Admirality, the Royal and Royal Geographical Societies and other public bodies. On the following day the Royal Geographical Society will give a dinner to the officers and scientific staff. According to present arrangements, officers and men will then be allowed to rest in peace, so far as public functions of an official character are concerned, until the beginning of November, when it is hoped that Commander Scott will open the new session of the Royal Geographical Society with a summary account of the whole expedition. This will be a special meeting, and possibly will be held in the Albert-hall.

THE CROCKER ECLIPSE EXPEDITION OF THE LICK OBSERVATORY.

Mr. William H. Crocker has offered to meet the expenses of observations on the total solar eclipse of August 30, 1905. Three expeditions will be sent out from the Lick Observatory to Labrador, Spain and Egypt. The provisional program for the three stations is as follows:

Labrador: A photographic search for intramercurial planets in a region of the sky 8½° wide, extending in the direction of the solar equator from 4° below the sun to 15° above it. The photography of the corona by means of a camera of five inches aperture and forty feet focus, of the form first used by Professor Schaeberle at the eclipse of 1893.

Spain: A photographic intramercurial search covering a region 9¼° wide, extending in the direction of the solar equator from 14° below to 14° above the sun. The photography of the solar corona with a camera of five inches aperture and forty feet focus. A study of the polarized light in the corona. The use of spectrographs provided with moving plate-holders to obtain a continuous record of changes in the spectrum of the sun's edge at the time of second and third contacts; of spectrographs for determining the wave-length of the green coronal bright line, and, if possible, the wave-lengths of the bright and dark lines in the isolated spectrum of the sun's edge, as nearly as possible at the time when the dark lines give way to bright ones, and *vice versa;* and of a spectrograph for recording the general spectrum of the corona.

Egypt: A photographic intramercurial search 8½°, extending in the direction of the solar equator from 4° below to 15° above the sun. The photography of the solar corona with a camera of five inches aperture and forty feet focus. The photography of the general spectrum of the corona.

SCIENTIFIC NOTES AND NEWS.

Dr. G. K. Gilbert, of the U. S. Geological Survey, has been elected a foreign member of the Accademia dei Lincei, Rome.

Commander R. E. Peary was presented with the gold medal of the French Geographical Society by its president, M. Cordier, at the banquet of the International Geographical Congress given in New York on September 14. In accepting the medal Commander Peary announced his plans for Arctic exploration next year.

Dr. Philipp Lenard, professor of physics at Kiel, and Dr. Adolf de Koenen, professor of geology at Göttingen, have been elected foreign members of the Belgian Academy of Sciences.

Captain R. S. Scott, of the *Discovery,* has been promoted to the rank of a captain in the Royal Navy.

The council of the British Institution of Civil Engineers has, in addition to the medals and prizes given for communications discussed at the meetings of the institution in the last session, made the following awards in respect of other papers dealt with in 1903–1904: Telford premiums to Arthur Hill, C.I.E. (Bombay), F. A. Hurley (Cairo), E. M. De Burgh (Greystones), H. H. Dare, M.E. (Sydney, N. S. W.), William Marriott (Melton Constable), T. G. Gribble (London), W. H. Haigh (Cardiff). For students' papers the awards are: A Miller scholarship, tenable for three years, and the James Forrest medal to C. W. L. Alexander, B.E. (Birmingham); Miller prizes to J. M. Clark, M.A., B.Sc. (Glasgow), L. G. Crawford (Barrow-in-Furness), W. H. Dickenson, B.Sc. (Jesmond-on-Tyne), William Lawson (Newcastle-on-Tyne), C. G. Du Cane, B.A. (Middlesbrough), C.

Gribble (York), J. E. Lister (Sheffield), J. M. Kennedy (London), H. Middleton (Newcastle-on-Tyne), J. D. Morgan (Handsworth).

MR. SAMUEL HENSHAW, A.M., of Cambridge, Mass., has been appointed curator of the Museum of Comparative Zoology, at Harvard University. He is the third curator in succession of that museum. Professor Louis Agassiz, the founder, was curator, then director from 1859 until his death; in 1873 he was succeeded by his son, Dr. Alexander Agassiz, who resigned in 1898. Since that date Dr. W. McM. Woodworth has been assistant in charge, then keeper. Mr. Henshaw was connected with the Boston Society of Natural History as assistant from 1876 to 1892, and as secretary and librarian, 1892–1899. He succeeded the late Professor H. A. Hazen as assistant in entomology in the Museum of Comparative Zoology, in 1892 and was appointed librarian in 1899. These two positions he has since held.

THE president of the British Institution of Civil Engineers, Sir William White, and more than one hundred members of the institution, have arrived on the Cunard steamship, *Etruria,* on a visit to the United States and Canada. The invitation to the institution to pay this visit, the first of the kind made since its foundation in 1818, was given by the American and Canadian Societies of Civil Engineers. It is proposed to take part also in the International Engineering Congress organized in connection with the St. Louis Exhibition, to be held in October.

DR. AND MRS. N. L. BRITTON sailed for Nassau, New Providence, on August 19, for the purpose of continuing the exploration of the Bahamas.

MR. MALCOLM PLAYFAIR ANDERSON, of Stanford University, left for Japan early in July to carry on biological work under the auspices of the Zoological Society of London. He will make collections of mammals and birds and other specimens of the island fauna and flora, and a general rough survey of the natural history features.

DR. ERNST A. BESSEY, of the United States Department of Agriculture, who has been abroad for somewhat more than two years, will return about the first of October. While abroad he traveled in Russia, the Caucasus, Turkestan and Algeria, for the Department of Agriculture. He spent some time in study in the Universities of Halle and Munich, finishing his work for the doctorate in Halle last spring.

DURING the past summer Professor C. N. Gould, of the University of Oklahoma, assisted by E. G. Woodruff, conducted investigations on the subject of water supply in the Panhandle of Texas for the United States Geological Survey. Professor Gould last year made a reconnaissance along the Cimarron and South Canadian Rivers in Oklahoma, Texas, Kansas, Colorado and New Mexico, and on the completion of the field studies submitted a report on the geology and water resources of Oklahoma. A similar report on the water resources of the Panhandle will be submitted during the coming winter.

DR. W. A. MURRILL has been appointed assistant curator, at the New York Botanical Garden, in the place of Professor F. S. Earle, who resigned to become director of the Experiment Station of Cuba.

MR. R. M. ARANGO has been appointed a consulting engineer on the staff of Chief Engineer Wallace in the Panama Canal construction.

DR. ALEXANDER C. ABBOTT, chief of the Bureau of Health, and professor of hygiene in the University of Pennsylvania, delivered the inaugural address at McGill University, on September 12.

DR. J. DENIKER, librarian of the Paris Museum of Natural History, will deliver the Fifth Huxley Memorial Lecture of the Anthropological Institute of Great Britain and Ireland, on October 7. He will take as his subject 'The Races of Europe.'

DR. C. L. HERRICK, editor of the *Journal of Comparative Neurology and Psychology,* died at Socorro, New Mexico, on September 15. Stricken with pulmonary tuberculosis early in 1894, he left his professorship in Denison University and succeeded for more than ten years in holding his disease in check in the climate of the far south-west. This period of

exile, though filled with suffering and privation, was one of the most productive of his life. During four of these years as president of the Territorial University of New Mexico he did valiant service for the cause of higher education in the southwest, and during the whole time was conducting and publishing researches in zoology and geology, besides supporting his family by practising as a mining expert. During the last few months of his life failing physical strength gave opportunity for a final formulation of much unfinished work, particularly in philosophical lines, a part of which has already been published, and much of which is still in manuscript.

Professor Ed. von Martens, vice-director of the Berlin Zoological Museum, died on August 14, at the age of seventy-three years.

We also regret to record the death of Dr. P. van der Vliet, formerly professor of physics at the University of St. Petersburg, aged sixty-four years.

King Edward has directed that a new medal be struck for service in polar regions. The officers and crew of the Antarctic exploration ship *Discovery* will be the first recipients of the medal.

The U. S. Civil Service Commission will hold an examination on October 12, for the position of assistant to the agrostologist, of the Bureau of Plant Industry, Department of Agriculture, with a salary of $1,400 a year. On the same day an examination will be held for the position of assistant preparator in the Division of Vertebrate Paleontology, National Museum, at a salary of $480 a year.

In a recent number of the *Bulletin* of Lick Observatory, Professor W. W. Campbell states that the late Director Keeler's observing program for the Crossley reflector included the photography of about one hundred of the principal nebulæ and star clusters. The portions of this program available for observation in clear summer weather were practically complete at the time of his death; but those in position during the cloudy winter months, forming nearly a half of the whole, were incomplete. After the lamented death of Professor Keeler, Assistant Astronomer Perrine, in charge of the Crossley reflector, made it his first duty to complete the observing program. This was accomplished in September, 1903. The importance of prompt publication of this invaluable series of photographs has been fully realized, but difficulties, both technical and financial, have existed. Owing to the generosity of friends of the Lick Observatory plans have recently been completed, whereby it is hoped to issue, within the coming half-year, a volume of the *Lick Observatory Publications,* to contain high-class reproductions of seventy-two of the principal subjects, as well as a list of several hundred new nebulæ incidentally recorded on the negatives.

The University of Chicago paleontological expedition to Wyoming the past summer has obtained a valuable and extensive collection of land reptiles from the Trias. The material collected includes labyrinthodonts, dinosaurs, anomodonts and phytosaurs of several kinds. One specimen, largely complete, apparently belonging in the last group, has a slender, teleosaur-like skull nearly three feet in length, armed with serrated, cutting, dinosaur-like teeth. Several labyrinthodont skulls of at least two forms were obtained. The material will be described as soon as possible by Dr. S. W. Williston and Mr. E. B. Branson, of the University of Chicago.

The International Geographic Congress and the Society of Chemical Industry have been holding their meetings and making the visits in accordance with the programs to which we have already called attention. We hope to publish later some account of the proceedings.

The International Astronomical Congress began its meetings at Lund on September 5.

The second International Congress of Philosophy was opened at the university at Geneva on September 4, with 316 members in attendance.

The fifteenth annual general meeting of the British Institution of Mining Engineers was held at Birmingham on September 14.

The fourth Congress of the International Aeronauts' Committee, with about 60 members in attendance, met at St. Petersburg, beginning on August 30.

THE International Conference for Wireless Telegraphy, summoned at the initiative of Germany, which was to have met October 4, has been postponed at the request of France and Great Britain, these countries desiring more time to study the questions involved.

A REUTER telegram from Basel, dated August 30, states: "The second International Congress on the History of Religions was opened at 11 o'clock this morning. Professor von Orelli, of Basel, president of the organizing committee, in opening the first plenary sitting, welcomed the delegates, and speeches were also made by Professor Raville, representing the Swiss Federal Council, and Professor Burckhardt, representing the Cantonal government, and by members of various learned societies. The speakers included Dr. Hauptmann, of Baltimore, on behalf of the United States government, and Mr. H. M. A. Balfour, on behalf of Oxford University. Professor von Orelli then read an address in the course of which he pointed out that the objects of the conference were purely scientific, and that a propaganda in favor of a particular sect and controversies on the lines of religious discussions during the middle ages would not be allowed. Over 300 savants from all parts of the world have already arrived. The conference will be divided into eight sections, seven of which will deal with the religions of the following peoples and countries respectively: (1) Primitive Races, including the Peruvians and Mexicans; (2) the Chinese and Japanese; (3) the Egyptians; (4) the Jews; (5) India and Persia; (6) the Greeks and Romans; and (7) the Germanic, Celtic, Slavonic and Hungarian Races. The eighth section will devote itself to the discussion of the Christian Religion."

WE learn from *Nature* that it is proposed to fix a standard time for use upon all Indian railways and telegraphs, which shall be exactly five and one half hours in advance of Greenwich time, and to fix for Burma a standard six and one half hours in advance of Greenwich. The government of India has intimated that it is in favor of the adoption of the new standard for general as well as for railway and telegraphic purposes, and is prepared to cooperate in any movement with this end in view; but as the matter is one upon which the local communities should be consulted, the opinions of the chambers of commerce upon the proposals are being sought by the government.

WE learn through the London *Times* that the annual report for 1903 of the Swiss National Museum at Zürich, recently published, contains an account of a donation to that institution by Dr. H. Angst, C.M.G., the founder, for all practical purposes, of the museum, and its first director. At the end of last year, Dr. Angst resigned the directorship, but accepted a position as representative of the Canton of Zürich on the museum commission. Before his retirement, however, had actually taken place, but when it had been already decided on, Dr. Angst crowned his life's work for the museum by presenting to the institution at once, substantially the whole of his great and almost unique collection of Swiss antiquities, including glass and pottery. Even before the museum was opened, Dr. Angst had made over to it a very valuable collection, representing some £4,000 sterling; and soon after, fearing that in a private house they might be exposed to danger, he entrusted to the institution as a loan the rest of his collection, embracing antiquities of all sorts, in the purchase of which not less than £20,000 had been actually expended, while with the rise in market prices, the present value is much greater. This property Dr. Angst has now conveyed, in immediate and complete possession, to the museum without waiting for his death, one half of it—that is £10,000 value—as an unconditional gift, and the other half in consideration of a payment in cash of £2,000 and of a moderate life-rent to cover the balance. This act was gratefully recognized by the Swiss government in an official letter signed by the president and the chancellor of the Confederation, and by the rising of the members of the National Council in their seats when the donation was publicly announced.

THE new metallurgical smelting-house at Bournbrook in connection with Birmingham University was formally opened on Sep-

tember 5. In an introductory lecture at the university Professor Turner said, according to the London *Times*, that the beginning of the work marked an important event in the history of the section. The erection of the building had occupied a year and entailed an expenditure of not much less than £10,000. There was no more ready index of the progress of civilization in any nation than that afforded by the knowledge of the work and value of its metallurgical products, and it was of the utmost importance that metallurgical industries should be encouraged and developed if Great Britain were to keep her position amongst the nations of the world. With regard to the position of the United Kingdom in metallurgical industries, a great change had been witnessed in the last twenty-five years. England used to be spoken of as the chief coal and iron producer of the world, and also occupied a prominent position as a producer of other metals. It still led in gold because of the Transvaal and Australia, but was now second in coal, third in iron, fifth or sixth in other metals, and only produced about one twentieth part of the tin, lead and zinc which were made in the world. The two chief competitors had been the United States and Germany, and the reasons for their progress were varied. In America there were the necessities of a new country, the rapid development of their railways, the opening up of enormous fields of ore deposits and coal fields. There was also the question on which the chancellor of the university had spoken a great deal, the question of tariffs; but he was more immediately interested at the present moment in the influence of education on metallurgical progress and the lines that should be followed in connection with that subject. Professor Turner went on to enumerate the schools of metallurgy in America and Germany, and to show that some of them were on a scale that had hitherto not been matched in Great Britain.

UNIVERSITY AND EDUCATIONAL NEWS.

By the will of the late Dr. Henry Tuck, Harvard University will receive one fourth of the estate should his children not survive. The estate is valued at $5,000,000.

Ground was broken for the new Eastman building of Rochester University, to be used for biology and physics, for which Mr. Eastman, of Rochester, gave $60,000. The effort to raise necessary funds towards the $150,000 required for the building has been successful. Of the desired amount, the sum of $120,000 is in hand, including $15,000 contributed by Hiram W. Sibley for the renovation and decoration of the library.

The following assistants have been appointed at Leland Stanford Junior University: *Mechanical Engineering,* R. H. Gaither; *Education,* E. R. Snyder, Miss C. F. Atherton; *Entomology,* Miss M. I. McCracken; *Zoology,* W. K. Fisher, H. M. Spaulding; *Physics,* C. K. Studley, Miss G. N. Brown; *Physiology,* J. F. Cowan, M. Sindo; *Chemistry,* W. E. Crawford, C. C. James, N. E. Dole, R. H. Sherry, Miss J. A. Comings, D. F. Fitzgerald, W. E. Burke; *Civil Engineering,* J. F. Byxbee, T. B. Hunter, Jr., E. G. Brua, L. J. Mayreis, G. A. Hodge.

C. G. Rogers, assistant in physiology in the University of California, has been appointed instructor in physiology at the University of Kansas.

Mr. Alexander Lauder, senior demonstrator in chemistry in the University College of North Wales, Bangor, has been appointed lecturer in agricultural chemistry in the Edinburgh and East Scotland College of Agriculture.

Dr. Oskar Hertwig, professor of comparative anatomy, at Berlin, has been appointed rector of the University.

Professor E. Wichert, of Göttingen, has been called to a chair of physics at Königsberg; Professor Eduard Brückner, of Bern, has been called to a professorship of geography, at Halle.

Professor O. E. Meyer, director of the Physical Laboratory, at Breslau, will retire from active service at the close of the present semester.