

they appear. In this way, details which are sometimes obscured by over-development may be seen as they appear, although they might not show in the fixed negative.

The development of such plates in darkness is liable to fog the plates. If plates do fog, they may be cleared up by taking them nearer to the lamp.

The results will be published in a forthcoming number of the *Transactions* of the Academy of Science of St. Louis.

SCIENTIFIC NOTES AND NEWS.

THE usual spring meeting of the Council of the American Association for the Advancement of Science, was held at Washington on April 19th, with President Gilbert in the chair. Dr. Howard, the permanent secretary, read his report. The local secretary for the [New York meeting reported that all the arrangements for the meeting were made, and that everything promised an unusually large and successful meeting. The number of important special societies meeting with the Association would be much larger than ever before. The sessions will be held at Columbia University except the address of President Gilbert, which will be given at the American Museum of Natural History. The Hotel Majestic, Central Park and 72d St., will be the headquarters of the Association.

PRESIDENT SETH LOW, of Columbia University, was elected president of the American Geographical Society, New York City, on April 17th, succeeding the late Charles P. Daly.

M. A. LANCASTER, director of the Meteorological Service of Belgium, has been elected a foreign member of the Royal Meteorological Society, of London.

MR. WM. G. FREEMAN, B.Sc., has accepted the position of technical assistant to the Imperial Department of Agriculture for the West Indies.

CAMBRIDGE UNIVERSITY will confer the degree of doctor of science on Mr. Charles Hose, of Saráwak, known for his contributions to the natural history of Borneo.

PROFESSOR FREDERICK STARR has returned from a three month's trip to Mexico.

THE Duke of Loubat has returned to New York from a trip in Mexico, where he visited the ruins of Mitla to view the explorations by Mr. Marshall H. Saville, of the American Museum of Natural History.

MR. ANDREW CARNEGIE has promised the trustees of the Carnegie Institute, Pittsburg, Pa., to become responsible for \$3,000,000, the amount estimated as necessary for the proposed extension and enlargement of the building at the entrance of Schenley Park. The new building will be nearly six times as large as the present one. It will be 500 x 700 feet in size. The space now occupied by the museum will be transferred to the library, while the museum will be transferred to the new building.

M. ALPHONSE MILNE-EDWARDS, the distinguished French naturalist and director of the Museum of Natural History, died on April 21st, in his sixty-fifth year.

PROFESSOR WM. M. THRASHER, for forty years professor of mathematics at the Northwestern Christian University and Butler College, has died at Berkeley, Cal.

A CORRESPONDENT of the London *Times* writes: Captain Peter Astte Scott, R.N., who died on March 31st, at the age of 84, had had a long and varied career. He joined the Navy in 1829, served in the Antarctic expedition of 1839 under Sir James Ross, and only missed serving as lieutenant to his old friend Sir John Franklin in his last fatal Arctic expedition owing to his arrival in England too late. He had already served five years under that officer in Tasmania as naval architect and surveyor. From 1846 to 1866 (when he retired) he was employed on the marine survey of the Canadian Atlantic coast. From 1869 to 1889 he served in the marine department of Canada, the protection of the fisheries, as examiner for masters' and mates' certificates, and as general nautical adviser, and was well known to all who served on the North American station for his geniality and hospitality.

THE London *Times*, also, states that Mr. William Cross, the well-known naturalist and dealer in wild animals, has died at Liver-

pool, after an illness lasting several weeks. He was 57 years of age. As a collector of rare and curious animals Mr. Cross was without a rival, and probably no name was so well known in the remote regions where wild beasts are hunted and captured as his. His place of business in Earle street, not far from the Liverpool Exchange, was always full of strange and interesting beasts, and had a fame which probably no similar collection for purposes of trade has ever enjoyed. Here proprietors of zoological collections and travelling menageries and all persons interested in animals and reptiles could count on finding objects worthy of attention, and here all importers of wild animals brought their wares. In addition to his chief establishment in Liverpool Mr. Cross had branches in Africa, America and China. He carefully studied all the living creatures brought under his notice, and was not only able to estimate their value from a commercial point of view, but also knew the best methods of treating them in captivity. Besides his large stock of animals Mr. Cross collected all sorts of curiosities, such as china, weapons, skins, and rare shells.

THE Arctic steamer *Windward* will sail from New York, in July, under American registry, by virtue of a bill recently signed by President McKinley. It will be under the command of Capt. S. W. Bartlett, of Newfoundland, who commanded the *Diana* and the *Hope*. The movements after joining Lieut. Peary, who is wintering in Etah, will be determined by him.

THE Minnesota Botanical Society was given preliminary organization at a meeting held in Minneapolis, April 14, 1900. Thirty-four members of the committee on organization were declared fellows of the Society, and a committee on constitution was appointed to report to the Fellows in June.

A CALL signed by Dr. Hexamer, President of the Farmers' Club of the American Institute; Dr. N. L. Britton, Director of the New York Botanical Garden, and James W. Withers, of *American Gardening*, has been issued for a meeting to be held in the museum building of the New York Botanical Garden, Bronx Park,

for the purpose of organizing a 'New York Society of Horticulture.'

WE learn from *Nature* that the summer meeting of Cambridge University will be held on August 2-15th, and August 15-27th. Among the lectures to be delivered in the section on scientific progress are the following: *Physical Science*: The development of the nebular theory in the nineteenth century, by Sir Robert Ball, F.R.S.; The spectroscope in astronomy, by Mr. Arthur Berry; The wave-theory of light, by Sir George Stokes Bart, F.R.S.; Advances in the science of electricity, by Professor J. J. Thomson, F.R.S.; The conservation of energy, by Professor J. A. Ewing, F.R.S.; Chemistry and its applications, by Mr. M. M. Pattison Muir; Electro-chemical methods, by Mr. D. J. Carnegie. *Biological Science*: The theory of evolution and its influence on thought and research, under arrangement; Researches on the brain, by Dr. Alex. Hill. There will also be lectures on some aspects of advance in the following sciences: Geology, by Professor T. McK. Hughes, F.R.S.; Anthropology, by Professor A. Macalister, F.R.S.; Agriculture, by Professor W. Somerville; Bacteriology, by Professor Sims Woodhead. Mr. H. Yule Oldham will give a lecture on Geographical exploration in the nineteenth century; Professor W. M. Davis of Harvard University, will give six lectures On the study of the development of land forms. The study of special points in the following departments will be undertaken in sectional meetings: Chemistry and physics, under the direction of Mr. A. W. Clayden; Evolution, under the direction of Mr. F. W. Keeble, Mr. C. Warburton, and others; Anthropology, under the direction of Professor A. C. Haddon, F.R.S. There will in addition be arranged, primarily for teachers, practical courses in chemistry and geography.

THE National Educational Association's special committee charged with the inquiry into the proper seating, lighting, heating and ventilating of the school buildings, offers a prize of \$200 for the best essay submitted on each of those topics, and of \$100 for the second best essay. Each essay shall be limited to ten thousand words and shall be submitted in printed or

typewritten copy without signature, but with the name of the author enclosed with it in a sealed envelope and addressed to the chairman of the committee at Emporia, Kans. Three copies of each essay shall be submitted. They must be mailed not later than February 1, 1901.

THE Glasgow International Exhibition to be opened in May, 1901, includes eight classes, embracing agriculture, mining, industrial design and manufactures, machinery and labor-saving appliances in motion, locomotion and transport, marine engineering and shipbuilding, lighting and heating, science, education, music, sports and sporting appliances. Applications for space should be made to the General Manager, Mr. H. A. Hedley, not later than June 1st.

THE news regarding the plague is not reassuring. It continues unabated in India, the deaths numbering over 4000 a week. A total of 185 deaths is reported from Manila and 38 from Sidney. Deaths still occur in Mauritius, and cases are now reported at Aden on the Red Sea.

THE *Annales de l'Institut Pasteur* states that since the foundation of the Antirabic Institute at Algiers 1836 persons have been under treatment, of whom 645 belonged to the province of Algiers, 632 to that of Oran, 557 to Constantinople and two to Tunis. Out of this total, 1339 were French, Spaniards and Europeans of other nationalities, while 497 were Algerians. The number of deaths has been only nine, or rather less than one-half per cent.

THE Passmore Edwards Museum, in the Rumford-road, Stratford, is, according to *Nature*, now approaching completion and arrangements for the opening will shortly be made. The museum has been built and furnished by the Council of the County Borough of West Ham, at a cost of about 9000*l.*, of which 4000*l.* was the gift of Mr. Passmore Edwards. The main portion of the museum will be devoted to the Essex Museum of Natural History, belonging to the Essex Field Club, which is deposited in the building under agreement between the club and the Borough Council. The remainder of the building will be used as an educational museum in connection with the adjoining

Municipal Technical Institute. The scientific control of the Essex Field Club collection remains with the club, and they contribute 50*l.* a year towards the curatorial expenses, the council contributing 100*l.* a year. The club appoints the curator. At their meeting on March 27th, the council resolved to set aside annually out of the Estate Duty Grant the sum of 1000*l.* for museum purposes. It is expected that from 500 to 600*l.* of this will be needed for the upkeep and maintenance charges, the balance being placed to the credit of a museum purchase fund, which will be treated as a capital fund, from which payments may be made from time to time for the purchase of objects and of the necessary cases, etc., in which to exhibit them. The Essex Field Club have appointed Mr. W. Cole as curator of their Natural History collections. The building itself, and the educational collections of the council, are under the charge of the principal of the Technical Institute, Mr. A. E. Briscoe.

MR. H. W. NEVINSON writes to the London *Daily Chronicle* from Ladysmith under siege, as follows: Again I was on Observation Hill two or three times in the day. It is impossible to keep away from it long. Whilst Puffing Billy was firing I tried to get sight of a small mocking bird, which has learned to imitate the warning whistle of the sentries. In the Gordons the Hindoo Purriboo-Singh, from Benares, stands on a huge heap of sacks under an umbrella all day and screams when he sees the big gun flash. But in the other camps, as I have mentioned, a sentry gives warning by blowing a whistle. The mocking bird now sounds that whistle at all times of the day, and what is even more perplexing, he is learning to imitate the scream and buzzle of the shell through the air. Another interesting event in natural history occurred a short time ago up the Port road. A Bulwan shell, missing the top of Convent Hill, lobbed over and burst at random with its usual din and circumstance. People rushed up to see what damage it had done, but they only found two little dead birds—one with a tiny hole in her breast, the other with an eye knocked out. Ninety-six pounds of iron, brass, and melinite, hurled four miles through the air, at unknown cost, just to deal a true lovers'

death to two sparrows, which are sold for one farthing.

THE New York *Evening Post* states that the exhibit of the division of forestry for the Paris Exposition is now complete and on the way to Paris. It will be one of the most novel of the government exhibits and will be wholly distinct from the commercial features of lumbering to be shown in another department. The display will be in the form of a hall or pagoda, the walls of which consist of large transparencies illustrating American forest conditions. These walls will be double and illuminated by interior electric lights. The pictures range in size from 3 by 5 feet to 4 by 6 feet. There will be two transparencies 6 by 10 feet, portraying groves of red fir and California big trees, two of the most impressive American trees. A point will be made of the relation of forestry to agriculture, and such subjects as protective forests, the use of trees in preserving water supply, the management of woodlands, etc., are fully illustrated. The extent of the timber resources of the United States will be shown by pictures from all important lumber regions. The distribution of forests will be shown by maps. Twenty of the most important American woods will be represented by sections of trees.

MR. WM. DUTCHER writes in the *Auk* that Commission houses in New York City, in their endeavor to obtain bird skins for millinery purposes, send out many circulars offering varying scales of prices for bird skins. Recently a postal card was sent by one of these firms to postmasters along the Gulf coast soliciting Gulls, Terns, Grebes, Barn Owls, etc. Dr. T. S. Palmer, of Washington, brought this matter to the attention of the Hon. Jas. Wilson, Secretary of Agriculture, who at once sent a very urgent letter to Hon. Chas. Emory Smith, Postmaster General, calling his attention to this direct violation of the law, and a letter has been sent to postmasters warning them against being parties to any transactions that violate the State laws.

THE automobile contests which will take place at Paris during the exposition period are exciting much interest. The speed contests will take place in July. In the contest between

carriages there will be nine cash prizes, aggregating 30,000 francs. The first prize will be 8000 francs; the second prize, 6000 francs. In the contest between small carriages there will be seven prizes, aggregating 9000 francs, the first prize being 4000 francs. In the contest between motorcycles there will be thirteen cash prizes, aggregating 8000 francs, the first prize being 2000 francs and the second prize 1500 francs. The contest between light-weight automobiles will take place in September. The program will include a contest of automobile cabs and delivery wagons capable of carrying loads of 1200 kilograms in weight. United States Commissioner General Peck has taken great interest in these automobile contests and will offer every facility for American visitors who desire to witness them.

ONE of the innovations in military transportation, says the *Electrical World*, which was brought about and developed largely through our war with Spain is the use of the automobile. The signal corps of the American army has recently been supplied with electric automobile wagons for use in the Philippines. These wagons are of two kinds, one to carry the instruments and material and the other to carry the personnel. The first is built like a covered ambulance, with rubber-tired wheels, and contains a storage battery capable of running the vehicle for thirty hours on one charge when carrying 1500 pounds of load. There are two $3\frac{1}{2}$ -H.-P. motors, one in each rear wheel. The maximum speed is about ten miles an hour. The other wagon is constructed like a high cart and is in other respects similar to the first. Both wagons are fitted with electric side lights, and the first also has electric lights in the interior. Other military applications of the automobile have been considered by the military world, but this is the first actual introduction.

At a recent meeting of the Sanitary Institution, London, the annual report of the council was presented, stating that the question of additional premises for enlarging the museum and extending the work of the institute had received the careful consideration of the council, and although the leases of the present premises had

been renewed for another ten years these were scarcely adequate, and it had been decided to start a building fund, a proposal which was looked upon with favor by the president, the Duke of Cambridge. They had allotted £5,000 of the invested capital of the Institute as a nucleus of the fund and further donations had been received, but some £25,000 was expected to be required. Many lectures and demonstrations on sanitary science had been given to the students, who, during the period over which the lectures had extended, had had the free use of the library and museum, and the committee desired to tender hearty thanks to the lecturers. Two new examinations had been established during the year, one for inspectors of meat and other foods, and the other in practical hygiene for school teachers. There had been a steady increase in the number of students brought to the museum by lecturers and demonstrators, showing an appreciation of the teaching value of the museum. The total in 1899 was 2154, against 1958 in 1898 and 1674 in 1897. A comparison of the roll of the institute with that of the preceding year showed an increase in the number of members and associates, the total in 1899 being 2324, against 2130 in 1898.

UNIVERSITY AND EDUCATIONAL NEWS.

DR. D. K. PEARSON, of Chicago, on April 14th, which was his eightieth birthday, decided to add \$525,000 to the \$2,000,000 he has given to colleges. His principal gifts, to be paid before January 1, 1901, will be: Mount Holyoke College (Mass.), \$150,000; Colorado College (Colorado Springs), \$50,000; Berea College (Ky.), \$50,000; Fairmount College (Kan.), \$50,000; McKenzie College (Ill.), \$25,000; Onarga College (Ill.), \$20,000; Carleton College (Minn.), \$50,000; Fargo College (N. D.), \$50,000.

THE will of Mrs. Eliza Chrisman, who died in Topeka recently, has been filed in the Probate Court. She bequeaths the greater part of a fortune, estimated at \$250,000, for the founding of the University of Topeka. The bequest is contingent on the Methodist churches of Kansas raising an equal amount within ten

years. Mrs. Chrisman leaves \$35,000 cash to the Ohio Wesleyan University.

MR. JOHN D. ROCKEFELLER some time since promised \$100,000 to Denison University, at Granville, O., if the trustees should raise \$150,000 this term. President Purinton has announced that nearly \$125,000 had been secured.

THE establishment of a School of Commerce at the University of Wisconsin, Madison, was unanimously decided upon by the board of regents at their meeting on the 17th ult. Professor W. A. Scott is made director of the school, and a professor of commerce is to be appointed.

At the Patrons' Day celebration of Colgate University on April 20th, the annual address was delivered by President Seth Low of Columbia University, New York, who took as his subject, 'The College and the University.'

It is now said that Dr. E. Benjamin Andrews will probably accept the chancellorship of the University of Nebraska.

EIGHTEEN fellowships have been awarded at Columbia University, of which the following are in the sciences, falling more immediately within the scope of this JOURNAL:

Hartley Burr Alexander, Philadelphia, Pa., Philosophy, University of Nebraska, A.B., 1897.

Robert Henry Bradford, Salt Lake City, Utah, Metallurgy, University of Utah, B.S., 1895.

William Austin Cannon, Palo Alto, Cal., Botany, Stanford University, A.B., 1899.

Robert Heywood Fernald, Cleveland, O., Mechanical Engineering, University of Maine, B.M.E., 1892.

George Irving Finlay, New York, Geology, Harvard University, A.B., 1898.

Thomas Jesse Jones, Greenfield, O., Sociology, Marietta College, A.B., 1897; Columbia University, A.M., 1899.

Austin Flint Rogers, Lawrence, Kan., Mineralogy, Kansas State University, A.B., 1899.

Harry Beal Torrey, Berkeley, Cal., Zoology, University of California, B.S., 1895, and M.S., 1898.

Clark Wissler, Columbus, O., Psychology, Indiana University, A.B., 1897; A.M., 1899.

DR. A. OSANN, docent in geology in the University at Basle, and Dr. M. Smoluchowski von Smolan, docent in theoretical physics in the University at Lemberg, have been promoted to assistant professorships. Dr. Fünfstück, docent in botany in the Polytechnic Institute at Stuttgart has been made full professor. Dr. Ed. Buchner, professor at the Agricultural Station of Berlin, has qualified as docent in the University