NSF Employment Profile of Scientists, 1954–55

Comprehensive information on the employment and other characteristics of American scientists is made available in a bulletin released recently by the National Science Foundation. The report, *Employment Profile of Scientists in the National Register of Scientific and Technical Personnel, 1954–55,* is based on the replies of more than 94,000 scientists who supplied information to the Register. It contains the most recent data available on so large a number of scientists, including about 27,000 chemists, 16,300 biologists, 12,200 psychologists, 11,800 geologists (including 3400 geophysicists), 11,200 physicists, 6700 chemical engineers, 5400 mathematicians, 3200 meteorologists, and 400 astronomers.

More than 41 percent of the employed scientists in the Register held the Ph.D. degree; 25 percent attained a master's degree; and 32 percent had the bachelor's or first professional degree (M.D., and so forth). Fewer than 2 percent of scientists reported no degree.

Scientists at the doctorate level in 1954–55 reported a median annual salary of $7000, those with less than a Ph.D. degree—$6125. Highest median salary was for Ph.D. physicists and meteorologists—$7850. Lowest salaries were for psychologists—$5850. Salaries are not only dependent on educational attainment, but also on such things as age, sex, type of employer, and functions to which scientists devote the major part of their time. The data on salaries is less representative than the information on other employment characteristics, however, because the chemists and chemical engineers did not report salary information.

About one-half of the employed scientists held a job in industry (private companies, self-employed, nonprofit foundations, and privately controlled research foundations). Almost one-third were employed by educational institutions; and the remaining 18 percent by the Government (federal, state, and local).

Research, development, or field exploration was the primary function of half the scientists; management or administration, of 18 percent; and teaching, of 16 percent. In this, as in other respects, basic differences among the various scientific fields appear. Teaching, for example, was reported as the major function of almost 40 percent of the mathematicians, but of only 4 percent of the chemical engineers.

About 7000 women scientists were included in the Register total of 94,000, and 85 percent of these were in three fields—psychology, chemistry, and biology. The psychologists made up the largest group of women scientists. One out of every four psychologists was a woman. Next to psychology in terms of the proportion of women scientists was astronomy, one out of every six; in mathematics, one out of every ten.

The National Science Foundation Act of 1950 established the Register, which is administered jointly by the foundation and a number of professional societies. The information in the bulletin is based on voluntary registration with these cooperating societies. Limited numbers of copies of this bulletin are available. Requests should be addressed to: National Science Foundation, Washington 25, D.C.

USIA University Catalog Program

The U.S. Information Agency has undertaken a program to distribute overseas catalogs of American institutions having graduate schools. The purpose of the project is to acquaint people in other countries with the facilities of American higher education. USIA will bear all costs of transporting the material. To function effectively, the program will require 200 catalogs from each cooperating college or university.

Institutions wishing to participate in this project should write to Mrs. Anna B. Hendricksen, Information Center Service, U.S. Information Agency, 1776 Pennsylvania Ave., Washington 25, D.C.

Cancer Mortality Decline

Metropolitan Life Insurance Company statisticians have reported a downward trend over the past 10 years in the cancer death rate among women in middle life. Among the company's millions of industrial policyholders, mortality from all types of cancer was down by 13 percent for women at ages 45 to 64 over the 10-year period. There has been a one-third decline in the death rate from uterine cancer in this age range.

While the cancer death rate for middle-aged women declined, that for men rose somewhat. This was due principally to increased mortality among males from cancer of the lungs, buccal cavity, stomach, and urinary organs.

Army Ionizing Radiation Center

Sharpe General Depot at Stockton, Calif., has been chosen as the site for the U.S. Army Ionizing Radiation Center. The facility will be built by the Army Corps of Engineers and will include a nuclear reactor that is to be constructed by the Atomic Energy Commission.

The center will investigate the use of ionizing radiation in the preservation of food and conduct other projects of interest to the Department of Defense. The Quartermaster Research and Development Command at Natick, Mass., will direct its operation.

The AEC reactor and related equipment will cost an estimated $3 million. A preliminary design for the reactor, which will be of the water-moderated type with solid fuel elements, is now being completed for the commission by Internuclear Company of Clayton, Mo. The AEC is considering 11 proposals made by industrial concerns for the engineering design, fabrication, and construction of the reactor.

Other facilities of the center, costing an estimated $4,500,000, will include a high-energy particle accelerator to be procured by the Quartermaster Corps, and offices, laboratories, and processing and storage areas that will be constructed by the Corps of Engineers according to specifications being developed by the Quartermaster Corps.

Initially the center will have as its primary mission the development of methods of utilizing ionizing radiation to preserve foods and to determine the economic feasibility of such a process. This aspect of the center's activities will be performed in conjunction with the Quartermaster Food and Container Institute, Chicago, which is conducting the overall Quartermaster Corps research and development program in the field of radiation preservation of food. This program includes contracts with 16 universities as well as contracts with research institutes and industrial concerns located throughout the country. The center is expected to be in operation in 1958.

NBS Boulder Radio Propagation Engineering Division Reorganized

The Radio Propagation Engineering Division of the National Bureau of Standards Boulder Laboratories has been reorganized with the original two research sections divided into seven new units. The reorganization is designed to facilitate the increased research that has grown out of the recent development and widespread use of tropospheric scatter propagation, radio noise, modulation, and navigation techniques. Two new assistant division chiefs have been named and eight other scientists given new assignments in the reorganization. Kenneth Norton continues as chief of the division.

J. W. Herbstreit and Kenneth O. Hornberg are the new assistant division chiefs. Herbstreit, who formerly was in charge of all tropospheric work, will now supervise research and development. Hornberg, the project leader of the Cheyenne Mountain tropospheric radio propa-

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.