of the earth can be tested by our methods for the temperature at which it lived. We do hope, however, to find a small fraction of such fossil remains preserved to such a degree that such measurements can be made and at least a limited exact knowledge in regard to these matters secured. These studies can be compared to the radioactive time scale which I referred to previously. That method is very simple in principle, but the actual carrying out of the research which established the time scale involved very careful work covering many years. What will be remarkable, if these ideas are substantiated by further work, will be that such a transient physical quantity as temperature will prove to have been recorded in the rocks in a sufficiently durable form to allow us to read this thermometer at the present time.

NEWS and Notes

Albert E. Whitford has been appointed director of the Washburn Observatory, University of Wisconsin, succeeding **Joel Stebbins,** who retired on July 1.

Z. I. Kertesz, professor of chemistry at the New York State Agricultural Experiment Station, Cornell University, Geneva, has been granted a sabbatical leave and has accepted a joint invitation from the Division of Food Preservation and Transport, CSIR, the Australian Chemical Institute, and the Food Technology Association to study for 6 months the biochemical aspects of food production and processing in Australia. Dr. Kertesz leaves Geneva early this month. His headquarters will be at the Chemistry Department, Sydney Technical College, Ultimo, Sydney, N.S.W.

Stanley D. Miroyiannis has resigned as professor and chairman of the Department of Biology at Northeastern University, Boston, to accept the position of professor of advanced biology in the Graduate School of the Massachusetts College of Pharmacy, Boston.

Robert Simha, consultant for the Division of Organic and Fibrous Materials, National Bureau of Standards, is spending four months in Europe studying the status and trends of high-polymer research in government, academic, and industrial institutions. In September he attended the International Rheological Congress in Holland; in October he lectured at the Institute of Physical Chemistry, Basel, Switzerland; and he is now lecturing at the University of Stockholm.

Theodore L. Jahn, who has been associate professor of zoology at the State University of Iowa, is now professor of zoology on the Los Angeles campus of the University of California. In addition to teaching general physiology and physiology of the Protozoa, Dr. Jahn will continue his research on the physiology of vision.

Robert W. Dougherty, who was formerly associated with the College of Veterinary Medicine, State College of Washington, has recently been appointed professor of veterinary physiology at the New York State Veterinary College, Cornell University.

Adam G. Bøving, research associate in zoology, Smithsonian Institution, has been elected a member of the Royal Academy of Sciences and Letters of Denmark.

Elmer L. Sevringhaus, director of endocrine and metabolic clinical studies at the Medical Center, Jersey City, and director of clinical research for Hoffman-La Roche at Nutley, New Jersey, has also been appointed clinical professor in the Department of Medicine of the New York Medical College, with teaching and clinical duties at the Metropolitan Hospital in connection with endocrine and nutritional work.

C. H. Hardin Branch, formerly executive director of the Institute of Pennsylvania Hospital at Philadelphia, has been appointed professor and head of the newly formed Department of Psychiatry at the University of Utah College of Medicine.

Keith T. Swartz, formerly with the Research Department of the Continental Can Company, Chicago, has recently joined the staff of the Animal Products Branch, Quartermaster Food and Container Institute for the Armed Forces, Chicago. Dr. Swartz will be engaged in developmental work on canned meat items for use by the Armed Forces.

Harold A. Zahl, who has been associated with the Signal Corps in research and development work since 1931, has just been made director of research for the SC Engineering Laboratories, Fort Monmouth, New Jersey.

Horace W. Stunkard, professor and head of the Department of Biology, New York University, recently returned from sabbatical leave at the Scripps Institution of Oceanography, La Jolla, California. During his leave, **W. W. Cort,** of Johns Hopkins University, served as chairman of the Editorial Committee and managing editor of the *Journal of Parasitology.* Volume 34 (1948) is now complete, and manuscripts intended for publication in the journal should henceforth be sent to New York University, University Heights, New York City 53.

Visitors to U. S.

Torbjoern O. Caspersson, director of medical cell research and genetics at the Medical Nobel Institute, Karolinska Institute, Stockholm, is to present the Salmon Memorial Lectures this fall. Dr. Caspersson's lectures, on "Cell Function and Cell Growth in Normal and Pathological Conditions Studied by Quantitative Cytochemical Procedures," will be given November 8, 9, and 10, at 8:30 P.M. in Hosack Hall of the New York Academy of Medicine, 2 East 103rd Street, New York City.

Two German agricultural scientists, William Rudorf, director of the Kaiser Wilhelm Research Institute at Voldagsen, and Alfred Koenekamp,

director of the Grassland Fodder Crop Institute at Voelkenrode, have just completed a four-day visit at Iowa State College. The two men, sent to this country under the auspices of the U. S. occupation authorities in Germany, are making a tour of some of the chief agricultural colleges.

Grants and Awards

Charles P. Berkey, Newberry professor emeritus of geology at Columbia University, has been named first recipient of the Kemp Medal by the trustees of Columbia upon recommendation of the advisory council of the Kemp Memorial Fund "for distinguished service in geology." This award was established last year in honor of James Furman Kemp, founder of the Geology Department. The presentation was made by President Eisenhower at the Men's Faculty Club on Tuesday, October 26. Dr. Berkey was recognized for his early pioneering in engineering geology and also for his aid and advice on some of the major engineering projects of this century, including the George Washington Bridge, the Lincoln Tunnel, the Grand Coulee, the TVA, and other great dam sites.

David S. Grey, a member of the research staff of the Polaroid Corporation, Cambridge, Massachusetts, received the 1948 Adolph Lomb Medal on October 22 during the 33rd annual meeting of the Optical Society of America. The award is given every two years to "a young scientist of outstanding promise who has made a noteworthy contribution to optics." Mr. Grey's accomplishments have included the design of lenses for television-receiving sets and microscopes for medical research, as well as the development of an ultra-high-speed lens for use with radar. One of his most recent developments promises to bring about sharper and brighter images in television sets of the projection type.

Vannevar Bush, president of the Carnegie Institution of Washington and until recently chairman of the Research and Development Board of the National Military Establishment, has received the 1949 medal of the Industrial Research Institute, Inc. The award, established in 1945, is given for outstanding accomplishment in the management field of industrial research. Dr. Bush received the award for his leadership in the OSRD, in marshaling industrial and academic research and coordinating it with the military effort for the common defense.

Applications for grants in aid of research on cardiovascular problems to begin in 1949 will be received by the Life Insurance Medical Research Fund up to January 15, 1949. Support is available for physiological, biochemical, and pathological research which bears on cardiovascular problems, as well as for clinical investigation in this field. Preference is given to fundamental research. It is expected that about $500,000 will be awarded for these grants.

Applications for postgraduate fellowships for training in research in 1949–50 will be received by this Fund up to January 1, 1949. Preference is given to candidates who wish to work in the broad field of cardiovascular function or disease and to candidates who wish to work in institutions other than those in which they have obtained most of their experience. A doctor's degree (M.D. or Ph.D.) or the equivalent is required. The annual stipend usually varies between $2,500 and $3,500, but larger amounts are granted in special cases. Approximately 12 fellowships will be available.

Later in the year, the Fund will also offer a number of student (predoctoral) research fellowships for 1949–50.

Both grants and fellowships will become available on July 1, 1949. Further information and application blanks may be secured from the Scientific Director, Life Insurance Medical Research Fund, 2 East 103rd Street, New York 29, New York.

Fellowships

The first Psychometric Fellowships, established this year by the Educational Testing Service for graduate study under the new Psychometric Training Program in the Department of Psychology at Princeton University, have been awarded to Bert F. Green, Jr., a student at Yale University, and Warren S. Torgerson, who has recently completed a year's graduate study at the University of Wisconsin. The fellowships are normally renewable and carry a stipend of $2,200 annually. Holders may engage in part-time research at the Educational Testing Service as well as full-time study toward the doctorate. The new program, inaugurated in September, is being directed by Harold Gulliksen, research adviser to the ETS and professor of psychology at the University. In addition to the faculties of the Departments of Psychology and Mathematics, the staff of the ETS, which is a nonprofit testing agency, is assisting in the program.

The American Heart Association announces that applications for fellowships and for research in cardiovascular disease are available. Application blanks may be obtained by addressing the Medical Director, American Heart Association, 1775 Broadway, New York 19, New York.

The ultimate aim of the Association is to develop a continuing program of productive research within the broad field of cardiovascular disease, including rheumatic heart disease.

The recommendations of the Research Policy Committee were published in the *American Heart Journal,* 1948, **36,** 463. These policies are subject to modification by the membership of the Association's Scientific Council and approval by the Board of Directors.

The research program of the American Heart Association will be closely coordinated with that of the National Heart Institute of the National Institutes of Health, U. S. Public Health Service, and with that of the Life Insurance Medical Research Fund.

Colleges and Universities

Ohio State University's Chemistry Department is planning a program November 19–20 to commemorate the University's 75th anniversary. Graduates of the Department will read papers and a dinner will be held November 19. Those holding advanced degrees in chemistry from Ohio State have been invited to the meeting. Faculty members who are arranging the program are Frank Verhoek, chairman, Cecil E. Boord, and William MacNevin.

A new electrical engineering building is to be started at Iowa State College within the next few weeks, according to Charles E. Friley, president of the College. Allotment of $858,000 for the building has been approved by the interim committee of the state legislature.

Lehigh University has received a graduate research fellowship, valued at $2,000, from the Socony-Vacuum Company for research in the general field of instrumental analysis. The fellowship was assigned to the Department of Chemistry, and Earl J. Serfass, chemistry professor, will direct the work. The Lehigh fellowship, which is one of 13 sponsored by Socony-Vacuum over the country, is the only one for the support of research in analytical chemistry.

The Department of Milling Industry, Kansas State College, has just completed, at a cost of $20,000, a new pilot plant bakery. The bakery, funds for which were contributed by the milling industry, was designed for research on wheat quality and fermentation problems and is fully equipped for a wide variety of research activities. According to J. A. Shellenberger, head of the Department, who has just returned from a two-month assignment in Costa Rica and El Salvador for the Food Supply Division of the Institute of Inter-American Affairs, this is the only laboratory of its kind connected with an educational institution or an agricultural experiment station in the United States. The equipment will be used to a limited extent in connection with the laboratory portion of a course which is offered in experimental baking.

Additions to the faculty of California Institute of Technology during the last 15 months have brought the staff to a total of 318 as compared with 264 a year ago. The ratio of teachers to students is now one of the lowest in the country (approximately one teacher for every four students). In addition to 4 associate professors, 2 assistant professors, 22 research associates and 6 instructors, 55 research fellows were appointed, 25 of whom are from foreign countries.

The highest laboratory in the world, situated on the summit of Mt. Evans, Colorado, at an elevation of 14,156 feet, is currently being used by a number of universities for cosmic-ray research and for biological experiments. Established in 1936 through the generosity of John Evans, after whose grandfather the mountain was named, the laboratory has since the war been administered by an inter-university group composed of New York University, Chicago, Cornell, M. I. T., Denver, and Princeton. During the war the laboratory was used as a Meteorology Station by the Army. Because of the steadily increasing interest in cosmic-ray research, space in the laboratory itself has become insufficient. Shown in the cover photo, taken by S. A. Korff, of New York University, are a large trailer housing the University of Denver biological experiment, a station wagon which transports the New York University cosmic-ray equipment, and mobile equipment from the University of Chicago and M. I. T. The small stone building on the far right houses the electric power-generating units.

Industrial Laboratories

J. A. Hutcheson, director of the Westinghouse Research Laboratories, has received the Westinghouse Order of Merit for outstanding engineering achievements and able direction of research activities. Highest award of the Westinghouse Electric Corporation to its employees, the Order of Merit is conferred by vote of the Company's Board of Directors. Dr. Hutcheson was cited for "his valuable engineering contributions to the development of radio broadcasting equipment, military radar, and other electronic apparatus," and for "his capable management and direction of the Research Laboratories."

Donald K. Morgan, formerly research engineer of the Hartford-Empire Company, has been appointed chief engineer of John I. Thompson & Company, Washington, D. C. He succeeds **Charles J. Roggi,** who resigned on October 1.

S. C. Ogburn, Jr., head of the Department of Chemical Engineering at Bucknell University from 1928 to 1936 and more recently research and development manager for the Pennsylvania Salt Manufacturing Company, Philadelphia, has been appointed manager of research and development and chairman of the Research and Development Committee for the Foote Mineral Company of Philadelphia.

Meetings and Elections

The Engineering College Research Council will meet November 8 in Washington, D. C. The Research Council, representing the research activities of 73 institutional members of the American Society for Engineering Education, will bring together at this meeting engineering research administrators, news writers, and editors. The papers to be given are: "Applied Science in the Daily Press," by Herbert B. Nichols, science editor of the *Christian Science Monitor*; "The 'Working Press,'" by John M. McCullough, of the editorial staff of the Philadelphia *Inquirer*; "Science Service," by Ron Ross, news editor of that organization; "Photographs and Diagrams: How the Magazines Can Help," by Edward D. Fales, associate editor of *Science Illustrated*; "Science on the Radio," by Irving J. Gitlin, CBS science director; "The Business Press," by Paul Wooton, president of the National Conference of Business Paper Editors; and "Research in the Engineering Press," by Philip W. Swain, editor of *Power*.

The Polytechnic Institute of Brooklyn and the Brooklyn Polytechnic Chapter of the Society of Sigma Xi will hold a symposium on "The Solid State" on Saturday, November 13, at 10 A.M., in the Student Lounge of the Institute, 99 Livingston Street, Brooklyn. Max von Laue, of the University of Göttingen, will make the introductory remarks and will be followed by C. G. Shull, Oak Ridge National Laboratory, who will speak on "Techniques and Applications of Neutron Diffraction"; Rudolph Brill, Phillips Petroleum Company, whose topic will be "Some X-Ray Studies of Chemical Bonding"; and Sir W. L. Bragg, University of Cambridge, who will discuss "A Dynamical Model of a Crystal Structure."

The National Malaria Society will meet conjointly with the American Society of Tropical Medicine, the American Academy of Tropical Medi-

cine, and the American Society of Parasitologists in New Orleans, December 5–8.

The National Malaria Society has scheduled four scientific sessions, including a panel discussion on malaria and a joint meeting with the American Society of Parasitologists and the American Society of Tropical Medicine. Panel discussions will also be held by the American Society of Parasitologists on arthropod vectors and the American Society of Tropical Medicine on helminths and protozoa.

Registration will begin Sunday afternoon, December 5, at the Hotel Roosevelt, which will be the headquarters.

More detailed information about the meetings may be obtained from the secretaries of the societies concerned: Martin D. Young, P. O. Box 1344, Columbia, South Carolina (Malaria); Harold W. Brown, 600 West 168th Street, New York City 32 (Parasitology); Frederick J. Brady, National Institutes of Health, Bethesda, Maryland (Society of Tropical Medicine); and E. C. Faust, Tulane University, New Orleans, Louisiana (Academy of Tropical Medicine).

The Second Inter-American Congress on Brucellosis will be held November 17–20 at Mendoza, and November 22–26 at Buenos Aires, Argentina, under the auspices of the Argentine Government and the Pan American Sanitary Bureau. Some of the topics to be discussed are: the investigations of brucellosis within the different countries including Colombia, Venezuela, Chile, United States, Puerto Rico, and Mexico; human brucellosis; zoological and neurological manifestations of brucellosis; and treatment of brucellosis with streptomycin and sulfadiazine. On November 19 and 20 there will be excursions to the laboratories, hospitals, dairy establishments, meat-packing plants, farms, etc. The meeting then moves to Buenos Aires, and excursions in that city will be made on November 24.

The U. S. National Commission for UNESCO met in Boston September 27–29 for the purpose of analyzing UNESCO's proposed program for 1949. Nine of the 10 scientists on the Commission attended the meetings. The program for the Natural Sciences was examined in detail at two Section meetings, with the scientists and engineers of the Commission and half a dozen specially invited guests participating in the discussions.

The Section meeting of the Natural Sciences assigned the highest priority to the development and further strengthening of UNESCO's four Field Science Cooperation Offices and to UNESCO's program of "Grants-in-Aid" to the International Scientific Unions. The Section further commended UNESCO for its work in the field of scientific reconstruction and urged the development of a "Science Credits Scheme" and of activities directed toward easing import and export regulations and toward exemption from currency controls in reconstruction work. The Section approved the maintenance by UNESCO in Paris of a World Center of Scientific Liaison, including among its activities, in addition to those mentioned above, improvements of scientific documentation, the international exchange of scientists, the maintenance of a Scientific Apparatus Information Section, and close collaboration with the United Nations and the specialized agencies. The scientists meeting at the Section of the Natural Sciences in Boston gave lowest priority to the following two projects in the 1949 program: (1) the standardization of scientific terminology and the preparation of dictionaries; (2) activities in the field of cartographic science.

The Section meeting of the Natural Sciences, as well as the entire National Commission, went on record as favoring full participation by UNESCO in the forthcoming United Nations Scientific Conference on the Conservation and Utilization of Natural Resources (May–June 1949; see Bulletin 8, "Science in UNESCO," issued by the NRC Committee on UNESCO). The Section meeting expressed its approval of the appointment by the U. S. National Commission of a Panel on the Protection of Nature, with Harold J. Coolidge as chairman. It also recommended that "in its participation with the United Nations Natural Resources Program, UNESCO should put special emphasis on the preservation of natural areas which have particular importance for their aesthetic and nonmaterialistic values."

The Section meeting expressed much interest in UNESCO's work in the field of the popularization of science and welcomed the formation of a panel on the subject under the guidance of Mr. Watson Davis. It was recommended that the science clubs of the United States should cooperate with students abroad in science projects.

There was much discussion about barriers to the free movement of scientists, and the Section meeting urged that the need for simplification of visa requirements be promptly brought to the attention of the Department of State and of the Immigration and Naturalization Services of the Department of Justice.

At the Section meeting the United Nations-UNESCO inquiry into the establishment of international laboratories and observatories was discussed, and, specifically, it was recommended that an interorganization committee be set up for the detailed study of a project to establish somewhere in Europe an international computational center and associated international astronomical laboratory.

A considerable amount of time was devoted to a discussion of two questions relating to science and the maintenance of peace. The Section meeting was presented with an interim report on the subject by the NRC Committee on UNESCO. The most significant contribution to the discussion was made by Arthur H. Compton, whose remarks led to the adoption of the following resolution incorporated in the report of the Section meeting:

"We propose the following four ways in which UNESCO can use science toward the maintenance of peace:

"(1) Scientists can emphasize and develop the human values associated with science and technology.

"(2) Scientists can insist on freedom and honesty in their search for knowledge.

"(3) Because of the natural one-worldness of their fields, scientists can consciously serve as prototypes of world citizens.

"(4) By systematically promoting international cooperation, scientists can contribute directly to world inte-

gration and the construction of the defenses of peace.''

A limited amount of mimeographed material relating to UNESCO's activities in the field of the natural sciences is obtainable upon request from the NRC Committee on UNESCO, 2101 Constitution Avenue, Washington 25, D. C.—BART J. BOK, *Harvard College Observatory.*

The American Society of Limnology and Oceanography (formerly the Limnological Society of America) held its 11th annual meeting at the University of Maryland, College Park, on September 10–12. This was the Society's first meeting since its expansion to include the marine field (*Science,* March 26, p. 318). The sessions were attended by more than 100 members and included, in addition to the usual volunteer papers, a demonstration session, invitation symposia, and a field excursion. The symposium on the ''Ecology of Inshore Waters'' was held jointly with the Ecological Society of America, and that on ''The Optimum Catch'' was sponsored jointly with the Ecological Society and the Eastern North American Region of the Biometric Society. The field excursion to the Chesapeake Biological Laboratory included a demonstration by boat of methods for oyster and crab investigations.

At the business meeting of the Society, C. E. ZoBell, Scripps Institution of Oceanography, University of California, was elected president, and D. C. Chandler, Franz Theodore Stone Laboratory, Ohio State University, vice-president. G. L. Clarke, Biological Laboratories, Harvard University, continues as secretary-treasurer. The Society voted to establish a Pacific Division which will include all members west of the Rockies and will hold its own regional meetings. The Oceanographic Society of the Pacific was invited to join in this step, and on October 6, 1948, this organization voted to disband as such and to amalgamate with the American Society of Limnology and Oceanography in forming the new Pacific Division. All members of the former Oceanographic Society of the Pacific thus automatically have become members of the American Society of Limnology and Oceanography and are included in the Pacific Division. C. L. Hubbs, Scripps Institution of Oceanography, was appointed vice-president, and R. P. Dempster, California Academy of Sciences, was appointed secretary of the Pacific Division to serve until the first meeting. With the establishment of the Pacific Division, the American Society of Limnology and Oceanography now has a total enrollment of about 700 members.—GEORGE L. CLARKE, *Secretary-Treasurer.*

The Engineering Foundation has elected Joel D. Justin, consulting engineer of Philadelphia, as its chairman, according to John H. R. Arms, secretary of the Foundation. Boris A. Bakhmeteff, consulting engineer and professor of civil engineering, Columbia, was chosen vice-chairman. Re-elected officers were Edwin H. Colpitts as director, and Mr. Arms, secretary. In addition to Mr. Justin and Mr. Arms the Executive Committee will consist of: O. H. Buckley, president of the Bell Telephone Laboratories; A. B. Kinzel, vice-president, Union Carbide and Carbon Research Laboratories; R. H. Chambers, former vice-president and consulting engineer of the Foundation Company; and Herman Weisberg, mechanical engineer in the Electrical Engineering Department, Public Service Company, New Jersey.

The Research Procedure Committee will be headed by Dr. Bakhmeteff. During the past year the Engineering Foundation has aided 18 research projects, which included studies in such varied fields as hydraulics, alloys of iron, properties of gases and gas mixtures, riveted and bolted structural joints, welding, and properties of metals at different temperatures. The Foundation will continue 9 of the 18 projects and add 5 more to the list this year.

Deaths

George A. Dick, 70, professor emeritus of animal husbandry and former dean of the University of Pennsylvania's School of Veterinary Medicine, died October 15 at University Hospital, Philadelphia.

C. Walter Collins, 66, who, prior to his retirement in 1944, was senior entomologist in charge of the U. S. Department of Agriculture's Forest Insect Laboratory in Morristown, New Jersey, died October 18 at his home in Morristown.

Daniel E. Ziskin, 53, professor of dentistry at Columbia's School of Dental and Oral Surgery and head of the Division of Oral Diagnosis, died October 21 in New York City.

"The Future in Medicine" will be the general theme of the 14th series of Laity Lectures to be given by the New York Academy of Medicine this year. Admission to these lectures at 2 East 103rd Street, New York City, is free, and the public is cordially invited to attend. The lectures, all of which will be at 8:30 P.M., will also be broadcast over WNYC and WNYC-FM. Speakers and their subjects follow: November 17, Robert Patterson, former Secretary of War, ''Some Problems in Law and Medicine''; December 9, Ephraim Shorr, Cornell University Medical College, ''The Endocrines: Masters or Servants?''; December 23, Leo Alexander, Boston State Hospital, ''Science Under Dictatorship''; January 13, William C. Boyd, Boston University School of Medicine, ''Blood and Man''; January 27, John R. Dunning, Columbia University, ''The Future of Nuclear Energy''; and February 10, George E. Gardner, Judge Baker Guidance Center, Boston, ''The Criminal in Our Midst.''

Make Plans for—

American Mathematical Society, November 27, Los Angeles, California.

Conference on Electronic Instrumentation in Nucleonics and Medicine, sponsored by the Institute of Radio Engineers and American Institute of Electrical Engineers, November 29–December 1, New York City.

American Medical Association, interim session, November 30–December 3, St. Louis, Missouri.

American Academy of Dental Medicine, annual midwinter meeting, December 5, Hotel Pennsylvania, New York City.

Highway Research Board, 28th annual meeting, December 7–10, National Academy of Sciences, Washington, D. C.