

of solar heat reaching the earth, but also the quantity of heat which would reach a body like the moon, which has no atmosphere.

The observations have indicated that the sun is probably a variable star having a range of variation amounting to from five to ten per cent. within an irregular interval of from five to ten days. Last year Mr. Abbot observed in Algeria, while his colleague, Mr. Aldrich, observed on Mt. Wilson, in California. The object of thus duplicating the measurements was to avoid being misled by any local atmospheric conditions which might have affected Mt. Wilson observations. As nearly one third of the circumference of the earth lies between Mt. Wilson and Algeria, it could not be expected that a similar local disturbance could affect both stations at the same day in the same manner. The observations of 1911 strongly supported the belief that the sun is variable, but owing to cloudiness their number was not sufficient to fully establish this point. Hence, it was thought best to return to Algeria this year.

Mr. Abbot was assisted in Algeria by Mr. Anders Knutson Angström, of Upsala, Sweden. Mr. Angström comes from a distinguished family of scientists. His grandfather, Anders Angström, is the one of whom Kayser says in his great work on spectroscopy, "Now arose a man so great that his name will be forever associated with the history of spectroscopy." Mr. Angström's father, Knut Angström, was scarcely less distinguished than the grandfather, and invented many valuable instruments for measuring the radiation of the sun and earth. The present Mr. Angström is much interested in the same problems that occupied his father, and is now pursuing advanced work at Cornell University.

The observations made by the Smithsonian party in Algeria this year were apparently very satisfactory. They occupied sixty-four days, and on more than fifty of these days Mr. Fowle made similar observations on Mt. Wilson, in California. It can hardly be doubted that the results of the work of 1911 and 1912 will thoroughly establish the supposed varia-

bility of the sun, or will show conclusively that this hypothesis can no longer be held.

PROFESSOR MORRIS LOEB

At a special meeting of the board of trustees of the Chemists' Club of New York City, held October 8, the following resolutions offered by committee consisting of Mr. Ellwood Hendrick, Mr. Clifford Richardson and Mr. Walter E. Rowley, were adopted:

WHEREAS Morris Loeb, the president of the club, has been taken from us by death, and

WHEREAS he was the leading spirit in bringing to fulfillment ambitions and plans that had long been ours, and

WHEREAS he was always ready to shoulder burdens and to give help, and

WHEREAS he was a man of order, and of integrity in mind and in heart, sincere in scholarship, living without malice or scorn, speaking no evil, and generous in judgment, and

WHEREAS we were drawn to him by ties of deep and abiding affection, now, therefore, be it

Resolved, that we make this minute of our poignant grief at his passing, and that we cherish his memory as another of his great gifts to science and to humanity.

SCIENTIFIC NOTES AND NEWS

THE autumn meeting of the National Academy of Sciences will be held in New Haven, beginning Tuesday, November 12, 1912, at 10 A.M. By invitation the sessions will be held in Sloane Physics Laboratory of Yale University.

SIR WILLIAM RAMSAY lectured at the Johns Hopkins University on October 18, when the degree of doctor of laws was conferred on him.

Nature states that Sir George Darwin, Plumian professor of astronomy at Cambridge University, has undergone a severe operation after which he is making good progress toward recovery.

THE Fritz Schaudinn medal for work in microbiology has been awarded by the international committee to Dr. Carlos Chagas, of the Instituto Oswaldo Cruz Manguinhos, Rio de Janeiro.

DR. CARL RUNGE, professor of mathematics at Göttingen, recently Kaiser-Wilhelm professor at Columbia University, has been appointed "Geheimsregierungsrat."

DR. BENJAMIN BOSS, son of the late Dr. Lewis Boss, has been appointed acting director of the Dudley Observatory, Albany.

COLONEL MARTIN V. CALVIN, for the past six years director of the Georgia Agricultural Experiment Station, has announced his retirement from the station.

MR. E. GRANT HOOPER, superintending chemist of the government laboratory, London, has been appointed deputy-government chemist, in succession to Mr. H. W. Davis, who has retired.

DR. F. BIDLING MEYER has been appointed director of the Observatory for Terrestrial Magnetism at the University of Munich.

DR. A. B. HAMILTON, who is now abroad, has been appointed a delegate from the University of Minnesota to the first International Congress of Comparative Pathology, which meets in Paris, October 17-23.

PROFESSOR JOSIAH ROYCE, of Harvard University, will give a course of eight Lowell lectures on Monday and Thursday afternoons beginning November 18, on "The Problem of Christianity."

A COURSE of lectures at Union College on the Ichabod Spencer Foundation will be delivered by Dr. Rudolf Eucken, professor of philosophy at the University of Jena and visiting professor at Harvard University. The subjects of his lectures will be, "Goethe as a Philosopher," "Idealism and Realism in the Nineteenth Century," "Defence of Morality," and "Philosophy and Religion."

THE sixth of the Weir Mitchell lectures of the College of Physicians was given on October 21 in Mitchell Hall by Dr. G. H. F. Nuttall, of Cambridge, England, on "Some Recent Advances in Our Knowledge of the Mode of the Spread of Protozoan Diseases."

PROFESSOR BOREL, the French mathematician, is the guest of the University of Illinois this week. Professor Borel comes di-

rectly from Houston, Texas, where he has been attending the Rice Institute's inaugural exercises.

AMONG the recent lectures delivered by Dean Eugene Davenport, of the College of Agriculture, was one on "The Church and Country Life" delivered at Rantoul on October 11 and another on "Agriculture as a Career for Boys," delivered October 8 at the Illinois State Fair at Springfield. Some twenty men from the faculty of the College of Agriculture gave lectures and instruction at the State Fair Boys School of Agriculture.

AT McGill University the annual university lecture for the current year was given on October 8 by Professor Francis E. Lloyd. He took for his subject "The Artificial Ripening of Bitter Fruits."

THE first meeting of the Royal Geographical Society, London, will be held in the evening of November 4, when Miss Ellen Churchill Semple, of the University of Chicago, will give an amply illustrated lecture on "The Geography of Japan and its Economic Development."

PROFESSOR W. M. FLINDERS PETRIE, F.R.S., will deliver the address on the occasion of the opening of the extension to the Manchester Museum on the afternoon of October 30.

THE Henry Sidgwick memorial lecture at Newnham College will be given by Professor James Ward in the College Hall on November 9. The subject will be "Heredity and Memory."

DR. WILLIAM WILLARD DANIELLS, emeritus professor of chemistry of the University of Wisconsin, has died at the age of seventy-two years.

DR. FRANK S. BILLINGS, formerly director of the Nebraska State Veterinary Hospital and a leading authority on veterinary surgery, has died at the age of sixty-seven years.

PROFESSOR HERM. F. WIEBE, a member of the Physical Reichsanstalt, has died at the age of sixty years.

THE U. S. Civil Service Commission announces an open competitive examination for

men only, for a specialist in agronomy in the Office of Experiment Stations, Department of Agriculture, at a salary of \$1,800 per annum, and for associate physicist in the Bureau of Standards, Washington, D. C., at a salary ranging from \$1,800 to \$2,000.

MEMBERS of the American Association for the Advancement of Science expecting to contribute to the program of Section D are requested to so inform G. W. Bissell, secretary, East Lansing, Mich., as soon as possible. This section receives no support from affiliated societies, but the programs in the past few years have been good and the sessions well attended. The Cleveland meeting should be no exception.

THE geographers who took part in the trans-continental excursion returned to New York last week and held scientific sessions in the hall of the American Geographical Society. On Friday evening there was a banquet at the Waldorf-Astoria. Most of the foreign geographers sailed for their homes on the nineteenth instant.

THE 220 German physicians who have been visiting places of scientific interest in this country after the International Congress on Hygiene and Demography sailed on the morning of October 9 on the liner *Victoria Louise*.

THE next International Physiological Congress will be held at Groningen from September 2 to 6, 1913.

A SECOND exposition of inventions will be held at the coliseum, St. Louis, from November 11 to 17.

MRS. RUSSELL SAGE has bought Marsh Island, Louisiana, at a cost of \$150,000, for a bird refuge. The island is on the gulf coast, southwest of New Orleans, and is about eighteen miles long and nine miles wide, and contains about 75,000 acres. It has long been a famous winter feeding ground for ducks and geese and various other migratory birds, and has been for many years one of the most popular resorts in the south for market hunters. Mrs. Sage will place control of the island in whatever hands will best accomplish her purpose, either the federal government,

the state of Louisiana or some association organized for bird protection. The matter was brought to Mrs. Sage's attention by Edward A. McIlhenny, of Avery Island, La., who, in conjunction with Charles Willis Ward, of Michigan, recently gave a 13,000-acre bird refuge on Vermillion Bay to the state of Louisiana.

THE Somerset County Council has set aside Brean Down, a little promontory stretching into the British Channel as a sanctuary for birds, and the Society for the Protection of Wild Birds has provided a guardian.

A CABLE message has been received at the Harvard College Observatory from Professor Perrine, director of the Cordoba Observatory, from Christiana, Minas Geraes, Brazil, "Rain." This appears to indicate that observations of the eclipse of the sun on October 9-10 were prevented by bad weather.

THE return of marriages, births and deaths registered in England and Wales, states that the number of persons married during the first quarter of the present year corresponds to an annual rate of 9.8 per 1,000 of the population; this is 1.5 per 1,000 below the mean marriage rate in the ten preceding first quarters and is the lowest marriage-rate recorded in any quarter since the establishment of civil registration. The births in the second quarter of the present year correspond to a rate of 23.9 annually per 1,000 of the population; this is 3.7 per 1,000 below the mean birth-rate in the ten preceding second quarters, and is the lowest birth-rate recorded in any second quarter since the establishment of civil registration. The deaths last quarter correspond to an annual rate of 12.7 per 1,000 persons living; this rate is 1.7 per 1,000 below the mean rate in the ten preceding second quarters, and is the lowest death-rate recorded in any second quarter since the establishment of civil registration.

ON August 30 last, the Philosophical Institute of Canterbury, New Zealand, celebrated its jubilee by holding a *conversazione* in Christchurch, the capital of the province. There was a large gathering, local bodies,

educational institutions and the parliament of New Zealand being represented. Among the guests were the Mayor of Christchurch and also Mr. G. M. Thomson, M.P., who has done much scientific work in the dominion. The president of the institute, Dr. L. Cockayne, F.R.S., presided. He delivered an interesting address, in which he showed what science has done for civilization, and what it is doing in New Zealand and in other parts of the world. He also briefly sketched the history of the institute, and referred to the work done in the past by Sir Julius von Haast (the first president), Captain F. W. Hutton and other members. He pointed out that in recent years the institute has taken important enterprises in hand, notably the publication of the "*Index Faunæ Novæ Zealandiæ*" and "*The Subantarctic Islands of New Zealand*," the latter a large two-volume publication, the result of a scientific expedition the institute was the means of sending to the Auckland and Campbell Islands, south of New Zealand, in 1907. During the evening, Mr. Thomson, on behalf of the board of governors of the New Zealand Institute, presented to Dr. Cockayne a sum of money, which accompanies the Hector medal, awarded for the first time some months ago. The medal was struck by the New Zealand Institute in memory of the late Sir James Hector, and has been awarded to Dr. Cockayne for his researches in ecological botany. At the gathering, a large number of messages were received congratulating the Canterbury Institute on attaining its jubilee, and Dr. Cockayne on having been elected a Fellow of the Royal Society. Amongst those who sent congratulatory messages were the Prime Minister of the Dominion (the Hon. W. F. Massey) and other members of the government. In a speech, Mr. Thomson announced that the government intended to help the scientific workers of the dominion, especially by offering them facilities in regard to the publication of scientific papers and reports.

THE annual meeting of the Swedish Museums Association was held in Wisby, in conjunction with that of the Swedish Archeolo-

gists, on August 9-12, under the presidency of State Antiquary Dr. Oscar Montelius, who was reelected to the same office for the ensuing year, together with the secretary, Dr. R. Uppmark, and the treasurer, Dr. Otto Janse. The question of state contribution to provincial museums, which was discussed at last year's meeting and has since then been under the consideration of the Academy of Antiquities, was again discussed, and it was decided to approach the government with a request for the sum of, at most, 30,000 kronor (\$7,700), to be distributed among provincial museums according to their respective means. The question of payment for treasure trove has also been under the consideration of the Academy of Antiquities. It was proposed that the term should include all objects of metal, both bronze and copper, as well as those silver; but it was decided that the final proposals of the Academy should be referred to all the provincial museums for their opinion, which should then be acted upon by the Museums Association. Among the papers read at the meeting were the following: "*Sarcophagi and Reliquaries*," and "*Relics of Heathen Times in Gotland*," both by Professor Montelius; "*An Ancient Shrove-tide Custom*," by Miss Louise Hagberg; "*The So-called Battle Graves of Gotland*," by Mr. Hans Hansson, in whose opinion these remains are not graves but ancient foundations; "*The Country Churches of Gotland*," by Dr. Sune Ambrosiani; "*The Dwelling-houses of Gotland*," by Lektor Karl A. Berlin; "*The City Walls of Wisby*," by Dr. Emil Ekhoft; "*The Church Organs of Gotland*," by Mr. C. F. Hennerberg; "*The Church Furniture of Gotland*," by Dr. Otto Janse; "*Museum Technique*," by Dr. Bernard Salin, director of Nordiska Museet, who dealt chiefly with registration and cataloguing. The concluding lecture by Lektor N. Klintberg, entitled "*Sketches from the Peasant Life of Gotland*" showed a selection from the large series of photographs which Dr. Klintberg has been taking for so many years in order to preserve for future generations a complete representation of every operation in

the life of his fellow-countrymen—a life that retains so many characteristics of the middle ages but is now rapidly passing away. Excursions were made to the numerous ruins of Wisby, and to several of the churches and archeological remains on the island.

It is stated in *Nature* that the geological department of the British Museum (Natural History) has recently received a valuable gift of Wealden fossils from the Reverends P. Teilhard and F. Pelletier, S.J., who made the collection during a four years' residence near Hastings. A large proportion of the specimens are small teeth from bone-beds which had previously been very little examined, and among them is the unique mammalian tooth described under the name of *Dipriodon valdensis* by Dr. Smith Woodward in 1911. There are numerous teeth of the dwarf crocodile *Theriosuchus*, which has hitherto been known only from the Purbeck Beds. The series of plant-remains is also important and will shortly be described by Professor A. C. Seward in a communication to the Geological Society.

THE experiments on orchard fertilization and cultural methods, started six years ago by Dr. J. P. Stewart, experimental pomologist of the Pennsylvania State College, are attracting attention from both official and practising horticulturists. Parties from foreign countries as well as from our own and neighboring states have recently visited a number of these experiments in company with Dr. Stewart. These parties have included Dr. Girolamo Molon, the leading horticulturist of Italy; Professor Niels Esbjerg, director of the Pomological Experiment Station at Esbjerg, Denmark; Professor J. W. Crow, head of the department of pomology at the Ontario Agricultural College at Guelph, Canada; Professors Price and Drinkard from the Virginia Experiment Station; and Mr. W. T. Creasy, president of the State Horticultural Association of Pennsylvania. This association held its summer meeting in one of the experimental orchards at which Mr. H. W. Collingwood, editor of *The Rural New-Yorker*, was

present, besides representatives of other agricultural journals and several hundred practical fruit-growers and farmers.

UNIVERSITY AND EDUCATIONAL NEWS

MR. GEORGE R. AGASSIZ has given Harvard University \$25,000 for the general use of the Museum of Comparative Zoology; it is not to be used for anything connected with undergraduate instruction. An anonymous friend has given \$10,000 to be used to rebuild the front portion of the central section of the Gray herbarium.

On October 6, Augustana College and the theological seminary, Rock Island, Ill., came into the possession of endowment funds amounting to \$117,000. Of this amount \$46,000 was given by the will of the late Senator C. J. A. Ericson, of Boone, Iowa, on condition that an equal sum in cash be raised. Mr. C. A. Smith, of Minneapolis, Minn., gave \$25,000 to be used as a fund for purchasing books for the Senkman Memorial Library.

THE arrangements for the administration of the Graham Bequest have been completed by the University of London. Dr. Charles Bolton has been elected director of research and Mr. H. G. Butterfield, Graham scholar. By means of the bequest 15 workers in the research laboratories of the school are in receipt of grants; a quantity of valuable apparatus has also been purchased and a special library furnished for the use of research workers.

At the last meeting of the board of trustees of the University of Illinois it was definitely decided that the College of Literature and Arts, and the College of Science should be consolidated into one college to be known as the College of Arts and Sciences. Although the board of trustees acted favorably upon the question nothing definite in regard to the details of the consolidation has been done.

MRS. HUNTINGTON WILSON, of Washington, D. C., has established a lectureship on eugenics at the University of Virginia. Professor H. E. Jordan, of the university, has been selected as the lecturer.