in the public reading of papers, and for similar purposes. The smoking and general conversation room or rooms will be independent of the foregoing. The annual address of the retiring president, Professor H. L. Fairchild, will be delivered on the evening of Saturday, the twenty-eighth. The council desires to increase the number of students and other junior workers in geological science attending the meeting as visitors, and with this object requests each fellow to send to the secretary, not later than November 25, the names and addresses of persons who, whether they can attend the meeting or not, are seriously interested in geology and deserving of recognition as visitors, although they have not yet reached such standing as to gain membership in the society. The council will then write to the persons thus nominated, inviting them to attend the New Haven meeting.

SCIENTIFIC NOTES AND NEWS

DR. EDWARD W. MORLEY, the distinguished American chemist, has been made an honorary member of the Swiss Association for the Advancement of Science.

THE gold medal for science of the Prussian government has been conferred on Dr. Robert Helmert, director of the Geodetic Institute of Potsdam.

DR. E. J. BARTLETT, professor of chemistry in Dartmouth College, has been elected representative to the state legislature from the town of Hanover on the Republican ticket.

DR. LEO KOENIGSBERGER, professor of mathematics in Heidelberg, celebrated his seventy-fifth birthday on October 15.

THE Gedge prize of Cambridge University has been awarded to Mr. A. V. Hill, of Trinity College, for his essay entitled "The Heat Production of Amphibian Muscle and of Cold-blooded Animals."

M. D'OLIVEIRA, the Brazilian ambassador to Belgium, has been delivering a course of lectures in several universities and colleges and has been making a special study of the American collegiate educational system.

PROFESSOR MERRITT L. FERNALD, of Harvard University, lectured before the Geographical Society of Chicago on November 8 on "The Mountains and Barrens of Newfoundland and the Gaspé Peninsula."

PROFESSOR H. L. REITZ, of the department of mathematics at the University of Illinois, spoke on "The Mathematical Treatment of Scientific Data" before the first College of Science assembly of the year on November 1. The science assembly will be held monthly throughout the year, following the practise instituted last year.

DR. FRED. E. WRIGHT, of the Geophysical Laboratory of the Carnegie Institution of Washington, will give a course of lectures on experimental geology to the students of the geological department of the Johns Hopkins University, beginning at the opening of the winter term in January, 1913. Dr. Arthur L. Day, director of the Geophysical Laboratory, will cooperate with Dr. Wright in some of these lectures, the general purpose of which will be to present to advanced students in geology this comparatively undeveloped but highly important branch of the subject, attention being directed to the fundamental principles of chemistry, physics and crystallography which underlie work in this field. The results which have already been secured in experimental geology will be reviewed and attention directed to those geological problems which are still unsolved and in which experiment may render efficient aid.

PROFESSOR HAROLD B. SMITH, director of the department of electrical engineering of the Worcester Polytechnic Institute, who is on leave of absence and who has recently returned from a trip around the world, was in Worcester recently and delivered three illustrated lectures descriptive of his travels. The first was before the Alumni Association, the second before the Worcester Polytechnic Institute Branch of the American Institute of Electrical Engineers and the third for members of the electrical engineering department and their friends.

THE Huxley memorial lecture of the Royal Anthropological Institute will be given on November 19, when Professor W. Gowland, F.R.S., will deliver an address on "The Metals in Antiquity."

THE Huxley lecture at the University of Birmingham was delivered on October 30 by Professor John Joly, F.R.S., on "Pleochroic Halos."

A MEMORIAL to Dr. D. B. St. John Rosa was unveiled in the Post-graduate Medical School and Hospital, New York City, of which he was the president from its foundation, in 1881, to his death in 1908. The bronze tablet, which represents in relief Dr. Rosa in academic robes, is the work of Mr. Henry Merwin Shrady.

DR. JOHN WILLIAM MALLETT, F.R.S., professor emeritus of chemistry at the University of Virginia and eminent for his contributions to chemistry, died on November 7, aged eighty years.

DR. JOHN MONROE VAN VLECK, professor of mathematics at Wesleyan University from 1853 until his retirement as emeritus professor in 1904, died on November 4, aged seventy-nine years.

MAJOR GENERAL ROBERT MAITLAND O'REILLY, U.S.A., retired, former surgeon general of the United States Army, died on November 3.

MR. BRADFORD TORREY, the American author of books on natural history, has died at the age of seventy years.

MR. JAMES B. PARKER, of Oxford, known for his work in archeology and geology, has died at the age of seventy-nine years.

MR. WILLIAM BOTTOMLEY, the nephew of Lord Kelvin, who assisted him in his scientific and engineering work, died on October 19, aged sixty-three years.

THE U. S. Civil Service Commission announces an examination for assistant chemist in radio-activity, for men only, to fill vacancies in the Bureau of Mines, at Washington, D. C., or Denver, Colo., at salaries ranging from $1,800 to $2,160 a year. For the same bureau there will be on November 20 an examination for junior alloy chemist at a salary from $1,500 to $1,800.

A Mental Hygiene Conference and Exhibit was conducted at the New York City College by the National Committee for Mental Hygiene and the Committee on Mental Hygiene of the New York State Charities Aid Association. Provision had been made for a large public attendance, and physicians guided parties through the exhibit every half hour, afternoon and evenings. The exhibit, which closed on November 15, was opened on November 8 with addresses by President Finley, Dr. Lewellys F. Barker, Dr. James U. May and Professor George F. Canfield.

WE learn from *Nature* that on October 16 a conversazione was held by the Royal Microscopical Society in the great hall of King's College, about four hundred fellows and guests being received by the president, Mr. H. G. Plimmer, F.R.S., and Mrs. Plimmer. The object in view was, so far as practicable, to gather together a series of exhibits which would indicate the many uses, both in science and commerce, to which the microscope is put at the present time. In addition, the conversazione afforded an opportunity for those engaged in microscopic work to show objects of interest or to demonstrate the use of apparatus or appliances for special purposes.

THE International Photometric Commission, commonly known as the "Zurich Commission," was created by the International Congress of Gas Industries which convened in Paris in 1910. This commission, composed of representatives from the various national technical gas societies, with the cooperation of certain of the national laboratories, has been concerned with general questions of photometry in addition to its more specific functions in connection with the photometry of the incandescent mantle. Inasmuch as there has developed a wide-spread appreciation of the need of an international, thoroughly representative commission to deal with general questions of photometry, and possibly also of illumination, it has been proposed that the International Photometric Commis-

sion be reorganized to fulfill these requirements in a way acceptable to all photometric interests. This movement is being well received, both in Europe and America. President Vautier, of the International Photometric Commission, has requested the sub-commission on photometric units and standards to formulate a plan of reorganization. This sub-commission was originally appointed at the 1911 session of the International Photometric Commission to consider the recommendations of the Illuminating Engineering Society (U. S.) regarding photometric nomenclature and standards. The sub-commission at present is composed of the following members: Dr. Brodhun, Dr. Kusminsky, M. F. Laporte, Mr. C. C. Paterson, secretary, M. Th. Vautier, *ex-officio,* and a representative of the United States soon to be appointed. The personnel of the sub-commission, composed of representatives of the various national laboratories, is peculiarly qualified to undertake the duty of formulating plans of reorganization. It is hoped that as the outcome of the efforts of the sub-commission, with the endorsement of the various national technical gas societies to which the International Photometric Commission in the past has been responsible, an essentially new commission will be formed which will be equally representative of and responsible to all national technical gas, electric and illuminating engineering societies, and other bodies interested in photometry and illumination.

There was a decrease of nearly 28 per cent. in the production of iron ore and a smaller but noteworthy decrease in the production of pig iron and steel in the United States in 1911, compared with the production in 1910, due to the large over-production of ore in 1910, and to a lessening demand for iron products in 1911. The prospects for 1912 are encouraging, according to Ernest F. Burchard, of the United States Geological Survey, in a report on the "Production of Iron Ore, Pig Iron and Steel in 1911," but at no time since 1907 has the excessive capacity for manufacturing iron and steel been fully utilized, and nothing short of abnormal activity, which is not likely to occur in 1912, will result in employing the full capacity of the plants. One of the important features of the iron-ore industry in 1911 was the increased attention paid to the conservation of ore in the Lake Superior region through beneficiation (washing, concentrating, roasting, nodulizing and briquetting of ores). The iron ore marketed in the United States in 1911 amounted to 40,989,808 long tons, valued at $86,419,830 at the mines, compared with 56,889,734 long tons, valued at $140,735,607, in 1910. Minnesota and Michigan produced the bulk of the iron ore, the former 23,398,406 long tons and the latter 8,944,393 long tons. During the year 159 mines produced over 50,000 long tons of iron ore each, compared with 191 mines which exceeded that output in 1910. The largest quantity produced by any single mine in 1911 was 1,553,510 long tons, from a mine at Marble, Minn. The production of pig iron in 1911 amounted to 23,257,288 long tons, valued f. o. b. at the furnaces at $327,234,624, compared with 26,674,123 long tons, valued at $412,162,486, in 1910, a decrease in quantity of 3,416,835 tons and in value of $84,827,862. Pennsylvania produced the greatest quantity of pig iron, 9,581,109 long tons; Ohio was second, with 5,371,378 long tons, and Illinois stood third, with 2,036,081 long tons. The total quantity of steel produced in 1911 was 23,675,501 long tons, against 26,094,919 long tons in 1910. The bulk of it came from Pennsylvania, whose output was 13,207,539 long tons.

The United States Geological Survey has recently published, as an advance chapter from "Mineral Resources of the United States for 1911" a report on the mine production of silver, copper, lead and zinc in the central states in 1911, by B. S. Butler and J. P. Dunlop. The total value of the output of these metals in the central states in 1911 was $64,519,444, nearly half of which came from Missouri, whose production was valued at $30,171,311. The value of the output of Michigan, the second largest producer, was $27,743,572. The production of silver in the central states in 1911 was 550,184 fine ounces, valued at

$291,598, compared with 365,702 fine ounces, valued at $197,479, in 1910. Of the 1911 production 497,281 ounces came from the copper lodes of Michigan. The output of copper from the central states in 1911 came from the states of Michigan and Missouri and amounted to 220,480,513 pounds. Of this production 219,840,201 pounds came from Michigan. The mine production of lead in the central states in 1911 was 188,669 short tons, which, rated at the average New York price for the metal for the year ($90 a ton), was valued at $16,980,210, compared with 171,226 short tons, valued at $15,067,888, in 1910. Missouri produced 95 per cent. of the yield of the central states and about 44 per cent. of the primary lead recovered in the United States from domestic ore. The production of zinc in the central states in 1911, based on mine returns with a deduction for separating and smelting losses, was 172,698 short tons, valued at $19,687,572; the production for 1910 was 178,784 short tons, valued at $19,308,672. Missouri was the largest producer of zinc in the United States, although its production, 122,515 tons, was slightly less than in 1910.

UNIVERSITY AND EDUCATIONAL NEWS

WORK has been begun at Harvard University on the three freshman dormitories which are to stand near the bank of the Charles River, south of the main body of university buildings. It is understood that Mrs. Russell Sage is one of the large contributors to the fund of $1,800,000 which is now nearly completed for these dormitories.

GROUND has been broken for the north wing of the new electrical laboratory of the Sheffield Scientific School. It will cost about $115,000, of which $75,000 is a gift made by A. C. Dunham, Yale, '54, of Hartford, Conn.

THE trustees of Wesleyan University have voted to build an astronomical observatory at a cost of $60,000.

THE Queen Wilhelmina chair in Dutch history, literature and language will be established at Columbia University, supported jointly by the university and by funds raised for the purpose in Holland.

THE first event in the opening of the Peter Bent Brigham Hospital at the Harvard Medical School was the opening of a class for nurses in the ward building on October 31. On the same date the hospital took over the Harvard Clinic, which will be the first continuous clinic in Boston. Patients will be admitted to the hospital about the middle of January.

ON October 23 the corner stone of the library and administration building for the University of Utah was laid with appropriate ceremonies. This building is to occupy the central position at the head of the street upon which the campus faces. The superstructure will be of Sanpete oolite, and the foundation of Temple granite from Little Cottonwood Canyon. When completed it will house the library, the administrative offices, the art gallery, the archeological museum and a spacious auditorium, as well as rest rooms for men and women. The cost will be more than $300,000.

A RECENT analysis of the professional distribution of the graduates of Oberlin College reveals the fact that teaching has been the most prominent field of endeavor. The total number of graduates of the academic department, including men and women, is 3,385 (when the same person has taken more than one degree he has been considered but once). Of these, 1,244, or 36.8 per cent. have gone into the profession of teaching. If the group of unclassified is left out of consideration, thus omitting many women with no profession, the proportion of graduates entering teaching is even more striking, since one out of every two has become a teacher. From a total of 1,682 men graduating from the academic department, 392, or nearly 25 per cent., were teachers. Of the women, 853 out of a total of 954 classed in any profession have taught.

PROFESSOR T. J. HEADLEE, head of the department of entomology and zoology in the