

tary of the Treasury upon the efficiency of its scientific work and the condition of its equipment. The members of this committee shall serve without compensation, but shall be paid the actual expenses incurred in attending its meetings. The period of service of the members of the original committee shall be so arranged that one member shall retire each year, and the appointments thereafter to be for a period of five years. Appointments made to fill vacancies occurring other than in the regular manner are to be made for the remainder of the period in which the vacancy exists.

SCIENTIFIC NOTES AND NEWS.

MR. J. J. H. TEALL, F.R.S., has been appointed director general of the Geological Survey of Great Britain and Ireland, in succession to Sir Archibald Geikie, who retired on February 28th. Sir Archibald has been in the service of the Survey for forty-six years and has reached the age limit.

At a meeting of the Canadian Mining Institute held at Montreal on March 6th, it was unanimously decided to recommend the appointment of Professor Frank D. Adams, as director of the Geological Survey of Canada in succession to the late Dr. Geo. M. Dawson.

A COMMITTEE has been formed to erect at Heidelberg a monument in memory of three of its great scientific men, Bunsen, Kirchhoff and von Helmholtz.

PROFESSOR J. J. THOMSON, Cavendish professor of physics at Cambridge University, has been elected a member of the Athenæum Club under the provision which empowers the annual election of nine persons of distinguished eminence.

DR. M. I. PUPIN, professor of electro-mechanics, at Columbia University, and Dr. R. Mark Wenley, professor of philosophy at the University of Michigan, will represent their universities at the Ninth Jubilee of the University of Glasgow, which takes place in June.

MR. PERCY WILSON, of the New York Botanical Garden, is accompanying Professor Todd's expedition to the Dutch East Indies to observe the total solar eclipse. He will make collections for the Garden.

MR. JARED G. SMITH, of the U. S. Department of Agriculture, left Washington on March

15th for Honolulu, to assume the directorship of the Agricultural Experiment Station.

THE Division of Forestry of the U. S. Department of Agriculture has selected from its working force two trained lumbermen with some knowledge of forestry to be sent to the Philippine Islands in compliance with a cable request of the Taft Philippine Commission. The persons selected for this work are Mr. Grant Bruce, formerly a State forester in New York, and Mr. Edward Hamilton. Both these men are expert lumbermen with some training in forestry, and have been selected in view of their special fitness for the Philippine work. A bureau of forestry was established in the Philippines in April, 1900, with Capt. George P. Ahern, Ninth United States Infantry, in charge.

At a meeting of the American Academy of Arts and Sciences on March 13th, the following fellows were elected:

Resident Fellows:

ALEXANDER WILMER DUFF, of Worcester, Physics.
THEODORE LYMAN, of Brookline, Physics.

LEWIS JEROME JOHNSON, of Cambridge, Technology and Engineering.

HENRY LLOYD SMYTH, of Cambridge, Technology and Engineering.

FRANK SHIPLEY COLLINS, of Malden, Botany.

EPHRAIM EMERTON, of Cambridge, Political Economy and History.

FRANK WILLIAM TAUSSIG, of Cambridge, Political Economy and History.

Associate Fellows:

ELIAKIM HASTINGS MOORE, of Chicago, Mathematics and Astronomy.

GEORGE ELLERY HALE, of Williams Bay, Physics.

EDWARD LEAMINGTON NICHOLS, of Ithaca, physics, in place of the late William Augustus Rogers.

CYRUS GUERNSEY PRINGLE, of Charlotte, Vermont, Botany, in place of the late George Clinton Swallow.

FRANKLIN PAINE MALL, of Baltimore, Zoology and Physiology, in place of the late Alfred Stillé.

HENRY FAIRFIELD OSBORN, of New York, Zoology and Physiology, in the place of the late Othniel Charles Marsh.

CHARLES OTIS WHITMAN, of Chicago, Zoology and Physics.

WILLIAM STEWART HALSTED, of Baltimore, Medicine and Surgery, in place of the late William Alexander Hammond.

WILLIAM WILLIAMS KEEN, of Philadelphia, Medicine and Surgery, in the place of the late Jacob Mandes Da Costa.

Foreign Honorary Members:

JULES HENRI POINCARÉ, of Paris, Mathematics and Astronomy, in the place of the late Francesco Brioschi.

HENRICH MÜLLER-BRESLAU, of Berlin, Technology and Engineering.

HUGO KRONECKER, of Bern, Zoology and Physiology, in place of the late Willy Kühne.

ROBERT KOCH, of Berlin, Medicine and Surgery, in place of the late Louis Pasteur.

SIR THOMAS LAUDER BRUNTON, of London, Medicine and Surgery, in place of the late Sir James Paget, Bart.

ALBERT VENN DICEY, of Oxford, Philosophy and Jurisprudence.

WILLIAM EDWARD HEARN, of Melbourne, Philosophy and Jurisprudence, in place of the late Charles Russell, Baron Russell of Killowen.

HENRY JACKSON, of Cambridge, Philosophy and Archaeology, in place of the late Henry Sidgwick.

EDMONDO DE AMICIS, of Florence, Literature and the Fine Arts, in place of the late John Ruskin.

PROFESSOR SIMON NEWCOMB gave the fourth address of the series on the Progress and Tendency of Science during the Nineteenth Century before the Washington Academy of Sciences on March 19th, his subject being 'The Progress and Tendency of Astronomy.'

PROFESSOR JACQUES LOEB, of the University of Chicago, read a paper on 'Artificial Parthenogenesis' before the American Philosophical Society at Philadelphia on March 15th.

DR. SIMON FLEXNER, of the University of Pennsylvania, who went to San Francisco to investigate, on behalf of the U. S. Government, the alleged existence of the bubonic plague in that city, lectured before the Academy of Sciences on 'Defense against Disease.'

GEORGE FRANCIS FITZGERALD, since 1881 Erasmus Smith professor of natural and experimental philosophy at Dublin, died on February 21st, at the age of forty-nine years. The Faculty of Science of the newly constituted University of London has passed the following resolution in his memory:

That this meeting of the Faculty of Science of the University of London, having heard with profound sorrow of the premature death of the late Professor

George Francis Fitzgerald, desires to place on record its high appreciation of his brilliant qualities as a man, as a teacher, as an investigator, and as a leader of scientific thought, and to express to his family its mournful sympathy under the calamity which has befallen science and his many friends.

PROFESSOR CHARLES McDONALD, for more than thirty years professor of mathematics in Dalhousie College, died in Halifax, N. S., on March 10th.

THE death is announced of Mr. R. G. Halliburton, of Canada, known for his political and scientific writings. He was sixty-nine years of age.

MR. ANDREW CARNEGIE, as all our readers are doubtless aware, has offered to give \$5,200,000 to New York City for the construction of buildings for sixty-five branch libraries. The city must provide land and maintenance. The offer has been made in conference with Dr. John S. Billings, director of the New York Public Library, and it is understood that the branch libraries would be administered in connection with the public library. The acceptance of Mr. Carnegie's offer would probably require special legislation, but the city officers have expressed themselves strongly in favor of the plan. Mr. Carnegie has also offered to give \$1,000,000 for a library at St. Louis. Mr. Carnegie's gifts and offers awaiting acceptance amount to over \$20,000,000, largely for library buildings.

THE American Museum of Natural History has recently received a gift of \$1,500 from Mr. John L. Cadwalader, of New York, for the purpose of mounting groups of birds illustrating seasonal changes of plumage and other adaptive features of bird life. The fund is to be expended under the direction of Mr. Frank M. Chapman, associate curator.

MR. HUGH LEONARD has given £100 and Sir William J. Farrer £50 to the Royal Institution of London for experimental research at low temperatures.

MR. FORDHAM MORRIS, of New York City, has presented to the American Museum of Natural History a painting representing Audubon with his gun, dog and horses made by his sons, John and Victor, in the late forties a few years before his death. The painting is

now on exhibition in the library reading-room.

THE University College of South Wales and Monmouthshire has received £800 towards the £1,000 required for the Museum of Anatomy proposed as a memorial to Professor A. W. Hughes.

AT a recent meeting of the Canadian Mining Institute a committee was appointed to urge upon the Government an increase of the salaries of those engaged in the Geological Survey, and the need of providing a suitable building at Ottawa for the geological collections.

THE Peary Arctic Club has reelected President Morris K. Jesup, Treasurer Henry W. Cannon and Secretary Herbert L. Bridgman. It likely that a steamer, the fifth, will be chartered and dispatched to find the *Windward*, from which, since the departure from Godhaven, North Greenland, August 20, 1900, with Mrs. Peary and Miss Peary, nothing has been heard.

LIEUTENANT R. F. SCOTT, R.N., the leader of the British Antarctic Expedition, has made to a representative of Reuter's Agency a statement in the course of which he says that the preparations for the British Antarctic Expedition are now practically complete. The *Discovery*, the expedition's ship, will be launched on the 23rd inst., and, after she has been handed over by the contractors, will come round to London, where her equipment and provisions will be put aboard. The *Discovery* has been built on whaler lines, only with greatly increased strength to withstand ice pressure. She is 171 ft. long and 34½ ft. beam, and has 1,500 tons displacement. She will have auxiliary steam, and is fitted with engines of the latest type. In her construction the lines of the *Fram*, though carefully studied, have not been adopted, as Nansen's ship would have been ill-adapted for the heavy seas the *Discovery* will have to encounter. The expedition will leave London in July or August, and will proceed to Melbourne, reaching there in November. The actual work of the expedition will then begin. The naval staff, in addition to Lieutenant Scott, consists of Lieutenant A. R. Armitage (second in command),

Lieutenant Charles Royds, and two other officers yet to be appointed. The civilian staff will consist of Professor Gregory, of Melbourne University (director of the civilian scientific staff), Mr. Hodgson (biologist), and Mr. Shackleton (physicist). The medical staff will consist of Dr. Koettlitz and Mr. Wilson.

THE department committee appointed by the British Board of Agriculture to inquire into the conditions under which agricultural seeds are at present sold has completed its report. The committee has come to the conclusion that the seed trade in England is on the whole well conducted and has of late years improved with the advance of science. Nevertheless the majority of the committee recommends that one central station should be provided in the United Kingdom for the purpose of testing the purity and germinating power of seeds sent to it for official examination.

THE British Museum (Natural History) has purchased for £350, an elephant's tusk, which is said to be the largest ever known. The following are its weight and dimensions: Weight, 226½ lbs. Length—outside curve, 10 ft. 2½ in.; inside curve, 9 ft.; base to point in straight line, 8 ft. 2 in. Circumference—at hollow end, 24 in.; at solid 24½ in. Diameter—at hollow end, 8½ in.; at solid, 7¾ in.

THE following bill was recommended for passage by the committee on coinage, weights and measures, Mr. Southern, chairman, in the closing days of the last Congress.

A Bill, To adopt the weights and measures of the metric system as the standard weights and measures in the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled: That on and after the first day of January, nineteen hundred and three, all the Departments of the Government of the United States, in the transaction of all business requiring the use of weight and measurement, except in completing the survey of public lands, shall employ and use only the weights and measures of the metric system; and on and after the first day of January, nineteen hundred and three, the weights and measures of the metric system shall be the legal standard weights and measures of and in the United States.

GOVERNOR ODELL, of New York, has signed

the bill abolishing the Forest, Fish and Game Commission and the Forestry Preserve Board as now constituted—consolidating their departments and placing them under the charge of a State Forest, Fish and Game Commissioner.

THE following bill regulating the practice of medicine has been favorably reported in the New York Assembly by the Committee on Public Health :

Any person shall be regarded as practicing medicine who shall for remuneration, charge, fee, gift, bonus or reward, directly or indirectly profess to heal, or who shall give treatment to any other person by the use of any means or method whatever, whether with or without the use of any medicine, drug, instrument, or other appliance, for the relief or cure of any wound, fracture, or bodily injury, infirmity, physical or mental, or other defects or diseases.

This article is not to apply to any person giving treatment to another under the direction or upon the prescription of a physician, duly licensed by the laws of this State. Neither is it to prohibit the manufacture, sale, or use of patent medicines where no diagnosis is made by the maker or seller ; or of the giving temporary relief in an emergency by a registered pharmacist or any person, or the domestic administration of family remedies ; or any person in charge of or employed in any gymnasium from giving suggestions or advice as to form or methods of exercise, or any optician engaged in adapting glasses to the sight, or any rights of chiropodists under existing laws, or the manufacture or construction of optical instruments.

THE subjects of the Walker prizes in Natural History awarded by the Boston Society of Natural History are as follows : For 1901 : ' Monograph on any problem connected with, or any group belonging to, the North American fauna or flora ' ; for 1902 : (1) ' Nuclear fusions in plants ' ; (2) ' The fate of specific areas of the germ of chordates, as determined by local destruction ' ; (3) ' The reactions of organisms to solutions, considered from the standpoint of the chemical theory of dissociation. ' Further particulars may be obtained from Mr. C. L. Batchelder, secretary of the Society.

PROFESSOR WILLIAM TRELEASE, director of the Missouri Botanical Garden, has sent out an announcement calling attention to the opportunities offered by the Garden for original research. It calls attention to the fact that in

establishing and endowing the Garden, its founder, Henry Shaw, desired not only to afford the general public pleasure and information concerning decorative plants and their best use, and to provide for beginners the means of obtaining good training in botany and horticulture, but also to provide facilities for advanced research in botany and cognate sciences. Persons who wish to make use of these are invited to correspond with the director, outlining with as much detail as possible the work they desire to do at the Garden, and giving timely notice so that provision may be made for the study of special subjects.

DR. B. E. FERNOW, director of the New York State College of Forestry, announces that the spring courses for the junior and senior year students in the College Forest, at Axton, will begin on April 16th and continue until June 13th. In addition to the practical forestry work in silviculture, forest mensuration, surveying, exploitation and forest regulation under the direction of Professors Roth and Gifford, the practical instruction in timber estimating, given last year by Mr. Cyrus P. Whitney, will be repeated. A course of daily lectures on Fish Culture and Game Preservation, beginning April 29th, and lasting two weeks, with laboratory work and field excursions, will be given by Professor Barton W. Evermann, ichthyologist of the U. S. Fish Commission. This course will be open to visitors, as far as accommodations may be found by them in Axton or in the neighborhood.

WE have received the announcement of the twelfth season of the Biological Laboratory of the Brooklyn Institute of Arts and Sciences at Coldspring Harbor, L. I. The laboratory will be open for regular work from July 1st to August 24th, but investigators may make arrangements for a longer residence. A complete series of courses is offered by the Board of Instruction which is as follows :

Professor C. B. Davenport, Ph.D., The University of Chicago, Director of the Laboratory ; D. S. Johnson, Ph.D., Johns Hopkins University, in charge of Cryptogamic Botany ; Professor Henry S. Pratt, Ph. D., Haverford College, in charge of Comparative Anatomy ; Professor Nelson F. Davis, Sc.M., Bucknell University, in charge of Bacteriology ; Mrs. Ger-

trude C. Davenport, S.B., Past Instructor Kansas University, in charge of Microscopic Methods; Henry A. Kelly, Ph.D., Ethical Culture Schools, New York, in charge of Nature Study; Lawrence E. Griffin, Ph.D., Western Reserve University, in charge of Embryology; H. N. Whitford, S.B., The University of Chicago, in charge of Phanerogamic Botany; A. G. Mayer, Ph.D., Brooklyn Institute of Arts and Sciences, Lecturer in Entomology; Professor Stephen R. Williams, Ph.D., Miami University, Instructor in Zoology; Professor W. L. Tower, Antioch College, assisting in Microscopic Methods and in Entomology; Louise B. Dunn, Barnard College, assisting in Ecology; A. F. Blakeslee, A.M., Harvard University, assisting in Botany.

THE Summer Laboratory of Biology of Tufts College was established at South Harpswell, Maine, in 1898, and will hold a second session this year. The announcement states that the regular courses of instruction begin on July 8th and continue for six weeks. The laboratory will be established in a small wooden building directly on the shore and will have accommodations for fifteen or twenty students. South Harpswell is situated on the shores of Casco Bay, sixteen miles from Portland. The bay has a rich fauna and flora and is well adapted for a marine laboratory. South Harpswell itself is well situated, as from it one can readily reach the numerous islands of the bay as well as the outer fishing grounds rich in invertebrates. The laboratory is near the extremity of a narrow peninsula (ten miles in length) and being thus almost entirely surrounded by water is free from mosquitoes while hot weather is unknown. Courses will be given by Professor Kingsley and Dr. Lambert on invertebrate zoology, vertebrate zoology, botany and embryology, and facilities are offered to a certain number of students who are able to carry on their researches without assistance.

APROPOS of the movement for an archeological survey of Michigan and legislation to that effect which is now pending, it is of interest to know that Wisconsin students are about to organize a State archeological association, the objects of which are to encourage to a greater extent than is now possible the study and preservation of Wisconsin antiquities and to establish a closer working relationship between collectors and students in different parts of the State.

THE *London Times* states that a further collection of some 400 photographs of objects and customs of antiquarian and historical interest within the British Islands has been made by the National Photographic Record Association and is now at the offices of the Royal Photographic Society, before being deposited in the British Museum. Sir Benjamin Stone's contribution to the present collection is devoted to the county of Warwick. There are two interiors of Trinity Church, Statford-on-Avon, one showing the chancel with its carved oak screen and fine perpendicular windows, and the other a more general view, taken from the extreme west end, in order to give prominence to the unusually placed organ—over the chancel arch. From the same church are illustrations of the fine Elizabethan monument, of the Clopton family, the mayor's pew, and the ancient sanctuary knocker, the seizing of which by a refugee was sufficient to confer upon him the privilege of sanctuary. Outside the church, too, are the shot marks of a military execution. A considerable number of recumbent effigies are taken from the churches of Meriden, Merevale, and Astley. Shakespeare's tomb at Statford-on-Avon is shown when covered with flowers on the occasion of the festival in April last, and various views of the festival procession are also preserved; while the 'Mop' and the roasting of the ox at Statford are also recorded. Another series illustrates the entire process of haymaking by hand, from the sharpening of the scythe to the stacking—an interesting series of an unusual type, showing a complete industry. Mr. Calcott gives some views of Bristol, St. Peter's Hospital being a particularly fine specimen of carved timber work with the projecting stories supported by animal grotesques. Miss Mary Cotton has contributed some records from the Ardmore, County Waterford, of the Round Tower and ruined cathedral there, and of the ornamental stones known as the Ogham Stones, inscribed only with horizontal lines of various lengths. Of even greater archeological value are Mr. A. R. Hogg's unique photographs from near the Boyne, of the entrance to the Dowth Mound, and the interior of the Tumulus of New Grange, showing the foundation of the stone roof.

Wales is represented by a series of the famous Celtic crosses at Llantwit Major, near Cardiff. A remarkably fine collection of Norman arches, fonts and crosses is sent from Shropshire by Mr. F. R. Armitage. The largest contribution to the collection has been made by Mr. G. Scamell, who has sent over a hundred photographs, principally taken in and around London, of houses once occupied by well known men, houses which are likely to be pulled down soon and, most important, many of the Old Bailey Courts.

UNIVERSITY AND EDUCATIONAL NEWS.

By recent action of the Legislature of North Carolina the annual appropriation to the State University was increased by \$12,500; \$60,000 was appropriated for the Normal and Industrial School at Greensboro, N. C.; and \$40,000 for the Agricultural and Mechanical College, located at Raleigh, N. C., for payment of debts and buildings.

HENRY STAFFORD LITTLE, of Trenton, has offered \$100,000 to Princeton University for the erection of a new dormitory, adjacent to Stafford Little Hall, of which he was the donor.

HARVARD UNIVERSITY has received \$5,000 by the will of the late Jacob Wendell for a scholarship 'to be awarded to a student of excellent standing, exclusive of financial needs.'

WORK has been commenced on the new physical laboratory to be erected by the University of Pennsylvania at a cost of \$300,000.

THE Registrar has just issued the lists of candidates for degrees in Sibley College and other departments of Cornell University. The former numbers about 130; of whom over thirty are in M.E. in electrical engineering, and the remainder mainly in the regular course for M.E., including those in marine and in railway engineering. There will be about twenty candidates for the master's degree, M.M.E. The latter, like M.E., includes marine and railway as well as electrical engineers. The registration of Sibley College is now between 650 and 700, including students engaged in graduate-work and candidates for the second degree. Contracts have just been

awarded for the erection of the west central 'dome' of Sibley College, to connect the existing two wings, making a front of about 400 feet, facing the campus from the north. It is to be completed early in the next academic year. It is another step toward the completion of the plans of the founder, by his son, Mr. Hiram W. Sibley. The new building will include new space for the museums and collections and a fine auditorium. This, with accessory extensions of old structures, will add about 20,000 square feet of floor-space to the College buildings. The plans, as prepared for the founder before his death, include further additions of about 40,000 square feet, to give accommodations to a thousand students in mechanical engineering and its subdivisions.

PRESIDENT PATTON brought forward some suggestions of much importance at a meeting of the trustees of Princeton University on March 15th, and these were referred to a special committee. They include: (1) Additions to the faculty that will enable the University to offer courses in human anatomy and physiology and in common law, so that students may take in their senior year the equivalent of the first year in professional schools of medicine and law; (2) making it possible for students doing additional work to secure the bachelor's degree in three years; (3) offering additional lectures in the sophomore year.

It appears that the disturbances in the Russian universities are continuing, it being reported that 700 students have been arrested at Moscow.

AT Yale University the following instructors have been promoted to assistant professorships: E. W. Scripture in psychology; A. W. Evans in botany, and H. E. Gregory in physical geography.

AT Princeton University, Dr. W. M. Rankin has been promoted to a full professorship of invertebrate morphology, and Dr. C. F. W. McClure to a full professorship of comparative anatomy.

DR. PETER GUTHRIE TAIT, since 1860 professor of natural philosophy at Edinburgh University, has resigned his chair on account of ill health.