

lier, for the publication of his botanical researches in Africa; M. Turquan, for the publication of his work on statistics; Abbe Breuil, for paleontological researches in l'Aisne; M. Cartailhac, for prehistoric researches in Sardinia; M. Chantre, towards the publication of his work on quaternary man in the Valley of the Upper Rhône; the Paris School of Anthropology, for researches on the antiquity of man; MM. Fournier and Repelin, towards the publication of their explorations in Provence; M. Gentil, for excavations in Algeria; and M. Rivi re, for researches in the caves of Mouthe.

#### SCIENTIFIC NOTES AND NEWS.

PROFESSOR WOLCOTT GIBBS has been appointed one of the five official representatives of Harvard University at the bi-centennial exercises of Yale University.

DR. CARROLL D. WRIGHT, U. S. Commissioner of Labor, has been elected a member of the Paris Institute of Sociology.

WILLIAM JAMES, professor of philosophy, George Lincoln Goodale, professor of natural history and director of the Botanical Garden, and Maxime B cher, assistant professor of mathematics, have returned to their work at Harvard after a year's leave of absence spent abroad. We regret to learn that the health of Dr. B. O. Peirce, professor of mathematics and natural philosophy, is such that it has been necessary to extend his leave of absence.

MR. FRANK B. LITTELL, of the U. S. Naval Observatory, has been appointed a professor of mathematics in the navy.

PROFESSOR H. W. CONN, of Wesleyan University, has been appointed lecturer on agricultural bacteriology at the Connecticut Agricultural College, and has been put in charge of dairy experimentation at the Storrs Experiment Station. The experimental work is to be done partly at Storrs and partly in the biological laboratory at Wesleyan University.

DR. DAVID T. DAY, chief of the department of mines and metallurgy in the St. Louis Exposition, has added these experts to the department: Professor J. A. Holmes, state geologist of North Carolina; George F. Kunz, gem expert, with Tiffany & Co., New York City; John

Birkinbine, president of the Franklin Institute, Philadelphia; E. W. Parker, editor of the *Engineering and Mining Journal*, New York City; Jefferson Middleton, geological survey, Washington, D. C., clay expert; and Charles C. Yale, Mint Bureau, San Francisco.

WE learn from *Nature* that owing to losses in the staff by death and retirement, the following appointments have been made on the Geological Survey of the United Kingdom: Dr. J. S. Flett has been selected to assist in the petrographical work of the Survey, Mr. J. Allen Howe and Mr. H. H. Thomas have been appointed geologists on the English staff, Mr. H. B. Muff on the Scottish staff and Mr. W. B. Wright on the Irish staff.

PROFESSOR W. H. HOLMES, of the U. S. National Museum, has gone to Indian Territory to make collections of Indian remains.

MR. CLOUD RUTTER, scientific assistant of the U. S. Fish Commission, is on the Pacific Coast for the purpose of gathering salmon statistics, with headquarters on the Sacramento River near Rio Vista.

MR. S. W. LOPER, curator of the museum of Wesleyan University, spent the greater part of the summer in the study of the Cambrian formation of Cape Breton Island for the United States Geological Survey. Mr. Loper made a large collection of fossils.

It is reported that Mr. H. DeWindt and Mr. George Harding will make a third attempt to accomplish an overland journey via Bering Straits between Europe and America.

THE steamship *Windward* has arrived at Newfoundland bringing Mr. Robert Stein, of Washington, and Mr. Samuel Warmbath, of Boston. The *Windward* will return next summer for Lieutenant Peary.

A TELEGRAPH from Alice Springs on July 19 states that Professor Baldwin Spencer's expedition had finished its work at Barrow Creek, where six weeks had been spent among the Kaitish and Ummatjera tribes. The next main camp was to be formed at Tennant's Creek, about 150 miles further north.

A GRANITE monument in memory of James Bowman Lindsay, an investigator and an in-

ventor who fifty years ago made experiments in connection with wireless telegraphy, was unveiled on, September 14, at Dundee, Scotland, by Sir William Preece.

WE regret to learn that Edward W. Claypole, professor of geology at Throop Institute, Pasadena, Cal., died quite suddenly at Long Beach, Cal., on August 17, aged sixty-six years. Professor Claypole was an Englishman and had degrees of A.B. and Sc.D. from the University of London. He came to this country in 1872 and through the influence of Rev. Ed. Everett Hale, was appointed professor of natural science at Antioch College, Ohio, where he served until 1881. He was paleontologist to the second Geological Survey of Pennsylvania for two years and professor of geology at Buchtel College, Ohio, from 1883 to 1897, when he sought the milder climate of Southern California in the interest of his wife's frail health. Dr. Claypole was a geologist noted on two continents. He was a fellow of the Geological Societies of London, Edinburgh and America, and a fellow of the American Association, having served at different times as both section president and secretary of geology. He had published 'The Lake Age in Ohio' and was a frequent contributor to American and foreign scientific journals.

DR. ABRAM LITTON, who for fifty years filled the chair of chemistry both at Washington University and the St. Louis Medical College, died at his home in St. Louis on September 22 aged eighty seven years.

THE position of assistant pomologist in the Bureau of Plant Industry of the Department of Agriculture will be filled as the result of a civil service examination on November 2. The examination is entirely on the subjects of the office, and applicants are not required to be present at any special place. On October 22, an examination will be held to fill the position of assistant in the Dairying Division of the Bureau of Animal Industry at a salary of \$1,200. The examination will be held in any city in the United States where rural free delivery has been established.

THE subject of the Fiske Fund Prize Essay (\$200) for the year 1902 is 'Serumtherapy in

the Light of the Most Recent Investigations.' Further information may be obtained from the secretary of the Board of Trustees of the Fiske Fund, Dr. Halsey DeWolf, 212 Benefit Street, Providence, R. I.

MR. W. C. MILLS, curator of the Ohio State Archeological and Historical Society, has returned to Columbus, Ohio, from a successful season of exploration in various part of Ohio. He excavated the noted Adena Mound, situated in sight of Chillicothe and perhaps the largest mound in the Scioto Valley, being 26 feet high and 445 feet in circumference. The mound contained about 6,000 cubic yards, all of which was turned over and examined. Thirty-two skeletons with many implements and ornaments were found. One specimen is a very fine carving about 8 in. long, representing the human figure. In execution it is not surpassed by any of the objects found in mounds in the Scioto Valley.

THE German Mathematical Society held its annual meeting from September 22d to 28th at Hamburg in affiliation with the Congress of German Men of Science and Physicians. Twenty-one papers are to be found on the program issued in advance of the meeting, and it is stated that the Society would consider the publication of a monthly journal in the place of the present *Jahresbericht*.

WE learn from the London *Times* that the Congress of the International Association for Testing Materials was held at Budapest, from September 9 to 14, under the presidency of Professor L. von Tetmajer, and was largely attended by engineers from all parts of the world. The delegates present included four from England, 41 from Austria, three from Belgium, nine from Denmark, two from the United States, 36 from France, 152 from Hungary, 70 from Germany, three from Norway, 12 from Italy, 26 from Russia, one from Roumania, three from Spain, one from Servia, ten from Switzerland and five from Sweden. After an inaugural presidential address and address of welcome from the Hungarian authorities, a representative of each country was elected an honorary president of the congress, Mr. Bennett H. Brough being chosen for England, and Professor H. M. Howe for the United States.

The other English and American members present were: Sir William H. Bailey (Manchester), Mr. Bertram Blount (London), Dr. C. J. Renshaw (Ashton-on-Mersey), and Dr. R. Moldenke (New York). In addition to the various reports of committees dealing with technical problems, the following papers dealing with metals were read and discussed: 'On the Measurement of Internal Tension,' by Mr. Mesnager (Paris); 'On the Forms of Carbon in Iron,' by Baron Jüptner (Leoben); 'On Brinell's Researches,' by Mr. A. Wahlberg (Stockholm); 'On the Testing of Metals by Means of Notched Bars,' by M. H. Le Chatelier (Paris), by M. G. Charpy (Paris), and by Professor Belelubsky (St. Petersburg); 'On Micrographical Researches on the Deformation of Metals,' by Mr. F. Osmond (Paris); 'On Metallography,' by Mr. E. Heyn (Charlottenberg); 'On the Testing of Railway Material,' by Mr. E. Vanderheyem (Lyons); and 'On the International Iron and Steel Laboratory,' by Professor H. Wedding (Berlin). Several papers dealing with stone and mortars were also read, and an interesting lecture on the iron industry of Hungary was delivered by Professor Edvilles (Budapest).

It is now said that the German government has authorized the purchase of the astronomical instruments originally taken from Peking by the German soldiers.

In addition to the *Lucania*, three other steamships of the Cunard Line—the *Campania*, the *Umbria* and the *Etruria*—will be fitted with Marconi's system of wireless telegraphy.

CONSUL HAYNES, of Rouen, under date of August 26, 1901, says that the metric system is compulsory in twenty countries, representing more than 300,000,000 inhabitants—Germany, Austria-Hungary, Belgium, Spain, France, Greece, Italy, Netherlands, Portugal, Roumania, Servia, Norway, Sweden, Switzerland, Argentine Republic, Brazil, Chile, Mexico, Peru, and Venezuela—and advises American exporters in dealing with any of these countries to adopt the system.

WE learn from the *Electrical World* that the International Statistical Institute will hold this year in Budapest, from September 20 until

October 5, an international exhibit of all kinds of machines and instruments which facilitate work with figures. The aim of the exhibit is to furnish to the most competent representatives of scientific and practical statistics assembled from different parts of the world the opportunity of gathering personal information about this kind of technical construction. The exhibit will include all kinds of inventions, engines and apparatus which are intended to facilitate work with figures in general, and especially those which are devised to facilitate the compilation of statistical data and to perform the necessary proportional calculations, and to accelerate and render more economical statistical labor; especially machines for adding, multiplying, dividing, tabulators, accounting machines for the combined compilation of data, etc.

It is announced that a commission, to be presided over by Sir Colin Scott-Moncrieff, is being appointed to lay down rules for control of irrigation works in India. In connection with this announcement the London *Times* quotes figures given in the annual review of irrigation issued recently in India. From them it appears that 22 of the large productive works realized a net revenue amounting to 9.52 per cent. on the capital outlay, while 13 others yielded only 0.79 per cent., reducing the average return to 7 per cent. The total area of the crops irrigated or protected exceeded 18½ millions of acres, being an increase of over three quarters of a million during the year. The principal enhancements were in respect to the Punjab canals, the area irrigated there exceeding all previous records by over 300,000 acres, while the net return on capital in respect to that province was as high as 10.24 per cent. Still more gratifying results may be looked for in the current year, since the great Jehlum Canal, begun in the autumn of 1898, is to be formally opened in October, and will irrigate a vast tract of country lying between the Chenab and Jehlum rivers, a great portion of which has hitherto lain waste. Other large projects are being carried out in the Punjab, and will, when ready, be worked on the lines so successfully adopted in the case of the Chenab colonies. The total surplus revenue earned since irrigation works were undertaken by government has been nearly ten millions

sterling. This is the purely financial result of irrigation, regarded as an investment, and the figure quoted has no reference to its economic value in increasing food supplies, in preventing famine, and in strengthening the position of the owners and occupiers of the land. Neither does it take into account the increase of land revenue received by the State, as a result of bringing waste tracts under cultivation.

#### UNIVERSITY AND EDUCATIONAL NEWS.

THE Severance Chemical Laboratory of Oberlin College was dedicated on September 26, the address being made by President Ira Remsen, of the Johns Hopkins University. At the conclusion of the dedicatory exercises it was announced that Mr. Lewis Severance, of New York City, the donor of the laboratory, had given the sum of \$40,000 for an endowment for the chair of chemistry.

THE University of Southern California at Los Angeles has obtained the \$100,000, of which \$25,000 was offered by Mrs. Anna Hough on condition that the balance be given. Mrs. Hough has now offered \$40,000 towards a second \$100,000.

By the will of the late Mrs. Martha Callahan, \$20,000 is bequeathed to Tuskegee Normal and Industrial Institute of Tuskegee, Ala.

PROFESSOR GOLDWIN SMITH has given \$10,000 to the library of the University of Toronto.

At a recent meeting of the corporation of Yale University it was decided that the house which Professor O. C. Marsh bequeathed to the University and which is now occupied by the Forest School shall be known officially as Marsh Hall, and the grounds about it as the Yale Botanical Garden.

At the spring meeting of the trustees of Colby College, Waterville, Me., the department of geology was abolished, and it was decided that henceforth the teaching of geology should be by the assistant in chemistry. The determination was taken suddenly, the reason assigned for the action being purely a financial one. The abolition of the department necessarily legislates Dr. W. S. Bayley from the position which he has held during the past twelve years.

DR. STURGIS, of the Connecticut Agricultural Experiment Station, Professor Brinton, the State entomologist, and Professor Hopkins, of West Virginia University, have been appointed special lecturers in the Yale Forest School.

MR. EUGENE L. LEHNERT, of Clinton, Mass., has been elected professor of veterinary medicine at the Agricultural College at Storrs.

At the Western Reserve University, Dr. F. W. Reichmann, of the University of Chicago, has been appointed instructor in physics; Dr. O. F. Tower has been promoted to be associate professor of chemistry.

DR. CHARLES M. HAZEN has been appointed professor of biology in Richmond College, at Richmond, Va.

THE following appointments have been made at the Illinois College, Jacksonville, Ill.: J. Bishop Tingle, Ph.D. (Munich), instructor of chemistry at the Lewis Institute, Chicago, to be professor of chemistry. J. B. Overton, Ph.D. (Chicago), graduate assistant in botany in the University of Chicago, to be professor of biology. J. H. Hall, Ph.D. (Yale), assistant in the University of Chicago, to be assistant professor of physics.

MISS S. M. HALLOWELL, professor of botany at Wellesley College, has been given leave of absence for the year and the work of the department will be under Miss Clara E. Cummings, assistant professor of botany.

EDWARD C. SCHNEIDER, Ph.D. (Yale, 1901), has been appointed to take charge of the work in biology at Tabor College, Tabor, Iowa.

MR. R. M. FERRIER, B.Sc. (Glasgow), M.Sc. (Durham), has been appointed to the chair of engineering at University College, Bristol, in succession to Dr. Stanton, who has received the appointment of superintendent of the engineering department in the National Physical Laboratory.

DR. ROKURO NAKASEKO, who has been the recipient of a University Fellowship at Yale during the past two years, has returned to Kyoto, Japan, to take charge of the instruction in physiological chemistry in the Scientific School there.