and would not forsake the technical advances in other countries for politics.

* * *

At the recent meeting of the American Medical Association, L. Phillips Frohman, chairman of the section of general practice, warned that the atomic age in medicine is approaching at so rapid a pace that most physicians are not prepared for it. He commented that most physicians are "babes in the wood" about the effects of atomic radiation, largely because the information is not available. He pointed out that at the moment "we are ensnared in an incongruous situation" wherein the physical scientist controls the "atomic pile of education and knowledge," while the practicing physician passively stands aside.

Vault for the Future

Science and *The Scientific Monthly,* in company with such journals as the *Saturday Review of Literature* and *Newsweek,* will be buried in the Vault for the Future, which was dedicated on 20 June at George Washington University. The vault will preserve for 100 years records of modern engineering achievement. It is located beneath the walkway in front of the university's Tomkins Hall of Engineering, which is now nearing completion.

The vault will contain contributions from 20 Government agencies and national and local societies. Each group invited to participate will place selected materials in one of 24 copper boxes, which will be sealed in the vault and marked by a granite block surmounted by a bronze plaque.

The boxes will contain such diverse items as documents and photographs, research reports, strain gages, ball bearings, gas turbine blades, a gyroscope, and ball point pens. The university plans to open the vault 100 years from today, so that engineers then can see this record.

TB and the Yellow Bacillus

A disease that resembles tuberculosis but is caused by an unknown bacillus was reported in the June issue of the *American Review of Tuberculosis and Pulmonary Diseases* (vol. 73, No. 6), journal of the American Trudeau Society. Lawrence E. Wood, Victor B. Buhler, and Ann Pollak of the University of Kansas, describe 17 patients infected with an acid-fast type of bacillus that has the same shape as the tubercle bacillus but which produces yellow cultures, whereas the tubercle bacillus is colorless. Another distinguishing characteristic is that the yellow germ does not produce disease in the guinea pig, although this animal is highly susceptible to tuberculosis.

Among the 17 cases described six had died, but it is not known whether one death was related to the disease. Five of the deaths, however, could be attributed to the disease resulting from infection by the yellow bacillus. At the time the report was prepared, four patients were well, another four were still under treatment, and three were no longer available for study.

Again, the "Abominable Snowman"

The "abominable snowman" still haunts the Himalayas. This creature, variously regarded as a bear, as a monkey, as a giant ape surviving as a relic of the ice age, as an animal hitherto unknown to science, or even, by arrant scoffers, as a pure myth [*Science,* **123,** 1024 (8 June)], continues to make the headlines. An Associated Press dispatch from Katmandu, Nepal, dated 10 June, states that Himalayan villagers claim to have found the body of an "abominable snowman" imbedded in the ice of a crevasse at the foot of Mount Makalu, a 27,790-foot peak on the Tibetan-Nepalese border. Furthermore, according to this dispatch, Peter John Webster, a British tea planter, hopes to go to Mount Makalu next year to investigate the villagers' story.

Webster, who has climbed extensively in the Himalayas, only recently crossed 20,000-foot Ambu Lapcha Pass to join the Swiss expedition that conquered Mount Everest. Once, while high in the Himalayas, he heard a whistling sound, which his guides believed to be the wail of the "snowman." Search of the area, however, revealed no evidence of such a beast.

Webster is skeptical about the existence of an "abominable snowman"; but, with true scientific spirit, he intends to investigate the reported body in the ice beside Mount Makalu. One hopes that he will take along a camera. Yet, whatever he may or may not find, it is not to be expected that the "abominable snowman" will desist from his gambols in the Himalayan snows. He is too well established a poltergeist to do that.—W.L.S., JR.

Microwave Detection of Metallic Ions in Plant Material

Microwave developments during the war have made it possible to use microwave experiments widely, not only in physics and chemistry but even in biological investigations. H. Shields, W. B. Ard, and W. Gordy of Duke University report the "Detection of metallic ions and organic radicals in plant materials by microwaves" in the 26 May issue of *Nature.*

Materials taken from a plant or from the ground below were placed in a microwave absorption cell and studied at room temperature. In numerous plant substances, electron-magnetic resonances corresponding to those from manganese ions in aqueous solutions were detected (six equal components with a component spacing of 95 gauss). Therefore, the investigators conclude that the manganese ions found in plants may be dissolved in their water content.

In pine cones and pine needles, a single sharp line was superimposed on the manganese hyperfine structure. Similar resonances were found in fallen oak leaves, naturally dried ivy stems, and other apparently dead plant materials; this may be caused by bound or semibound oxygen.

A third type of resonance was observed in several plant materials. This was a broad resonance, which the authors tentatively attribute to cupric ions. Microwave detection of ions in plant material should become a useful tool for the plant physiologist or agriculturist.—K. L.-H.

Scientists in the News

JOHN J. DAVIS of Purdue University is retiring as head of the entomology department and the Purdue University Agricultural Experiment Station after more than 35 years of service. He will be succeeded as head of the department by JOHN V. OSMUN.

W. ALBERT NOYES, dean of the University of Rochester graduate school, has been named acting dean of the College of Arts and Sciences. He succeeds J. EDWARD HOFFMEISTER, who resigned the deanship in order to devote full time to the chairmanship of the department of geology and geography.

ALFRED M. BONGIOVANNI, associate professor of pediatrics at the University of Pennsylvania School of Medicine, has received the 1956 CIBA award of the Endocrine Society for outstanding research in human endocrine glands, particularly as they affect the development of the child. He was honored for his work on the chemical nature of adrenal cortex hormones and on the abnormalities in the biosynthesis of these hormones which lead to various adrenal diseases.

The award is made annually to a scientist under 35 years of age. It provides $1800, and $700 for expenses, should the winner decide to move to a laboratory other than his own for special research.

RICHARD M. NELSON, high-school science teacher of Kalispell, Mont., has been named the fifth "McCall's Teacher of the Year" by *McCall's* magazine. He was cited for "bringing the world of science to the attention of an agricultural and lumbering community—contributing to an eventual understanding of the atomic age by the layman." Recently, accompanied by two of his students, he was presented to President Eisenhower at the White House.

HOWARD O. McMAHON, science director of Arthur D. Little, Inc., has been elected a vice president of the company.

J. W. T. YOUNGS, professor of mathematics at Indiana University, has been named chairman of the department of mathematics and director of the Graduate Institute for Mathematics and Mechanics. The appointment consolidates the administration of the university's two divisions devoted to teaching and research in mathematics.

THOMAS H. CHRISTIE, chairman of the science department at Washington-Lee High School, Arlington, Va., has been selected by the Virginia Section of the American Chemical Society to receive its 1956 distinguished service award in recognition of his excellence in science teaching and his outstanding contributions in stimulating interest in science among high-school students.

Lehigh University has named HARVEY A. NEVILLE as vice president and provost and FRANK E. MYERS as dean of the graduate school. Neville, head of the chemistry department and former dean of the graduate school, will continue to direct the program of the Lehigh Institute of Research. Myers will continue to serve as head of the department of physics, a post he has held since 1947.

MAX A. WOODBURY, who formerly headed logistics research at George Washington University, has been appointed research professor of mathematics at the New York University College of Engineering. A specialist in probability, mathematical statistics, and computational methods, Woodbury devised the system by which the computer Univac predicted the outcome of the 1952 Presidential election on the basis of very early returns.

Besides developing the college's program in engineering statistics, he will direct the statistical, computational and mathematical work of the Engineering Research Division. This covers research in such fields as aerodynamics, navigation, electronics, meteorology, and oceanography.

WILLIAM N. LACEY has resigned as dean of graduate studies at California Institute of Technology in order to devote full time to teaching and research. He has been succeeded in the deanship by H. F. BOHNENBLUST, professor of mathematics at the institute since 1946.

The following are among those who have recently received honorary doctoral degrees.

Purdue University: HENRY R. KRAYBILL, vice president and director of research and education for the American Meat Institute Foundation.

Lawrence College: GERARD PIEL, publisher of *Scientific American*.

Cambridge University: DETLEV W. BRONK, president of the National Academy of Sciences.

West Virginia University: NATHAN I. HALL, vice president and director of Hughes Aircraft Company.

Oregon State College: WILLIAM J. KROLL of Corvallis, metallurgist; ROGER J. WILLIAMS, director of the biochemical institute at the University of Texas.

Union College: HENRY T. HEALD, chancellor of New York University; RUDOLPH A. SCHATZEL, vice president of Rome Cable Company; GLENN B. WARREN, vice president of the General Electric Company.

Alfred University: MARVIN J. UDY, Strategic Materials Corporation.

Hahnemann Medical College: FRANK M. PORTER, president of the American Petroleum Institute; FRANCIS BOYER, president of Smith, Kline and French Laboratories; DONALD GUTHRIE, surgeon-in-chief of the Guthrie Clinic at the Robert Packer Hospital.

A. M. GUREWITSCH, a physicist at the General Electric Research Laboratory, Schenectady, N.Y., has been appointed as one of the laboratory's European scientific representatives. Operating from the new G.E. research office in Zurich, Switzerland, Gurewitsch will travel throughout western Europe, attending scientific meetings and visiting laboratories that conduct fundamental research in areas that are of interest to the company.

ROBERT YORK, who since 1953 has been assistant director of the General Development Department of Monsanto Chemical Company in St. Louis, Mo., has been appointed the first Socony Mobil professor of chemical engineering at Cornell University. The new chair, made possible by a 5-year grant from Socony Mobil Oil Company, Inc., and intended primarily for undergraduate instruction, is believed to be the first of its kind to be established by an American university.

KARL S. QUISENBERRY has succeeded A. H. MOSEMAN as director of crops reseach in the U.S. Department of Agriculture's Agricultural Research Service. MARION W. PARKER, head of weed investigations in the Field Crops Research Branch, has replaced Quisenberry as assistant director. Moseman, who has directed USDA research in crop production since 1953, is resigning from Government service to accept a position with the Rockefeller Foundation as associate director for agricultural programs.

LLOYD A. HALL, technical director of the Griffith Laboratories, Inc., has been named recipient of the 1956 honor scroll award of the Chicago Chapter, American Institute of Chemists. The scroll will be presented next October at a testimonial banquet.

GAIL M. DACK, director of the Food Research Institute at the University of Chicago, received the Babcock-Hart award of the Institute of Food Technologists during its recent annual meeting. He read a paper on "Evaluations of microbiological standards for food."

JOHN L. NICKERSON, for the past 6 years professor of physiology at the College of Physicians and Surgeons, Columbia University, has been appointed chairman of the department of physiology and pharmacology at Chicago Medical School.

RILEY D. HOUSEWRIGHT has been appointed scientific director of the Army Chemical Corps Biological Warfare Laboratories at Fort Detrick, Md. Formerly he was chief of the Medical Bacteriology Division at Detrick. He succeeds JOHN L. SCHWAB, who was recently named deputy for scientific activities of the Army Chemical Corps Research and Development Command.

JAMES C. THOMSON, formerly director of the Nutrition Research Institute and professor of biochemistry and nutrition at International Christian University in Tokyo, and more recently nutrition consultant on the Joint FAO/WHO/UNICEF Pakistan Milk Survey Team, has returned to his position in Teheran, Iran, as World Health Organization nutrition consultant to the Ministry of Health of Iran.

J. PALMER SAUNDERS, formerly deputy chief of the Pharmacology Branch, Chemical Warfare Laboratories, Army Chemical Center, Md., has accepted appointment as executive secretary of the Pharmacology and Experimental Therapeutics Study Section, Division of Research Grants, National Institutes of Health.

RUFUS OLDENBURGER, director of research for the Woodward Governor Company, will join the Purdue University faculty on 1 Sept. as professor of engineering sciences and mechanical engineering.

Recent Deaths

ROBERT BENSLEY, Chicago, Ill.; 88; professor emeritus of anatomy at the University of Chicago; authority on cell structure; 11 June.

FREEMAN F. BURR, Wayne, Me.; 79; retired Maine state geologist and authority on Maine's natural resources; 8 June.

CLARENCE G. CAMPBELL, New York, N.Y.; 88; physician and specialist in anthropology and eugenics; 16 June.

CHARLES DERLETH, JR., San Francisco, Calif.; 81; retired chairman of the department of civil engineering at the University of California; 13 June.

LAWRENCE J. HERR, Westfield, N.J.; 57; civil engineer for Esso Research and Engineering Company; 12 June.

ERNST LEITZ, Wentzler, Germany; 85; president of the Leitz Optical Works; 15 June.

C(HAUNCEY) M. LOUTTIT, Detroit, Mich.; 54; chairman of the department of psychology at Wayne University; editor of *Psychological Abstracts*; 24 May.

CLARENCE LOWE, Johannesburg, Union of South Africa; 62; former director of the Archaeological Survey of South Africa; 17 June.

FRANCES E. McRAE, New York, N.Y.; 87; retired associate professor of chemistry at Hunter College; 11 June.

THOMAS H. McHATTON, Athens, Ga.; 72; professor emeritus and former head of the department of horticulture at the University of Georgia; 15 May.

Grants, Fellowships, and Awards

■ The Graduate Research Institute of Baylor University has announced the availability of assistantships for students working towards the M.S. and Ph.D. degrees in the basic fields of science related to modern medicine. Included are anatomy, microbiology, cytology, human genetics, immunology, and organic, bio-, and radiochemistry.

Because of the close connection between the institute and Baylor University Hospital and the Wadley Blood Center, an unusual opportunity is afforded students to conduct research on human pathologic states. For further information, address inquiries to Dr. Morton D. Prager, Baylor University Graduate Research Institute, 3600 Gaston Ave., Dallas, Tex.

■ The Alfred P. Sloan Foundation, Inc., has announced an expansion of its scholarship program. Originally limited to some 100 scholarship stipends tenable at four institutions, the program in the future will embrace 13 colleges and universities and make awards to some 240 students. Two institutions have been added to the program during the last month. They are the Case Institute of Technology and the Johns Hopkins University School of Engineering.

The 11 institutions already participating in the scholarship program are Albion College, Amherst College, California Institute of Technology, Cornell University, Dartmouth College, Massachusetts Institute of Technology, Oberlin College, Stanford University, Wabash College, and Williams College. By 1960, when this scholarship program is fully operative, it is anticipated that the foundation's annual expenditure will exceed $420,000.

In the Laboratories

■ The Ultrasonic Manufacturers Association has announced the formation of an Engineering Standards Committee. Composed of members from 17 ultrasonic manufacturers in the United States, this committee has been established to formulate engineering standards and practices for the industry.

■ The Gulf Research and Development Company, Harmarville, Pa., has announced that it has undertaken an expanded production research program, to be conducted by 150 scientists, engineers, and technicians, in an effort to improve the recovery of petroleum from oil fields. Specific aims include increasing the percentage of petroleum recovered from oil formations, and improving both the speed and the economy of drilling wells and producing and transporting oil and gas.

Two new buildings, to cost approximately $1.5 million, will house these activities, for which additional staff members are now being recruited. Both buildings are under construction. The smaller, for heavy drilling research, is scheduled for completion in August and the main building in January 1957.

The larger structure, of two-tone brick and steel frame, will be four stories high. It will include some 94 laboratories and offices, besides storage, utility, and service rooms.

The smaller structure, of concrete block and metal panels, will be built around an 80-foot derrick. Sliding roof panels will permit operation of the derrick. There will be a single floor, several offices, and a mud pit for mixing drilling mud. The area beneath the drilling platform is designed for setting up heavy test equipment, such as experimental drills and oil field rock cast in concrete for drilling rate studies.

■ A new firm, the New England Nuclear Corporation, 575 Albany St., Boston, has been formed by Edward Shapiro and Seymour Rothchild, former heads of the inorganic and organic chemistry departments of Tracerlab, Inc. The firm will specialize in the chemical aspects of radioactive materials and will manufacture labeled compounds, reference sources, and radioactivity devices.

Miscellaneous

■ The International Commission on Zoological Nomenclature has given notice that beginning 26 Dec. it will start voting on the following cases involving the possible use of its plenary powers for the purposes specified against each entry. Full details were published in the *Bulletin of Zoological Nomenclature* [**12**, pt. 3 (26 June 1956)]. (i) *Lepidurus* Leach, 1819, validation; *Triops* Schrank, 1803, determination of gender and designation of type species for (Cl. Crustacea, order Decapoda); (ii) APODINAE Hartert, 1897 (Cl. Aves), validation; (iii) *volvulus* (emend. of *volvulas*) (*Filaria*), validation of, as from Leuckart [1892] (Cl. Nematoda); (iv) *Asaphus* Brongniart, 1822, validation of and designation of type species for; *cornigerus* Schlotheim, 1820 (*Trilobites*), suppression (Cl. Trilobita). Comments should be sent as soon as possible to Francis Hemming, Secretary to the Commission, 28 Park Village East, Regent's Park, London, N.W.1.

■ The Fund for Peaceful Atomic Development, 2000 Second Ave., Detroit 26, Mich., has published a pamphlet entitled *Nuclear Science and Engineering Training in the United States* that is a listing of facilities at selected colleges and universities and at the national laboratories of the U.S. Atomic Energy Commission.

The publication has been prepared especially for the use of students from outside the United States who are interested in graduate training in this country. It should also be helpful to American students seeking unclassified training in nuclear science, engineering, radiological and health physics, isotope handling, and associated courses.

The information presented in the report was obtained almost entirely through questionnaires addressed to the institutions listed. The material is in summary form and is intended simply as a guide in selection of institutions for advanced training.