

different classes of buildings and of conservation were, in the lecturer's opinion, required. For valuable objects of which no possible deterioration must be permitted, and which must be safeguarded from risks of theft, such buildings as our present museums were admirable. But for rougher objects and things of small individual value a much less costly and elaborate system was needed. A fine site in a city, a noble building, costly glass cases were quite inappropriate to the greater part of the material which was to be kept and studied. The system to which the necessities pointed was that of long galleries, far apart, against which much larger annexes could be attached at any point. This might be called the gridiron pattern, and the building must, of course, be placed outside of London rents. Some said: "Let us leave everything to local care; let local museums keep everything as found." They might as well leave things safely buried instead. The local museum had its own uses for elementary instruction, but no student could possibly race over the whole world to find the examples of any subject he needed. Professor Petrie suggested that a square mile of ground should be obtained somewhere within an hour's train from London at a comparatively cheap rate. It would, in a generation or so, be to Greater London what South Kensington was to the Lesser London 50 years ago. This village that would grow up around it might very appropriately be called, after the founder of the British Museum, the village of Sloane. The Sloane Galleries would soon outgrow any confusion with the little collection of Sir John Sloane in Lincoln's-inn-fields. The lecturer worked out in considerable detail the form of the galleries, the cost, the arrangements for the staff, and the fittings, and said that at first the Sloane would be the clearing ground for freeing the existing museums from everything of small value and attractiveness. That the British Museum should thus devolve the care of its contents of lesser value was a necessity that was to be met in the library by powers of very free-handed disposal to locate centers, or even destruction. Such powers in other departments were therefore to be expected sooner or later. As yet nothing could legally leave the museum, but useless lumber could be

interred in the grounds. The normal average increase of the vote for the British Museum was £10,000 every four years of its history. If the proposed national repository enabled the British Museum to expand by weeding out, instead of by fresh building, the former would be paid for to all time. All that was absolutely required could be provided on the present system of expenditure if the British Museum were to be weeded during eight years of its more cumbrous and less valuable contents sufficiently to take in its new acquisitions.

#### SCIENTIFIC NOTES AND NEWS.

DR. J. WILLARD GIBBS, professor of mathematical physics in Yale University, has been elected a corresponding member of the Paris Academy of Sciences.

THE gold medal of the Linnean Society of London has been awarded to Professor Alfred Newton, F.R.S., in recognition of his important contributions to zoological science. The medal is awarded annually, alternately to a zoologist and to a botanist.

ON May 8th the Prince of Wales, president of the Society of Arts, presented the Albert medal to William Crookes, F.R.S., "for his extensive and laborious researches in chemistry and in physics; researches which have, in many instances, developed into useful practical applications in the arts and manufactures."

THE Boston Society of Natural History has awarded the first Walker prize of \$100 to Dr. Rudolph Ruedemann, assistant N. Y. State paleontologist, the subject of whose essay is the 'Hudson River formation of the vicinity of Albany, N. Y., and its taxonomic equivalents.' The paper will be published as a bulletin of the N. Y. State Museum.

AT the meeting of the Paris Académie de Médecine on May 1st, Professors Behring (of Marburg), Golgi (of Pavia), Tilanus (of Amsterdam), and Pawloff (of St. Petersburg), were elected Foreign Associates.

PROFESSORS W. PFEFFER of Leipzig, von Richthofen of Berlin, and S. Schwendener also of Berlin, have been elected members of the Academy of Sciences of Christiania.

THE following candidates have been selected

by the Royal Society for election into the Society: George James Burch, lecturer at University College Reading; T. W. Edgeworth David, professor of geology in the University of Sydney; John Bretland Farmer, professor of botany, Royal College of Science, London; Leonard Hill, lecturer on physiology, London Hospital Medical College; John Home, senior geologist of the Geological Survey of Scotland; Joseph Jackson Lister, demonstrator of comparative anatomy in the University of Cambridge; James Gordon MacGregor, professor of physics, Dalhousie College, Halifax, N. S.; Patrick Manson, physician and medical adviser to the Colonial Office; Thomas Muir, superintendent-general of education in Cape Colony; Arthur Alcock Rambaut, Radcliffe Observer, late astronomer royal of Ireland; William James Sell, senior demonstrator of chemistry, University of Cambridge; W. Baldwin Spencer, professor of biology in the Melbourne University, and James Walker, professor of chemistry, University College, Dundee.

THE Craggs Research Scholarship of £300 a year has been awarded to Dr. G. L. Low, M.A., M.B., C.M., of the London School of Tropical Medicine.

M. CORNU and M. Darboux Jean have been nominated as candidates for election to the permanent secretaryship of the Paris Academy of Sciences.

AN informal reception will be given to Dr. H. S. Pritchett, president-elect of the Massachusetts Institute of Technology, by the Technology Club, on June 5th.

MR. OTTO H. TITTMANN, assistant superintendent of the Coast and Geodetic Survey, will go to Alaska, where he will trace the boundary line established by the *modus vivendi* of October, 1899, between the British government and the United States. He will be absent for about two months.

PRESIDENT GILMAN and Professor Paul Haupt will represent the Johns Hopkins University at the celebration connected with the 500th anniversary of the University of Cracow on June 7th. Cambridge University will be represented by Dr. Alexander Hill and Mr. C. H. Monroe.

PROFESSOR HARRIS, of the department of geology, Cornell University, will take a class with the steam launch the *Orthoceras* to Lake Champlain for geological work.

DR. ALBERT B. PRESCOTT, dean of the pharmaceutical department of the University of Michigan, was elected president of the American Conference of Pharmaceutical Faculties at its first meeting held in Washington, May 11th.

SIGNOR MARCONI left Southampton for New York on May 26th. It is said that he will conduct extensive experiments on wireless telegraphy in this country.

JONAS GILMAN CLARK, the founder of Clark University at Worcester, Mass., died on May 23d, at the age of eighty-five years. Mr. Clark had no children and it is hoped that by his will Clark University will be adequately endowed.

GARDINER S. WILLIAMS, emeritus professor of the science and art of teaching at Cornell University, died on May 19th, at the age of seventy-two years.

THE death is announced of Dr. Edmund Atkinson, at the age of sixty-nine years. He was associated, as assistant to the late Sir Edward Frankland, with the early days of the chemical laboratory of Owens College, Manchester. Afterwards he was for many years professor of experimental science at the Royal Military College, Sandhurst, and at the Staff College.

DR. A. CLAUS, who recently resigned, on account of ill health, from the chair of chemistry, in the University of Freiburg i.B., died on May 7th, aged 60 years.

WE must also record the death at Ealing, England, of Brigade-Surgeon-Lieutenant-Colonel William Center. Lieut. Colonel Center joined the Indian Medical Department in 1865, and from 1871 served in the Punjab as chemical examiner and professor in the Lahore Medical School. In 1882 he was statistical officer in the sanitary department of the Government of India, and afterwards received the appointment of civil surgeon, Lahore, and superintendent of the lunatic asylum. From 1888 until his retirement in 1893 he held one of the chairs at Lahore Medical College.

THE Croonian lectures before the Royal College of Physicians of London, will be delivered on June 19th, 21st, 26th and 28th, by Dr. F. W. Mott, F.R.S., pathologist to the London County Asylums, who has taken for his subject 'The Degeneration of the Neuron.'

A FIRE occurred in the Astronomical Observatory of Yale University on May 22d. Damage to the extent of about \$500 was caused, and at one time the entire observatory was in danger. The fire was caused by a defective gas jet in the photographic room.

SEVERAL positions of a partly scientific character will be filled by a competitive examination in the State of New York on June 2d. These include an assistant commissioner of agriculture and a bridge designer in the office of the State Engineer and Surveyor.

As we have already announced, the University of Illinois has fallen heir to the Bolter Collection of Insects. The collection numbers approximately fifteen thousand species, represented by about seventy thousand specimens, besides thirty thousand duplicates not in the systematic collection. This collection, accumulated during the last fifty years by the late Andreas Bolter, a business man of Chicago, is remarkable for the excellence of the material and for the exquisite care with which it has been prepared and arranged. It represents all orders of insects and North America in general, and contains also a considerable amount of exotic material. The gift was made by the executors of Mr. Bolter, in accordance with the terms of his will, conditional upon its maintenance as a unit, under the name of the 'Bolter Collection of Insects,' in a fire-proof building.

THE valuable series of specimens collected by Mr. R. T. Günther in N. W. Persia, and described by him and others in the *Journal of the Linnean Society* (London) published last January is now incorporated with the collections of the British Museum.

A COMMITTEE of the Society for Plant Morphology and Physiology consisting of Professor Farlow, Dr. MacDougal, and Dr. Von Schrenk, will report to a business meeting of that body

in New York in the last week in June upon the feasibility of securing an improved method of bibliographical reviews in botany.

THE Right Hon. W. H. Long, M.P., President of the British Board of Agriculture, has appointed a Departmental Committee to inquire into the conditions under which agricultural seeds are at present sold, and to report whether any further measures can with advantage be taken to secure the maintenance of adequate standards of purity and germinating power. The Committee will consist of the following members, viz: The Earl of Onslow, G.C.M.G., chairman; Sir W. T. Thiselton-Dyer, K.C.M.G., C.I.E.; Sir Jacob Wilson; Mr. R. A. Anderson, Secretary of the Irish Agricultural Organization Society; Mr. R. Stratton, The Duffryn, Newport (Mon.); Mr. Martin J. Sutton, Henley-park, Oxon.; Mr. James Watt, Knowefield, Carlisle, and Mr. David Wilson, Carbeth, Kilmearn, N. B. Mr. A. E. Brooke-Hunt of the Board of Agriculture, will act as secretary to the committee.

THE *Fourth Annual Report* of the New York Zoological Society contains besides reports of the Executive Committee, Director and Treasurer, a list of members, and the various acts relating to the Park, as well as a number of plates illustrating details of construction and installation and positions of the herds of elk and bison. The Society is to be congratulated upon the rapid progress it has made since assuming control of the grounds in August, 1898, and also upon the fact that every dollar has been expended to good advantage. It is to be hoped that it may succeed in increasing its membership and in securing the funds needed for the proper maintenance of the park. The number of animals in the park on Jan. 1, 1900, was 781, distributed as follows: mammals, 44 species, 151 individuals; birds, 43 species, 185 specimens; reptiles, 92 species, 445 specimens.

THE authorities of the British Museum have decided to adopt a system of hydraulic pressure upon all the fire mains of the institution as an additional precaution against fire. By the adoption of this system a pressure of water of enormous force will be obtained by the mere turning of a couple of wheels, and the necessity

for the fire engines which are at present on the roof of the museum will be obviated.

THE new British National Physical Laboratory will not be erected on grounds belonging to Kew Gardens as has been stated but on crown land outside the Gardens.

THE coming meeting of the American Association will offer several special features to the botanists. Among these we note that Section G. will be the guests of the New York Botanical Garden on Wednesday, June 27th, on which date the Torrey memorial program will be given in the lecture hall of the museum of the Garden. The special features of this program have been noted in a previous number of this JOURNAL. The Section and the Botanical Society of America will hold a joint session on Thursday, June 28th, in which the program of the latter including the president's address will be given. A general discussion of the plant geography of North America has been arranged for Friday, June 29th, in which Dr. F. V. Coville, Dr. John Macoun, Professor B. L. Robinson, Dr. John K. Small, Professor W. A. Kellermann, Dr. Roscoe Pound, Dr. H. C. Cowles, Dr. P. A. Rydberg, Dr. J. N. Rose, Professor C. V. Piper, Professor W. L. Bray, Mr. T. H. Kearney, Dr. N. L. Britton and perhaps one or two foreign botanists will participate. The last general presentation of this subject in a systematic manner was given at the Indianapolis meeting in 1890, since which time such advances have been made in the development of the principles that govern plant distribution, and in the collation of facts from the careful study of the flora that the coming symposium is bound to be of great interest and lasting value.

UNDER the auspices of the Boston Society of Natural History, a series of courses in natural history, including geology, zoology and botany, will be given at Bayville, Linekin Bay, Maine, beginning Friday, July 6, 1900, and continuing for three weeks. The object of these courses is to teach the elements of natural history by observation in the field and laboratory under trained instructors, and to furnish opportunity for more extended work in one or more of the branches taught, to those who desire it, under the guidance of the instructors. Mr. A. W. Grabau, of

Rensselaer Polytechnic Institute, will give instruction in zoology; Mr. Freeland Howe, Jr., of Harvard University, in zoology, and Mr. C. E. Preston, assistant in Harvard University, in botany. Further particulars may be obtained by addressing Mr. A. W. Grabau, Boston Society of Natural History, Boston, Mass.

THE New Mexico Biological Station, conducted by Professor T. D. A. Cockerell and Miss Wilmatte Porter, will be in session at Las Vegas during June and July. Special attention will be given to the local plants and insects.

A FEW years ago it was necessary to import from abroad most of the scientific apparatus required for instruction and research. At present such apparatus is to a large extent made at home, and there are indications that it will soon be exported to a considerable degree. Thus Messrs. Queen & Co., of Philadelphia, have recently received an order from a foreign government for two Ruhmkorff induction coils which will be the largest ever made. The celebrated Spottiswoode coil, built under the auspices of the Royal Society, gave a spark of 42 inches. The Queen coils are to give a spark of 45 inches, expending an energy of 3 to 4 horsepower, and having a potential of half a million volts.

At a meeting of the Zoological Society of London on May 8th, Mr. J. S. Budgett, F.Z.S., read a paper entitled 'Some Points in the Anatomy of *Polypterus*,' as deduced from an examination of specimens lately procured by the author in the River Gambia. The urinogenital organs of the male and female *Polypterus* were described in detail; those of the male, it was believed, for the first time, while the description now given of the genital ducts in the female did not entirely agree with those of previous writers. The later stages in the formation of these organs were also described, and it was shown that the condition found in the Ganoid *Lepidosteus*, where the products of the testis are carried away by the tubules of the kidney, was not primitive. Some new points of interest in the vascular system were communicated, and reasons were given for not regarding the external gill of *Polypterus* as homologous with the hyoidean pseudobranch of *Acipenser*, but rather

with the external gill of the Dipnoi and the Amphibia. The formation of the abdominal pores of *Polypterus* was also described, and the use of the enlarged anal fin of the male in the breeding-season was discussed.

#### UNIVERSITY AND EDUCATIONAL NEWS.

THE wills of John Nicholas Brown and Harold Brown were filed in Newport on May 22d. Brown University receives \$25,000 from them each. J. N. Brown leaves \$150,000 for a library building and \$500,000 for an endowment, the place of the library to be selected by the trustees. Both wills contain a number of charitable bequests.

WASHINGTON AND LEE UNIVERSITY receives \$3000 for a scholarship by the will of the late Mrs. Juliet S. Bradford.

THE entomological collection belonging to the late Dr. J. A. Lintner, for many years State entomologist, is to be given to Cornell University by his widow as a memorial to her husband.

MR. THOMAS ANDREWS, F.R.S., has given to the Chemical Laboratory of Cambridge University one of the Echelon spectroscopes, invented by Professor A. A. Michelson.

A DORMITORY is being erected by Cornell University on the tract of land in the Adirondacks, used in connection with the School of Forestry.

It is said that a commercial university will soon be established at Hamburg with all the rights of the German universities and technical schools. Provision will be made for chairs in all scientific subjects connected with commerce.

ON May 9th, the Convocation of Oxford University established the new degrees of Doctor in Science and in Literature. Now it will no longer be necessary for graduates in science of this ancient seat of learning to take the examinations of London University for the sake of obtaining a doctorate. Thus the impulse given to research will be both direct and indirect.

MR. BALFOUR has consented to give the

inaugural address at the summer meeting for University Extension students and others to be held at Cambridge in August. The meeting will last from August 2d to 27th, and during that time over one hundred lectures will be delivered upon different aspects of life and thought in England in the nineteenth century. Amongst those who will lecture are Professor Jebb, M.P., Professor A. V. Dicey, Professor Clifford Allbutt, Dr. Augustus Jessopp, the Master of Trinity, Sir Robert Ball, Professor J. J. Thomson, the Bishop of Southampton, Sir Joshua Fitch, and the Dean of Ely.

A REQUISITION addressed to Lord Balfour is being signed, asking him to allow himself to be nominated for the chancellorship of St. Andrews University, vacant by the death of the Duke of Argyll. The appointment rests with the general council of the University, and is held by the occupant for life.

MR. LAURENCE EDMONDS GRIFFIN, Bruce Fellow and candidate for the degree of Doctor of Philosophy this year at the Johns Hopkins University, has been appointed instructor in biology in the College for Women of the Western Reserve University, in the place of the late Dr. N. R. Harrington.

ALICE W. WILCOX, instructor in biology at Vassar College, has been appointed by the faculty to hold the Babbott Fellowship for 1900-1901 and will do graduate work in biology at the University of Chicago.

SEVERAL changes have recently taken place in the medical staff of University College, London. Dr. Sydney Ringer has retired from the Holme professorship of Clinical Medicine, and has been succeeded by Dr. F. T. Roberts. Mr. Christopher Heath has resigned the Holme professorship of Clinical Surgery and is succeeded by Mr. Rickman J. Godlee. Dr. Roberts on taking up the Holmes professorship has resigned the professorship of the principles and practice of medicine, and the council have selected Dr. G. Vivian Poore to succeed him.

DR. JOHN WYLLIE has been elected professor of medicine in the University of Edinburgh in succession to the late Sir Thomas Grainger Stewart.