

any legally binding effect whatever upon the freedom of their action. And I declare that it shall be lawful for the senate of the said university, if they shall think fit so to do, to postpone the election of the first or any subsequent professor of eugenics for a period of not exceeding four years from the date of my death, or from the date of the occurrence of any vacancy in the office as the case may be. . . .

I declare it to be my wish, but I do not impose it as an obligation, that on the appointment of the first professor the post shall be offered to Professor Karl Pearson, and on such conditions as will give him liberty to continue his Biometric Laboratory now established at University College.

SCIENTIFIC NOTES AND NEWS

THE National Academy of Sciences will hold its annual meeting in Washington, beginning on Tuesday, April 18.

THE American Philosophical Society will hold its general meeting in the hall of the society at Philadelphia on April 20, 21 and 22. On the evening of April 21, Professor Svante Arrhenius, of Stockholm, will give an illustrated lecture on the physical condition of the planet Mars, which will be followed by a reception in the hall of the College of Physicians. On the evening of the twenty-third the annual dinner of the society will take place at the Bellevue-Stratford.

DR. WILLIAM H. WELCH, professor of pathology in the Johns Hopkins University, has received from the emperor of Germany the decoration of the royal crown of Prussia, second class.

DR. LEWIS BOSS, director of the Dudley Observatory and of the department of meridian astronomy of the Carnegie Institution, has been elected a corresponding member of the Academy of Sciences of St. Petersburg.

DR. S. W. STRATTON, director of the Bureau of Standards, represents the United States government at the International Convention on Weights and Measures at Paris, beginning on March 29.

PROFESSOR ALBERT A. MICHELSON, head of the department of physics in the University of Chicago, will give a course at the University

of Göttingen in the coming summer semester.

At the invitation of the Department of Education of the Philippine government, Professor J. Paul Goode, representing the University of Chicago, will deliver a series of lectures to the Teachers' Assembly at Baguio in May.

THE expedition that was sent to Argentina two years and a half ago under the auspices of the Carnegie Institution for the purpose of making meridian measurements of position of stars down to the seventh magnitude that are south of -20° of declination, and generally inaccessible for exact measurement at observatories of the northern hemisphere, has completed its meridian-work. In 1909 and 1910 about 87,000 meridian-determinations of positions were made with precision. The observations were conducted on a fundamental basis, and correspond to others to be secured at the Dudley Observatory at Albany as an integral part of the entire enterprise. The instruments were shipped to Albany from Buenos Aires early in March and the members of the staff, of which Professor Richard H. Tucker is director, are arriving at various times.

THE magnetic survey yacht the *Carnegie* arrived at Capetown on March 20, having completed successfully a voyage of about 14,000 miles in the Atlantic Ocean since last June. Dr. Bauer left Vancouver on March 24 to make magnetic observations in the Samoan Islands during the total solar eclipse of April 28 and to meet the *Carnegie* at Colombo, Ceylon.

It is stated in *Nature* that at the recent meeting of the Australasian Association for the Advancement of Science in Sydney, the Mueller memorial medal was awarded to Mr. Robert Etheridge, curator of the Australian Museum, in recognition of the value of his numerous contributions to the paleontology and ethnology of Australasia.

THE trustees of Dartmouth College have voted that Charles Henry Hitchcock be made Hall professor of geology, emeritus, and that Gabriel Campbell be made Stone professor of

intellectual and moral philosophy, emeritus. They retired last year on the Carnegie Foundation fund. Frank Asbury Sherman, professor of mathematics, will retire at the end of the academic year, when he will have reached the age of sixty-nine years.

PROFESSOR BERNSTEIN, director of the physiological laboratory at Halle, will retire from active service at the beginning of the winter semester on account of advanced age.

DR. ROLLIN T. CHAMBERLIN, of the University of Chicago, sailed for South America on March 20, to engage in geological work on some of the metamorphic rocks of southeastern Brazil and on certain portions of the Andes.

DR. SIMON B. WOLBACH, assistant professor of bacteriology at the Harvard Medical School, and Dr. J. L. Todd, of McGill University, have departed for West Africa to study the sleeping sickness and allied diseases.

DR. A. S. PEARSE will leave the University of Michigan on April 1, to fill a position as assistant professor in the department of zoology of the University of the Philippines in Manila.

DR. OSTEN BERGSTRAND, for some time observer at the Upsala Observatory, Sweden, has been appointed professor of astronomy in the Upsala University and director of the observatory.

DR. SVANTE ARRHENIUS, director of the Nobel Institute, Stockholm, lectured before the Washington Academy of Sciences and the Philosophical Society of Washington on March 25 on "The Siderial Cultus."

DEAN ALLEN J. SMITH, of the University of Pennsylvania, closed a series of popular health lectures, given under the auspices of the medical faculty, March 17. His talk was on "Flies and Other Insects as Carriers of Disease."

ON the evening of March 17, Professor C. J. Keyser, of Columbia University, delivered a lecture before the Philosophical Club of Princeton University on "The Nature and Philosophic Significance of the Mathematical Doctrine of Invariance."

MR. JAMES R. STEERS, of the class of 1853, has made a further gift of \$2,200 to the Wolcott Gibbs Library of Chemistry of the College of the City of New York. The money is to be expended in the completion of certain journals and for cataloguing.

A PORTRAIT of David Rittenhouse, painted in 1772 by Rembrandt Peale, has been given to the University of Pennsylvania by Mrs. William Lawber. David Rittenhouse was professor of astronomy and vice-provost of the university from 1779 to 1782, and from 1782 until the time of his death in 1796, a trustee.

FÉLIX PLATEAU, who recently retired from active duties of the chair of zoology in the University of Genth, known especially for his studies on the behavior of insects, died on March 4.

IN the New York senate on March 21 a bill was introduced to incorporate "The Carnegie Corporation of New York." The incorporators named in the bill are Andrew Carnegie, Senator Elihu Root, president of the Carnegie Endowment for International Peace; Dr. Henry S. Pritchett, president of the Carnegie Foundation for the Advancement of Teaching; William H. Frew, president of the board of trustees of the Carnegie Institute of Pittsburgh; Robert S. Woodward, president of the Carnegie Institution of Washington; Charles L. Taylor, president of the Carnegie Hero Fund Commission; Robert A. Franks, president of the Home Trust Company, and James Bertram, Mr. Carnegie's secretary. Under the language of the bill the incorporators are authorized "to receive and maintain a fund and apply the income to promote the advancement and diffusion of knowledge among the people of the United States, by aiding technical schools, institutions of higher learning, libraries, scientific research, hero funds, useful publications, and by such other agencies and means as shall from time to time be found appropriate."

THE Austrian Academy of Sciences held on March 9 a sitting to celebrate the fiftieth anniversary of the appointment of the Archduke Rainer to be its curator. The archduke gave 100,000 kronen to the academy as an en-

dowment to keep the academy in touch with the progress of science abroad.

M. FAUVEL has offered 30,000 francs for the construction of an addition to the laboratory of the National Museum of Natural History in Paris.

THE president of the Royal Society and the members of the General Board of the National Physical Laboratory visited the laboratory on March 17.

AT midnight on March 10 the clocks at the railway stations and all government offices and municipal buildings of France and Algeria were set back nine minutes twenty-one seconds, to bring them in accord with Greenwich time, which is now used in all countries of western Europe except Russia, Portugal and Ireland.

THE ninth International Congress of Agriculture will be held at Madrid, beginning on May 8, under the patronage of his Majesty Alfonso XIII. Americans wishing to attend the congress may secure the printed account of the arrangements from the American member of the *Commission Internationale d'Agriculture*, Dr. L. O. Howard, U. S. Department of Agriculture, Washington, D. C.

THE next triennial prize of £300, under the will of the late Sir Astley P. Cooper, will be awarded to the author of the best essay or treatise on "The Means by which the Coagulability of the Blood may be Altered." Essays, written in English, must be sent to Guy's Hospital, before January 1, 1913.

THE U. S. Civil Service Commission announces an examination on April 15, to fill at least three vacancies in the position of magnetic observer in the Coast and Geodetic Survey. The initial salaries will range from \$75 to \$90 a month, according to the character of the work and the qualifications of the applicant; and in exceptional cases where the person employed has had repeated experience in magnetic work, the initial salary may reach \$125 a month. Appointments to permanent positions are also made from the examination for laboratory assistant in the Bureau of Standards.

THE Harpswell Laboratory will be open this summer for the fourteenth season, from June 19 to September 15. South Harpswell is 16 miles from Portland, Maine, with which it is connected by several boats daily. The location is admirably adapted for a biological station. It has a very rich marine flora and fauna. Especially noteworthy are the abundance of Elasmobranch material, and the eggs of *Cerebratulus* and *Echinarachnius*, so valuable for experimental studies. For several years the laboratory has been open solely for research, no instruction being given. It has nine private rooms, several of which are already engaged for the coming summer, and can accommodate a few more in the large laboratory room. Thanks to the cooperation of several colleges and universities, the laboratory is able to offer its facilities free to those competent to carry on independent investigation. There will be a collector employed and the laboratory has several boats, including a motor boat, dredges, the usual instruments and glass ware and a little physiological apparatus. Alcohol for collections and expensive chemicals can not be furnished. There is also a small library. The laboratory will not issue a circular this year. Those wishing to avail themselves of its facilities should apply to Professor J. S. Kingsley, Tufts College, Mass. It would be well to give some idea of the line of work to be followed so that advice may be given as to the prospects of material.

By cooperation between the American Museum of Natural History and the United States Bureau of Fisheries, the government steamer *Albatross* sailed from San Diego, on February 25, on a two months' collecting expedition to Lower California. Dr. Charles H. Townsend, acting director of the museum, is in command of the expedition. He is accompanied by seven investigators and collectors, representing the U. S. National Museum, the New York Zoological Society and the New York Botanical Gardens, all of which bear a share of the expense of the trip. Dr. Townsend began the work with a line of deep-sea dredgings to Guadalupe Island, some two

hundred and fifty miles from San Diego. From Guadalupe Island the *Albatross* planned to work eastward to begin a fish survey of the peninsula of Lower California. The fishery resources of the region will be studied with a view to the establishment of closer fishery relations with Mexico. There will be work on shore also. The peninsula is seven hundred and fifty miles long and will be studied along both coasts. During the progress of the vessel along these coasts collecting parties will be landed each day to procure the mammals, birds, reptiles and fishes of the region, which are of especial interest to naturalists because so large a number of them are peculiar to the locality.

THE Charleston (S. C.) Museum has been developing a large amount of public interest recently in the scientific studies that were so much cultivated in that city in the years before the war. In the middle decades of the last century, Charleston was a center of scientific work and interest. The visit there of Agassiz in 1850, and the notable work of Audubon and Bachman, and of others beside, gave great stimulus to scientific pursuits. There has been organized in recent years a Natural History Society, as an educational department of the museum, composed largely of young people, but by no means confined to them, which has already done much excellent local work, and is raising up and training a body of enthusiastic observers, especially in botany and ornithology. The museum has also within the past year issued the first volume of its "Contributions,"—"The Birds of South Carolina," by Arthur Trezevant Wayne, honorary curator of ornithology in the museum, and a recognized authority on the birds of the region. This is an octavo volume of 254 pages, and is the most complete and accurate work on the subject that has been published. With a view to stimulating public interest, and also in the desire to link the present and future work of the museum with that which gave Charleston its reputation in the days of Audubon and Bachman, the Natural History Society proposed to devote its March meeting to the work of those

eminent men, and to make it a memorial occasion. To this end, request was made for copies in private hands, of the plates and various editions of their works, and also for other objects connected with them. The main hall of the museum was assigned to this Audubon-Bachman exhibit. The result exceeded all anticipation, and revealed a wealth of choice material of this kind, belonging to private owners that had not been suspected. A noble collection of Audubon's bird-plates was thus secured, together with copies of the several editions of his work on birds, and of the joint work of Dr. Bachman on the mammals, with busts, portraits, original drawings, etc., of great interest. This loan collection attracted much public attention, and has given a distinct impetus to scientific appreciation in the city. At the memorial meeting, held on March 2, a large audience was present, and very interesting addresses were given on the life and work of both Audubon and Bachman, by several speakers, including Director Rea, of the Museum, and the venerable Dr. C. S. Vedder, of Charleston, an intimate friend of Dr. Bachman for many years.

A NEW expedition is being arranged, Reuter's Agency learns, to explore the Snow Mountains of New Guinea, a region in which the British expedition under Captain Rawling is at present working. The Dutch government is interested in the undertaking, and Queen Wilhelmina and Prince Henry have contributed towards the cost. The details have not yet been finally arranged, but it is probable that Captain von Nauhuys, who has already been on three expeditions in New Guinea under Dr. Lorentz, will be in command and will be accompanied by a number of European scientific men.

THE production of tungsten in the United States increased considerably during the year 1909, but practically all the nickel, cobalt and tin consumed was imported. In an advance chapter from "Mineral Resources of the United States Calendar Year 1909," prepared by Frank L. Hess for the United States Geological Survey, the production of these metals and of the rarer metals vanadium, titanium,

molybdenum, uranium and tantalum is reported. Colorado led in the production of tungsten in 1909. The prices quoted for the metal were considerably higher than in 1908, and the production of ore increased from 671 short tons, valued at \$229,955, to 1,619 tons, valued at \$614,370. This is the largest quantity produced by any country in one year. The United States last year produced nearly one third of the world's total production of tungsten ore, which was about 5,300 tons. Very little nickel was produced in the United States, but a great deal was imported, and, as more nickel is refined in this country than can be used here, large quantities were exported. In all, 22,194,102 pounds of nickel as metal and as metallic content of ores were brought into the United States in 1909. The total value was \$3,036,273. The exports of nickel amounted to 12,048,737 pounds, valued at \$4,101,976. The importations of cobalt amounted to 12,132 pounds, valued at \$11,696. Titanium is being used with great success in making steel rails. The New York Central Line has given rails treated with ferrotitanium a thorough test in the Grand Central terminal yards and now requires that all rails made for its lines shall be treated with titanium alloy. Rutile, or titanium oxide, was produced in the United States last year only at and near Roseland, Va. No rutile was imported, but one American company exported it in considerable quantities. Molybdenum, uranium and tantalum were little used in the United States in 1909, and only a small quantity of tantalum was produced. A little was imported from Germany, but the use of tungsten in incandescent lamps has proved so satisfactory that the demand for tantalum has probably not greatly increased. Although the United States uses 43 per cent. of the world's output of tin, it is not an important producer of that metal. Tin was produced in Alaska and South Dakota in 1909, but not in large quantities. In 1909 there were imported into the United States 47,662 tons of tin, valued at \$27,558,546. The average price was 28.91 cents a pound. Several thousand tons of tin are recovered from used tin cans and other wastes.

UNIVERSITY AND EDUCATIONAL NEWS

THE subscription to the memorial to President Grover Cleveland exceeded \$100,000 on the seventy-fourth anniversary of his birth. It will be remembered that the memorial is to be a tower forming part of the graduate college of Princeton University.

THE University of Washington at Seattle has received from Messrs. Sigmund and Abraham Schwabacher \$30,000 to maintain a bureau of child welfare.

GOVERNOR STUBBS, of Kansas, has vetoed the bill placing the University of Kansas and other state institutions under the control of a commission consisting of three paid members. It is stated that the recent legislature seriously reduced the appropriations for the university.

THE University of the Pacific, College Park, California, by the action of its trustees, will henceforth be known as the College of the Pacific. This action separates the college from a conservatory of music and a preparatory department.

At the meeting of the board of regents of the University of Minnesota on March 3, the salary of one of the professors, who is dean of one of the schools, was increased from \$4,000 to \$6,000.

THE cornerstone of the administration building of the William M. Rice Institute, was laid by the trustees on March 2, the seventy-fifth anniversary of Texan independence. The seven members of the board were present. They are: J. A. Baker, W. M. Rice, Jr., J. E. McAshan, B. B. Rice, C. Lombardi, E. Raphael, E. O. Lovett.

HEREAFTER the degree of bachelor of chemistry (B.Chem.) will be conferred by Cornell University on students who have completed the special course in chemistry. The department of chemistry remains a department of the College of Arts and Sciences. A four-year course in chemistry and allied subjects has been offered by the department since about 1903 for students planning to follow chemistry as a profession. Although the course is essentially technical in character and professional in purpose, the degree of bachelor