gent, the more kindly it will be. I know of no institution that can house such a way of thinking other than the university, but it will have to be a new university. Perhaps you will say, "Men will no more respect it than they now respect anything in heaven or on earth, for do not churchmen make the Deity partner to their chicanery and do not city politicians pray?" Just so do men of learning use their status in science and the university as proof of their superiority, a conceit that often leads to vicious acts. This is all true, and yet I say you are wrong. I have not taught students for 30 years without noting how quickly and well some of them judge their teachers and how great is their respect for the scholar. This is, of course, not true of all, but the students who are capable of such judgment will set the standard for the rest. I have seen older men, those who once held power in a college where they had absolute and tyrannical control, become, literally overnight, quite decent men when they entered an institution of higher learning.

And so I come to my conclusion. Loewi's appeal is not merely a "great concern about the future of medical physiology because of the increasing schisms," nor is it just a cry, deploring with Howard Mumford Jones "the increasing tendency to train scientists predominantly as superb research technicians rather than carriers of a flame," nor is it only an appeal for a scientific literature that is interesting to the student: it is a prayer for "belief in the meaningfulness of the universe." Many will say that this is nothing more than religious faith. I have no objection to this, and perhaps it is true. But it carries with it the tragic admission that science and academic learning have failed. This failure is not necessary.

# *News and Notes*

## Ichthyologists and Herpetologists

The American Society of Ichthyologists and Herpetologists, a new affiliate of the AAAS, can trace its beginning back to 27 Dec. 1913 when the first issue of a 4-page pamphlet entitled *Copeia No. I* was published. Its announced purpose was to advance the science of cold-blooded vertebrates. The founders were a group of men in the American Museum of Natural History in New York and the Academy of Natural Sciences in Philadelphia who felt the need of an additional outlet for short notes. The initial number had an article on turtles, one on lizards, two on fishes, and one on a frog. John T. Nichols was the first editor. In 1916, after *Copeia* had been appearing for about 3 yr during which more than 30 issues were published, the A.S.I.H. was organized in New York at the American Museum of Natural History. The second annual meeting was held at the Academy of Natural Sciences in Philadelphia, and the third at the Museum of Comparative Zoology at Harvard.

In 1924, *Copeia* started carrying the statement "Published by American Society of Ichthyologists and Herpetologists" and officially became a monthly, although it had been one, in fact, since its start. But it was still a pamphlet until 1930, when it took its present form and became a quarterly of approximately 300 pages per year. In addition to the journal, the society has recently published the sixth edition of the *Check List of North American Amphibians and Reptiles,* by Karl P. Schmidt. A check list of fishes is planned.

A special function of the society is the maintenance of a revolving fund that is available to members who need help in expenses involved in publication, collecting, or transportation. A grant is not a loan, but it is hoped that recipients, when they are in a more favorable financial position, will replenish the fund.

Since the organization of the society, meetings have been held yearly without interruption, except during World War II, and the 34th annual meeting will take place in September in conjunction with the convention of the American Institute of Biological Sciences at the University of Florida. Annual meetings last about 3 days and are devoted to papers on herpetology and ichthyology, usually presented in separate sections. Occasionally joint sessions are arranged if enough papers of general interest have been submitted. Small cash prizes are given for the best student work in each field.

The A.S.I.H. is a member of the A.I.B.S. and also makes an annual contribution to the support of the *Zoological Record.* Two functioning divisions have been organized, the Southeastern Division and the Western Division.

The society has approximately 1200 members. In addition, 300 journal subscriptions go to institutions and agencies. Membership is world-wide, with of course the greatest bulk in the United States. It is made up of a fairly representative cross section ranging from eminent specialists through students and amateurs. The society is open to all persons interested in advancing the knowledge of the cold-blooded vertebrates.

ARNOLD B. GROBMAN, *Secretary*
*Florida State Museum, Gainesville*

## Science News

The National Institutes of Health, Bethesda, Md., has received as a gift from the Liggett and Myers Tobacco Co., a 3,000,000-v **Van de Graaff generator** constructed in 1950 for an experimental program of the company. The 30-ton apparatus is being installed in the radiation wing of the new 500-bed Clinical Center at NIH, where it will be used in research on the biological effects of high-energy radiation. It operates

under high pressure inside a steel tank and is capable of delivering more than 12 kw of electrical energy, thus enabling study of the effects of radiation delivered at dose rates not heretofore achieved in the laboratory.

In April the Nevada Supreme Court ordered the University of Nevada to reinstate **Frank B. Richardson,** professor of biology, who was dismissed a year ago on charges of insubordination because he opposed the University Regents and the President in their move to lower entrance requirements so as to admit any Nevada high school graduate, whatever his grades [*Science* **118,** 154 (1953)]. In thus upholding the contractual rights of university professors with tenure, the Nevada Supreme Court has strengthened academic freedom throughout the land, in a period when it has been woefully weakened by a variety of pressures. In Nevada it is to remain possible for a scientist to express his views about educational policies affecting the teaching of science without fear of dismissal from his post. Since one of the prime charges against Prof. Richardson was that he had circulated among his colleagues copies of an article on education reprinted from *The Scientific Monthly* [Aug. 1952, p. 109], it is particularly encouraging to the editors that freedom of thought and discussion has prevailed.—*B. G.*

Information has recently been released about an untried design for the world's first commercial, **nuclear-fueled electrical power house.** The core of its furnace, which is to be built by Westinghouse Electric Corp. for the Duquesne Light Co. about 25 mi northwest of Pittsburgh, will weigh more than 10 tons. It will be made up of natural uranium and the U-235 isotope.

Capsuled in a cylinder 6 ft in diameter and 7.5 ft high, the reactor is designed to accommodate even larger cores if in the future they seem desirable. It can accept cylinders up to 9 ft in diameter and 25 ft high.

Some 20,000 lb of uranium, which contains slightly more of the U-235 isotope than the natural element, will generate surface temperatures up to 335°C, which is the boiling temperature of water under a pressure of 2000 lb/in$^2$. Water at this pressure will circulate through three loops from reactor to a heat exchanger, carrying off enough heat to develop 60 megawatts of electric power. A fourth loop is held in reserve for emergencies. About 16,000 gal/min can be pumped through each loop.

This first nuclear reactor power plant is not expected to produce electric energy at a price competitive with current rates, although the hope is that the cost will not be much higher. The actual design is nearing completion, and ground-breaking should take place sometime this fall. The whole project should be finished in about 4 yr. It is an $85,000,000 installation, including the generating and substation equipment that the Duquesne Light Co. is financing. The company also is contributing $5,000,000 toward the development of the reactor, and plans to buy steam from the reactor at 8 mills/kw hr of electric energy generated. The latter arrangement will, in effect, save the government about $30,000,000, bringing the government's interest in the project to $50,000,000. The Duquesne Co. also will man and operate the entire plant at no cost to the government.

In an article scheduled for a forthcoming issue of *Science,* Saul Rich and James G. Horsfall describe the correlation of **fungitoxicity** with an orderly reshaping of a potentially fungitoxic molecule. It is believed that the change made, increasing the length of the alkyl side chain, increases the amount of toxicant penetrating into the fungus.

Correlating chemical structure with biological activity is an extremely active field of research. Great numbers of workers in almost every major branch of biology search diligently for clues to explain the effects of biologically active compounds. These researchers have been spurred on by two main interests: the use of these studies to trace the pathways of biological mechanisms; and the possibility that the biological activities under study may in some way solve an important problem in applied biology. So it is that compounds identifiable by their structure as possible antimetabolites have been useful both for studying microbial metabolism and for combating bacterial infections. Plant-growth hormones, now known to require certain chemical configurations for biological activity, have been useful both for studying plant metabolism and for solving agricultural problems. However, the biological activities of certain groups of compounds have not been adequately correlated with chemical structure. One such group is the fungitoxicants. It is in this group of compounds that we look for tools to study fungus metabolism and for fungicides to protect wood, fabrics, paints, plastics, and agricultural crops against depredations by fungi.

**Oil** that lubricates even at −100° F has been developed by Elgin National Watch Co., Elgin, Ill. It is expected to eliminate one of the great obstacles to successful arctic military operations.

***Manpower Resources in Mathematics,*** a report on the professional characteristics, employment, and earnings of mathematicians in the United States, has been issued by the National Science Foundation. The report, prepared jointly by the Foundation and the Bureau of Labor Statistics of the U.S. Department of Labor, is based on information supplied to the National Scientific Register in 1951 by about 2400 mathematicians. Nearly 1500 of the estimated 2000 mathematicians in this country who hold Ph.D. degrees in mathematics are represented.

About 90 percent of the Ph.D. survey group were employed in universities and colleges. Of the Ph.D. mathematicians engaged primarily in research, however, 44 percent held appointments at educational institutions, while more than 26 percent worked for the Government and 30 percent were employed in research and as consultants for private industry.

Only 8 percent of the professional mathematicians

with Ph.D. degrees were women, although 15 percent of the non-Ph.D. mathematicians were women. The median age of the Ph.D.'s in the study was 41 yr, somewhat older than in the fields of physics and chemistry, which have expanded more rapidly in recent decades. The median income of the Ph.D.'s was $6200 per year compared with $4400 per year for professional mathematicians without Ph.D.'s. The report is available for 20 ct from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

A very faint **comet** has been found in the constellation of Corona, now directly overhead, by Robert G. Harrington of Mt. Wilson and Palomar Observatories in California. The comet was discovered on 24 June and is of magnitude 19, much too faint to be seen except with the very largest telescope.

Discovery of a possible **index to male fertility,** based on the amount of desoxyribosenucleic acid (DNA) in the spermatozoa, was announced by David R. Weir and Cecilie Leuchtenberger of Cleveland at the recent meeting in San Francisco of the American Society for the Study of Sterility.

In a group of human males of proved fertility, the investigators discovered that the amount of DNA per spermatozoon was very constant and uniform for each person and for the group as a whole. In childless couples, where study of the wife showed she is presumably fertile, the DNA content of the husband's spermatozoa is often abnormal. In such abnormal cases, the routine semen analysis is also usually, but not always, abnormal. In some couples where routine study showed no cause for the childlessness, the DNA content of the spermatozoa is abnormal.

This summer, H. V. Neher, professor of physics, and his assistant Edward Stern, both of the California Institute of Technology, have undertaken a **cosmic ray expedition** sponsored by Caltech, the Office of Naval Research, and the U.S. Weather Bureau. They plan to measure cosmic ray intensities from Charleston, S.C., to the northern tip of Ellesmere Island near the north geomagnetic pole. Helium-filled balloons carrying ionization chambers and telemetering devices will be released to record the intensity of low-energy particle radiation at Charleston, Washington, and Boston. From Boston the investigators will take a Navy icebreaker to Thule, Greenland, where measurements will also be made. Then they will go to Alert, a U.S.-Canadian Weather Bureau Station on Ellesmere Island, to conduct their northernmost studies, after which they will visit Resolute, another U.S.-Canadian Arctic weather post, for final observations.

Sounding balloons reach a maximum height of about 20 mi. Since they are free balloons, most of those released at sea and in the far north will not be recovered, and it is only the short-wave telemetering devices that provide information on the intensities that have been recorded in the ionization chambers. Low-energy nuclear particles arrive in greater concentrations at high latitudes and the current studies involve variations in intensities at various latitudes and longitudes.

To round out the project, two Caltech graduate students in physics will man a station near Bismarck, N.D., for the summer period in order to make readings, according to a prearranged schedule, at times coincident with those made by Neher and Stern. The Bismarck studies will serve as controls by providing simultaneous comparison data made at approximately the same altitude but a different latitudes. Bismarck was chosen because of its northern location, because extensive studies of cosmic radiation have been made in that area on at least six previous occasions, and because it is an area favorable for the recovery of balloon-borne instruments.

A recent count indicates that at least 50 foreign scientists have been refused **visas** in the last 2 yr. The total is probably many times this number, since only a small percentage of the visas denied are heard about in the United States.

## Scientists in the News

**William F. Ashe,** chief of internal medicine at the Holzer Clinic in Gallipolis, has been appointed professor and chairman of the department of preventive medicine in Ohio State University's College of Medicine, effective 1 Oct. He succeeds **John A. Prior,** who has served for several years as acting chairman and in January became assistant dean of the College of Medicine.

**Raymond C. Bard,** head of the microbiology section at Smith, Kline & French Laboratories, has accepted an additional part-time appointment as associate professor of microbiology at Hahnemann Medical College, Philadelphia.

**Nathan Birnbaum,** a member of the chemistry department of the City College of New York since 1929, succeeded **Benjamin Harrow** as departmental chairman on 1 July.

**Harold A. Bolz,** chairman of the department of general engineering at Purdue University, has been named associate dean of the College of Engineering at Ohio State University, effective 1 Oct. In his new post, Dr. Bolz will devote a major part of his time to the development of conference and technical meetings through which the university can better serve Ohio industry.

**Edward D. Churchill,** chief of the General Surgical Services at Massachusetts General Hospital and professor of surgery at the Harvard Medical School, has accepted an invitation from the Department of State to visit the Near East under the International Education Exchange Program. He is spending approximately 3 wk giving a series of lectures and conferring with medical leaders in Lebanon and Syria.

**Carroll Augustus Curtis,** a member of the engineering faculty at the University of Idaho for the past 6

yr, has been appointed an associate professor in the West Virginia University College of Engineering.

**Emile F. Holman,** professor of surgery at the Stanford University School of Medicine, has received the Rudolph Matas award in vascular surgery. He was chosen for his research that set the stage for new types of surgery in heart and artery abnormalities, including the "blue baby" operation.

Dr. Holman will retire on 1 Sept. after 29 yr as head of his department. He will be succeeded by **Victor Richards,** a member of the medical school staff since 1942.

**William White Howells,** formerly professor and chairman of the department of sociology and anthropology at the University of Wisconsin, has taken the place of the late Earnest A. Hooton as the principal physical anthropologist on the Harvard University faculty.

The University of Wisconsin has appointed two scientists—one a chemist, the other a geneticist—to named professorships. **William S. Johnson,** professor of chemistry at Wisconsin, has been appointed Homer Adkins professor of chemistry, and **Sewell Wright,** professor of genetics at the University of Chicago, has been named Leon J. Cole professor of genetics. Both appointments are for 5 yr beginning with the 1954–55 academic year, and both men are first incumbents of the two special chairs.

**Herbert Pollack,** consultant to the Surgeon General, Department of the Army, since 1951, has been appointed associate professor of clinical medicine at New York University-Bellevue Medical Center's Post-Graduate Medical School.

**Charles C. Rabe,** associate professor of pharmacy administration at the St. Louis College of Pharmacy and Allied Science, has been named assistant to the secretary of the American Pharmaceutical Association. He assumed his new duties at the A.Ph.A. headquarters building in Washington, D.C., shortly after 1 July.

**H. P. Robertson** of the California Institute of Technology has been appointed scientific advisor to Supreme Headquarters, Allied Powers, Europe (SHAPE), headed by Gen. Alfred M. Gruenther, Supreme Allied Commander in Europe. He is taking a year's leave of absence as professor of mathematical physics and plans to leave for Paris early this month. The position of SHAPE scientific advisor is newly created by the North Atlantic Treaty Organization (NATO), which authorized Dr. Robertson's appointment. His office is to supply scientific advice on military problems that arise in any of the divisions of Gen. Gruenther's staff.

**Michael B. Shimkin,** chief of the U.S. Public Health Service's Laboratory of Oncology at San Francisco, has been transferred to Bethesda, Md., as chief of the biometry and epidemiology branch at the National Cancer Institute. The Laboratory of Oncology, which Dr. Shimkin headed from the day of its establishment in 1947, was discontinued on 30 June. It had been operated by the National Cancer Institute and the University of California School of Medicine as a cooperative project for cancer research.

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 and Canada.**

J. W. Cornforth and R. H. Cornforth, Medical Research Council, 38 Old Queen St., London. Here 31 July–25 Aug. to attend the Gordon Research Conference on Chemistry of Steroids at New Hampton, N. H.

J. S. Hall, Animal Husbandry Department, King's College, University School of Agriculture, Newcastle-on-Tyne, Eng. Here beginning mid-July for about 2 wk to attend the World Jersey Cattle Bureau meeting in Guelph, and to visit Beltsville, Md.

Alastair Heron, Medical Research Council, Unit for Research in Occupational Adaptation, attached to the Institute of Physiatry, Maudsley Hospital, London. Here 1 June–9 Sept. to visit centers of interest for research in occupational adaptation.

G. E. Kellaway, Geological Survey, Dept. of Scientific and Industrial Research, London. Arrived in Montreal in May for an indefinite stay to visit northwestern Canada, Alaska, and other areas to study the effects of permanent frost upon soft sedimentary rocks.

R. E. F. Lewis, Medical Research Council's Applied Psychology Research Unit, 38 Old Queen St., London. Arrived in Toronto in April for a stay of 2 yr as an exchange worker with the Defense Research Board Medical Laboratories.

W. C. Lister, head of the Instrument Division and designer of apparatus at the National Institute for Medical Research, Medical Research Council, 38 Old Queen St., London. Here 11 Sept.–20 Oct. to attend the 1st Instrument Congress in Philadelphia.

L. C. Luckwill, Long Ashton Research Station, Agricultural Research Council, 15 Regent St., London is serving as a visiting professor at Cornell University for 1 yr beginning 1 July.

E. M. McGirr, lecturer in medicine in the Muirhead Dept. of Medicine, Royal Infirmary, Glasgow, Scotland. Will come for 3 mo in the fall to observe the clinical use of radioactive isotopes.

A. R. Meetham, Physics Division, National Physical Laboratory, Teddington, Middlesex, Eng. Will arrive in mid-September for about 3 wk to attend the 9th Annual Calorimetry Conference in Schenectady.

Carlos De Andrade Rizzini, São Paulo, Brazil, director-general, Diarios Associados; professor, University of Brazil; director of radio broadcasting, Educational Services, Ministry of Education. Arrived 30 Apr. for 90 days. Trip arranged by Governmental Affairs Institute, c/o Miss Elizabeth Joszick, Programs Branch,

Leaders Division, Dept. of State, Washington, D.C.

H. D. Sawyer, lecturer in nonferrous extraction metallurgy at Royal School of Mines, Imperial College of Science and Technology, Imperial Institute Rd., London. Arrived mid-June for 3 mo to visit U.S. and Canadian centers of nonferrous extraction metallurgy.

R. C. Tomlinson, mathematician, National Coal Board, England. Here 8 June–28 July, to attend the Convention of American Society for Quality Control and an A.S.T.M. symposium in Chicago.

E. K. Woodford, Agricultural Research Council's Unit of Experimental Agronomy, 38 Old Queen St., London. Arrived 25 June for about 90 days to visit centers concerned with research on new crops and selective phytotoxicity.

## Meetings

Fifty sessions, sponsored by the five technical divisions of the **American Institute of Electrical Engineers,** will be held at the Institute's fall general meeting in Chicago, 11–15 Oct. J. F. Calvert of Northwestern University is general chairman. Special emphasis will be on electrical aspects of air transportation, with eight sessions planned on this subject.

The power division is planning sessions on carrier current, insulated conductors, power generation, protective devices, relays, rotating machinery, switchgear, system engineering, transformers, and transmission and distribution. The science and electronics division is scheduling papers on computing devices, electrical techniques in medicine and biology, electronics, and nucleonics.

The industry and general applications divisions will sponsor programs on chemical, electrochemical, and electrothermal applications, feedback control systems, general industry applications, industrial power systems, and land and air transportation.

The most complete gathering of pharmacists, representing every phase of the profession, is scheduled for the week of 22 Aug. at the Hotel Statler in Boston, Mass. Meeting with the **American Pharmaceutical Association** at its 101st annual convention will be the American Association of Colleges of Pharmacy, the National Association of Boards of Pharmacy, the American Society of Hospital Pharmacists, the American College of Apothecaries, and the National Conference of State Pharmaceutical Association Secretaries. These organizations, together with the house of delegates of the A.Ph.A., constitute a complete cross section of all phases of pharmacy and will bring together the leaders of the profession, including those in industry, for discussion of their scientific, economic, and social problems. For information write the American Pharmaceutical Association, 2215 Constitution Ave., NW, Washington 7, D.C.

"Science and the changing patterns of civilization" will be the subject discussed by Gordon M. Shrum, director of the British Columbia Research Council before the 2nd Western Regional Conference of **The Chemical Institute of Canada,** Vancouver, B.C., 10–11 Sept. A feature of the technical program will be the lecture before a general session by Kenneth Pitzer of the University of California, Berkeley. Other fields to be covered by papers include: chemical engineering, biochemistry and nutrition; chemical education; plant products; analytical chemistry; and physical chemistry. Further information can be obtained from Dr. Neal M. Carter, Pacific Fisheries Experimental Station, 898 Richards St., Vancouver.

A microscopy exhibition, **"From magnifying glass to eye of science,"** will be held at the National Museum for the History of Science, Leiden, from 25 June to 19 Sept., coinciding with the International Congress of Cell Biology.

To provide standardization in the vitamin assay of foods in various countries and thus to facilitate international trade, an **International Vitamin Commission** has been organized under the auspices of the food division of the International Union of Pure and Applied Chemistry with Prof. E. Brunius, of the National Public Health Institute, Stockholm, Sweden, as chairman. The additional members are W. F. G. Cuthbertson, Glaxo Laboratories, Ltd., England; Max Kofler, F. Hoffman–La Roche and Co., Ltd., Switzerland; Bernard L. Oser, Food Research Laboratories, Inc., United States; Henri Simonnet, National Veterinary School (Alfort) and National Agronomic Institute, France.

The Commission will attempt to utilize the standardized methods of the numerous organizations within several countries that have engaged in standardization work, and to integrate and adapt these methods for use at the international level.

The fifth **Symposium on Vegetative Neurology,** on the subject "Physiology and pathology of temperature regulation," will take place in Vienna, 30 Aug.–1 Sept. It is sponsored by Acta Neurovegetativa. Inquiries should be directed to Dr. Evelyn Anderson, Chief, Section of Endocrinology, National Institutes of Health, Bethesda, Md., or to Dr. W. Schwable, The Secretariat of the Symposium, Springer-Verlag, Vienna I, Molkerbastei 5, Austria.

## Society Elections

**Alpha Epsilon Delta:** pres., Lloyd R. Gribble, West Virginia University, Morgantown; v. pres., Joseph B. Price, Millsaps College, Jackson, Miss.; sec., Maurice L. Moore, Vick Chemistry Co., New York; treas., Norman F. Witt, University of Colorado, Boulder.

**Illuminating Engineering Society:** pres., Duncan M. Jones, Curtis Lighting of Canada, Ltd., Montreal; v. pres., Marshall N. Waterman, Westinghouse Lamp Division, Bloomfield, N.J.; sec., Kirk M. Reid, General Electric Co., Cleveland, Ohio; treas., George J. Taylor, Day Brite Lighting, Inc., New York.

**Special Libraries Association:** pres., Gretchen D. Little, Atlas Powder Co., Wilmington, Del.; 1st v. pres. and pres.-elect., Chester M. Lewis, *The New York Times*; 2nd v. pres., Isabella M. Frost, Lansing Library Service, Oakland, Calif.; sec., Margaret A. Firth, United Shoe Machinery Corp., Beverly, Mass.; treas., Burton W. Adkinson, Library of Congress, Washington, D.C.

**South Dakota Academy of Science:** pres., Harlan L. Klug, South Dakota State College; 1st v. pres., Frank W. Jobes, Yankton College; 2nd v. pres., Charles R. Estee, University of South Dakota; sec.-treas., A. L. Haines, University of South Dakota; representative to the AAAS Council, Raymond J. Greb, South Dakota State College.

## Education

Brown University will institute this fall an undergraduate curriculum leading to the B.S. degree in **applied mathematics.** The program is designed to train students to translate scientific problems into mathematical form that can be handled by electronic computing devices. During the first two years of the new program, students will take courses in engineering, physics, and chemistry; in the junior and senior years, the application of mathematical methods to these fields will be emphasized. The curriculum will include elective courses designed to broaden educational experience and to encourage the study of other fields in which the application of mathematics offers opportunities.

A 1-wk refresher **course in aviation medicine** for civilians is to be given at the Ohio State University College of Medicine during the week of 13 Sept. The course, which will be 80 percent clinical, is sponsored jointly by the University and by the Civil Aeronautics Administration, and is approved by both the Aero Medical Association and the Airline Medical Examiners Association. Topics to be covered include two half-day sessions on cardiovascular disease and discussions of balistocardiography and vector cardiography. There will be half-day sessions on the following subjects: ophthalmology and visual problems; otolaryngology; endocrine and metabolic disorders; psychiatry; including the problems of the aging pilot; and respiratory and pulmonary function tests.

Nonclinical matters will be covered in lectures on the future of aviation medicine; medical aspects of accelerative forces; the psychological evaluation of airmen; physiological aspects of cabin pressurization; and aviation toxicology. For further information address Dr. Richard L. Neiling, College of Medicine, Ohio State University, Columbus 10.

William C. Van Ost, a graduate this June of the Albany Medical College, has been awarded an Alumni Exchange Scholarship to intern at the University of Sheffield and the Royal Hospital in Sheffield, England, during the next academic year. This is the first year of the **internship exchange** between the two institutions. A British candidate to be sent to Albany is being selected on the basis of an examination held recently in Sheffield.

The first 4-yr collegiate program in **medical journalism and writing** leading to a bachelor's degree has been announced by the American Medical Writers Association. It will begin in September at the University of Illinois and the University of Missouri. Several partial scholarships, sponsored by the AMWA, will be available. Descriptive literature can be obtained from Earl F. English, dean, School of Journalism, University of Missouri, Columbia, or from I. W. Cole, School of Journalism and Communications, University of Illinois, Urbana.

The **U.S. Public Health Service Communicable Disease Center** at Chamblee, Ga., has available a schedule of the laboratory refresher training courses that will be offered by the Center during the period July 1954–June 1955. Information will be sent on request.

North American Philips Co., Inc., and its western dealers will hold the second **Western X-ray Diffraction School** at the Sir Francis Drake Hotel in San Francisco during the week of 30 Aug.–3 Sept. There will be no registration charge. Since accommodations will be limited, those who wish to attend are urged to register as soon as possible with Philips dealers or any North American Philips Co. office.

## Grants and Fellowships

Two new scholarship funds have been established at Ohio State University. A gift of $7500 from Mrs. Louise O. Caldwell and friends of the late **Frank C. Caldwell,** former professor of electrical engineering, established a memorial fund in his name and its income will be used for undergraduate scholarships in electrical engineering.

The **Dana J. Demorest** scholarship fund was set up by alumni gifts, totaling $3000, in honor of Dr. Demorest, now an emeritus professor. Income from this fund will support scholarships for students in metallurgical engineering.

Walter L. Nelson of Cornell University's department of biochemistry and nutrition has received a grant from **Swift and Co.** for study of the metabolism of mammary gland tissue.

The engineering honor society, **Tau Beta Pi Association,** has awarded the following graduate fellowships for 1954–55.

J. Tults, Purdue University. Electronics.
R. F. Hoglund, Northwestern Technological Institute. Heat power.
A. R. Chamberlain, Colorado A. & M. College. Fluid mechanics.
P. L. McCarty, Massachusetts Institute of Technology. Sanitary engineering.
S. J. Poulos, Massachusetts Institute of Technology. Design and construction of hydraulic structures.
L. D. Wall, Mississippi State College. Power systems.

**Tuskegee Institute** has been awarded a $3000 research grant by the **Upjohn Co.** for continuation of a project

for research on synthesis of drugs. Principal scientist is L. F. Cason.

A total of $454,596 in grants for research or professional training has been approved by **United Cerebral Palsy,** New York. A sum of $284,638 was allocated to basic and applied research in the medical field; $144,993 to training personnel; and $24,965 to projects in special education.

St. Christopher's Hospital for Children, Philadelphia. J. B. Arey. Diagnostic service for neuropathologic studies of cerebral palsy, $7500.

Children's Medical Center, Boston. B. B. Geren. Structure of the neuron, $7500.

Harvard University. P. I. Yakovlev. Developmental pathoarchitectonics of the central nervous system in congenital, heredo-familial and early acquired encephalopathies, $15,351.12.

University of Arkansas. W. K. Jordan, School of Medicine. Nucleic acid metabolism in growth and development of the central nervous system, $7992.

New York State Psychiatric Institute. H. Waelsch. Formation of proteins and enzymes in the developing central nervous system, $10,800.

Washington University. D. E. Smith. Evaluation of postmortem material for the study of the quantitative histochemistry of the human nervous system, $6,463.50.

Columbia University. E. A. Kabat, College of Physicians and Surgeons. Immunochemical studies of cerebrospinal fluid protein constituents in various neurological diseases and on mechanisms of allergic reactions, $10,746.

University of Utah. R. W. Doty. Visuo-motor behavior following damage to central nervous system; role of movement in learning, $16,470.

University of California. E. Eldred, School of Medicine. Centroneural control of the muscle spindle, $10,000.

Instituto N. de Cardiologia, Mexico City. A. Rosenblueth. Control of muscular activity, mainly the role of the central nervous system, $5000.

Montefiore Hospital, Pittsburgh. Y. D. Koskoff and R. A. Patton. Behavioral effects of hemispherectomy in primates previously submitted to brain damage, $16,038.

University of Cincinnati. G. H. Acheson, College of Medicine. Changes in ganglionic transmission resulting from section of postganglionic axons, $9000.

Boston University. A. M. Lassek, School of Medicine. Irreversibility of motor deficits following bilateral cerebral lesions, $8056.80.

Columbia University. J. B. Campbell, College of Physicians and Surgeons. Innervation of the urinary tract from the urethra to the renal pelvis in animals, directed at improving the therapeutic approaches to urinary dysfunction of neurogenic origin in man, $10,800.

Georgetown University. J. F. Fazekas. Influence of reduction of mean arterial pressure and of traumatic head injuries on cerebral hemodynamics and metabolism, $6048.

Children's Hospital of Philadelphia. C. Kennedy. Brain circulation in children with cerebral palsy, $14,806.80.

Georgetown University, E. Anderson, W. Haymaker, W. T. Spence, and D. M. Rioch, School of Medicine. Effect of brain lesions on endocrine function and metabolism, $11,793.60.

New England Deaconess Hospital, Boston. S. P. Hicks. Mechanisms of malformation, $7744.

Harvard School of Public Health. T. H. Ingalls. Experimental and epidemiologic investigation of congenital malformations of the central nervous system, $11,314.

Columbia University. C. M. Steer, College of Physicians and Surgeons. Pregnancy wastage with special reference to cerebral palsy as a result of blood group incompatibility, $11,646.72.

Columbia University. A. Wolf, College of Physicians and Surgeons. Etiology of functional and morphological abnormalities of the nervous system of the child. Inapparent maternal viral infection and damage to the fetal nervous system, $7,192.80.

University of California. J. M. Adams, D. Imagawa, and M. H. Jones. Placental transmission of viral infections, $17,354.

State University of New York. P. Gruenwald, Research Foundation. Physiology and pathology of aeration of the lungs of newborn infants, and of methods for the prevention of prolonged asphyxia at birth, $5769.

Johns Hopkins University. G. W. Corner, Jr., and G. W. Anderson, School of Medicine. Chemical and physiologic environment in fetal and neonatal anoxia correlated with the morphology of the brain, $9807.48.

University of Michigan. B. C. Graham and M. U. Tsao. Plasma oxygen tension in infants, $6000.

University of Utah. J. F. Bosma. Impairment of coordination of the mouth and pharynx in infants and children having cerebral palsy, $5994.

Children's Medical Center, Boston, B. Crothers. Natural history of cerebral palsy and film project, $10,000.

University of Illinois. S. A. Kirk. Language process of preschool cerebral palsied children, $13,085.28.

Syracuse University. G. O. Johnson, School of Education. Comparative study of attitudes of cerebral palsied children towards school, $11,880.

Orthopaedic Hospital, Los Angeles. R. Harrington, Breathing movements in a selected cerebral palsy population, $3517.56.

University of Michigan. E. F. Domino. Effects of antispastic drugs on brain stem mechanisms, $6372.

Children's Hospital, Boston. W. T. Green. Analysis of the value of surgical procedures in the treatment of cerebral palsy of the spastic type, $7560.

*Training grants*

American Physical Therapy Association. Training of physical therapists, $15,000.

American Occupational Therapy Association. Training of occupational therapists and pediatric neurologists, $25,000.

Educational summer workshops: University of Texas, $7000; University of Nebraska, $7920; Western Reserve University, $5400; Boston University, $1500.

Vocational summer workshops: University of Kentucky, $5000; Boston University, $3500; Pennsylvania State University, $800; Temple University, $5000.

Children's Rehabilitation Institute. Training of doctors and therapists, $10,000.

William Berenberg, Children's Medical Center, Boston. Program of clinical research and training in a demonstration cerebral palsy unit of the Children's Medical Center, $9000.

Columbia University School of Dental and Oral Surgery. Fellowship program for dental hygienists in dentistry for the cerebral palsied child, $4645.

Columbia University School of Dental and Oral Surgery. Fellowship program in dentistry for cerebral palsied, $15,860.

Columbia University College of Physicians and Surgeons. Postgraduate courses in cerebral palsy for physical and occupational therapists and physicians, $8000.

Luigi Luzzatti, Children's Hospital, San Francisco. Training program for personnel concerned with the care and treatment of the cerebral palsied pre-school child, $21,368.

The **University of Texas Medical Branch** has announced the establishment of the **James W. McLaughlin Fellowship Fund,** as a result of a generous bequest of the late A. C. McLaughlin of California. The fund honors a former professor of internal medicine at the Medical Branch, who was also a regent of the university. On recommendation of a special committee, the McLaughlin fellowships are to be used for the investigation of infection and immunity. Funds are available to support predoctoral and postdoctoral fellowships, as well as senior and faculty fellowships. Fellowships will be made available for 1 yr with opportunity for renewal in certain instances. Address application to the Executive Director, University of Texas Medical Branch, Galveston.

## In the Laboratories

**Arthur D. Little, Inc.,** has announced acquisition of the research and development division and laboratories of the Merrill Company, a metallurgy and engineering firm in San Francisco. The new unit is to be known as Little's Western Laboratories Division.

The first contribution by an industrial firm toward the creation of a bust of Josiah Willard Gibbs for

New York University's Hall of Fame has been received from the **M. W. Kellogg Co.** of New York. Arthur B. Kemper of Manhattan College, secretary of the American Chemical Society's New York section, is receiver of gifts for the fund. Checks payable to the section should be mailed to him at Riverdale 71, N.Y.

Effective 1 July, the **National Lead Co.** has been selected to operate the U.S. Atomic Energy Commission's Raw Materials Development Laboratory at Winchester, Mass., which has been operated by the **American Cyanamid Co.** under Commission contract since 1951. The laboratory is principally concerned with the development of processes for treatment of uranium-bearing ores in the production of uranium concentrates.

A $2,000,000 electronics laboratory has been opened officially by **Raytheon Manufacturing Co.** The U.S. Navy began construction of the building late in 1952, when it was planned that Raytheon would use the structure as a Navy research and development center. It is one of the most advanced of all laboratories for the development of aircraft electronics equipment and guided missiles control systems. It has 100,000 $ft^2$ of floor space on two floors, and can house approximately 700 workers. There are 21 specially designed bays for operating and testing radar equipment.

For "pioneering use of television in bettering the health of the nation," the American Medical Association recently awarded a special citation to the Philadelphia Pharmaceutical house, **Smith, Kline, & French Laboratories.**

The **Westinghouse alternating current network calculator** was set into operation on 1 July at an official opening. Built by the Westinghouse Corp. and cooperatively sponsored by seven major power companies, the calculator is housed in The Franklin Institute Laboratories for Research and Development. The sponsoring power companies—Atlantic City Electric Co., Delaware Power and Light Co., Jersey Central Power and Light Co., Metropolitan Edison Co., New Jersey Power and Light Co., Pennsylvania Electric Co., and Philadelphia Electric Co.—will use this $400,000 analyzing device to stimulate conditions of their respective electric power systems. The participants will contribute to operating costs in proportion to their annual work load. Should companies not require all their allotted time, they are free to relinquish a portion of it to other nonsupporting utilities.

## Miscellaneous

The first two issues of the *ASB Bulletin,* the new quarterly publication of the Association of Southeastern Biologists, have been circulated. Both, one for March and one for June, contain articles on the editorial plans of the publication. At present research papers are not included, but it is possible that a section devoted to short papers may be added after several years. The new bulletin will run about 64 pages per volume. The subscription rate is $2.00 per year. For further information write the editor, V. A. Greulach, University of North Carolina, Chapel Hill, N. C.

A *Directory of Geologists and Exploration Geophysicists* belonging to the member societies of the American Geological Institute was issued by the Institute in April. Approximately 20,000 names and addresses are listed in the directory, which is a by-product of the work on the Earth Sciences Section of the National Register of Scientific and Technical Personnel carried out by the Institute in cooperation with the National Science Foundation. The directory is mimeographed and sells for $2.50 in the United States, Canada and Mexico.

The Society of Actuaries has just published a 300-page report on an extensive investigation of the mortality experienced among insured lives with various physical impairments. Entitled *1951 Impairment Study,* it is the latest in a series of medico-actuarial investigations conducted in this country over the last 45 yr by actuaries and medical men. The present study represents in effect the experience between 1935 and 1950 connected with some 725,000 policies that were followed up for varying periods of time up to 15 yr, with over 18,000 deaths among them. More than 130 groups of different impairments were included in the study.

By act of Congress, Mar. 3, 1847, an appropriation was granted to Henry Rowe Schoolcraft, explorer and historian, and he was authorized to prepare what presumably would be a complete and definitive encyclopedia on American Indians and everything pertaining to them. The project was to be carried out under the direction of the Office of Indian Affairs. The first volume of Schoolcraft's *Historical and Statistical Information respecting the History, Condition and Prospects of the Indian Tribes of the United States* appeared in 1851. Five others followed.

Preparation of this opus had involved an enormous amount of work in the collection of data, but the material was poorly organized. Many of Schoolcraft's philosophical and ethnological ideas, which he stressed, long since have become outmoded. Sometimes his facts were quite mixed up. Nevertheless, the work represents an almost unequaled wealth of material that has been an invaluable source of information for historians and ethnologists. The record is of particular significance because the data, however wrong at times, came from intelligent observers who were in personal contact with the Indians before their ways of life had been much affected by white contacts. The first comprehensive **index to Schoolcraft's volumes,** which will make the work more generally useful to scholars, has just been issued by the Smithsonian Institution's Bureau of American Ethnology. It was prepared, during several years of intensive work, by Frances S. Nichols, formerly of the Bureau staff.