

of scientific kite-flying on a remarkable scale. Recent ascents have reached altitudes but little short of a mile above sea level, and excellent records have been obtained by means of a self-recording instrument made by Fergusson, of the Blue Hill staff, which gives automatic readings of temperature, pressure, humidity and wind velocity. Mr. Rotch, the proprietor of the Observatory, has now had constructed for him by Richard *Frères*, of Paris, an aluminum instrument weighing less than three pounds, which records pressure, temperature and humidity. The meteorological results already obtained are of great value, and the full discussion of them is awaited with interest. Among the most important matters that have been noted is the presence of cold waves and warm waves at considerable elevations some hours before the temperature changes are noted at the earth's surface. The prospect of improving our weather forecasts by such soundings of the free air is very encouraging, and it is more than likely that before long some practical use will be made of these discoveries.

HARVARD UNIVERSITY. R. DEC. WARD.

SCIENTIFIC NOTES AND NEWS.

THE fifth session of the Hopkins Seaside Laboratory, of Stanford University, will open on June 15th. It will continue for six weeks, but investigators may remain in residence throughout the summer. The laboratory, which includes two buildings well equipped for instruction and research, is located at Pacific Grove, on the Southern shore of Monterey Bay, about four hours' distant from San Francisco. To investigators prepared to carry on original work the use of the Laboratory and its equipment is tendered free of charge, and its location offers unusual advantages to students from the Eastern States wishing to become acquainted with the fauna and flora of the Pacific. The laboratory is under the direction of Professor O. P. Jenkins and C. H. Gilbert, with the assistance of other instructors from Stanford University.

MR. GRIFFITH, Secretary of the British Association for the Advancement of Science, is now in America to make arrangements for the meeting of the British Association in Toronto in 1897. On May 19th he was the guest of Prof. Putnam, Permanent Secretary of the American Association for the Advancement of Science. The two Secretaries passed the morning in discussing various matters relating to their respective Associations. It is the intention of the American Association to arrange the time and place of its meeting next year so that members of the American and British Associations can attend both meetings, and as the British Association will probably hold its meeting on August 18-25 it is suggested that the American Association hold its meeting August 30 to September 4. A few Harvard professors, prominent in the Association, met Mr. Griffith at the Colonial Club, and the afternoon was spent in visiting several departments of Harvard University. On Wednesday Mr. Griffith visited the Harvard Medical School and other places of interest in Boston, and in the evening he left for Ottawa in order to meet the members of the Royal Society of Canada before their adjournment on Friday. From there he goes to Toronto to arrange with the local committee for the meeting of the British Association.

THE Secretary of the Smithsonian Institution has leased for another term of three years, for the benefit of American students, one of the tables at the Naples Zoölogical Station. This was done in response to requests from a large number of colleges and universities, and to resolutions from the principal natural history societies in the country, and a petition signed by over four hundred biologists. During the last three years the following universities and colleges have been represented; that is to say, the occupants of the Smithsonian table have been either graduates of those universities or professors in their faculties:

Clark University, Worcester; University of Chicago; Brown University; University of Michigan; Kentucky State College; John Hopkins University; Kansas Agricultural College; Bryn Mawr College; Wesleyan University; Iowa Agricultural College; Leland Stanford Junior University; Olivet College, Michigan.

The candidates for the privileges of the Smithsonian table are recommended by a committee composed of representatives of the *National Academy of Sciences*, *American Morphologists*, *Society of American Naturalists* and the *Association of American Anatomists*.

MR. HERBET SPENCER has recently communicated to the *London Times* a series of letters opposing the adoption of the metric system and advocating a reorganization of the present duodecimal system in preference to a change which would adjust our weights and measures upon a decimal system.

WE noted last week that in the occasion of its millennial celebration the University of Buda-Pesth will confer an honorary degree upon Dr. John S. Billings. It is said that degrees will not be conferred on any other Americans and only on four Englishmen: Lord Kelvin, Mr. Herbert Spencer, Prof. Max Müller and Mr. James Bryce.

PROF. W. K. BROOKS has been elected Fellow of the Royal Microscopical Society.

A TELEGRAM to the New York *Evening Post* states that there has been a volcanic eruption on the island of Socorro, off the Mexican coast. Two months ago, which is the latest date of news received, lava was running down the mountain sides, overflowing the lowlands and moving towards the sea.

GOV. MORTON has signed the bill authorizing the use of the land now occupied by the old reservoir at Forty-second street and Fifth avenue in New York City for a free public library and reading room, to be erected under the supervision of the New York Public Library, the combination of the Astor, Lenox and Tilden foundations.

A NEW law authorizes the Brooklyn board of estimate and apportionment to grant \$100,000 payable on the Mayor's order, to any corporation depositing an equal amount with the City Treasurer for the purpose of a free public library.

PROF. KEMP and Prof. Peale, of Columbia University, will conduct the summer work in geology and mining of the School of Mines at Butte, Montana. Prof. Scott, of Princeton University, will conduct a geological expedition

which will have its headquarters at Flagstaff, Arizona.

PROF. D'ARCY THOMPSON and Mr. Barrett Hamilton have been appointed by the British government as the naturalists to investigate the seals in Behring Sea. They are now on their way to the United States.

THE British Government, in recently distributing a number of sets of the Challenger Reports to scientific institutions, selected on the advice of the council of the Royal Society, sent five of the sets to the United States. The Institutions which receive them are the Universities of California, Tulane and Colorado, the Woods Holl Laboratory and the Hydrographic Bureau of the United States Navy.

THE Museum of Practical Geology, London, will be opened on Sunday, from 2 p. m. to 7 p. m., as an experiment, the continuance of which will depend on the attendance of visitors.

AN International Congress of Agriculture will be held at Buda-Pesth in connection with the Millennial Exposition. An International Horticultural Exposition will be held at Hamburg from May to October, 1897. The sum of \$100,000 has been appropriated for the purpose by the city.

THE publication is announced of a journal in Milan devoted to acetylene and its applications.

THE *British Medical Journal* states that the Koch Institute is not to be transferred to Dahlem after all. The Prussian government has decided to buy a plot of land close to the ground on which the new fourth municipal hospital is to be erected—in the See Strasse—and to build an enlarged and improved Koch institute upon it. The decision, simple as it seems, has been arrived at only after long and wearisome negotiations. Now it is hoped that, this knotty point once solved, the rebuilding and enlargement of the Charité Hospital will be attacked in earnest. The ground at present occupied by the Koch Institute is required for the hospital, but of course, until the future of the institute itself had been definitely settled, it was impossible to begin work. A new museum for the pathological collections is urgently needed, as Virchow is terribly cramped in the Pathological Institute. It is said that 1896 is to see this

building begun; but delays have been so frequent that it is best not to prophesy.

Nature states that M. Moisson is reported (*Centr. Zeit. für Opt. u. Mech.* xvii. 6) to have discovered a substance harder than the diamond in the form of a compound of carbon and boron, produced by heating boracic acid and carbon in an electric furnace at a temperature of 5,000°. This compound is black and not unlike graphite in appearance, and it appears likely to supersede diamonds for boring rocks, cutting glass and other industrial purposes. It will even cut diamonds without difficulty, and it can be produced in pieces of any required size.

It is reported that the metric system has been legally introduced into Turkey, and that the Russian Minister of Commerce recommended its consideration at the recent Industrial Congress.

It appears from *La Vie Scientifique* that 'La société française de physique' has recently held in Paris an exhibition similar to the recent *Conversations* of the Royal Society and the exhibition of the New York Academy of Sciences. Röntgen photographs, the manufacture of acetylene, applications of aluminum and other recent advances in scientific apparatus were exhibited.

Natural Science states that a summer meeting of the Anatomical Society of Great Britain and Ireland will be held at Oxford on Saturday, July 4th. This Society, which was founded in 1887, meets, as a rule, four times a year, three of the meetings being held at the London medical schools in rotation, and the other at one of the provincial universities or schools.

MACMILLAN & Co. announce 'An Intermediate Course of Practical Physics,' by Prof. Arthur Schuster, F.R.S., and Dr. C. H. Lees.

THE death is announced of the Abbé Delaney, a missionary in China, who discovered and introduced into Europe a large number of undescribed species of plants.

M. GERMAIN SÉE, the eminent French pathologist, has died at Paris at the age of 77.

LIEUT. PEARY will embark from Cape Breton in July, in a steamship under the command of Captain John Bartlett, which will proceed to

Cape York, where Lieutenant Peary last year discovered a meteorite said to be the largest in the world. If the conditions are favorable he may go further north to his former headquarters on Inglefield Gulf. Prof. Ralph S. Tarr with a party from Cornell University will be taken by the steamship to some point in Greenland, where they will remain while the steamship goes further north.

DR. WASHBURN writes to the London *Times* from Constantinople that on Saturday evening, April 18th, at 7 o'clock, as the M. M. steamer Sindh was passing to the south of the island of Cyprus, a brilliant meteor was seen, which appeared to burst just over the island. It seemed to be in all respects an exact duplicate of the meteor which was seen at Madrid several months since. It started about 30° from the zenith, took a direction of about 80° from the horizon, and burst when about 20° from the horizon. For 15 minutes, three zigzag lines of silver light marked its course, and the fiery cloud when it burst did not disappear for half an hour. This appeared to be about 2° in diameter, was very brilliant for some minutes, and then slowly faded. The sight was so startling that those who saw the meteor did not notice the sound of the explosion, but several persons noticed the explosion who did not see the meteor.

THE Hydrographic Office has issued a chart of the Arctic regions prepared under the direction of Commander C. D. Sigsbee. It extends to about 4° south of the Arctic circle, showing the tracts of seventy-six expeditions, and indicating forty-eight explorations of coasts.

A SUMMER session of the New York State Library School, which will take up the elementary principles of library economy, will begin on July 7th and last five weeks.

SIR WILLIAM PRIESTLEY, a well-known physician and writer on medicine, has been elected a member of the British Parliament representing the universities of Edinburgh and St. Andrew.

THE Duke of York has been elected president of the Royal Agricultural Society of Great Britain. The Society has received a bequest of \$50,000 by the will of the late Mr. E. H.

Mills. At the country meeting to be held at Manchester prizes are offered by the Society for self-moving vehicles.

At a meeting of the Philosophical Society of Washington on May 23d the following biographical notices of deceased members were expected: Thomas Antisell, by H. W. Seaman; Stephen Vincent Benet, by Rogers Birnie; J. Mills Browne, by Robert Fletcher; Thomas Lincoln Casey, by B. R. Green; Robert Edward Earll, by G. Brown Goode; William Lee, by D. Webster Prentiss; Walter Lamb Nicholson, by Edward Goodfellow; Orlando Metcalfe Poe, by O. H. Tittman; Charles Valentine Riley, by L. O. Howard; William Bower Taylor, by W. J. Rhees.

THE attention of those who are interested in the history of human progress (it is a pity that we lack the German word *Culturgeschichte*), in its forward and backward currents, should be called to a book of absorbing interest, *Woman Under Monasticism*, by Lina Eckenstein (Macmillan). It gives a vivid picture of the convent life of women during the period between 500 and 1500 A. D., in Germany and England, with special biographies of those nuns and abbesses who exerted an important influence upon the life of their times; but its chief value is in showing that the present effort of women to obtain a greater share of social responsibility is a return to conditions which were the established state of things a thousand years ago. The convent afforded a career for those who felt themselves capable of wider activities than were involved in the care of the household, and a career of greater influence and power than has been open to women, of other than royal descent, under any other circumstances. The closing of the monasteries, by compelling all women to marry, acted injuriously upon human development in more ways than one, even though its effect may have been on the whole desirable. That there is an historical basis for the present movement toward greater independence on the part of women is a matter of much importance.

At a recent meeting of the Anthropological Institute of Great Britain, Professor E. B. Tyler commented upon Mr. Howarth's paper on 'The Asiatic Element of the Tribes of

Southern Mexico,' drawing attention to the difficulty of defining the meaning of the word 'prehistoric' in America. He remarked that the picture writings exhibited by Mr. Howarth were wonderful examples of the authentic Aztec, side by side with the imported Spanish element, the exact proportion of which was, however, exceedingly hard to distinguish. In the United States, he continued, many anthropologists, headed by Dr. Brinton, support a kind of 'Anthropological Monroe Doctrine,' according to which America admitted no extraneous contributions to her culture. The conflict of this theory with the older doctrine gives promise of a good fight in the future, should he still remain constant to the older theory. He found it very difficult, on the new Monroe doctrine, to account for such things as the astronomical calendar. He, nevertheless, favored dropping, for the present, such questions as Egyptian derivation, in favor of the investigation of nearer links in the chain.

It is stated in the daily papers that Profs. Cox and Calendar, of the McGill University have reported to the Canadian Royal Society that they have made experiments showing that the X-rays are deflected by magnetic influence. It is also said that Prof. Dorn and Dr. Brandes, of the University of Halle, have proved that the X-rays affect the retina, it having been demonstrated in the first instance in the case of a patient the lenses of whose eyes had been removed. Later it is said that they were themselves able to see the rays, looking at their source through an aluminum plate.

A COMPLETE edition of the works of Descartes will be published by the French Ministry of Public Instruction, under the auspices of the 'Revue de Métaphysique et de Morale' 5 rue de Mézières, Paris. Five volumes will be devoted to the correspondence, including letters addressed to Descartes as well as those written by him, and five volumes will be devoted to his published works. The publication will be begun this year and will be completed in 1900. A deduction of 40 per cent. in the price will be made to those who send subscriptions in advance to the above address.

WE learn from the *American Geologist* that the

question as to the desirability of retaining the museum of the London Geological Society has formed the subject of long deliberations by the Council of the Society. It was announced at the recent annual meeting that, in accordance with the report of a special committee, the trustees of the British Museum had been asked whether they would undertake to house and care for the collections, keeping type-specimens and specimens illustrative of papers read before the Society distinct, and defraying also the expense of transference. To these conditions the trustees have assented, and the matter will before long be submitted to the Fellows for their decision at a special general meeting.

MR. S. E. DUERDEN contributes to the May number of *Natural Science* an article on 'Museum work in Jamaica,' in the course of which he says that the museum in Jamaica is one of the components of the Institute of Jamaica, an organization existing for the advancement of Literature, Science and Art in the island; and embracing also a well-established public library and reading room and an embryonic art gallery. It is managed by a Board of Governors, and practically the whole support is derived from the Legislature. Members are elected with certain privileges, and members' meetings are held. A journal devoted to the special objects of the institute is published at intervals. Courses of public lectures on science and literature, on the lines of the University Extension courses in England, are arranged from time to time. In almost every department of biological enquiry Jamaica and the West Indies generally offer a very rich but only partially investigated field for research. A vigorous attempt was made a few years ago to form a marine laboratory upon a large scale, with the special object of affording facilities to foreign biologists in studying tropical life, but unfortunately the scheme fell through, largely because of its too ambitious nature. However, a biological laboratory with most modern appliances for carrying on scientific research, and a dark room for photography, have lately been fitted up in connection with the Museum.

THE Congress of Criminal Anthropology to be held at Geneva from the 24th to the 29th of August will meet in five divisions entitled (1)

criminal biology, (2) criminal sociology, (3) criminal psychology, (4) legal applications of criminal anthropology, (5) administrative applications of criminal anthropology. A large number of interesting papers have already been promised, including communications from Mr. Galton, M. Tarde, Prof. Kurella, M. Bertillon, Dr. Brockway and others.

ACCORDING to the authorized announcements of the University of the State of New York in 1888 only five states in the Union exacted an examination for license to practise medicine, and the laws of these States were crude and imperfect and for the most part inoperative. A licensing examination is now required in 22 States. In fact, if we count Texas, whose laws conflict, the roll includes 23. Of these examinations, 16 are before a single board; 4 before 2 boards, allopathic, homeopathic; 3 before 3 boards, allopathic, homeopathic and eclectic. In 11 of these States candidates for examination must be graduates of medical schools; in 3 of these 11 States they must have studied medicine for 4 years; in 2 States they must have attended at least three courses of medical lectures, though a diploma is not required. One of these two States, Minnesota, will require four courses of lectures, but not a diploma after January 1, 1899. In 6 States applicants must have a competent preliminary education, though the provision is indefinite except in the New York law. The laws in 13 States and 3 Territories demand either approval of medical diploma or examination by State or other duly qualified boards. This leaves only New Hampshire, in which not even registration is required, and 8 States and 3 Territories in which it is necessary merely to present the diploma or other certificate of qualification to unqualified local officers. Of the 12 medical schools in New York State, 4 adopted a 4-year graded course in 1894 and 5 in 1895 and 1896. For matriculants after January 1, 1898, four years study of at least nine months each, including four satisfactory courses of at least six months each in four different calendar years must be required for degrees by all medical schools in New York State. This minimum standard for the degrees of M. D. is equal to that prescribed in Austro-Hungary, France and Germany.