Recent appointments to the staff of the National Bureau of Standards are as follows. WILLIAM S. CONNOR will work in the statistical engineering section of the applied mathematics division on the application of modern probability and statistical methods to the physical sciences. He was previously employed at NBS from 1951 to 1954.

JULIAN F. SMITH will extend the present scope of the instrumentation reference service of the office of basic instrumentation. Prior to his appointment, he spent 4 years as a documentation and technical information service consultant, largely at the Library of Congress.

FRANK A. GRANT, who formerly was an assistant professor of physics at the University of Maryland, will do research in the mineral products division on the semiconducting properties of titanium dioxide and titanates.

At the cryogenic engineering laboratory of the Boulder laboratories of the bureau, ROBERT B. JACOBS has been appointed chief of the cryogenic equipment section, replacing BASCOM W. BIRMINGHAM who has been made chief of the cryogenic processes section.

WILLIAM D. GRAY has been named head of experimental pharmacology in the research division, American Cyanamid Company, at Lederle Laboratories, Pearl River, New York. He was formerly group leader in pharmacological research.

G. ARTHUR COOPER has been appointed head curator of the U.S. National Museum's department of geology. He will continue to serve as curator of invertebrate paleontology and paleobotany, a position he has held since 1943.

JOHN A. CLARK, a member of the Massachusetts Institute of Technology faculty since 1949, has been appointed professor of mechanical engineering at the University of Michigan and will start with the second semester of 1956–57.

JOHN J. DENTON has been named director of organic chemical research at the Pearl River laboratories of the American Cynamid Company. He was formerly technical director of Cyanamid's fine chemicals division.

Two Netherlands visiting professors have been announced by the University of Michigan. J. DROOGLEEVER FORTUYN, professor of neurology at the University of Groningen, will join the department of anatomy of the University of Michigan Medical School from January to June 1957; and M. G. RUTTEN, professor of physical geology at the University of Utrecht, will serve in the department of geology, College of Literature, Science and the Arts, for the 1957–58 university year.

JOSE DEL CASTILLO, professor of biophysics at University College, London, England, has been appointed visiting professor of physiology at the State University College of Medicine in Brooklyn for 1 year beginning 1 Sept.

J. C. HACKLEMAN, University of Illinois professor of crops extension, will retire from the university staff on 1 Sept., to join the staff of the Illinois Crop Improvement Association as its public relations officer.

WILLIAM F. MANN, JR., will be the new head of the Southern Forest Experiment Station's research center at Alexandria, La. He succeeds JOHN T. CASSADY, who will take charge of the East Gulfcoast Research Center in western Florida and southern Alabama.

RANDOLPH T. MAJOR, former scientific vice president of Merck and Company and more recently in an advisory capacity at Merck, has been appointed professor of chemistry at the University of Virginia.

Recent Deaths

ELMER C. BERTOLET, SR., Philadelphia, Pa.; 68; director of chemical laboratories at the Research Institute of Temple University; 16 July.

CHARLES W. BONNEY, Germantown, Pa.; 82; professor and surgeon on the staff of Jefferson Medical College; 21 July.

A. NOWELL CREADICK, Durham, N.C.; 73; clinical professor emeritus of obstetrics and gynecology at Yale University Medical School; 23 July.

JOHN P. DERINGER, Los Angeles, Calif.; 53; metallurgist; 20 July.

CARL R. ENGLUND, Fullerton, Calif.; 71; expert on radiotelephony; retired member of the staff of Bell Telephone Laboratories; 22 July.

RICHARD W. FESSENDEN, Amherst, Mass.; 54; professor of chemistry at the University of Massachusetts; 23 July.

MALCOLM GOODRIDGE, New York, N.Y.; 83; former professor of clinical medicine at Cornell University Medical College; 23 July.

ARTHUR D. HOLMES, Amherst, Mass.; 71; professor emeritus of chemistry at the University of Massachusetts; 18 July.

ELIHU KATZ, New York, N.Y.; 68; professor of gastroenterology of the New York Polyclinic Hospital; 20 July.

PIERRE J. RABIL, Washington, D.C.; 43; assistant professor in surgery at Georgetown University Medical Center; 23 July.

ALEXANDER RICE, Newport, R.I.; 80; founder of the Institute of Geographical Exploration and professor emeritus of geographic exploration at Harvard University; 23 July.

FRANCIS B. TRUDEAU, SR., Saranac Lake, N.Y.; 69; authority on tuberculosis; 20 July.

MANFRED WAHL, Germantown, Pa.; retired microbiologist; 7 July.

LIGHTNER WITMER, Devon, Pa.; 89; founder of the psychological clinic at the University of Pennsylvania and its director for 35 years; former member of the faculty at Bryn Mawr College and Lehigh University; 19 July.

Education

■ A program for advanced training of psychiatrists in New York State's mental hygiene institutions will be started in September. The program will be under the joint direction of the State University of New York and the New York State Department of Mental Hygiene. In its initial phase, it will provide training for medical staffs of six mental hygiene institutions in the metropolitan area in cooperation with the faculty of the State University Medical School at Brooklyn. A similar program also is planned for staffs of mental hospitals upstate. This will be centered around the State University's Medical School at Syracuse.

■ A new graduate program in nautical engineering, leading to the degree of master of science, will be started in September by the Stevens Institute of Technology. The new program, with classes to be held in the evening, is designed to help ship designers fulfill present-day demands for vessels that will travel at high speeds in rough, as well as smooth, seas. The staff, consisting of members of the regular Stevens faculty and the group at the institute's Experimental Towing Tank Laboratory, will teach recently developed techniques in fluid dynamics, statistical methods, dynamical structural analysis, and model testing.

■ The science consultant program of the University of Texas, which was established by a grant from the AAAS has added two consultants to its field staff. They are Alan Humphreys, formerly a science teacher at Belton High School, and John Wagner, formerly a mathematics teacher at Kerrville High School. Humphreys and Wagner, together with Wayne Taylor, who is executive direc-

tor of the new program and Extension Teaching and Field Service Bureau associate professor, will visit high schools within 200 miles of Austin to confer individually with teachers on methods of improving laboratory instruction, sources, and use of materials. They will also aid in organizing science clubs, fairs, and other programs designed to encourage science students. Finally, they will participate in in-service training programs for teachers and address professional meetings.

Grants, Fellowships, and Awards

■ The American Heart Association has awarded grants-in-aid totaling $1,042,817 to 180 scientists engaged in research in this country and in three foreign countries in the field of cardiovascular diseases. These funds come from contributions by the public to the Heart Fund campaign conducted each February.

Almost every known field of biological investigation is represented in the list of projects. Many fall into the category of basic research, with a number of investigations concerned with tracing the metabolic pathways of heart muscle. The grants also provide for an intensive inquiry into the nature of atherosclerosis, including studies of substances found in the blood which under normal conditions appear to "clear" it of fats after a heavy meal, and of the effects of hormones on the fat content of the blood.

In addition, there are studies of enzymes that may serve as the body's mechanism for breaking up blood clots, studies of the use of anticlotting drugs in the long-term treatment of coronary artery disease, studies of the circulation and functioning of the kidney, and studies of the influence of the nervous system in setting up a chronic constriction of the smallest arteries. A number of investigations are in the field of rheumatic fever, and some of them will seek to explain why a streptococcal infection leads to rheumatic fever in some individuals but not in others. Further, some projects are seeking to improve existing surgical procedures and to develop new ones, procedures, for example, for operating on the heart in a "dry field" using heart-lung machines or lowered body temperatures. Experimental studies in blood vessel grafts to replace diseased arteries are also receiving support.

■ The American Dermatological Association is again offering a series of awards for the best essays submitted for original work, not previously published, relative to some fundamental aspect of dermatology or syphilology. The cash awards will range from $500 to $200. Essays will be judged on the basis of originality of ideas, potential importance of work, experimental methods and use of controls, evaluation of results, and clarity of presentation. For information write to J. Lamar Callaway, Secretary, American Dermatological Association, Duke Hospital, Durham, N.C.

■ Nine grants, totaling $367,182, to conduct research and demonstrations in the field of hospital service and administration have been announced by the U.S. Public Health Service. Aimed at finding ways to improve the care of patients in hospitals and health facilities, reduce costs, and help make the benefits of hospital and health services more widely available, this research is part of the Hospital Survey and Construction (Hill-Burton) Program.

■ The Rockefeller Foundation has awarded a grant of $105,000 to the Boyce Thompson Institute for Plant Research to be spent over a 5-year period. The money will be used to support the work of Lawrence P. Miller, Robert G. Owens, and S. E. A. McCallan on mechanisms of fungicide action. The investigation will include the use of radioisotopes to study the uptake and metabolism of fungicides by fungus spores and host plants, determination of the effect of fungicides on enzyme systems in spores, and studies on the nature of the fungicidal action of sulfur.

■ A $300,000 program of research concerned with preserving the human resources of the state of Michigan has been initiated at the University of Michigan. The program is financed by an appropriation from the state legislature and will cover a 12-month period. Fourteen projects have been undertaken by various schools and colleges of the university.

■ The National Foundation for Infantile Paralysis has made grants totaling $1,952,155.05 to 27 institutions for scientific research in the fields of virology and epidemiology, prevention and treatment of aftereffects of polio, and support of poliomyelitis respirator centers.

The awards reflect efforts by the National Foundation to rescue polio patients with paralyzed respiratory systems from dependence on mechanical breathing devices. Eight of the current grants are to polio respiratory centers supported by the National Foundation. The program, begun in 1950, has attracted world-wide medical attention and now encompasses 15 treatment-research centers.

The foundation has also made 19 grants totaling $1,211,983 to aid teaching programs bearing on the treatment of poliomyelitis patients.

Miscellaneous

■ Opportunities for research in a number of fields bearing on the use of southern farm crops are now being offered at the Southern Research Branch, New Orleans, of the Agricultural Research Service, U.S. Department of Agriculture. Openings range from a starting salary of $8990 per year for mature scientists to $3175 per year for scientific aides. The positions are graded under federal Civil Service in accordance with training and experience. Chemists specializing in organic, physical, or analytic chemistry or biochemistry are needed; also needed are physicists, cotton technologists, chemical and textile engineers, and mechanical engineers to help develop cotton-processing machinery. Application should be made through the U.S. Civil Service Commission, Eighth Civil Service Region, 1114 Commerce St., Dallas, Tex. For information write to C. H. Fisher, Chief of the Southern Utilization Research Branch, 1100 Robert E. Lee Blvd., New Orleans 19, La.

■ As a tribute to the memory of an outstanding physician, teacher, and investigator, the associates and friends of John Punnett Peters are seeking funds to create a resident lectureship or visiting professorship in his name. The lectureship would be offered periodically to outstanding scientists in all areas of medicine from any part of the world.

For information write to Paul H. Lavietes, Secretary, John Punnett Peters Memorial Fund, Yale University School of Medicine, New Haven 11, Conn.

■ A program to keep blind people informed of the progress of science has been initiated by T. A. Benham, assistant professor of physics at Haverford College, who has been blind since the age of 2 years. Books in scientific fields and a monthly magazine, *Science Recorded,* will be made available as tape recordings. The recordings of books will be accompanied by a supplement in Braille, which will contain explanatory material in the form of mathematical equations, graphs, tables, and a summary of the spellings of scientific words.

■ University of Michigan botanists will begin work this fall on the state's first complete, up-to-date handbook on local flora in more than 50 years. The cost of the undertaking will be an estimated $60,000.

The principal investigator for the project will be Edward G. Voss, of 1015 Lincoln Ave., Ann Arbor. Much of his work will be centered in the university herbarium, which contains about 300,000 specimens of flowering plants.