Tufts College; Professor Theodore W. Richards, of Harvard University; Professors H. P. Talbot and A. A. Noyes, of the Massachusetts Institute of Technology; Professor Wilder D. Bancroft, of Cornell University; Dr. Willis R. Whitney, president of the American Chemical Society, and M. Debierne, of Paris.

THE NORTH POLE

Readers of Science will have been greatly interested in the full reports published in the daily papers in regard to Dr. Frederic A. Cook's adventurous expedition. It is not necessary to repeat here the descriptions that have been published, and there is not at hand an account of scientific results. The interest is indeed dramatic and human rather than scientific. A performance such as reaching the North Pole or flying across the British Channel would be rather a result made possible by scientific progress than an important contribution to the advancement of science. But courage and resourcefulness make a deep effect on human nature; scientific men may well be pleased to note the exhibition of such traits on the outskirts of their field.

From a scientific man of the highest rank, who has especial competence to form an opinion on the subject, the editor has received the suggestion that men of standing and representative position be invited to sign the letter that is subjoined. The editor would be pleased to receive from scientific men their opinion as to the desirability of such action, but suggests that it would probably be best for the leading geographical societies of the country to unite in appointing a joint committee to report on the subject. The proposed letter reads:

The statements published in the press relative to the claim of Dr. F. A. Cook that he reached the North Pole on April 21, 1908, have been of such a nature as to awaken, in many minds, skepticism as to the validity of the claim. If it be valid, it is highly important to remove these suspicions as promptly and completely as possible. If it be invalid, it is not less important that American men of science withhold their acceptance of a questionable claim. In view of the fact that the observations and photographs which would be taken by a competent person properly equipped, in the course of a trip to the North Pole, should bear ample evidence of its actuality, we ask you to publish in Science the following requests:

1. That Dr. F. A. Cook publish as promptly as practicable a full statement of the essential facts with all such data as will bear evidence of the validity of his claim.

2. That, if in your judgment, after conference with men of judicial attitude accessible to you, this statement shall not of itself clear away all reasonable grounds of suspicion, you, as editor of Science, select a committee of seven persons of critical knowledge in the matters involved and request them to make a critical examination of the data and give the scientific public the benefit of their best judgment.

3. That, meanwhile, all American scientific societies withhold all action relative to the matter, to the end that if the attainment of the North Pole is properly authenticated there may be united action in doing the fullest honor due to Dr. Cook, and that if the claim is not authenticated there be equal unanimity in withholding honor that has not been duly earned.

As the present issue of Science is going to press, the news is announced of the successful termination of Commander Peary's expedition to the North Pole.

SCIENTIFIC NOTES AND NEWS

Mr. Philip Fox, hitherto instructor in astrophysics at the Yerkes Observatory, University of Chicago, assumed the duties of professor of astronomy in the Northwestern University and director of the Dearborn Observatory, Evanston, Illinois, on September 1. He is succeeded at the Yerkes Observatory by Dr. Frederick Slocum, for several years assistant professor of astronomy at Brown University, who has just returned from a year in Europe, principally spent at the Royal Astrophysical Observatory at Potsdam.

DRS. F. B. LANEY (Yale, 1908) and J. E. Pogue (Yale, 1909) have been appointed assistant curators in the department of geology of the U. S. National Museum; the former in the division of applied geology and the latter in the division of mineralogy.

DR. E. D. DURAND, the director of the census, has announced the appointment of experts in statistics, economics, agriculture and manufactures to cooperate with him in the formulation of the census schedules on which the enumerators will enter the information they obtain next April. The conferees on the agricultural schedule are: Dr. J. L. Coulter, instructor in agricultural economics in the University of Minnesota; Dr. H. C. Taylor, professor of agricultural economics in the University of Wisconsin; Dr. C. F. Warren, Jr., professor of farm management in Cornell University, and Dr. T. M. Carver, professor of economics in Harvard University. The conferees for manufactures and on population are leading experts, being in most cases university professors.

THE chief examiners in the sciences for the college entrance examination board next year are: in mathematics, Professor R. W. Prentiss, of Rutgers College; in physics, Professor F. A. Waterman, of Smith College; in chemistry, Professor Alexander Smith, of the University of Chicago; in geography, Professor A. P. Brigham, of Colgate University; in zoology, Professor G. H. Parker, of Harvard University, and in botany, Professor W. W. Rowlee, of Cornell University.

PROFESSOR THOMAS C. CHAMBERLIN, of the department of geology of the University of Chicago, and Dr. Rollin T. Chamberlin, have returned from the expedition sent by the University of Chicago to study educational conditions in the orient.

THE University of Chicago paleontological expedition to the Permian of northern Texas has returned from a most successful trip. Numerous skulls and skeletons of small reptiles and amphibians were secured, giving to the University of Chicago, with its previous collections from that formation, an excellent representation of Permian vertebrates.

THE Michigan Biological Survey is, this summer, investigating the fauna and flora of Dickinson County, Michigan. The work is under the direction of Alexander G. Ruthven, the chief field naturalist of the survey, and the members of the party, and the groups to which they are giving primary attention, are as follows: A. G. Ruthven and F. Gaige (vertebrates), H. Baker (molluscs), W. W. Newcomb (insects) and G. H. Coons (botany).

MR. MYRON L. FULLER, who has recently completed his report on the differentiation of the glacial drifts of Long Island, New York, upon which he has been at work for the United States Geological Survey for some years, will sail in October for a trip around the world, the principal stays being made in India and Japan with shorter stops in Java and Borneo.

DR. JUAN GUITARAS has consented to remain director of sanitation and chairman of the National Board of Health for Cuba, in view of the fact that the government has now appropriated sufficient funds for the work of the department of sanitation.

PROFESSOR W. M. KERR, of Oregon, has been elected president of the Association of American Agricultural Colleges and Experiment Stations, at the recent meeting held at Portland, Oregon.

CAPTAIN HERBERT E. PUREY CUST, R.N., assistant hydrographer, has been appointed to be hydrographer of the British Navy in the place of Rear-Admiral Arthur M. Field, F.R.S.

THE permanent commission of the International Association of Seismology was held at Zermatt on August 30 with Professor Arthur Schuster, F.R.S., as chairman. Among the papers on the program was one by Professor Harry Fielding Reid, of the Johns Hopkins University, on "Some Lessons of the California Earthquake."

DR. OTTO VON BOLLINGER, professor of pathology at Munich, has died at the age of sixty-seven years.

DR. KARL FRIEDHEIM, formerly professor of organic chemistry at Berne, has died at the age of fifty-one years.

The monument erected to the memory of Professor Tillaux, of Paris, will be dedicated on October 7, 1909, at the amphitheater of anatomy of the hospitals.

Among the civil service examinations to be held by the state of New York on September 18 is one for inspector of drawing and industrial training at a salary of $2,500 and for assistant sanitary chemist at a salary of from $1,200 to $1,500.

The Imperial Cancer Research Fund has received from the Duke of Bedford, vice-president, a further donation of £1,000.

We learn from *Nature* that at the meeting of the Royal Horticultural Society on August 31, there was an exhibition on behalf of Professor Sargent and Harvard University of photographs illustrating the flora, fauna and scenery of central and western China. The photographs are from the large collection taken by Mr. E. H. Wilson during his last (third) journey to China.

Dr. Charles H. Frazier has resigned the deanship of the medical school of the University of Pennsylvania. He retains his connection with the school as professor of clinical surgery.

Dr. E. A. Erlanger has been appointed associate professor of physiology at the Johns Hopkins University to succeed Dr. Percy M. Dawson, who has resigned to take up the study of theology.

Mr. Lee I. Knight, of the botanical staff of the University of Illinois, has been appointed associate professor of botany at Clemson College, South Carolina.

Mr. Wilmar E. Davis, of the University of Chicago, has been appointed assistant professor of botany at Kansas Agricultural College, Manhattan, Kansas.

Dr. Thomas H. Bryce, lecturer on anatomy at Queen Margaret's College, Glasgow, has been appointed to the chair of anatomy at the University of Glasgow in the place of Professor Cleland.

Dr. Karl Marbe, of the Frankfort Academy, has been called to the chair of philosophy at Würzburg.

The graduates of the courses in chemistry at the University of Wisconsin will hold positions in chemical laboratories all over the country this year, 47 having recently received appointment in 17 different states. Of these 14 will remain in Wisconsin, six being in the university, three in colleges and normals, three in high schools and two in commercial positions. The Bureaus of Soils and of Standards at Washington have appointed five Wisconsin chemists to government positions, while four others go to Missouri. New York, Michigan and Illinois have each given three collegiate or commercial positions to Wisconsin men, while the states of Washington, Pennsylvania, South Dakota and Iowa have appointed two Wisconsin graduates each, and Oregon, Indiana, Arizona, Ohio, California, Oklahoma and Kansas have each a man from the Wisconsin state university chemistry department.

We learn from *Nature* that meetings of two special commissions appointed by the International Meteorological Committee at Paris in 1907 were held in London during the week commencing June 21. The appointment of the first commission arose out of a proposal made at Innsbruck by the Rev. Lowis Froc, S.J., director of the Zi-ka-wei Observatory, for the general adoption of a code of maritime weather signals now in use in far eastern waters, and a further proposal made at Paris by Professor Willis L. Moore, chief of the United States Weather Bureau, in favor of an international system of maritime weather signals. To this commission the question of an understanding as to the projection and scale of charts for representing marine meteorological data was also referred. The second commission is appointed to consider international questions concerning weather telegraphy, including wireless telegraphy from ships. The commissions will report to the meeting of the International Meteorological Committee which is expected to be held in 1910.

Students of American geology and geography owe much to the four great government organizations which worked in the west between 1867 and 1879, before the establishment

of the United States Geological Survey. These organizations are commonly known as the Hayden, King, Powell and Wheeler Surveys, from the men in charge, of whom Clarence King later became the first director of the United States Geological Survey and J. W. Powell the second. The publications of these earlier surveys constitute a storehouse of geographic, geologic, ethnologic and archeologic information concerning the then almost unknown western portion of the United States and though their usefulness may have diminished as a result of more detailed surveys and more precise work, they are still invaluable to all who are interested in the study of the development of the west. The United States Geological Survey has published a catalogue and consolidated index of these publications, by Mr. L. F. Schmeckebier, that will make the information they contain easily accessible. This catalogue can be obtained free on application to the director, U. S. Geological Survey, Washington, D. C.

THE total production of coal in the United States in 1908, as reported by Mr. E. W. Parker, of the United States Geological Survey, was 415,842,698 short tons, having a spot value of $532,314,117. Of this total, 83,268,754 short tons, with a spot value of $158,178,849, was Pennsylvania anthracite and 332,573,944 short tons, with a spot value of $374,135,262, was bituminous and lignite. In 1907, when the maximum output of both anthracite and bituminous coal was recorded, the total production amounted to 480,363,424 short tons, valued at $614,798,898, of which 85,604,312 short tons, valued at $163,584,056, was Pennsylvania anthracite and 394,759,112 short tons, valued at $451,214,842, was bituminous, semibituminous and lignite, with scattered lots of anthracite and semianthracite. The total production in 1908 showed a decrease of 64,520,726 short tons, or 13.43 per cent. in quantity, and of $82,484,781, or 13.42 per cent. in value. In spite of the depressed conditions, the decrease in the production of Pennsylvania anthracite was only 2,335,558 short tons, or 2.73 per cent. in quantity and $5,405,207, or 3.3 per cent. in value. In the production of bituminous coal, the decrease in 1908 amounted to 62,185,168 short tons, or 15.75 per cent. in quantity and to $77,079,574, or 17.08 per cent. in value.

THE next to the largest of the Brenham (Kiowa County, Kansas) siderolites, weighing something over 218 pounds, has lately passed from the Snow estate, into the possession of Dr. F. W. Cragin, of Colorado Springs, Colo. These meteorites belong to the rare and remarkable group known as *pallasites,* named for Pallas, who described the first example of this class, from Medwedewa, Krasnojarsk, Russia, in 1776. They were first identified as pallasites, by Professor Cragin, the original purchaser of the main part of them, in letters to Professor John S. Newberry and others. The first printed descriptions of them were published in SCIENCE of May 9 and July 18, 1890, by Mr. George F. Kunz and Professor F. H. Snow, and were more elaborately studied in Vol. XXI. of the Proceedings of the American Academy of Arts and Sciences, by Dr. O. W. Huntington. A beautiful and characteristic illustration of the structure of these pallasites, is that of a polished section which was published in 1900 by Professor Henry A. Ward, as Plate VI. of his book on the great Ward-Coonley Collection of Meteorites, in Chicago. The fact that a few *siderites,* or plain nickeliferous irons, constituted a part of the same "fall" with the Kiowa County pallasites, was a remarkable circumstance, and led Dr. Huntington to suggest the interesting and plausible theory that the eruption of the heavenly body that yielded the Brenham meteorites, had ejected them from an intermediate or transitional zone, between the deeper, heavier, metallic, or *siderite-yielding* zone (such as the terrestrial one whose existence we may infer from the specific gravity of the earth's whole mass being much greater than that of its outer and known portion) and the more superficial, lighter zone, that would yield meteorites of the stony class known as *aerolites.* This dual or transitional composition of the Kiowa County "fall" may exceptionally occur in an individual pallasite.

An instance of the kind was found by Dr. Huntington in part of a Brenham pallasite in the Harvard University Museum, and was illustrated in Plate III. of his above-cited paper. The scientific and exhibitional value of the Brenham pallasites is shown by the fact that, while the total "fall" was scattered over an area of about a half mile by two miles, and aggregated well toward a ton in weight, the largest specimen offered in the 1907 price-list of one of the largest firms in America dealing in meteorites, weighs less than five and a half pounds, and is listed at $150.

UNIVERSITY AND EDUCATIONAL NEWS

Harvard University has received the sum of $15,000 from Mrs. James Augustus Rumrill, of Springfield, in memory of her husband, who received his degree of A.B. from the university in 1859. It is to be used to establish three scholarships for southern students.

While the British are reorganizing the College of Medicine and the Technical Institute at Hong Kong into a university, the Germans have established a school of university grade at Kiao-chau. It is said that the German government has appropriated $160,000 for its establishment and will contribute $50,000 annually for the support of the institution.

It is proposed to reorganize the schools of higher education of Algiers into a university.

The Tulane University of Louisiana during the past year has come into possession of the following amounts: Two million eight hundred dollars from the Newcomb estate. This goes to the Newcomb College—the woman's department of the University—founded by Mrs. Josephine Louise Newcomb as a memorial to her daughter, and to which Mrs. Newcomb before her death gave about one million dollars. Mrs. Ida A. Richardson has made a donation of $50,000 to the university towards the establishment of a chair of botany. By the will of Miss Linda Miles, who died recently in Washington, D. C., the university library is the recipient of $5,000 to purchase books. The following persons have been added to the scientific departments of the university for the session of 1909–10: Charles K. Burdick, New York City, professor of law; Irving Hardesty, Ph.D., University of California, professor of anatomy; Henry W. Stiles, University of Michigan, assistant professor of anatomy; H. Hays Bullard, University of Missouri, instructor in anatomy; D. F. MacDonald, University of Chicago and U. S. Geological Survey, assistant demonstrator in chemistry and geology; J. G. Gage, assistant in clinical medicine.

DISCUSSION AND CORRESPONDENCE

"MARS AS THE ABODE OF LIFE"

The recent letters in Science on the geologic facts in "Mars as the Abode of Life" have an origin which readers of Science should have the opportunity to know. The geologic facts in "Mars as the Abode of Life" are taken from recognized sources, chiefly Dana, Geikie, Dr. Lapparent and recent research; only the weaving together is new. They are not *res gratae* to certain geologists because they clash with a new cosmogeny devised by the Chicago geologist, Professor Chamberlin, who associated with himself for the mechanical and mathematical proof of it, on which all such hypotheses must rest, the assistant professor of astronomy of his university, Professor Moulton. It becomes pertinent, therefore, to consider the basis of their belief which is necessarily astronomic. From the latter writer's exposition of the hypothesis given in most detail in his "Introduction to Astronomy," we shall now quote.

We shall begin with a statement on page 380, which in itself is sufficient to render the reader cautious when he finds himself adventured later upon the exposition. It is with regard to the speed of meteors when they strike the earth. It runs as follows:

> Let us assume provisionally that the meteors are moving around the sun in sensibly parabolic orbits, like the orbits of the comets, and let us find the greatest and least velocities with which they can encounter the earth's atmosphere. If it were not for the earth's attraction they would pass the earth's orbit at the rate of twenty-five miles per second, the velocity being independent of the angle at which they crossed. The earth's