contains the germ of those later contributions to science which have placed him on so conspicuous an eminence among the geologists of the day. It sketches the general principles of mountain-architecture, especially revealed by a study of the Alpine chain. But he did not confine his view to the particular area with which he was himself personally familiar. Already his eye looked out on the wider effects of the unequal contraction of the terrestrial crust, and swept across the European continent eastward into Asia, and westward across the Atlantic into America. . . . To thoughtful students of the science this treatise, in his firm hold of detail combined with singularly vivid powers of generalization, was full of suggestiveness. But the interest and importance of its subject did not obtain general recognition until it was followed ten years afterwards (1885) by the first volume of the great "Antlitz der Erde"—the work which has chiefly given Suess his place among his contemporaries, and by which his name will be handed down to future time. In its striking arrangement of subjects, in its masterly grouping of details which, notwithstanding their almost bewildering multiplicity, are all linked with each other in leading to broad and impressive conclusions, and in the measured cadence of its finer passages, the "Antlitz" may be regarded as a noble philosophical poem in which the story of the continents and the oceans is told by a seer gifted with rare powers of insight into the past.

The writer had the great pleasure of meeting Suess during the Ninth International Geological Congress held at Vienna in August, 1903. Tall and powerful, decisive and yet kind, his great head covered by the familiar soft felt hat, the man left an indelible impress upon my memory during the hour in which we talked of paleogeography, seas and barriers. To me the personal interview was memorable, but the great mental power and vivid imagination of the master mind naturally showed to better advantage at the farewell banquet given by the congress at the Hotel Continental on the evening of August 27. Tietze, presiding as president of the congress, gave the official farewell in French. Following him, and speaking in his own tongue, came Geikie, telling of his first visit to Vienna forty years since, and saying that of those he met at that time nearly all were gone excepting Suess, then a young man of great prominence, since known to all geologists through his masterly work "Das Antlitz der Erde." This reference to the time when Geikie and Suess—both of whom later became storm-centers in geology—were young, visibly affected the latter. Toward the end of the speaking he arose and with bowed head and in a low voice which increased to greater volume as he went on, he made in German a most eloquent appeal to geologists to rise to ever greater and better work. Unfortunately no one was at hand to take down what he said, and so after the dinner I asked him if he would be so kind as to put his speech in writing. This he did a few days later and a translation of it appeared in the *American Geologist* for January, 1904. In part this is as follows:

> Returning to his earth the geologist perceives that the sum total of life's phenomena not only forms a single phenomenon, but that it is also limited by space and time. It occurs to him now that the stone which his hammer strikes is but the nearest lying piece of the planet, that the history of this stone is a fragment of the history of the planet, and that the history of the planet itself is only a very small part of the history of the great, wonderful, ever-changing Kosmos.
>
> His heart then thrills; he feels called as a colaborer on the most sublime problems in which feeble mortal beings can take part. Then, too, he sees that the fundamental lines of structure coursing over the earth's surface have nothing to do with the political lines separating the nations. The vastness of the problem itself makes the concord of civilized nations natural, and they remain separated only through their emulation, all filled with the idea that mankind in general will most highly esteem that nation which is in the position to offer the most and the best of noble example, of new truth and of ideal worth.

CHARLES SCHUCHERT
YALE UNIVERSITY

SCIENTIFIC NOTES AND NEWS

SURGEON GENERAL W. C. GORGAS has received the degree of doctor of laws from Yale University and from Princeton University.

THE degree of LL.D. was bestowed by the University of California on commencement day on Eugene Woldemar Hilgard, from 1874

to 1906 professor of agriculture and dean of the College of Agriculture; upon George Holmes Howison, Mills professor of intellectual and moral polity in the University of California from 1884 to 1909; and on William Mulholland, the engineer.

At its recent commencement Wesleyan University conferred the degree of doctor of science on Dr. Walter P. Bradley, who has this year retired from the professorship of chemistry which he had held since 1893.

Dean Frank D. Adams, of McGill University, school of applied science, received the honorary degree Sc.D. at the Tufts College commencement. Incidentally he spoke at the annual dinner of the Association of Harvard Engineers and Dr. and Mrs. Adams were the guests of the geologists of Greater Boston at a dinner at the University Club.

On the occasion of the opening of the new physiological laboratory at the University of Cambridge on June 9, the degree of doctor of science was conferred on Sir William Osler, Sir David Ferrier, Sir Edward Schäfer and Professor E. H. Starling.

The first award of the Chandler gold medal was made to Dr. L. H. Baekeland when the Charles F. Chandler lectureship at Columbia University was inaugurated by an address given by him.

The Royal Society of Arts will confer the Albert medal for the current year on Chevalier Guglielmo Marconi, "for his services in the development and practical application of wireless telegraphy."

The Geological Society of London has elected to foreign membership Dr. F. J. Becke, professor of mineralogy at Vienna; Dr. T. C. Chamberlin, professor of geology in the University of Chicago; Dr. F. J. Loewinson-Lessing, professor of mineralogy and geology at St. Petersburg; Dr. A. P. Pawlow, professor of geology and paleontology at Moscow; Dr. W. B. Scott, professor of geology in Princeton University; Dr. P. Choffat, Geological Survey of Portugal, and Dr. Charles R. Van Hise, president of the University of Wisconsin.

Director William Wallace Campbell, of Lick Observatory, has gone to Russia on the Crocker Expedition to observe a total eclipse of the sun. For this purpose Regent William H. Crocker gave $5,800 to the University of California.

Dr. Simon Flexner and Dr. Peyton Rouse, of the Rockefeller Institute for Medical Research, have gone to Spartanburg, S. C., to study the situation in regard to pellagra.

Mr. J. S. Diller, geologist of the United States Geological Survey, has gone to Mount Lassen to prepare a report on the eruptions of the peak.

On June 23, Dr. Alexander G. Ruthven and Mr. Frederick M. Gaige, of the museum of zoology of the University of Michigan, sailed for British Guiana, where they will carry on zoological field studies. The principal field work will be the study of the local distribution and habits of the amphibians, reptiles and ants, and the gathering of extensive collections of amphibians, reptiles, ants, molluscs and crustaceans. An attempt will also be made to secure specimens in a few groups other than those mentioned, particularly in those needed to fill out the synoptic collections in the museum.

A party from the Peabody Museum of Yale University, under the leadership of Professor R. S. Lull, is to explore the Miocene along the Niobrara River, Nebraska, this summer, in the hope of securing additional fossil vertebrate material to supplement the great Marsh collection at Yale.

Dr. Robert K. Nabours, professor of zoology in the Kansas Agricultural College and zoologist of the Kansas State Experiment Station, sailed on May 19 for Rotterdam. He will visit for the college the agricultural experiment stations of Russia, Turkestan and Central Asia, making special study of the work in animal genetics and securing specimens for his experiments. On the return trip he will visit experiment stations in Germany and other European countries.

Dr. Charles H. Ellwood, professor of sociology in the University of Missouri, has been

granted a sabbatical year's leave of absence, and will spend the larger part of his time in England studying social conditions. Dr. L. L. Bernard, professor of sociology in the University of Florida, will have charge of the work in sociology in the University of Missouri during Professor Ellwood's absence.

PROFESSOR L. E. DICKSON, of the University of Chicago, will be visiting professor of mathematics in the University of California from August to December, 1914.

DR. C. H. T. TOWNSEND, director of the entomological station at Lima, Peru, should after July 1 be addressed at the U. S. National Museum.

ON June 4 a number of plant pathologists of the Pacific Coast, meeting at Davis, Cal., formed a Western Branch of the American Phytopathological Society. The following officers were elected: *President,* Ralph E. Smith, Berkeley, Cal.; *Vice-president,* H. S. Jackson, Corvallis, Ore.; *Secretary,* W. T. Horne, Berkeley, Cal.

AT the annual meeting of the Medical Research Club of the University of Illinois, Dr. Wm. H. Welker was elected president and Dr. J. J. Moore, secretary, for the next academic year.

THE annual address before the graduating class of the School of Medicine of the University of Alabama, at Mobile, was delivered by Surgeon General William C. Gorgas.

DR. JOHN F. ANDERSON, director of the Hygienic Laboratory, U. S. Public Health Service, delivered the annual address, on June 9, before the Alumni Association of the College of Medicine, Syracuse University. The subject of his address, which was illustrated with lantern slides, was "The United States Public Health Service: its Organization, its Work and its Accomplishments."

A MONUMENT to Captain Scott and the companions who perished with him will be unveiled during the summer at Finse, Norway. The memorial will be nearly 20 feet high, and will bear the names of the explorers, with the inscription, in Norwegian, "The South Pole, January, 1913. Erected by Norwegians." The funds for the monument have been raised by a newspaper, and donations have been contributed by the Norwegian government, the Geographical Society, and a number of prominent men from all parts of the country.

THE seventh centenary of the birth of Roger Bacon was commemorated at Oxford on June 10 by the unveiling of a statue in the University Museum and by the delivery of a series of addresses. The statue, which is the work of Mr. Herbert Pinker, was unveiled by Sir Archibald Geikie, and was accepted on behalf of the university by the chancellor, Lord Curzon, of Kedleston. It presents Bacon in the habit of a Franciscan friar, holding in his hands an astrolabe with a desk in front of him. It is a full length figure in white marble.

DR. RUPERT NORTON, assistant superintendent of the Johns Hopkins Hospital, died on June 19, of typhoid fever.

DR. JOSEPH REYNOLDS GREEN, F.R.S., known for his important researches in plant physiology, fellow and lecturer of Downing College, Cambridge, and formerly professor to the Pharmaceutical Society of Great Britain, died on June 3.

THE U. S. Civil Service Commission announces an examination for metallurgical engineer, for work in iron and steel, eligibles to fill a vacancy in this position in the Bureau of Mines, Department of the Interior, for service at Pittsburgh, Pa., at a salary ranging from $3,000 to $4,500 a year.

THE medical school of the University of Minnesota has adopted the principle of teaching fellowships in the clinical departments, with the end in view of providing well-trained full-time assistants and research workers and at the same time giving a basis for graduate instruction in the various specialties. It is arranged that the fellowships be in three grades; viz., first year, $500; second year, $750; third year, $1,000. To be eligible to a first year fellowship a candidate, as a general rule, must have received his M.D. degree from an acceptable school and have served one year as interne in a good hospital. The fellows ap-

pointed under this system will give their entire time to study, research and such assisting in clinics as they may be prepared for. A course of study will be laid out for each fellow, adapted to prepare him for the specialty chosen by him. This course will include work in the laboratory branches, dispensary service, hospital service and investigation. It is probable that the course (of two or three years?) will lead to a degree properly recognizing the specialty in which the candidate has worked. Arrangements may be made whereby these fellows can spend one year at the Mayo Clinic and count the same toward the advanced degree. In order to inaugurate the system the board of regents of the university has authorized the following teaching fellowships for the next school year: one each in medicine, in surgery, in obstetrics and gynecology and in eye, ear, nose and throat, each of $500. There is also provision for one $500 fellowship and one $1,000 fellowship in mental and nervous diseases, or in lieu of these a $1,500 instructorship.

The Geological Survey has completed its preparations for the annual campaign of investigating the mineral resources of Alaska, the field plans for the year having been approved by Secretary Lane. Eleven parties will be put in the field this year, and as in the past special heed will be given to the investigation of the resources of those districts which are tributary to the several routes that have been advocated for the proposed government railways. A party under the leadership of J. W. Bagley and Theodore Chapin will undertake the exploration of the region tributary to Talkeetna River and will connect with the surveys of the Broad Pass region made last year. An exploration of the region lying between Lake Clark on the east and the Iditarod district on the west will be undertaken by R. H. Sargent and Philip S. Smith. A. G. Maddren will investigate the goldplacer districts tributary to the lower Kuskokwim. He will ascend Iditarod River by canoe, portage across the divide to reach the Kuskokwim, and visit the Anniak, Tuluksak and Goodnews Bay placer districts. Stephen R. Capps and C. E. Giffin will carry geologic and topographic surveys across Skolai Pass into the White River basin and thence to the international boundary. A detailed base map will be made of part of the Juneau district, now the most important gold lode camp in Alaska and promising to become one of the most important on the continent. D. C. Witherspoon will undertake the making of the map, which will be on a scale of three inches to the mile. A survey of the Kotsina copper-bearing area was undertaken in 1912. It is planned that F. H. Moffit and J. B. Mertie now complete this work. B. L. Johnson, with one assistant, will undertake the detailed geologic survey of the Port Valdez gold and copper district. To coordinate and correlate the various geologic surveys in Alaska it is necessary to continue the studies of the general geology and mineral resources. Three geologists will be engaged in this work during 1914. George C. Martin, assisted by R. M. Overbeck, will continue his studies of the Mesozoic stratigraphy. He will visit localities in southeastern Alaska, in the Chitina Valley, and along the Yukon. H. M. Eakin will undertake supplementary investigations of the tin deposits of Alaska. Alfred H. Brooks, the geologist in charge of the Alaska surveys and investigations, expects to leave for Alaska as soon as office work permits. He will study especially the problems of Quaternary geology, including the genesis and occurrence of placer deposits. He will visit the Iditarod and Fairbanks districts and, time permitting, the Nome district. Mr. Brooks will also join the Moffit party in the Kotsina district and the Johnson party in the Valdez district for brief periods of time.

Dr. W. P. Herringham, vice-chancellor of the University of London, and Sir Alfred Pearce Gould, chairman of the Brown Institution Committee, write to the London *Times* with reference to the movement for further university research into the causation of swine fever and other animal diseases; that the work of the Brown Animal Sanatory Institution belonging to the University of London has not

been generally recognized. They say that: "The Brown Institution was founded under the will of Mr. Thomas Brown of Dublin, who died in December, 1852, and left about £20,000 to the University of London for the purpose of 'founding . . . an institution for investigating, and, . . . endeavoring to cure maladies, distempers and injuries, any quadrupeds or birds useful to man may be found subject to.' . . . The institution, at 149 Wandsworth-road, was opened in 1871. Many of its researches have been carried out at the instance and on behalf of government departments, and the diseases investigated have been numerous and diverse in character, including anthrax, actinomycosis, hydrophobia (for the Hydrophobia Commission), vaccinia (for the Local Government Board), tuberculosis, swine fever (for the Board of Agriculture), and sleeping sickness. We may refer particularly to the research on Johne's disease of cattle by Mr. F. W. Twort, the present superintendent of the institution, and Mr. G. L. Y. Ingram, who succeeded in growing outside the animal body the causative bacillus of the disease. The work had to be curtailed owing to the fact that the institution was unable to provide the funds necessary for the keep of infected animals for experimental purposes. We are thoroughly in agreement with the Berks and Oxon Chamber of Agriculture that such investigatons are best carried out in a place like a university. We beg further to point out that in the Brown Institution the University of London has the nucleus of exactly such a research department as is required, and that nothing but adequate funds are needed for its further development."

UNIVERSITY AND EDUCATIONAL NEWS

AT the celebration of the centenary of the foundation of the Yale University Medical School, large gifts were announced in addition to the $500,000 from the General Education Board. These included a provisional gift of $500,000 for the Anthony N. Brady foundation and $600,000 from donors not officially named.

BY the will of James Campbell, the St. Louis University Medical School will receive his entire estate after the death of his heirs, who have a life interest in it. The present value of his estate is estimated to be from $15,000,000 to $40,000,000.

BY the will of Thomas W. Holmes, of Troy, Rensselaer Polytechnic Institute is bequeathed the sum of $50,000.

BY the will of the late Dr. Joseph D. Bryant, professor of surgery in the University and Bellevue Hospital Medical College, a trust fund of $1,000 is established for the benefit of New York University. The directions regarding it left by Dr. Bryant were as follows: "The income of this fund shall be devoted to instilling in the minds of the senior class the principles of ethics of the American Medical Association." Upon the death or remarriage of his widow, one seventh of Dr. Bryant's residuary estate is to be given in trust to New York University, and one seventh in trust to the New York Academy of Medicine. One contingent bequest of $10,000 is to be devoted to opposing the efforts of anti-vivisectionists in New York State.

MISS SUSAN MINNS has given $50,000 to the department of botany of Wellesley College, in memory of Susan M. Hallowell, the former head of the department.

SIR GEORGE KENDRICK has given $90,000 to the University of Birmingham to endow the chair of physics in memory of the late Professor John Henry Poynting.

THE trustees of Columbia University have appointed Dr. Warfield T. Longcope, to be Bard professor of the practise of medicine to succeed Dr. Theodore C. Janeway, who goes to the Johns Hopkins University. Professor Longcope is also nominated medical director of the Presbyterian Hospital. The department of therapeutics has been merged with that of clinical medicine and Dean Samuel W. Lambert, formerly professor of therapeutics, has been appointed professor of clinical medicine. Dr. Charles C. Lieb has been appointed assistant professor of a new department of