

Frederick T. Hollis, Daniel H. McMillan, Judge Joseph Daly, William Kernan, Robert F. Wilkinson, and the Secretary of the Board of Regents, and the Assistant Superintendent of Public Instruction. All were men of the highest standing, of trained capacity, and specially interested in the whole subject. I cannot too heartily thank them for their invaluable and wholly disinterested labor for the public welfare.

This commission, after careful consideration, has arrived at suggestions embodied in a report suggesting statutory changes which, if adopted by the Legislature, will give effect to the system which they recommend. What they propose is the creation of a Department of Education, including both the University and the Department of Public Instruction, of which a single officer, known as the Chancellor of the University, shall be the responsible executive and administrative head. The University is, of course, continued, and has its oversight extended to cover the entire field of education, so that its real authority and opportunity for public service will be much increased.

The plan proposed is simple, effective, and wholly free from political or partisan considerations. It deserves the cordial support of all friends of public education, and this means of every patriotic citizen of the State.

It is impossible to exaggerate the importance of the interests involved, or the importance of considering them solely from the point of view of the general welfare of the State.

INDIAN UNIVERSITY FOR RESEARCH.

CONSUL FEE writes from Bombay under the date of November 1, 1899, to the Department of State as follows:

The conference which has been sitting at Simla, the hot-weather capital of India, considering the scheme for a research institute, has about completed its labor. Its recommendations will be submitted to the government of India for sanction, and later will be put into legal being by proper legislation.

The inception of the idea of this institution is Mr. Tata's, a wealthy resident of Bombay, whose public spirit and munificence has made its creation possible.

It is to be named the 'Indian University of Research.' It will be unlike all other universities of India, in that it will neither be an examining body nor bestow degrees, but will grant fellowship to distinguished students and graduates, and afford them facilities for research and investigation in the broadest sense possible. It will have a university court, consisting of a chancellor, a vice-chancellor, one member to represent the supreme government of India, one to represent each of the eight local governments, one for each of the five existing Indian universities, one to represent Mr. Tata, and one to be added for any benefactor who may subscribe not less than 15,000 rupees.

The site, the question of which gave rise to no little discussion, was finally granted to Bombay, with Bangalore, the chief city of the native state of Mysore, as a second choice. The fact that the Mysore government had offered to donate a site and a handsome contribution to the building may have been an attraction.

It is recommended that this new university coöperate with existing institutions by giving assistance to original scientific research where this work is now in any way hampered or curtailed.

The conception of this institution is as broad as its ultimate development will be vast. It will give a livelier tone to higher education in India, and be a noble monument to its founders and promoters.

SCIENTIFIC NOTES AND NEWS.

MR. J. B. HATCHER has been appointed chief of the department of vertebrate paleontology of the Carnegie Museum, in place of Dr. Wortman, who has resigned. Dr. Wortman will undertake work on the collections made by the late Professor Marsh for the Peabody Museum, Yale University.

SIR ROBERT BALL, F.R.S., was elected president of the Mathematical Association for the ensuing year at the annual meeting of the Association at University College, London, on January 27th.

THE Prince Regent of Bavaria has conferred the order of St. Michael on Dr. Nansen.

THE address at the commencement exercises

of the University of Michigan next June will be delivered by John M. Coulter, Ph.D., head professor of botany in the University of Chicago.

DR. GEORGE F. BECKER, of the Geological Survey, who was recently sent by the government to the Philippines to report on the geology and mineral resources of the islands, has returned to Washington.

THE death is announced in Berlin of Dr. W. Hauchecorne, director of the School of Mines.

WE also note with regret the death, on January 13th, of Dr. J. W. Gunnings, professor of chemistry at Amsterdam, at the age of 72 years; of Dr. Peter Waage, professor of chemistry at Christiania, at the age of 57 years, and of General Alexis de Tillo, of St. Petersburg, known for his work in geography and meteorology.

THE mineralogical museum of Columbia University will be named after the late Thomas Eggleston, long professor of mineralogy and metallurgy at the University, to whose gifts and efforts the museum is chiefly due.

PROFESSOR G. H. PARKER, on January 29th, lectured before the New York Academy of Sciences, under the auspices of the Section of Biology. The title of the lecture was 'The Neurone Theory in the Light of recent Discoveries.' The lecturer gave a summary of the development of our knowledge of the histological structure of the nervous system, and contrasted with the neurone theory as widely understood that of Apathy's, which declares the absolute continuity of the nervous system by means of the fibrillæ in the nerve cells and fibers as demonstrated by his method of technique. The lecture was closed by a criticism of Apathy's interpretation of his preparations.

DR. EDWARD THORNDIKE, of Columbia University, gave a series of five lectures before the course in General Biology at the University of Chicago, February 4th to 9th. One of these was also open to all members of the University.

PROFESSOR T. H. MORGAN, of Bryn Mawr College, will repeat the course of lectures given at Columbia University at the University of Chicago, February 19th to 23d.

ON February 8th, Professor H. H. Turner, F.R.S., Savilian professor of astronomy in the

University of Oxford, gave the first of a course of three lectures at the Royal Institution on 'Modern Astronomy.' On March 22d, Mr. H. J. Mackinder will deliver the first of a course of three lectures on 'Equatorial East Africa and Mount Kenya,' in the place of Mr. E. A. Fitzgerald, who is unable to deliver his course of lectures owing to his departure for South Africa.

LARGELY through the generosity of Mr. W. F. E. Gurley, formerly State Geologist of Illinois, the University of Chicago has come into the possession of an exceptionally valuable collection of paleozoic fossils. The making of this collection has been the life work of Mr. Gurley and it is undoubtedly the best existing collection of the paleozoic fossils of the interior States. It also contains a large amount of excellent material from other regions. The collection is estimated to contain 15,000 species, and several hundred thousand specimens. With this collection as a nucleus, the University of Chicago will be in position to build up one of the most valuable collections of paleozoic fossils in America.

MR. MORRIS STEINERT has given to Yale University his collection of historical musical instruments. It includes more than 500 pieces, including some of great value, representing the development of the piano and violin. The collection also includes musical manuscripts and original musical compositions.

By the will of Mme. Beaucourt the Geological Society of France receives 40,000 fr., the income of which is to be used for research work.

It is stated in the *Scientific American* that the sum of \$7,550 has been given by Professors Haeckel, Conrad and Fraas, to be awarded for the best essays submitted on the application of the Darwinian theory to international political development and legislation. The essays must all be submitted prior to December, 1902.

THE American Section of the International Association for Testing Materials, of which Professor Mansfield Merriman, of Lehigh University, is chairman, has received contributions to its publication and research fund amounting to \$655.

WE learn from the *National Geographic Magazine* that the French government will erect a

meteorological observatory on a hill near Tonkin.

THE Weather Bureau proposes to extend its service by establishing stations at all the Mexican Gulf ports between Tampico and Progreso.

A TELEGRAM has been received at the Harvard College Observatory from Professor Kreutz, at Kiel Observatory, stating that Comet *a* 1900 (Giacobini), was observed by Javelle at Nice, February 3^d. 2893, Greenwich Mean Time, in R. A. 2° 49' 51."0, and Dec. —6° 40' 10" :

Daily motion in R. A. — 39'
 " " " Dec. + 25"

A CABLEGRAM to the daily papers reports that there were 400 deaths at Bombay on February 5th, more than on any day since the first outbreak of the plague.

THE congregation of the University of Chicago, at its meeting on January 3d, adopted a resolution to the effect that the official publications and journals of the University should use the simplified spelling recommended by the National Educational Association. This action was, however, overruled by a vote of 20 to 16 by the Faculty Senate.

ACCORDING to the daily press, the cable sounding ship *Nero* which arrived at Honolulu on January 29th, while between Guam and Manila, made the deepest ocean soundings that have yet been recorded. She found a large area over which the soundings showed 5260 fathoms, about 260 fathoms more than had ever been found before. This area was named *Nero's Hole*.

THE second annual meeting of the New England Association of Chemistry Teachers was held at the United States Hotel, Boston, on February 3d. Mr. Charles A. Pitkin, of South Braintree, reported for the committee on physiological chemistry, and Mr. Irving O. Palmer, of Newton, for the committee on new apparatus and methods, while Professor Theodore W. Richards, of Harvard University, told of Harvard requirements for admission in chemistry. Mr. Rufus P. Williams, of Boston, was elected president, and Mr. H. J. Chase, of Newton, secretary, for the coming year.

THE *Electrical World* states that the English

army surgeons' employment of the Röntgen rays in field surgery has proved most successful, and has met with the highest commendation. Orders have been received for a fresh equipment and skilled operators, and before February it is likely that every column at the front will be furnished with a Röntgen ray outfit. Wireless telegraphy is also rapidly gaining ground. Marconi outfits are being installed on three British vessels destined for active service, as well as on the passenger steamers in the English Channel.

At a New York State Civil Service Examination to be held on February 24th, the position of assistant in geology in the State Museum, will be filled. The salary of this office is \$900. It is desired that candidates shall be graduates in civil or mining engineering.

A VACANCY exists among the second-class assistantships in the Geological Department of the British Museum, owing to the removal of Professor Gregory to Melbourne. Admission to these posts is by Civil Service examination in general and special subjects, after nomination by the trustees. The maximum limit of age has recently been lowered to 25 years. The British Treasury Department has, however, the power of appointing persons over this age and without examination, should a strong recommendation to that effect be made by the trustees. It is said, however, that such appointments have always been highly unpopular with the working staff.

ACCORDING to the bill now before Congress, providing for a Department of Commerce with a Cabinet officer, the Patent Office is removed from the Interior Department and placed under the proposed Department of Commerce.

A BILL has been introduced into the New York Legislature appropriating \$200,000 for the construction and equipment of suitable buildings for carrying on the work of promoting knowledge throughout the State in forestry and agricultural lines by Cornell University.

THE president of the British Board of Agriculture has appointed a departmental committee to inquire and report as to what regulations may with advantage be made by the

Board of Agriculture, for determining what deficiency in the normal constituents of genuine milk or cream, or what addition of extraneous matter or proportion of water, in any sample of milk (including condensed milk), or cream shall raise a presumption that the milk or cream is not genuine. The committee will consist of the following gentlemen: Lord Wenlock. (chairman), Mr. George Barham, Mr. George Cowan, Major Patrick George Craigie (an assistant secretary of the Board of Agriculture), Mr. S. W. Farmer, Mr. Shirley F. Murphy, M.D., Professor Thorpe, F.R.S. (principal chemist of the Government Laboratories), and Mr. J. Augustus Voelcker, Ph.D. Mr. Robert Henry Rew, of the Board of Agriculture, will act as secretary to the committee.

AN effort is being made by the New York Fish, Game and Forest League in New York State to secure the establishment of a State Biological Station. Professor H. A. Surface, chairman of the biological committee, writes that its purpose would be the making of investigations and practical experiments (a) to determine the nature, habits, food, and needs of the fish, game and insectivorous and song birds; (b) to determine the causes of their decrease; (c) to determine what measures can be taken to reduce their enemies, increase their natural food supply and shelter, and secure such natural or modified conditions as should lead to their abundance throughout the State; (d) to propagate not only the desirable creatures named above, but also their natural food supply; (e) to study and experiment with the best methods of introducing beneficial species, to show what measures can be taken to help them to become acclimated, and to provide for their winter feeding and shelter; (f) to obtain material for publication; (g) to obtain facts upon which proper legislation can be based to secure the effective protection and maintenance of desirable species and the destruction of obnoxious kinds; (h) to obtain facts that may be useful to teachers of nature study, natural history, biology, botany, zoology, ornithology, ichthyology or forestry in the State. Another important feature will be the preparation and labeling of collections of specimens (especially fishes and other aquatic and semi-aquatic animals) for schools of the

State, which will stimulate scientific research and facilitate better methods of science teaching.

A MARINE laboratory and museum will be opened at the University of Berlin on the first of April.

A SECOND edition of the Botanists Directory, published by I. Dörfner, Vienna, is in preparation. The publisher will be glad to receive the names and addresses of all botanists, especially those whose names do not appear in the first edition, as well as information concerning botanical gardens and societies concerned with botany.

WE learn from the *London Times* that the report by Sir William Crookes, F.R.S., and Professor Dewar, F.R.S., on the composition and quality of daily samples of the water supplied to London for the month ending December 31, 1899, states that of the 192 samples examined by them during the month, all were found to be clear, bright, and well filtered. The rainfall at Oxford during the month was 1.30 in. The average for the past 30 years is 2.10 in.; this leaves a deficiency of 0.80 in., bringing the total deficiency for the year up to 4.54 in., or 17.6 per cent. The general supply has been admirable from a bacteriological point of view. During the year they examined 4792 samples of London water bacteriologically, as compared with 3590 and 3249 respectively in the two previous years. They also made 2456 chemical analyses of London waters, making a total of 7248 samples examined. During the first six months the Thames-derived companies clear-water wells contained on the average 32 bacteria per cc., while the New River and River Lea supplies contained respectively 18 and 25. During the second six months the number of bacteria in the waters from the three were respectively 22, 12, and 14. These results show that during the year effective filtration of the London waters has been properly maintained. The report adds: "When we consider that a water containing about 100 bacteria per cc. in the clear-water wells would be regarded by the highest authorities as properly filtered, we see that the London supply must be considered exceptionally good."

THE *British Medical Journal* states that

there are now eight Pasteur Institutes in France; arranged according to the dates of their establishment, they are those of Paris, Algiers, Tunis, Montpellier, Marseilles, Bordeaux, Lille, Lyons. The last was opened on the first day of this year. There are five like institutes in Italy (Bologna, Milan, Naples, Palermo, Turin), two in Austria-Hungary (Vienna and Buda-Pesth), seven in Russia (St. Petersburg, Moscow, Samara, Kharkof, Warsaw, Odessa, Tiflis), two in the Ottoman Empire (Constantinople, Aleppo), one in Roumania (Bucharest), and one in Malta.

'VARIATIONS and Regeneration in *Synapta inhaerus*' on page 178 of the number of *SCIENCE* for February 2, 1900, should have the name of the author, Professor Charles L. Edwards, attached to it.

UNIVERSITY AND EDUCATIONAL NEWS.

PLANS for a botanical laboratory to cost over \$100,000 have been submitted to the Senate of Cambridge University.

THE new wing of the engineering laboratory at Cambridge University, erected in memory of the late Dr. John Hopkinson by his widow and family, was formally opened on February 2d by Lord Kelvin; and at the same time a portrait of Dr. Hopkinson was unveiled.

ST. LAWRENCE UNIVERSITY has recently received a gift of \$24,000 from a friend of that institution.

THE Massachusetts Institute of Technology offers a new course in landscape architecture which, as provisionally laid out, includes in the second year horticulture, elementary architectural design, shades and shadows, perspective, freehand drawing, surveying, topographical drawing and dynamical geology, with the usual general courses in physics, language and history. In the third year the same general lines of work will be followed, with work in horticulture at the Arnold Arboretum, architectural and landscape design, architectural history, freehand drawing and pen and ink, stadia and plane table surveying, curves and earth-work, highway engineering and structural geology. In the fourth year, landscape architecture and de-

sign and horticulture will be the main features, with courses in sanitary engineering and drainage, building stones and sanitary science, history of ornament, life class, modeling, pen and ink, water color, specifications and working drawings and business relations. An arrangement has been made with the director, Prof. C. S. Sargent, of the Arnold Arboretum, by which students will receive a part of their instruction there, particularly in all that relates to planting and the use of plants and trees. With this work at the Arboretum will be combined a series of excursions to neighboring parks and country places in order to study examples of planting and design. The special instruction in landscape design will be conducted by Mr. Guy Lowell a graduate in the class of 1894, who has since taken the diploma of the *École des Beaux Arts* with distinction, and has made a special study of landscape architecture in Europe.

THE course of landscape architecture, at Harvard University, the establishment of which we recently announced, has been placed under the direction of Mr. Frederic Law Olmsted, Jr. He will be assisted by Mr. Arthur A. Shurtleff.

THE Technical Education Board of the London County Council offers two scholarships of £150 each to teachers in schools. They are tenable from Easter to Christmas 1900, and enable the holder to visit the continent and study methods of teaching modern languages in commercial schools.

THE foundation of a chair of American Archaeology at the University of Berlin by the Duke of Loubat, has given a great impetus to the development of the teaching of anthropology at that University. Recently it has been announced that Adolf Bastian has been made Professor Ordinarius of Ethnology. This has been followed by the announcement of the appointment of Dr. Felix von Luschan as Professor (extraordinarius) of Anthropology.

NICHOLS KNIGHT, Ph.D., of Syracuse University, has been appointed professor of chemistry at Cornell College, Mt. Vernon, Ia.

JUNE E. DOWNEY, A.M. (Chicago), has been appointed instructor in psychology at the University of Wyoming.