NEWS and Notes

Clarence Zener, professor of metallurgy at the Institute for the Study of Metals, University of Chicago, is serving as special lecturer and consultant in physical metallurgy in the Department of Mining and Metallurgical Engineering, University of Illinois.

Glenn Ray Noggle, formerly on the staff of Blandy Farm, University of Virginia, has been appointed senior biologist in the Biology Division of the Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Hutton D. Slade, formerly with the Research Division of Wallerstein Co., Inc., and **Eugene L. Hess,** formerly research associate in the Department of Physical Chemistry, University of Wisconsin, have joined the staff of the Rheumatic Fever Research Institute at Northwestern University Medical School. Dr. Slade will continue his studies in bacterial physiology and metabolism, while Dr. Hess will conduct biophysical studies of tissues.

Benjamin Epstein, formerly at Carnegie Institute of Technology, and **Gerald Harrison,** lately of Queens College, have been appointed associate professor and assistant professor, respectively, in the Mathematics Department of Wayne University.

Allan G. Douglas, formerly professor of biology at Southwest Missouri State College, has accepted a position in the Biology Department at California State Polytechnic College.

Visitors to U. S.

W. A. Macfarlane has been loaned by the Ministry of Fuel and Power to the Department of Scientific and Industrial Research for appointment as director of the United Kingdom Scientific Mission in the British Commonwealth Scientific Office in Washington, D. C. He will also serve as attaché for scientific questions in the British Embassy. The present director, **F. N. Woodward,** will return to the United Kingdom toward the end of the year.

Li-chi Tai, who is associated with the Iron and Steel Division of the Chinese National Resources Commission, Nanking, is taking a 6-month postgraduate course at the Carnegie Institute of Technology on a grant from a $25,000 fund provided by the American Chemical Society through UNESCO for the purpose of assisting foreign students. Dr. Tai is the fourth student to work under the grant, which was established two years ago.

M. Gerard Dreyfuss, French engineer, is now studying at the Harvard School of Engineering under a fellowship. A graduate of the Ecole Nationale des Ponts et Chaussées, the oldest engineering school in Europe, he is taking up at Harvard the study of soil mechanics and foundations.

Grants and Awards

Upon recommendation of the National Advisory Mental Health Council, the Surgeon General of the Public Health Service has been authorized to make grants for research in the field of mental health for periods beyond the fiscal year 1949. If approved during the fiscal year 1949, they will constitute a contractual obligation of the Government to forward finance the research projects beyond the present fiscal year. Forward financing of grants to medical schools for undergraduate training in mental hygiene was also authorized, but obligations for both research and training grants must not exceed $2,300,000. This limit will not permit forward financing of all mental health grants, and some will continue under the old system. The institutions and individuals to benefit from the new arrangement will be determined at a meeting of the Council this month.

The Department of Pharmacology of Baylor University College of Medicine, Houston, has obtained grants for the following studies: from the Bilhuber-Knoll Corporation, $2,250 —cardiovascular effects of some aliphatic amines; from the Lakeside Laboratories, $500 and equipment valued at $1,500—fundamental mechanisms involved in mercurial diuresis; and from the U. S. Public Health Service, $8,650—kidney function.

Marcelle V. Schubert, Triple Cities College of Syracuse University, Endicott, New York, has received a Frederick Gardner Cottrell grant of $1,950 from the Research Corporation for research on "Crystallization of Yeast Invertase."

The Alexander Agassiz gold medal and honorarium for 1948 was awarded to Thomas Gordon Thompson at the autumn meeting of the National Academy of Sciences held at the University of California, Berkeley. Dr. Thompson, who is professor of chemistry and director of the Oceanographic Laboratories of the University of Washington, has long been a leader in investigations of the complex chemistry of the ocean and has participated very actively in international oceanographic research. Established by Sir John Murray in 1911, the medal is awarded by the Academy "for original contribution in the science of oceanography to scientific men in any part of the world."

The 1948 Scientific Award of the Grocery Manufacturers of America has been conferred on George R. Cowgill, professor of nutrition at Yale University. Dr. Cowgill, who received the award during the organization's annual meeting in New York City last month, was cited for "his fundamental contributions to the science of nutrition, particularly his research on the functional role of vitamin B_1, his success as a teacher of young biochemists, and his outstanding editorial work for the *Journal of Nutrition.*"

Brig. Gen. Edgar Erskine Hume received the Gorgas Award of Wyeth, Inc., at the recent annual dinner of the Association of Military Surgeons in San Antonio, Texas. He was cited for halting Naples' wartime typhus epidemic by the first mass-scale use of DDT and for his general advancement of preventive medicine since entering the Medical Corps in 1916.

Vladimir K. Zworykin, vice-president and technical consultant of the RCA Laboratories Division, Princeton, New Jersey, has been named winner of the 1948 gold medal of achievement of the Poor Richard Club in recognition

of his invention of the electronic scanner. He will receive the gold medal at ceremonies in Franklin Institute, January 7.

Colleges and Universities

A $20,000,000 scientific development program was approved last month by the Committee on Financing Development of the Massachusetts Institute of Technology Corporation. About half of the amount required will be assigned as endowment and unrestricted funds, the balance being invested in new buildings and equipment. Some of the new buildings planned will be laboratories for nuclear science and engineering, metals processing, biology and food technology, hydrodynamics, and electronics.

The Department of Geology and Geography, University of Tennessee, is sponsoring a symposium on the mineral resources of the Southeast which will be held on the Knoxville campus March 3–5, 1949. According to Frank G. Snyder, chairman of the symposium committee, papers on the major metallic and nonmetallic mineral products of the Southeast will be presented by invited speakers.

A joint program of clinical cancer research has been announced by W. A. Bloedorn, dean of George Washington University Medical School, and J. R. Heller, Jr., director of the National Cancer Institute. A committee to develop and direct the new program has been appointed with Roy Hertz, assistant professor of medicine at George Washington and chairman of the Endocrinology Section of NCI, as chairman. The cooperative program, financed from the University's cancer research funds, which come from grants made by NCI, the American Cancer Society, and private sources, will initially devote attention to (1) endocrine and metabolic aspects of cancer of the breast, prostate, uterus, ovaries, and testes, including possible use of hormone therapy; (2) studies in nutritional aspects of cancer of the gastrointestinal tract; and (3) study of metabolic aspects of nitrogen-mustard therapy in lymphoid diseases. A clinical laboratory for these studies has been set up at the new George Washington Hospital, and additional facilities will be provided by NCI.

The losses suffered by the Department of Botany at the University of Kentucky on November 12 when fire almost totally destroyed Norwood Hall, in which it was housed, have been reported to *Science*. The entire herbarium of approximately 30,000 plants and most of the equipment were completely destroyed. An adjoining greenhouse was badly damaged, and most of the plants in it, including several thousand research seedlings, were killed by heat. Wayne C. Hall, Frank T. McFarland, and B. B. McInteer, members of the Botany staff, lost all personal material kept in the building, their collections, and libraries, one of which contained several thousand books. While the office of Herbert P. Riley, head of the Department, was not burned, a number of books in it were damaged by water. Much valuable material was also lost by the Kentucky Geological Survey and the State Department of Mines, which shared the building.

A 20,000,000-volt betatron, now being constructed at the University of Cincinnati from less than $2,000 worth of war surplus and other materials, will, upon completion early in 1949, be the starting point from which the University will launch a large-scale atomic energy program. When the project was conceived two years ago, Francis Jankowski, a graduate student in the Applied Science Research Laboratory of the University, was assigned to drawing the plans. In addition to designing the betatron, he has done much of the actual building under the direction of Walter Soller, head of the Laboratory. To gain additional experience for the assignment, Mr. Jankowski worked in the Argonne National Laboratory, where he developed a method for measuring the intensities of the neutron beams used in atomic energy research. The project was assisted by donations of magnetic iron from a Cincinnati firm and the main vacuum tube from the University of Illinois.

A miniature supersonic wind tunnel, simulating flying conditions of 1,360 mph at an altitude of 80,000′, has been put into operation at the University of Washington Aeronautical Laboratory, Seattle. The complete unit, measuring 20′ long and 4′ high, has a test section of only $1'' \times 2''$. It is the first of its size to be designed with an enclosed air-stream system, which cleans and drys the air while returning it for reuse, thus making it unnecessary continually to remove moisture from outside air. The tunnel maintains an air-stream speed three times the speed of sound, achieving a Mach number of three—or an air-stream velocity three times the speed of sound at –250° F. Modifications will be added to allow tests approximating actual conditions at an altitude of 200,000′ with an air-stream speed of 2,000 mph.

G. E. Ledbetter, who began work on the tunnel in 1946 as a research fellow, and D. W. Lueck, research engineer of the University Engineering Experiment Station, are in charge of the project. They are now constructing a second tunnel with a $3'' \times 3''$ test section, which will be completed in January.

Industrial Laboratories

General Electric's traveling exhibit of electrical measuring devices, called the "Carnival of Measurements," will be viewed in 80 major U. S. industrial cities. Featured in the display is the new GE I-50 watt-hour meter, the rotating disk and shaft of which are suspended in space by the interaction of two tiny magnets. Various other devices include aircraft instruments, photometric devices, telemeters, etc. The tour will be completed in July of next year, when the exhibit may be seen in the New York area.

Kenneth C. D. Hickman, inventor of the modern molecular still used for refining heat-sensitive oils, has entered into an arrangement by which he will divide his time between the Eastman Kodak Company, Rochester, New York, and Arthur D. Little, Inc., Cambridge, Massachusetts. While serving on the staff of the latter, he will do research in a field of high-vacuum engineering not previously commercially developed and be available for general consultation.

Meetings and Elections

The Maryland Chapter of the Society of the Sigma Xi will meet at 8:00 P.M., December 13, in the Agriculture Building of the University of Maryland, College Park. Walter N. Ezekiel, head mycologist in charge of moisture and fungus proofing, Bureau of Ordnance, Navy Department, will speak on "Problems of Deterioration of Military Equipment." The meeting will be open to the public.

The American Anthropological Association, American Folklore Society, and **Society for Applied Anthropology** will meet at the Royal Ontario Museum of Archaeology and the University of Toronto on December 28–30. General sessions will be devoted to archaeology, personality and culture, acculturation, education, theory, diffusion, language and culture, physical anthropology, and methods. A special meeting, sponsored by the Society for Applied Anthropology and under the chairmanship of G. Gordon Brown, will include the following papers: "Administration of Indians," "Some Experiments in Culture Change," "Causes and Effects of Migration of British Columbia Indians to Washington Berry Fields," and "A Study in the Problems of Re-education in Industry." A panel discussion on "The Adjustment of the Canadian Indian" will follow. Another feature of the meeting will be a symposium on "The Contributions of Community Studies in Anthropology," with Conrad M. Arensberg presiding. Further information may be obtained from the secretary of the Association, D. B. Stout, Department of Sociology and Anthropology, Syracuse University, Syracuse 10, New York.

The American Society for X-Ray and Electron Diffraction (ASXRED) will hold a combined business meeting and scientific session December 16–18 at the Battelle Memorial Institute, Columbus, Ohio. A symposium on "Identification of Materials by Crystallographic Means" will be a feature of the meeting. Those planning to attend should communicate with C. M. Schwartz, of the Batelle Memorial Institute.

The Optical Society of America is planning a Symposium on Luminescence as a feature of its winter meeting to be held in New York City on March 10–12, 1949. One day of the general meeting will be devoted to this symposium. Those working on luminescence are invited to participate in it, whether or not they are members of the Society. Plans for the symposium will be facilitated if those desiring to contribute will communicate as early as possible with Dr. Gorton R. Fonda, Research Laboratory, General Electric Company, Schenectady, New York.

The Southeastern Branch of the Society of American Bacteriologists held its third biannual meeting October 22 at the University of Georgia, Athens, with representatives from Florida, Alabama, and Georgia attending. Martha J. Johnson, secretary-treasurer, reports that the meeting was called to order by W. C. Burkhart, president of the Branch and head of the Bacteriology Department at the University of Georgia. George H. Boyd, dean of the Graduate School welcomed members and guests. Fourteen papers were presented. At a banquet held at the Holman Hotel, W. F. Friedewald, chairman of the Department of Bacteriology at Emory University Medical School, spoke on "Virus and Host Cell Relationships."

The spring meeting will be held in Knoxville, Tennessee, as a joint meeting with the Kentucky-Tennessee Branch, the Association of Southeastern Biologists, and the Southeastern Section of the Botanical Society.

The 8th General Assembly of the International Scientific Radio Union, held in Stockholm, Sweden, July 12–20, was attended by 100 persons. A total of 153 scientific papers had been submitted for the meeting. Most of these were presented by abstract, but some were presented in full, and grouped by topics. These led to lively discussions. The scientific sessions were organized under the Union's four "Commissions": (1) Radio Standards and Methods of Measurement; (2) Radio Propagation; (3) Radio Noise; (4) Radio Physics.

The work of the Commissions led to new plans for international cooperation in scientific radio research, including the intercomparison of standards for the measurement of field intensity, joint studies of standard sources of radio noise and of radio-frequency power measurement, and researches on interaction of radio waves, tidal phenomena in the ionosphere, tropospheric propagation, and nonlinear oscillations.

The newly elected officers of the Union, for a term of office extending to the next General Assembly, are: president, Sir Edward Appleton (England); vice-presidents, J. H. Dellinger (U.S.A.), B. van der Pol (Holland), H. Sterky (Sweden), R. P. Lejay (France), J. Lugeon (Switzerland), and Col. A. E. Dorsimont (Belgium); treasurer, C. H. Manneback (Belgium); secretary, E. Herbays (Belgium). R. Bureau, head of the French National Radio Laboratory, was made an honorary president of the Union.

The business affairs of the Union were reorganized, largely as a result of recent action taken by UNESCO to participate in financial support of the Union. A representative of UNESCO was in attendance at the General Assembly. The technical Commissions of the Union are to be more active, and certain expenses of their officers in attending meetings will be paid by the Union. Separate English and French versions of all documents, instead of the unsatisfactory polyglot documents of the past, will be issued after this year.

The number of technical Commissions was increased. The Commissions and their chairmen are as follows: Radio Standards and Methods of Measurement — J. H. Dellinger (U.S.A); Tropospheric Radio Propagation—C. R. Burrows (U.S.A.); Ionospheric Radio Propagation—Sir Edward Appleton (England); Terrestrial Radio Noise—H. Norinder (Sweden); Extraterrestrial Radio Noise—D. F. Martyn (Australia); Radio Waves and Circuits, including General Theory and Antennas—B. van der Pol (Holland); and Electronics, including Properties of Matter—G. Lehmann (France).

Representatives of the Union were appointed to serve on three Joint Commissions established by this and

other Unions, all organized under the International Council of Scientific Unions. The Joint Commissions are on: Ionosphere, Radio-Meteorology, and Terrestrial and Solar Phenomena. The members from the United States are, respectively, N. Smith, C. R. Burrows, and D. H. Menzel.

Members of the American delegation attending the Stockholm meeting were: J. H. Dellinger (chairman of delegation), chairman of U.S.A. National Committee; W. B. Burgess, Naval Research Laboratory; C. R. Burrows, director, College of Engineering, Cornell University; F. T. Davies, chief, Radio Propagation Laboratory, Ottawa, Canada; K. R. Eldredge, Office of Naval Attaché, London; Lt. Col. C. W. Janes, U.S.A. Signal Corps; K. Lark-Horovitz, head of Physics Department, Purdue University; F. B. Llewellyn, Bell Telephone Laboratories; H. O. Peterson, Riverhead Laboratory, Radio Corporation of America; P. F. Siling, Engineer in Charge, RCA Frequency Bureau; and Newbern Smith, Central Radio Propagation Laboratory, National Bureau of Standards.

The next General Assembly will be held in Switzerland, probably in Zurich, in 1950. (J. H. DELLINGER, *Chairman, U.S.A. National Committee.*)

The American Institute of Chemical Engineers, at its recent annual meeting in New York City, elected the following officers: Francis J. Curtis, of the Monsanto Chemical Company, St. Louis, president; Warren Lee McCabe, of the Flintkote Corporation, vice-president; and, as directors, H. D. Wilde, Humble Oil and Refining Company; Paul D. V. Manning, of the International Mineral and Chemical Corporation; Donald B. Keyes, of the Heyden Chemical Corporation; and Irvin L. Murray, of Carbide and Carbon Chemicals Corporation.

NRC News

Ralph E. Cleland, head of the Department of Botany, University of Indiana, has been appointed chairman of the Division of Biology and Agriculture. New executive secretary of the Division and also of the American Institute of Biological Sciences is **Milton O. Lee.** Dr. Lee is also secretary of the Federation of American Societies for Experimental Biology as well as executive secretary of the American Physiological Society.

An American Geological Institute, comprising 11 national societies with a combined membership of more than 10,000 professional geologists, has been organized to direct the talents of the profession into more effective channels of national service. The Institute will be sponsored by the National Research Council. The first meeting of the directors, named by the affiliated societies, was held November 15–16 in Washington, D. C., to initiate immediate action in speeding the discovery of additional reserves of scarce materials, the detailed geologic mapping of the United States, greater recognition and use of geologists and the geologic sciences in governmental agencies and the armed services, the training of more geologists in colleges and universities to overcome the present critical shortage within the mineral industries, the improvement of educational standards in the geologic sciences, more effective dissemination of geologic research information, and greater public understanding and appreciation of the role of geology in modern civilization.

Officers of the new Institute are: A. I. Levorsen, dean of the School of Mineral Sciences, Stanford University, president; Wm. B. Heroy, consulting geologist and geophysicist of Dallas, Texas, vice-president; and Earl Ingerson, of the U. S. Geological Survey, Washington, D. C., secretary-treasurer. The member societies include the Geological Society of America, American Association of Petroleum Geologists, American Institute of Mining and Metallurgical Engineers, American Geophysical Union, Mineralogical Society of America, Society of Economic Geologists, Society of Exploration Geophysicists, Society of Economic Paleontologists and Mineralogists, Seismological Society of America, Paleontological Society, and Society of Vertebrate Paleontology.

Headquarters will be established at the National Academy of Sciences, Washington, D. C., as soon as an executive secretary has been appointed.

Deaths

Arthur J. Wilson, 64, head of the Chemistry Department, North Carolina State College, died November 11 in Raleigh, North Carolina, as the result of a heart attack.

Samuel T. Orton, 69, authority on speech disorders, died November 17 in St. Francis Hospital, Poughkeepsie, New York. He had recently retired as professor of neurology and neuropathology at the College of Physicians and Surgeons, Columbia University.

John E. Goodwin, 73, head librarian, University of California at Los Angeles, died November 18 in Santa Monica, California.

Excavation of a prehistoric Eskimo village on the shores of Frobisher Bay, Baffin Island, in the Canadian Arctic, has yielded artifacts of two ancient cultures. The archaeological stury was undertaken this summer by Henry B. Collins, Jr., of the Smithsonian Institution, and Colin Thacker, of the National Museum of Canada (see *Science*, July 9, p. 36). The village consisted of one-room houses of stone and whalebone built in excavations about two or three feet deep with roofs above the surface. The houses were entered by subterranean passageways. One of the dwellings, showing the stones of the passageway in the foreground, is pictured on this week's cover. Most of the artifacts were typical of the Thule culture, which is thought to have originated in Alaska and spread eastward along the Arctic coasts about 800 years ago. Some found on Baffin Island are almost identical to those of the same period in Alaska, indicating that the migration may have have occurred over a short period of time, possibly only one generation. Underlying and mixed with these, however, were found a number of small, delicately carved implements which belong to the Dorset culture. The latter shows resemblance to the oldest Eskimo artifacts found in Alaska which may have been the work of the earliest migrants from Asia. The village on Frobisher Bay has not been precisely dated, but it certainly preceded the

culture found there by Martin Frobisher, the 16th-century explorer, who found the Baffin Island Eskimo already using iron.

The 131-year-old New York Academy of Sciences recently opened a campaign for a $1,000,000 fund to finance the construction and maintenance of a permanent Academy building and science center in New York City. According to its president, Harden F. Taylor, the organization's present accommodations in the American Museum of Natural History are inadequate for its conference and publication activities. In the last 11 years, membership in the Academy has grown from 324 to 4,000. The organization plans to spend $500,000 to purchase and recondition a centrally located building and $500,000 to expand its program into the fields of astrophysics, mathematics, experimental medicine, and public health.

"Suggestions for Science Teachers in Devastated Countries," an illustrated booklet recently published by UNESCO, is now being distributed free to schools in Greece, Poland, Czechoslovakia, Austria, Hungary, Italy, China, and the Philippines. Its author, who is science master at the City of London School and member of the Royal Society Committee for Cooperation with UNESCO, explains how science teaching can be begun without apparatus and then how equipment for experiments in astronomy, meteorology, measurement, heat, light, magnetism, electricity, chemistry, and biology can be improvised from easily obtainable materials. In the Introduction the author emphasizes that the improvisations should not be considered makeshifts, but that they and their construction are in the best tradition of science and science teaching. Several useful sections are included on laboratory directions, charts, and logarithm tables, and mention is made of the use of visual aids in science teaching and recently developed laboratory materials. The most outstanding feature of the booklet, however, is the great number of concise diagrams accompanying the text. It has been suggested by UNESCO that teachers in more fortunate countries may find the booklet useful for extending the scope of classes at little cost.

Scientists wishing to send Christmas gifts of food to colleagues abroad may now select two new assortments through CARE—the Holiday Package ($15), including a whole turkey and other foods sufficient for a dinner for 12, and the Standard Food Package ($10), recently revised to contain more meats, fats, and sweets. The former may be sent to Austria, Belgium, Czechoslovakia, Finland, France, Germany (American, British, French Zones and all of Berlin), Great Britain (Scotland, Wales, and northern Ireland), Greece, Italy, Hungary, the Netherlands, and Poland; the second package may be sent to all of these countries with the exception of Poland, Great Britain, Greece, and Italy. There will be an additional charge for packages sent to Berlin during the blockade. Assortments of food designed to meet specific national tastes are also available for all countries previously mentioned and Japan, Okinawa, and Korea. Orders may be addressed to CARE, 50 Broad Street, New York City, or to local CARE outlets in major cities.

A lead chloride crystal measuring $2\frac{1}{2} \times 4$ cm, believed to be the largest ever grown, has been produced by Joseph M. Ashcroft and A. Smakula at the Engineer Research and Development Laboratories, Fort Belvoir, Virginia. This was done by lowering a melt of purified commercial lead chloride crystals in a glass crucible through a temperature gradient, in a specially designed furnace, at the rate of only 1.2 cm/day. This procedure was necessary to grow a single crystal instead of a mass of small crystals. The crystal will be subjected to optical and other physical tests impossible with the minute crystals available commercially.

Make Plans for—

Symposium on the Pathogenesis and Pathology of Viral Infections, December 14–15, New York Academy of Medicine, 2 East 103rd Street, New York City.

Mycological Society of America, December 26–30, Chicago, Illinois.

Botanical Society of America, Inc., December 27–30, Stevens Hotel, Chicago, Illinois.

National Science Teachers Association, December 27–30, Washington, D. C.

American Society of Plant Physiologists, December 27–31, Chicago, Illinois.

7th Pacific Science Congress, February 2–8, Auckland New Zealand; February 16–22, Christchurch.

Recently Received:

Blumea (Tijdschrift voor de Systematiek en de Geografie der Planten)—a journal of plant taxonomy and plant geography. Vol. VI, No. 1, pp. 1–336. Published by the Rijksherbarium, Leiden, Holland.

Collected papers of the Institute of Medical and Veterinary Science, Adelaide, South Australia, 1944–47, Vol. 3.

News Bulletin of the Institute of International Education, 2 West 45th Street, New York City 19.

Ultrafax: a high-speed radio communication system. Descriptive pamphlet issued by the Radio Corporation of America, 30 Rockefeller Plaza, New York City 20.

Statlab Review, a publication of the Statistical Laboratory, Iowa State College, Ames.

Bibionidae, by D. Elmo Hardy. (Ruwenzori Expedition, 1934–35, Vol. 1, No. 6.) London: British Museum of Natural History, 1948.

Journal of the New York Botanical Garden, November 1948.

An analysis of the real cost of TVA power, by C. J. Green. Published by the Natural Resources Department, U. S. Chamber of Commerce, Washington 6, D. C.

Annual Report of the Statistical Laboratory, Iowa State College (1947–48).

Guarding our wildlife resources, by Rachel L. Carson. (Conservation in Action, No. 5, illustrated.) Washington, D. C.: U. S. Government Printing Office, 1948. $.30.