or in nitrogen. Ferricytochrome becomes reduced when irradiated in nitrogen, but anomalously was not affected at all when irradiated in air at doses up to 35 kiloroentgens.

The catalytic activity of succinic oxidation by cytochrome *c* was reduced by only 15 percent after receiving 35 kiloroentgens in air. The same dose in nitrogen caused a 35 percent loss of activity, apparently because the initial reaction product undergoes a secondary and irreversible oxidation to a green pigment after oxygen is admitted.—B.G.

■ Some 99,000 gallons of drinkable water were produced and distributed by the Army's new mobile purifier during 9 days of emergency operation recently in flooded Stroudsburg, Pa. Developed by the Corps of Engineers Research and Development Laboratories, Fort Belvoir, Va., the truck-mounted unit is capable of purifying 3000 gallons of water an hour, 24 hours a day.

The unit, which is nearing standardization by the Army, is one of a group of purifiers that have resulted from years of basic and applied research at the laboratories. Other units include 1500 and 600-gallon-per-hour capacity mobile purifiers, and a semipermanent one capable of producing 10,000 gallons per hour.

■ An electronic instrument for the measurement of muscle strength was reported at the recent meeting of the American Congress of Physical Medicine and Rehabilitation by Willis C. Beasley of Children's Hospital, Washington, D.C. Currently, when muscle strength has been affected by neuromuscular diseases, such as poliomyelitis, the degree or amount of remaining strength is measured manually by a physician or physical therapist. Manual measurement, of necessity, must involve the subjective opinion or interpretation of the examiner.

Following ten years of study supported by the National Institutes of Health and the National Foundation for Infantile Paralysis, Beasley, a biophysicist, has developed a method of measuring muscle strength electronically.

Although an examiner using manual methods may obtain a relatively accurate measurement of the immediate muscle strength, the mechanical method is also able to determine the degree of lasting strength.

■ A calendar determinant, a 7½- by 10-inch device that, by means of slides, can display the calendar for any Gregorian month in a span of 400 years, has been invented by Osmund Robin of Croydon, England. The instrument's range could be extended indefinitely.

Development of the new calendar is reported in the August issue of the *Journal of the Horological Institute of America,* which comments that the invention is a "remarkable commentary on the inconsistencies of the Gregorian calendar, which requires so ingenious a device to enable one to determine a past or future date."

■ Identification of certain human-type bones in a gorilla and a chimpanzee is reported in the 24 Sept. issue of *Nature* by G. T. Ashley of the department of anatomy, University of Manchester, England. The bones, suprasternal ossicles, are located just above the breast bone. They are quite common in man, but until 1944 they had never been seen in primates other than man.

In that year Adolph Schultz of Johns Hopkins University reported finding them in two gibbons. They have not been reported in monkeys or orangutans. In man these small bones were at one time thought to represent rudiments of the furculum, or wishbone, of birds. Now they are thought to be rudiments of a bony structure of the primitive shoulder girdle.

Scientists in the News

HELEN SAWYER HOGG, associate professor at the University of Toronto, has been appointed program director for astronomy in the division of mathematical, physical, and engineering sciences of the National Science Foundation. She is on leave of absence from the university.

VERNON BRYSON is program director for genetic and developmental biology. Since 1943 he has been working as a geneticist at the Long Island Biological Association, Cold Spring Harbor, N.Y.

FRANK RICHARDSON, who is on leave from the University of Nevada, has been appointed visiting lecturer for the current academic year in the department of zoology of the University of Washington, Seattle.

In a ceremony that took place on 20 Sept. at the Southern Utilization Research Branch of the U.S. Department of Agriculture, New Orleans, La., Secretary of Agriculture Ezra T. Benson presented a Superior Service Award plaque to a group of scientists on the branch's staff. Members of the group were DOROTHY C. HEINZELMAN, RALPH W. PLANCK, FRANK G. DOLLEAR, FRANK C. PACK, and ROBERT T. O'CONNOR. The award was given to the group in recognition of its members' work in the development of new and highly improved methods of analysis that are of importance to research on new uses for fats and oils.

KENNER F. HERTFORD became manager of the Atomic Energy Commission's Santa Fe Operations Office on 1 Oct. He succeeded DONALD J. LEEHEY, who has resigned and plans to establish an engineering consultant's office in Seattle, Wash. Hertford retired from the U.S. Army Corps of Engineers on 31 July in order to accept the AEC appointment. Santa Fe Operations has field responsibility for the commission's program for the research, development, production, and testing of nuclear weapons.

T. GOLD, chief assistant to the Astronomer Royal, Royal Observatory, England, will deliver two lectures in the physics department of the University of Maryland on 25 and 26 Oct. He will discuss "Some aspects of the history of the earth" and " Field of a uniformly accelerated charge."

WILLIAM E. WRATHER, director of the Geological Survey, U.S. Department of the Interior, received the department's Distinguished Service Award on 21 Sept. Wrather first joined the Survey in 1907, working with a field party during the summer in Montana. Then he worked for a long period in the Southwest, first as a petroleum geologist with J. M. Guffey Petroleum Company, which merged into the Gulf Production Company, and then as an independent consulting geologist. He was appointed director of the survey on 7 May 1943.

During a long career, he has served as a delegate representing the United States at several important international scientific meetings, received honorary degrees of doctor of science from the Montana School of Mines, and Kentucky and Southern Methodist universities, and doctor of engineering from the Colorado School of Mines. In 1950 he was awarded the Anthony F. Lucas petroleum medal, and in 1954 the John Fritz medal.

HANS WINTERSTEIN, research professor of physiology at the Institute of Physiology, University of Istanbul, Istanbul, Turkey, recently delivered the Harvard Medical School's Edward K. Dunham lectures. The theme this year was *The Chemical Control of Pulmonary Ventilation.*

L. EARLE ARNOW, vice president and director of research for Sharp and Dohme, a division of Merck and Company, Inc., was awarded the University of Minnesota Outstanding Achievement Award during the recent meeting of the American Chemical Society that took place at the university. Arnow, who received both his Ph.D. and M.D. degrees from Minnesota, is a former member of the university's medical faculty.

WILLIAM R. HAWTHORNE has been appointed to the new faculty post of Jerome Clarke Hunsaker professor of aeronautical engineering at Massachusetts Institute of Technology for the current academic year. Hawthorne is on leave from Cambridge University, England, where he holds the Hopkinson and Imperial Chemical Industries professorship in applied thermodynamics. His principal interests are aircraft propulsion and advanced fluid mechanics; at M.I.T. Hawthorne will divide his teaching efforts in these fields between the departments of mechanical and aeronautical engineering.

VINCENT DU VIGNEAUD, professor of biochemistry at Cornell University Medical College, is to receive the Chandler medal from Columbia University in recognition of his contributions to the knowledge of biochemistry, his most recent achievement being the first synthesis of certain polypeptide hormones. The medal will be presented during a dinner-meeting at the Men's Faculty Club of Columbia on 9 Nov., when du Vigneaud will discuss the "Isolation and proof of structure of the vasopressins and the synthesis of octapeptide amides with pressor-antidiuretic activity."

ALBERT CAROZZI of the University of Geneva, Switzerland, is visiting lecturer in geology at the University of Illinois for the current academic year. He is teaching an undergraduate course in structural geology and a graduate course in tectonics.

MURIEL E. WARNER, former director of the American Medical Association microbiological laboratory, has recently joined the staff of Foster D. Snell, Inc., New York, consulting chemists, engineers and biologists. The firm plans to extend its services in the microbiological and pharmaceutical fields, especially in production control, process and product development, stability tests, legal problems, and assignments involving the various regulatory bodies.

ALBERT H. COOPER, professor of chemical engineering at the University of Maryland, has been named chairman of the department of chemical engineering at Pratt Institute. Cooper is also manager of the Pilot Engineering Co. and vice president and technical director of Chemchron Corp.

HENRY C. SMITH, associate professor of psychology at Michigan State University, has been granted a Fulbright award for 1955–56 to engage in research in industrial psychology at Società Umanitaria, Milan, Italy.

FREDERICK L. STONE, assistant for professional services to the vice chancellor, School of the Health Professions, University of Pittsburgh, and a member of the executive committee of the medical advisory board of the National Multiple Sclerosis Society, has been appointed director of the society's medical and scientific department. His primary responsibility will be to develop expanded research and medical programs; he will also administer all research grants and fellowships.

MELSON BARFIELD-CARTER of the radiology department of Alabama Medical Center, and JAMES R. GARBER, of the department of obstetrics, retired on 1 Aug. Both men had served since 1945 as chairmen of their respective departments.

ROGER H. CHARLIER of Chester, N.J., president of the New Jersey Academy of Science, has been appointed special lecturer in geology and physical geography at Hofstra College.

WALTER H. ZIMPFER, of the civil engineering staff of the University of Florida, has been granted a 1-year leave of absence to serve as assistant in the University Relations Division of the Oak Ridge Institute of Nuclear Studies. He succeeds WADE T. BATSON, who has resumed his post as associate professor of biology at the University of South Carolina.

SIMON RODBARD, former assistant director of the Medical Research Institute at Michael Reese Hospital, Chicago, Ill., has been appointed professor of experimental medicine at the University of Buffalo and director of its Chronic Disease Research Institute. He will conduct an intensive program of research and training in the cardiovascular field.

Necrology

RICHARD R. DEIMEL, Englewood, N.J.; 74; retired head of the mechanical engineering department of Stevens Institute of Technology; 28 Sept.

THOMAS MACKIE, Westport, Conn.; 60; tropical disease specialist, former professor at Columbia University, Cornell University, and Bowman-Grey School of Medicine; consultant in tropical medicine to the Secretary of War during World War II; 5 Oct.

KARL PAECH, Tübingen, Germany; 46; botanist and plant chemist, professor at the University of Tübingen; 28 July.

REV. LOUIS B. SNIDER, Chicago, Ill.; 42; psychologist, professor at Loyola University; 28 Sept.

ZATAE L. STRAW, Manchester, N.H.; 89; physician, first woman graduate of Dickinson College; 1 Oct.

LOUIS L. THURSTONE, Chapel Hill, N.C.; 68; retired professor of psychology at the University of Chicago and a member of the staff there for 28 years; president of the American Psychological Association in 1932; 29 Sept.

Education

■ University of California Extension is offering a course in aviation medicine this fall. The course, which is open to graduates of approved medical schools, will meet 26, 27, and 28 Oct. in the Religious Conference Building adjoining the university's Los Angeles campus. In addition to lectures by authorities on such subjects as aviation toxicology, psychology, and otolaryngology, the course will include a field trip to the Lockheed Aircraft Corporation in Burbank, Calif.

■ A research building designed for studies of the Khapra beetle, a serious pest of stored food products, will be constructed shortly on the Riverside campus of the University of California. The new structure will provide isolated facilities that will permit entomologists to observe the beetle without any danger of contaminating other buildings.

Facilities will include rooms for raising mass cultures of the pest, laboratories for checking the effectiveness of various control techniques, fumigation chambers, and equipment for formulating the many insecticides that will be tested. Experiments will be directed by David L. Lindgren and Glenn E. Carman.

■ The department of dentistry and division of dental research of the University of Rochester School of Medicine and Dentistry celebrated its 25th anniversary on 8 Oct. Day-long scientific sessions brought together a majority of the 58 former dental research fellows at the Rochester Medical Center, many of whom have since become deans, professors, and research directors in many parts of this country and abroad. The celebration was dedicated to George H. Whipple, emeritus dean of the School of Medicine and Dentistry and emeritus professor of pathology, who originated the dental research program.

About 20 reports were given describing new developments in dental research and education. Among the participants in the sessions in Whipple Auditorium were Alan Gregg, vice president of the Rockefeller Foundation, and A. LeRoy Johnson, emeritus dean of Harvard Dental School. They, as well as Whipple, spoke on the early history of the dental research and training program, which was begun and supported for 5 years by a substantial grant from the Rockefeller Foundation.