that Congress is disposed to give its library a divorce.

Despite implications for national security and economic progress, Congress has not really thought much about LC as the keystone of a national information system. And the job of convincing Congress may not be made much easier by the report, which offers no mechanization millennium for information but, rather, comes through with an honest two cheers for automation.

—JOHN WALSH

Cooperative Research: Biologists Plan International Study Program

Plans for American participation in a projected international program of cooperative research in basic biology are currently under study by a special committee appointed by the National Academy of Sciences.

The proposal for an International Biological Programme (IBP) was developed by the International Council of Scientific Unions (ICSU) and its affiliated unions in the life sciences, particularly the International Union of Biological Sciences (IUBS). The proposal grows out of a feeling among biologists that certain significant biological problems might best be explored on an international basis.

While discussions on how to organize a coordinated program preceded the International Geophysical Year, the success of IGY provided added impetus and the belief that "it could be done." What is planned now is not, like the IGY, an intense effort compressed into a brief time but a program of cooperative research, at preselected sites over a period of perhaps 5 years.

Early international consultation in ICSU and IUBS produced agreement that the major biological problem facing the world's population is the world's population. In trying to define a unique contribution that biologists could make in this field, it was agreed that to concentrate on the negative side—population control—would restrict participation to specialists in reproductive physiology and perhaps in sociology. Instead, it was decided to develop a positive study and to focus attention on the natural resources on which human life depends.

In November 1963, after several transmutations in international committees, a plan for an International Biological Programme to be entitled "The Biological Basis of Productivity and Human Welfare" was approved by the executive committee of IUBS and the General Assembly of ICSU. It is this plan that is now being examined by individual nations.

The objectives of the plan are, "ensuring worldwide study of (1) organic production on the land, in fresh waters, and in the seas, so that adequate estimates may be made of the potential yield of new as well as existing natural resources, and (2) human adaptability to the changing conditions." To promote these ends, the proposal outlines five main areas of research: (i) productivity of terrestrial communities (with major subdivisions in ecology, physiology, and conservation); (ii) productivity of fresh-water communities; (iii) productivity of marine communities; (iv) human adaptability; and (v) use and management of biological resources. Special attention is also to be given to problems of public relations and training.

Underlying the research outlines are certain common principles, also approved by IUBS and ICSU: a sense of urgency, both "because of the steadily growing pressures of human population on renewable resources [and] because many of the situations, both biological and human, are changing fast . . . ," and a sense of modesty and limitation. "The proposed program," the report states, "is based largely on existing research . . . so that the functions of the organizers will be to coordinate rather than to direct." The hope is, however, that the program would have a catalytic effect on research in these fields by, among other things, providing at least some training grants to research workers—300 to 500 is the number aimed for at present. Beyond that, the goal of the program is simply to obtain "internationally comparable observations of the basic biological quantities," and international coordination of research methods as well as projects.

Whether the plan will be put into action in the form described depends a good deal on the decisions of the ad hoc committee recently appointed by the National Academy to consider U.S. participation. The charge to the committee is "to review and evaluate the proposed program in relation to the interests of U.S. scientists, and to make recommendations as to its modification, to identify individuals and groups that might wish to be involved, and to arrive at conclusions as to the nature and probable extent of U.S. participation and to formulate recommendations as to the organizational structure necessary to ensure effective coordination of project activities." All this is supposed to be done by the end of 1964, and if no serious problems emerge, the program might get under way not too long after its original target date of 1965. The members of the U.S. committee are Stanley A. Cain (chairman), W. Frank Blair, John E. Cantlon, George K. Davis, Kingsley Davis, Bostwick H. Ketchum, Paul J. Kramer, William S. Laughlin, Thomas Park, and Sid Robinson. Inquiries should be addressed to the Ad Hoc Committee on IBP, Division of Biology and Agriculture, National Academy of Sciences–National Research Council, 2101 Constitution Avenue, Washington 25, D.C.—ELINOR LANGER

Hornig Assumes White House Duties

The Senate last Monday confirmed Donald F. Hornig to succeed Jerome B. Wiesner as director of the Office of Science and Technology. The confirmation was made without a committee hearing, which is often the case with posts below the topmost governmental echelon. Hornig, who is on leave from Princeton, where he headed the chemistry department, will also succeed Wiesner as presidential science adviser; chairman of the 18-member President's Science Advisory Committee (PSAC); and chairman of the Federal Council on Science and Technology, a sub-Cabinet group of government research executives. Wiesner, who has been appointed dean of science at MIT, will continue as a member of PSAC.

Announcements

Princeton University recently combined its departments of aeronautical and mechanical engineering, to form a department of **aerospace and mechanical sciences**. The merger is a move to expand the university's opportunities for training in the newer, interdisciplinary areas of the applied sciences. The department will include undergraduate and graduate programs. Courtland D. Perkins, professor of aeronautical engineering, has been appointed chairman.

Kansas State University recently opened its **Institute for Environmental Research**, in Manhattan, Kansas. It includes four laboratories for research in biochemical engineering, air pollution and fine particle technology, air distribution, and thermal environment. The institute was financed through the Kansas legislature, with funds matched by the Health Research Facilities Branch of NIH. The American Society of Heating, Refrigerating, and Air-Conditioning Engineers provided a $150,000 environmental test facility.

A center for **applied mathematics** has been started at Cornell University. The center is designed "to encourage the application of mathematical knowledge in the physical, biological, and social sciences. . . ." At the same time, Cornell's graduate school has designated applied mathematics as a field of major and minor study. The faculty of the center includes 20 members, from the university's mathematics, engineering, physics, and chemistry departments. It is headed by William R. Sears, professor and director of the graduate school of aerospace engineering.

Grants, Fellowships, and Awards

Grants of books and other appropriate literature are available for departmental libraries of colleges that offer advanced study in **audiology or speech pathology**, from the Beltone Institute for Hearing Research. The publications must be readily available for students; and a maximum value of $100 for the books will be granted to any institution. (Beltone Institute for Hearing Research, 4201 West Victoria St., Chicago, Ill.)

Nominations are being accepted for the 1964 Dexter award in the **history of chemistry**. The $1000 prize is administered by the American Chemical Society's division of history of chemistry. Nominations should be submitted in duplicate and should contain details of the nominee's contributions, both major and minor. Deadline: *10 March*. (S. M. Edelstein, Dexter Chemical Corp., 845 Edgewater Rd., Bronx 59, N.Y.)

The State University of New York is offering graduate scholarships, fellowships, and assistantships in **forestry**, for 1964–65. Scholarships consist of tuition waivers. Fellowships, sponsored by industrial, research, and governmental organizations, carry annual stipends of $2250 to $3100; recipients will devote full time, except for course work, to assigned research. Assistantships have $2300 stipends for the 9-month academic term, and recipients will assist part-time in teaching or research, while studying toward the master's or Ph.D. degree in an area of forestry. Deadline for applications: *1 March*. (Associate Dean for Graduate Studies, State Universiy of New York, College of Forestry at Syracuse University, Syracuse 10, N.Y.)

Meeting Notes

The International Organization for Pure and Applied **Biophysics** will meet in Paris, 22–27 June. In addition to the general sessions, meetings of the committees on cell and membrane biophysics and on biophysics of communications and control processes will be held, and the problems of education in biophysics will be discussed. (J. Tonnelat, Laboratoire de Biologie Physico-Chimique, Orsay, S. et O., France.)

The National Academy of Science is seeking funds from U.S. government agencies to provide travel grants to the meeting for U.S. scientists. Deadline for receipt of applications for these grants: *15 March*. (Miss Inger Hermann, Division of Biology and Agriculture, NAS, 2101 Constitution Ave., Washington, D.C. 20418)

An international conference on the physics and chemistry of **solid surfaces** will be held at Brown University, Providence, R.I., 21–26 June. Papers are invited on the nature of crystal surfaces, the role of surface structure in affecting atomic and electronic events, and the interplay between chemical phenomena at interfaces and electronic processes. Abstracts of approximately 400 words are required. Deadline: *15 February*. (H. E. Farnsworth, Brown University, Providence, R.I.)

A conference on **urban transportation analysis** will be held at Northwestern University, 16–29 August. The meeting will emphasize the uses of modern theories of transportation system development and analysis techniques, including the use of computers for traffic assignment and simulation of urban growth and development. NSF is providing stipends and travel grants for a maximum of 30 teachers of transportation engineering and related subjects, such as transportation geography and regional economics. Deadline for applications for participation in the meeting: *15 March*. (W. L. Garrison, Department of Civil Engineering, Northwestern University, Evanston, Ill.)

The third symposium on **war gaming** is scheduled 27–28 February in Miami Beach, Florida. It will be devoted to global and strategic war gaming, ground combat and support, and problems in applying war gaming. (Operations Research, Inc., 1400 Spring St., Silver Spring, Md.)

The fifth annual meeting of the Society for **Economic Botany** will be held at the University of North Carolina, Chapel Hill, 23–24 March. Sessions will include contributed papers, and a symposium on the use of plant fibers in the modern world. (D. J. Rogers, New York Botanical Garden, Bronx Park, N.Y.)

Recent Deaths

William M. Clark, 79; professor emeritus of physiological chemistry at Johns Hopkins Medical School; 19 January.

Alexander G. Gilliam, 59; professor of epidemiology at Johns Hopkins Medical School; 12 December.

Philip B. Hadley, 82; retired director of bacteriological laboratories, Western Pennsylvania Hospital, Pittsburgh, and former associate professor of bacteriology at the University of Michigan Medical School; 8 December.

James I. Hoffman, 71; retired chief chemist of the metallurgy division and consultant to the Director of National Bureau of Standards; 14 January.

Elwin M. Jellinek, 73; visiting professor and research associate at Stanford University's Institute of Human Problems; 22 October.

Clarence W. Kanolt, 83; research physicist at Farrand Optical Company, New York; 28 November.

Oliver J. Lee, 82; retired astronomy professor and head of the department, at Northwestern University; 13 January.

John S. Nichols, 68; professor of zoology and entomology at Yale University; 11 September.

Stephen Wilson, 59; dean of the college of pharmacy at Wayne State University; 17 December.