

quirements, as by adding a fourth year to the medical course and by reorganization of the Law School. A further growth is represented by the students of Barnard College and Teachers College, respectively 278 and 297, both established at the beginning of President Low's administration and now under the sphere of influence of Columbia University. If 1,173 extension students are added the total number under the immediate influence of the University is 3,985.

Among the important educational advances of the year may be mentioned the creation of a large number of scholarships in the place of free and reduced tuition, the establishment of a professorship of anthropology and an adjunct professorship of mechanical engineering, and the decision to conduct a summer session in 1900.

SCIENTIFIC NOTES AND NEWS.

WE record with great regret the death of Sir William Dawson, the eminent geologist and author, for twenty-eight years principal of McGill University. He was born in Nova Scotia in 1820 and died on November 19th.

THE University of Pennsylvania has appointed a committee to arrange with similar committees of other organizations for a memorial in honor of the late Professor Brinton.

THE Washington *Star* states that the orders recently issued in the case of Professor S. J. Brown, U. S. A., have been modified by the Acting Secretary of the Navy, so as to assign him to duty as astronomical director of the Naval Observatory, to take effect December 17th, instead of making him director of the Nautical Almanac, an office attached to that institution, as originally intended.

A COMMITTEE formed at the Dover Meeting of the British Association is making arrangements for an international meeting of scientific men in connection with the Paris Exposition of 1900. Those wishing to assist in this undertaking should address the assistant secretary, Mr. J. R. Marr, 5 Old Queen Street, London, S. W.

THE third annual meeting of the Society for Plant Morphology and Physiology, will be held, in conjunction with the meetings of the Ameri-

can Society of Naturalists and the Affiliated Scientific Societies at New Haven, on Wednesday, Thursday and Friday, December 27-29th.

FREDERIC W. SANDERS, Ph.D. (Chicago), formerly professor in the University of West Virginia, has been elected President and Director of the New Mexico College of Agriculture and Mechanic Arts and Agricultural Experiment Station at Mesilla Park, New Mexico.

DR. W. H. CORFIELD, professor of hygiene and public health in University College, London, has been appointed to the newly created post of consulting sanitary adviser to the British Office of Works.

MR. HORACE PLUNKETT, M.P., has been appointed vice-president of the new department of Agriculture and Technical Education for Ireland.

WE learn from *Nature* that at the recent annual meeting of the Royal Academy of Medicine in Ireland, the following men of science were elected honorary Fellows of the Academy: Sir J. Burdon-Sanderson, Bart., F.R.S.; Prof. Howard Kelly, Baltimore; Professor Koch, Berlin; Professor Kocher, Bern; Professor Th. Leber, Heidelberg; Sir W. MacCormac, Bart., K.C.V.O., London; Professor Martin, Berlin; Professor Nothnagel, Vienna; Professor Osler, Baltimore; and Sir W. Turner, F.R.S., Edinburgh.

DR. WILLIAM S. CHURCH, President of the Royal College of Physicians, London, has been elected an honorary fellow of University College, Oxford.

THE gold medal of the Highland Agricultural Society of Scotland has been awarded to Professor Cossar Ewart in recognition of his intercrossing and other experiments.

PROFESSOR H. S. CARHART of the Physics Department of the University of Michigan, who, as we have already stated, is in Berlin, has compared the standard Clark cell with the standard of the Physical Technical Institute and found that the electromotive force of the standard Clark cell does not differ more than one in twenty thousand from the average electromotive force of the standard cell of the institute.

DR. O. VON DER HEYDE, assessor of forestry, in the German Empire, who has been examining the management of forests in India and Japan, is at present in the United States.

WE regret to learn that Professor Ernst Mach of the University of Vienna is prevented by illness from giving his lectures this winter.

DR. WALTER J. HOFFMAN died at Reading, Pa., on November 8th, at the age of fifty-three years. When a surgeon in the U. S. Army he made studies on the North American Indians, and later when connected with the American Bureau of Ethnology published numerous important researches on the subject.

DR. W. C. ARNISON, professor of surgery in the University of Durham, died on November 4th, aged 62 years. He was formerly lecturer in botany and vegetable physiology. He had been president of the section of surgery of the British Medical Association, and was the author of numerous contributions to the medical press.

THE death is announced, at the age of 96 years, of Dr. Gonzalo Aróstegui, at one time professor of surgery in the University of Havana.

A MEMORIAL of Dr. Müller, who it will be remembered fell a victim to the plague in Vienna on October 23, 1898, was recently unveiled in the quadrangle of the General Hospital of that city. Professor Nothnagel delivered an address.

WE learn from *Natural Science* that Dr. Kishinouye and other Japanese zoologists have hired a two-storied building on the shores of the Inland Sea, with the view of converting it into a biological station. Professor J. Ijima has returned from a zoological expedition to Formosa.

MR. ANDREW CARNEGIE has offered to give \$125,000 for a building for the Polytechnic Library Society, of Louisville, Ky., for the construction of a building, provided that the city appropriates at least \$10,000 a year for running expenses. He has also offered \$50,000 to establish a public library at Houston, Tex., on condition that the city appropriate \$4,000 for maintenance.

THE Council of the Senate of Cambridge University, having regard to the extensive and valuable collections procured for the University by the Torres Straits Expedition, propose that a further grant of 100% (making 550% in all) be made from the Worts Travelling Scholars' Fund to Dr. A. C. Haddon towards the expenses of the expedition.

REUTER'S agency reports that, according to advices received in London, Dr. Donaldson Smith, who left England for East Africa some time ago, has safely arrived at Hargeisa, in Somaliland, with his Somali escort. Dr. Smith, who is accompanied by Mr. Carlisle Fraser, states that it is his intention to push on to Lake Rudolph as quickly as possible and then explore the unknown country to the west. It is, therefore, unlikely that anything more will be heard of the expedition for a considerable time.

DR. VON HÖHNEL, professor of botany in Polytechnic Institute at Vienna, has returned from an expedition to Brazil with valuable collections.

Natural Science states that the Danish expedition to East Greenland, under the leadership of Lieut. Amdrup, returned to Copenhagen on September 13th. It had investigated and mapped the tract between 65° 50' and 57° 22' N. lat., hitherto unvisited by Europeans. At one time it was inhabited by many Esquimaux, all of whom have now perished. A collection of their skulls and other relics was brought home. Botanical, geological, and zoological observations were made, as well as anthropological measurements on living Esquimaux in other parts. Depots were left at 60° 6' and 67° and 15' N. lat.

A STEAMSHIP has been held in quarantine outside New York City containing two cases of bubonic plague. There was also one death on the voyage. The steamship came direct from Santos, Brazil. It is commonly supposed that there is no chance that the bubonic plague will become epidemic under proper sanitary conditions, but its development in widely separated places causes some apprehension.

THE St. Petersburg correspondent of the London *Times* telegraphs that rich auriferous deposits have lately been discovered on the

northwestern shore of the sea of Okhotsk, and have been examined by a commission of mining engineers sent by the Imperial Government to Siberia for that purpose. These deposits will be leased to the highest bidders at a public auction to be held on February 27th next, at the Ministry of Agriculture and State Domains. The agents of the Russian Ministry of Finance abroad are authorized to communicate to intending purchasers the conditions of the sale, and all further particulars concerning the lease of the deposits in question.

THE department of pharmacognosy of the University of Michigan will hereafter grow its plants for use in research work. This is to guarantee abundance and authenticity of the drugs. Several acres of ground will be secured, and the plants which are to be the subjects of investigation will be cultivated in large quantities. The plan is an outgrowth of the botanical gardens which were established three years ago.

AN Ornithological Club, with about fifteen members, has been organized by Mr. W. E. D. Scott, at Princeton University.

WE take the following note from the last issue of *Natural Science*: At a meeting held in The Outlook Tower, Castlehill, Edinburgh, on 14th October, Professor James Geikie, D.C.L., in the chair, an interesting and stimulating address was delivered by Professor Wilbur Jackman, M.A., of Chicago University and Training College, on 'Nature Study, its Methods and Results in School Practice.' Even apart from the able address, which will doubtless be published, the exhibits of notes of work, especially those in water-color, arranged round the room, showed what results await those teachers who have the courage and opportunity to devise courses of nature-study to mitigate the burden of book-work. To many of those present these exhibits and the story of them must have seemed a revelation, but it was interesting to notice that several authorities who took part in the discussion, which lasted for towards two hours after the lecture, reverted to the necessity of 'books.' A guide-book for the teacher may be necessary—not that there is really a lack—but of more books for the scholars there

should, in a case like this, be no mention. Owing to the overcrowded audience, an adjournment after the lecture was effected to the Castlehill public school, where, under the chairmanship of Professor Crum Brown, F.R.S., an interesting discussion was held. To this contributions were made by Mr. Robert Smith, B.Sc., of University College, Dundee, who reported on some nature-study classes which he had conducted, by Mr. Robert Blair, Science Inspector, by Mr. Dunn, H.M.I.S., by Professor J. Arthur Thomson of Aberdeen, by Dr. Maurice Paterson of the Free Church Training College, by Miss Stevenson of the Edinburgh School Board, by Mr. Walter Blaikie, Professor Geddes of Dundee, and others. There was also an exhibition of maps of a botanical survey of Scotland by Mr. Robert Smith, of a cosmosphere by Mr. Walter Blaikie, of a first panel of a proposed spheric atlas by Professor E. Reclus of Brussels, of relief models by Mr. George Guyou, etc. Altogether the meeting was one of considerable educational importance in connection with the teaching of natural science in schools.

ACCORDING to *Nature* the Society of Arts of London planned to open its new session on November 15th, with an address from the chairman of the Council, Sir John Wolfe Barry, K.C.B., F.R.S., in which it was expected that he would develop the subject of his address last year, 'London Communications,' and would make some suggestions as to the practical means of carrying his proposals into effect. The first paper after the opening meeting will be by Mr. D. E. Hutchins, who will draw attention to the want in England of measures for the proper conservation of woods and forests. At the next meeting Mr. Allan Wyon will give a paper, principally of an antiquarian nature, on the Great Seals of England. At the other meetings before Christmas it is probable that Mr. Joseph Cash will describe the substitutes which have recently been introduced to replace silk, and the methods of their production. Mr. F. G. Afalo will draw attention to the necessity for some legislation to restrict sea anglers from catching immature and undersized fish; and Mr. H. Bloomfield Bare will describe and illustrate the methods, which have recently achieved considerable success in

America, of teaching drawing by the use of the blackboard, both hands being employed. Mr. H. H. Cunynghame, who has devoted a great deal of attention to the subject, will give a course of Cantor Lectures before Christmas on the art of enamelling. It is intended to demonstrate practically the whole process of enamel-making during the course. The Juvenile Lectures will be by Mr. Herbert Jackson, of King's College, who will lecture on phosphorescence.

UNIVERSITY AND EDUCATIONAL NEWS.

THE San Francisco *Call* says it is understood that the money, amounting to \$11,400,000, obtained by Mrs. Jane Stanford for her 285,000 shares of Southern Pacific stock, which she sold recently, will at once be made available for the use of the Stanford University. The Library, the gift of T. W. Stanford, and the Assembly Hall, are now ready for occupancy.

WILLIAM H. WEBB founder of Webb Academy and Home for Shipbuilders, New York city, has by his will left to the Academy the reversion of the larger part of his estate valued at over \$600,000. He has also left directly to the Academy his paintings, drawings, books, etc., relating to shipbuilding.

MR. JAMES JENNINGS McCOMB of New York, one of the founders of the Southwestern Presbyterian University at Clarksville, Tenn., has given \$70,000 to the endowment fund, making his contributions amount in all to \$100,000.

BROWN UNIVERSITY has received an unconditional gift of ten thousand dollars from the heirs of the late Lucian Sharpe.

THE Rev. John Pike has left the reversion of half his property to found two scholarships in Bowdoin College.

IT is announced that architects' plans are now being considered by the corporation of Yale University for the memorial building which it is planned to erect before the bi-centennial exercises in 1901. The building will contain a dining hall and an auditorium, and will cost \$750,000, of which sum over \$400,000 has been subscribed. The building will be at the corner of Grove and College Streets.

THE Wilmerding School of Industrial Arts,

which the regents of the University of California have established in accord with the will of the late J. C. Wilmerding, will be opened for instruction on January 8, 1900.

A PLAN submitted by Professor Hanus of Harvard University, to the Cambridge School Board, according to which a certain number of Harvard students should be allowed to undertake practice teaching in the public schools, and teachers should have the privilege of taking courses at Harvard, has been rejected by the board.

THE courses of lectures in the sciences at Oxford University for the present term number 41, distributed as follows: physics 6, chemistry 10, geology 3, mineralogy 3, zoology 7, physiology 10, botany 1, anthropology 1. As these courses include both elementary and advanced work, and many of them are only one hour a week, it is evident that Oxford does not compare favorably with the scientific work of other great universities.

THE Archæological Institute of America offers six fellowships for next year. Three for work to be done at Athens and three at Rome. Further information can be obtained from Dr. C. H. Young, Secretary, Columbia University.

MRS. ELIZABETH CARY AGASSIZ has resigned the presidency of Radcliffe College, but has consented to accept the position of honorary president.

DR. H. S. LEAKE has been appointed instructor in anatomy in Williams College, to take the place of the late Professor Woodbridge. Dr. Leake is a graduate of Williams College and of the College of Physicians and Surgeons, New York City.

IN accordance with the new law permitting French universities to establish professorships for which the means are at hand, two new professorships have been established under the faculty of sciences at the Sorbonne, a chair of histology, to which M. Chatin has been assigned, and a second chair of physics, to which M. Pellat has been assigned. The chair of chemistry, vacant by the death of M. Friedel, has not been filled, but M. Chabrié is giving the courses.