News Notes

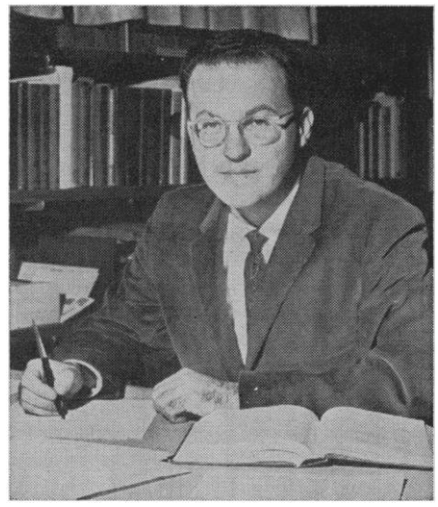
Libby and Glaser Win Nobel Awards in Chemistry and Physics

Two University of California professors have won Nobel Prizes in science. Willard F. Libby, 51, of the Los Angeles campus, will receive the chemistry prize, and Donald A. Glaser, 34, of the Berkeley campus, the physics prize. A check for approximately $43,700 will be presented to each man on 10 December during a ceremony in Stockholm that will similarly recognize Sir Macfarlane Burnet of Australia and Peter Brian Medawar of England, previously announced joint winners of this year's Nobel Prize in physiology and medicine.

The Royal Swedish Academy of Sciences, which administers the awards for the Nobel Foundation, announced that Libby is being honored for having developed a method of using carbon-14 for age determination. Glaser's prize-winning achievement is the invention of the bubble chamber, a device for studying subatomic particles.

In developing his "atomic clock," Libby found that all organic matter absorbs a certain definite amount of carbon-14. This disintegrates at a fixed rate, having a half-life of 5568 years. Therefore, by measuring the amount of radioactivity left in an ancient specimen, ages of from 1000 to 30,000 years can be calculated to within about 200 years. Libby, a member of the Atomic Energy Commission from 1954 to 1959, conducted his carbon-dating research after World War II, while at the University of Chicago.

Willard F. Libby



Donald A. Glaser

The Swedish Academy's citation for Glaser described two earlier Nobel Prize winning methods of elementary particle study, C. F. Powell's emulsion method and C. T. R. Wilson's cloud chamber method, then pointed out that Glaser had bridged the "wide gap in range" between the two techniques by evolving a process in which the nuclear particles leave traces in superheated liquids; these traces appear on photographs as "strings of fine vapor bubbles." The citation also said: "Mention should be made here of bubble chambers filled with liquid hydrogen which now render extremely valuable service. . . ." Glaser developed his bubble chamber at the age of 28, while he was on the staff of the University of Michigan.

This is the first time in the 60-year history of the Nobel awards that two scientists from the same university have won the chemistry and physics prizes simultaneously and exclusively.

New Standard of Length Adopted

At 6 P.M. Paris time on 14 October, during the 11th General Conference on Weights and Measures, the world adopted a new international standard of length—a wavelength of light—replacing the meter bar which has served as the standard for more than 70 years. The announcement was made from Paris by Allen V. Astin, director of the U.S. National Bureau of Standards and head of the American delegation to the conference. The new definition of the meter as 1,650,763.73 wavelengths of the orange-red line of krypton-86 will replace the platinum-iridium meter bar which has been kept at Paris as an international standard for length since 1889 under the Treaty of the Meter.

While not of general concern, the conference decision is of great importance to those engaged in precision measurement in science and industry. For many years the world has relied on a material standard of length—the distance between two engraved lines on the International Meter Bar kept at Paris. Duplicates of the International Standard were maintained in the standards laboratories of other countries of the world. From time to time it was necessary to return these duplicates to Paris for recalibration, and occasionally discrepant results were obtained in these recalibrations. Also, there was doubt in the minds of some scientists regarding the stability of the international meter bar.

The new definition of the meter relates it to a constant of nature, the wavelength of a specified kind of light, which is believed to be immutable and can be reproduced with great accuracy in any well-equipped laboratory. Thus it is no longer necessary to return the national standards of length to Paris at periodic intervals in order to keep length measurements on a uniform basis throughout the world. Also, it is possible to measure some dimensions more accurately in terms of the new definition than was possible before.

Measurement of Length Not Changed

The new definition of the meter will not materially change the measurement of length nor alter in any way the relationship between the English and metric units. Experiments performed at the National Bureau of Standards by the team of A. G. Strang, K. F. Nefflen, J. B. Saunders, B. L. Page, and D. B. Spangenberg immediately prior to the meeting confirmed that the wavelength standard and the metal standard are in satisfactory agreement. The inch now becomes equal to 41,929.399 wavelengths of the krypton light.

Similar measurements performed by the National Research Council in Canada, by K. M. Baird and his associates, are in substantial agreement with the National Bureau of Standards results. They all show that the distance from a point in New York to a point in Washington would be altered by less than three inches, as measured in terms of the old metal standard and the new wavelength standard. However, by adoption of the new definition, the standard of length which has been used by spectroscopists for the past 50 years

is brought into agreement with that used in other branches of science, thus increasing the unification of systems of measurement throughout the scientific world. Although the conferees recognized that the new definition may have the effect of shortening the meter, the amount of shortening will be less than 1/5000 the thickness of a dime.

Other Actions Taken in Paris

Other actions taken by the Paris conference included the establishment of a central facility at the International Bureau of Weights and Measures for international coordination of radiation measurements and confirmation of a new definition of the second of time. The establishment of a central international facility for measurement of x-rays, radioactive isotopes, and neutrons will assure that all nations of the world will be able to make coordinated measurements of these radiations. To accelerate the planning of this major effort to establish world-wide standards of radiation measurement, the Ford Foundation has made a grant of $32,500 to the International Bureau of Weights and Measures, which was accepted by the conference.

The conference also confirmed the action of the International Committee on Weights and Measures in defining the second of time as 1/31,556,925.9747 of the tropical year 1900, instead of 1/86,400 part of the mean solar day, and discussed the possibility of using atomic vibrations as standards for measuring time intervals.

Latin America Needs Journals; Appeal Made for Unused Issues

The Division of Science Development of the Pan American Union has organized a new program to help Latin-American scientific libraries and information centers complete their files of scientific journals. Latin-American libraries are being urged to become members of the U.S. Book Exchange and to request the journals they need through that organization's established procedure.

The Exchange is a nonprofit corporation in Washington that serves as a central office for the exchange of books and journals between libraries all over the world. It also receives and distributes contributions from individuals. Some 1800 libraries, more than half of them in foreign countries, are members. Approximately one and a half million items are exchanged annually, but requests often exceed supplies.

The Pan American Union's Division of Science Development has issued an appeal to U.S. scientists to send unused files of professional journals to the Book Exchange for distribution abroad. The division has also announced that if a Latin-American library has an urgent need for a specific journal which is not available in the U.S.B.E., the division will publicize that need through appropriate professional journals, suggesting that the journal be sent to the Exchange designated as a gift for the library in question.

The estimated value of a gift and the mailing costs may be claimed as income tax deductions. For further information, write to the U.S. Book Exchange, Inc., 3335 V St., NE, Washington 18, D.C., or to the Division of Science Development, Pan American Union, Washington 6, D.C.

Drosophila Stock Center To Be Established in Philadelphia

The Institute for Cancer Research, in Philadelphia, will establish a *Drosophila melanogaster* stock center. The center, the second one in the United States, will be under the direction of Irwin I. Oster of the institute's Division of Chemotherapy. The National Science Foundation has awarded $124,800 to support the new project for a 5-year period.

Some 2500 mutant strains of fruit flies will be maintained at the center. In addition to being used for research projects there, they will be available, free of charge, to researchers and teachers throughout the world. The stocks will be kept in groups of six vials each, so that cultures can be supplied to investigators at any time.

The new center will have duplicates of the 800 varieties of fruit flies currently maintained in the stock center at the California Institute of Technology. It will also have 600 stocks representing the major portion of the strains maintained at Indiana University, as well as 200 stocks maintained in the institute's department of genetics, and 800 strains consisting of other useful mutations obtained from other laboratories or synthesized by Oster and his staff.

The NSF grant also provides for the annual publication and distribution, through the Drosophila Information Service, of descriptions of the stocks and explanations and suggestions for their use. The publishing of periodic diagrammatic descriptions of existing and future stocks will serve to familiarize workers in the field with the latest techniques available for research in *Drosophila.*

Placement Services Being Surveyed

Some 200 privately supported associations concerned with higher education will soon receive from the U.S. Office of Education's Division of Higher Education questionnaires concerning the nature and extent of higher education placement services offered. The study covers placement for all academic and administrative positions. Findings will be published as a directory of higher education placement facilities, with a brief description of the study and an analysis of the problems in this area. The directory should be useful to colleges and universities, to faculty members wishing to secure or change positions, and to all higher education placement services.

The study was conceived jointly by the U.S. Office of Education and the American Council on Education. The current phase of the work is being conducted under the direction of Robert Poppendieck, specialist for teacher education, U.S.O.E. He urges that all private organizations which provide placement assistance and have not received questionnaires report to his office, Rm. 3760, U.S. Office of Education, Washington, 25, D.C., so that they may be included in the study.

News Briefs

Controlled thermonuclear reaction. An extremely brief, but controlled, thermonuclear reaction was announced on 4 November by Frederic H. Coensgen and his associates in the University of California's Lawrence Radiation Laboratory, Livermore. The achievement, which was reported during a meeting of the American Physical Society's plasma physics division in Gatlinburg, Tenn., is considered a major step in the search for an unlimited source of energy for peaceful uses.

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Explorer VIII launched. The National Aeronautics and Space Administration announced that Explorer VIII was successfully launched from Cape Canaveral, Fla., on 3 November and is transmitting satisfactorily. A 90-

pound, "spinning-top" vehicle, this is the first of several planned satellites whose mission will be to chart the ionosphere above the 400-mile level. Explorer VIII is expected to stay in orbit for several years, but the transmitter is designed to operate for only 2 or 3 months.

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Science talent search. High school seniors throughout the country have been invited this month to compete in the 20th annual Westinghouse Science Talent Search for awards and scholarships totaling $34,250. Forty teen-agers judged in the Search as the nation's most promising future scientists will attend the 5-day Science Talent Institute in Washington, D.C., early next year to compete for five top scholarships. During their expense-paid trip to the institute, the national winners will exhibit their own research projects, tour government and private research centers, and hold discussions with many of the nation's leading scientists. Science Service, Washington, D.C., administers the Search through its Science Clubs of America. A record 29,000 students entered the competition last year.

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Ecological society of Australia. At a meeting of animal and plant ecologists recently held in Canberra, Australia, a new biological society—the Ecological Society of Australia—was inaugurated. The objectives of the society are similar to those of the corresponding bodies in the U.S. and Great Britain.

The society's officers are as follows: president, K. H. L. Key; secretary, J. H. Calaby; and treasurer, A. G. McArthur. There will be an annual general meeting each August and an additional meeting held in association with the annual meetings of the Australian and New Zealand Association for the Advancement of Science. For information, write to the secretary, Wildlife Section, Commonwealth Scientific and Industrial Research Organization, Box 109, Canberra City, A.C.T., Australia.

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Radio telescope delayed. Construction of the Navy's rotating radio telescope at Sugar Grove, W. Va., has been delayed at least 2 years by unexpected engineering difficulties. Completion was originally scheduled for 1962. The saucer-shaped antenna, 600 feet in diameter, will be more than twice as large as the antenna at Jodrell Bank, England, now the world's largest. Bigger radio telescopes are being built by scooping reflectors in the ground, such as the 1000-foot dish being built by the Defense Department in Puerto Rico. However, these cannot be rotated.

Construction at Sugar Grove began in September 1958. Recently the largest single piece of the structure was put in place in the center of the foundation—a 116-ton cylindrical piece of steel, 15 feet 4½ inches in height and 10 feet in diameter, which will serve as the shaft for the central pintle bearing.

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Agricultural research laboratory. A major U.S. Department of Agriculture research laboratory was dedicated on 31 October. Located 25 miles north of Columbus, Ohio, the new building will house the North-Central Forest Biology Laboratories, a unit of the Central States Forest Experiment Station, Forest Service; and the Shade Tree and Ornamental Plants Laboratory, a unit of the Agricultural Research Service.

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Italian health institute anniversary. On 12 December the Istituto Superiore di Sanità of Rome will mark its 25th anniversary. A celebration will take place during the first International Symposium on National Health Institutes and Research in Medico-Sanitary Problems, which is being sponsored by the World Health Organization, the Italian Minister of Health, and the Istituto Superiore. For information, write to the Istituto Superiore di Sanità, Viale Regina Elena 299, Roma, Italy.

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Teaching-improvement loans. The sum of $6,480,000 has been made available under Title III of the National Defense Education Act to provide loans for strengthening instruction in science, mathematics, and modern foreign languages in private nonprofit elementary and secondary schools. The Act requires that funds be allotted for use in the states and territories in proportion to pupil enrollment. All information on the loans program and application forms will be sent immediately, upon request, to schools that wish to file a loan request in this fiscal year. Address requests to: John R. Ludington, Director, Aid to State and Local Schools Branch, Office of Education, Washington 25, D.C.

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Arctic sound named for Massey. An unnamed sound in Canada's arctic archipelago is to be named after Vincent Massey, former governor general of Canada. Massey Sound, as it will henceforth be known, is the feature between Axel Heiberg and Amund Ringnes islands in the Queen Elizabeth Islands of the northern archipelago. It is approximately 70 miles long and 30 miles wide. Massey has always been particularly interested in Canada's northland.

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Molten salt reactor. The Atomic Energy Commission will build a reactor experiment of the molten salt type at the Oak Ridge National Laboratory as a part of the commission's effort to investigate advanced reactor concepts having potential advantages for the production of electrical power. The molten salt reactor concept offers the potential economic advantages of improved steam conditions and high efficiency through operation at very high temperatures and specific power. Since the fuel is in solution, no fabrication of fuel elements is necessary and continuous removal of fission poisons is possible.

Costs of the experiment are estimated at about $4,100,000, exclusive of research and development. Initial operation is planned for spring, 1963.

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Darwin film. The University of Chicago last month held a premiere showing of the "Darwin Centennial Celebration Documentary Movie," produced by Encyclopaedia Britannica Films, Inc. The new film is devoted to the celebration held at the university last November which attracted scientists from all parts of the United States and abroad, including Sir Charles Darwin and Sir Julian Huxley. The featured guest at the showing was John T. Scopes, a former University of Chicago graduate student and the school-teacher defendant in the famous Dayton, Tenn., "monkey trial" on the teaching of evolution.

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IAEA fusion journal. The first issue of *Nuclear Fusion*, a quarterly international scientific journal devoted to plasma physics and controlled thermonuclear research, was published last month by the International Atomic Energy Agency. Atomic fission, rather than fusion, has been the basis of most of the work done thus far in applying atomic energy for peaceful purposes. Continued utilization of the fission reaction depends primarily on the continued availability of uranium and thorium, the principal sources of fissionable material in nature. It is believed that these resources will ultimately have to be supplemented in order to satisfy the rapidly mounting energy demands of the peoples of the world.

Grants, Fellowships, and Awards

Biophysics. The National Academy of Sciences–National Research Council *ad hoc* Committee on International Relations in Biophysics has obtained funds to assist a number of U.S. biophysicists to attend the International Congress of Biophysics, Stockholm, 31 July–4 August 1961. A special committee has been established to screen applications for travel grants. Applications must be received no later than *31 December 1960.* Application forms may be obtained from the Committee on International Relations in Biophysics, Division of Biology and Agriculture, National Academy of Sciences–National Research Council, 2101 Constitution Ave., NW, Washington 25, D.C.

Medicine overseas. The Association of American Medical Colleges is accepting applicants for a foreign fellowship program which gives future United States physicians opportunity to study medicine in remote areas of the world. The program, begun last year under the sponsorship of Smith Kline and French Laboratories, enables selected medical students of either sex who have finished either their third or fourth year of training to benefit from unusual clinical experiences and to practice preventive medicine at outpost facilities in greatly different societies and cultures. The foreign visits usually last about 12 weeks. Last year, grants totaling some $50,000 were made to 29 students from a $180,000 fund. It is expected that about 30 Fellows will be named in 1961. Applications, which are available through medical school deans, must be returned to the AAMC *by 31 December.*

NATO. At the request of the Department of State, the National Science Foundation will again administer United States participation in North Atlantic Treaty Organization fellowships in science. About 50 fellowships will be awarded citizens and nationals of the United States to encourage further study in the sciences abroad.

Awards will be made in the mathematical, physical, and engineering sciences; in medical and biological sciences, including anthropology and psychology (exclusive of clinical psychology); and in certain social sciences. Included, as well, are interdisciplinary fields which overlap two or more scientific disciplines. Applicants must, by the anticipated beginning of the fellowship, have earned a doctoral degree in one of the above-listed sciences or must have had research training and experience equivalent to that represented by the doctoral degree.

Applicants are encouraged to apply for study in a country that is a member of the NATO community; however, consideration will be given to those planning study elsewhere. NATO fellows will receive $4500 for tenures of a full year and $3375 for the academic year. Limited round-trip travel and dependency allowances will also be provided.

Applications will be evaluated for the National Science Foundation by panels of scientists appointed by the National Academy of Sciences–National Research Council. Detailed information may be obtained from the Fellowship Office, National Academy of Sciences–National Research Council, 2101 Constitution Ave., NW, Washington 25, D.C. Completed application forms must be received by the NAS–NRC *by 19 December.* Awards will be announced on 3 April 1961.

National Science Foundation. The National Academy of Sciences–National Research Council has again been called upon to advise the National Science Foundation in the selection of candidates for the foundation's program of graduate and postdoctoral fellowships. The foundation plans to award approximately 1200 graduate and 150 postdoctoral fellowships in these two programs during the 1961–62 academic year. Academy–Research Council committees will evaluate the applications of all candidates. Final selection will be made by the foundation, and awards will be announced on 15 March 1961.

These fellowships, which are open to citizens of the United States, may be applied to advanced study in the mathematical, physical, medical, biological, and engineering sciences, including anthropology, psychology (exclusive of clinical psychology), and the following social sciences: geography, mathematical economics, econometrics, demography, information and communication theory, experimental and quantitative sociology, and the history and philosophy of science. They are open to college seniors, graduate and postdoctoral students, and others with equivalent training and experience.

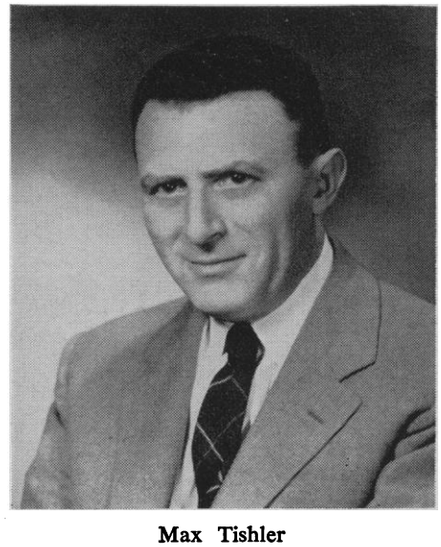
All applicants for graduate (predoctoral) awards will be required to take the Graduate Record examination designed to test scientific aptitude and achievement. This examination, administered by the Educational Testing Service, will be given on 21 January 1961, at designated centers throughout the United States and in certain foreign countries.

The annual stipends for graduate fellows are as follows: $1800 for the first year; $2000 for the intermediate year; and $2200 for the terminal year. The annual stipend for postdoctoral fellows is $4500. Limited allowances for tuition, laboratory fees, and travel will also be provided.

Further information and application materials may be obtained from the Fellowship Office, National Academy of Sciences–National Research Council, 2101 Constitution Ave., NW, Washington 25, D.C. The deadline for receipt of applications for regular postdoctoral fellowships is *19 December 1960* and for graduate fellowships, *6 January 1961.*

Scientists in the News

Max Tishler, president of the Merck Sharp and Dohme Research Laboratories Division of Merck and Co., Inc., has been chosen to receive the 1961 Industrial Research Institute Medal, which is awarded annually for achievement in the management and organization of scientific research in industry. Tishler, who is a member of the National Academy of Sciences, heads the staff of more than 1000 that conducts Merck's $20-million-a-year research effort in widely divergent fields, ranging from human health and nutrition to electronics. He pioneered the introduction of cortisone and hydrocortisone, penicillin and streptomycin, B_{12} and other vitamins in the 1940's as head of Merck's development team. His many



Max Tishler

other scientific achievements include the first synthesis of hydrocortisone in 1950. The medal will be presented next May at the annual meeting of the institute.

Manuel Morales, career investigator of the American Heart Association and formerly professor and chairman of the department of biochemistry at Dartmouth Medical School, has been appointed professor of biochemistry at the University of California School of Medicine (San Francisco) and staff member of the Cardiovascular Research Institute.

Three others from Dartmouth, all associate professors of biochemistry, have joined the University of California and its Cardiovascular Research Institute—**Jen Yang, Shizuo Watanabe,** and **Jean Botts**. The first two have retained their titles, and the third is now associate professor of physiology.

Joe M. Smith, professor of chemical engineering and chairman of the department at Northwestern University, has been named winner of the 1960 William H. Walker Award of the American Institute of Chemical Engineers. The award, which is made "to encourage excellence in contributions to the chemical engineering literature," will be presented during the annual meeting of the institute at the Statler-Hilton Hotel, Washington, D.C., 4–7 December. Smith is the author of some 50 books and technical articles on the interaction of physical and chemical processes, heat transfer, thermodynamics (particularly thermodynamic properties of fluids), and applied chemical kinetics and reactor design.

Maurice Bender has been appointed chief of the research and training grants branch in the Division of Air Pollution of the U.S. Public Health Service, Washington, D.C. He was formerly executive secretary of the cancer chemotherapy study section of the Division of Research Grants at the National Institutes of Health, Bethesda, Md.

The Atomic Energy Commission has announced the appointment of **John V. Vinciguerra** as director of the Office of Contract Policy. He succeeds **John R. Moore**, who has been transferred to the commission's Oak Ridge Operations Office as assistant manager for administration. Vinciguerra was formerly assistant director for safeguards in the Division of International Affairs.

Milton U. Clauser, former vice-president and director of research for Ramo-Wooldridge's Space Technology Laboratories, has formed the Clauser Technology Corporation in Torrance, Calif., which will engage in the development and production of electronic equipment for missiles. After 13 years with Douglas Aircraft Company, Clauser became head of the School of Aeronautics at Purdue University. In 1954 he joined the Ramo-Wooldridge organization.

The new company's scientific staff includes George A. Bronson, chief engineer; Fred W. Schmidlin, solid-state physics; Donald J. Farmer, quantum electronics; and Lee O. Heflinger and Edward L. Garwin, magnetohydrodynamics and space simulation.

Evert Arne Bjerhammar, professor of geology at the Swedish Royal Institute of Technology, Stockholm, has begun a 2-month lecture tour of engineering colleges in the United States. The tour is sponsored by the Engineers Joint Council and the American Society of Civil Engineers under a grant from the National Science Foundation, and is coordinated by the Surveying and Mapping Division of the ASCE. Bjerhammar is a specialist in optical and electronic distance measuring devices, parallax-triangulation automatic mapping, and applications of the calculus of matrices to the method of least squares. His tour includes some 25 colleges and universities throughout the country.

N. R. Brewer, associate professor in the department of physiology and superintendent of animal quarters at the University of Chicago, has received the 1960 Griffin Award of the Animal Care Panel in recognition of his pioneering work in the field of laboratory animal care.

Merlin D. Peterson, formerly director of Industrial Reactor Laboratories, Inc., Plainsboro, N.J., has resigned that position to accept an appointment as deputy associate laboratory director for education at Argonne National Laboratory.

After 7 years as a project architect at the University of California Lawrence Radiation Laboratory in Berkeley and Livermore, **Philip W. Faulconer** has left on a year's tour of laboratories and research organizations in Japan, India, and Europe.

Microbiological Associates, Inc., Bethesda, Md., has announced the appointment of **George E. Jay, Jr.**, as director, department of laboratory animals. Previously he served as the genetics and animal resources officer for the Cancer Chemotherapy National Service Center of the National Cancer Institute.

George E. Pake, professor of physics at Stanford University, has received the alumni award of merit from Carnegie Institute of Technology. He is the originator of nuclear resonance techniques for analyzing the structure of crystals and is a member of the governing board of the American Institute of Physics.

Nathan E. Cohen, dean of the School of Applied Social Sciences at Western Reserve University, will deliver a principal address at the 10th International Conference of Social Work, to be held in Rome, 8–14 January.

Lars Lindquist of Uppsala University, Sweden, will spend this year as a National Academy of Sciences–National Research Council visiting scientist at the Quartermaster Research and Engineering Laboratories in Natick, Mass.

William L. Bradford, chairman of the department of pediatrics at the University of Rochester School of Medicine and Dentistry and a member of the faculty since 1926, has received the 1960 Gold Medal of the university's Medical Alumni Association. The award is given to a faculty member in recognition of integrity and inspiring teaching.

Harry L. Rietze, since 1958 assistant regional director in Alaska for the Bureau of Commercial Fisheries, U.S. Fish and Wildlife Service, has been appointed director. He replaces **John T. Gharrett**, who was recently transferred to Gloucester, Mass., as regional director for the bureau's North Atlantic Region.

Lawrence R. Boies, professor and head of the department of otolaryngology at the University of Minnesota, was named president-elect of the American Academy of Ophthalmology and Otolaryngology at the 65th annual business meeting, on 13 October in Chicago. He will take office in January 1962, succeeding **Dohrmann K. Pischel**, San Francisco, who is now president-elect and will become president in January 1961.

Robert W. Knecht, who has just returned from a year's study at Cavendish Laboratory, Cambridge, England, has been named assistant division chief of the Ionosphere Research and Propagation Division of the Boulder Laboratories of the National Bureau of Standards. This new assignment is in addition to his present duties as chief of the Sun-Earth Relationships Section of the Boulder Laboratories.

Jason J. Nassau, professor of astronomy and formerly director of the Warner and Swasey Observatory and the Nassau Astronomical Station of Case Institute of Technology, has been elected a corresponding member of the Academy of Athens in Greece. He is one of six such foreign corresponding members.

The Martin Company, Baltimore, has announced the appointment of **William S. Stringham**, for the past 7 years a nuclear chemist for the Goodyear Atomic Corporation, to supervise activities at Quehanna, Pa., where Martin has applied for a license from the Atomic Energy Commission to carry out advanced development work in isotopic power. Stringham will be in charge of laboratory facilities associated with five heavily shielded "hot cells" in which a variety of radioactive fuels for atomic generators can be handled.

Johannes van Overbeek, chief plant physiologist at Shell Development Company's Agricultural Research Laboratory in Modesto, Calif., has been awarded an honorary doctor's degree in agricultural science by the Institute Agronomique de l'Etat, Gembloux, Belgium. The presentation ceremony marked the institute's centennial celebration.

Robert Ornduff of the University of California, Berkeley, received the Cooley Award for the best paper presented at the annual meeting of the American Society of Plant Taxonomists. His paper was entitled "Hybridization between *Lasthenia* and *Crockeria* (Compositae): its taxonomic and evolutionary implications."

Thomas G. Ward, since 1956 professor of virology at the University of Notre Dame, has been named director, Division of Virus Research at Microbiological Associates, Inc., Bethesda, Md.

Melvin S. Day, formerly director, Office of Technical Information, U.S. Atomic Energy Commission, has been named deputy director of the National Aeronautics and Space Administration's Office of Technical Information and Educational Programs.

The training program for anesthesiology at the University of Washington School of Medicine (Seattle) was recently given departmental status and is to be headed by **John J. Bonica**, former director of anesthesiology at Tacoma General Hospital and Pierce County Hospital.

Also in the medical school, **J. Thomas Grayston**, has been appointed professor of public health and preventive medicine and executive officer of the department. An authority on infectious diseases, he has headed a U.S. Navy medical research unit in Taipei, Formosa, for the past 3 years. During that period he was on leave from a position as assistant professor of preventive medicine at the University of Chicago School of Medicine.

Recent Deaths

Johan G. Andersson, Stockholm, Sweden; 86; archeologist, who as a young man took part in several polar explorations, including Otto Nordenskoeld's Antarctic expedition of 1901–04; in 1909 was appointed head of the Swedish Geological Institute and later spent about 10 years as geological research adviser to the Chinese Government; honorary member of the Society of Antiquaries in London, the Royal Anthropological Institute of Great Britain, and the Ecole Française d'Extreme-Orient in Hanoi; 29 Oct.

John O. Bower, Philadelphia, Pa.; 75; former director of surgical research at Temple University Medical School who, with associates, developed a serum to combat acute appendicitis; in 1940 left Temple to establish the Foundation for Clinical and Surgical Research, which produced antiperitonitis serum and blood plasma during Wold War II; 30 Oct.

Leslie D. Cassidy, St. Louis, Mo.; 63; gastroenterologist and assistant professor of clinical medicine at the St. Louis University School of Medicine; was associate physician at the St. Mary's Group Hospitals for 19 years, and was on the executive committee at DePaul Hospital, where he had also served as chairman of the staff; 24 Oct.

Kenneth B. Clarke, Brooklyn, N.Y.; 59; superintendent of systems programming for the Defense Activities Division of the Western Electric Company; former coordinator of transportation and logistics for the Distant Early Warning Line, a network of radar warning stations in the Arctic constructed for the government by Western Electric; 28 Oct.

Peter L. Goldacre, Canberra, Australia; 34; a senior research officer in the Division of Plant Industry, Commonwealth Scientific and Industrial Research Organization, Canberra; appointed in 1947 as one of the first two plant biochemists to join the plant division; in early research, largely enzymological, was the first to characterize the "indoleacetic acid oxidase" complex as being composed in part of a peroxidase, and was instrumental in discovering the activating effect of monophenols on this enzyme complex; later research emphasis was on the mechanism underlying differentiation of plant cells, which led to his discovery of "Kineapple," a yet uncharacterized, highly active cell division inducer from apple fruitlets; 16 Apr.

Harry H. Goode, Ann Arbor, Mich.; 51; professor of electrical engineering at the University of Michigan; known internationally for his work in the engineering of large-scale systems; served as a computer, mathematics, and defense consultant; a former technical director of the Bendix Systems Division, Ann Arbor; 30 Oct.

Alfred H. Lovell, Ann Arbor, Mich.; 76; professor emeritus of electrical engineering at the University of Michigan; joined the university faculty in 1911, became professor in 1919, was made head of the department in 1945, and retired in 1954; 27 Oct.

Robert B. McGraw, New York, N.Y.; 63; psychiatrist and a former clinical professor of psychiatry at the College of Physicians and Surgeons of Columbia University; served for 30 years, until 1958, as chief of the university's Vanderbilt Psychiatric Clinic; 23 Oct.

Robert S. Shaw, New York, N.Y.; 56; physicist on the faculty of the College of the City of New York since 1929; 24 Oct.

John C. Walker, Westfield, N.J.; 66; retired research director for the Cities Service Company, New York; an inventor who held patents in this country and abroad on corrosion control in gas and petroleum pipelines and on other processes; 31 Oct.