

E. M. Griffith, of the Bureau of Forestry, U. S. Department of Agriculture, who visited the Hawaiian Islands on his way to the Philippines last winter, returned a report to Governor Dole in which he said the mountain forests of Hawaii must be fenced, on the lower slopes to protect them from the tame cattle, on the upper slopes to keep out the wild ones. He also recommended the establishment of a forest force, consisting of a forest inspector, who should have charge of all government forest lands and direct the work of the forest rangers; and four forest rangers, one for the island of Oahu, one for Hawaii, one for Kauai, and one for Maui and Molokai.

SCIENTIFIC NOTES AND NEWS.

PROFESSOR RUDOLPH VIRCHOW died at 2 o'clock on the afternoon of September 5. A public funeral was given by the City of Berlin on September 9.

M. LEVASSEUR, professor of agriculture at the Collège de France, has been elected president of the French Association for the Advancement of Science. The Association will hold its meeting in 1903 at Angiers.

THE Iron and Steel Institute of Great Britain held its meeting at Düsseldorf last week. Among those who made addresses at the opening meeting was Professor Henry M. Howe, of Columbia University. Mr. Andrew Carnegie has been elected president of the Institute.

PROFESSOR S. W. STRATTON is at present in Berlin studying the Reichsanstalt with a view to the buildings to be erected at Washington for the newly established Bureau of Standards.

THE Accademia dei Lincei, at Rome, has elected the following members: Hieronymus Zeuthen, Hendrich Anton Lorentz, Robert Thalén, Julius Wiesner and Hugo de Vries.

SIR HENRY THOMPSON, well known for his numerous publications on medical topics and also for astronomical studies, has recently celebrated his eighty-second birthday.

SECRETARY HAY has appointed Dr. H. C. Wood and Dr. F. B. Power to represent the

United States at the International Convention for the Unification of the Formulas for Heroic Medicines, which is to be held at Brussels, beginning on September 15.

DR. NICHOLAS SENN, professor of surgery in the Rush Medical College, has returned to Chicago from a journey to the Orient.

DR. W. W. KEEN, professor of surgery in the Jefferson Medical College of Philadelphia, who has been making a tour round the world during the past fifteen months, is expected to arrive in New York on September 19. Dr. Keen will resume his teaching and practice.

DR. C. H. WIND, of Gröningen, has been appointed director of the Royal Dutch Meteorological Institute at De Bilt.

DR. HILTNER, of the Berlin Bureau of Health, has been called to the directorship of the newly established Agricultural Institute at Munich.

THE centenary of the birth of Hugh Miller was celebrated at Cromarty on August 22. The principal address was made by Sir Archibald Geikie. An address was also made by Dr. John M. Clarke.

THE death is announced of Dr. Paul Plosz, professor of physiological and pathological chemistry in the University of Budapest, aged fifty-seven, and Dr. Marc Micheli, the botanist, at Geneva, at the age of fifty-seven years.

KING EDWARD has granted a charter incorporating the new British Academy for the promotion of historical, philosophical and philological studies, with forty-nine original fellows.

It will be remembered that the plan of enlarging the scope of the Royal Society to include representatives of the humanities was seriously discussed.

THE New York Aquarium was during July and August visited by 512,625 persons.

THE Civil Service Commission will hold an examination on October 21 for the position of assistant engineer in the Hydrographic Division of the Geological Survey and to fill three vacancies in the position of topographic

draftsman in the Coast and Geodetic Survey—two at a salary of \$900 per annum each, and one at a salary of \$700 per annum.

At the meeting of the Corporation of the Marine Biological Laboratory held in Wood's Holl, August 12, 1902, it was voted to raise the fee to \$4.00 a year, and to send the *Biological Bulletin* to all members in good standing. The *Bulletin* will be published as heretofore, under the auspices of the Marine Biological Laboratory, and its scope will include zoology, general biology and physiology. It will contain original articles in these fields, and also occasional reviews, and reports of work and lectures at the Marine Biological Laboratory. Preliminary statements of important results will be made a special feature.

THE Marine Biological Station of the University of California at St. Pedro has had a successful session. The laboratory has been under the direction of Professor W. E. Ritter, Professor C. A. Kofoid and Dr. H. B. Torrey.

PROFESSOR C. D. PERRINE discovered a comet at the Lick Observatory on September 1. It is in the constellation Perseus and is moving slowly northwest. It is slightly elongated, 4' in diameter, with a tolerably well defined nucleus and a tail less than 30' long.

THE expedition under the leadership of Col. Willard Glazier, of New York, which left St. John's on July 10 on the steamer *Virginia Lake* to explore the unknown parts of Labrador, has returned.

THE Census Bureau has issued a statement showing the increasing age of the population from decade to decade. The median age of the total population in 1900 was 22.8 as compared with 21.9 in 1890. The median age of the white population in the last census year was 23.4 and the colored, including Negroes, Indians and Mongolians, was 19.7, while in 1890 that of the white population was 22.4 and the colored 18.3. The report shows that there was an increase in the median age of the white population in each decade from 1810 to 1890, amounting in the ninety years to 7.4 years. The statement says: Many complex influences have cooperated in producing as a resultant this steady change in the age composition of

the population. Three may be mentioned—the rapid progress of medical and sanitary science, which has tended to increase the average length of life; the decrease in the relative number of children born, which has made the earlier age periods less preponderant numerically in the total population, and the influx, especially since 1840, of great numbers of adult immigrants, increasing the number in the older age periods.

The Medical News gives an account of the Pathological Museum, established by Professor Virchow at Berlin, which contains 23,066 preparations. A similar institute does not exist in the world, and the well-known and doubtless as prominent Musée Depuytren in Paris, in comparison with Virchow's creation, is but a fragment. How completely throughout and in what minute detail the pathological museum has been planned can be seen by the fact that besides the apartments for the director, assistants and draftsman, microphotographic rooms have been built, workrooms provided for the mounting of preparations and their temporary conservation, and even a bathroom furnished for the laboratory attendants. Self-dependent as in certain respects this new pathological museum is, it yet stands in organic and local connection with the pathological institute, which, like the whole Hospital of the Charité, will be remodeled in compliance with modern demands, and will also in a short time be rebuilt in new and more splendid form. Besides the relation which exists between the pathological institute and the clinical divisions of the hospital, because the necropsies are performed there, various physical, clinical and bacteriological sections will be added separately in the new institute for scientific purposes.

THE *Journal of the American Medical Association* gives the following statistics in regard to students in the United States: One hundred and fifty-six medical colleges, with 6,776 instructors, enrolled 27,501 students and graduated 5,002 students in the school year 1901-2. In the year previous, 1900-1, 156 colleges, with 5,958 teachers, enrolled 26,417

students and graduated 5,444. Twenty years ago there were 89 medical schools with 14,934 students and 4,115 graduates. The increase in the number of schools and students is far in advance of the increase in the number of graduates. The graduates twenty years ago were 4,115; in 1900, 5,314; in 1901, 5,444, and in 1902, 5,000. The attendance in twenty years has therefore increased nearly 200 per cent. and the number of graduates has increased less than 25 per cent. The decrease in the number of graduates in the last year is assigned to the increased length of course of study and increased requirements by state boards. It is considered by many a temporary decrease and one that will be changed to an increase as soon as the temporary check is overcome. The decrease in graduates is classified thus: There were 4,879 graduates from the regular colleges in 1901; 387 from the homeopathic; 148 from the eclectic, and 30 from the physio-medical and nondescript; total, 5,444. In 1902, 4,498 graduated from regular schools; 336 from the homeopathic; 138 from the eclectic, and 27 from the others; a decrease in every class. The increase in students is classified thus: There were 23,846 students registered at the regular colleges during the year ending July 1, 1901; 1,683 at the homeopathic; 664 at the eclectic, and 224 at the physio-medical and nondescript; a total of 26,417. During the year ending July 1, 1902, 24,878 students registered at the regular colleges; 1,617 at the homeopathic; 765 at the eclectic, and 241 at the physio-medical and nondescript; total, 27,501. This is an increase among all but the homeopathic schools. In the year the regular schools increased in enrolment 1,032 and decreased in number of graduates 381. The homeopaths lost in enrolment 66 and in graduates 51; the eclectics gained in enrolment 99 and lost 10 in graduates; all other schools gained 17 in enrolment and lost 3 in graduates.

THE *Electrical World* gives details as to the award of the Galileo Ferraris award, to which we have already called attention. The commission for the award, which was instituted in 1898, composed of representatives of the executive committee of the Association of the

General Italian Exposition, in Turin, 1898, of the Chamber of Commerce and Arts, of the Royal Academy of Sciences and of the Royal Italian Industrial Museum of Turin, has decided to reopen an international competition for the conferring of this premium on the occasion of the inauguration, which will take place in the second half of September next, of the monument to be erected in Turin in honor of Galileo. The premium consists of 15,000 lire and interest from 1899 up to the date of the assignment, and will be conferred upon the author of any invention from which results a notable progress in the industrial applications of electricity. Competitors can present papers, projects and drawings, as well as machines, apparatus or constructions relating to their inventions. The jury nominated by the association above named will have most ample powers to execute practical experiments with the inventions presented. Competitors must present their requests and deliver their works, machines, apparatus or anything else connected with their inventions, not later than the 18th day of September, 1902, at the office of the secretary of the association, in the palace of the Chamber of Commerce and Arts of Turin, via Ospedale, No. 28.

THE topographic survey of the eastern part of the state of Washington, commenced by the U. S. Geological Survey, will be continued this season under the general direction of Mr. R. U. Goode. Two parties from the geological survey will be engaged in the work. One of them will be under Mr. L. C. Fletcher, with Messrs. J. G. Hefty and J. B. Bond as assistants. The work of the party will be an extension westward of that commenced last season in the vicinity of Republic, the area to be surveyed extending along the international boundary for about 30 miles and including the valley of the Okanogan River and the region adjacent to the Osoyoos Lake. The second party will be under Mr. G. T. Hawkins. The work assigned to this party is the extension of the existing triangulation in the vicinity of Spokane southward through Whitman, Garfield and Asotin counties. This triangulation will be followed as soon as may be prac-

licable by a detailed topographic survey, and the resulting maps will in turn form a basis for the investigation of the important economic problems in this region.

UNIVERSITY AND EDUCATIONAL NEWS.

THE *Carnegie* Trust for the universities of Scotland, in addition to payment of the fees of students, has now made appropriations for buildings and teaching. The sum of £40,000 a year for five years is to be distributed among the universities as follows: Edinburgh, £11,500; Glasgow, £11,000; Aberdeen, £9,000; and St. Andrews, £8,500. Under buildings and permanent equipment Glasgow receives £8,000 per annum for the period of five years; Aberdeen (which has recently greatly extended its buildings), £1,000 a year for apparatus; St. Andrews, £3,000 a year; and Edinburgh, £8,000 a year. The grants for teaching, which are partly only for present expenditure, and mainly to establish a fund which at the end of the five years' period will constitute the nucleus of a permanent endowment in each case, are as follows: Glasgow, £2,000 a year; Aberdeen, £7,000 a year; St. Andrews, £4,500 a year; Edinburgh, £2,500 a year. To each of the university libraries an annual sum of £1,000 is given.

THE value of the estate of the late Dr. Levi Cooper Lane, San Francisco, has been appraised at over \$300,000. His widow, who died on August 9, has left the bulk of the estate to Cooper Medical College.

THE chair of pathology at Johns Hopkins, held by Professor Welch, will hereafter be known as the 'Boxley Professorship of Pathology,' in memory of Dr. Henry Willis Boxley, an eminent surgeon of Baltimore, who died in 1876, leaving a bequest for the founding of a chair in pathology.

AT the University of Colorado, at Boulder, John B. Ekeley, M.A. (Colgate), Ph.D. (Freiburg), has been elected professor of chemistry to succeed Dr. Chas. S. Palmer, who has been called to the presidency of the Colorado State School of Mines.

PRESIDENT E. R. NICHOLS, of the Kansas State Agricultural College, has declined the

presidency of the Rhode Island College of Agriculture and Mechanic Arts.

DR. F. P. GRAVES has resigned the presidency of the University of Washington. Professor T. F. Kane, professor of Latin, has been elected acting-president.

SIR GEORGE STOKES, since 1849 Lucasian professor of mathematics at Cambridge, has been elected master of Pembroke College.

MR. JAMES BLACK BAILLIE, B.A. Camb., M.A. and D.Phil. Edin., lecturer on philosophy at University College, Dundee, has been appointed professor of moral philosophy in the University of Aberdeen, in succession to Professor Latta, who was recently called to Glasgow.

DR. BENJAMIN MOORE, lecturer in physiology in Charing Cross Medical School, has been elected to the Johnston chair of bio-chemistry in University College, Liverpool. Dr. Moore until recently held the chair of physiology in the Medical School of Yale University.

MR. J. GRAHAM KERR, of Christ's College, Cambridge, has been appointed professor of natural history in the University of Glasgow, in succession to Professor John Young, who has resigned.

DR. HERMAN MINKOWSKI, of the Polytechnic School at Zurich, has been called to a professorship of mathematics at Göttingen.

PROFESSOR SCHOTKY, of Marburg, has been called to a full professorship of mathematics at Berlin.

DR. ISHIRO MIYAKE has been appointed on the faculty of the new Waseda University (Japan), which has just opened this month under the presidency of Dr. Hatoyama. Dr. Miyake was formerly a student in Yale University, having taken his degree in experimental psychology with a thesis entitled 'Researches on Rhythmic Action.'

ERRATA: In the article by Mr. A. Lawrence Rotch on the International Aeronautical Congress, page 297, second column, nineteenth line, 'ten kilometers thick,' read 'fourteen kilometers high'; second line from bottom, 'or registration balloon, *ballon sonde*,' read 'registration balloon, or *ballon sonde*.'