It would be a tragic waste if, although millions of dollars in materials, equipment, planes, gasoline and flyers' and photographers' time, and even some lives, have been spent in acquiring the material, it were allowed to deteriorate from lack of care or to be destroyed because of lack of a place to house it.

Military authorities are likely to fail to have much consideration for or interest in non-military uses of their apparatus and equipment. Their job is to defend the country, and such things as do not bear directly upon this do not necessarily carry much weight with them. Those at present in charge of the units that have jurisdiction over this material are keenly aware of and interested in its peacetime preservation and use. They do not yet have proper facilities for housing and filing of the negatives. There is, furthermore, no assurance that those at present actively working with the collection will not leave the services and return to civil life as soon as they are permitted to. What would happen to the material if an officer who did not understand or appreciate its full value were placed in charge is highly uncertain. Scientists have ample reason to be concerned about this in view of what has sometimes happened in the past, not only in military agencies but in certain civilian ones.

It is theoretically the duty of the National Archives to handle all material of this sort. The officials of this agency of the government are at present actively concerned with this very problem. They have, however, inadequate facilities both for going to the agencies in possession of such material and asking for it, and for housing it should it be offered to them. It would, furthermore, be too late to assert their jurisdiction after the negatives had been destroyed as obsolete for military purposes or because space was needed for other purposes.

The various agencies concerned are at present working on this problem and have plans for a negative depository to handle all negatives accumulated as a result of the war, and perhaps all other negatives of permanent value that are property of the government. Details of this scheme are not complete, but the plan for the building is before Congress for approval. The main necessity is to gain congressional approval and appropriations to build the needed building and to provide the staff to catalog and administer the collection.

It is hoped and anticipated that if such a depository becomes an actuality the material will be generally available to scientists, regardless of their governmental or institutional connections.

This article is written for the purpose of stimulating those scientists and organizations of scientists whose interests and researches will be served by having available this great accumulation of photographs to indicate to the government agencies involved and to Congress their needs and concern as to its disposition. If this is neglected, the arrangements finally made may be disappointing and the greatest scientific good may not be served.

F. R. FOSBERG

THE TOXICITY OF DDT TO DAPHNIA

IN view of the widespread interest in the effect of DDT on animal life in general a series of experiments was carried out to determine the threshold concentration of toxicity to *Daphnia magna*. A suspension of DDT[1] in Lake Erie water was made by adding one ml of a one per cent. solution of DDT in acetone (one g DDT to 100 ml acetone) to 249 ml or more water for initial concentrations. The remainder of the procedure followed was the same as that described by the author in determining the toxicity of substances found in industrial wastes.[2]

It was found, in all but one instance, that 50 per cent. of the *Daphnia* were immobilized by concentrations of over one part per billion in thirty-two hours or less. Concentrations from one to one hundred parts per billion immobilized the animals in periods between sixteen and thirty-two hours. Animals in concentrations of less than one part per billion survived as long as the controls in Lake Erie water alone. Some experiments were run as long as 130 hours.

These results may be of significance in relation to using DDT for mosquito control, since in many localities it is essential that the zooplankton be protected.

BERTIL G. ANDERSON
FRANZ THEODORE STONE LABORATORY,
THE OHIO STATE UNIVERSITY, AND
DEPARTMENT OF BOTANY AND ZOOLOGY,
WEST VIRGINIA UNIVERSITY

REPORTS

PROPOSALS FOR A NATIONAL RESEARCH FOUNDATION

THE joint meeting of the National Advisory Health Council and National Advisory Cancer Council of the Public Health Service, was convened on September 28, 1945, to consider specifically the relation of the Public Health Service to the report made by Dr. Vannevar Bush to the President, and to pending

[1] Dr. George L. McNew, of Naugatuck Chemical, kindly furnished an alcohol washed sample of DDT with a set point of 103.4.

[2] *Sewage Works Jour.*, 16: 1156–1165, 1944.

legislation pertaining to the implementation of the report.

Each member of the councils, at the request of Surgeon General Parran, expressed his opinion regarding the relationship of the Public Health Service with the proposed National Research Foundation or any overall research body which the pending bills would create.

The consensus of the councils may be summarized as follows:

I. The Bush report is a magnificent and distinguished document which outlines a plan for stimulating basic research in civilian research institutions and for continuing the close and profitable cooperation between civilian and governmental research agencies. To implement the recommendations of the report, the formation of a new body, the National Research Foundation, was proposed. The report expressed the belief that the existing governmental research agencies should be further developed and provided with more funds. It further emphasized that, although a new independent agency is needed to develop and foster research, this new agency should in no way conflict with existing governmental agencies, but should "supplement the research activities of these agencies in a valuable manner." The report proposes that a National Research Foundation would provide for the training of scientific personnel, promote basic research and cooperate with governmental research agencies. These aims and views expressed in the report were endorsed by the councils.

II. (*a*) The councils agreed that pending legislation is not clear regarding the relation of the proposed new body to the budgetary and research policies of existing governmental agencies. Although the various bills may be interpreted broadly as carrying out the intent of the Bush Report, the omission of specific language may permit the interpretation that the National Research Foundation would exercise direct or indirect control over the budgetary and research policies of the existing agencies. The Bush Report visualized only a consultative, advisory and cooperative relationship.

(*b*) In the firm belief that the Public Health Service should retain autonomy in its research activities, the councils were of the opinion that pending legislation should be clarified.

(*c*) Under existing law, (P.L. 410, Sec. 301, par. (c) and (d)), the Public Health Service has broad authority to coordinate and conduct research upon the physical and mental impairments and diseases of mankind, to allocate grants-in-aid for such research to other institutions, upon recommendation of its advisory councils, and to provide fellowships for the training of scientific personnel in these fields.

In this connection, the councils recommended that the Public Health Service continue to develop and expand its research and training programs, as authorized by Congress, both in its own facilities and through grants-in-aid to universities and other institutions.

III. A study of the pending legislation shows lack of agreement in regard to the representation of governmental agencies on the board or executive organization of the proposed National Research Foundation. In the medical portion of the Bush Report (Part II, p. 57) it is stated that "men who are experienced in research and who understand the problems of the investigator should administer the agency and its policies." The councils agree with the intent and implications of this statement, but they believe that governmental agencies should be represented on such boards and advisory committees as may be set up in or by the new body.

This opinion is based on the reasonable assumption that governmental agencies would appoint as their representatives men "who are experienced in research"; but it appears advisable that this requirement should be clearly expressed in the proposed legislation.

IV. In general, it was the opinion of the councils that appropriate legislation can maintain in peacetime the cooperative relationship which was maintained throughout the war among governmental agencies, the Office of Scientific Research and Development and civilian research institutions. In the establishment of a National Research Foundation, the councils favored the appointment of a board to carry out the powers and purposes of the foundation, and the choice by that board of its own chairman and other officers. The councils felt, however, that members of the board should be selected from among persons nominated to the President by the National Academy of Sciences and governmental research agencies.

It was the opinion of the councils that either (a) a new bill should be written as a cooperative enterprise of all governmental agencies concerned and the appropriate committee of the National Academy of Sciences; or (b) that the defects of proposed legislation be remedied by amendments such as those recommended by the Senate Committee on Naval Affairs in its reports on S.825 (Rept. No. 551, Calendar No. 549), July 28, 1945, as follows:

(1) The board shall in no way relieve governmental agencies of their responsibility for or authority over research and development work under their legal cognizance. This Act shall not be construed as superseding, curtailing or limiting any of the functions or activities of existing governmental agencies now authorized to engage in scientific research and devel-

opment, or as authorizing the board to exercise any supervisory direction or power of regulation over such functions or activities in any manner. Funds allocated by the board to other governmental agencies shall be utilized for projects designated by the board and undertaken on its behalf, and shall be in addition to, and not in lieu of, funds regularly appropriated to the agency concerned.

(2) Wherever practicable the board shall make use of the facilities and services of governmental agencies legally available for scientific research or development work, and wherever practicable it shall conduct research or development projects related to the legally authorized functions or activities of any governmental agency through or in cooperation with such agency. The said agencies are hereby authorized to make such facilities and services available to the Board and to participate in the conduct of its projects, on terms mutually agreeable to the Board and to the agency concerned. The board shall not operate laboratories under its own auspices.

V. To implement the foregoing opinions, the following motions were passed unanimously by the councils:

(1) That proposed legislation should be amended to include statements to the effect that autonomy in the development and conduct of their research programs should be maintained by those governmental agencies now engaged in such activities.

(2) That there should be governmental representation on such boards and advisory committees as may be set up in connection with the proposed National Research Foundation.

(3) That the joint report and recommendations of the councils be brought to the attention of other scientific groups, both public and private, now considering the proposals for a National Research Foundation.

SCIENTIFIC BOOKS

BIOLOGY

General Biology. By LESLIE A. KENOYER and HENRY N. GODDARD. 653 pp. Revised edition. Harper and Brothers. 1945. $4.50.

THE second edition of Kenoyer and Goddard's book joins the ranks of elementary biology text-books. Professor Kenoyer is head of the Department of Biology of the Western Michigan College and his interests are primarily in plant ecology. Professor Goddard retired from the same institution some years ago. His interests are in nature study and elementary science teaching.

The authors have attempted "(1) to introduce much material illustrative of the outstanding biological principles; (2) to place a satisfactory emphasis on both the animal and the plant kingdoms; (3) to steer a median course between the type study method and the method that emphasizes principles; and (4) to introduce wherever possible biological facts of general interest and practical or economic importance."

Chapters 1 and 2 deal with the scope and history of biology and include a brief survey of the plant and animal kingdoms. The next chapter is concerned with structure and function in the seed plants. This consideration of the seed plant as a typical organism is followed by chapters on cellular structure and the nature of protoplasm. Discussion of the latter topic consists primarily of elementary inorganic chemistry. Chapters 6 and 7 discuss food and digestion and metabolism. The process of digestion is treated with such brevity that it nearly missed inclusion in the book. The chapter on "metabolism" emphasizes diffusion, osmosis and photosynthesis.

Following these seven introductory chapters, fourteen chapters are devoted to the lower plants and to the animal kingdom. The usual organisms included in an elementary course are described. The description of individual organisms is brief, but an attempt is made to indicate their importance to more general problems. Thus, in the discussion of Amoeba we find a paragraph, on the role of the nucleus in the cell, based on experiments performed on that animal. In the chapter on bacteria we find mention of viruses, the electron microscope, spontaneous generation, carbon and nitrogen cycles, the sulfonamides and penicillin. A single chapter is devoted to chordate morphology and physiology. The frog is taken as a type and the emphasis is morphological. A chapter on the classes of vertebrates concludes the survey of the animal kingdom.

Genetics and embryology are covered in few pages but with an attempt to include as many aspects of these fields as is possible. The remaining plant groups (Bryophytes, Pteridophytes and Spermatophytes) are treated next, and then the authors turn to more general topics such as evolution, man's place in nature, ecology and conservation.

This résumé will give an indication of the material covered by the authors. Nearly everything that could conceivably be studied in any elementary biology course is mentioned. This extensive coverage of topics, which apparently is a trend in current biology text-books, is probably made with the hope of increasing adoptions. In the present instance this results in more superficiality than broadness of view. This, in the reviewer's opinion, is the chief weakness