"Numerical Solutions of Integral Equations," by Professor A. T. Lonseth, of Northwestern University.

One hundred and thirty-one research papers were presented at this meeting, thirty-five in person and ninety-six by title.

T. R. HOLLCROFT,
Associate Secretary

RESEARCH INSTITUTIONS OF BIOLOGY

THE following statement has been submitted by the Committee on the Promotion of Research of the Michigan Academy of Science, Arts and Letters to the Subcommittee on War Mobilization of the Senate Military Affairs Committee, of which Dr. Lee R. Dice is chairman, which is currently holding hearings on proposals to increase research in the United States:

We earnestly urge the establishment of research institutes of biology in each state and territory of the United States and their generous support jointly by both the federal and state government. These biological research institutes should be dedicated to the discovery of the fundamental laws of biology and the application of biological knowledge to human affairs. Among the problems to be investigated should be included the causes of human diseases and mental disorders, the factors that determine human aptitudes and special abilities, the effects of different types of environments on the human organism, and the adjustment of human societies and cultures to the conditions and resources of their habitats. This kind of research can best be carried out in the individual states rather than concentrated in a single federal institution. Research in human biology surely deserves adequate support by the nation at least as much as and in addition to research in agriculture, in physical science and in engineering.

THE MAGNUSON BILL

THE executive committee of the Pacific Division, American Association for the Advancement of Science, at its meeting in San Francisco on October 19, voted unanimous approval of the following letter, which was written in the first instance by Professor Howard S. Reed to Senator Sheridan Downey of California:

Dear Mr. Senator:

In my capacity as an officer of the Pacific Division of the American Association for the Advancement of Science, I am writing briefly concerning the bills before the Congress regarding national support of scientific research and development.

I have recently been studying the text of Senate Bills 1297, 1285, 1248 and 828. The idea underlying the proposals of the four bills is something new and will undoubtedly provoke an unfavorable reaction on the part of some people just because it is new and venturesome. I do not feel that way about it. I find that these bills recognize the fact that *all* the people should support and promote research in science and the useful arts. Hitherto, support of these activities has come from relatively few public-spirited men and women. In a general way, I favor the proposals outlined in a bill introduced by Mr. Magnuson (Senate Bill No. 1285). The following are my reasons for endorsing this rather than the other proposals:

(1) The proposed National Research Foundation is authorized to develop and promote a broad program and to initiate and support basic scientific research.

(2) The Foundation is authorized to grant scholarships and fellowships. (This is undoubtedly one of the best ways to train promising young men and women.)

(3) The Board of Directors would be free to promote the purposes of the Foundation without the political or semi-political consideration.

(4) The Division of Publications and Scientific Collaboration which could make available to the public scientific information is extremely important, and I speak from experience when I say that privately operating scientific periodicals are fighting desperately for life.

For the first five years the Board of Research and Development could utilize existing laboratories. No greater mistake could be made than to spend large sums at present in the construction of Federal laboratories. It would be much better to make grants of funds to private industrial laboratories or educational institutions under the supervision of the Board of Directors. It will take nearly five years for the board to prepare an adequate program for research. In its essence, men and their intellects are the important things in research rather than lofty buildings. I am not in favor of having the research funds spent in the existing laboratories of the Federal Government because I do not believe that there are now men in those laboratories who are capable of directing basic scientific researches, except in a few cases.

Thanking you for your consideration, I am

Very respectfully yours,

H. S. REED, *Chairman of the Executive Committee, Pacific Division of the American Association for the Advancement of Science.*

The executive committee of the Pacific Division, in endorsing Professor Reed's letter, instructed the secretary to send copies to all members of the Senate and House Committees on Military Affairs, and to send a copy to the editors of SCIENCE.

FEDERAL SUPPORT OF SCIENTIFIC RESEARCH

THE Board of Permanent Officers of the Sheffield Scientific School of Yale University, at a meeting on October 8, 1945, unanimously approved the report of a committee appointed to formulate policy as to federal support of scientific research.

This report recommends the incorporation of four general principles in any legislation concerned with the problem. These are as follows:

First, there should be complete freedom of research, both as to choice of problems and methods of attacking them, on the part of individuals and institutions. No hampering restrictions of any kind should be attached to grants of funds nor should there be attempts by any supervisory agency to regiment scientists or to control the direction of their research. Voluntary cooperation is to be encouraged, and ample support should be given investigators whose studies do not fit into any preconceived program.

Second, the body responsible for the administration of federal support should be completely free from political control and should select its own executive officer. Men chosen for this task should be of the highest scientific reputation and enjoy the confidence of scientists generally. It is desirable that the National Academy of Sciences, which was established to advise the government on scientific matters, should present in nomination a panel of names from which the members of the administrative body would be appointed.

Third, provision should be made for the support of the most fundamental and theoretical scientific investigations, most of which have no obvious practical application. Popular interest and support will naturally center on problems which promise immediately useful returns, but great care should be taken that fundamental problems, always the ultimate source of knowledge upon which applications must be based, are not neglected.

Fourth, since the almost complete cessation of education in science during the war has resulted in a serious deficit in trained scientific personnel in this country, it is important to increase substantially the number of persons receiving such training. This can be done by establishing, through federal funds, a series of undergraduate scholarships, graduate fellowships, and post-doctoral fellowships in the sciences. Compulsory enrollment in a National Science Reserve should not be a stipulation for such support.

FELLOWSHIPS IN THE MEDICAL SCIENCES OF THE NATIONAL RESEARCH COUNCIL

FELLOWSHIPS in the medical sciences, similar to those which have been administered by the Medical Fellowship Board of the National Research Council since 1922, will again be available for the year beginning July 1, 1946. These fellowships, supported by grants from the Rockefeller Foundation to the National Research Council, are designed to provide opportunities for training and experience in research in all branches of medical science. They are open to citizens of the United States or Canada who possess an M.D. or a Ph.D. degree, and are intended for recent graduates who are not yet professionally established.

In addition to these fellowships the Medical Fellowship Board administers two groups of research fellowships, made available through a grant from the National Foundation for Infantile Paralysis, Inc. The first group, open to applicants who hold either the Ph.D. or M.D. degree, is for the purpose of providing opportunities for special training and experience in the study of filtrable viruses. The second group, open only to graduates in medicine who have completed one or more years of hospital experience in clinical surgery and are planning a career in orthopedic surgery, is designed to provide opportunities for training and research in those basic medical sciences that will be of particular value in furthering progress in the field of orthopedic surgery.

A series of fellowships in anesthesiology has been established through a grant from the American Society of Anesthesiologists. These fellowships are offered with a view to fostering a closer union between the clinical practice of anesthesiology and the fundamental disciplines on which anesthesia rests. Applicants must hold the M.D. degree and must have completed one or more years of hospital experience as intern or resident.

Fellows will be appointed at a meeting of the Medical Fellowship Board late in February, 1946. Applications to receive consideration at this meeting must be filed on or before January 1. Appointments may begin on any date determined by the board.

For further particulars address the Secretary of the Medical Fellowship Board, National Research Council, 2101 Constitution Avenue, Washington 25, D. C.

NEWS FROM ABROAD

THE following letter dated August 8 from Dr. H. W. Newton, of the Royal Observatory, Greenwich, has been received by Dr. Neal J. Heines, of Paterson, N. J.:

Dear Dr. Heines,

Thank you for your letter of July 16. I regret that I am unable to send anything but a short reply, because my correspondence has to be kept to the very minimum on account of my partial loss of sight from the onset of glaucoma.

The enclosures you send will, I am sure, be of interest to the Director of the Solar Section of the B.A.A. with whom I am in touch.

Thank you also for your expressions of good wishes for our safety at Greenwich. The five and one half years have been very difficult ones though a great experience. The observatory has suffered a considerable amount of superficial damage from blast and a few direct hits, but is safe fundamentally.

With reciprocal good wishes,

Sincerely yours,

H. W. NEWTON

P.S. I have not seen Mrs. Maunder for some time. She has not been very well, I think.

He has also received the following communication, dated September 27, from Dr. W. Runner, of the Astronomical Observatory at Zurich: