

Division of Botany, and also head of the Natural History Museum of the Department of Agriculture and Commerce and editor of the *Philippine Journal of Science*; Dr. M. A. Tubangui, parasitologist and head of Division of Microbiology; Dr. Mariano Basaca, bacteriologist; Dr. Joaquin Marañon, chemist, head of Division of Tests and Standards; Mr. Rafael Simpao, chemist; Mr. A. O. Cruz, chemist; Mr. Gil Opiana, ceramics; and Mr. F. D. Maramba, engineer.

In the Department of Agriculture and Commerce, Dr. Deogracias V. Villadolid, ichthyologist, is head of the Division of Fisheries, and Dr. Marcos M. Alicante, soil chemist, is head of the Division of Soil Survey. Others in the Natural History Museum, under the same department, include Dr. Canuto G. Manuel, ornithologist, and Mr. Jose Mendoza, mycologist.

Among the professors at the College of Agriculture of the University of the Philippines at Los Baños are the following: Dr. Leopoldo B. Uichanco, dean and head, Department of Entomology; Professor Silverio M. Cendaña, entomology; Dr. Francis A. Santos, head, Department of Agricultural Chemistry; Dr. Leopoldo Villanueva and Dr. Julian Banzon, agricultural chemistry; Dr. Dionisio I. Aquino, head, Department of Soils, and Dr. Nicolas Galvez, soils; Dr. Gerardo O. Ocfemia, head, Department of Plant Pathology; Dr. Francis M. Sacay, head, Department of Agricultural Education, and Professor Andres Aglibut, agricultural education; Dr. Rafael B. Espino, head, Department of Botany; Dr. Anastacio L. Teodoro, head, Department of Agricultural Engineering, and Professor Alejandro Catambay, agricultural engineering; Dr. Leon Gonzales, head, Department of Agronomy, Dr. Pedro A. David and Dr. Jose M. Capinpin, agronomy; Dr. Valente Villegas, head, Department of Animal Husbandry, and Dr. Mariano Mondoñedo, Professor Felix B. Sarao, Dr. Francisco M. Fronda, Dr. Lorenzo P. Zialcita, animal husbandry. The last named returned from America on the staff of President Osmeña at the time of the liberation. These specialists are desirous of resuming communication with their correspondents in the United States, and are particularly anxious to receive reprints of scientific papers in their fields.

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THE AIR FORCES' COLLECTION OF AERIAL PHOTOGRAPHS

DURING the course of the war and previously the Army and Navy Air Forces have accumulated a collection of aerial photographs covering a very substantial part of the earth's land surface. Aerial

mapping has developed to an extent where it will largely supersede conventional mapping from ground surveys. The art of interpreting aerial photographs in terms of vegetation, geological structure and even depth of water, as well as cultural features, before the war in a more or less experimental stage, has developed into a powerful tool to be used in many branches of research in geography, geology, botany, ecology and conservation, as well as being indispensable in modern exploration.

The actual extent of coverage of the earth is not yet known and will not be for many months. The negatives are still coming in to Washington from all theaters of Army and Navy activity. They must be rewashed to insure against deterioration. Prints must be made and examined. Data must be assembled and the negatives catalogued. This is an enormous task that may well continue for several years before any one has an adequate idea of the full value of this photographic collection.

Since the greater part of this aerial coverage is of overlapping shots it may be studied stereoscopically, bringing out detail undreamed of in ordinary examination of single prints. The mapping of vegetation types made possible by this technique will lay the foundation for a complete and detailed knowledge of the plant covering of the earth, even in regions hitherto practically unknown. Much information on physiography and such structural geology as may be deduced from physiography will become available, laying the foundation for intensive study on the ground. Much time may thus be saved and a far more dependable framework for all types of geological studies will be provided than ever has been available before. For geography and ecology, not only will there be suddenly available an enormous amount of basic data, but a reference point in time may be established from which to study and measure changes of many types and magnitudes over both long and short periods of time. The greater portion of the negatives being on cellulose acetate film, they may be expected to last without recopying for periods of hundreds of years. Basic to all branches of science, material is now available for detailed mapping of the earth's surface, and methods of preparing such maps are far more satisfactory than ever before.

It is, of course, unnecessary to urge the value of this accumulation of photographic data to any one who has any idea of its extent and quality. It will suffice merely to indicate its existence to those who are not aware of it. The important question to be posed by this article is that of the future preservation and availability of this material. Many of the scientists who have some knowledge of the collection are expressing concern as to what shall become of it.

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 DDT¹ 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.

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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.