Harvey Society, the American Neurological Association, and the British Association for the Study of Animal Behavior and a foreign member of the British Psychological Association and the Royal Society of London. On 28 July 1958, only a few days before his death, he formally signed in London the historic membership book of the Royal Society.

Lashley gave the Hughlings-Jackson Memorial Lectures in Montreal in 1937, the Vanuxem Lectures in Princeton in 1952, and special lectures at Columbia and other American universities and at the universities of London, Berlin, and Moscow. He was the recipient of the Howard Crosby Warren medal of the Society of Experimental Psychologists, the Daniel Giraud Elliot medal of the National Academy of Sciences, and the Baly medal of the Royal College of Physicians.

Lashley's two great hobbies were sailing and music, and he was creative in both of them. He designed and built several admirable small sailboats that had a number of unique features which he had invented. He also loved to play the violoncello and participated, as volunteer member, in the Jacksonville Philharmonic Orchestra and in a number of chamber music groups.

As a small boy he had participated with his parents in the Klondike Gold Rush of 1898. He never forgot these exciting experiences, and twice after his retirement in 1955 he went to Alaska to retrace this early trip.

To many people this distinguished scientist seemed shy and reserved, but his close friends knew him as warm-hearted, wise, and gay. In his death the world has lost a brilliant student of neurology and behavior. His studies advanced in a significant way our understanding of the physiological basis of the mental life of man.

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News of Science

World Meteorological Congress Studies Use of Satellites

On 28 April the World Meteorological Organization's third congress completed a 4-week session in Geneva, after calling for a continuing review of the use of artificial satellites to obtain weather information, new studies on atomic energy questions, and action to fill gaps in the world network of weather observation stations. The congress, which meets once every 4 years, also planned its technical program and budget for the period 1960 through 1963, reelected Andre Viaut (France) as president, and reappointed David A. Davies (United Kingdom) as secretary-general of the organization. In the course of the session, WMO membership rose to 102 states and territories. Action was taken at the congress in the following fields.

Outer Atmosphere and Satellites

In view of the bearing of satellite observations on meteorology, the executive committee of WMO had designated a rapporteur, Harry Wexler of the United States Weather Bureau in Washington, to prepare a report on this problem, paying particular attention to activities that might be undertaken by WMO. This report was issued during the session, and the congress examined it in detail.

The congress considered that it was difficult to foresee the developments which might take place in the course of the next few years in this field. Therefore the congress adopted a resolution in which it commented that the results of meteorological measurements which may be made by means of satellites are of great potential value, not only for meteorological research but also for direct use in forecasting.

The congress instructed the WMO executive committee to arrange for a continuing review to be made of the uses of artificial satellites for meteorological purposes and to keep members informed of developments.

Meteorology and Atomic Energy

After a discussion that included a statement by a representative of the International Atomic Energy Agency, the congress adopted a resolution expressing its view that the organization can play a useful role in the use of radioisotopes in meteorological measurements, the safety of atomic plants, and measurement of radioactivity in air and water. The resolution also directs the executive committee to implement a large program of study and publication in connection with these three aspects. It calls for continued consultations with IAEA and other international organizations in this field and for continued cooperation with the United Nations Scientific Committee on the Effects of Atomic Radiation.

World Network of Meteorological Stations

The congress reaffirmed as one of the WMO's essential aims the maintenance and improvement of the world network of weather observation stations. It was stressed that many important meteorological problems such as the study of the general circulation of the atmosphere could not be fully understood until the existing serious gaps in the network had been filled. Therefore, the congress directed the executive committee to make use of all possible means—such as international or multilateral agreements for joint support and financing, technical assistance, and the United Nations Special Fund—to achieve improvement of the world network of meteorological stations.

The congress also directed the executive committee to give effect within the next 4 years to joint-support projects which may help improve the international exchange of weather information and to meet deficiencies in the network of observation stations. (Joint-support schemes are based upon international or multilateral agreements between countries interested in a particular project and involve the financing of the project by the countries which are contracting parties to the agreement.) In addition, standardization of the instruments internationally used in meteorology was considered to be an activity which would be in need of collective aid.

Program and Budget

The congress adopted for the 4-year period 1960–63 a budget of $2,694,484. The budget for the last 4 years (1956–59) amounted to $1,770,000.

The technical program of the organi-

zation stresses the importance of the application of meteorology to aviation, agriculture, shipping, water resources and other human activities and gives priority to such activities as are of a particularly urgent character in view of scientific and technical progress.

Fallout Hazards Assessed by AEC Group

A review of the dangers of radioactive fallout from nuclear test explosions has been issued by the General Advisory Committee of the Atomic Energy Commission. Chairman McCone requested the special report last March after many expressions of public concern had been voiced. Warren C. Johnson, dean of the division of physical sciences at the University of Chicago, is chairman of the reporting committee. The text of the statement follows.

1) The General Advisory Committee has reviewed carefully the available facts and many opinions regarding the magnitude of fallout to date, and how much can be anticipated in the future from weapon tests that have already been carried out by the United States, the United Kingdom, and Soviet Russia.

2) We find that the Atomic Energy Commission has released all significant fallout data to other agencies and to the public. Certain information as to the estimated yield of various weapon tests and certain other factors bearing on the radioactive content of the upper atmosphere have defense implications which require classification, but the significant information on actual fallout throughout the free world that the AEC has developed has been released. Furthermore, the commission has been largely responsible for the development of equipment and procedures to measure extremely minute quantities of radioactive materials.

3) It is now apparent that the circulation of the upper atmosphere, and particularly the stratosphere, is much more complicated and the concentration of bomb debris less uniform than had been anticipated when early estimates were made. This has resulted in nonuniform distribution of the fallout with higher concentrations in the middle latitudes of the Northern Hemisphere. Fortunately, it was just here that most of the early measurements of actual fallout were made. The principal result of later information has been to reduce somewhat the earlier estimates of future fallout of debris which has been injected into the stratosphere near the equator by the United States and United Kingdom tests. The debris injected last autumn by U.S.S.R. tests into the stratosphere in the more northern latitudes has been falling out quite rapidly and is largely confined to the Northern Hemisphere.

A reasonable estimate of the amount of fission products that has been injected into the stratosphere by all nuclear tests is 65 megatons (TNT equivalent) of fission energy.

This corresponds to about 100 pounds of strontium-90 in the entire stratosphere. It is estimated that fully 50 percent (50 pounds) of this strontium-90 has already fallen out. This means that not more than half of the total strontium-90 injected into the stratosphere still remains there.

4) The present state of knowledge does not permit a full evaluation of the biological effects of fallout. However, in order to place the hazard of the fallout in proper perspective, it should be pointed out that the amount of total body external radiation resulting from fallout to date, together with future fallout in any part of the world from previous weapon tests, is: (i) less than 5 percent as much as the average exposure to cosmic rays and other background radiation; (ii) less than 5 percent of the estimated average radiation exposure of the American public to x-rays for medical purposes.

5) It is interesting to note that human beings have lived for many generations in parts of the world which have five times or more the background radiation normal to the United States, or more than 100 times the average amount of radiation from fallout in the United States.

6) In regard to internal effects of strontium-90 due to ingestion, the amount of strontium-90 which has been found in food and water is less of a hazard than the amount of radium normally present in public drinking water supply in certain places in the United States, and in public use for many decades.

7) Next, the committee addressed itself to the question of the responsibilities of the Atomic Energy Commission with regard to radiation safety. Clearly, the commission must assure itself that it is conducting its own operations in a safe manner, as is required by the Atomic Energy Acts. To meet these needs the Atomic Energy Commission has established, in addition to worldwide sampling of air, soil, foods, and water, an effective and outstanding biological and medical research program in the general field of radiation hazards and protection. The AEC needs this program in order to have scientific facts available to insure and improve the safety of its own operations. Therefore, the committee recommends that the AEC continue its scientific studies in these areas.

As the civilian uses of x-rays, radioisotopes, and nuclear reactors increases, public health authorities should actively sponsor proper public standards of radiation safety. In so doing they should continue to make use of all information available. The relation between the public health authorities and the AEC in its civilian activities should be analogous to that between the same authorities and most industry.

The Public Health Service and the Food and Drug Administration should make the best use of information developed by the AEC and others and should be given whatever funds are necessary for programs to be carried out on their own initiative, whether these programs be in the realm of research, training, or dissemination of information to local authorities. It will take time for the public health authorities to develop such programs and to acquire the necessary background of knowledge and experience. In the opinion of the committee, the public health agencies, both national and local, should gradually assume responsibilities for matters pertaining to the regulation of all radiation hazards affecting the public. At present x-rays are the most important artificial source of such hazards.

8) It is the opinion of the committee that the level of effort the AEC has devoted to its research programs on radiation standards and protection, in their broadest sense, has been quite adequate. However, it is realized that in several areas of the programs considerable time will be required to obtain conclusive results which will provide a more comprehensible understanding of radiation and its effects.

9) The committee feels that although the AEC is releasing information on fallout to the public promptly and completely, the statements and scientific papers presenting this information have not always been in a form readily understood by the public. As a result, the public has been confused about the status of fallout and its implications. There is a real need for clear, simple exposition of the facts of fallout in media widely available to the public. We feel that the commission should assume this responsibility. It should be clearly explained to the public that weapons tests have been an essential part of our effort to prevent the occurrence of nuclear war.

General Advisory Committee Members

Jesse W. Beams, chairman of the physics department at the University of Virginia.

Manson Benedict, professor of nuclear engineering at Massachusetts Institute of Technology.

James W. McRae, vice president of the American Telephone and Telegraph Company.