Aid for Polish Science

A $475,000 appropriation to aid science in Poland has been announced by the Rockefeller Foundation. At the end of April the Ford Foundation also announced a $500,000 grant to stimulate cultural, science and technical exchanges between Poland and the West. Both programs developed from visits by the foundation's representatives to Poland last February. In each case, they were the first such efforts by the foundations on behalf of Soviet-dominated countries.

The Rockefeller program includes $175,000 for fellowships to enable from 20 to 30 young Polish scholars to study in other countries during the next year. The remaining $300,000 is to buy materials and equipment for Polish universities and research institutions. In addition, half a dozen senior Polish scholars are expected to be included in the foundation's regular program for travel grants. This would be outside the special appropriation.

Approximately half of the Polish fellows may seek to come to the United States. Problems of passports and visas will be handled by the scientists themselves. The State Department has indicated it is "the general attitude of our Government to encourage such contacts with Poland." No favors or exceptions from official policy have been asked.

The fellows will be drawn largely from the biological sciences, particularly medicine and agriculture. After personal interviews by foundation advisers with candidates nominated by Polish institutions, awards will be made that will assure the scholars posts upon their return to Poland.

The $300,000 grant will aid the universities at Warsaw, Poznan, Wroclaw, Lublin, Cracow, and Lodz, medical and agricultural schools and research institutes affiliated with the Ministries of Health and Agriculture, and the Polish Academy of Sciences.

Film on Security Practices

Can the Federal Government's industrial security program grow so large that eventually every engineer and scientist in the country will require clearance in order to work anywhere at all? This question is raised in a movie previewed recently in Washington by the national council of the League of Women Voters. The film, produced by the League's Carrie Chapman Catt Memorial Fund, neither condemns nor condones current security practices. The League's purpose in making the film is not to criticize the industrial security program, "but to get people to think about it."

"Kill Only the Ivy" is the title. It will be offered soon to League units all over the United States for local presentation. The movie shows the outcome of two fairly typical cases which actually came before the screening board set up in the Defense Department to pass on people who apply for secret and top-secret work in defense plants. In both cases dramatized, clearance had been denied. But eventually, in one instance, the decision was reversed.

Women in Engineering

Emma C. Barth, an engineer in the rotating apparatus department at the Westinghouse plant in East Pittsburgh, Pa., commented recently on discrimination against women engineers. She pointed out in a lecture that of more than 120,000 women who received degrees in 1956 only 62 were graduated in engineering, while at the same time a survey by the National Education Association showed that this country will need 630,000 engineers by 1965 but will have only 530,000 available then. Miss Barth also observed that the male advantage in basic engineering aptitude tests is only 3 to 2 over women, according to a 1956 report of the U.S. Department of Labor.

Brown-Hazen Fund

The Research Corporation has announced the establishment of the Brown-Hazen Fund, its first program of grants in the medical sciences. The fund's resources are derived from royalties on the production of nystatin, the antifungal antibiotic discovered and developed by Elizabeth L. Hazen and Rachel Brown of the scientific staff of the New York state laboratory.

The fund committee will consider requests for support of fundamental research in biochemistry, microbiology, and immunology. Inquiries may be addressed to Dr. Rachel Brown (secretary), Division of Laboratories and Research, New York State Department of Health, Albany 1, N.Y., or to Mr. Charles H. Schauer, Research Corporation, 405 Lexington Ave., New York 17, N.Y.

Pyroceram

The Corning Glass Works has reported the development of a versatile new substance, Pyroceram, that is harder than steel and lighter than aluminum. The material was announced at the recent dedication of Corning's new research center. The first practical use of Pyroceram will be in radomes, the nose cones that protect the directional instruments in guided missiles.

Pyroceram starts out as glass and is melted and fashioned in the same way. But each batch of raw material includes chemical ingredients that contain a nucleating agent, which, under heat treatment, forms crystals. Glass is noncrystalline, whereas Pyroceram is crystalline.

The new material can be cast like metal in a foundry, thus allowing the fabrication of large and complex shapes. The substance is extremely hard and fine grained. It can be made transparent or opaque and, by controlling the chemical composition and growth of the Pyroceram crystals, materials of widely differing properties can be produced. Pyroceram was invented and developed by S. Donald Stookey, manager of Corning's chemical research department.

Cloud-Seeding

An evaluation of the effects of commercial cloud-seeding that has been carried out in the Great Plains area is being conducted by the Advisory Committee on Weather Control. The problems of this evaluation are being called to the attention of interested meteorologists and statisticians before an attempt is made to calculate the precipitation during the seeded period.

At present the committee staff is studying techniques for the effective forecasting of precipitation in the summertime. The problems that present themselves immediately are (i) how to find a satisfactory control area and (ii) how to deal with the wide variability of the shower-type precipitation that occurs during the summer. Comments and suggestions will be appreciated. These should be sent to Max A. Woodbury, Advisory Committee on Weather Control, Washington 25, D.C.

Luminous Clams

William D. McElroy, professor of biology at Johns Hopkins University and director of the university's McCollum-Pratt Institute, is in Naples, Italy, collecting specimens of the luminous clam, *Pholas dactylus,* that is native to the area. Through the cooperation of the Naples Experimental Zoological Station, he hopes to procure several hundred of these mollusks, which he will have packed in ice and shipped to the university.

McElroy and his colleagues will use the clams in their studies of the conversion of chemical energy into light energy. The research group at Hopkins has long been concerned with the chemical in fireflies, adenosine triphosphate, that is

necessary for light emission. This compound, called ATP, is present in all living things and plays a part in the utilization of energy.

McElroy for a number of years has been using large quantities of fireflies' tails in his efforts to learn how energy is liberated. Through this work with fireflies, he discovered that luciferin, a compound in the firefly's tail or lantern, when combined with ATP and the enzyme luciferase, produces light. The amount of light varies with the amount of ATP; hence, the combination of small amounts of tissue of the lantern with a fixed amount of luciferin and luciferase will determine how much ATP is in the tissue. McElroy will use clams in this study for the first time.

New Nuclear Laboratory

The $50 million atomic research laboratory in Middletown, Conn., where the Air Force intends to develop a nuclear aircraft engine, received its first employees last month. Pratt and Whitney Aircraft Corporation, which will operate the laboratory for the Air Force, has moved equipment and 500 employees who have been working on the project from South Windsor, Conn., into the Maromas section of Middletown. The Air Force facility, known as CANEL, covers a 1200-acre tract in an isolated area bordering the Connecticut River. Under construction for almost 2 years, the plant will employ about 3500 when it goes into full operation late this year.

Educational TV

The Fund for the Advancement of Education (New York) has announced the establishment of the National Program in the Use of Television in the Public Schools, for which the fund is making available $986,000. Taking part in this program initially are eight large cities—Atlanta, Cincinnati, Detroit, Miami, Norfolk, Oklahoma City, Philadelphia, and Wichita—and two states, Nebraska and Oklahoma. Grants have been made to the public school authorities in these cities and states on a matching dollar basis to begin regular classroom instruction over television in the elementary and high schools. In each case television teaching to large classes will begin next September.

The fund has over the past 2 years supported a number of experiments in the use of television in the public schools—notably in Hagerstown (Md.), St. Louis, Pittsburgh, and Chicago. These demonstrations have already shown that a teacher can extend his services through the use of television, that pupils learn at least as much in television classes as with conventional instruction, that television saves a great deal of time and thus permits teachers to give pupils more individual attention. The National Program in the Use of Television in the Public Schools will try to find out whether the experience in a few communities can be applied to most American schools.

Proposed Legislation

Of the many bills introduced in Congress, some have a special relevance to science and education. A list of such bills introduced recently follows.

HR 7431. Make an appropriation to National Science Foundation to construct and equip a geophysical institute in Territory of Hawaii. Burns (D Hawaii) House Appropriations.

HR 7245. Authorize Secretary of Army, Secretary of Navy, and Secretary of Air Force to make grants to educational institutions for construction of military and naval science buildings. Rabaut (D Mich.) House Armed Services.

HR 7171. Create a Federal Advisory Council of Health in Executive Office of the President. Wainwright (R N.Y.) House Interstate and Foreign Commerce.

HR 7388. Regulate interstate distribution and sale of packages of hazardous substances intended for household use. Curtis (R Mo.) House Interstate and Foreign Commerce.

H Res 243. Express sense of House that Secretary of Health, Education and Welfare should investigate the Santa Cruz plan for rehabilitation of hospitalized mental patients. Gubser (R Calif.) House Interstate and Foreign Commerce.

S J Res 85. Amend act approved 7 Aug. 1935 (P.L. 253) concerning U.S. contributions to International Council of Scientific Unions. Green (D R.I.) (by request) Senate Foreign Relations.

HR 7167. Amend section 1314 of act of 7 Aug. 1953 (P.L. 207) 83rd Congress (67 Stat. 418) *re* authority of Federal officers and agencies to withhold information and limit availability of records. Hoffman (R Mich.) House Appropriations.

HR 7172. Amend section 3 of chapter 324 of act of 11 June 1946 (60 Stat. 238) to clarify and protect right of public to information. Dawson (D Ill.) House Judiciary.

S 1949. Facilitate the administration of the public lands. Murray (D Mont.) (by request). Senate Interior and Insular Affairs.

S 2119. Expedite utilization of television facilities in our public schools and colleges and in adult training programs. Magnuson (D Wash.) Senate Interstate and Foreign Commerce.

S 2039. Clarify the requirements *re* performance of labor imposed as a condition for the holding of mining claims on Federal lands pending the issuance of patents therefor. Bible (D Nev.) Senate Interior and Insular Affairs.

HR 7253. Amend section 27 of act entitled "An act to promote the mining of coal, phosphate, oil, oil shale, gas and sodium on the public domain" to increase the aggregate acreage of coal leases that may be held by one person in any one state. Thomson (R Wyo.) House Interior and Insular Affairs.

S 2072. Establish a Chiropractic Section in Medical Service Corps of Army. Case (R S.D.) Senate Armed Services.

HR 7542. Authorize Secretary of Navy to take possession of naval oil shale reserves and to experiment in extraction of synthetic liquid fuels from oil shale in interest of national security. Staggers (D W.Va.) House Armed Services.

HR 7444. Amend Veterans' Readjustment Assistance Act of 1952 to make educational benefits provided for therein available to all veterans, whether or not they served during a period of war or of armed hostilities. Beckworth (D Texas) House Veterans' Affairs.

S 2077. Direct Secretary of Department of Interior to undertake a survey in order to assist in promoting the production of concentrated iron ore and steel in southern Appalachian area. Talmadge (D Ga.), Russell (D Ga.), Thurmond (D S.C.), Johnston (D S.C.), Sparkman (D Ala.), Hill (D Ala.), Kefauver (D Tenn.), Ervin (D N.C.), Scott (D N.C.).

Scientists in the News

H. BURR STEINBACH, professor of zoology at the University of Minnesota, has been appointed chairman of the department of zoology at the University of Chicago, effective 1 July. He succeeds the late Carl R. Moore. Steinbach is well known for his work in bioelectric phenomena, injury potentials, the sodium-potassium equilibrium of cells, ontogenesis of enzyme systems in chicks, and the enzyme systems of cellular inclusions.

HARVEY BROOKS, investigator of nuclear power and solid-state physics, will become dean of engineering and applied physics at Harvard University on 1 Sept. Brooks, who is Gordon McKay professor of applied physics, is in England this year conducting research as a Guggenheim fellow at the Cavendish Laboratory, Cambridge.

He will succeed JOHN H. VAN VLECK, Hollis professor of mathematics and natural philosophy, who plans to resume his research in mathematical