coordination of the principal meteorological facts which have been discovered during the past twenty-four years of observations. 'The Climate of Western Australia from Meteorological Observations made during the Years 1876-1899' is the title of this publication, and it reflects great credit on Mr. Ernest Cooke, Government Astronomer for Western Australia. Naturally, meteorological work has been carried on under the greatest difficulties in the district in question, and the earlier records cannot be compared as regards accuracy with those which are now being made.

It is a great satisfaction to note that Mr. Cooke gives at the very beginning of his report a series of seventeen weather maps illustrating the weather types of the district under discussion, for the best understanding of a climate is to be gained through an appreciation of the local weather types. There are two principal types of weather, the winter and the summer, although each of these is, of course, subject to endless modifications. A general, albeit very brief, description of the climate follows the discussion of the weather types, the statements having special reference

to Perth, and a full set of meteorological tables completes the volume. A table of special interest is that which shows the duration of the 'heat waves' which have passed Perth since January 1, 1880. The longest of these spells without a break occurred in 1896, when the maximum temperature exceeded  $90^{\circ}$  on every day between January 25 and February 12—nineteen days in all, but the most severe heat was apparently in January and February, 1880, when the maxima on several days rose over  $100^{\circ}$ , and on two days over  $110^{\circ}$ . It may be noted, however, that hot nights are exceptional, even during these hot waves, the minima being usually between  $60^{\circ}$  and  $70^{\circ}$ . A series of charts accompanies the volume, showing, for each month and for the year, the pressure; mean, maximum and minimum temperature, and the rainfall.

R. DEC. WARD.

HARVARD UNIVERSITY.

#### SCIENTIFIC NOTES AND NEWS.

THE Academy of Sciences at Christiania has elected the following corresponding members: Dr. J.H. van't Hoff, professor of general chemistry, and Professor Adolf Engler, professor of botany, at the University of Berlin; Dr. Richard Abegg, professor of chemistry at Breslau; Dr. Karl A. Ritter von Zittel, professor of paleontology and geology at Munich, and Dr. Julius Hann, professor of meteorology at Vienna.

MCGILL UNIVERSITY has conferred the degree of doctor of science in course on Professor Frank Dawson Adams, M.A., Ph.D., Logan professor of geology and paleontology, McGill University, and on William Bell Dawson, M.A., M.A.E., of the Department of Marine, Ottawa.

GLASGOW UNIVERSITY has conferred its LL.D. on Mr. James Stevenson, of Largs, for his services in opening up Nyassaland and in establishing the Livingstone mission by which the work of Dr. Livingstone was continued and brought to fruition, and in the completion of the great highway between Lake Nyassa and Tanganyika, known as Stevenson-road.

PROFESSORS VICTOR C. VAUGHAN and Frederick G. Novy of the medical department of the

University of Michigan will leave for Asia about the middle of June to investigate tropical dysentery.

WE regret to learn that President Henry Morton, of Stevens Institute of Technology, Hoboken, has suffered a relapse following the surgical operation he underwent on April 15.

MR. WILLIAM S. WEEDON, L.B., Maryland Agricultural College, 1897, assistant in chemistry at the Johns Hopkins University and a candidate for the doctorate of philosophy in June, has been appointed research chemist of the General Electric Company, Schenectady, N. Y.

DR. F. A. BATHER has been promoted to the assistant keepership of the Department of Geology in the British Museum (Natural History).

PROFESSOR CHARLES AURIVILLIUS has been elected permanent secretary of the Royal Academy of Sciences at Stockholm, and Dr. Yngve Sjöstedt has been made professor in the Academy and custodian of the entomological department of the Museum of Natural History.

SIR WILLIAM ROBERTS-AUSTEN gave the tenth James Forrest lecture before the Institution of Civil Engineers of London on April 23, his subject being the 'Relations between Metallurgy and Engineering.'

DURING the coming season four field parties will be sent out from the department of vertebrate paleontology of the Carnegie Museum at Pittsburg, Pa. These parties will be under the general direction of Mr. J. B. Hatcher, and will be assigned as follows: One under the direct charge of Mr. Peterson will continue the exploration of the Tertiary deposits of northwestern Nebraska; a second, in charge of Mr. C. W. Gilmore, will carry on the work in the Jurassic deposits on Sheep Creek, Wyoming, where such excellent results have already been obtained by this museum during the past three years; a third, with Mr. W. H. Utterback in charge, will work in the Laramie of Wyoming and Montana; while Mr. Earle Douglass, who has recently been engaged by this museum, will undertake a systematic

exploration of the various Tertiary horizons discovered by him in western Montana. It is proposed to continue Mr. Douglass in this field until he has accumulated sufficient material and data to enable him to definitely correlate the various horizons and to monograph the fauna of each.

*Nature* states that the meeting of the Paris Academy of Sciences on April 14 was adjourned as a sign of respect for the late Professor A. Cornu, whose untimely death was announced by the president in the following words:

The Academy of Sciences has suffered a great loss. Professor Cornu died on Friday, carried away rapidly by a disease which no one could foresee would terminate so sorrowfully. Our colleague was relatively young; he entered the École Polytechnique in 1860 and was nominated a member of our Academy in 1878, at thirty-seven years of age. Esteemed as a professor at the École Polytechnique, and contributing to the Bureau des Longitudes every year notices written in perfect language, he died while in active scientific work, leaving saddened parents and friends behind him, and universal regret in the scientific world.

WE regret to record the deaths of Dr. Alexander Bittner, chief geologist in the Imperial Geological Institute at Vienna, and of Dr. Egon Müller, docent in physics at the University at Erlangen.

THE astronomical library and collection of photographs, drawings, etc., belonging to the late Miss Catherine M. Bruce, to whom astronomy was indebted for many generous gifts, has been presented to the Allegheny Observatory by her sister, Miss M. W. Bruce.

A DESPATCH from Wellington says the government has provided \$5,000 for an antarctic relief ship.

THE first conversazione of the Royal Society for this session will be given at Burlington House on Wednesday, May 14, at 9 P.M.

THE agricultural experiment station of the University of Illinois in cooperation with the Bureau of Soils of the U. S. Department of Agriculture is beginning an agricultural survey of Illinois soils. A field party is now at work in Tazewell County. In conducting the

survey the ground is gone over carefully and the soil is examined to a depth of from three to six feet, samples being obtained by boring with augers. Soil maps will be made which will show the area and location of all the different important types or classes of soil in the land surveyed.

THE commission authorized by the late New York legislature to report on the establishment of a state electrical laboratory, met at Albany on April 29.

It has for some time been understood that the Louisiana Purchase Exposition at St. Louis will not be held before 1904, and the executive committee has requested congress to change the time of the exposition from 1903 to 1904.

THE nineteenth annual meeting of the American Climatological Association will be held at Los Angeles, Cal., on June 9-11, under the presidency of Dr. Samuel A. Fisk, of Denver.

THE Easter vacation party at the Port Erin Biological Station, says *Nature*, has suffered by the absence abroad of Professor Herdman and Mr. I. C. Thompson, so that it was not possible to arrange any steam dredging expeditions. Nevertheless, much good work has been done on the shore and with the tow-net, and several workers have spent a profitable vacation at the station. These include Dr. Darbishire, Miss Pratt and Miss Drey from Owens College, Messrs. Pearson and Tattersall from University College, Liverpool, and Mr. Laurie from Oxford. Mr. Cole was to have conducted a vacation class, but was unable to cross owing to a family bereavement. The new and greatly improved station is progressing rapidly and will be opened in the summer.

MUCH additional material from the A. J. Stone Expedition to Alaska has been received recently by the American Museum of Natural History among which there are specimens of what proves to be a fine new species of caribou and a new species or subspecies of mountain sheep. This expedition is the first of a series made possible through the efforts of Madison Grant, Esq., and supported by him and other

friends of the Museum, for the purpose of securing an adequate representation of the game mammals of the continent. The past season's work has been especially important because it has provided material from Alaska, a portion of America heretofore practically unrepresented in the collections.

NEWS has been received to the effect that the expedition headed by Mr. W. F. Whitehouse of Newport, R. I., who is accompanied by Lord Hindlip, reached Gildessa on the Abyssinian frontier, on March 23, with the members in good health, and proceeded to Adis Abeba, capital of Abyssinia.

PLANS for the auxiliary Baldwin-Zeigler expedition to northern polar regions have been completed and the men who have been intrusted with its direction will shortly leave for Europe. The steamer *Frithjof*, which with the *America* conveyed the Baldwin party to Franz Josef land, will depart from Tromsøe on July 1. The auxiliary expedition will be in charge of Mr. W. S. Champ, secretary to Mr. William Zeigler, who will sail for Europe on the steamship *Cymric* on May 23, and the remainder of the party will leave on the steamship *Pretoria* on June 7.

THE Horticultural Society of New York will hold its third annual meeting at the New York Botanical Garden on May 14. Members and their friends leaving Grand Central station by the 1:35 P.M. train for Bronx Park, will be met at the station by Mr. James Wood, president of the Society, and escorted to the conservatories. Those leaving Grand Central Station by the 2:35 P.M. train will be met by Dr. D. T. MacDougal, first assistant, New York Botanical Garden, and escorted to the conservatories. Leaving the conservatories at 3:35 the party will walk through the grounds to the museum building; the formal meeting will commence in the lecture hall of the museum building at 4:15 o'clock and will be followed by an exhibition by Dr. N. L. Britton, of lantern slides illustrating 'Features of the New Zealand Flora,' contributed to the Garden by Mr. L. Cockayne. The Council of the Society will meet in the administration office, museum building, at 3:15 o'clock. The mu-

seum, library, herbarium, and laboratories in the museum building will be open for inspection until 6:30. An exhibition will be held in connection with the meeting, in the hall of the museum building immediately adjoining the lecture hall; this exhibition will be open from one o'clock until half past six on Wednesday, May 14, and from ten o'clock until five on Thursday, May 15.

#### UNIVERSITY AND EDUCATIONAL NEWS.

ADELPHI COLLEGE, Brooklyn, has received gifts amounting to \$250,000, of which one half was given by Mr. John D. Rockefeller.

MR. HENRY C. HAVEMEYER has given two thousand volumes to the library of the public school at Greenwich, Conn., erected by him and Mrs. Havemeyer at a cost of \$200,000.

THREE of the positions offered by the Harvard Medical School to properly qualified men desirous of training in physiological research and in the management of large laboratory classes in experimental physiology are not yet filled for the next collegiate year. Holders of these positions give more than half the day to research. The remaining time is spent during the first four months of the collegiate year in learning laboratory methods and during the last four months in directing the laboratory work of the medical students, about two hundred of whom work from two to three hours daily for sixteen weeks in experimental physiology. The fundamental experiments in physiology done by so many men working at one time present every variety of results and impart a training not to be acquired in other ways. Much too may be learned by association with the large staff engaged in research in the laboratories of anatomy, histology, pathology, pharmacology, hygiene, physiology and physiological chemistry, all of which have their laboratories in the Medical School building. No charge of any kind is made either for the training in physiological research and in teaching or for the use of animals and other material. In addition to these opportunities each assistant receives four hundred dollars. Applications for these positions should be sent to Professor W. T. Porter, Harvard Medical

School, 688 Boylston Street, Boston, Massachusetts.

THE HON. CARROLL D. WRIGHT, commissioner of labor, has been appointed president of the collegiate department of Clark University. It is understood that Mr. Wright will not, for the present at least, resign his position under the government or his work at Columbian or Catholic University.

DR. FRANK STRONG, formerly president of the University of Oregon, has been elected chancellor of the University of Kansas.

IT is expected that General Webb, president of the College of the City of New York, will retire from his office at the end of the present year. Arrangements have this winter been made by which the officers of the College retired for age shall receive a liberal pension. The report that Dr. W. H. Maxwell, superintendent of public schools, will succeed General Webb is said to have no definite foundation.

PROFESSOR LACHMAN, of the University of Oregon, has been invited to take charge of the chemical department at the University of California for the coming summer session.

DR. FRANK R. VAN HORN has been appointed professor of geology and mineralogy at Case School of Applied Science, Cleveland, Ohio.

DR. W. B. HUFF, instructor in physics in the Johns Hopkins University, has been appointed associate in physics at Bryn Mawr College. Dr. Huff received his baccalaureate degree at the University of Wisconsin in 1889, his master's degree at the University of Chicago in 1896, and his doctorate at Johns Hopkins in 1900.

DR. FOURNIER has been appointed professor of geology and mineralogy in the University of Besançon. Dr. v. Nathusius, docent in agriculture at Heidelberg, has been called to an assistant professorship at Jena. Dr. Wöhler has qualified as docent in inorganic chemistry in the Technical Institute at Charlottenburg and Dr. Brunner as docent in physical chemistry in the University of Lemberg.