SCIENTIFIC EVENTS

PRESERVATION OF RECORDS IN LIBRARIES

ACCORDING to the *Technological News Bulletin* of the Bureau of Standards, lack of funds has caused the bureau to suspend, temporarily it is hoped, its studies to find the most favorable conditions for the preservation of important records in libraries. For the past four years, the various rather intangible problems confronting librarians in their attempt to save valuable publications from early decay have been studied systematically. Surveys of the conditions surrounding stored material in public libraries indicated that light, adverse temperature and humidity conditions, acidic pollution of the air and poor paper were all taking their toll. Laboratory studies of the effect of light showed that it has a more intensive effect than was commonly realized, that even high-grade book and writing papers may be rapidly weakened by its action, and that this effect may occur without visible evidence of it. Careful control of temperature, and particularly humidity, was found necessary to prevent dampness which promotes mold, or excessive dryness which makes book materials brittle. In both laboratory exposures of paper to air containing sulphur dioxide, and studies of its effect under normal library conditions, this product of fuel combustion was found to be a most potent source of deterioration. However, it was proved that this danger could be eliminated effectively and inexpensively by washing the air with an alkaline solution. Tests of old newspapers and book papers revealed the deteriorative effects of crude fibers, such as ground wood, which for a time was used more or less for all classes of publications. A partially completed study of the protection of records printed on impermanent paper indicated that a covering of Japanese tissue paper or transparent cellulose acetate sheeting might be suitable. Additional work, it is said, should be done on this problem, and on the equally interesting possibility of preventing or retarding decay of papers by the incorporation of protective materials in them. Of various materials proposed for the reproduction of records, permanent photostat paper appeared to be the most suitable.

This series of investigations was made with the assistance of a fund granted for the purpose by the Carnegie Foundation to the National Research Council.

THE DEVELOPMENT OF THE COLLECTION OF MAPS AT THE UNIVERSITY OF CHICAGO

THE development of a great map library at the University of Chicago, rivaling the collections of the national government and organized to serve scholars and business men of the Middle West, is being planned. Professor Wellington D. Jones, of the department of geography, chairman of the committee in charge, recently outlined the project through which it is hoped eventually to accumulate 400,000 sheet maps.

More than 50,000 maps now on file in the map division of the University Library form the nucleus of the proposed collection. This includes 10,000 items acquired from the John Crerar Library through the interest of J. Christian Bay, librarian. Expansion will be along four lines: first, the collection of "master" topographic maps, covering the entire civilized portions of the globe on a scale of one inch to the mile, wherever available; second, acquisition of large-scale city maps; third, accumulation of hundreds of types of maps containing special data; fourth, a collection of historical maps.

Six of the chief collections of maps in the United States are in Washington. These are those of the Military Intelligence Division, War Department, 1,000,000 maps; the Library of Congress, 688,000 maps; the Engineers Office of the War Department, 260,000 maps; the Interstate Commerce Commission, 175,000 maps; the General Land Office, 102,000 maps, and the U. S. Geological Survey, 87,000 maps. The American Geographical Society, New York, has a collection of 100,000 maps.

Among maps suggested for the collection at Chicago are those showing cities with regard to zoning, community areas, nationality, land values, rents and economic status, newspaper circulation and purchasing power, marketing districts, crime and poverty; time maps showing identical subjects at intervals, and maps showing voting trends, political unrest, standards of living, literacy and cultural traits, such as legal systems and religions. The project also calls for the collection of 3,000 atlases. It is planned to work out methods of development for cataloguing and handling the maps in cooperation with the Graduate Library School.

No funds are yet available for this project, but the university would be glad to receive as gifts all types of sheet maps, including maps in manuscript which are no longer useful to the owners.

RESEARCH CONFERENCES ON CHEMICAL PHYSICS

THE Johns Hopkins University, through its department of chemistry under the directorship of Professor J. C. W. Frazer, has instituted a series of Research Conferences on Chemical Physics to be held at Gibson Island between June 25 and July 21. The purpose of the conferences is to have lectures, discussions and demonstrations on frontier problems which are on the border line of physics and chemistry, and to afford those present a chance to acquire the latest informa-

tion in chemical physics as well as to benefit from the contacts with the specialists in the field. There will be only one formal lecture or conference a day, leaving time free for special conferences with specialists or for sports on the island. The island has an excellent golf course, perfect tennis courts, ideal swimming accommodations, and the fishing in the Chesapeake Bay which borders the island is unexcelled. A dense forest covers part of the island. The plan is a combination of conferences and vacation so arranged as to provide sufficient time for both. It is believed that the group contacts during the time of recreation is one of the opportunities which the plan affords.

The number attending will be limited, partly due to the limited facilities of the island and partly due to the desire to keep it sufficiently small to give each man registered the privilege of making contacts with specialists. All may be housed at the club house or adjacent cottages.

Since the conferences will cover frontier material, some modifications of the program may be made, depending upon the progress of work before the conferences, but the following gives the general program:

A. SURFACE PHENOMENA. Dr. Irving Langmuir. June 25–29.

The week's conferences include a series of lectures and discussions on various problems associated with "surface phenomena."

B. THERMAL ENERGY AND THE STRUCTURE OF MOLECULES. Professor Donald H. Andrews. July 2–6.

The recent developments in the quantum theory of the chemical bond have served to emphasize the importance of knowing how the thermal energy in molecules is distributed. The piling up of energy at a particular point may play a major rôle in determining the course of a chemical reaction. It is proposed to devote this week to a discussion of some of the recently accumulated evidence which can be brought to bear on the question of the distribution of thermal energy in molecules and its relation to the nature of the chemical bond. The lecturers and their subjects are: Dr. Donald H. Andrews, "The Distribution of Thermal Energy in Molecules at Low Temperatures," "The Bending of the Chemical Bond." Dr. John R. Bates, "Molecular Structure and Chemical Reactions." Dr. Charles P. Smyth, "The Effect of Dipole Forces upon the Energies of Crystalline Lattices and Molecules." Dr. Donald H. Andrews, "The Effect of Isotopes on the Thermal Energy of Crystal Lattices and Molecules."

C. HEAVY HYDROGEN. Dr. Harold C. Urey. July 9–13.

These conferences consist of lectures and discussions grouped around work in progress on the isotopes of hydrogen, as follows: Dr. F. G. Brickwedde, "Vapor Pressures of the Hydrogens and the Discovery of Deuterium." Dr. H. S. Taylor, "The Electrolytic Method of Separating the Hydrogen Isotopes." Dr. Harold C. Urey, "The Thermodynamic Properties of the Hydrogens and Their Compounds," "The Effect of Mass on the Kinetics of Chemical Reactions," "Transmutation Reactions."

D. THE STRUCTURE OF SOLIDS, LIQUIDS AND GASES. Dr. Maurice L. Huggins. July 16–20.

A series of lectures, with informal discussion, participated in by the lecturers and other research workers in these fields. Dr. Maurice L. Huggins, "Principles Determining Arrangements of Atoms, Ions and Molecules in Crystals." Dr. Sterling B. Hendricks, "Irregularities in Crystal Lattices." Professor B. E. Warren, "X-ray Diffraction in Glasses and Liquids." Professor Eric R. Jette, "Crystal Structure Studies in Metallic Alloy Systems." Dr. L. R. Maxwell, "The Structure of Gaseous Molecules as Determined by Electron Diffraction."

It is possible to register for the entire session or any week unit. This enables those having a limited vacation to attend one or more weeks as suits their convenience. Advanced registration is advisable. The special registration for these conferences is five dollars per week or twenty dollars for the four weeks. Information regarding the special rates for board and room on the island, advance registration or other inquiries may be requested through Professor Neil E. Gordon, Department of Chemistry, the Johns Hopkins University, Baltimore, Md.

THE INTERNATIONAL CONGRESS OF THE ANTHROPOLOGICAL AND ETHNOLOGICAL SCIENCES

THE first session of an International Congress of Anthropological and Ethnological Sciences will be held in London, under royal patronage, from July 30 to August 4. It is to include all those departments of research which contribute to the scientific study of man, and in their application to races, peoples and modes of life.

The congress was planned more than twenty years ago by a small international committee at the invitation of the Royal Anthropological Institute and the first session was to have been held in 1916. The congress as now established is to meet at intervals of four years midway between the sessions every four years of the International Congresses of Prehistoric and Protohistoric Sciences established in 1932. It is designed to take place in the years in which the Americanist Congress meets in Europe, as it does this year at Seville.

Meetings this summer will be held at University College, Gower Street, and at the Wellcome Historical Medieal Museum. Lord Onslow is the president, and Captain T. A. Joyce, of the British Museum, chairman of the executive committee. H. G. Beasley is the treasurer, and the secretaries are A. H. Brodrick