gation experiments, will be responsible for technical administration of the division's engineering and logistical work.

Moody C. Thompson has been appointed as a consultant to do original research on microwave refractometers and special instruments relating to tropospheric effects on radio waves propagation. James R. Wait, a theoretical physicist, will continue to serve in his capacity as a consultant.

The new sections and section chiefs are as follows: data reduction instrumentation, Walter E. Johnson; modulation systems, Arthur D. Watt; navigation systems, Gifford Wefley; radio noise, William Q. Crichlow; tropospheric measurements, Charles F. Peterson; radio systems application engineering, Robert S. Kirby; and tropospheric analysis, Philip L. Rice.

FWS Study of Fish Chemistry

The Fish and Wildlife Service of the Department of the Interior has inaugurated a continuous study of the protein, fat, mineral, and vitamin content of all species of fish used for food. There are about 160 species of fish and shellfish used on American tables and the nutritive elements vary with the subspecies, the season and area of capture, sex, and various other conditions. While such technological studies have been made from time to time on a few species, the knowledge of the changing nutritive values of even the most-studied varieties is insufficient to meet modern demands, and for most of the 160 species such knowledge is either entirely lacking or fragmentary.

Instructions have been sent to each of the fishery laboratories operated by the Service—Seattle, Boston, Ketchikan (Alaska), College Park, (Md.), and Pascagoula (Miss.)—to conduct the necessary chemical analysis on a continuing basis on samples of the fish in their respective areas. These samples will come from commercial catches and from fish taken by the exploratory fishing vessels operated by the Service. Laboratory tests will also be made on any new or unusual fish caught by the exploratory ships.

In the light of present chemistry, fish are divided into two classes, fatty and nonfatty. Fish having more than 3 percent fat are listed in the fatty category. Cod, flounder, haddock, halibut, yellow perch, and yellow pike are among those considered as nonfatty, but the degree will vary from time to time. Salmon, mackerel, ocean perch, and sable fish are among the fatty species, with mackerel varying from three to 22 percent and salmon and the others showing variations almost as wide. Pacific rockfish vary up and down from the 3 percent line; scallops are nonfatty; oysters are nonfatty but high in the carbohydrate-type (glycogen) energy source as well as the valuable protein component.

News Briefs

■ The Indian Government plans to set up a Central Astronomical Observatory that is to be under the Indian Meteorological Department. The new facility will have a 74-inch telescope, one of the largest in the world.

■ The National Tuberculosis Association has reported the following TB statistics: more than 15,000 people die annually of the disease, despite the decline in death rate; 11 states and the District of Columbia had an increase in death rate in 1955 as compared with 1954; nearly 80,000 new active cases are being reported annually; in people over 65 years of age, one death is reported for every two cases; infection is taking place, in some parts of the country, at the rate of one person per 100 population a year.

■ The earth satellite that is being constructed by the Navy's Project Vanguard for launching during the International Geophysical Year will receive a coat of pure gold instead of the shiny, silvery one originally ordered. Brooks and Perkins, Inc., of Detroit, Mich., manufacturer of the sphere, said a change in specifications calls for gold plating 1/30,000 of an inch thick.

■ A very low incidence of dental caries among children in the village of Bang Chan in Thailand has been noted by researchers for the Southeast Asia Program of Cornell University's department of Far Eastern studies. Hazel Hauck of the New York State College of Home Economics of Cornell, who has been associated with the Bang Chan project since its start in 1950, reports that among the 226 children surveyed, 68 percent had no cavities in their permanent teeth.

Scientists in the News

WILLIAM J. MORGAN, formerly research director for unconventional warfare in the Office of the Chief of Psychological Warfare in the Department of the Army, has been appointed to the position of chief of the Motivation and Development Branch in the Civilian Personnel Office in the Office of the Chief of Staff, Department of the Army.

L. EUGENE ROOT of the Lockheed Aircraft Corporation has been appointed a vice president of the corporation and general manager of its expanding new Missile Systems Division. A former executive in the Rand Corporation and chairman of the Aerodynamics Advisory Panel for the Atomic Energy Commission at Los Alamos, Root will succeed HALL L. HIBBARD, a senior vice president who has been serving as pro tem director of the division.

Starting in Van Nuys, Calif., the division has built a staff of 5000 scientists, engineers, technicians, and craftsmen and this fall began occupancy of a new plant in the San Francisco Bay area. This plant includes some 200,000 square feet of research laboratories at Stanford University's Industrial Park and 350,000 square feet of engineering, manufacturing, and administrative space in nearby Sunnyvale.

MITSURU NAKAMURA, formerly research associate in microbiology at Boston University School of Medicine and associate professor of microbiology at the New England College of Pharmacy, has been appointed associate professor of bacteriology and chairman of the department at Montana State University, Missoula. His research activities have dealt with the nutrition, biochemistry, chemotherapy, and immunology of *Endamoeba histolytica.*

PAUL FUGASSI, director of the Coal Research Laboratory at Carnegie Institute of Technology; George Ostapchenko, a graduate student of chemistry at the institute; and Ruth Trammell, instructor in chemistry at Chatham College, have received the American Chemical Society's bituminous coal research award for having delivered the best paper presented before the gas and fuel chemistry division's session at the ACS annual meetings last September.

THURMAN B. GIVAN and BENJAMIN KRAMER, both pediatricians, have been appointed clinical professors emeritus by the State University of New York College of Medicine in Brooklyn. Givan has been a member of the faculty of the college and its predecessor, the Long Island College of Medicine, since 1919. He served as president of the Kings County Medical Society in 1946 and has been New York State chairman of the American Academy of Pediatrics, president of the Brooklyn Academy of Pediatrics, and president of the Brooklyn Pediatric Society.

Kramer joined the college in 1926. He was associate attending pediatrician at Johns Hopkins University and pediatrician-in-chief at Brooklyn Jewish Hospital before assuming his post at the college. Kramer, who is president of the pediatric section of the New York Academy of Medicine, is known for his work in calcium metabolism.

TURNER G. TIMBERLAKE has been appointed chief of the mechanical engineering department at the Corps of Engineers' Research and Development Laboratories, Fort Belvoir, Va. He fills a position left vacant when Robert W. BEAL was promoted to the position of director of applications engineering. Previously Timberlake, who has been with the Corps of Engineers for 10 years, had been chief of the maintenance engineering division of the Engineer Maintenance Center in Columbus, Ohio.

W. L. FAITH, chief engineer of the Air Pollution Foundation (Los Angeles, Calif.) since the organization began operations in 1954, has been named managing director of the organization. He succeeds LAUREN B. HITCHCOCK, who has resigned to return to private consulting practice in the industrial research and development field.

LLOYD E. THOMAS, formerly a professor in the biochemistry department of the University of Missouri School of Medicine, has joined the laboratory staff of the Good Samaritan Hospital, Portland, Ore., to start a research program at the hospital.

OTTO WALCHNER, aeronautical research engineer at the Air Research and Development Command's Wright Air Development Center, Ohio, has received the decoration for exceptional civilian service, the highest civilian award that the Air Force bestows, for his work as a research physicist in the field of armament aerodynamics. The citation, signed by the Secretary of the Air Force, read in part, "His outstanding and timely research in the critical problem of bomb release and predictability of its trajectories has resulted in developments of extraordinary importance." Besides the citation, the award consists of a gold medal and gold lapel emblem.

A former German scientist, Walchner was born in Weil, Germany. During World War II he worked as a research professor with the German Air Force at the Aerodynamics Research Center, Goettingen, Germany. He came to the United States in 1946 and was employed by the Air Force through the Joint Intelligence Objectives Agency alien specialist program.

PHINEAS J. SPARER, chief of psychiatry and psychosomatics at the Memphis (Tenn.) Veterans Hospital, has joined the staff of the University of Tennessee College of Medicine as professor of psychiatry and of preventive medicine. Sparer, author of the recent book *Personality, Stress and Tuberculosis,* has had extensive training in both the medical and psychological disciplines.

ALEXANDER SYMEONIDIS, former head of the geographic pathology unit of the National Cancer Institute, has been appointed professor of pathology and director of the Cancer Institute, Aristotelian University School of Medicine, Thessaloniki, Greece.

The American Society of Civil Engineers has awarded its 1956 research prizes as follows: to FRED BURGGRAF, Washington, D.C., associate director of the Highway Research Board, "in recognition of outstanding contributions to knowledge through the administration of research in highway engineering and construction materials"; to CHESTER P. SIESS of the University of Illinois, Urbana, "in recognition of outstanding contributions to knowledge through his research on reinforced concrete slabs"; and to VINTON W. BACON, Sacramento, Calif., executive officer of the California State Water Pollution Control Board, "in recognition of achievements in applied research on waste water reclamation, pollution and water quality."

LAWRENCE M. KUSHNER has been selected to head the newly organized metal physics section of the National Bureau of Standards Metallurgy Division. He is the former assistant chief of the surface chemistry section. The new section will supplement the present program of the division's other four sections in the broad fields of mechanical, chemical, and thermal metallurgy and corrosion.

The Institute of Radio Engineers, Inc., has announced the recipients of three of its annual awards for 1957. The presentation of these awards will be made during the IRE national convention, which will be held 18–21 Mar. in New York.

O. G. VILLARD, JR., professor at Stanford University, Stanford, Calif., will receive the Morris Liebmann memorial prize "for his contributions in the field of meteor astronomy and ionosphere physics which led to the solution of outstanding problems in radio propagation."

DONALD RICHMAN, supervising engineer at the Hazeltine Corporation, Little Neck, N.Y., will receive the Vladimir K. Zworykin prize "for contributions to the theory of synchronization, particularly that of color subcarrier reference oscillator synchronization in color television."

GEORG GOUBAU, physicist at the Signal Corps Engineering Laboratories, Fort Monmouth, N.J., will receive the Harry Diamond memorial prize "for his many contributions in ionospheric research and circuit theory and for his discovery of the surface wave transmission principle."

J. REID CLEMENT, JR., a physicist at the Naval Research Laboratory, Washington, D.C., has been awarded the Meritorious Civilian Service award for his achievements in cryogenics. The award is the second highest given to a civilian employee. Clement was recognized for his development of a carbon-composition thermometer and for his research and recommendations which lead to international agreement on a new temperature scale. As a result, Clement's thermometer is presently being used in most low temperature laboratories in this country as well as in Europe and Asia.

SIDNEY N. GELLIS, who recently concluded 5 years as chief of the tuberculosis section in the Veterans Administration Hospital at Tucson, Ariz., has joined the research staff of Eli Lilly and Company, Indianapolis, Ind.

ROLLAND PERRY has rejoined Argonne National Laboratory as an associate physicist in the Particle Accelerator Division. From 1946 to 1948, and from July 1951 through September 1951, Perry was with Argonne as an associate physicist; since that time, he has been head of the department of physics at Utah State College.

Recent Deaths

THOMAS S. ARBUTHNOT, Pittsburgh, Pa.; 85; president of the Carnegie Hero Fund and former dean of the medical school at the University of Pittsburgh; 2 Dec.

RAYMOND E. BASSETT, Durham, N.H.; 52; chairman of the department of sociology at the University of New Hampshire; 4 Dec.

HARRY R. BRYSON, Manhattan, Kan.; 64; associate professor of entomology at Kansas State College; 3 Dec.

HORACE G. BYERS, Arlington, Va.; 83; head of the chemistry department at Cooper Union from 1919–28; chief of the division of soil chemistry and physics of the Bureau of Chemistry and Soils, U.S. Department of Agriculture until 1942; 2 Dec.

LESTER D. GARDNER, New York, N.Y.; 80; founder of the Institute of the Aeronautical Sciences; 23 Nov.

S. PHILIP GOODHART, New York, N.Y.; 84; former professor of neuropsychiatry at New York Polyclinic Medical School and professor of clinical neurology at the College of Physicians and Surgeons of Columbia University; 6 Dec.

NATHAN C. GROVER, Washington, D.C.; 88; retired chief hydraulic engineer for the U.S. Geological Survey; 29 Nov.

LANDON C. HAYNES, Greenville, Tenn.; 99; professor emeritus of physics