samples obtained will, upon analysis, give information about the concentration of such trace elements as copper, lead, nickel, zinc, and chromium in deep-sea muds as well as material for radiocarbon dating and for study of the bottom-dwelling fauna.

■ A patent has recently been issued to Donald F. Jones, Connecticut Agricultural Experiment Station, and Paul C. Mangelsdorf, Harvard University, for a genetic process that eliminates or greatly reduces hand removal of tassels in the production of hybrid seed corn. In the hand process, which at the peak of the season requires the labor of more than 125,000 people, tassels are removed from the seed-producing corn in order to assure pollination from another inbred line of corn in adjacent fields.

In the genetic process, the seed-producing line of corn has bred into it a cytoplasmic gene for male sterility. Accordingly, it does not produce pollen and does not have to have its tassels removed. To produce double-cross hybrid seed, the process is more complicated. Hand removal of tassels may be used at one stage, or a dominant gene for restoration of male fertility may be introduced into one of the stocks to be crossed to the product of the first male-sterile cross.

The patent, thought to be the first in the United States for the control of an industrial process by genetic means, has been assigned to the Research Corporation, a non-profit foundation that administers patents that originate in college or university research. The foundation disburses the royalties from its patents in the form of research grants.

■ Experiments by the U.S. Department of Agriculture on the control of sagebrush by the herbicide 2,4-D have been carried on for the past 10 years on range lands in the Lassen and Modoc National Forests of northern California. The sprays could be effectively applied by ground rig, airplane, or helicopter. Where sagebrush was sparse, application of 2,4-D was more economical than plowing or burning. Following treatment, kill of sagebrush in large-scale tests ranged from 88.5 percent to 99 percent. With deferment of grazing for 1 year and good grazing management thereafter, native grasses and reseeded species will become established, and the return of sagebrush will be delayed.

■ The National Geographic Society-*Calypso* expedition will try to obtain photographs from the deepest levels ever attained at two sites: in the deep of about 18,500 feet 350 miles off the Liberian coast, and in the Romanche trench, which lies some 500 miles west of the first site and reaches a depth of about 25,000 feet. The society has sponsored the work of the French oceanographic vessel, the *Calypso,* captained by Jacques-Yves Costeau, for the past 4 years. In the present expedition, a new 100-pound camera invented by Harold E. Edgerton of Massachusetts Institute of Technology will be lowered on a 0.25-inch nylon line 28,000 feet long. The camera is equipped with electric lights and a position indicator that will determine distance from the bottom by reflected sound waves.

Scientists in the News

LEONARD M. GOLDMAN, nuclear physicist and for the past 4 years a member of the staff at Princeton University, has been appointed research associate at the General Eelectric Research Laboratory, Schenectady, N. Y.

MARSHALL W. JENNISON, professor of bacteriology in the department of plant sciences at Syracuse University, has been named chairman of that department.

GORDON E. GIBBS has been appointed professor and chairman of the department of pediatrics at the University of Nebraska College of Medicine. His special interests are in cystic fibrosis of the pancreas, juvenile diabetes, pediatric gastroenterology, and pediatric endocrinology and metabolic diseases.

MILTON LEVY has been appointed chairman of the department of biochemistry and CHESTER W. HAMPEL has been appointed chairman of the department of physiology and biophysics at New York University.

MERL M. MUSSELMAN has been appointed chairman of the department of surgery at the University of Nebraska College of Medicine.

ARNOLD COURT, former chief climatologist of the Office of the Quartermaster General, Department of the Army, has joined the staff of the California Forest and Range Experiment Station of the U.S. Forest Service in Berkeley, Calif., as meteorological adviser. He will participate in a new 5-year cooperative research project that is being carried out by the Forest Service and the state of California to determine how timber in the Sierra Nevada should be harvested to provide the best possible yield of water from the winter snow pack.

RICHARD W. WALLEN, associate professor of psychology at Western Reserve University, has accepted appointment as senior associate for Creelman Associates, Cleveland, Ohio, consultants in the management sciences.

ROBERT GLASER, former program director at the American Institute for Research, Pittsburgh, has been appointed associate professor of psychology at the University of Pittsburgh.

WILLIAM S. BENNINGHOFF, chief of the U.S. Geological Survey's Alaska Terrain and Permafrost Section, has been appointed associate professor of botany to head the program of ecology at the University of Michigan's department of botany. He succeeds PIERRE DANSEREAU, who is now dean of faculties at the University of Montreal.

MARTIN L. STONE has been appointed professor and director of the department of obstetrics and gynecology at New York Medical College, where he has been a faculty member since 1949.

JOHN OSBORNE, professor of prosthetics at the University of Birmingham, England, has been named visiting professor of dental materials at Northwestern University Dental School.

Recent Deaths

GEORGE P. DIXON, Alexandria, Va.; 67; communications engineer; executive vice president of the Armed Forces Communications and Electronics Association; 9 July.

HARRY J. EPSTEIN, Philadelphia, Pa.; 54; associate professor of medicine at Hahnemann Medical College; 9 July.

EARL H. MORRIS, Boulder, Colo.; 66; research associate in archeology for the Carnegie Institution of Washington since 1924; lecturer in anthropology at the University of Colorado; 24 June.

WILLIAM WELKER, Oak Park, Ill.; 75; retired head of the biochemistry department of the University of Illinois College of Medicine; 7 July.

Education

■ A new national organization will seek more effective training for teachers and students in basic subjects, especially English, mathematics, science, history, and foreign languages. Incorporated in the District of Columbia, the group will be known as the Council for Basic Education.

Starting with a nation-wide membership of 110 prominent laymen, educators, editors, writers, and industrialists, the council plans to expand its individual

membership as soon as its Washington headquarters can be established. It will also enlist the support and cooperation of educational, professional, and citizens' organizations that are concerned with the vital problems of education. At present CBE's activities are being financed by a generous grant from one of the private foundations.

The officers are president, Arthur Bestor, professor of history, University of Illinois; vice president, Paxton Blair, a former New York Supreme Court justice; treasurer, Howard A. Meyerhoff, executive director, Scientific Manpower Commission; and executive secretary for 1 year, Harold L. Clapp, who will be on leave of absence from his duties as professor of Romance languages at Grinnell College.

■ Colorado College is the 24th liberal arts college to join Carnegie Institute of Technology in a 5-year undergraduate program. At the end of 3 years of liberal arts at Colorado College, with a major in science, and 2 years of engineering or science at Carnegie Tech, students will receive a bachelor of arts degree from Colorado College and a bachelor of science degree from Carnegie Tech.

■ The council on postgraduate medical education of the American College of Chest Physicians will sponsor postgraduate courses this fall in Chicago and New York on recent advances in the diagnosis and treatment of chest diseases. For information write to the Executive Director, American College of Chest Physicians, 112 E. Chestnut St., Chicago 11, Ill.

■ Courses for about 60 high-school science teachers will be offered this summer at the University of New Mexico, at Harvard University, and at Duke University under a program jointly supported by the U.S. Atomic Energy Commission and the National Science Foundation. Lasting 6 to 8 weeks, the courses will include lectures and laboratory work in radiobiology as well as refresher courses in physics, mathematics, biology, and other sciences. Upon completion of the summer's work, each teacher will receive a kit containing radiation measurement instruments and other apparatus, so that by conducting classroom demonstrations he can stimulate interest in atomic energy.

The courses are offered without cost to the teacher-students and include a small allowance for living expenses that was made possible by NSF support. The AEC will supply the necessary laboratory equipment and defray certain teaching costs. The three universities will provide a full-time faculty and classroom space and will also arrange for guest lecturers.

Grants, Fellowships, and Awards

■ The National Science Foundation is accepting through *4 Sept.* applications for a second group of postdoctoral fellowships in the life and physical sciences and in the fields of convergence between natural and social sciences. Winners will be announced on 16 Oct. 1956. These fellowships are in addition to the second group of awards planned under the Senior Postdoctoral Program, which was announced earlier [*Science* **123**, 1115 (22 June 1956)].

Decision to award the postdoctoral fellowships for a second time during the current year was made in order to permit those who completed academic requirements since March 1956, when the last group of fellowships was awarded, to begin postdoctoral studies earlier than would otherwise be possible. Applications are not restricted to those who received their Ph.D. degrees in June, however.

Candidates must be United States citizens who will begin or continue studies at the postdoctoral level at any time within 1 year after announcement of awards. In most cases individuals who receive fellowships will begin their fellowship activities within 9 months after the award date. Selection will be made solely on the basis of ability and will be based on academic records, written evaluation of each individual by faculty advisers or other qualified observers, and a proposed plan of research. Applicants will be rated by special fellowship panels established by the National Academy of Sciences. Final selection will be made by the NSF.

Stipend for NSF postdoctoral fellowships is $3400 a year. Dependency allowances will be made to married fellows. A limited allowance to aid in defraying a fellow's cost of travel will be paid, as will tuition and certain fees collected from individuals of similar academic standing. Fellows may attend any accredited nonprofit institution of higher education in this country or similar institutions abroad.

Postdoctoral fellowships will usually be awarded for an academic year of two semesters (or three quarters) or a year consisting of the regular academic year plus a full summer session. Postdoctoral fellowships may be awarded for longer or shorter periods from 6 months to 2 years upon submission by the applicant of adequate justification. Fellows who receive awards for tenures of longer or shorter duration will receive stipends and allowances in proportion to the tenure of their awards.

For applications write to the Fellowship Office, National Research Council, 2101 Constitution Ave., NW, Washington 25, D.C.

■ The award of 20 unclassified life science research contracts in the fields of medicine and biology has been announced by the U.S. Atomic Energy Commission. The contracts were awarded to universities and private institutions as part of the commission's continuing policy of assisting and fostering research and development in fields related to atomic energy as specified in the Atomic Energy Act of 1954.

Four of the awards, each of which covers a period of 1 year, are new projects; three are in the field of medicine and one is in biology. Sixteen contract renewals for 1 year were awarded to allow for continuation of research already in progress. Eight of these are in the medical sciences and eight in biology.

■ Applications for awards available 1 July 1957 will be received by the Life Insurance Medical Research Fund as follows: (i) postdoctoral research fellowships, *until 15 Oct. 1956*. Candidates may apply for support in any field of the medical sciences. Preference is given to those who wish to work on cardiovascular function and disease or related fundamental problems. The minimum stipend is $3800, with allowances for dependents and necessary travel; (ii) grants to institutions in aid of research on cardiovascular problems, *until 1 Nov. 1956*. Support is available for physiological, biochemical, and other basic work broadly related to cardiovascular problems as well as for clinical research in this field. Approximately $1 million will be available for the two types of award. Further information and application forms may be obtained from the Scientific Director, Life Insurance Medical Research Fund, 345 E. 46 St., New York 17, N.Y.

■ The Edison Foundation will make awards to the television station and the radio station judged to have best served youth. Each award will consist of a scroll and an Edison scholarship of $1000, which the station will then give to a high-school senior in the community. The student will be selected by local officials.

Nominations accompanied by a statement of 500 to 1000 words describing the achievements of the radio or television station should be sent by *1 Nov.* to the Committee on Station Awards, Thomas Alva Edison Foundation, 8 W. 40 St., New York 18, N.Y.

Erratum: In the report of the Committee on Genetic Effects of Atomic Radiation, which appeared in the 29 June issue, the number "200 million children" in line 18 of the third column on page 1163 is an error. The question should read: "What is the estimate of the total number of mutants which would be induced by this radiation dose and passed on to the next total generation of about 100 million children?"