

News and Notes

Annual Meeting of the Society of American Bacteriologists

ON August 10-14, about 1300 scientists met at the Palace Hotel in San Francisco to participate in the Annual Meeting of the Society of American Bacteriologists. The northern California-Hawaiian Branch, the host organization, provided admirable facilities. In addition to the usual scientific functions, the council and the business session continued its consideration of economic and sociological problems of its members, including certification of bacteriologists and accrediting of curricula in colleges and universities offering training in this field. These problems were reviewed by the Society President, Gail M. Daack, in his presidential address.

The sixteenth Eli Lilly Research Award in Bacteriology and Immunology was given to J. Lederberg of the University of Wisconsin. A joint meeting of all divisions heard him review his work in bacterial genetics, for which the award was made.

The four symposia organized by the Divisions of the Society were well attended. The Agricultural and Industrial Division sponsored a symposium on Actinomycetes, convened by P. R. Burkholder of Yale University, which considered the identification, classification, variation, and metabolism of this group of soil microorganisms which has recently become of foremost importance in industrial microbiology. F. Lipman of Harvard University convened a symposium on energy utilization and synthetic reactions which was sponsored by the Physiology Division and included as participants E. A. Evans, Jr., R. M. Herriot, S. Spiegelman, L. Szilard, M. Doudoroff, E. R. Stadtman, L. O. Krampitz, M. Calvin, and I. C. Gunsalus. Symposia on radiations were sponsored by the Medical and the General Divisions, the former dealing with the role of infection in radiation injuries and the latter with radiation effects on cells and bacteria. The local committee arranged a symposium on the history of bacteriology in the western states. A committee on *Bergey's Manual of Determinative Bacteriology* held an open meeting on proposed changes in classification.

At the five concurrent sessions, which occupied three full days, 252 research reports were presented. The diverse fields of microbiology were well represented but more than usual attention was paid to viral culture, microbial adaptation, the biosynthesis of nucleic acid constituents, and intermediary metabolism. Of the many outstanding papers presented, only a few can be mentioned here. By using an isotope technique, it was shown by P. W. Wilson and co-workers of the University of Wisconsin that some strains of *Aerobacter aerogenes* are able to fix atmospheric nitrogen. B. A. Rubin of Syntex Co., Mexico, reported on new organisms that speed cortisone production by carrying

out, in a few fermentation steps, a modification of naturally occurring steroidal saponogens into intermediates that require fewer chemical manipulations to produce the useful end products. A new antibiotic, magnamycin, which works against a variety of virus diseases as well as amebic dysentery, was reported by F. W. Tanner of Chas. Pfizer & Co. An improved vaccine for whooping cough, which contains cells disrupted by supersonic waves, was reported by W. F. Verwey and co-workers of Sharpe and Dohme. J. T. Syvertson of the University of Minnesota summarized the experimental studies on the culture of poliomyelitis and other viruses on a stable strain of human malignant epithelial cells which has been maintained in serial culture since early in 1951. Heinmetz, Taylor, and Lehman of Camp Lejeune, N. C., presented the thesis that chemicals, heat, and radiations destroy certain specific processes in cellular metabolism, since their data show that organisms killed by any one of these processes can be revived by incubation with a particular spectrum of metabolic intermediates. In a report from Ohio State University, G. L. Stahly and associates revealed a new process to produce dextran by microbes which gave double or triple the yield of dextran suitable for clinical use. The isolation of a variety of types of *Salmonella* species from birds, reptiles, and animals in the Detroit Zoo by Elizabeth Cope and associates suggests that this may be a reservoir of infection potentially hazardous for zoo visitors. Craig and Francis of the University of Michigan showed that normal monkeys kept in the same cage with those infected with type I poliomyelitis virus rarely acquired antibodies from a possible subclinical infection that might be expected as a result of such intimate contact.

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The 1953 Gordon—AAAS Research Conference on Nuclear Chemistry

OVER 100 nuclear chemists from the U.S. and Canada, with 6 representatives from overseas, met June 22-26 at the New Hampton School, New Hampton, N. H., for the second Gordon Research Conference on Nuclear Chemistry, one of the series of research conferences sponsored each summer by the AAAS. The general program was organized by C. D. Coryell of the Massachusetts Institute of Technology and I. Perlman of the University of California Radiation Laboratory.

Three sessions were devoted to nuclear systematics under the chairmanship of Katherine Way of the National Bureau of Standards, G. T. Seaborg of the University of California Radiation Laboratory, and T. P. Kohman of the Carnegie Institute of Technology. An

extended session, with L. E. Glendenin of the Argonne National Laboratory as chairman, dealt with the subject of fission. Discussion of high-energy nuclear reactions covered two sessions, E. Segrè of the University of California and A. L. Turkevich of the University of Chicago presided. Physical techniques and chemical techniques each occupied a session, with G. Friedlander of Brookhaven National Laboratory and E. K. Hyde of the University of California Radiation Laboratory, respectively, in the chair. The last session, under the chairmanship of C. H. Townes of Columbia University, was devoted to a survey of spectroscopic and atomic beam methods for nuclear information.

The general framework for next year's Conference was extensively discussed, with the majority opinion favoring continued emphasis on nuclear chemistry rather than on chemical tracer applications, as many applications of radiochemistry are covered in other Gordon Conferences. However, the consensus was that such borderline subjects as the role of long-lived radioactivities in geochemistry and the extranuclear effects of nuclear processes should properly be included in future conferences. Officers chosen for the next Conference were Gerhart Friedlander, Chairman, and Truman P. Kohman, Vice-Chairman.

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Scientists in the News

McGeorge Bundy, Associate Professor of Government at Harvard University, succeeds **Paul H. Buck** as Dean of the Faculty of Arts and Sciences, which is the university's largest faculty and which controls both Harvard College and the Graduate School of Arts and Sciences.

E. D. Merrill, Arnold Professor Emeritus of Botany at Harvard University and formerly Director of the Arnold Arboretum, has been elected a foreign member of the Royal Netherlands Academy of Science.

Ralph Metheny, formerly Manager of the Veterans Administration Hospital in Syracuse, has been appointed Clinical Associate Professor (hospital administration) in the Department of Public Health and Preventive Medicine of the State University of New York College of Medicine.

Frank Neumann, Chief, Seismology Branch, Division of Geophysics, Coast and Geodetic Survey, has retired after 42 years of service. After receiving his education at the Baltimore Polytechnic Institute and joining the Survey, he was for several years engaged in magnetic field work and directed the magnetic and seismological observatories in Puerto Rico and Hawaii. In 1925, when the Coast and Geodetic Survey was recognized as the authority for the investigation

of earthquakes, he was placed in charge of this activity.

Notable among Mr. Neumann's achievements in the field of seismological research are: (1) the discovery, through the study of seismograph records in 1932, of a much discussed change in the character of the rock structure of the earth just beneath the basement rocks of the crust; (2) development of a method of double-integrating accelegraph records of destructive earthquake reactions so as greatly to increase the usefulness of the data for engineering and other purposes; (3) construction of the first torsion pendulum analyzer that makes it possible to reproduce, in slow motion, the theoretical movements of a building during an earthquake; and (4) the conduct of studies directed toward formulating the complex relationship that exists between earthquake intensity and actual ground motions.

In 1952 Mr. Neumann was guest of the Haitian Government in surveying earthquake destruction and recommending future procedures in regard to the earthquake problem. He has served as consultant for engineering-vibration problems at damsites on the Pacific coast and for related problems in the Canal Zone. He also made the initial measurements that determined the amount of sway of the Washington Monument and aided in the solution of vibration problems associated with the remodeling of the White House. In 1950 Mr. Neumann received the Department of Commerce Silver Medal for meritorious service.

Mr. Neumann is author of numerous seismological publications. A member of many professional societies, he served two terms as president of the Seismological Society of America. During his retirement Mr. Neumann will be Professor of Seismology at the University of Washington in Seattle, and will continue his research in engineering seismology.

John V. Quaranta, formerly an assistant professor at Manhattan College, has been appointed Chairman of the Department of Psychology and Director of Guidance at Marymount College, Tarrytown, N.Y.

Gustaaf Rambitan, chief civilian medical officer of Djakarta, Republic of Indonesia, is serving as a visiting fellow for six months at Ohio State University, where he is studying aviation physiology under Fred A. Hitchcock of the physiology faculty. Dr. Rambitan is supported by a grant from the Division of International Health of the Education and Training Branch, U.S. Public Health Service. During his stay in this country he will visit the Civil Aeronautics Administration in Washington, D.C., and will attend several conferences. Before returning to Djakarta, where he will head the civil aviation medical division, Dr. Rambitan will study for six months in the Netherlands.

John D. Roberts, Professor of Organic Chemistry at the California Institute of Technology, has been named recipient of the 1954 American Chemical Society award in pure chemistry. The \$1000 award is

given annually to an outstanding young chemist in recognition of his contribution in fundamental research. Dr. Roberts is the third member of the Caltech faculty to receive the honor in the past five years. His chief investigations have dealt with theoretical organic chemistry, and he has conducted radioactive tracer research and studies on small-ring organic compounds and rearrangement reactions of organic compounds.

Last spring two new directive positions were created within the Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica. The new positions of Deputy Director and Director of Research and Education were assigned respectively to **Armando Samper**, Head of the Scientific Communications Service, and **H. C. Thompson**, Head of the Plant Industry Department. Both men have continued with their regular duties in addition to those of the new posts.

S. Smith Stevens, Professor of Psychology at Harvard University and Director of the Psychological Laboratories, has been invited to spend the coming year at the Institute for Advanced Study at Princeton.

Edward A. Strecker, Chairman of the Department of Psychiatry at the University of Pennsylvania, retired in June after having filled the post for 22 years. He has been succeeded by **Kenneth Appel**, who has been associated with the University and with the Pennsylvania Hospital since 1924. Dr. Strecker is the author of many books and articles on psychiatry.

One of the less well-known monuments of his distinguished career is the Strecker Psychiatric Society, which was founded in 1945. This society is an undergraduate medical organization of about 40 members. It serves a very useful educational purpose and the meetings, in which nationally known guest speakers participate, have a large attendance.

Education

The **American Association for Health, Physical Education and Recreation** has appointed a committee, headed by Dr. Arthur Steinhaus, to work with the National Society for Medical Research, Chicago, in developing programs and materials for education in the schools.

Amherst College is constructing a subterranean vault designed to house 6 to 8 ounces of radioactive cobalt. The material will make possible further studies of radiation effects, both direct and genetic. The use of the cobalt will be supervised by Harold H. Plough, Professor of Biology, who has returned from the Nevada Proving Grounds (Yucca Flat) after two years as Assistant Chief of the Biological Branch of the Atomic Energy Commission.

Linked to the biology laboratory by an underground passage, the 12-foot-square concrete-lined chamber will hold the cobalt in a heavy lead container mounted

on a movable carrier. The cobalt at Amherst has a total strength of 500 curies (equal to the amount given off by a pound of radium), but will actually deliver 600 roentgens per hour at a distance of 30 inches. At the end of five years it will have lost approximately half its original strength. Exposure to the radioactive metal will be possible only after the room has been sealed, and will be regulated by means of levers in the passageway. The entire vault will lie under several feet of earth so that there can be no external contamination. Funds for the new project were made available by the Atomic Energy Commission.

The **Seoul National University School of Public Health** has recently been established in Korea. In response to a special message from Col. James P. Pappas, Chief of the Public Health Section of the United Nations Civil Assistance Command in South Korea, the Harvard School of Public Health assembled an emergency library of more than 300 public health and preventive medicine textbooks and reference works. The library was flown to Seoul in time for the opening of the new public health school, the first in Korea. Further additions to the library are seriously needed.

The **University of Texas** has announced consolidation of the Department of Applied Mathematics and Astronomy and the Department of Pure Mathematics into a single department, to be known as the Department of Mathematics and Astronomy.

Grants and Fellowships

The **Explorers Club**, an organization of scientific explorers with headquarters in New York City, has established a fund for exploration. Grants are made from this fund for worthwhile exploratory activities. The grants are considered by the Exploration Fund Committee, which consists of Serge A. Korff, Chairman, Professor of Physics at New York University; Alexander Wetmore, Secretary of the Smithsonian Institution; Samuel Stein, Chairman of the Law Committee of the Explorers Club; C. R. Vose of the Vose Insurance Company; James R. Allis, Treasurer of the Explorers Club; Charles B. Hitchcock, Director of the American Geophysical Society; and G. Tate, herpetologist with the American Museum of Natural History. Applications should be sent to the Secretary of the Club, and must show the nature, sponsorship, commercial interest, and other details of the proposed expedition.

In the last 8 months the **Lasdon Foundation, Inc.** has made 26 research grants, amounting to \$178,092.54, to universities and medical centers throughout the United States and abroad. It is the policy of the Foundation to support selected medical projects in order to sustain research activities that might otherwise be neglected. The most recent group of awards includes one of \$15,000 to Harvard Medical School for further studies into the transplantation of the hu-

man kidney, and one of \$15,856 to Washington University, St. Louis, for research into certain phases of hypertension and other vascular diseases, under the direction of Henry A. Schroeder.

The **National Science Foundation** will award individual grants to defray partial travel expenses of a limited number of American plant scientists who will attend the Eighth International Congress of Botany to be held in Paris, France, July 2-14, 1954. Application blanks may be obtained from the National Science Foundation, Washington 25, D.C. *Completed applications must be returned to the Foundation by Jan. 1, 1954.* Announcements of the travel grants to be awarded will be made in March, 1954.

Initial selection of botanists to be awarded travel grants will be made by a committee representing all major areas of plant science to be chosen by the American Institute of Biological Sciences. Final selection of grantees will be made by the National Science Foundation.

Research grants numbering 1419 and aggregating \$13,716,318 have been awarded by the **U.S. Public Health Service** upon the recommendation of advisory councils to the National Institutes of Health at their meetings in Washington last June. (At the next meetings, which start in October, the total is expected to be considerably higher.) Heart research led the list with 332 awards totalling \$3,380,021. Next in order were the following: cancer, 298, \$2,841,282; general, 240, \$1,957,950; arthritis and metabolic, 191, \$1,716,169; neurology and blindness, 155, \$1,590,203; microbiology, 125, \$1,206,278; mental, 65, \$890,683; and dental, 13, \$133,732.

In the Laboratories

M. W. Olsen and S. J. Marsden of the Bureau of Animal Industry, Beltsville Agricultural Research Center, U.S. Department of Agriculture, report that living, fatherless embryos have developed in 15% of all eggs laid by experimental virgin turkey hens. This may be the first observed case of **natural parthenogenesis in birds**. It is known to occur as far up the animal scale as fish or frogs, and has been induced even in rabbits.

In 98% of the fatherless embryos development was disorganized, a translucent membrane simply spreading over part or all of the egg yolk. None of the embryos ever lived more than seven days, and usually stayed alive only two to four days.

An improved technique for studying photosynthesis has been developed at the State University of New York College of Forestry. John P. Decker, plant physiologist who has experimented in charting the metabolic rates of trees and green plants since 1938, conducted the work on this gas analysis apparatus for determining the amount of CO₂ taken from the air by the green plant. The new method permits researchers to obtain in two minutes data which formerly

required two hours, and with a degree of accuracy which was previously impossible. The heart of the apparatus is a new electronic device, an infra-red gas analyzer perfected by Max Liston, a physicist of Stamford, Conn. In its original form the analyzer was developed in Germany for use as a carbon monoxide warning device in German U-boats during World War II. When adapted to carbon dioxide, the analyzer was ideal for Dr. Decker's purposes.

This photosynthesis apparatus should have many important applications. John Clark, research specialist of the Laboratory of Forest Biology at Fredericton, New Brunswick, Canada, will use the new technique in studies of the effect of defoliating insects on the photosynthetic capacity of Canadian forests, now a serious problem. Further, the improved method of measuring may lead to a cheaper production of sugar by aiding in the detection of genetically superior plants obtained from hybridization. Similar uses by other plant breeders will obviously suggest themselves.

The **University of Minnesota Laboratory of Physiological Hygiene** has commenced a 5-year program on minimum food needs in emergencies. Investigators hope to determine how much food and what kinds a man requires to maintain his capacity for working or fighting under survival conditions. Sponsored by the Quartermaster General and Surgeon General of the Army, these new studies are designed to help the Defense Department plan for military emergencies. Nineteen soldiers from Ft. Lee, Va., have volunteered for rigid discipline and periods of real hunger and discomfort to aid scientific knowledge in the first of a series of experiments, each lasting 6-8 weeks.

These experiments will also yield valuable information about basic human physiology and biochemistry, and the circulation tests to be used will dovetail with the main long-term research of the laboratory on heart disease and aging of the blood vessels. Henry L. Taylor, an associate professor, is in charge of the early experiments. He will be assisted by Joseph T. Anderson and Ernst Simonson, associate professors, and a staff of 20 doctors and technicians.

The well-known "Minnesota Starvation Experiments," with conscientious objectors as subjects in 1944-46, was the laboratory's last major experiment on undernutrition. During the war, the laboratory did pioneer work for the Army in developing and testing combat rations, including the "K" ration.

Meetings and Elections

The **American Society of Biological Chemists** has elected the following officers for 1953-54: pres., D. Wright Wilson; v. pres., C. G. King; sec., Philip Handler; treas., Philip P. Cohen.

The **5th Canadian High Polymer Forum** will take place at London, Ontario, Nov. 19-20. Meetings will be held in the Auditorium of the London Public Library and Museum, and hotel accommodation will be at the Hotel London, a short distance away. In-

formation and reservations may be obtained from Dr. H. Leverne Williams, Polymer Corp. Ltd., Sarnia, Ontario, Canada.

As part of the Forum there will be an invited address by D. P. Riley of the Royal Institution, London, England, and a group dinner. The Committee will arrange visits to the University of Western Ontario and local industries. Eighteen papers have been accepted by the Programme Chairman. Further contributions can still be accepted for the final program by submitting a title and a 200 word abstract to the Programme Chairman, Prof. R.V.V. Nicholls, McGill University, Montreal, Quebec.

The Members of the Board for 1953-54 of the **Federation of American Societies for Experimental Biology** are:

American Physiological Society: pres., E. F. Adolph; pres. elect, H. E. Essex; past pres., E. M. Landis; exec. sec., M. O. Lee (federation secretary).

American Society of Biological Chemists: pres., D. W. Wilson; sec., Philip Handler; Vincent du Vigneaud (appointed to fill vacancy caused by the death of past pres. H. A. Mattill).

American Society for Pharmacology and Experimental Therapeutics: pres., Harvey B. Haag; sec., Carl C. Pfeiffer; past pres., K. K. Chen (federation chairman).

American Society for Experimental Pathology: pres., D. Murray Angevine; sec., C. C. Erickson; past pres., S. C. Madden.

American Institute of Nutrition: pres., C. A. Elvehjem; sec., J. M. Orten; past pres., P. L. Day.

American Association of Immunologists: pres., Thomas P. Magill; sec., John Y. Sugg; past pres., John F. Enders.

During the 19th International Physiological Congress in Montreal, official delegates from Physiological Societies of seventeen countries voted unanimously to form an **International Union of the Physiological Sciences**. A Council of eleven members was elected. Its composition is as follows: E. D. Adrian (England), C. H. Best (Canada), K. M. Bykov (Russia), C. Heymans (Belgium), B. A. Houssay (Argentina), Y. Kuno (Japan), E. Lundsgaard (Denmark), A. Mayer (France), A. von Muralt (Switzerland), M. B. Visser (U.S.), and H. H. Weber (Germany). The Council elected C. H. Best as president and M. B. Visser as secretary for three-year terms. The Council was instructed by the Assembly of the I.U.P.S. to complete arrangements for adherence to the International Council of Scientific Unions and to the Council for International Organizations in the Medical Sciences. The Council was also instructed to initiate actions looking toward improvements in the abstracting and indexing of literature in the physiological sciences on a world basis.

The 26th annual **Pecos Conference of Southwestern Anthropologists** was held at the Museum of Northern Arizona, Flagstaff, on August 17, 18, and 19. One

hundred and twenty-five scientists from forty-three universities, colleges, museums, and research foundations submitted reports. Next year's meeting will be held at Globe, Ariz., where conference participants will be guests of the United States National Park Service at Gila Pueblo, Headquarters of the Southwest Monuments.

The **Society of Protozoologists** elected the following officers at its annual meeting last month: pres., David H. Wenrich, Zoological Laboratory, University of Pennsylvania; v. pres., William F. Diller, Zoological Laboratory, University of Pennsylvania. Officers whose terms have not expired are: treas., Reginald D. Manwell, Syracuse University; sec., Norman D. Levine, College of Veterinary Medicine, University of Illinois. Representative to the AAAS Council is L. R. Cleveland, Biological Laboratories, Harvard University.

The Sixth Session of the **South East Asia Regional Committee of the World Health Organization** took place last month at the Sala Santithan (Hall of Peace) in Bangkok's new United Nations Building. Abdul Rahim, Delegate from Afghanistan, was elected Chairman. Delegates from seven countries as well as observers from the United Nations, the United Nations Children's Fund, the Food and Agriculture Organization, and UNESCO were present when the meeting was called to order by the retiring chairman, M. Soerono of Indonesia. He stressed his great disappointment over the serious curtailment in funds available to the World Health Organization through the United Nations Technical Assistance Program. Under the circumstances, he said it would be necessary for all countries to redouble their efforts to utilize available assistance most effectively.

M. G. Candau, Director-General of the World Health Organization, emphasized in his address the economic value of health work. He declared that India would add an estimated 40 million man hours yearly in only one area where the Government was carrying out large-scale operations in malaria control. He recalled that India, like most of the other countries in Southeast Asia, is rapidly expanding its anti-malaria work with the aim of eliminating it as a public health problem within a few years. Dr. Candau added that he hoped that the results already achieved by the Technical Assistance Program would not be jeopardized by economies which were ridiculously small as compared with the money the world is spending for non-constructive purposes.

The countries included in the South East Asia Region are: Afghanistan, Burma, Ceylon, India, Indonesia, Nepal, and Thailand. In addition to delegations from member countries, representatives from French and Portuguese India attended. The meeting was followed by a Southeast Asia regional conference on malaria, also in Bangkok. This was the first region-wide malaria conference ever to be held in Southeast Asia and it brought together some of the world's foremost specialists in modern malaria control.

A University of Buffalo research conference on "The Physics of Carbons" will be presented on its campus on Nov. 12. The Physics Department of this institution has been devoting its major research efforts to the field of carbons since 1949, and its research is now being sponsored by the Office of Naval Research and the United States Atomic Energy Commission. Reservations may be made by communicating with the Industrial Liaison Office, 172 Hayes Hall, The University of Buffalo, Buffalo 14, N.Y.

Recent Deaths

José Tinoco Acero (70), astronomer and former director of the Madrid Observatory, Madrid, Spain, Oct. 8; **Thanning W. Andersen** (56), anatomist, Medical College of Virginia, Richmond, Va., Sept. 25; **Georges Baril** (68), chemist, author, and dean of the Faculty of Sciences, University of Montreal, Montreal, Canada, Oct. 8; **W. R. B. Battle** (34), glaciologist, Baffin Island, Canada, July 13; **Wainwright D. Blake** (59), associate professor of psychology, Bucknell University, Lewisburg, Pa., Oct. 3; **John B. Brandeberry** (59), dean of the College of Engineering, University of Toledo, Toledo, Ohio, Sept. 23; **Byron C. Brunstetter** (52), executive secretary of the Division of Research Grants' Hematology and Pathology Study Sections, National Institutes of Health, Bethesda, Md., Sept. 16; **Colin Campbell** (65), dean of the Faculty of Science, University of Manchester, England, Aug. 23; **Ermine C. Case** (82), geologist, author, professor emeritus, and retired director of the Museum of Paleontology, University of Michigan, Ann Arbor, Mich., Sept. 7; **Arthur N. Clagett** (82), cancer specialist and former professor, Ill. Post-Graduate Medical School and Loyola University, Chicago, Ill., Sept. 20; **Edwin J. Cohn** (60), blood specialist, researcher, and director of the Harvard Laboratory of Physical Chemistry, Cambridge, Mass., Oct. 1.

Max Einhorn (91), retired gastroenterologist, inventor of surgical instruments, and author, New York, N.Y., Sept. 25; **Robert B Eiten** (46), professor of mathematics, University of Detroit, Detroit, Mich., Oct. 6; **Lloyd D. Felton** (67), former professor, researcher, and retired medical director at the National Institutes of Health, Bethesda, Md., Sept. 11; **H. E. Fierz-David** (71), chemist, author, and professor emeritus at Eidgenössische Technische Hochschule, Zürich, Switzerland, Aug. 25; **Colin G. Fink** (71), research chemist and professor emeritus of chemical engineering at Columbia University, New York, N.Y., Sept. 16; **Ciro Molina Garces** (62), agricultural scientist, Cali, Colombia, Sept. 25; **Norman R. Goldsmith** (46), dermatologist, researcher, and author, Lancaster, Pa., Oct. 9; **Jacob J. Golub** (62), retired medical director and executive vice president of the Hospital for Joint Diseases, New York, N.Y., Sept. 23; **Louis V. Hayes** (62), professor of oral surgery, New York University College of Dentistry, New York, N.Y., Oct. 5; **Edward O. Heinrich** (72), criminologist and

former professor at the University of California, Berkeley, Calif., Sept. 29; **Edwin P. Hubble** (63), astronomer and chairman of the joint Mount Wilson-Palomar Research Committee, Calif., Sept. 28; **Herman P. Hurlong** (73), president of the Pan-American Ontological Association and professor at the University of Mexico, Mexico, Sept. 24; **James M. Labberton** (60), professor of marine engineering at the New York University College of Engineering, New York, N.Y., Oct. 6.

Donald M. McNicol (78), electrical engineer, author, and former lecturer in the Sheffield Scientific School of Yale University, New Haven, Conn., Sept. 17; **Clare K. Madden** (53), assistant professor of orthodontics at the Columbia University School of Dental and Oral Surgery, New York, N.Y., Sept. 17; **Ray A. Moncrieff** (67), hydroelectric engineer and vice president of Charles T. Main, Inc., Boston, Mass., Sept. 28; **Irving H. Morse** (85), sugar chemist, author, and inventor, New Orleans, La., Sept. 9; **Ralph S. Overman** (37), researcher and assistant professor of biochemistry in medicine at Cornell University Medical College, New York, N.Y., Sept. 10; **Alfred M. Peter** (96), emeritus head of research chemistry at the University of Kentucky Agricultural Experiment Station, Lexington, Ky., Aug. 11; **José Antonio Presno** (77), president of the Academy of Sciences, Havana, Cuba, Sept. 12; **F. H. Rein** (56), physiologist, author, and former professor at the University of Göttingen, Germany, May 14; **Roberto Luiz Restrepo** (71), mining engineer, Bogota, Colombia, Sept. 24; **Harrison A. Ruche** (65), professor of dairy science at the University of Illinois, Urbana, Ill., Oct. 8.

Florence R. Sabin (81), first woman member of the National Academy of Sciences, and emeritus member of the Rockefeller Institute for Medical Research, New York, N.Y., Oct. 3; **Edward B. Sanigar** (51), physical chemist, Naval Radiological Defense Laboratory, San Francisco, Calif., July 28; **Florian E. Schmidt** (69), researcher on chest diseases and medical director of the Chicago Heart Association, Chicago, Ill., Sept. 10; **Louis A. Scholl, Jr.** (65), chief of the geophysical division of the Texas Company, Houston, Tex., Sept. 22; **Jasper P. Scott** (55), research chemist and executive director of operations planning for Eli Lilly and Company, Indianapolis, Ind., Sept. 8; **William C. Shank** (39), chemist and former managing editor of *Biological Abstracts*, Springfield, Pa., Sept. 3; **G. Martin Shepherd** (58), research chemist at the National Bureau of Standards, Washington, D.C., Sept. 17; **Samuel Siegler** (58), gynecologist and author, New York, N.Y., Sept. 15; **Horace W. Soper**, specialist in diseases of the digestive tract and former president of the National Gastroenterological Association, St. Louis, Mo., Sept. 28; **Homer F. Swift** (72), emeritus member of the Rockefeller Institute for Medical Research, New York, N.Y., Sept. 24; **Albert A. Teeter** (65), retired vice president and director of Chas. Pfizer & Co., New York, N.Y., Sept. 3; **William M. Thornton, Jr.** (69), lecturer in chemistry at Loyola College, Baltimore, Md., Sept. 22.