

# News and Notes

## Scientists in the News

**Lawrence W. Bass**, vice president of U. S. Industrial Chemicals, Inc., New York City, has been named chairman of the Committee on Equipment and Materials of the Research and Development Board, Department of Defense. Dr. Bass succeeds **E. Pennell Brooks**, who has become head of the newly organized Sloan School of Industrial Management at MIT.

**Carroll L. Birch**, professor of medicine at the University of Illinois, has been appointed dean of the Lady Hardinge Medical College for Women at New Delhi, India. She will remain in New Delhi for a year. Lady Hardinge Medical College is the only Indian medical institution for the training of women.

United Cerebral Palsy has appointed **Mrs. J. Howard Brinckerhoff** associate director to assume charge of field activities throughout the United States, Canada, and South Africa. Mrs. Brinckerhoff, who joined United Cerebral Palsy in 1949, has served as regional director covering the Northern, Eastern, and Central states and Canada.

**H. Boris Burns** has been elected president of the Arlington Chemical Company, Inc., which was recently acquired by the U. S. Vitamin Corporation. Mr. Burns became executive vice president of U. S. Vitamin in 1936 and will continue as president, to which office he was elected in 1940.

**Richard J. Cross**, of Fair Lawn, N. J., has been named by Columbia University as the first recipient of the Walter W. Palmer Fellowship for the 1951-52 academic year. Dr. Cross is doing biochemical research at the Public Health Research Institute. The fellowship was established in 1949 by the Martha Washington Straus-Harry H. Straus Foundation, Inc.

**Clarence Dennis** has been appointed professor of surgery and director of general surgery, University Division, at Kings County Hospital, a branch of the College of Medicine, State University of New York at New York City. He is professor of surgery at the University of Minnesota School of Medical Sciences.

**B. T. Dickson**, chief of the Division of Plant Industry, has retired after 23 years with Australia's Commonwealth Scientific and Industrial Research Organization. Dr. Dickson arrived in Australia from Canada in 1927 to form the division. Under his leadership it has grown into a major research institute, with headquarters at Canberra and with branch laboratories and field stations at many points throughout Australia. Prior to joining the staff of CSIRO Dr. Dickson was professor of plant pathology and economic botany at McGill. He has been succeeded by **O. H. Frankel**, director of the Crop Research Division

of the New Zealand Department of Scientific and Industrial Research.

**Harry Julius Emeléus**, professor of inorganic chemistry and fellow of Sidney Sussex College at the University of Cambridge, Eng., lectured this month on "Recent Advances in the Chemistry of the Interhalogen Compounds" at Illinois Institute of Technology.

**Richard T. Evans** and **Frederick M. Hart**, who retired on July 31 from the Geological Survey after 52 and 51 years' service, respectively, were presented with illuminated scrolls, awards for meritorious service, and other tokens on behalf of the Survey. Mr. Evans has served in the Survey's Topographic Division since 1899. Mr. Hart entered the federal service in 1900, and since 1908 he has worked in the Section of Cartography, now called the Special Map Projects Section.

**Stanley Frankel**, assistant professor of applied mechanics in charge of the Digital Computing Group at Caltech, is at the University, Manchester, Eng., as a guest of the British government for work on a problem in mathematical neurophysiology.

**Irving Glickman** has been appointed director of the Graduate and Postgraduate Studies Division at Tufts College Dental School. Dr. Glickman is professor of oral pathology and periodontology and succeeds **Arthur H. Wuchrmann**, who resigned to join the new dental school at the University of Alabama.

**David Green** has been made head of the newly formed Animal Nutrition Department in the Research Division of Armour and Company. Dr. Green is a specialist in the application of the B vitamins in animal nutrition and in antibiotic feed supplements.

Directors of Canada Southern Oils, Ltd., formed to take over the Canadian and Ecuadorian interests of Pancoast Oil Company, C. A., have announced the election of **Cecil V. Hagen** as president. Mr. Hagen formerly was chief geologist in charge of exploration for the Superior Oil Company of California. He now operates his own geological consulting concern.

**Wilson F. Harwood** has assumed his duties as assistant director for administration of the National Science Foundation. He has been executive assistant to the director of the National Bureau of Standards since early this year and has been on loan from the bureau to assist, on a part-time basis, in the staffing and organization of the foundation.

**Bartholomew W. Hogan**, former commanding officer of the Naval Medical School at Bethesda, Md., has taken charge of the Naval Medical Hospital, succeeding **Robert M. Gillett**, who has been assigned to sea duty.

**Elizabeth Hyde** has resigned as professor of chemistry at Wells College, Aurora, N. Y., to become professor of chemistry at Wesleyan College, Macon, Ga.

**F. J. Kearns** has been appointed senior research officer of Australia's Commonwealth Fisheries Office, for research into economic problems affecting the fishing industry. Mr. Kearns has been officer-in-charge of the Sydney Higher Appointments Office of the Commonwealth Employment Service and a member of the planning and research staff.

The second of the National Science Foundation's technical divisions has been established with the appointment of **Harry C. Kelly** as assistant director for the Division of Scientific Personnel and Education. The Division of Biological Sciences was the first of the four statutory divisions to be established. The new division will be responsible for the development and administration of programs related to the granting of scholarships and fellowships; and, as an initial undertaking, the division will also explore what may be done along the lines of coordination of teaching and research. Dr. Kelly has been head of the Scientific Section of the Office of Naval Research Branch Office in Chicago.

The Academic Senate of the University of Edinburgh, at the recommendation of the Faculty of Medicine of that university, has awarded the 1951 Cameron Prize in Practical Therapeutics jointly to **Edward C. Kendall**, of Mayo, and to **Tadeus Reichstein**, of the University of Basel, Switzerland, for "their fundamental researches leading to the discovery of cortisone."

**James J. Kerrigan**, president, and **James M. Carlisle**, medical director, of Merck & Co., Inc., were among those awarded honorary degrees of Doctor of Laws in Dublin by the National University of Ireland.

**J. A. A. Ketelaar**, director of the General and Inorganic Chemical Institute of the University of Amsterdam, Holland, will be at Brown University during the next academic year as a visiting professor.

**Ernest Lawrence** and **Donald Cooksey**, of the University of California, recently arrived in Stockholm to study the Swedish cyclotrons. A new unit of 25 mev has just been completed at the Swedish Government Research Institute for Physics, of which **Manne Siegbahn** is head. The institute already possessed a smaller cyclotron, and a third unit is being constructed under the supervision of **The Svedberg**, professor of physical chemistry at the University of Upsala.

**Clyde B. Morgan** has been elected president and a director of Rayonier, Inc. Since 1941 he has been president of the Eastern Corporation. The presidency of Rayonier had been vacant since the resignation of **Edward Bartsch** last November.

**D. S. Muzzey** has been made chief of the Magnetism Division of the Engineering Department at the Naval Ordnance Laboratory, succeeding **E. A. Gaugler**, re-

signed. Dr. Muzzey has been deputy chief of the Underwater Ordnance Department.

**Howard K. Nason**, has been appointed director of research of the Organic Chemicals Division of Monsanto Chemical Company, succeeding **Richard M. Hitchens**, who has been director since 1947.

**Ira G. Needles**, vice president of the B. F. Goodrich Rubber Company of Canada, Ltd., since 1945, has been elected its president. Mr. Needles succeeds **George W. Sawin**, who resigned for reasons of health. Mr. Needles joined the parent company in 1916 and Goodrich of Canada in 1925.

**Charles Lane Newberry** has been named special assistant to the chief of the Division of Industrial Hygiene, USPHS. He will be responsible for the development of rehabilitative and health services in industry. Dr. Newberry has had experience with physical restoration programs in the Office of Vocational Rehabilitation for the past five years.

**Mildred E. Newton**, assistant dean of the University of California School of Nursing, has been made head of Ohio State University's School of Nursing. Miss Newton, who will succeed **Frances McKenna**, will hold the rank of professor of nursing education and director of the school. The new director has been at the University of California since August 1934, and in her present rank of assistant dean since July 1944. Previously she served at Pasadena Hospital and Junior College as instructor and later as director of the School of Nursing.

**R. R. Overman**, associate professor of physiology at the University of Tennessee Medical Units, has been named director of a new laboratory of clinical physiology. Establishment of the laboratory is part of the current expansion program of the university's College of Medicine. It will permit more research at John Gaston Hospital, teaching hospital of the college.

**Kremers-Urban Company** has announced the appointment of **Horace H. Palmer** as bacteriologist. He will serve at the main Kremers-Urban plant in Milwaukee. He was previously associated with **Oscar Mayer & Company**, Chicago, as chief chemist and bacteriologist.

New York Medical College, Flower-Fifth Avenue Hospital has named **Sophie Rabinoff** as professor and director of the Department of Public Health and Industrial Medicine. Dr. Rabinoff formerly was connected with the City Health Department.

**Louis L. Ray**, in charge of the Alaska Terrain and Permafrost Section of the U. S. Geological Survey, attended the 25th anniversary meetings of the *Archiv für Polarforschung*, held at Kiel, Germany.

**Abraham White**, vice president and director of research, Chemical Specialties Co., Inc., New York, has been appointed lecturer in biochemistry, College of Physicians & Surgeons, Columbia University.

## Education

**Duke University** will inaugurate a training center for premature infant care this fall. Public health and graduate nurses throughout the state will be trained at the Duke School of Nursing, under the direction of Eileen Kiernan, formerly of New York Hospital.

The **Illinois Neuropsychiatric Institute**, Chicago, formerly operated jointly by the State Department of Public Welfare and the University of Illinois, has been transferred to the University of Illinois. Eric Oldberg will serve as director of the Division of Neurology and Neurological Surgery, and Francis J. Gerty as director of the Division of Psychiatry. The State Psychopathic Institute and the Pathological Laboratory, housed in the institute building, will remain under state jurisdiction.

The construction program of the **Instituto Tropical de Investigaciones Científicas de la Universidad Autónoma** of El Salvador, the new institute founded last year, is nearing completion. The research staff, other than the technical director and two assistants, is to consist entirely of guest scientists from abroad. The institute can accommodate about ten such visitors, who will be the guests of El Salvador.

The **Inter-American Institute of Agricultural Sciences**, under a grant from the Shell Oil Company of Delaware, is investigating the reaction of tropical plants to new insecticides, fungicides, and herbicides. Kenneth L. Olsen is in charge of the project, with Oliver Newton as a collaborator. The institute is also the center of an abacá program, in cooperation with the USDA, which will give emphasis to basic research related to the expansion of cultivation of this important industrial fiber plant. B. B. Robinson, of the Division of Cotton and Other Plant Fibers, will be in charge, and Charles H. Batchelder, entomologist, and William Q. Loegering, plant pathologist, will conduct research in their respective fields. A soils technician will also be supplied.

The **New York Zoological Society's** Department of Tropical Research has returned from its 49th expedition. Five months were spent at the new field station at Simla in north-central Trinidad. Work was concentrated on a preliminary survey of the ecology of Arima Valley, with special reference to birds, a study of the aggressive and defensive behavior of mantids, and the breeding of butterflies in large open-air cages in order to study their social behavior under partially controlled conditions. William Beebe directed the expedition; other members were Jocelyn Crane, Henry Fleming, John Cody, and Ellen Ordway.

A series of lectures on modern chemistry, around the theme "New Analytical Tools for Research," will be sponsored by **Northwestern University** on Tuesday evenings extending from Oct. 2 through Dec. 11. Further information may be obtained from Donald D. DeFord, Department of Chemistry, Northwestern University, Evanston, Ill.

## Grants and Fellowships

The **Children's Bureau** is making \$100,000 available annually to pay the cost of care at regional heart centers that will provide surgical and hospital care for "blue babies." The first such center is already in operation at the Grace-New Haven Community Hospital in Connecticut. About 100 children per year, referred by doctors, parents, or other individuals or groups, can be cared for.

With a fund of \$25,000 bequeathed it by Newcomb Cleveland, anonymous donor of its annual Thousand Dollar Prize, for "a notable contribution to science," the AAAS will continue to make the award under the name of **The Newcomb Cleveland Prize**.

The **Ford Foundation** will support, by an initial allocation of \$5,000,000, a program of overseas projects for the "development and better use of economic resources," beginning with India and Pakistan. Paul G. Hoffman, John Cowles, Chester C. Davis, John B. Howard, and Paul B. Helms recently toured Europe and Asia in search of projects that "cannot be financed by local governments or by our government, but that will promote understanding and reduce tensions" among nations.

**Rockefeller Foundation** grants for the second quarter of 1951 totaled \$4,771,788. The International Press Institute, organized in Paris last May, will receive \$120,000 for operating expenses over a three-year period, with an additional sum of \$150,000 being given by the **Ford Foundation** for the same purpose. The institute's immediate objectives are the safeguarding of freedom of the press and the achievement of understanding among peoples. One of the largest grants went to Indiana University, which will receive \$200,000 for research in genetics under H. J. Muller, Tracy M. Sonneborn, and Ralph E. Cleland. More than half a million dollars will support projects in medicine and public health in the U. S. and foreign countries; \$1,193,250 went to the social sciences, \$112,430 to the humanities, and another half a million to the natural sciences.

**Swift & Company** has approved grants-in-aid totaling \$140,000 for the support of long- and short-term scientific studies in agriculture and human nutrition. Twenty-two universities and other research institutions in the U. S. and Canada will share in the 29 grants. Among the agricultural studies, which may cover a five-year period, are the Southern Great Plains Feeding Project, and support of the journal *Biological Abstracts*. Institutions receiving aid for studies in human nutrition, which will extend over one year and are renewable, include the University of Florida, for an investigation of the relation of newly discovered vitamins to growth; Washington University, for a study of protein requirements in old age; and the University of Rochester, where Lloyd J. Filer, Jr., of the School of Medicine and Dentistry, will study the role of iron in the metabolism of infants. The recent awards bring this year's total to \$160,000.

## Meetings and Elections

The **American Foundation for the Blind** has elected the following new trustees: Deane W. Malott, J. P. Morgan 2nd, F. E. Davis, and Roy Kumpe. M. C. Migel, chairman of the board, William Ziegler, Jr., president, and other foundation officers were re-elected.

At the annual meeting in Cleveland of the **American Home Economics Association** Elizabeth S. Herbert was elected president. Vice presidents elected were Catherine Dennis, Olga Brucher, and Beulah Gillaspie. Jessie McQueen was elected recording secretary, and U. Vivian Crow treasurer. Patricia Doyle, of the University of Omaha, assumed office as president of the undergraduate group affiliated with the association.

A **Canadian Psychiatric Association** was organized at a meeting in Montreal last June. Officers elected for 1951-52 are: president, Robert O. Jones; vice president, Charles G. Stogdill; secretary, John P. S. Cathcart; and treasurer, R. C. M. Hamilton. Each province is represented by a director.

The second **Conference on Coastal Engineering** will to be held at the Rice Hotel, Houston, Texas, Nov. 7-10 for the purpose of summarizing current information and techniques for engineers engaged in the design, construction, operation, and maintenance of coastal works. Southwest Research Institute is sponsoring the conference, with the cooperation of the University of California, Texas A & M Research Foundation, The Rice Institute, the University of Houston, and the Houston branch of the ASCE. Information and programs may be obtained from Charles E. Balleisen, Southwest Research Institute, 8500 Culebra Rd., San Antonio 6.

The annual meeting of the **Electron Microscope Society of America** will be held in Franklin Hall of the Franklin Institute, Philadelphia, Nov. 8-10. Besides contributed papers and a display of electron micrographs and commercial exhibits, there will be a symposium on "Elementary Electron Optics and Factors Affecting the Electron Microscopical Image." Programs and abstracts will be available from T. G. Rochow, American Cyanamid Company, Stamford, Conn.

The annual meeting of the **International Council of Women Psychologists** in Chicago this month will feature a panel on "Children Around the World." Helen L. Koch will be moderator, and Doris T. Allen, Hildegard Durfee, David Kopel, Elizabeth Morris, and Marjorie Page Schauffler will participate in the discussion.

Charles L. Brown, dean of Hahnemann Medical College, and Charles E. Kossmann, of New York University Medical School, have been appointed as chief consultant in internal medicine and in cardiology, respectively, on the Board of Central Office Consultants of the **Veterans Administration**.

The first international conclave of its kind, the **World Metallurgical Congress**, to be held in Detroit, Oct. 14-19, as part of the 250th anniversary of the Michigan city, expects approximately 400 foreign "conferees" to arrive in the U. S. about Sept. 15. The American Society for Metals, sponsor of the congress and the National Metals Exposition and Congress, is arranging study tours of American industry for the foreign visitors both before and after the congress, in cooperation with ECA and OEECC, in which some 150 plants in 13 states and 57 cities will be visited. Zay Jeffries, former vice president of General Electric, and a past president of the American Society for Metals, has been appointed director general of the congress. For information concerning the meeting, write to Wm. H. Eisenman, 7301 Euclid Ave., Cleveland, Ohio.

## Miscellaneous

The **Hacker Foundation for Psychiatric Research and Education** has moved to new and larger quarters at 160 Lasky Drive, Beverly Hills, Calif. In its new quarters the foundation will initiate a research program and offer seminars and lecture courses on psychiatry and allied subjects to interested community groups. Esther Murray, executive director of the foundation, will supply further information.

**Elsevier Press** has moved its main office from New York to 402 Lovett Blvd., Houston 6, Texas, although a branch will remain at 445 Park Ave., New York 22. **Commonwealth Fund of New York** books in the future will be issued through Harvard University Press, which will handle manufacturing, sales, promotion, and distribution. A new joint publishing venture, the **University of Kansas City Press-Twayne Publishers**, has been organized as a medium for belles-lettres and works of scholarly interest. **Pacific Book and Supply Corporation**, which will export books, periodicals, and office and school supplies to Indonesia, has opened a New York office at 667 Madison Ave. Five tons of books have already been shipped to the Pacific area office. The **University of Texas Press** will publish a reprint of Ashbel Smith's account of the yellow fever epidemic in Galveston in 1839, which will include a biographical sketch of Smith and a general account of the development of knowledge regarding the control of yellow fever. Ashbel Smith (1805-86) was a founder of the University of Texas and the first chairman of its Board of Regents.

Science writers are invited to write or wire to Westinghouse Awards, 1515 Massachusetts Ave., N.W., Washington 5, D. C., for details of the annual \$1,000 **AAAS-George Westinghouse Science Writing Awards** for both newspaper and magazine writers. Nominations for the awards are also invited. Deadline for receipt of entries, which must be made in triplicate, is Oct. 8.

Two grants have been made by the **Damon Runyon Memorial Fund for Cancer Research** to the University of Texas Medical Branch, Galveston, one to the Pharmacology Laboratory for work under the direction of George A. Emerson, and one to the Tissue Culture Laboratory for work under the direction of Charles M. Pomerat.

## The National Science Foundation Program<sup>1</sup>

The **National Science Foundation** program, for its first year of operations, is based on the modest budget of \$14,000,000 which the President recommended. Although scientists generally will agree that this amount would fall far short of meeting the total national need for increased support of basic research and education in the natural sciences, it nevertheless affords the opportunity for a sound approach to the problem. That such an approach should be made is all the more important in a time of national emergency.

On the basis of a preliminary survey of the need, the foundation planned to allocate \$8,155,000 for the support of basic research in the medical, biological, mathematical, physical, and engineering sciences, and \$5,060,000 for the training of scientific personnel through the award of graduate and postgraduate fellowships.

The smallest portion of the budget, \$785,000, has been earmarked for the development of national research policy and for operating expenses. The \$50,000 specifically set aside for policy development in no sense reflects the degree of importance that attaches to this function. But the National Science Board and the foundation staff as well feel that a comprehensive policy can only be realized as a result of the meeting of many minds, including those of both scientists and laymen. The foundation will wish to draw upon the experience and the counsel of individuals and of groups representative of a broad cross section of American science and education, but it is not contemplated that this process will involve a large expenditure of funds. Every effort has been made to reserve as much as possible of the 14 million total for substantive operations.

Funds for the support of research were planned for allocation as follows: \$3,913,000 for the mathematical, physical, and engineering sciences; \$2,600,000 for the biological sciences; and \$1,300,000 for the medical sciences. This breakdown follows the organizational pattern of the technical divisions prescribed by the Act. Consideration of specific proposals in these areas has been made contingent upon action by Congress in appropriating funds. The foundation must also complete the staffing of the technical divisions before it will be in a position to evaluate research proposals in all areas against the necessary background of in-

formation on the current status of research in a given field.

Those loyal friends of the foundation who have faithfully followed its fortunes through the uncertain years of its inception and who therefore are the ones most interested in seeing it get under way will nevertheless be the first to recognize that worth-while research programs do not spring fully planned from the head of any one man. Support that is to be meaningful must be given to investigators for work in promising areas, and such judgments should not be rendered hastily or without opportunity for review of the entire field.

A steady stream of basic research proposals has been flowing in all summer. There has been general progress throughout all the subject areas in the formulation of a support program, but the program in biological sciences is furthest along. John Field, assistant director for the biological sciences, who is on leave of absence as chairman of the Department of Physiology of the University of California at Los Angeles, was the first of the division heads to join the staff.

In the other major area of programmatic operations—fellowships and scholarships—there are fortunately fewer problems to be met in getting under way. Under the guidance of Harry Kelly, assistant director for scientific personnel and education, the foundation hopes to launch a pilot program of research fellowships in the natural sciences at the beginning of the winter term in 1952, on the basis of approximately 10 per cent of the funds authorized by Congress for the 1952 fiscal year fellowship program.

The decision to give immediate attention to the fellowship program is based on the obvious impending shortages of trained scientific manpower. Not only is there complete agreement among government agencies, scientific and technical societies, and other interested groups that severe shortages exist in varying degrees in every field requiring scientific specialized training, but these are expected to become more acute.

Although the foundation is authorized in its legislation to award both scholarships and fellowships, the decision to begin with the fellowship program was made because additional training at the graduate and postdoctoral levels would have the most immediate effects upon the scientific manpower supply. In order to make it possible to award some fellowships as early as January 1952, the foundation planned to contract with the National Academy of Sciences to utilize the experience and facilities of the National Research Council in publicizing the program, receiving applications and testing and screening the candidates for the final selection by the National Science Foundation. Criteria for the selection of the candidates will be established by the foundation, which will present the names of the proposed fellows to the National Science Board for final review and approval. Ability will be the primary basis for selection.

Dr. Kelly and his staff also have interesting plans

<sup>1</sup> As this issue of *SCIENCE* goes to press, the program discussed by Dr. Waterman appears more remote than he knew. The House Appropriations Committee has cut the NSF budget from \$14,000,000 to \$300,000. Whether the cut will be restored in the Senate, or will survive conference if it is restored, is problematical.—Editors.

looking to ways and means of according recognition to teachers of science for their accomplishments and of providing opportunities for them to keep up to date with findings in research.

Other items for which the foundation contemplates support in 1952 fall generally in the area of research administration. Research and development planning has been hampered to a very considerable extent by the lack of complete, current, and reliable statistics regarding the scientific population. Under the terms of the *National Science Foundation Act*, the foundation is directed "to maintain a register of scientific and technical personnel and in other ways provide a central clearinghouse for information covering all scientific and technical personnel in the United States, including its territories and possessions." Toward this end the foundation budgeted \$156,000 for the maintenance of the National Scientific Register during 1952. The register, which for the past year has been operating under the U. S. Office of Education, is proving extremely useful for scientific manpower studies needed for the defense mobilization program.

Another item under the general category of research policy development and services, the dissemination of scientific information, is one that I believe will command the widespread interest of scientists. Here is a problem common to all scientists and to all disciplines, which has only recently begun to take on the character of an independent entity worthy of research in its own right. One of the earliest explicit definitions of the problem was set forth by Vannevar Bush in his article entitled "As We May Think":

The difficulty seems to be, not so much that we publish unduly in view of the extent and variety of present day interests, but rather that publication has been extended far beyond our present ability to make real use of the record. The summation of human experience is being expanded at a prodigious rate, and the means we use for threading through the consequent maze to the momentarily important item is the same as was used in the days of square-rigged ships (*Atlantic Monthly*, 176, [1], [July 1945]).

The frustration of the scientist who tries to keep even reasonably abreast of current developments in his field is measurable to some extent by the volume of publication. The Science Division of the Library of Congress estimates that the library receives 40,000 different scientific and technical periodicals a year. Based on a representative sampling of the 40,000, the division estimates a total number of about 272,000 issues. There are approximately 10.7 articles per issue, so that a total of something like 2,900,000 scientific and technical articles is received in a year. These, of course, are in every language, so that in addition to problems of indexing and abstracting, there are also problems of translation. Nor do these figures necessarily suggest the total extent of existing material even in the field of periodicals. The library estimates that Poland alone, for example, publishes 106 scientific and technical journals, of which the library receives only a small fraction. Nor does this mention

of the literature problem make any reference to books or to the now really formidable volume of technical reports, many of which are never formally published, or are given small circulation by government agencies, and therefore are unknown to cataloguers, bibliographers, and indexers.

Dr. Bush suggests that the time has come for science to apply the highly developed tools of the present day to its own problems. Funds allocated by the National Science Foundation for scientific information contemplate a thorough examination of the problem and the exploration of new methods for coping with the volume.

The foundation has active interest, also, in another major medium for the exchange of information: international congresses and meetings. Recognizing the importance to American science of representation at significant international gatherings, the foundation budgeted \$60,000 for the purpose of enabling some 60-80 scientists to attend such meetings.

Another important activity which now looks to the National Science Foundation for support is the Interdepartmental Committee on Research and Development. This committee, which has operated as a coordinating body for the scientific agencies of the government, is part of the over-all pattern for the administration of research in the federal government contemplated by the President's Scientific Research Board in its *Report to the President*. The foundation budget included \$26,000 to cover the salaries of the committee secretariat in 1952.

The terms of reference envisaged for the National Science Foundation by the authors and supporters of its legislation are broad and far-seeing. The conditions covering both the support of research and the award of fellowships and scholarships were drawn with full appreciation of the impossibility of charting, except in very general terms, the pursuit of the unknown and the schooling of the creative mind. Those who were apprehensive lest government support of research should bring with it the threat of thought-control or excessive burdens of administrative accountability have noted with gratification that the *National Science Foundation Act* recognizes the global scope of science, the unpredictability of basic research, and the desirability of permitting the scholarly investigator to pursue the natural inclinations of his interest without the necessity of economic sacrifice.

It is to be hoped that the National Science Foundation will have the opportunity to make full use of this effective legislative implement for the continuing replenishment of the store of scientific knowledge. There is universal acknowledgment that the maintenance of scientific supremacy is essential for national survival, but what must also be recognized is that more than ever in times of emergency the sources of scientific progress must be strengthened and nourished. The National Science Foundation can and should make an important contribution to this vital aspect of national defense.

ALAN T. WATERMAN