

by his colleagues on October 7, at the Cosmos Club, Washington. Before entering the Public Health Service as chief of the division of zoology in the Hygienic Laboratory (now the National Institute of Health), Dr. Stiles was chief of the zoological division of the Bureau of Animal Industry. A distinguished gathering, representing the Public Health Service, Bureau of Animal Industry, Bureau of Plant Industry, Bureau of Biological Survey, U. S. National Museum, the medical departments of the Army and of the Navy, the Johns Hopkins University and various other groups were present at the dinner. Dr. Hall presided and the following speakers discussed

Dr. Stiles' services in connection with the topics noted: Dr. L. Stejneger, "Dr. Stiles and the International Commission of Zoological Nomenclature"; Dr. Wm. H. Welch, "Medical Aspects of Dr. Stiles' Work on Hookworm"; Dr. W. S. Thayer, "Dr. Stiles and His Work in Medical Fields"; Dr. A. M. Stimson, "Dr. Stiles' Work in the Public Health Service"; Dr. T. S. Palmer, "Dr. Stiles as a Zoologist"; Dr. Paul Bartsch, "Dr. Stiles and the Helminthological Society of Washington"; Dr. C. L. Marlatt, "Dr. Stiles' Work in Entomology"; Dr. Benjamin Schwartz, "Dr. Stiles' Work in the Bureau of Animal Industry," and Dr. N. A. Cobb, "Dr. Stiles Himself."

SCIENTIFIC NOTES AND NEWS

At the dinner held in connection with the New Haven meeting of the National Academy of Sciences on November 17, tributes to Othniel Charles Marsh were presented by Professors Charles Schuchert and Richard S. Lull, in memory of the one hundredth anniversary of his birth, which occurred on October 29, 1931. Marsh gave to Yale University his services, his great paleontological collections and his estate. He was president of the National Academy from 1883 to 1895.

THE Draper Medal of the National Academy was presented at its dinner to Dr. Annie Jump Cannon, curator in the Harvard Observatory, for her work on the classification of stars by means of their photographic spectra. Professor Harlow Shapley, director of the observatory, made the presentation address. The Agassiz Medal for oceanography was presented to Professor Henry Bryant Bigelow, of Harvard University, and director of the Oceanographical Institute at Woods Hole, with an address by Professor George H. Parker.

THE Frederick Ives Medal of the Optical Society of America has been awarded to Dr. Theodore Lyman, Hollis professor of mathematics and natural philosophy, emeritus, and director of the Jefferson Physical Laboratory at Harvard University.

THE John Scott Medal was presented on November 18 at the Franklin Institute to Professor Philip Drinker and to Mr. Louis Agassiz Shaw, of the School of Public Health of Harvard University, in recognition of their invention of the Drinker respirator. They presented a paper entitled "Prolonged Administration of Artificial Respiration."

GENERAL JAN CHRISTIAAN SMUTS, formerly premier of South Africa, retiring president of the British Association for the Advancement of Science, has been elected rector of St. Andrews University.

It is expected that Professor Albert Einstein will spend the winter at the California Institute of Technology.

DR. ALLEN O. WHIPPLE, professor of surgery at the College of Physicians and Surgeons of Columbia University, since 1921, is the first incumbent of the newly established Valentine Mott professorship of surgery. The trustees, in creating the new chair, proposed that it be so named in recognition of the "long and distinguished service of one of the most eminent surgeons in the whole history of New York."

FOLLOWING the resignation of Director James T. Jardine, of the Oregon Agricultural Experiment Station, to become chief of the Office of Experiment Stations, Mr. William A. Schoenfeld, regional representative of the Federal Farm Board at Portland, has been appointed dean and director.

MR. CHARLES ALFRED WEATHERBY has been promoted to be assistant curator of the Gray Herbarium of Harvard University. Miss Marjorie W. Stone has been appointed bibliographer, succeeding Miss Winifred E. Burrell.

MR. ERNEST J. TEBERG, of Chicago, has been appointed curator of the railroad transportation division of the Museum of Science and Industry of Chicago.

DR. DON M. GRISWOLD, formerly professor of hygiene and public health, University of Iowa, has been provisionally appointed consulting epidemiologist on the Division of Communicable Diseases of the New York State Department of Health.

DR. J. S. YOUNG, lecturer in experimental pathology and assistant director of cancer research in the University of Leeds, has been appointed Musgrave professor of pathology at the University of Belfast.

PROFESSOR HENRI LECOMTE, for many years curator of the phanerogamic herbarium of the Muséum d'Histoire Naturelle in Paris, retired on October 1. He is succeeded by Professor Henri Humbert.

DR. HAVEN EMERSON, professor of public health administration at Columbia University and formerly health commissioner of New York City, has been appointed chairman of a committee on sanitation, public health and water supply of the Merchants' Association of New York. The association has undertaken a study of the sanitation and sewage disposal problems of the city.

DR. EDWARD R. WEIDLEIN, vice-president of the Board of Trustees of the Mellon Institute of Industrial Research and also director of that institution, has been elected a member of the board of trustees of the University of Pittsburgh for the period 1931-34. The Mellon Institute is allied with the University of Pittsburgh.

The Experiment Station Record reports that Director F. B. Linfield, of the Montana College and Experiment Station, has had leave of absence for four months ending in December to be spent in the Orient. It was planned to visit Japan, China, India, Australia, New Zealand and the Fiji and Hawaiian Islands. A report will be presented on the agricultural outlook in Australia and New Zealand, with particular attention to grain and dairy production. During his absence, Mr. Clyde McKee, who returned to the institution in June, after a year of travel and graduate study, is serving as acting director.

ARTHUR PAUL JACOT, formerly acting head of the department of biology of the Shantung Christian University, after spending three months collecting topotypes of European Acarina through a grant of the Elizabeth Thompson Science Fund, is continuing his studies on the moss mites at the Osborn Zoological Laboratories of Yale University.

DR. WILLIAM FILEWICZ, a delegate of the minister of agriculture in Poland, recently visited the College of Agriculture of the University of Wisconsin to observe methods of apple growing.

THE seventh annual Norman Lockyer Lecture of the British Science Guild was given by Dr. H. H. Dale on November 24. The subject of the lecture was "Biology and Civilization."

DR. WILLIAM MORRIS DAVIS, emeritus professor of geology at Harvard University, will give on November 30 before the New York Academy of Sciences at the American Museum of Natural History an illustrated lecture on "The Coral Reef Problem."

DR. HERBERT GROVE DORSEY, of the U. S. Coast and Geodetic Survey, recently gave a lecture at the Catholic University on "The Fathometer and other

Applications of Acoustics in Hydrographic Surveying."

PROFESSOR KYOJI SUYEHIRO, director of the Earthquake Research Institute of the Tokyo Imperial University, gave an illustrated lecture on his earthquake studies in Japan with emphasis on the engineering aspect at an open meeting of the Saint Louis University Sigma Xi Club, on November 16.

THE Sigma Xi Club of the University of Buffalo held its first regular meeting of the current year on November 11, following a dinner at the Campus Edge restaurant. Dr. G. H. Cartledge, the newly appointed professor of chemistry, addressed the members on "Changes in the Periodic System." Officers of the club are Professor Grant Hector, *president*, and Dr. Howard W. Post, *secretary-treasurer*.

LECTURES given during November at the Duke University School of Medicine and Duke Hospital include Dr. R. W. Hegner, of the Johns Hopkins School of Hygiene, on "Parasitology"; Dr. Louis B. Wilson, director of the Mayo Foundation, and Dr. Eugene F. DuBois, professor of medicine at Cornell University School of Medicine, on "Metabolic Factors in Hyperthyroidism and Typhoid Fever at the Duke Hospital."

THE University of Pittsburgh (Xi Chapter of Phi Lambda Upsilon) sponsored two lectures by Dr. Harry Sobotka, of the Rockefeller Institute and Mt. Sinai Hospital, New York City, which were given during October, the first in conjunction with the American Chemical Society on "The Biochemistry of Bile Acids," the second at the University of Pittsburgh on "The Specificity of Enzymes."

THE De Lamar lectures at the Johns Hopkins School of Hygiene and Public Health are being given as follows: Dr. R. E. Dyer, acting director of the National Institute of Health, Washington, "The Typhus-Rocky Mountain Spotted Fever Group of Diseases"; Dr. Victor G. Heiser, associate director, International Health Division, Rockefeller Foundation, "Disease Control and the League of Nations"; Dr. Edgar Sydenstricker, director of the division of research, Milbank Memorial Fund, "Statistics of Morbidity"; Dr. Arthur I. Kendall, professor of research bacteriology, Northwestern University Medical School, "Filterability of Bacteria"; Dr. Charles Armstrong, surgeon, United States Public Health Service, "The Complications of Smallpox Vaccination"; Dr. W. H. Taliaferro, professor of parasitology, University of Chicago, "Experimental Studies on Monkey Malaria"; Dr. Albert G. Love, Lieutenant-Colonel, Medical Corps, U. S. A., "Some Aspects of the Vital Statistics of the United States Army and their Value in Public Health."

A SYMPOSIUM summarizing present knowledge of poliomyelitis was held in Albany, New York, on November 12, under the auspices of the state department of health and a group of pediatricians of New York and adjacent territory in Canada. Among the speakers were Drs. William Lloyd Aycock, director, Harvard Infantile Paralysis Commission, Boston; George Draper, associate professor of clinical medicine, Columbia University College of Physicians and Surgeons; Simon Flexner, director, Rockefeller Institute for Medical Research; William H. Park, director, bureau of laboratories, New York City department of health, and Dr. John G. FitzGerald, director, Connaught Laboratories, University of Toronto.

THE semi-centennial meeting of the Staten Island Institute of Arts and Sciences was held on November 11. The meeting was attended by four of the founders, Mr. William T. Davis, Dr. N. L. Britton, formerly director of the New York Botanical Gardens; Dr. Arthur Hollick, paleobotanist on the staff of the New York Botanical Gardens, and C. W. Leng, director of the Staten Island Public Museum. The fifth survivor, Edward C. Delavan, Jr., was unable to attend. Preceding the meeting a reception was held at the institute, during which all departments of the museum were open for inspection. A gift was announced of \$2,000 from Mr. Davis, president, to be applied to the foundation of a Natural Science Fund.

THE one hundred and seventy-third regular meeting of the American Physical Society is being held at the Ryerson Physical Laboratory of the University of Chicago on November 27 and 28. Other meetings for the current season are as follows: December 18-19, Pacific Coast, Berkeley; annual meeting, New Orleans, December 29-30; February 25-27, 1932, Cambridge; April 28-30, Washington; June, Pacific Coast, Pullman, Washington; June meeting, New Haven.

THE annual meeting of the American Society of Mechanical Engineers will be held in New York City from November 30 to December 4.

THE annual meetings of the American Anthropological Association and the American Folk-Lore Society will be held on December 28 and 29, at Phillips Academy, Andover, Mass.

THE seventeenth annual meeting of the Radiological Society of North America will be held in St. Louis, from November 30 to December 4, with Dr. Bundy Allen, Tampa, Florida, as president.

THE annual congress of the British Institute of Radiology will be held at the Central Hall, Westminster, on December 2, 3 and 4. In association with the congress an exhibition of x-ray apparatus will be

held in the same building under the auspices of the British x-ray industry.

THE inaugural meeting was recently held at the London School of Hygiene and Tropical Medicine, of a new club to be called the "Thirty-one Club," in which it is intended to unite men of diverse scientific interests in order to make known the progress of different branches of science. Sir Richard Gregory, editor of *Nature*, presided.

FOR its International Polar Year Expedition the Canadian Meteorological Service has received a special grant to apply this year for the purchase of instruments and for the preliminary arrangements. The main magnetic station will be at Chesterfield Inlet. Four or five other stations will be established principally for meteorological work.

THE Boston Dispensary has recently created and established a department of clinical research. Dr. William A. Hinton is the director. Research has been carried out at the Boston Dispensary in connection with the various services for about four years. The definite organization of the research activities into a department represents an appreciation of the value research has been found to have in the investigation of clinical conditions among the large out-patient clientele of the dispensary.

CLASSES in the Engineering School of Columbia University have been opened to unemployed professional engineers, according to an announcement made by Dean Joseph W. Barker. Applicants must secure a certificate from the Engineers' Committee on Unemployment, of which H. de B. Parsons is chairman, showing that they are accredited members of the profession and that they are idle through no fault of their own. They will present these credentials to Dean Barker who will assist them in arranging their class attendance. The number of the engineers admitted will be limited only by the size of the lecture halls. Catalogues and class schedules have been sent to the committee, which has its headquarters in the Engineering Societies' Building, 29 West 39th Street, and which is endeavoring to find work for approximately 2,500 unemployed engineers in the Metropolitan district.

SYRACUSE UNIVERSITY announces the establishment of an independent department of psychology, with Dr. Ernst Thelin as head of the department. Until the present time, psychology and philosophy have formed a single department, despite the fact that in nearly all other universities they have established separate organizations.

THE first book in a series of brief scientific volumes sponsored by the Century of Progress Exposition—

Chicago's 1933 World's Fair—has been published by Williams and Wilkins. The title is "The Queen of the Sciences" and the author is Dr. E. T. Bell, professor of mathematics at the California Institute of Technology. The books in the series will be written in a non-technical style. Each will deal with some phase of the advance of science and invention during the past century. The series will be published, one book at a time, throughout 1932 and the early part of 1933. The books will average from 25,000 to 30,000 words each. The program includes a book on the automobile, giving an insight into the industry and its effects on society, by Mr. C. F. Kettering, of the General Motors Corporation; a book on communication—radio, telephone, telegraph—by Major-General Squier; on astronomy by Dr. R. H. Baker, of the University of Illinois; on chemistry by Dr. L. V. Redman, of the Bakelite Corporation; on steel and its relation to people, by Dr. G. M. Eaton; on electrochemistry, by Dr. G. L. Mantell, and on development of the evolutionary theory, by Dr. H. H. Newman.

The Experiment Station Record reports that because of the financial depression, reductions were made by the last Nebraska legislature in appropriations for most of the expending agencies of the state. The direct tax appropriation for the University of Nebraska was reduced approximately 5 per cent. as compared with two years ago, and of this amount the station assumed approximately 4 per cent. of its direct tax appropriation. The revolving funds made up of cash receipts have also been reduced by the lower prices received for farm products. Provision

was made, however, for some building, the College of Agriculture being allotted \$15,000 for cottages for the North Platte Substation and \$75,000 for rebuilding the animal husbandry building, partially destroyed by fire during the spring, while a special appropriation of \$20,000 was made for a shop building at the Curtis School of Agriculture.

ACCORDING to *Museum News*, the Greater St. Louis Museum of Natural History, which was incorporated October 30, 1930, is planning to erect a building and has had plans drawn by W. P. Manske and associates. It will provide quarters for departments of astronomy, including a planetarium, geology, zoology, anthropology and related subjects. The first three floors of the building are planned to house exhibits of the above-mentioned subjects in natural settings. On the fourth and fifth floors the plan places scientific collections, laboratories and curators' offices. The fourth floor also provides for an extensive library on the natural sciences. The planetarium will be on the fifth floor. The ground floor is to have a lecture hall with a seating capacity of 800; also a cafeteria and kitchen. The exhibit floors will be inclined so that no stairways nor elevators will be required, although these will be available for those who desire to use them. It is proposed to erect the museum building on the Memorial Plaza, a downtown location, covering a block 300 feet square. The building will cost approximately three million dollars and the museum association will seek a bond issue for this purpose. Mr. Hermann Schwarz is president of the organization and Mr. Edwin P. Meiners is secretary-treasurer.

DISCUSSION

IS THE EMBRYO SAC A MEGASPORE?

SEVENTY-FIVE years and over seems a long time for a misconception of fundamental importance to have been persistently associated with one of the most classic contributions to the science of botany. Yet such an anomaly exists in connection with Hofmeister's comparative researches of the middle of the last century—researches which paved the way in the plant world for the reception of the biological principles that Darwin announced a few years later. When Hofmeister established homology between the free-sporing condition in the vascular cryptogams and the seed habit of the higher forms he unfortunately chose for comparison with the seed plants certain of the heterosporous forms of the vascular cryptogams. His points of comparison are interesting from the fact that difference in size of spore, the basic feature of heterospory as ordinarily understood, is not one of them. Even in the figures that he used to illustrate his work there is no hint that he regarded dif-

ference in size of the spores in the seed plants as important. In fact, Hofmeister seems to have carefully avoided, whether intentionally or not, any reference to the embryo sac as being a large spore, stating his epoch-making generalization simply as follows: "Der Embryosack der Coniferen lässt sich betrachten als eine Spore, welche von ihrem Sporangium umschlossen bleibt." Since Hofmeister's time, however, it has been universally assumed among botanists that the ovule does contain a big spore (*mega-* or *macro-spore*) and that the seed plants are heterosporous with regard to size, some botanists even going so far as to suggest that the larger the female spore the greater the chance of its being retained. The anomaly of this situation would have been long ago apparent had any one taken the trouble to measure and compare the size of the male and female spores in the seed plants, since the pollen or male spores are in some cases even larger than the female spores, and when the reverse is the case the difference