

in 1894. The only university that shows a decrease in the attendance of matriculated students this year as against 1894 is Würzburg, and there the loss is very slight, from 1,442 to 1,424. The largest gains in actual number of students have been made by Berlin, München, Bonn, Leipzig, Münster and Göttingen, in the order named, while the largest relative (percentage) increases have been registered by Münster, Kiel, Göttingen, Bonn, Giessen, Jena and Marburg. It is interesting to note that there are three large cities in the first group, and not one in the second, so that we may say, speaking broadly, that the institutions located in the smaller cities have experienced a greater *relative* gain than those in the large cities, while, on the other hand, the universities of Berlin, München and Leipzig alone have to their credit 37 per cent. of the gain in actual number of matriculated students made at all of the institutions together since 1894.

The following figures taken from the second volume of the report of the commissioner of education for the year ended

NUMBER OF STUDENTS IN ATTENDANCE AT THE
PROFESSIONAL SCHOOLS OF THEOLOGY, LAW
AND MEDICINE IN THE UNITED STATES

	1908- 1909	1907- 1908	1899- 1900	1889- 1890	1879- 1880	1869- 1870
Theology	10,218	9,583	8,009	7,013	5,242	3,254
Law	18,553	18,069	12,516	4,518	3,134	1,653
Medicine (incl. homeopathic)	22,158	22,787	25,213	15,484	11,929	6,194

June 30, 1909, may be of interest. They illustrate the growth of the professional schools of theology, law and medicine in our own country, and it will be seen that, contrary to the conditions in Germany, theology does not show a loss, whereas medicine, on the other hand, exhibits an increase when compared with 1890, but a decrease since 1900; law has made constant and rapid progress. Unfortunately no figures

for the school of philosophy are available for the United States. In comparing the American with the German figures, it should also be borne in mind that the general standards for admission to professional courses of study in Germany are much higher than they are in our own country.

RUDOLF TOMBO, JR.

COLUMBIA UNIVERSITY

SCIENTIFIC NOTES AND NEWS

DR. H. T. RICKETTS, of the University of Chicago, who has been in Mexico conducting research into the etiology of typhus fever, has died from that disease.

DR. JOHN TROWBRIDGE, who retires this year from the active duties of his chair at Harvard University, has been appointed honorary director of the Jefferson Physical Laboratory.

DR. ABRAHAM JACOBI, emeritus professor of the diseases of children in the College of Physicians and Surgeons of Columbia University, celebrates his eightieth birthday on May 6. On April 23, exercises were held at the Mount Sinai Hospital in his honor. A Bronze bust was presented to the hospital by the medical and surgical staff, and a new library named in his honor was given by the board of directors. At a dinner given the same evening by the trustees of the German Hospital announcement was made that the new children's ward which Mrs. Anna Woerishoffer has given to the hospital will be known as "The Dr. Abraham Jacobi Division for Children."

SIR ARCHIBALD GEIKIE has been elected a foreign member of the Royal Danish Society of Sciences, Copenhagen.

SIR THOMAS BARLOW has been elected president of the Royal College of Physicians, London, in succession to Sir Douglas Powell.

PROFESSOR R. B. OWENS, recently professor of electrical engineering in McGill University, has been appointed secretary of the Franklin Institute, Philadelphia.

MR. H. C. GRAHAM, B.A., Toronto, '08, and fellow in chemistry, has been appointed chemist assistant in the Provincial Laboratory at Edmonton, Alberta.

MR. J. E. SEARS has been appointed to take charge of the work of the metrology division of the British National Physical Laboratory in the place of Mr. H. Homan Jeffcott, who has been nominated recently to the professorship of engineering in the Royal College of Science, Dublin.

MRS. ZELIA NUTTALL has handed in her resignation as member of the Organizing Committee of the Seventeenth International Congress of Americanists, to be held in Mexico City next September, and has also renounced the title of honorary professor of Mexican Archeology at the National Museum, as a protest against the treatment she received from the ministry of public instruction and the inspector of monuments in connection with her recent discovery and proposed exploration of the ruin of an ancient temple on the island of Sacrificios, off Vera Cruz.

THE American Philosophical Society in response to invitations received has appointed the following delegates to represent it at the International Congresses to be held during the current year. At the International Botanical Congress to be held at Brussels, May 14-21, 1910, Professor George Lincoln Goodale, of Harvard University. At the International Scientific Congress to be held at Buenos Aires, July 10-25, 1910, Dr. Louis A. Bauer, director of the department of Terrestrial Magnetism, Carnegie Institution, Washington. At the International Geological Congress to be held in Stockholm, August 18-25, 1910, Professor Harry C. Jones, of Johns Hopkins University. At the Congress of Americanists to be held in the City of Mexico, in September, 1910, Professor Frederick W. Putnam, of Harvard University.

DIRECTOR L. H. BAILEY, of the College of Agriculture of Cornell University, is at present in Great Britain.

THE American Electrochemical Society is

holding this week its seventeenth general meeting at Pittsburgh. The address of the president, Dr. Leo H. Baekeland, is on "Science and Industry."

At the annual meeting of the Iron and Steel Institute, May 4 and 5, Sir Hugh Bell resigned the chair to the Duke of Devonshire. The Bessemer gold medal for 1910 was presented to Mr. E. H. Saniter, and the president delivered his inaugural address.

DR. L. A. BAUER gave the following lectures on terrestrial magnetism and atmospheric electricity at the Johns Hopkins University from April 25 to 29:

"The Chief Facts of the Earth's Magnetic Changes (Regular Variations and Magnetic Storms)."

"The Ionic Theory of the Earth's Magnetic Disturbances."

"The Earth's Magnetic Permeability and General Theory of Magnetic Variations."

"Relation between Terrestrial Magnetism, Solar Activity, Atmospheric Electricity, Radioactivity, Meteorology and Geology."

Nature quoting from the *Daily Chronicle* states that a monument in memory of Professor Tyndall will be erected on the summit of the Bel Alp, 6,735 feet high, a little above the place where for many years Tyndall resided during the summer months. Mrs. Tyndall has engaged M. F. Correvon, of Geneva, to design the monument, which is a large conical block of granite. It will be erected by the Swiss Alpine Club in July on Bel Alp, overlooking the Aletsch Glacier.

WE learn from the *Journal* of the American Medical Association that at Jefferson, Ga., on April 21, a monument to Dr. Crawford W. Long was unveiled in the presence of members of the Medical Association of Georgia, which was in session at Athens. The monument is in commemoration of the fact that Dr. Long was one of the first to use ether as a general anesthetic. Dr. Woods Hutchinson, of New York, was the principal speaker.

THE death is announced of Dr. George Carpenter, editor of the British journal of chil-

dren's diseases and a well-known authority on this subject.

THE Congress of American Physicians and Surgeons is meeting in Washington this week. Meeting in affiliation with it are the American Association of Genito-Urinary Surgeons, American Association of Pathologists and Bacteriologists, American Climatological Association, American Dermatological Association, American Gynecological Society, American Laryngological Association, American Medico-Psychological Association, American Neurological Association, American Ophthalmological Society, American Orthopedic Association, American Otological Society, American Pediatric Society, Association of American Physicians, and American Surgical Association.

THE British *Medical Journal* states that Professor Lannelongue, of Paris, has written to the Société de Chirurgie announcing his intention of founding a prize consisting of a gold medal carrying with it a sum of £250, to be awarded to the candidate who has contributed most to the progress of surgery during the ten years before the date of award. The prize is open to surgeons of all nations, and will be awarded every five years during the annual meeting of the Paris Société de Chirurgie. The judges will be a committee of surgeons of various nationalities, grouped as follows: The United Kingdom; Germany; Austria-Hungary and the Balkan States; Belgium, Holland and Scandinavia; Spain, Portugal and Mexico; United States and Canada; South America; Japan and China.

THE Naples Table Association for Promoting Laboratory Research by Women announces the offer of a fifth prize of one thousand dollars for the best thesis written by a woman, on a scientific subject, embodying new observations and new conclusions based on an independent laboratory research in biological, chemical or physical science. The theses offered in competition are to be presented to the executive committee of the association and must be in the hands of Mrs. Ellen H. Richards, Massachusetts Institute of Technology, Boston, Mass., before Feb-

ruary 25, 1911. The papers will be judged by a board of examiners, or by such specialists as they may choose. The Board of Examiners consists of Dr. William H. Howell, Dr. Theodore W. Richards and Dr. Albert A. Michelson. The first prize was awarded to Florence Sabin, B.S., Smith, '93, M.D., Johns Hopkins University, '00, for a thesis on the "Origin of the Lymphatic System." The second prize was awarded to Nettie M. Stevens, B.A., M.A., Leland Stanford University, '99, '00, Ph.D., Bryn Mawr, '03, for a thesis on a "Study of the Germ Cells of *Aphis rosea* and of *Aphis ænotheræ*." The third prize offered was not awarded. The fourth prize was awarded to Florence Buchanan, D.Sc., Fellow of University College, London, for a thesis on the "Time Taken in the Transmission of Reflex Impulses in the Spinal Cord of the Frog."

A LETTER has been received at the Harvard College Observatory from Professor Robert W. Willson, of Harvard University, stating that Halley's comet was photographed by Dr. J. C. Duncan at the Students' Astronomical Laboratory of Harvard University, April 21st 3^h 51^m A.M. eastern standard time. "Exposure 15m., considerably fogged by dawn. Comet brighter, photographically, than B.D. +6^h.5227, mag. 4.4. Tail faintly seen to a distance of one degree; leaves read between two short, well-defined streamers whose position angles are 66 and 142 degrees. Pos. Ang. of axis of main tail, 100 degrees." A photometric measurement of the light of the nucleus of Halley's comet was made by Professor Wendell at the Harvard College Observatory on April 27. The comparison star was B.D. +7^h.5101, phot. magn. 6.74. The measured brightness of the nucleus was 6.01 magn. The comet was visible to the naked eye. Its total brightness was estimated as 3.0 magn., or brighter, and the tail as over 3° long. The comet was observed visually on April 27 by Mr. Leon Campbell, who saw it easily with the naked eye and estimated its total brightness, by the Argelander method, as 2.5 magn. He estimated the tail as 4° in length. A photograph of the comet was ob-

tained at the observatory on the same morning. On the photographic plate, the comet shows a rather sharp nucleus with a short tail.

AN excursion for geological and geographical field work was recently made to the district between the Hudson River and the Catskill Mountains, with headquarters at Catskill, N. Y., by a party of thirty teachers and students from Harvard, the Massachusetts Institute of Technology, Yale, Columbia, St. Lawrence and Rutgers. The district visited is of particular value from its succession of fossiliferous formations, its folded and faulted structure, and its characteristic Appalachian topography, both structure and form being developed on a small scale that is especially suitable for purposes of instruction. Among the instructors present were Professors Davis and Johnson and Mr. Lahee, of Harvard; Professor Shimer, of the Massachusetts Institute of Technology; Professor Chadwick, of St. Lawrence; Mr. Hyde, of Columbia, and Professor Lewis, of Rutgers. Detachments of the party, first led by Professor Chadwick and later led by Professor Johnson, ascended the strong east-facing escarpment of the Catskill mountains, with special attention to the features of stream capture as determined by the retrogressive erosion of the east-flowing Kaaterskill Creek in its deeply incised clove, under the broad high-standing valley of the west-flowing Schoharie Creek.

THE commission on phytogeographic nomenclature appointed by the second International Botanic Congress, held in Vienna in 1905, and of which Professor John W. Harshberger, of the University of Pennsylvania, is the American member, has printed its report in a pamphlet of forty pages. This report is the joint work of Briquet, Geneva; Adamovic, Vienna; Beck von Mannagetta, Prague; Drude, Dresden; A. Engler, Berlin; Flahault, Montpellier; Harshberger, Philadelphia; C. Schröter, Zurich; W. G. Smith, Edinburgh; Warburg, Berlin; Eug. Warming, Copenhagen; and it will be presented with recommendations to the third International Botanic Congress, to be held in Brussels, from May 14 to 22, 1910.

THE American Phytopathological Society has passed resolutions as follows:

Resolved, That the American Phytopathological Society views with alarm the recent introduction into America of two dangerous European plant diseases: the potato wart, caused by *Chrysophlytis endobiotica* Schilb., and the blister rust of white pine, caused by *Peridermium strobi* Klebahn. The former has been discovered in New Foundland. The latter has been widely distributed in nine of the United States and in the Province of Ontario, but is now believed to have been eradicated.

Resolved, That the society deplores the fact that in the absence of any national regulation in either the United States or Canada both governments are powerless to prevent the continued introduction of these and other dangerous diseases, or their transference from one country to the other.

Resolved, That on account of the enormous financial interests involved in potato culture and in white pine reforestation, this society regards the situation as very alarming, and one which warrants radical and immediate action. Even if these diseases do no more harm in America than they have in Europe, the situation is serious; but every law of biology and all experiences with plant diseases and pests indicates that, in a new climate, with new varietal and specific hosts and with an entire continent in which to spread, both diseases will reach a degree of virulence unknown in Europe.

Therefore, *Resolved*, That this society pledges its support to all legislation in both the United States and Canada looking toward the inspection, quarantine, or prohibition from entry, as may be necessary, of all plant material liable to introduce these or other dangerous diseases or pests.

SOME facts are being brought out by investigations of the effect of high voltages on insulating material by Mr. H. S. Osborne who is carrying out work for the degree of doctor of engineering at the Massachusetts Institute of Technology. At a recent meeting of the Boston Section of the American Institute of Electrical Engineers, which was held at the electrical engineering laboratories of the Institute of Technology, Mr. Osborne lectured on the results of his experimental research. The lectures of Professor Harold Pender for graduate students will next year extend the

discussion contained in his advanced lectures of this year on the high voltage alternating transmission and utilization of power. Professor Jackson's lectures for graduate students on the organization and administration of public service companies have this year dealt more particularly with questions of value of plant, the theory of so-called intangible values, the relation of revenues to value of the plant, depreciation, and the like; and next year the lectures will be directed more to the theory underlying methods of charging for service by public service companies, with particular reference to charges for electric light and power, but with collateral consideration of railroad and tramway charges and charges for gas and the service of other public utilities. Professor Wickenden will give a course of lectures on illumination, photometry and illuminating engineering which will become a part of the optional curriculum for undergraduate and graduate students.

MR. L. L. HUTCHISON, assistant director of the Oklahoma Geological Survey, has sent to press a special state report on the asphalt, oil and gas deposits of Oklahoma. In part one is a general map which shows that portion of the state in which asphalt occurs and the region where it is likely to be found. It also contains a geological map of the asphalt bearing district, and one showing the exact location of nearly one hundred known deposits. Part two is devoted to oil and gas. After reviewing the history of the industry and discussing the various theories of origin and accumulation of petroleum and natural gas, Mr. Hutchison discusses the geology of the Oklahoma petroleum and natural gas fields and closes the work with a chapter devoted to the latest Oklahoma statistics and a review of past and present conditions in the field. This section of the report is illustrated by a general map showing the present developed areas, probable territory yet undeveloped, and those parts of the state where it seems possible that oil and gas may be found and by a geological map of the oil fields and detailed maps, on a scale of one inch to the mile, which give the location of every well drilled in the various important fields prior to 1910.

THE Connecticut Agricultural College and the Willimantic State Normal School will hold their summer schools in the buildings of the State Agricultural College at Storrs, Conn., July 5-July 29, 1910. The Agricultural College offers courses in bird and insect study, botany, dairy industry, animal husbandry, school gardening, fruit culture, floriculture, landscape gardening, soils, farm crops, practical cooking, a special four-weeks' course in practical poultry husbandry, and a course in elementary agriculture with a model country school showing how agriculture may actually be taught in the schools. The Normal School offers courses for teachers in arithmetic, civics, geography, history, language, methods in rural schools, penmanship, psychology and reading.

PROFESSOR J. W. H. TRAIL, F.R.S., recently offered to the council of the Linnean Society a sum of money for the purpose of encouraging the study of protoplasm by means of an award to be made periodically, and, as we learn from *Nature*, a special medal has been struck in bronze for presentation with the award, bearing on the obverse a portrait of Linnæus and on the reverse the words "Trail Award" and the name of the recipient in a wreath. It is proposed to make an award about once in every five years for original work bearing directly or indirectly upon the "physical basis of life," and, in accordance with the wishes of the donor, a wide interpretation will be given to the scope of the investigations. The first recipient of the award will be Professor E. A. Minchin, professor of protozoology in the University of London, whose researches on sponges and protozoa have done so much to advance our knowledge of protoplasmic structures, and who is also the translator of Professor Bütschli's well-known work on protoplasm.

UNIVERSITY AND EDUCATIONAL NEWS

MORE than \$2,000,000 has been contributed to Washington University, St. Louis, for the medical department. The donors are Messrs. William K. Bixby, Adolphus Busch, Edward Mallinkrodt and Robert S. Brookings. Added to this are the resources of Barnes