of research. Representatives of some sixty institutions, organizations and departments of research were among the two hundred or more guests who accepted the invitations of the president and trustees of the institution.

At eleven o'clock the guests assembled in a tent erected on the grounds. Addresses were given by General John J. Carty, representing the trustees; by Dr. E. G. Conklin, head of the department of biology, Princeton University, representing scientific men, and by Dr. John C. Merriam, president of the Carnegie Institution, representing the staff. Dr. Henry S. Pritchett, vice-chairman of the board of trustees, presided.

The remainder of the day was spent in talking with the investigators and in inspecting the exhibits which the staff had prepared to illustrate their methods of investigation and somewhat of the results that have obtained. These exhibits were open to public inspection on June 1 and 2.

The station for experimental evolution, now the department of genetics, was formally opened on June 11, 1904. It was established under the direction of Dr. Charles B. Davenport. The eugenics record office was founded in 1910 by Mrs. E. H. Harriman and transferred eight years later to the institution, with an endowment. In 1921 a reorganization of the department was effected, by which the work of experimental evolution and human heredity was combined into a department of genetics, Dr. Davenport continuing as director.

## SCIENTIFIC NOTES AND NEWS

DR. L. R. JONES, professor of plant pathology at the University of Wisconsin, has been invited to act as president of the section of mycology and plant pathology of the Fifth International Botanical Congress to be held in Cambridge in 1930. Dr. E. D. Merrill, dean of the college of agriculture of the University of California, will be a vice-president of the section on taxonomy.

DR. FRANCIS G. BENEDICT, director of the nutrition laboratory of the Carnegie Institution of Washington, Boston, on May 6, following a lecture before the medical faculty of the University of Hamburg, was presented by the dean, Professor Paul Sudeck, the eminent surgeon, with the gold honor medal of the university "in recognition of his successful work in metabolism and physiology."

CHARLES M. ALLEN, professor of hydraulics at the Worcester Polytechnic Institute, will receive the degree of doctor of engineering at the commencement exercises on June 14.

A DINNER in honor of Dr. Aven Nelson, professor of botany and president emeritus of the University of Wyoming, was tendered on May 13 by his colleagues of the board of trustees, of the university faculty and of the administrative staff on the occasion of the completion of his seventieth year of life and forty-second in the service of the university.

A PORTRAIT painted by Boris Luban of Henry Hurd Rusby, dean of the college of pharmacy of Columbia University, who for forty-one years has served as professor of botany, physiology and materia medica, was presented to him by the student body on June 3, in the presence of pharmacists from all over the country, as part of the college centennial and commencement exercises.

ON April 5, Dr. E. P. Mathewson, past-president of the American Institute of Mining and Metallurgical Engineers and professor of administration of mineral industries at the University of Arizona, was made "a member with distinction" in Tau Beta Pi. The initiation took place at the university and was followed by a dinner.

DR. W. REID BLAIR, director of the New York Zoological Park and professor in New York University, was recently elected a resident member of the Authors' Club, New York.

THE council of the Royal Meteorological Society, as reported in *Nature,* has sent a message of congratulation and good wishes to the society's honorary member, Professor Hugo Hergesell, director of the Lindenberg Observatory, on the occasion of his seventieth birthday which occurred on May 29. Addresses of congratulation were presented to him by learned societies and official bodies in Germany in recognition of his services to meteorological science and its application to aviation.

THE honors awarded on the occasion of the birthday of King George of England include a knighthood conferred on Dr. Peter Chalmers Mitchell, F.R.S., secretary of the Royal Zoological Society.

DR. W. A. JOLLY has been elected president of the Royal Society of South Africa.

DR. G. CANBY ROBINSON, director of the New York Hospital-Cornell Medical College Association, has been elected president of the Harvey Society for the ensuing year.

THE fourth annual meeting of the Hawaiian Academy of Science was held at Honolulu from May 9 to 11. Officers for the coming year are as follows: *President,* Dr. Harold S. Palmer; *vice-president,* Dr. Harold L. Lyon; *secretary-treasurer,* Mr. E. L. Caum, and *councilor,* Mr. R. T. Aitken.

THE newly elected officers of the Society for Experimental Biology and Medicine are: *President,* Dr. Peyton Rous; *vice-president,* Dr. David Marine; *secretary-treasurer,* Professor A. J. Goldforb; *councilors,* Professor F. P. Gay and Professor G. B. Wallace.

PROFESSOR GEORGE W. CORNER, head of the department of anatomy of the University of Rochester Medical School, has joined the summer staff of the biological laboratory of the Long Island Biological Association at Cold Spring Harbor. This summer he will be in charge of the course of surgical methods in experimental biology. Dr. Justin Andrews, of the school of hygiene and public health of the Johns Hopkins University, who was announced as being in charge of the course, has obtained a leave of absence to carry on research at the Island of Grenada.

LAWRENCE T. CLARK has been appointed head of the laboratories of Parke, Davis and Company, succeeding Dr. E. M. Houghton, who retired on May 1, after serving for thirty-four years. Dr. Oliver Kamm, who was recently awarded the annual prize of the American Association for the Advancement of Science, has been made scientific director.

W. J. BEAN has resigned from the office of curator at Kew Gardens after serving forty-six years. Mr. Bean was a pupil during the administration of Sir Joseph Hooker and has served under three chiefs besides Sir Joseph—Sir William Thiselton Dyer, Sir David Prain and Dr. Hill.

DR. CHARLES R. STOCKARD sailed on June 3 for Europe. During his absence all manuscripts intended for *The American Journal of Anatomy* should be sent directly to the Wistar Institute in Philadelphia or to one of the associate editors—Dr. G. L. Streeter or Dr. H. D. Senior.

DR. F. L. RANSOME, professor of economic geology in the California Institute of Technology, sails from New York on June 19 to attend the Fifteenth International Geological Congress to be held at Pretoria, South Africa. Dr. Ransome goes as a delegate from the National Academy of Sciences, the National Research Council, the Geological Society of America, the American Institute of Mining and Metallurgical Engineers and the California Institute of Technology. He expects to spend some time at the copper mines of Northern Rhodesia after the session of the congress.

PROFESSOR HOWARD BARNES, head of the department of physics of McGill University, has joined an expedition led by R. B. Van Horne, of Montreal, president of the Cuban Railway Company, for the study of icebergs.

DR. PEYTON ROUS, of the Rockefeller Institute for Medical Research, delivered the Linacre Lecture of St. John's College, Cambridge, on May 6. The title of the lecture was "The Modern Dance of Death."

THE annual public address under the auspices of the Sigma Xi Club, of West Virginia University, was given on May 27 by Dean William E. Henderson, of the Ohio State University. His subject was "The Responsibility of Science."

A. E. WIGGAM will give on June 9 an address on the occasion of the laying of the cornerstone of the new Colgate Chemical Laboratory which has been built at a cost of $400,000. His subject will be "Science as a Way of Life."

A LECTURESHIP has been established in the Medical School of Loyola University, Chicago, by the Loyola chapter of the medical fraternity Phi Beta Pi in memory of the late Dr. Samuel A. Matthews, who was professor and head of the department of physiology, pharmacology and therapeutics from 1919 to 1928. The first of these lectures was given on May 20 by Dr. Arthur L. Tatum, professor of pharmacology at the University of Wisconsin, on "A Physiological Interpretation of Morphine Addiction."

THE committee in France which is endeavoring to collect funds for a suitable recognition of the centenary of Paul Schutzenberger, has available a plaquette, designed by Professor G. Urbain, of the Sorbonne, who is a sculptor as well as a distinguished chemist, which will be sent in bronze to those contributing 100 francs or in silver to those contributing 1,000 francs. American chemists and other men of science are invited to contribute.

PROFESSOR INEZ WHIPPLE WILDER, chairman of the department of zoology at Smith College since the death of her husband, Harris H. Wilder, a year ago, died on April 28 at the age of fifty-eight years.

M. EMILE CHAIX has died in Geneva at the age of seventy-four years. He was professor of geography at the University of Geneva and was known for his studies on the South Italian volcanoes and the Savoy Alps and for his work on sea erosion in Normandy and the Channel Islands.

COMMENDATORE LANCIANI, senator of the Kingdom of Italy and formerly professor of Roman topography in the University of Rome, died on May 21 at the age of eighty-three years.

A BRONZE portrait plaque of the late Sir William Schlich was unveiled in the school of forestry at the University of Oxford on May 23 by the vice-chancellor, Dr. F. W. Pember. Sir William Schlich was at one time inspector-general of forests to the Government of India, and afterwards professor of forestry at Cooper's Hill and later at the University of Oxford. In addition the forestry commissioners will set apart an area of forest to be named the Schlich

Forest, situated if possible within easy reach of Oxford, which will be available for experimental work. Subscriptions amounting to about £1,700 have already been received, which will be paid each year in rotation to different parts of the empire and to the United States, and will be devoted to some purpose calculated to further the cause of forestry. This year payment of the interest has been made for the first time, and Australia is the recipient. The trustees decided that in the present instance the memorial should take the form of a gold medal, to be awarded annually to the best student at the Australian Forestry School at Canberra.

THE Museums of the Peaceful Arts, New York City, unveiled the transatlantic plane *Bremen* in the Grand Central Station on May 21 before an audience of 17,000, including many of distinction. Colonel Fitzmaurice and Mayor Walker spoke in connection with the unveiling ceremonies. These ceremonies were taken by the Pathé Sound Movies. Prior to the unveiling a luncheon was given at the Commodore to about four hundred guests. President Frederic B. Pratt presided. The *Bremen* is to hang in the Grand Central Terminal, above the *De Witt Clinton,* until the museum has moved into its permanent home.

THE fourth annual spring meeting of the Oklahoma Academy of Science was held May 10 to 12 in the Arbuckle Mountains of southern Oklahoma. There were 178 persons registered from Oklahoma and Texas. This year special emphasis was placed on the study of botany, but additional walks and trips were given for those interested in geology, birds, insects and ecology. Botany studies included herbaceous plants, trees, grasses, ferns and mosses. Evening addresses were given on the following subjects: grasses, geology of the Arbuckle Mountains, botanical gardens, Oklahoma trees, poisonous animals and stars. Buildings and cottages at the Baptist Assembly ground at Prices Falls were used for sleeping quarters, and meals were served in the camp dining-room under the direction of the academy. Dr. Chas. N. Gould, director of the Oklahoma Geological Survey, was in charge of the program.

SIGMA PI SIGMA, national honorary physics fraternity, installed its Theta chapter on June 3 at West Virginia University. The installation was conducted by Dr. Marsh W. White, national secretary of the society. In addition to the undergraduate group five members of the physics faculty staff were admitted as charter members, including Dr. Robert C. Colwell, head of the department of physics. The chapter officers are: Ralph G. Owens, *president;* Ira O. Myers, *vice-president;* Charles D. Thomas, *secretary;* Charles W. Hawley, *treasurer.*

ON April 22, a meeting of physicians interested in pathology was held in the county medical rooms in San Francisco and there was formed an organization to be known as the San Francisco Pathologic Society. A constitution and by-laws were adopted and the following officers were elected: Wm. Ophuls, *president;* G. Y. Rusk, *vice-president;* Z. E. Bolin, *secretary-treasurer.* An executive committee was elected consisting of C. L. Connor, A. M. Moody and W. T. Cummins. The object of the society is to foster knowledge on the Pacific Coast. It is interesting to note that a similar society was formed in 1851 in San Francisco and that this was one of the earliest medical organizations on the Pacific Coast.

THE seventeenth annual meeting of the American Association of Agricultural College Editors will be held at the University of New Hampshire, at Durham, from July 9 to 12. At the meeting this year M. S. Eisenhower, director of the office of information, and E. E. Gapen, chief of the press service, will serve as members of the committee selected to judge the exhibits of bulletins, posters and press material.

THE next conference of the American Country Life Association will be held at Iowa State College at Ames, from October 17 to 20. The general topic will be "Rural Organization." The program committee, of which W. H. Stacy, of Ames, is acting as secretary, is developing a program based upon the combination of sectional meetings for open forum discussions of various phases of rural organization and for general sessions with prominent speakers of national repute. A memorial session in memory of the late Honorable Henry C. Wallace, former secretary of the U. S. Department of Agriculture, as a recognition of the large part which Mr. Wallace played in the improvement of rural life in America, will be one of the outstanding features of the program.

AT the thirty-second annual session of the American Gastro-Enterological Association, held at Atlantic City, N. J., from May 6 to 7, 1929, Dr. Frank Smithies, Chicago, donated a fund with the object of the association's securing annually a guest speaker of national prominence in research work. The proceeds of the fund assure an honorarium to the invited guest of $100. This annual address is to be known as "The Walter C. Alvarez Lecture."

THERE is being constructed at the biological laboratory of the Long Island Biological Association at Cold Spring Harbor, Long Island, a biophysical laboratory. This is in furtherance of a program of research in biophysics to be carried on throughout the year. This program was inaugurated last year, at which time Dr. Hugo Fricke, formerly director of the department of biophysics of the Cleveland Clinic

Foundation, was appointed to take charge of the work. The building is of tile and concrete construction, sixty-four by thirty-eight feet, and one story high. It will contain four research rooms (including a large chemistry laboratory and a large X-ray room), a receiving room, a room for records and a machine shop. It will be equipped with biophysical apparatus and machines, and, in addition, every effort is being made to make the research rooms relatively soundproof and free from vibration, and of comparatively constant temperature. The building will be in use this summer.

THE Imperial Bureau of Soil Science, one of the eight bureaus the formation of which was recommended by the Imperial Agricultural Research Conference of 1927, has commenced work at the Rothamsted Experimental Station. Sir John Russell, director of Rothamsted, is also the director of the bureau, and Dr. A. F. Joseph, lately Sudan Government chemist, has been appointed deputy director. The functions of the bureau include the collection and distribution of all research work of importance on soils to the British Empire, the assistance of research workers in the prosecution of their investigations in whatever ways it can, the bringing together of workers from different parts of the Empire (either by correspondence or in conference) interested in the same subjects and to supply information generally which may facilitate the work of soil experts in the development of agriculture. It is hoped that before long the bureau will be in close touch with all soil investigators of the Empire, both at home and abroad, and that by means of information-circulars and other methods, the results of studies carried on in one part of the Empire will be made available for all. Arrangements will also be made to supply information dealing with soil investigations in foreign countries, the results of which (owing to language or other difficulties) are not readily available.

THE London *Times* writes that a project for research into agricultural and stock-raising problems is rapidly developing among widely scattered parts of the British Empire. Last December it was proposed to the governments of the Empire that eight bureaus for the collection and interchange of such information be established. These bureaus were to be attached to recognized, already existing research institutes, and the necessary finance connected with them was to come from a common fund to which the governments would subscribe. Officials of all the institutes who have been approached have all agreed to the plan and all the Empire governments have agreed to support it. All the bureaus will be in various parts of the British Isles, and the scientific men who will direct them are Dr. John J. B. Orr, Professor F. E. Crew, R. G. Hatton, Dr. Sir John Russell, Dr. W. H. Andrews, Sir Rowland Biffen, Professor F. E. Stapledon and Dr. W. Leiper. All will be in operation before the end of the coming summer.

A RECORD of the latest scientific developments in the improved utilization of bituminous coal as a raw material is now available in the published proceedings of the Second International Conference on Bituminous Coal held at the Carnegie Institute of Technology in November, 1928. The *Proceedings* are published in two volumes containing a total of 1,927 pages of type matter and illustrations. The text is composed of one hundred and eleven different manuscripts by some of the world's foremost fuel technologists, chemists and engineers, complete discussions by delegates, and a forty-page index. A majority of the papers are accompanied by illustrations. That the Carnegie Institute of Technology is already making preliminary plans for a third international coal conference is indicated in the foreword by Dr. Thomas S. Baker, president of the Carnegie Institute of Technology and organizer of the first and second conferences. "The success of the Carnegie Congresses and the developments in fuel technology which may be expected in the future encourage us to believe that another International Conference would be welcomed and would be of value." The second conference, according to the published proceedings, had a registration of about two thousand members, including delegates from twenty-two countries. The papers reproduced in the *Proceedings* cover low temperature distillation, origin, composition and classification of coal, use of pulverized fuel, fertilizers from coal, purification and cleaning of coal, power and combustion, liquefaction of coal, tar and oil from coal, gasification of coal and high temperature distillation.

THE report of the National Physical Laboratory which has recently been issued describes, according to a summary given by the London *Times*, researches in the various departments of the laboratory into physics, electricity, meteorology, engineering, aerodynamics, metallurgy and units of standards of measurement. Special attention is called by the report to the very full program of work relating to fundamental standards of measurement which has been completed, and to the increasing volume of experimental work in view under this head. Last year's report contained a reference to assistance given to the Council of Scientific and Industrial Research of the Commonwealth of Australia, in connection with steps being taken by them to establish on a satisfactory footing for use in Australia standards of measurement in agreement with those employed in Great Britain. In the early part of 1928 an offer was conveyed to the Commonwealth Research Council by the Lord President of the Privy Council, on behalf of his Majesty's

Government, to carry out without charge at the National Physical Laboratory the verification, over a period of five years, of the standards to be procured by the Commonwealth Research Council for use in Australia. Full information as to the standards likely to be required was sent to Australia in a report from the laboratory. Assistance has also been given to Canada, India and South Africa in connection with standards for specific purposes. The committee feels that it is of the utmost importance that help should be given, whenever possible, towards securing uniformity throughout the empire in the standards employed.

## UNIVERSITY AND EDUCATIONAL NOTES

PRINCESS HENRY of Reuss has given $300,000 to the department of electrical engineering of Stevens Institute of Technology. Both the departmental and the professorship endowments will bear the name of Anson Wood Burchard, former husband of the princess, who, at the time of his death on January 22, 1927, was chairman of the executive committee of the General Electric Company and a trustee of the college.

BY the will of the late Mrs. Mary L. Walker Peters a bequest of $25,000 for research in cancer is left to Cornell University.

DR. FRANK CARNEY, professor of geology from 1904 to 1912 and professor of geology and geography from 1912 to 1917 at Denison University, has accepted the newly created professorship of geography at Baylor University. Since 1917 he has been chief geologist for an oil company. Dr. and Mrs. Carney will spend the summer in Europe with Professor George Grant MacCurdy, director of the American School of Prehistoric Research.

DR. PHILIP E. BROWNING, assistant professor of chemistry at Yale University, has been promoted to an associate professorship.

DR. H. R. ROSEN, since 1920 associate professor of plant pathology at the University of Arkansas, has been promoted to a professorship.

DR. H. A. BARTON, now fellow of the Bartol Research Foundation of the Franklin Institute, has been appointed assistant professor of physics at Cornell University.

PROFESSOR ERNST GELLHORN, of the University of Halle a/s, has been appointed associate professor of biophysics in the department of animal biology of the University of Oregon at Eugene.

## DISCUSSION

### A PIERRE DINOSAUR

A QUITE unusual find of petrified palm stems and a fragmentary dinosaur in association with the great marine turtles of the Pierre was briefly noted in the *American Journal of Science* for March, 1903 (p. 215), as follows:

With *Archelon ischyros* and *Marshii*, there occur in the uppermost 100 feet of the Pierre as developed along the Cheyenne River a series of associated forms of uncommon interest. Firstly, I have obtained in this same horizon well-preserved toe bones of a Dinosaurian, nearly of the form, and nearly as large as those of *Claosaurus annectens*, which I shall (later) figure as *Claosaurus* (?) *affinis;* while presumably from the same drift from a not far-distant shore, I secured an exquisitely preserved new species of Palm stem, *Palmoxylon cheyennense.*

Secondly, associated with these land forms occur Plesiosaurs, Mosasaurs, a shark (a broad-toothed Lamna), a fish allied to *Beryx*, and the following invertebrates—*Nautilus DeKayi* (very abundant in the matrix of one of the large turtle skeletons), the splendid *Placenticeras placenta, Scaphites nodosus, Emperoceras Beecheri* Hyatt, *Baculites ovatus* and *compressus* Say, *Callista Deweyi* M. & H., etc. (The determinations rest partly on the word in person of E. D. Cope and C. E. Beecher.).—Note:

Such definitive associations of land and marine types are the actual milestones in the biologic course. Continuing the record, hence, Dr. N. E. Stevens later gave, following a previous paper on palm stems from the Upper Cretaceous of New Jersey, a finely illustrated account of the Pierre Palmoxylons. The stems are calcified, the thin sections show the finest detail and there may be several species. All the details are enhanced by my own observation during the past summer in the Mesaverde of the far west, of the frequency of palms in association with a splendid series of petrified cycadeoids. Ultimately the Mesaverde-Pierre point of equivalence must be determinable.

Not so fortunate the status of the accompanying *"Claosaurus* (?) *affinis,"* which threatens to fall into the discard as a *nomen nudum.* The specimen as held with season's collections had been compared directly with *Claosaurus.* There seemed to be no immediate need of illustration; no doubt the suggested name was one of convenience. Now, however, there is need of a further note as Dr. Hay is about to bring out his new bibliography of the fossil vertebrata of North America. My notes say that:

On September 26–29, 1902, I walked from Buffalo Gap (northeasterly) twenty-five miles out to and along the Cheyenne. Several days' search along the Cheyenne and on "Squaw Humper Creek" resulted in little of interest. On the thirtieth, the fourth of the greater specimens of the giant turtle *Archelon* was located about one mile south of "Shoemaker Creek" on the west bank of the Cheyenne. It was while excavating this specimen that there was soon found not more than 300 feet away on the