

tary, Professor Geo. C. Comstock, Washburn Observatory, Madison, Wis.

*The American Physical Society.*—President, Professor Carl Barus, Brown University; secretary, Professor Ernest Merritt, Cornell University, Ithaca, N. Y.

*The American Mathematical Society.*—December 28, 29. President, Professor W. F. Osgood, Harvard University; secretary, Professor F. N. Cole, Columbia University.

*The American Chemical Society.*—December 27–January 2. President, Professor W. F. Hillebrand, U. S. Geological Survey; secretary, Dr. William A. Noyes, the Bureau of Standards, Washington, D. C.

*The Geological Society of America.*—December 26–29. Acting president, Professor W. M. Davis, Harvard University; secretary, Professor Herman L. Fairchild, Rochester, N. Y.

*The Association of American Geographers.*—December 31–January 1. President, Cyrus C. Adams, New York City; secretary, Albert P. Brigham, Colgate University.

*The American Society of Zoologists.*—December 27, 28, 29. President (Eastern Branch), Professor W. E. Castle, Harvard University; secretary, Professor H. S. Pratt, Haverford College. President (Central Branch), Professor C. C. Nutting, University of Iowa; secretary, Professor, T. G. See, University of Michigan.

*The Association of Economic Entomologists.*—December 28, 29. President, A. H. Kirkland, Malden, Mass.; secretary, A. F. Burgess, Columbus, O.

*The Society of American Bacteriologists.*—President, Dr. E. F. Smith, U. S. Department of Agriculture; secretary, Professor S. C. Prescott, Massachusetts Institute of Technology.

*The American Physiological Society.*—December 27, 28, 29. President, Professor W. H. Howell, the Johns Hopkins University; secretary, Professor Lafayette B. Mendel, 18 Trumbull St., New Haven, Conn.

*The Association of American Anatomists.*—December 27, 28, 29. President, Professor Franklin P. Mall; secretary, Professor G. Carl Huber, 333 East Ann St., Ann Arbor, Mich.

*The Botanical Society of America.*—December 27, 28, 29. President, Dr. F. S. Earle; secretary, Dr. William Trelease, Missouri Botanical Garden, St. Louis, Mo.

*The American Psychological Association.*—December 27–28. President, Professor James R. Angell, University of Chicago; secretary, Professor Wm. Harper Davis, Lehigh University.

*The American Philosophical Association.*—December 27–29. President, Professor William James, Harvard University; secretary, Professor John Grier Hibben, Princeton University.

*The American Anthropological Association.*—December 27–January 3. President, Professor F.

Putnam, Harvard University; secretary, Dr. Geo. Grant MacCurdy, Yale University, New Haven, Conn.

*The American Folk-lore Society.*—December 27–January 3. President, Dr. A. L. Kroeber, University of California; secretary, W. W. Newell, Cambridge, Mass.

*New York State Science Teachers Association.*—December 26, 27. President, John F. Woodhull, Teachers College, Columbia University.

#### SCIENTIFIC NOTES AND NEWS.

DR. HENRY FAIRFIELD OSBORN, Da Costa professor of zoology in Columbia University, curator of vertebrate paleontology and vice-president of the American Museum of Natural History, geologist and paleontologist of the U. S. Geological Survey, has been elected secretary of the Smithsonian Institution to succeed the late Samuel Pierpont Langley.

THE Botanical Society of America (a union of the Botanical Society of America, the Society for Plant Morphology and Physiology and the American Mycological Society) will hold its first meeting, under the federation effected last winter, in New York City, during convocation week. The council will meet at 9 A.M. on Thursday, in Schermerhorn Hall, and a very important business session will be held in the same place at 11 o'clock the same morning. Scientific meetings will be held at Schermerhorn Hall on Friday afternoon, and at the Botanical Garden both morning and afternoon on Saturday. It is also possible that sessions may be held on the following Monday. Professor F. S. Earle, of Herradura, Cuba, is president and Dr. Wm. Trelease, of St. Louis, is secretary.

THE American Physiological Society will meet, as already announced, on December 27, 28, 29 in New York City. The meetings will be held on December 27 in the physiological laboratories of the University and Bellevue Hospital Medical College, 338 East 26th St.; on December 28 in the physiological laboratories of the College of Physicians and Surgeons, 437 West 59th St.; on December 29, joint meeting with Section K of the American Association for the Advancement of Science in the Rockefeller Institute for Medical Research, 66th St. and Avenue A. All communications should be addressed to the secretary,

Professor Lafayette B. Mendel, 18 Trumbull St., New Haven, Conn.

EMERITUS PROFESSOR CAMPBELL FRASER was presented on November 6, by the senatus and former pupils, with addresses of congratulation on the occasion of his jubilee as professor of logic and metaphysics in the University of Edinburgh. The principal, Sir William Turner, presided over a large representation of the senatus, and the class room was filled with the general public and students.

DR. AUGUST TOBLER, docent in paleontology at Basle, will make an expedition to the East Indies, lasting several years.

DR. E. GROSSE, associate professor of ethnology at Freiburg, has received leave of absence to carry on researches in east Asia.

THE fourth lecture in the Harvey Society course was delivered by Professor J. G. Adami, of McGill University, Montreal, on December 1, at 8:30 P.M., at the New York Academy of Medicine. Subject: 'The Myelins and Potential Fluid Crystals of the Body.'

AT its annual dinner, on November 21, the Society of Ex-Internes of Kings County Hospital, Brooklyn, presented to the hospital association a bronze memorial tablet in memory of the late Walter Reed, who was an interne there in 1871, prior to his entrance into the medical department of the United States Army.

A MARBLE bust of Dr. Wilhelm Hittorf has been placed in the physical laboratory of Münster University, on the occasion of the celebration of the fiftieth anniversary of his doctorate.

MAJOR HORATIO N. RUST, noted both for his work on behalf of the Indians of southern California and for his archeological and ethnological collections and publications, died at South Pasadena, California, on November 14.

DR. VON ROTHMUND, professor of ophthalmology in the University of Munich, has died at the age of sixty-eight years.

THE Rev. Dr. Johannes Dzierzon, known for his studies on bees, has died at the age of ninety-five years.

THE U. S. Civil Service Commission announces the postponement, to January 3-4, 1907, of the examination scheduled for December 5-6, to fill at least four existing vacancies and vacancies as they may occur in the position of aid in the Coast and Geodetic Survey, at \$720 per annum. A vacancy as computer at \$1,400 to \$1,800 per annum, according to experience, and one as draftsman, at \$1,400 to \$1,800, according to experience, both in the service of the Coast and Geodetic Survey at Manila, P. I., may also be filled from the eligibles resulting from this examination, provided suitable eligibles are secured. As the commission has experienced considerable difficulty in securing a sufficient number of eligibles for this position to meet the needs of the service, qualified persons are urged to enter this examination. There will also be a civil service examination on December 12, to fill a vacancy in the position of assistant in animal husbandry in the Bureau of Animal Industry, Department of Agriculture, at \$1,800 per annum.

AMONG the New York State civil service examinations in December is one of chemist in the Department of Agriculture at a salary of \$1,200. The examination will have special reference to the analysis of food and dairy products.

A SEISMOLOGICAL SOCIETY has been formed in California. The letter calling a preliminary meeting says: "The formation of such a society would seem to be both proper and opportune. The fact that the Pacific coast has been the center of much seismic activity, and that the city of San Francisco has now a historic interest in matters seismological, may be offered as valid reasons why this section of our country should take the initiative in the formation of such an organization. The State Earthquake Commission is on record as favoring the formation of a seismological society. Several earnest investigators, including Dr. Omori, who recently visited the coast, have urged that organized effort be attempted through such a society, to collect, preserve and utilize all records, reports and studies of seismic phenomena. The prime object of such an organization as in Japan should be to

mold public opinion, to advise wisely, to set forth the truth and to provide funds for research and investigation. It is expected that such a society will be able, with the funds entrusted to its care, to publish from time to time the best information obtainable concerning earthquakes, and in every way work for the benefit and welfare of not only our own community but all mankind, so far as the effects of earth movements are concerned."

THE second meeting of the Southern Society for Philosophy and Psychology will be held in Montgomery, Alabama, in connection with the Southern Educational Association, December 27-29. Further particulars will be given later.

MR. LESTER F. WARD would be glad to be informed of as many as possible of the native plants, especially trees and shrubs, of the country which possess the sympodial type of branching, either complete or partial. Names, lists, notes, etc., may be sent to him at Brown University, Providence, R. I. Observations of sufficient importance might be sent to SCIENCE for publication. Any estimates of the proportion of sympodial to monopodial plants would be of interest. The subject is a neglected one, and references to the best treatment of it would be useful.

In an interesting and well-written article on 'The Lure of the Pearl' in the November *Century*, Mr. Frederick Courtland Penfield has this amusing bit of zoology: "It should be known that the pearl-bearing oyster of the Indian Ocean is only remotely related to the edible variety of America and Europe. It is the *Margaritifera vulgaris*, said to belong to the animal kingdom, and not to the fish family, and is never eaten."

WE learn from *The Journal of Experiment Stations* that the Chinese government has approved a request made by the native board of commerce at Peking for the use of the Loshan garden, which is situated on the Imperial Road outside of the Hsichih Gate of Peking, with an area of 166½ acres, as a field for agricultural experiments. In 1905 the board was authorized to take measures for the encouragement of agriculture, but up

to the present, with the exception of the few experimental fields and agricultural schools established in Chihli, Shantung, Shansi, Honan and Fukien, little has been done along this line.

THE *Journal of the American Medical Association* states that the Berlin Academy of Sciences has been examining the rich material of ancient medical MSS. in its library, and has just published the first volume of a descriptive catalogue, devoted to works dealing with Hippocrates and Galen. The work has been in charge of Professors H. Diels and G. Schöne. After the complete catalogue is issued it is proposed to publish all the MSS. in full. Professor Heiberg, of Copenhagen, is to help in this task, especially with the Egyptian papyri.

THE Medical Relief Committee, representing the New York Academy of Medicine, and the Medical Societies of the counties of New York and Richmond, announces that the total sum transmitted to the Medical Relief Committee at San Francisco amounted to \$7,701.10.

THE daily papers state that 'broadly speaking, the northern hemisphere will after November 1 report daily on its weather conditions to the Weather Bureau in Washington.' An arrangement made with the Central Physical Observatory at St. Petersburg enables reports to be received from the great land area lying between the Russian capital and the Pacific, while the opening of cable communication with Iceland will render possible telegraphic reports of the area of low winter barometer of the North Atlantic. As a consequence of these additional services, it is hoped that the bureau will be in a position to deal with world conditions and to make accurate forecasts for a longer time than ever before.

WE learn from *Nature* that the board of directors of the great manufacturing firm of Kynoch (Ltd.) has decided to introduce the metric system of weights and measures into all their works. A small committee has been appointed to consider the details of the change and to provide the necessary instruments, and

as soon as the committee reports the change will be made. All the weights and measures used by the firm, whether lineal, square or cubic, will be metric. For money calculations the pound sterling will be adopted as the unit, and this will be subdivided decimally.

THE Wisconsin Natural History Society announces the following series of nine public lectures to be given during the season of 1906-7 at the Public Museum, Milwaukee. This society is one of the oldest of its kind in the west, having been founded in 1857. At the May meeting the fiftieth anniversary of its foundation will be celebrated.

October 25.—Dr. R. M. Strong, University of Chicago, 'Colors of Birds.' (Illustrated by stereopticon.)

November 22.—Dr. E. C. Case, Wisconsin State Normal School, 'Geological Development of scenery.' (Illustrated by stereopticon.)

December 20.—Professor C. O. Whitman, University of Chicago, 'The Origin of Species.' (Illustrated by charts.)

January 31.—C. T. Brues, Milwaukee Public Museum, 'The Role Played by Insects in the Transmission of Certain Diseases of Man and the Higher Animals.' (Illustrated by stereopticon.)

February 28.—Professor S. W. Williston, The University of Chicago, 'The Phylogeny of the Elephant.' (Illustrated by stereopticon.)

March 28.—Dr. S. Graenicher, Milwaukee, 'The Adaptive Coloration of Insects.' (Illustrated by stereopticon.)

April 25.—H. L. Ward, Milwaukee Public Museum, 'Museum Collecting.' (Illustrated by stereopticon.)

May 30.—The Fiftieth Anniversary of the Founding of the Society.—C. H. Doerflinger will give a brief sketch of the founding of the society, followed by Professor E. A. Birge, The University of Wisconsin, 'Science and the People.'

June 27.—I. N. Mitchell, Wisconsin State Normal School, 'Burbank's Work with Plants.' (Illustrated by stereopticon.)

PROFESSOR A. R. CROOK, curator of the Illinois State Museum of Natural History, announces that a course of popular lectures on natural history and travel will be given in the Arsenal Auditorium on Saturday evenings at eight o'clock as follows:

December 1.—A. R. Crook, Ph.D., Curator, Illinois State Museum of Natural History, 'The

Making of the Grand Canyon of the Colorado.' (Illustrated.)

December 8.—O. C. Farrington, Ph.D., Curator of Geology, Field Columbian Museum, 'American Caverns.' (Illustrated.)

December 15.—H. G. Keppel, Ph.D., Northwestern University, 'Holland and the Hollanders.' (Illustrated.)

January 12.—Chas. F. Millsbaugh, Ph.D., Curator of Botany, Field Columbian Museum, 'Japan Resourceful.' (Illustrated.)

January 19.—Professor S. W. Parr, University of Illinois, 'What is Coal?' (Illustrated.)

January 26.—H. Foster Bain, Ph.D., State Geologist, 'Origin of Fuels.'

*The Educational Times* states that an important international inquiry into the methods and results of moral training in schools at home and abroad has been initiated in London. It is proposed to institute an inquiry, conducted by trained investigators, who will visit many European countries, the United States and Japan, to ascertain the conclusions which the best authorities in the different countries have reached as the outcome of their recent efforts. It is hoped to complete this inquiry and to publish the reports of the investigators by the autumn of 1907. The committee, which it is desired to strengthen by the admission of many more distinguished names, already includes, among others, the Bishops of Ripon, Hereford and Stepney, Sir Edward Fry the Right Hon. A. Dyke Acland, former minister of education, Sir Oliver Lodge, the Rev. J. B. Paton, D.D. (of Nottingham), Mr. Harrold Johnson, Secretary of the Moral Instruction League and Professor M. E. Sadler, LL.D., who is acting as hon. secretary at 8 Buckingham Street, Strand, W. C.

THE Copenhagen correspondent of the *Medical Record* writes: "Dr. Schaldemose will be appointed successor to Professor Wanscher, who died six months ago. The competition has been very close, not less than eight of our most prominent younger surgeons having entered it. Each competitor had to publish a work of no small size on a surgical topic of his own choosing and to deliver a clinical lecture with three hours' preparation. Three of the competitors, Drs. P. N. Hansen, Lendorf, and Schaldemose, were then admitted to the

final trials, consisting in a lecture on a surgical theme, the same for all of them, and communicated to them twenty-four hours in advance. It is generally reported that the judges found it very difficult to decide which of the three mentioned surgeons was most qualified to succeed to the disputed chair."

ACCORDING to *Nature* the promise of an interesting and useful addition to the local museums in the London district has been furnished by the spirited action of the Tottenham Local Board. In 1892 the Board purchased the fine 'Queen Anne' mansion known as Bruce Castle from Mr. Joshua Pedley at the price he had given for it, 15,000*l.*, toward which sum he contributed 700*l.*, in the hope that some day the house would become the home of a museum for Tottenham. The estate included twenty acres of garden and timbered land, which was soon thrown open as a public park. The idea of a museum having been grasped, many specimens and offers of aid came in from neighbors and friends. By gift, and as a result of a public subscription, several important collections were acquired. Especially worthy of mention are the long series of birds, small mammals and insects in cases and cabinets, made by Mr. H. W. Roberts, formerly a resident in Tottenham; a collection of minerals and fossils formed by Mr. Penstone, a friend of John Ruskin; and the collections of fossils and wax models made and lent by Mr. H. E. H. Smedley. Mr. Smedley is acting as honorary curator, and has generously devoted much time and skill to getting the collections into a fit state for public exhibition. Other important gifts have been made by Mr. C. C. Knight, the Hon. Walter Rothschild, Mr. Ruck, Mr. Currie, and others. The museum was publicly opened by Mr. W. W. Lewin, chairman of the libraries committee, and Councillor Knight on October 26. Mr. Smedley is responsible for the scheme of the museum, which will embrace a purely local collection of Middlesex natural history and illustrations of ancient Tottenham, while the educational aspect will be kept well in view, including exhibitions of living animals and plants designed to encourage observation at first-hand in the field.

THE *Scottish Geographical Magazine* has received from Dr. J. P. Thomson some particulars of a great irrigation scheme which the New South Wales government proposes to carry out in the Murrumbidgee Valley and the Lachlan, Namoi, and Gwydor basins. The first work which it is proposed to undertake is the construction of a dam and reservoir at Barren Jack. Barren Jack is about thirty miles from Bowning Railway Station on the Sydney to Melbourne line. The site is a deep gorge, where the river has cut through a solid ridge of granite. The sides of the gorge are between 300 feet and 400 feet high. The proposal embraces constructing a wall 200 feet in height right across the Murrumbidgee, thus damming the waters back for a distance of 40 miles. The reservoir will contain one and a half time more water than Sydney Harbor, and, in fact, will be little inferior to the great Nile dam. Much of the area of the actual dam site is now under cultivation as agricultural farms, and these will all have to be resumed. The full capacity of the reservoir will be 33,380,864,000 cubic feet, and the cost of the dam, including resumption of lands, is £758,000. The dam will first be built to a height of 120 feet, and its full height will be reached, it is anticipated, in seven years from the date of its commencement. The catchment area is 5,000 square miles, embracing the whole of the country drained by the headwaters of the Murrumbidgee. One great feature of this scheme is that the waters will be brought to the land irrigated entirely by gravitation, and pumping will not be necessary. The new dam when constructed will be one of the greatest sights in the commonwealth, and the New South Wales government have selected a proposed site for the Federal capital right in its immediate neighborhood. This site is known as Makoolma. Two or three alternative lines for a light railway have been surveyed to connect Bowning with the dam.

THE total value of the stone produced in the United States during 1905, according to a forthcoming report of the United States Geological Survey, was \$63,798,748. This total includes granite at \$17,563,139, trap rock at \$3,074,554, sandstone, not including grind-

stones and whetstones, at \$8,075,149, bluestone at \$1,931,625, marble at \$7,129,071, and limestone at \$26,025,210. As the corresponding value for 1904 was \$58,765,715, it appears that the production showed a gain of \$5,033,033 during 1905. The increased output for 1905 was caused by more activity in the building trades, and chiefly by a large increase in the output of limestone for use as furnace flux, which the reopening of many iron furnaces demanded. Granite, marble and limestone increased in value of output, while sandstone decreased slightly. Limestone showed the largest increase, from \$22,178,964 in 1904 to \$26,025,210 in 1905, or \$3,846,246. Granite, including trap rock, gneiss, basalt, etc., increased in value from \$20,015,025 in 1904 to \$20,637,693 in 1905, a gain of \$622,668. The trap rock increased in value from \$2,823,546 in 1904 to \$3,074,554 in 1905, or \$251,008. Other granite increased in value from \$17,191,479 in 1904 to \$17,563,139 in 1905, a gain of \$371,660. Marble increased in value from \$6,297,835 in 1904 to \$7,129,071 in 1905, a gain of \$831,236. Sandstone, including bluestone, decreased in value from \$10,273,891 in 1904 to \$10,006,774 in 1905, a loss of \$267,117. Bluestone increased in value from \$1,791,729 in 1904 to \$1,931,625 in 1905, a gain of \$139,896. The sandstone figures showed a decrease in value of \$407,013—from \$8,482,162 in 1904 to \$8,075,149 in 1905. The production of these different kinds of stone by individual states is set forth in detail in this report, which was prepared by Miss A. T. Coons, under the direction of Mr. Edwin C. Eckel.

#### UNIVERSITY AND EDUCATIONAL NEWS.

THE General Education Board held a meeting last week when Acting-president Henry Pratt Judson, of the University of Chicago; President E. A. Alderman, of the University of Virginia, and President H. B. Frisell, of the Hampton Institute, were elected trustees. The following grants were made:

Drury College, Springfield, Mo.....	\$ 50,000
Iowa College, Grinnell, Iowa.....	100,000
Richmond College, Richmond, Va.....	150,000
Lawrence University, Appleton, Wis....	50,000
Washington and Lee University, Lexington, Va. ....	5,000

Mercer University, Macon, Ga.....	75,000
Randolph-Macon College, Ashland, Va....	100,000

The gifts made within the last six months, in addition to those already mentioned, are:

Tulane University, New Orleans.....	\$75,000
Washburn College, Topeka, Kan.....	25,000
Coe College, Cedar Rapids, Iowa.....	50,000
Wofford College, Spartansburg, S. C.....	35,000
Furman University, Greenville, S. C.....	25,000
Wake Forest College, Wake Forest, S. C...	37,500
Howard College, Birmingham, Ala.....	25,000
Mississippi College, Clinton, Mass.....	25,000
Southwestern University, Jackson, Tenn...	25,000

We understand that the institutions are required to raise three times the amount of the appropriation from the board.

THE daily papers state that Mr. Andrew Carnegie has founded a scholarship in physics at the University of Paris with the sum of \$2,500, in honor of the late Professor Curie and Mme. Curie.

SIR J. T. BRUNNER has endowed a chair of Egyptology in the University of Liverpool.

A NEW laboratory for experimental physics is in course of erection at the University of Toronto. The building is planned on the unit system and will cost when completed, with equipment, approximately \$350,000. The laboratory is designed to accommodate the students in physics of the faculties of arts, medicine and applied science, which at the present time number about eight hundred.

THE John C. Green School of Science at Princeton University has this year a larger enrollment than the academic department. The numbers in each class are: senior, 78; junior, 67; sophomore, 144; freshman, 183. The registration in the academic department is: senior, 207; junior, 181; sophomore, 167; freshman, 139.

DR. H. E. ANNETT has been elected to a newly established chair of comparative pathology in the University of Liverpool.

DR. EMIL PHILIPPI, docent in Berlin, has been elected to the Haeckel chair of geology and paleontology in the University of Jena.

DR. OTTO JAECKEL, curator in the Berlin Museum, has been called to a chair of geology at Greifswald.