sented on a nation-wide basis: American Association for the Advancement of Science, American Association of Museums, American Association of University Women, American Federation of Arts, American Library Association, American Public Health Association, Music Educators National Conference, National Council of Parent Education, National Federation of Music Clubs and the National University Extension Association.

The American system of broadcasting, an evaluation of broadcasting from the point of view of the listener, educational broadcasting, and the future of radio have been selected as the topics of the four general sessions. Speeches on these subjects will be made by prominent representatives of education, the radio industry and the listener, and will be followed by periods of open discussion.

To give unity and continuity to the conference one person has been designated as leader of all the discussions which follow the general sessions. Dr. Lyman Bryson, of Teachers College, Columbia University, has accepted this responsibility.

Each afternoon will be devoted to section meetings in which specialists in the various fields covered in the general sessions will discuss specific aspects of each of these topics. At the banquet on the second evening, the speakers will discuss the international significance of radio.

Dr. George F. Zook, president of the American Council on Education, will again act as chairman. Dr. C. S. Marsh, vice-president of the council, is the executive secretary, and his office at 744 Jackson Place, Washington, D. C., is the headquarters for preparations. Carl Milam, secretary of the American Library Association, is chairman of the Chicago Committee on Arrangements.

SCIENTIFIC NOTES AND NEWS

DR. HARVEY CUSHING, Sterling professor of neurology emeritus in the School of Medicine of Yale University, has been appointed director of work in the history of medicine with the rank of professor.

IT is proposed to organize at the University of Michigan the Mortimer E. Cooley Foundation of Engineering, in honor of the dean emeritus of the College of Engineering, who has been a member of the faculty for forty-seven years. The object of the foundation is to provide funds to supplement state support for the financing of salaries of eminent teachers, the appointment of fellows and the provision of facilities and equipment.

ACCORDING to *Industrial and Engineering Chemistry* the American Electroplaters Society has awarded its gold medal to Harry P. Coats, of the Firestone Steel Products Company, Akron, Ohio, for presenting what was judged to be the best paper, "Brass Plating for Rubber Adhesion," on electrodeposition printed during 1936.

LÁSZLÓ ZECHMEISTER has been awarded the 1936 medal of the Hungarian Academy of Sciences, for his investigations in the field of the chemistry of carotenoids and polysaccharides.

THE Pasteur medal given by the Chemical Society of France jointly with the Society of Biological Chemistry, Paris, has been awarded to Dr. Adolf Butenandt, who was recently appointed director of the Kaiser Wilhelm Institute for Biochemistry at Berlin-Dahlem.

Nature states that M. Léon Guillet, director of the École Centrale des Arts et Manufactures and professor at the Conservatoire des Arts et Métiers, Paris, has been nominated an honorary vice-president of the British Iron and Steel Institute.

DR. LAURENCE H. SNYDER, of the Ohio State University, was elected president of the Eugenics Research Association at its recent annual meeting in New York City. Other officers elected were as follows: *Honorary president,* Charles B. Davenport; *Vice-president,* H. B. Fantham; *Secretary-Treasurer,* H. H. Laughlin.

AT Northwestern University appointments have been made as follows: Dr. Lewis H. Tiffany, of the department of botany, has been made head of the department; Dr. Harold T. Davis, for the past year head of the Cowles Commission for Research at Colorado Springs, professor of mathematics, and Dr. Robert H. Seashore, of the University of Southern California, associate professor of psychology.

DR. EVANS W. MCCHESNEY, associate professor of biological chemistry at the School of Medicine of the University of North Carolina, has resigned to join the faculty of the College of Medicine of Baylor University, Dallas, Texas. Dr. Augustus S. Rose, associate professor of anatomy, has become assistant in neurology at the Massachusetts General Hospital, Boston.

DR. ROY M. DORCUS, associate professor of psychology at the Johns Hopkins University, has resigned to accept a position in the University of California at Los Angeles. He will be associated with Dr. Knight Dunlap, who resigned in 1935 as professor of experimental psychology at the Johns Hopkins University.

N. H. MANDERFIELD, acting head of the department

of metallurgy at the Michigan College of Mining and Technology, has been promoted to a professorship. Other promotions include: to assistant professorships, J. M. Gaffney and W. A. Longacre, mathematics and physics; E. J. Townsend, civil and mining engineering, and W. B. Gertz, metallurgy and ore dressing. New instructors include: H. K. Burr, chemistry; G. R. Elwell, mechanical engineering; Alex Belda, mechanical drawing, and V. O. York, physics and mathematics.

DR. DANIEL NICHOLSON, assistant professor of pathology at the University of Manitoba, has been appointed professor of pathology to succeed Dr. William Boyd, who has become professor of pathology at the University of Toronto.

PROFESSOR JAMES H. DIBLE, professor of pathology in the University of Liverpool, has been appointed to the chair of pathology in the British Postgraduate Medical School.

GEORGE J. BAKER, animal husbandman, has been appointed acting director of the extension service at the North Dakota Agricultural College at Fargo. He will supervise the activities of extension agents in forty-eight counties, and will be in direct charge of educational work which reaches into every community in the state.

DR. J. ROSSLYN EARP, of Santa Fe, formerly director of public health of New Mexico, has been made state medical editor to supervise the collection of and edit the technical material of the various publications issued by the State Health Department.

DR. F. MURGATROYD, of the Liverpool School of Tropical Medicine, who is at present engaged on research work on sleeping sickness in West Africa, has been appointed assistant physician to the London Hospital for Tropical Diseases.

A SIX-YEAR study of trachoma will be continued this autumn at Washington University School of Medicine on a broadened basis as the result of the renewal of a grant for the study by the Commonwealth Fund of New York. Dr. Louis A. Julianelle, who has been in charge of the work, will join the teaching faculty as associate professor of applied bacteriology and immunology.

DR. F. W. WARBURTON, associate professor of physics at the University of Kentucky, has been granted leave for the first term of the next academic year. He will undertake special research work on the electromagnetic theory at the Massachusetts Institute of Technology.

DR. G. H. HART, head of the Division of Animal Husbandry at the College of Agriculture of the University of California at Davis, has been invited to speak before the International Veterinary Conference, to be held in Zurich in 1938. The subject that has been assigned him is "Growth and Early Maturity." Other speakers on this subject are: Dr. Contescu, director of the National Zootechnical Institute, Bucharest, and Professor Letard, of the veterinary school at Alfort, France.

STANLEY P. YOUNG, who is chief of the Division of Game Management of the U. S. Biological Survey, is in charge of a scientific expedition for the survey, in which the Chicago Academy of Sciences, the Smithsonian Institution and the National Zoological Park are cooperating in the Carmen Mountain section of northeastern Coahuila, Mexico. The main objective of the expedition will be wildlife photography similar to that conducted in northeastern Louisiana three years ago. Other objectives will be the collection of specimens of mammals for the survey and the other scientific agencies concerned, and the live capture of mammals for the National Zoological Park in Washington, D. C. The expedition will return to the United States about October 10.

THE annual Metal Mining Convention and Exposition of the American Mining Congress will be held at Salt Lake City from September 7 to 10. Delegates will be welcomed to Utah at a luncheon session on September 7 by Governor Blood, of Utah, and Mayor E. B. Erwin, of Salt Lake City. Response to this welcome will be made by Howard I. Young, president of the American Mining Congress, Guy N. Bjorge, chairman of the National Program Committee, and William E. Goodman, chairman of the Manufacturers Division of the congress. W. J. O'Connor, manager of the American Smelting and Refining Company, Salt Lake City, will preside at the luncheon. W. Mont Ferry will act as toastmaster at the annual banquet on Thursday night, September 9.

A FOOD TECHNOLOGY CONFERENCE will be held from September 14 to 17, under the auspices of the Department of Biology and Public Health of the Massachusetts Institute of Technology. It is inaugurated for the benefit of those persons in scientific, technical or executive positions who wish to avail themselves of recent scientific information concerning food technology as it concerns certain of the food industries. The sessions of Tuesday, Wednesday and Thursday will be taken up with the reading of technical papers. On Friday the period from 9 to 11 A.M. will be devoted to round-table discussions, which will provide opportunity for members of the conference to enter discussion groups covering selected phases of the principal food technology operations. A trip to Gloucester, where an old-fashioned New England clambake will be provided by the courtesy of the Gorton-Pew Fish-

eries Company, Ltd., will follow. After the clambake, arrangements will be made for an inspection trip to the Gloucester fisheries and other representative food industries, including the Cherry Hill Farm of H. P. Hood and Sons.

THE International Meeting on Physics, Chemistry and Biology of the "Congrès du Palais de la Decouverte," under the presidency of M. Jean Perrin, will be held in Paris from September 30 to October 7, in connection with the International Exposition. The purpose of the meeting is to present the most recent advances in the domain of the sciences covered. Full information may be secured from L. W. Tomarkin, Institut de Chimie, 11 Rue Pierre Curie, Paris.

THE *Journal* of the American Medical Association states that the Casselberry Prize of $500 of the American Laryngological Association is now available as an award for research in laryngology and rhinology. Manuscripts should be sent to the secretary, Dr. James A. Babbitt, 1912 Spruce Street, Philadelphia, before February 1.

AN amendment to the third deficiency bill, allowing the Department of the Interior to acquire a 6,700-acre stand of sugar pine trees for addition to the Yosemite National Park in California, has been passed by the Congress. The sum of $2,005,000 is made available to the department, which may either acquire the area by purchase or condemnation under a previous authorization.

IT is stated in the *Journal* of the American Medical Association that the production of serums for pneumonia of types V, VII and VIII and any additional types that may be found to be of value in the future will be made possible by a fund of $400,000 appropriated by the recent legislature of New York state to the state department of health. About $150,000 will be used to enlarge the facilities of the division of laboratories to meet the increased load of serum production. In addition, the department will be able to develop further its typing facilities, to extend the program of graduate professional education through the Medical Society of the State of New York and of education for the general public and to do more extensive epidemiologic research when occasion offers. The pneumonia control program in its present form was begun on November 1, 1935, as a cooperative undertaking of the State Health Department, the State Medical Society, the State Association of Public Health Laboratories, the Metropolitan Life Insurance Company and the Commonwealth Fund, the last two giving financial assistance.

ACCORDING to the London *Times*, the world's second largest telescope, which has taken two years to make, will leave Newcastle, within the next few months, for the new Radcliffe Observatory, Pretoria. With a 35-foot duraluminium tube resembling the skeleton framework of a huge howitzer, this £40,000 telescope has been constructed at the optical works at Walkergate-on-Tyne of Sir Howard Grubb, Parsons and Co., Limited. The telescope, which is of the reflector type, has a "great" mirror 74 inches in diameter. The instrument will be housed in a steel turret, 61 feet in diameter, on a brick and cement building with a reinforced concrete floor. The turret will contain a new type of observation car, mounted on an arm which will travel all round the turret and be independent of the movement of the dome. The operator, from his car, will be able to control the movements of the entire structure. Although the moving parts alone weigh some 35 tons, the whole apparatus will be worked by push buttons. A high degree of accuracy in control is obtained by the use of a calibrated tuning fork kept in a constant temperature chamber; 18 motors will be used to operate the telescope. In addition to spectroscopic arrangements, high up on the side of the tube is a special camera. It has two guiding microscopes and can take exposures over a period of many hours.

TO obtain a clearer picture of the relation between rainfall and soil erosion, the Soil Conservation Service has established approximately five hundred weather observation stations in the watershed of the Muskingum River in Ohio, a region where precipitation is heavy. Working in cooperation with the Weather Bureau, the Ohio Works Progress Administration and the Muskingum Watershed Conservancy District, the service has set up the stations in an 8,000 square mile area extending over 22 counties. They are situated about four miles apart and are conducted by farmers from the relief rolls who have received training in reading weather recording instruments. Each station is supplied with a full set of weather instruments, including a minimum thermometer, wet and dry-bulb thermometers, anemometer, wind vane and self-recording rain gauge. The instruments are read every half hour from seven in the morning until seven at night. Each morning readings of the previous day are forwarded to headquarters at New Philadelphia, Ohio. There a cartographic staff records the movement and intensities of precipitation and other climatological information on detailed maps. Similar observations are being made in Kingfisher, Logan and Blaine Counties in Oklahoma and it is hoped to extend such observations into other areas.

IT is announced that a farm of a hundred acres, adjacent to the campus of Cornell University, has been purchased for an extension of the program of its physiological field station which for ten years has con-

ducted research in experimentally produced nervous disorders in animals under controlled conditions. The station, with its farm houses converted into laboratories and living quarters for the research staff and its barns modernized, will take care of a population of pedigreed pigs, sheep and other animals which will be built up to provide breeds of diverse temperaments. The behavior of the animals will be studied from birth to death in an attempt to clarify the understanding of the deviations from normal behavior which Pavlov designated as experimental neuroses. The work was started in 1921 by the late Professor Sutherland Simpson, whose special interest was the endocrine organs in health and disease. This work was advanced by employing Pavlov's methods for studying conditioned reflexes. Professor Liddell, a student of Dr. Simpson's, has carried on the work as head of the Physiological Field Station since that time, and with his staff has developed the techniques for studying these reflexes.

DISCUSSION

UPPER CRETACEOUS PLANTS FROM PATAGONIA

EXACTLY thirty years ago I published a brief note in this journal[1] which was inspired by an article by Kurtz,[2] in which he listed some twenty-five species of fossil plants that had been collected by Hauthal at a locality known as Cerro Guido in the Territory of Santa Cruz. Nearly all these plants were identified with well-known northern species that had been described by Heer, Lesquereux and Newberry from the Dakota sandstone of the western United States. Although Kurtz's paper lacked illustrations, it was presented with an air of finality that seemed to stamp it as an important contribution to Mid-Cretaceous plant geography.

I have always been curious about this Cerro Guido flora, especially since it has been my later lot to study a considerable number of collections of fossil plants from a variety of horizons in Patagonia, and since there has been a tendency among Argentine geologists to consider the Cerro Guido flora as probably Tertiary. With the exception of some very imperfect material collected by Simpson as leader of the Scarrett Patagonian Expeditions I have not seen any Upper Cretaceous plants from Patagonia until this last winter, in spite of the large amount of geological activity in this region, At that time I received a small but well-preserved collection from the Argentine Survey that had been made by the mining engineer, A. Paitnitzky.

This came from a locality known as Cerro Baguales on the north side of the valley of Rio Shehuen in Santa Cruz Territory and is from the same general region as the Cerro Guido flora of Kurtz. The name Baguales is the gaucho term for wild horses, and consequently it has been applied indiscriminately to very many places in the Argentine, but the location of the plant outcrop is rather definitely fixed by the river. The Rio Shehuen or Sehuen, often called the Rio Chalia, as by the writer in describing the Tertiary plants collected by the Bailey Willis survey, rises between Lago Viedma and Lago San Martin, and is the main southern tributary of the Rio Chico de Santa Cruz. Its valley is the type region of Ameghino's Sehuen stage or Sehuense.

There has been more unprofitable discussion of the stratigraphy and correlation of the Patagonian section by authors lacking first-hand information of the region than can be said of any other equal area of the earth's surface, largely because of the marvelous succession of vertebrate faunas. Ameghino, their nestor, had all the industry of a Cope and the genius of a Leidy, but his geological correlations with the northern hemisphere were not so happy and not only raised paleontological blood pressures and stimulated the secretion of vast quantities of printer's ink, but also tended to a lack of appreciation of his very great talents as a comparative anatomist.

The Cerro Baguales flora, as previously stated, is not large, and it has been possible to identify but ten species. These represent the genera Gleichenites, Dennstaedtia, Dryopterites, Protophyllocladus, Menispermites, Paranymphaea, Sterculia, Laurophyllum and Myrcia. With the exception of Sterculia and Myrcia, which are equally common from the Mid-Cretaceous to the present, this assemblage would be recognized instantly as of Upper Cretaceous age. All the species are new and, aside from the Cerro Guido plants recorded by Kurtz, there are no Upper Cretaceous plants with which comparisons can be made nearer than Texas, which, although it would not be strictly accurate to say was on the other side of the world, is distant about 90 degrees of latitude.

It has been possible to make fairly reliable comparisons with the Cerro Guido flora by studying the illustrations of the plants which Kurtz recorded as given in the works cited in his bibliography. The results are most interesting. A few will be mentioned, since it will be some time before my completed paper appears in print. The *Gleichenites* aff. *gracilis* Heer

[1] E. W. Berry, SCIENCE, 23: 509–510, 1906.

[2] F. Kurtz. Sobre la existencia de una Dakota-flora en la Patagonia Austro-occidental. Revista Museo de la Plata, tome 10, 18 pp., 1899.