News and Notes

Indian Association

The annual general meeting of the Indian Association for the Cultivation of Science was held on 30 July. P. Ray, acting director, in presenting the annual report for 1953–54, said that the association's six research departments, the library, the workshop, and the administrative office continued to function actively during its third year in the new research laboratory building at Jadavpur. He described a 5-yr development plan covering fiscal years 1954–59, a plan that envisages the expansion of facilities with respect to equipment and staff in order to consolidate the present research activities and also to improve the level of efficiency; however, it does not involve the establishment of any new departments. The present recurring charges of the association will continue to be borne by the Government of India, but it is expected that the additional financial assistance that will be required to support the expansion plan will be borne jointly by the Government of India and the Government of West Bengal in the proportion of two to one.

During the year two members of the staff were awarded Ph.D. degrees by Calcutta University, and two others received postdoctoral fellowships for study and research in the United States. In addition, the director reported that four research projects were being conducted for the Government's Council of Scientific and Industrial Research, and also that the Ministry of Natural Resources and Scientific Research had established a number of senior and junior scholarships, under the Scientific Man-Power Committee scheme, to provide research training for deserving students at the association.

The association has started a publication section that has already issued a number of books and monographs, including a book on the history of science in Bengali (*Bijnaner Itihas*) by S. N. Sen and another on nuclear induction by A. K. Saha and T. P. Das. For the former work, the association received a substantial grant from the Government of West Bengal. The publication of a monograph, *Non-aqueous Titration* by S. R. Palit, M. N. Das, and G. R. Somayajulu, was also reported.

A number of lectures and a symposium were organized during 1953–54. G. I. Finch, who was awarded the association's Jay Kissen Mookerjee gold medal for 1950, delivered three lectures on "Electron optics and study of surfaces," "Crystal growth in electrodeposition and in surface reactions," and "Polish, mechanical wear, and lubrication." J. N. Ray gave a series of lectures as Coochbehar professor for 1949 on "Carbohydrate metabolism and the role of some plant nucleotides in the phosphorylation of glucose," "Curariform drugs and their action," and "Anesthetics." The Ripon professorship lecture for 1950 was delivered by T. R. Seshadri on "A line of investigation in the field of plant drugs and insecticides." D. K. Banerjee, M. S. Krishnan, and D. S. Kothari, the association's Ripon professors for 1948, 1949, and 1950, delivered, respectively, a series of lectures on the "Himalayan earthquakes," "Ancient Indian iron ore and the modern iron industry in India," and "Recent advances in statistical thermodynamics." Dilip Kumar Banerjee was awarded the John Wood Burn medal for 1950 and gave an address on "Steroid synthesis." J. C. Ghosh, the president of the association, delivered the memorial lecture, entitled the "Petroleum industry with special reference to India," on the occasion of the 50th anniversary of the death of Mahendra Lal Sircar, founder of the association.

A symposium on high polymers was organized by the department of physical chemistry; it was followed by a very successful 3-day summer course on the subject. Prof. Ray ended his report with a brief review of the researches carried out by the association during 1953–54. It was announced that C. C. Biswas succeeded J. C. Ghosh as president, that S. K. Mitra and K. S. Krishnan had been elected vice presidents, and that M. N. Saha was the new director.

S. N. SEN
Indian Association for the Cultivation of Science, Jadavpur, Calcutta 32, India

Science News

After **100 yr of Riemannian geometry,** the *Physikalische Blätter* (**10,** 296) has reproduced excerpts from Riemann's famous paper on the hypotheses that are the foundations of geometry. This lecture was delivered on 11 June 1854, and opened a whole new field of geometry and mathematics; it became particularly important in Einstein's general theory of relativity. In addition to the excerpts, the journal also presents a commentary by Karl F. Strubecker.—K. L. H.

The Food and Agriculture Organization of the United Nations has determined that **world food production** is rising faster than population increase for the second season in succession. There are surpluses in some regions and continued shortages and widespread malnutrition in others. Two problems in particular are matters of serious concern to the FAO: (i) How to reduce existing surpluses without unbalancing the trade in agricultural commodities. (ii) How to insure continued agricultural expansion on a selective basis with respect to countries and products in order to improve world nutrition as a whole.

The surpluses that exist are principally in North America and consist chiefly of grain. The rise in total agricultural production is greatest in Western Europe and the Near East, with smaller gains in the Far East and Oceania. Food production expanded faster than population in all the less well-fed regions except Latin America.

Phlebitis, forerunner of the often fatal pulmonary embolism, can be detected early by a simple test announced by Robert I. Lowenberg of New Haven, Conn., in a recent issue of the *Journal of the American Medical Association.* The pneumatic cuff of a blood pressure instrument is wrapped around the calf or thigh, instead of the arm, and is slowly distended. If the patient has phlebitis, he will "complain bitterly of pain" when the instrument registers somewhere between 60 and 150 mm of mercury. Usually patients do not register discomfort below 180 mm over the thigh or calf, and most can stand 250 mm on the arm without complaint. False positive tests may occur at times, but in some 350 patients Lowenberg has not had any false negative tests. No patient who had a negative test developed thrombophlebitis or pulmonary embolism.

Nineteen British doctors have left London for a 3-wk **visit in Russia.** The trip is sponsored by the British Society for Cultural Relations with the U.S.S.R. The group included T. F. Fox, editor of the medical magazine *Lancet*; Lord Amulree, president of the Medical Society for the Care of the Elderly; and Esther Killick, professor of physiology at the University of London.

A **desert plover** was found recently at the Ottenby bird station on the Baltic island of Gotland. The bird, a native of the Central Asiatic salt plains, is very rare outside its natural habitat, only seven finds having previously been recorded in Europe and Western Asia.

It is generally believed that all adult vertebrates possess a respiratory blood pigment, hemoglobin, contained in special cells, the erythrocytes. Hence the discovery of an exception to this rule is of considerable interest. Johan T. Ruud [*Nature,* **173,** 848 (8 May 1954)] reports on the blood of three species of fish, *Champsocephalus gunnari, Pseudochaenichthys georgianus,* and *Chaenocephalus aceratus,* of the family Chaenichthyidae. These three species, native to the waters of South Georgia Island in the South Atlantic, all have **colorless blood.** The existence of such fish has been known for over 20 yr, but no previous study of their blood appears to have been made.

Ruud studied the blood of *Chaenocephalus aceratus* in detail. When freshly drawn it is nearly transparent, slightly tinted yellowish-white. No cells resembling erythrocytes were found in blood smears stained after May-Grünwald and Giemsa. No blood pigment could be demonstrated; there was no absorption band in a spectrum. After centrifugation the plasma was as clear as water. The iron content of the blood is low, being no more than 4–5 percent of that found in various red-blooded fish. This supports the view that *C. aceratus* blood represents a plasma with a moderate content of leucocytes. Oxygen capacity of the fresh blood averaged 0.72 percent by volume; mean values found for the normal red blood of two local species of fish were 5.99 and 6.24, similar to those of northern fish. The O_2-capacity of *C. aceratus* blood being presumably no greater than that of ordinary red-blood plasma, it follows that it has no means of taking up O_2 except by physical solution. The actual metabolism of *C. aceratus* was not determined; the fish, however, appeared quite sluggish and sensitive to lack of O_2.

Since it can be assumed that these fish are descended from ancestors possessing blood hemoglobin, there arises the question of how they came to lose their blood pigment. Ruud thinks that such fish could survive only in the cold water of polar regions. The *Chaenocephalus* specimens came from water that can be as cold as $-1.7°C$. and is always well aerated. These seas may well have long been cold, even throughout Tertiary times.

In an appended note, H. Munro Fox points out that carp, pike, and eels have been found to be much less sensitive to carbon monoxide than is man, even though it converts nearly all of their hemoglobin to carboxyhemoglobin. He concludes that although blood hemoglobin is a necessity for some fishes, many other fishes when swimming quietly secure enough O_2 by solution in the blood plasma. The hemoglobin of such fishes represents only an emergency precaution. Evidently the "ice fish," as Fox notes, are even able to dispense with this luxury.—W. L. S., Jr.

Joseph M. Hopen and Francis N. Campagna, eye specialists at Philadelphia General Hospital, have been using injections of the digestive enzyme **trypsin to treat black eyes.** The treatment was successful in five cases, and also gave "impressive" results in seven cases of other eye conditions, including hemorrhage of the retina which caused sudden loss of vision.

The **Australian weather station** at Heard Island in the subantarctic regions 2500 mi southwest of Perth, Western Australia, is being abandoned this summer. Buildings and equipment on Heard Island will be used to expand Australia's new research station at Mawson in Antarctica; however, a basic establishment of buildings and supplies will remain on the island so that it may serve as a staging camp for future expeditions.

Clarence T. Shoch, head of the 33,000-member National Society of Professional Engineers, has criticized the action of the House-Senate conferees on the **Social Security expansion bill** in deciding to force self-employed professional engineers into the social security system, while excluding other major professions. The House bill provided mandatory coverage for all self-employed professionals except doctors. The Senate version continued the present exclusion of all self-employed professionals. The compromise provided mandatory coverage for self-employed professional engineers, architects and accountants, but continued the exclusion of lawyers, and doctors, dentists, and others in professions allied with medicine.

The objection of the professional engineers to mandatory coverage rests primarily on the same ground as

the opposition of the other professional groups—because the self-employed professional generally does not retire at the age of 65 yr and will not receive the retirement benefits after that age (until the age of 72) if he earns more than the small amount per year prescribed in the new bill ($1200 per yr).

William P. Longmire, professor of surgery at the University of California at Los Angeles Medical School who has just returned from Germany after a 2-yr leave of absence, reports that there are 6000 **unemployed doctors in West Germany.** Despite the general prosperity in West Germany unemployment among physicians is high, primarily because of the large influx of doctors from East Germany. Longmire commented that West German medical care is excellent, and that there are many well-equipped hospitals.

Lawrence Swan, biologist member of the 10-man American expedition to Mount Makalu in the Himalayas, recently reported that the group's entomologic studies and collections had established the discovery "of the **highest animal level in the world.**" Spiders were found living at a height of 20,000 ft and small snails at 16,000 ft. The expedition to the 27,700-ft mountain was sponsored by the University of California and led by William E. Siri.

Experiments that may lead to the use of supersonic waves in the treatment of some brain and mental diseases were reported by William J. Fry, John W. Barnard, and Rolfe F. Krumins of the University of Illinois at the recent meeting of the American Physiological Society. These investigators have used **supersonic waves to destroy brain tissue** in an area as small as 1/20 in. across without affecting blood vessels and without affecting tissues around, above, or beyond the spot. Only a few further tests are needed before this method can be tried on human patients. The frequncy used is 1 Mcy/sec, 50 times higher than the highest audible frequency. The beam is sent through a salt solution in contact with both sound source and the brain. The latter is exposed through an opening cut through the skull but not through the protective membrane covering the brain.

The Atomic Industrial Forum, of 260 Madison Ave., New York 16, has recently initiated a survey of the types of materials, equipment, and skills most likely to be required by the **atomic energy industry** during the next few years, together with an analysis of the magnitude of the demand for each. The Forum entered into a study agreement with the U.S. Atomic Energy Commission to facilitate the conduct of the survey. The survey is divided into three sections, private nuclear research and development, radiation instrument manufacture, and reactor development. Data on the first two sections are being obtained by means of questionnaires that have been mailed to 1000 institutions (including 75 radiation instrument manufacturers) active in or interested in the private development of atomic energy and its by-products. This information will be supplemented by interviews with selected industrial leaders active in the field. The reactor development section of the survey will be handled through a review of background information in AEC files, and through interviews both with contractors responsible for AEC's 5-yr reactor development program, and with various participants in AEC's industrial participation program.

The study team is made up of Frederick Warren of General Dynamics, former deputy director of AEC's division of construction and supply; James Pickard, a private consultant in atomic energy developments, formerly with AEC's division of reactor development; and Edwin Wiggin, Forum manager of technical information, formerly with AEC's isotopes division. The assembled data will be published and made available to all interested persons. Since no study of this type has ever before been conducted, the Forum believes that the information, will prove invaluable to industry in gaging its future plans in atomic energy development.

John C. Dunegan, plant pathologist of the U.S. Department of Agriculture, recently reported to the American Phytopathological Society that fruit trees are being protected from fire blight by antibiotic spray. In the first successful large-scale commercial **orchard trial of terramycin and streptomycin sprays,** 98 percent control of fire blight, which causes annual losses of $70,000,000, was obtained in tests at Marysville, Calif. These antibiotics are also being used on hitherto uncured bacterial diseases of tomatoes, peppers, beans, walnuts, and potatoes.

Government scientists on a small, somewhat remote island near Beaufort, N. C., will soon begin investigation of the possibility that H-bomb explosions at sea might make it very dangerous to eat tuna and other large ocean fish. The investigation is the outgrowth of the 1 Mar. H-bomb test that injured fishermen and **contaminated tuna** on a Japanese vessel. The Japanese tuna industry was hit hard when foreign importers became suspicious of all fish from the area. The new project, under Walter A. Chipman, will attempt to discover how quickly and to what extent fish collect dangerous radiation, and in what manner they do so.

Donald Thomas Fraser (1889–1954), associate director of the Connaught Medical Research Laboratories and the School of Hygiene, University of Toronto, died suddenly on 20 July in Santiago, Chile, while making a tour of South American medical schools and schools of public health at the request of the World Health Organization and under the auspices of the Pan American Sanitary Bureau.

Dr. Fraser obtained the B.A. degree at the University of Toronto and then graduated in medicine. After an interval of military service abroad, he returned to Canada in 1918 to join the staff of the Connaught Laboratories as bacteriologist, subsequently being appointed research associate and assistant director. In

1920 he was appointed to the staff of the department of hygiene and preventive medicine in the faculty of medicine, attaining the rank of professor in 1932 and head of the department in 1940. Dr. Fraser contributed much to the successful development of the school, of which he was appointed associate director in 1942.

Bacteriology and imunology were Dr. Fraser's fields and he made many important contributions. He early became interested in the control of diphtheria, and his studies included the transmission of the disease by carriers, types of organisms, the value of diphtheria toxoid in prevention, and the necessity of a recall dose in producing prolonged immunity. The control of diphtheria is one of the most remarkable achievements in the history of public health in Canada, and Dr. Fraser had a large share in this accomplishment. He was keenly interested also in tetanus, scarlet fever, and whooping cough. As professor of hygiene and preventive medicine, he developed the present courses of instruction, which extend over the whole 4 yr of undergraduate teaching. His influence as a teacher was felt far beyond the University of Toronto.

Dr. Fraser was internationally known for his work in preventive medicine and allied fields. He was president of the American Association of Immunologists in 1938–39 and of the American Epidemiological Society in 1948. He served the American Public Health Association as a member of several committees, including the Lasker Awards Committee, the Committee on Research and Standards, and the Subcommittee on the Control of Communicable Diseases. He was a fellow of the Royal Society of Canada and a senior member of the Canadian Public Health Association, as well as a member of the editorial board of the association's journal.

Scientists in the News

The University of Minnesota has announced the posthumous award of its "Builder of the Name" medal to the late **Dean Edward M. Freeman,** plant pathologist who for 25 yr headed the university's college of agriculture, forestry, and home economics. In a citation accompanying the medal, Dean Freeman is described as a "dynamic teacher in lecture hall, field and laboratory—revered for his devotion to the highest educational standards—beloved by students for his wise and generous counsel." Associated with the university as student, teacher, and administrator for almost half a century, Freeman, in 1907, organized the university's department of plant pathology, said to have been the first in this country. Dean Freeman, who retired in 1943, died 5 Feb. 1954.

Winners of Albert Lasker awards in rehabilitation are **Henry H. Kessler,** medical director, Kessler Institute for Rehabilitation, West Orange, N.J.; **Juan Farill,** chief surgeon of the Shriner's Hospital for Crippled Children, Mexico City; and **William Richard Morris,** Viscount Nuffield, Oxford, England.

The appointment of **Sidney N. Sadoff,** formerly of the H. K. Ferguson Co., as technical director of foreign operations of Bristol Laboratories, Inc., has been announced.

A bronze bust of **Albert Schweitzer,** philosopher, musician, theologian, and physician, has been presented to the University of Wisconsin by a group of hospital staff members and other Wisconsin residents. The bust, which is the work of Louis Mayer, was unveiled in August in the lobby of University Hospitals. A plaque on the bust reads:

> Versatile scholar in theology and philosophy. Distinguished contemporary interpreter of Bach. Founder and for 40 years missionary surgeon of the hospital at Lamberene, French Equatorial Africa. By his surpassing achievements in the service of God and his fellow men, Doctor Schweitzer has pointed the way to a full life in medicine. In his example the weak will find strength, and the stalwart, renewed courage and resolution.

Charles D. Shields, formerly physical medicine consultant, with the rank of colonel, in the professional division of the Office of the Surgeon General, U.S. Army, has been appointed professor and chairman of the department of physical medicine and rehabilitation at the Georgetown University School of Medicine.

Russell B. Stevens has been appointed executive secretary of the Biology Council of the Division of Biology and Agriculture, National Academy of Sciences–National Research Council, effective 15 Oct. Stevens is a plant pathologist who took his Ph.D. degree at the University of Wisconsin in 1940. He has been a teacher at three southern institutions and recently published a textbook, *Disease in Plants,* on which he collaborated with his father, Neil E. Stevens, now deceased. Associated with the Biology Council is the new committee on educational policies, which is under the chairmanship of **Howard M. Phillips,** dean of the Graduate School, Emory University.

In the Division's Food and Nutrition Board, **Paul E. Johnson** has been appointed executive secretary of the Food Protection Committee. Johnson has been with the agricultural relations division of the Tennessee Valley Authority and has had extensive experience in the field of animal and human nutrition.

On 1 July **W. F. Swanson** was named dean of the School of Dentistry of the University of Pittsburgh, where he will continue as professor of oral histology and embryology. He is a specialist in the role of vitamin C in tooth structure.

David G. White joined the pomology staff of the department of horticulture, Rutgers University, on 1 Aug. to serve as visiting professor while on sabbatical leave from the department of horticulture at Pennsylvania State University. He will help advise the 15 graduate students in pomology, complete a book on plant science techniques, teach a course in the latter

subject, and initiate research in better preservation of soft fruits at the harvest.

The Office of International Relations, National Academy of Sciences—National Research Council, has provided the following information concerning the travel plans of **scientific visitors** to the United States:

R. W. Cooke, Building Research Station, Department of Scientific and Industrial Research, Garston, near Watford, Herts, England. Arrived 22 Sept. for 1 yr on staff of United Kingdom Scientific Mission to conduct liaison work on Building Research.

H. P. Donald, director of the Agricultural Research Council's Animal Breeding Research Organization, Edinburgh. Here from 7 Sept. until early December.

W. H. Glanville, director, and R. L. Moore, (principal scientific officer), Road Research Laboratory, London. Here 14 Oct. for 5 wk to attend the Canadian Good Roads Association meetings, 8–10 Nov., and to make various visits.

A. Goldberg, Medical Research Council, London. Here in September on an Eli Lilly traveling fellowship to spend 1 yr at the department of medicine, University of Utah and Salt Lake General Hospital.

R. H. Heptinstall, Medical Research Council, London. Here in September on an Eli Lilly traveling fellowship to spend 1 yr in the department of pathology, Johns Hopkins Hospital, and in making various visits.

A. C. Hulme, Ditton Laboratory, East Malling, Kent, England. Here this fall for 1 yr at Cornell University to conduct research on the metabolism of amino acids and proteins in fruit with Prof. F. C. Steward.

W. A. Langmead, principal physicist, St. Thomas' Hospital, London. Here 28 Aug.–27 Oct. with Dr. Fleming, radiotherapist from the same hospital, to inspect hospital equipment with particular reference to radiocobalt teletherapy, and to study other applications of radioactive isotopes to medical problems.

K. McCarthy, Medical Research Council, London. Here in September on an Eli Lilly traveling fellowship to spend 2 yr at the Children's Hospital, Boston.

G. T. Mills, Medical Research Council, London. Here in September on an Eli Lilly traveling fellowship to spend 1 yr at the department of biochemistry, Western Reserve School of Medicine.

J. N. Morris, director, Medical Research Council's Social Medicine Research Unit, London. Here 11 Sept.–3 Nov. to attend the International Congress of Cardiology.

H. J. H. Starks, head, Vehicles Section, Traffic and Safety Division, Road Research Laboratory, Harmondsworth, West Drayton, Middlesex, England. Here 22 Sept. for 6 mo of liaison work on road research as a staff member of the United Kingdom Scientific Mission.

C. P. Stewart, head, Department of Clinical Chemistry, Royal Infirmary, University of Edinburgh. Will visit medical schools and other research centers in the United States and Canada during September, October, and November. Address care of Dr. Floyd Daft, National Institutes of Health, Washington, D.C.

J. H. Wilkinson, principal scientific officer, Mathematics Division, National Physical Laboratory, Teddington, Middlesex, England. Arrived 10 Sept. for 3 mo at the National Bureau of Standards. Is interested in the current trend and development in the construction of high-speed computing machines.

Dr. Moran and Mr. Wooler, Flour Millers Research Association. Here in October to obtain first hand knowledge of flour milling research and development.

F. Weinberg, Department of Chemical Engineering and Applied Chemistry, Imperial College of Science and Technology, London. Arrived 29 Aug. to attend the 5th International Symposium on Combustion at the University of Pittsburgh. Various other visits; departure date indefinite.

Mahapitiyage V. P. Peiris, coprofessor of surgery, University of Ceylon, and visiting surgeon, General Hospital and Lady Ridgeway Hospital, Colombo. Arrived 28 Aug. for 90 days. Sponsored by American Council on Education.

August Rucker, president, Munich Technical University, Munich, Germany. Arrived 31 Aug. for 60 days. Sponsored by American Council on Education.

Meetings

On 8 Oct. at the Hospital of the University of Pennsylvania, Philadelphia, a symposium on **Anthrax in Man** will be held under the joint sponsorship of the Department of Health, Commonwealth of Pennsylvania, the Department of Public Health, City of Philadelphia, and the School of Medicine, University of Pennsylvania. All interested parties are invited to this one day symposium. There will be no registration fee. Further information may be obtained from Dr. Harry E. Morton, School of Medicine, University of Pennsylvania.

A tentative program of 85 titles has been announced for the 28th annual fall meeting of the **American Oil Chemists' Society,** to be held in Minneapolis, 11–13 Oct. There will be four symposiums: drying oils, waste disposal, utilization of surfactants, and analytical techniques. General chairman is James C. Konen of Archer-Daniels-Midland Co., Minneapolis.

The seventh annual **Gaseous Electronics** conference, bringing together some 300 physicists from the United States and foreign countries, will be conducted at New York University, 14–16 Oct. The division of electron physics of the American Physical Society is cosponsor with N.Y.U. of the conference, which is being held in conjunction with the celebration of the centennial of the university's College of Engineering. About 50 papers on technical subjects in the physics of gas discharge phenomena will be presented.

Delegates from abroad this year will include the physicists F. Llewellyn Jones of the University of Swansea, South Wales, and T. E. Allibone, director,

Research Laboratories, Associated Electrical Industries, Ltd. Chairman of the conference is W. P. Allis of Massachusetts Institute of Technology.

A symposium on **Nutritional Aspects of Blood Formation,** made possible by a grant from the National Vitamin Foundation, will take place at the University of Cincinnati College of Medicine on 22 Oct. Proceedings will be published by the foundation.

The 3rd biennial symposium, sponsored jointly by the Philadelphia and Wilmington **organic chemists' clubs,** will be held in Philadelphia on 28 Oct. at the University of Pennsylvania Museum Auditorium. The principal speakers are E. J. Corey, University of Illinois; A. C. Cope, Massachusetts Institute of Technology; A. D. F. Toy, Voctor Chemical Works, Chicago; and A. R. Todd, Cambridge. For information write to William Langeland, Pennsylvania Salt Manufacturing Co., Research Laboratory, Wyndmoor, Pennsylvania.

Because extensive advances in many aspects of biological oceanography have been made since the last comprehensive general review 12 yr ago, the American Institute of Biological Sciences Committee on Hydrobiology, advisory to the Office of Naval Research, has undertaken a program calling for a series of reviews by prominent specialists. The initial phase of this program will be a symposium of five subjects presented at the AAAS meeting in Berkeley, Calif., 26–31 Dec.

The American Society of Limnology and Oceanography and the Ecological Society of America are cosponsoring this symposium on **"Recent advances in biological oceanography."** The following topics will be reviewed under the chairmanship of Robert W. Hiatt: (i) distribution of nutrients in the equatorial central Pacific Ocean by Townsend Cromwell and Thomas Austin; (ii) fluctuations in clupeoid fish populations by John C. Marr; (iii) sound scattering in the ocean by Gordon H. Tucker; (iv) ecologic adaptations to cold by Arctic marine organisms by Norman Wilimovsky; and (v) sound production by marine organisms by Marie Poland Fish.

More than 500 chemists from all over the nation gathered at the University of Illinois on 3 Sept. to honor **Roger Adams,** head of the university's chemistry department for 28 yr, who on 1 Sept. retired from that post to devote full time to research. Adams was described by Ernest H. Volwiler, president of Abbott Laboratories, Chicago, as "the keystone of a faculty group which, particularly in organic chemistry, is second to none in the world." Volwiler was in 1918 the first of 172 persons who have since earned their doctoral degree in chemistry at Illinois under Adams' direction. Volwiler opened a 2-day symposium at which five other Adams alumni presented technical papers.

For more than 30 yr Adams, who is a past president of AAAS, has averaged a scientific paper a month—375 all told. Among his scientific achievements are the isolation of gossypol, the complex pigment in cottonseed that defied chemists for many years; isolation of the principal of marijuana and synthesis of a compound 70 times as active; synthesis of a chemical for treating leprosy; development of a catalytic agent—platinum oxide—so useful to the chemical world it is often called "the Adams catalyst"; participation in the synthesis of the pain-killing drug procaine when desperately needed during World War I; and development of a sneezing gas "Adamsite" for the U.S. Army.

Early this month industry met with federal and state health authorities in Washington for the first national conference on **shellfish sanitation** to be held since 1925. Officials of about 20 states and the Dominion of Canada were among the participants. The plans of Japan, France and other countries to export shellfish to the U.S. necessitate discussion of protective health controls. Domestic problems stem from recent developments in breeding and freezing processes, growth of towns in proximity to shellfish-cultivation areas, and improvement of sewage-treatment facilities in coastal regions previously closed to shellfish production because of pollution hazards.

A new organization called the **Society of Technical Writers** has been founded. In the first issue of its official publication, *Technical Writing Review,* the society lists its aims: (i) developing and establishing standards for technical writing; (ii) stimulating the exchange of information of common interest in this and allied fields; (iii) encouraging the development and training of technical writers; (iv) acquainting others with the profession.

At the first annual meeting in May, Paul H. Flint succeeded Floyd Hickok as president. Other officers elected were v. pres., Ronald B. Eames; treas., Ralph Fullerton; and sec., Hyman Kana. In addition to the retiring president, Robert K. Schritzler and John V. E. Hansen became members of the executive board.

To foster growth, a plan has been formulated to enable distant members to become active in the society. Interested persons are urged to communicate with the Society of Technical Writers, 28 Newbury St., Boston 16, Mass.

Education

Only three universities—the University of Illinois, Johns Hopkins University, and the University of Pittsburgh School of Health—offer graduate programs in **bioclimatology,** the new name for science dealing with the effect of physical environment on human beings, animals, and plants. However, a few courses are given elsewhere in this country and more work is being done in Germany. While the demand for persons with this type of training is chiefly in the government and in teaching, indications are that such persons may be sought by industry as more is learned about the field.

Veterinary Corps officers of the Army and the Air Force will receive special training in evaluating the **effects of ionizing radiation** from atomic weapons on foods and food producing animals. The 2-wk course, which is the first of its type to be offered in the United States, will be conducted at the Oak Ridge Institute of Nuclear Studies. The curriculum includes biological aspects of radiation phenomena, dosimetry, radiobioassay in animal tissues, radiation syndromata in the domestic animals, and disposition and salvage of radiocontaminated foods.

Harvard University has received a 5-yr grant of $275,000 from the Rockefeller Foundation for the purpose of integrating the teaching of comprehensive medical care into the medical school curriculum. Medical students will be assigned to families living in the vicinity of, and now receiving medical care from, the Massachusetts General Hospital and related community agencies. The program is to be directed for the Harvard Medical School by a policy committee representing Harvard Medical School, Massachusetts General Hospital, and Boston Lying-In Hospital. Joseph Stokes, III, instructor in preventive medicine at the Harvard Medical School and clinical assistant in medicine at Massachusetts General Hospital, will head the program staff under the general supervision of the chairman of the policy committee, David D. Rutstein, professor of preventive medicine at Harvard.

The **Jesse H. Jones Medical Library of the Texas Medical Center,** Houston, was dedicated with appropriate ceremonies on 9 Sept. This library, developed by the Houston Academy of Medicine, is housed in a large building that also contains an auditorium and special lounges for the health professions. The dedication address was given by Chauncey D. Leake, executive director of the University of Texas Medical Branch, Galveston.

Illinois Institute of Technology will offer for the first time this fall a new course in **nuclear engineering.** The course is designed to instruct engineering graduates in the fundamentals of radioactivity and the manipulation and control of atomic energy. It will be taught by Walter Fagan, who helped develop the atomic-powered submarine *Nautilus.*

Construction of the new $340,000 **Rich's Electronic Computer Center** has begun at the **Georgia Institute of Technology.** The center will be the largest and most complete of its type in the South, and the first of its kind in a southern educational institution. The project has been made possible by a grant of $85,000 from the Rich Foundation of Atlanta, and an additional $85,000 from the Georgia Tech Research Institute. A $170,000 building to house the center is being provided through the University System Authority of Georgia.

Because of the great demand for the services of an electronic digital high-speed computer, a medium-sized, general purpose instrument will be purchased and put into operation as soon as possible in temporary space to be provided by the institute's Engineering Experiment Station. Later, a larger and more powerful computer will be constructed.

The services of the two computers will be made available to southeastern industry and business through the Georgia Tech Research Institute. The actual operation will be under the direction of the Engineering Experiment Station, assisted by the personnel of the School of Mathematics.

The **School of Tropical and Preventive Medicine of the College of Medical Evangelists** has announced the expansion and change in name of the former department of ichthyology and herpetology. The new division will be called the department of biotoxicology, and will include laboratories in histology, pharmacology, chemistry, taxonomy, toxicology, ichthyology, herpetology, and botany. The department's extensive library on poisonous and venomous marine organisms will ultimately be expanded to include other types of poisonous and venomous organisms.

Research areas of particular interest are: (i) poisonous and venomous organisms and their relationship to military and preventive medicine; (ii) The relationship of poisonous marine organisms to the development of new protein food sources from the sea; (iii) screening of organic compounds from natural products and an evaluation of their application to industry and medicine. The research program will be headed by Bruce W. Halstead, head of the department, who will continue his research in medical ichthyology.

A 3-ton, $42,000 mass spectrometer has been added to the research facilities of the **University of Michigan.** The fourth spectrometer of its kind in the nation owned by a university, it has been installed in the chemical and metallurgical engineering department of the College of Engineering, where it will be under the direction of David M. Brown.

Available Fellowships and Awards

Argonne National Laboratory has announced that applications for temporary research appointments at the Laboratory for the next academic year will be accepted until 15 Dec. Positions are available in biology, chemistry, engineering, medicine, metallurgy, and physics. The Laboratory reserves temporary positions each year for members of university and college faculties who will return to their academic institutions after the temporary residence at the laboratory.

Appointments will ordinarily be made for a period of approximately 1 yr although applications for the summer, or for other periods less than a year, will be considered in cases where useful results can be anticipated in the shorter time. Each applicant must be endorsed by his own academic institution. Further information may be obtained from J. C. Boyce, Associate Laboratory Director, Argonne National Laboratory, Box 299, Lemont, Ill.

On behalf of the **James Picker Foundation,** the National Academy of Sciences–National Research Council announces the continued availability of funds in support of radiological research during 1955–56. Applications are reviewed by the Committee on Radiology of the NAS–NRC's division of medical sciences. Final determination of awards is made by the foundation upon recommendation of the committee. The foundation has expressed particular interest in the support of studies oriented toward the diagnostic aspects of radiology. Awards are not restricted to citizens of the United States.

Grants-in-aid are designed to encourage research offering promise of improvement in radiological methods of diagnosis or treatment of disease. *Applications must be submitted on or before 30 Nov.*

Grants for scholars are a transitional form of support, designed to bridge the gap between the completion of fellowship training and the period when the young scientist has thoroughly demonstrated his competence as an independent investigator. A grant of $6000 per year will be made directly to the scholar's institution as a contribution toward his support, or his research, or both. Initial grants are limited to 1 yr, but renewal may be recommended. Applications should be submitted by the institution on behalf of the candidate *prior to 30 Nov.*

Fellowships in radiological research, available under the program of the foundation, have been announced separately [*Science* **120,** 449 (17 Sept. 1954)].

Further details and application blanks may be obtained from the Division of Medical Sciences, National Academy of Sciences–National Research Council, 2101 Constitution Ave., NW, Washington 25, D.C.

Grants and Fellowships Awarded

The **Campbell Soup Co.** has made a grant of $6000 to **Rutgers University** to study the need for maintaining a proper balance of the minerals, sodium, potassium, calcium, and magnesium in soils used for producing tomatoes. This work will be carried out by the university's department of soils at the New Jersey Agricultural Experiment Station.

Columbia Ribbon and Carbon Manufacturing Co., Inc., Glen Cove, N. Y., has awarded a $5000 research contract to **Adelphi College** to support research in the field of duplication processes, centering specifically on the problem of permanency in spirit hectographing. The ultimate aim of the project is to produce a hectograph ink that will not fade over a period of time.

The first **Drummond fellowship in nutrition** has been awarded to Iain MacIntyre at the Postgraduate Medical School of London. The Drummond fellowships are endowed from the proceeds of a recent appeal in memory of the late Sir Jack Drummond.

Eli Lilly and Co. has announced these research grants.

University of Chicago. J. B. Kirsner, dept. of medicine. Peptic ulcer in relation to certain hormonal and enzymologic aspects.

Cornell University. T. P. Almy, dept. of medicine. Neurohumoral mechanisms in intestinal motility.

University of Illinois. Fellowship for dept. of chemistry.

University of Louisville. M. M. Best, dept. of medicine. Atherosclerosis and cholesterol metabolism.

University of Minnesota. P. S. Hagen, dept. of medicine. Relationship of vitamin B_{12} and intrinsic factor.

New York University. H. Doubilet, College of Medicine. Effect of Paveril Phosphate and related substances in relaxing the sphincter of Oddi.

New York University. C. F. Wilkinson, Jr., Post-Graduate Medical School. Ilotycin.

St. Luke's Hospital, New York. T. B. Van Itallie, dept. of medicine. Glucagon-induced hyperglycemia as an index of liver function, and glucagon in the peripheral uptake of glucose.

University of Washington. E. H. Fischer, dept. of biochemistry. Structure of crystalline amylases.

Western Reserve University. E. W. Sutherland, School of Medicine. Mechanism of the action of hormones, primarily the hyperglycemic factor and epinephrine.

The **Hematology Research Foundation** of Chicago has announced the following awards.

Fellowships

Bracha Ramot, Michael Reese Hospital, Chicago, the Ruth Berger Reader fellowship.

Sheldon J. Horowitch, Michael Reese Hospital, Chicago, a fellowship in hematology.

Grants

H. L. Alt, Northwestern University Medical School. *In vivo* and *in vitro* studies of the bone marrow function in man by chemical and isotopic techniques, $3000.

F. E. Trobaugh, Jr., Presbyterian Hospital. Free and filter paper electrophoretic studies of serum and urinary proteins in various hematologic disorders, $3600.

Y. Matoth, Hebrew University-Hadassah Medical School, Israel. Pathogenesis of anemia in acute leukemia, $1500.

The **John Simon Guggenheim Foundation** has announced the award of the following 24 fellowships in the American republics, Puerto Rico, and the Philippines.

Gerardo Offimaria Ocfemia, College of Agriculture, University of the Philippines, Laguna. Transmission of plant diseases by insects.

Mario Meneghini, Biological Institute, São Paulo, Brazil. Mechanism of multiplication of plant viruses.

Alfonso Trejos-Willis, dept. of protozoology, University of Costa Rica. Diseases transmitted by fungi.

Americo Pomales-Lebron, dept. of bacteriology, University of Puerto Rico School of Medicine, San Juan. Medical bacteriology, with special reference to brucellosis.

Lauro Sollero, dept. of pharmacology, School of Medicine and Surgery, National University of Brazil, Rio de Janeiro. Pharmacology in relation to problems of cardiology.

Carlos Eyzaguirre Edwards, dept. of neurophysiology, Catholic University of Chile, Santiago. Physiology of the nervous system.

Raulino Reitz, Herbarium Barbosa Rodrigues, Itajai, Brazil. Botany with particular reference to the trees of the state of Santa Catarina, Brazil.

Jorge Helios Morello Wyler, dept. of plant physiology, University of Tucuman, Argentina. Comparative studies of shrubs common to desert regions of North and South America.

Gustavo Fuertas Gonzalez, dept. of botany, Menor Claretiano Seminary, Bosa, Colombia. Paleobotany.

Alfredo Pacyaya, St. Mary's School, Sagada, Mountain Province, Republic of the Philippines. Life and culture of the Mountain Province peoples of the Philippines.

Lauro José Zavala, Honduran National Institute of Anthropology and History, Tegucigalpa, Honduras. The early cultures of Honduras.

Juan Caudmont, Colombian Institute of Anthropology, Bogotá, Colombia. Linguistic study of the native languages of Colombia.

Silvio Diaz Escobar, Clinical Hospital, Asunción, Paraguay. Surgery with special reference to cancer.

Orlando Fals-Borda, Bogotá, Colombia. Mingling of Spanish culture and the culture of the Chibcha in Colombia.

Felix Gonzalez Bonorino, dept. of geology, University of Buenos Aires. Geology with special reference to the development of new techniques for locating mineral deposits.

Teodoro G. Megia, Bureau of Fisheries, Department of Agriculture and Natural Resources, Republic of the Philippines. Oceanography with particular reference to problems of fisheries.

William H. Partridge, Argentine Museum of Natural Sciences, Buenos Aires. Birds of northeast Argentina, southeast Brazil, and eastern Paraguay.

Renato Lion de Araujo, Biological Institute, São Paulo, Brazil. Neotropical termites.

Pedro Wygodzinsky, Miguel Lillo Institute and National University of Tucuman, Argentina. Taxonomic studies of the insect subfamily Emesinae.

Paulo Erichsen de Oliveira, division of geology and mineralogy, National Dept. of Mineral Production, Rio de Janeiro. Fossils of the Cretaceous-Tertiary of Brazil and of the North American Atlantic coast.

Jorge A. Crespo, Argentine Museum of Natural Sciences, Buenos Aires. Ecology and distribution of Argentine mammals.

Manuel García Morin, dept. of chemistry, University of Puerto Rico, Rio Piedras. Nuclear magnetic resonance of certain chemical compounds.

Norberto José Palleroni, Institute of Microbiology of the National University of Cuyo, Mendoza, Argentina. Biochemistry of microorganisms.

Victor Manuel Blanco, dept. of astronomy, Case Institute of Technology, Cleveland, Ohio. Red supergiant stars in certain areas of the Milky Way.

The **Minneapolis-Honeywell Regulator Co.** has announced that two new postgraduate fellowships for engineering and physics students have been set up with Purdue University and Tau Beta Pi. For the past several years, Honeywell has established at least one new fellowship annually, and these last bring to seven the total number offered by the company.

The **Philadelphia College of Pharmacy and Science** has announced the receipt of more than $80,000 from the estate of the late **Gustavus A. Pfeiffer,** formerly president of William R. Warner and Warner Hudnut, Inc., of New York City. The legacy was given as a tribute to the organization's work in research and teaching. It has also been announced that the fund drive initiated by the college a little over a year ago has now resulted in contributions of more than $1.5 million, an amount that does not include regular gifts received for the maintenance of the college. Ninety percent of the special fund came from alumni, 40 percent of whom made pledges and contributions.

In 1821 the Quaker founders of the college had written into the constitution that the corporate body was never to solicit or receive aid from the state, and the college has kept faith with that trust. In the past 10 yr it has, without benefit of outside collecting organizations, brought into the holdings of the college something in excess of $3 million.

The annual **Robert Scripps fellowship in biology** for 1954–55 has been awarded to June Mahon by the Zoological Society of San Diego. The problems that will concern her include a survey of internal parasites of zoo mammals and birds, with special reference to tapeworms, and the study of parasites of Central and South American animals.

Following are the second-quarter grants recently announced by the **Rockefeller Foundation.**

Harvard Medical School. Family treatment plan for broadening the training experience of undergraduate students and junior staff members, 5 yr, $275,000.

National Research Council. Work of Committee for Research in Problems of Sex, 3 yr, $150,000.

University of California. Research work of Virus Laboratory, 7 yr, $210,000.

University of Illinois. C. W. Kearns. Insect resistance to DDT, 5 yr, $75,000.

University of Illinois. G. W. Salisbury, dept. of dairy science. Biochemical and physiological process by which proteins are produced by animals, 6 yr, $100,000.

University of Saskatchewan. D. G. McKerracher and A. Hoffer, dept. of psychiatry. Basic studies in schizophrenia, 3 yr, $121,275.

Marine Biological Laboratory, Woods Hole, Mass. Support of research and training, $100,000.

University of Texas. Evolution in *Drosophila,* 5 yr, $100,000.

Columbia University. Lamont Geological Observatory. Marine biology research, $90,000.

Washington University. B. Commoner. Biochemistry of the determinative effects exerted by tobacco mosaic virus on the host, 5 yr, $75,000.

National Research Council. Fellowships in medical sciences, $150,000.

University of Sheffield. H. A. Krebs. Chemical mechanisms by which the living cell utilizes foodstuffs and the energy they provide, $80,000.

Columbia University. L. C. Dunn and T. Dobzhansky, Institute for the Study of Human Variation. Human genetics and heredity, 3 yr, $50,000.

Department of Health, Puerto Rico. Survey of medical and public health facilities in the Bayamon region, 18 mo, $63,500.

National Research Council Division of Biology and Agriculture. Work of Committee on Educational Policies, 3 yr, $50,000.

Ministry of Agriculture of Mexico. Scholarship program for agricultural research, 1 yr, $70,000.

McGill University. Training program of dept. of psychiatry, 6 yr, $47,250.

University of Durham, England. Training of public health engineers for West Africa, $48,000.

National University of Colombia. Equipment for medical school building, $60,000.

McGill University. D. O. Hebb. Physiological basis of psychological phenomena, 5 yr, $60,900.

New York Botanical Garden. W. J. Robbins. Basic plant biochemistry, 5 yr, $35,000.

Connecticut Agricultural Experiment Station. D. F. Jones, dept. of genetics. Genetics, 5 yr, $25,000.

University of Minnesota. Dight Institute for Human Genetics. Human genetics, 2 yr, $19,400.

University of Minnesota School of Medicine. Dept. of physiology. Mathematical biophysics, 3 yr, $19,500.

Medical Library Association. Foreign fellowships in medical librarianship, 2 yr, $15,000.

National Research Council. Work of Commission on Human Resources and Advanced Training, $12,000.

Harvard University. Laboratory of Social Relations. Methodology of attitude studies, $6000.

University of Chicago. L. R. Dragstedt, dept. of surgery. Visit to surgical centers in the British Isles and Europe, $2250.

Johns Hopkins University. E. V. McCollum. Protein chemistry, 1 yr, $5000.

Johns Hopkins University. J. E. Rose, School of Medicine. Service as visiting professor at University of Chile, $1450.

Yale University. N. J. Giarman, dept. of pharmacology. Service as exchange professor at University of Edinburgh, $1000.

Yale University. J. L. Melnick, dept. of microbiology. Visit to virus centers in Israel, $600.

Cornell University. R. D. Walk. Analysis of research materials on psychological stress, $4830.

University of California. R. L. Metcalf, Citrus Experiment Station. Mode of action of insecticides, 2 yr, $15,000.

Columbia University. M. Heidelberger. Immunochemistry, $7500.

Sloan-Kettering Institute for Cancer Research. Expenses of symposium on trace elements, $10,000.

Dartmouth College. R. P. Forster and R. W. Barratt. Cellular physiology and microbiology, $10,000.

New York University. B. D. Davis, dept. of pharmacology. Research, $6000.

University of Wisconsin. H. T. Wenham, dept. of plant pathology. Visit to agricultural, educational, and research centers in U.S., $700.

University of Illinois. G. S. Fraenkel, dept. of entomology. Visit to centers of research in insect physiology in Japan, Southeast Asia, India, and Israel, $2000.

Washington University. P. J. Campisi, dept. of sociology. Community study of Ivrea, Italy, $7500.

California Institute of Technology. H. Brown. Visit to study mineral resources of India, $4650.

Massachusetts General Hospital. R. D. Adams, dept. of neurology. To visit neurological centers in Europe, including England, $2500.

University of Pennsylvania. Exchange program with University of Stockholm, $2100.

Department of Health, Puerto Rico. J. A. Perez, Hospital Survey and Construction Bureau. Visit to medical care centers in U.S., $575.

Department of Health, Puerto Rico. E. Quintero, division of public health. Visit to medical care centers in U.S., $400.

University of Missouri. V. H. Harrison, division of nursing education. Study of university nursing schools and continuing medical and nursing education programs, $1000.

University of Toronto. Teaching and research in departments of medicine, and hygiene and preventive medicine, $29,150.

McGill University. F. C. Fraser, dept. of genetics. Human genetics, $7900.

University of Saskatchewan College of Medicine. Visit to medical education centers in U.S. and Canada by seven staff members, $6000.

McMaster University, Canada. S. S. Kirkwood, dept. of chemistry. Enzyme research, $6300.

University of Copenhagen. T. Kemp, Institute of Human Genetics. Genetics of mental defect, 5 yr, $14,200.

University of Turku, Finland. Equipment for medical faculty, $6200.

University of Paris. Travel for American delegates to colloquium on physiology of plants grown in tissue culture, $2400.

University of Naples. G. Montalenti, Institute of Genetics. Genetics, 5 yr, $28,000.

University of Pisa. G. Moruzzi, dept. of physiology. Neurophysiology, 5 yr, $25,000.

University of Utrecht. D. J. van Lennep, Institute of Clinical and Industrial Psychology. Teaching and research, 3 yr, $8900.

University of Oslo. Ø. Ødegård. Epidemiology of mental disease, 3 yr, $17,000.

University of Oslo. S. G. Laland, Faculty of Sciences. Chemistry of nucleic acids, $2000.

University of Oslo. T. Braarud. Visit to marine biology research centers in California, $660.

University of Bern. Equipment and assistance for foreign guests of Theodor Kocher Institute, 4 yr, $25,000.

University of London. B. J. Mason, Imperial College of Science and Technology. Physical and chemical properties of water, 3 yr, $18,000.

University of London. J. T. Randall, King's College. Electron microscope for research in biophysics, $6000.

British Medical Research Council. J. N. Morris, Social Medicine Research Unit. Visit to U.S. to observe work in epidemiology of chronic diseases, social medicine and teaching of preventive medicine, $1150.

St. George's Hospital, London. M. B. Powell. Visit to nursing schools and nursing service institutions in North America, $1700.

Middlesex Hospital Medical School, London. J. F. Tait. Extension of visit to centers of biophysics research in U.S. and Canada, $1100.

University of Liverpool. T. W. Goodwin. Visit to centers of biochemistry research in U.S. $1200.

St. Andrews University, Scotland. Equipment for dept. of biochemistry, $1700.

St. Andrews University, Scotland. L. W. Poel, dept. of botany. Plant physiology, $1200.

Stanley Medical College, Madras, India. A. A. Ayer, dept. of anatomy. Visit to U.S., Canada and Europe to observe trends in medical teaching and research with special reference to anatomy, $4450.

Conference of Indian medical educators. Discussion of undergraduate medical education in India, $5000.

Israel Foundations Trustees, Jerusalem. N. Goldblum. Virus studies, $10,000.

American University of Beirut, Lebanon. L. Giaccai, dept. of radiology. Visit to radiologic centers in U.S. and Canada, $2500.

Darbhanga Medical College, Bihar, India. N. L. Mitra, dept. of anatomy. Equipment, $5200.

Walter and Eliza Hall Institute of Medical Research, Melbourne. E. L. French. Visit to U.S. diagnostic and research centers in virus, rickettsial, and systemic fungal diseases, $2150.

Tokyo University Medical School. Y. Mikamo, dept. of medicine. Visit to U.S. teaching hospitals, $3100.

Otago University Medical School, Dunedin, N.Z. J. B. Howie, dept. of pathology. Visit to hematological centers in U.S. and Canada, $1750.

Otago University Medical School, Dunedin. F. H. Smirk, dept. of medicine. Visit to U.S. and Canada to observe hypertensive and cardiovascular research, and practice and teaching of general medicine, $1000.

University of the Philippines. Services of J. E. deYoung, sociologist, $5000.

Secretariat of Agriculture, São Paulo, Brazil. Equipment for Institute of Agronomy research on insect ecology, $10,000.

University of São Paulo. F. Andreazi, dept. of animal husbandry. Equipment for research in animal nutrition, $5800.

University of São Paulo. R. F. Santos, dept. of surgery. Visit to U.S. centers for teaching of surgery, $3100.

Mandaqui Tuberculosis Hospital, São Paulo. G. M. Botelho, dept. of surgery. Visit to U.S. centers of thoracic surgery, $2550.

Medical School of Pará, Belém, Brazil. M. M. Sampaio, dept of histology and embryology. Assistant professorship of Lousiana State University, $600.

University of Chile. H. A. Rodriguez, dept. of medicine. Visit to observe teaching of internal medicine in U.S., $2700.

Ministry of Agriculture, Santiago, Chile. M. Astorga C., director-general of agriculture. Visit to Mexican and Colombian agricultural programs and to New York, $2750.

Pan-American Agricultural School, Tegucigalpa, Honduras. Scholarships to agricultural colleges in U.S., $30,000.

National University of Mexico. O. H. Wheeler, Institute of Chemistry. Research, 1 yr, $4500.

National University of Mexico. L. Vazquez G., biology dept. Visit to scientific institutions and museums in U.S., $1850.

University of Cuzco, Peru. C. Vargas C. Visit to potato research centers in U.S., $2825.

University of the Republic, Montevideo, Uruguay. Faculty of Veterinary Medicine. Poultry pathology and animal genetics, $10,000.

Ministry of Public Health, Montevideo. Institute of Biological Research, Salary of secretary-librarian, 1 yr, $1000.

In the Laboratories

The opening of a new distribution center to meet the increased formaldehyde needs of chemical and textile industries in the South Atlantic States has been announced by the **Borden Co.'s chemical division.** The new center is at Kernersville, N.C.

Cornell Aeronautical Laboratory, Inc., Buffalo, has announced a major wind tunnel modernization program that will double the power of its large variable density tunnel and permit further exploration of the transonic speed range. The project, sponsored by the U.S. Air Force and administered by the U.S. Army Corps of Engineers, will cost $1,600,000. It calls for an increase from 15,000 to 30,000 hp and change to an 8 ft by 10 ft transonic throat section of Cornell's original design. The section will be used for study of airplane and missile models up to speeds 1¼ that of sound. The laboratory will spend $200,000 of its own funds on the throat modification.

Plans for construction of a $2,550,000 laboratory building for long-range and fundamental research by the **Du Pont Co.'s electrochemicals and pigments departments** has been announced. It will provide space for approximately 50 scientists to pursue research on

new products for the metals, textile, and paper industries; new venture studies based on important industrial needs; and fundamental studies of major existing products of the department. It is scheduled for completion by the end of 1955.

The **Ethyl Corp.**, New York, has announced the appointment of Richard K. Scales, former director of automotive products research, as general manager of the Detroit research laboratories and of George F. Kirby, Jr., former director of research on chemical products, as general manager of research and engineering at the Baton Rouge manufacturing plant.

A realignment of research and development work has been made in order to broaden the scope and effectiveness of Ethyl's research and technical services to the oil industry. Under the new organizational plan, all research programs in the automotive products field will be conducted at the Detroit laboratories and research and engineering on chemical products and on manufacturing processes will be concentrated at the plant in Baton Rouge.

A **laboratory for measuring and analyzing magnetic materials** was opened recently by the carboloy department of General Electric Co., Detroit. Facilities enable engineers to check designs, measure performance and efficiency of equipment, establish standards, calibrate precision magnetic assemblies, and evaluate new magnetic materials. Among the laboratory's major installations are a recording hysteresigraph and a 3000-v capacitor-discharge impulse magnetizer.

The **Nordic Mining Co., Ltd.** has announced the discovery of lead and zinc minerals worth an estimated 1 million krona ($15,000,000) at Mestersvis, Greenland. Processing of the newly found minerals is expected to start in the spring of 1956, and first shipments are scheduled to leave the Arctic that autumn. The company was founded in 1952. Shareholders are Canadian Frobisher of Toronto, the Swedish mining companies Boliden and Stora Kopparsberg, the Danish government, and various Danish enterprises. The research at Mestersvis was supported by a Danish government loan of Kr. 12,500,000 ($1,800,000).

Miscellaneous

The International Academy of Proctology announces the renewal of the postgraduate teaching fund to provide gift subscriptions to the *American Journal of Proctology* to 900 of the largest hospital libraries in this country and abroad. Beginning with the first issue of 1955, the journal will change from a quarterly to a bimonthly publication.

The following **chemicals** are wanted by the Registry of Rare Chemicals, Armour Research Foundation of Illinois Institute of Technology, 35 W. 33 St., Chicago, Ill.: truxillic acid; 1,2,3-butanetriol; chroman-5,6-quinone; alpha,alpha'-diphenyl-beta-picryl hydrazil; p-ethyl acetophenone; dilaurylselenide; ethyl alpha-methlacetoacetate; methylnitrolic acid; oxalosuccinic acid; zinc hydride; dihexyl carbonate; cyanogen; cyclohexylamine dodecylphenoxy acetate; 2,4-dichlorobenzyl alcohol; potassium thioplatinate; 2,3,5,6-tetramethylbenzoic acid; 9-phenyl-2,6,7-trihydroxy-3-fluorone; dihydrophorone; diethyl germanium iodide; 3,3,3-trichloropropylene.

An English translation by Séverine H. Britt of a French paper entitled **"Contribution to the study of the physicochemical structure of clays"** (Contribution a l'étude de la structure physicochimique des argiles) by Remy Hébert, which was originally published in Annales des Mines, No. 6, p. 3–48, Paris, 1950, has been placed in open file by the U.S. Geological Survey. The translation may be consulted at the Survey library in Washington, D.C. and at the Survey library in Denver, Colo. No copies are available for public distribution.

On 30 June, a final report of a research project, **"Performance examinations for the training and selection of scientific personnel,"** was released by Haym Kruglak of the physics department at the University of Minnesota. The work was carried out under a contract with the Office of Naval Research.

The development of forest policy in three of the world's most advanced forestry nations is the subject of ***Public Policy Toward Private Forest Land in Sweden, Norway, and Finland*** by R. E. Marsh, published recently by the Charles Lathrop Pack Forestry Foundation. The foundation was organized and endowed in 1930 to promote educational and scientific work in connection with a constructive policy of forest protection and extension, and to increase public appreciation of forests as natural resources essential to the national welfare. In pursuit of these aims, it has carried on numerous studies concerned with forest resources and their management, and has published over 16 books and bulletins dealing with the subject. This latest publication is available for $1 from the foundation, 1214 16th St. NW, Washington 6, D.C.

A committee of the Washington Association of Scientists, the Washington chapter of the Federation of American Scientists, has been formed to provide the service formerly rendered by the National Committee on Atomic Information in answering **queries on atomic energy.** Bibliographies of books, periodicals, pamphlets, and films, as well as study kits, may be obtained at nominal cost by writing to the Washington Committee on Atomic Information, 1749 L St., NW, Washington, D.C.

Many of Camp Detrick's contributions to **safety in the biological laboratory** were on display at the International Congress of Clinical Pathology, which took place 6-10 Sept. in Washington, D.C. The exhibit consisted of vividly presented pictures, slides, and scale models of instruments and techniques developed or

studied by the Army Chemical Corps at Detrick and now available for public use.

The Smithsonian Institution announces the publication of the ninth revised edition of the ***Smithsonian Physical Tables,*** compiled by W. E. Forsythe, physicist (retired) of the General Electric Co. In addition to most of the information included in former editions, the new edition contains sections on atomic and nuclear physics; in other fields, such as cosmic rays, electronics, plastics, aeronautics, and radiation, the material has been greatly amplified. The book may be obtained at cost—$9 for paperbound copies, $10 for clothbound—from the Editorial and Publications Division, Smithsonian Institution, Washington 25, D.C.

Another step has been taken toward the completion of a handbook on numerical values pertaining to biology. A so-called fascicle, **Standard Values in Nutrition and Metabolism,** of the projected Handbook has been prepared under the supervision of the Committee on the Handbook of Biological Data, American Institute of Biological Sciences, Division of Biology and Agriculture, National Research Council. The book, currently distributed as Wright Air Development Center Technical Report 52–301, is issued under the joint sponsorship of the Air Force, Army, Navy, and Atomic Energy Commission, and is a volume of tables of standard quantitative and descriptive data on animal and plant forms. It is intended for use by students and by laboratory and clinical investigators working on biological problems, and will be available in a commercial edition from W. B. Saunders and Co., Philadelphia, in October. The first fascicle, *Standard Values in Blood,* issued 2 yr ago, has already established itself as an indispensable and widely used tool.

Standard Values in Nutrition and Metabolism is the product of the contributions of over 800 specialists in the fields of nutrition and metabolism in this country and abroad. Its 160 tables were subjected to extensive review by experts in the respective subjects. The 223 pages of tables and 16 pages of diagrams contain many thousands of items of authoritative data—mostly quantitative, but with important non-numerical exceptions. J. W. Haim of the Wright Aero Medical Laboratory directed preparation of the work, and Errett C. Albritton of the George Washington University Medical School was editor.

The Federation of American Scientists is continuing its survey of the effects on science of the visa policies in existence under the present United States immigration act [*Science* **119,** 342 (12 Mar. 1954)]. The Federation is interested in information about cases involving **visa difficulties.** It would be helpful if as many details as possible are given, and in each specific case the extent to which material must be treated as confidential should be indicated. Please communicate with the Federation of American Scientists, Committee on Visa Problems, Box 1191, Stanford, Calif.

After an interval of almost 10 yr, publication of the ***Zeitschrift für Kristallographie*** will be resumed. The publishers, Akademische Verlagsgesellschaft, m.b.H., Frankfurt am Main, announce that Vol. 106, No. 2, will be released during October. Professors M. J. Buerger (Massachusetts Institute of Technology), F. Laves (Mineralogisch-petrographisches Institut der Eidg. Techn. Hochschule, Zurich), G. Menzer (Universitätsinstitut für Kristallographie und Mineralogie, München), and I. N. Stranski (Technische Universität, Berlin-Charlottenburg) have agreed to serve as editors of the journal and will exert every effort to perpetuate the tradition of this international periodical founded by Paul von Groth in 1877.

Articles will be printed in German, English, French, and Italian. The October issue will contain original papers by F. Albrecht, G. Borrmann, W. Gerrisch, E. Hellner, F. Laves, G. Menzer, K. Plieth, I. Schönewald, I. N. Stranski, and G. Wolff. The *Zeitschrift* will be published irregularly. One volume will consist of six issues, priced individually. (The price per volume will be approximately $16.65 or about DM 70.00.) Orders and inquiries should be addressed to the publisher at Holbeinstrasse 25–27, Frankfurt am Main, Germany.

Necrology

David P. Barrows, 81, educator, author, and former president of the University of California, Berkeley, Calif., 5 Sept.; **Jean Broadhurst,** 80, research virologist, author, and professor emeritus of bacteriology at Teachers College, Columbia University, New York, N.Y., 5 Sept.; **Harry F. Dietz,** 63, entomologist and manager of the agricultural and chemicals section of the Grasselli Chemicals Dept., E. I. du Pont de Nemours Co., Wilmington, Del., 4 Sept.; **Irwin Edman,** 57, author and chairman of the department of philosophy at Columbia University, New York, N.Y., 4 Sept.; **Henry P. Folland,** 67, pioneer aircraft designer, Nottingham, England, 5 Sept.; **Alfred P. Hart,** 66, pediatrician and pioneer in Rh negative blood transfusions, Toronto, Canada, 4 Sept.; **Glenn S. Hiers,** 58, research chemist for the Collins & Aikman Corp., Philadelphia, Pa., 6 Sept.; **David B. Jones,** 74, author and retired head of the protein investigation laboratories of the bureau of human nutrition and home economics, U.S. Dept. of Agriculture, Beltsville, Md., 5 Sept.; **Martin C. Madsen,** 61, chief engineer for the Northern Natural Gas Co., Omaha, Nebr., 4 Sept.; **Robert J. Minshall,** 56, principal designer of the B-17 airplane and former director of research for the Pesco Products Div. of the Borg-Warner Corp., Cleveland, Ohio, 7 Sept.; **Cyril F. Richards,** 59, former professor of philosophy and psychology and vice president of Denison University, Granville, Ohio, 7 Sept.; **Roger H. Sherman,** 51, authority on oil exploration and coordinator of all oil-producing activities of the Standard Oil Co., New York, N.Y., 5 Sept.; **Robert M. Stewart,** 76, retired Dominion Astronomer of the Dominion Observatory, Ottawa, Canada, 2 Sept.