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THE CHICAGO MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Edited by Dr. F. R. MOULTON

PERMANENT SECRETARY

FROM September 22 to September 27, inclusive, the American Association for the Advancement of Science had the pleasure of participating in the Fiftieth Anniversary Celebration of The University of Chicago. This was the one hundred ninth meeting of the association and its fifth meeting in Chicago, earlier meetings having been held in that city in 1868, 1908, 1920 and 1933. The program of the meeting consisted largely of the "Fiftieth Anniversary Symposia" on "New Frontiers in Education and Research" which were organized by the university. However, the Section on Medical Sciences (N) presented a very comprehensive and distinguished symposium on "Aerobiology," which had been in preparation for more than a year. There were, in addition, twelve special lectures by distinguished scholars, on many of whom honorary degrees were conferred at the convocation of the university held on September 29.[1]

Although at the time of the Chicago meeting most universities had already entered on the work of the current academic year, the attendance was gratifying and the participants were distinguished. About 2,000 persons were registered, and probably many others attended one or more of the sessions without registering. In quality, the meeting was worthy of a great

[1] SCIENCE, October 3, p. 321.

university. The fine buildings provided ample accommodations and the arrangements for the convenience of visitors were excellent. Nearly all the contributors to the programs submitted copies of their addresses far enough in advance to permit their being mimeographed for the use of representatives of the press, who were assigned commodious quarters in Mitchell Tower. To those who remembered the debris-littered grounds of earlier days the green, well-kept campus was a delight. In its maturity the university has taken on the genteel mellowness characteristic of all famous seats of learning, but it has lost much of the crusading spirit that for a generation led the Middle West and the South into a myriad of new educational adventures.

The date of the celebration was so late that several affiliated societies of the association were compelled for various reasons to hold their meetings earlier. The American Mathematical Society, the Mathematical Association of America, the Institute of Mathematical Physics and the Econometric Society held meetings at the university during the week beginning on September 1. On September 7–9 the American Astronomical Society held its annual meeting at the Yerkes Observatory, following which the astronomers held a three-day symposium on "Astronomical Spectra."

Special Lectures

On September 3, 4 and 5, Professor Oystein Ore, of Yale University, delivered the twenty-third colloquium lectures of the American Mathematical Society on "Mathematical Relations and Structures." It is expected that the society will publish these lectures.

On the evening of September 3 the sixteenth Josiah Willard Gibbs lecture was delivered by Sewall Wright, The University of Chicago, on "Statistical Genetics and Evolution."

On Monday, September 22, Herald R. Cox, Rocky Mountain Laboratory, U. S. Public Health Service, recipient of the Theobald Smith Award in Medical Sciences of the A.A.A.S. for 1941, delivered an address on "Cultivation of Rickettsiae of the Rocky Mountain Spotted Fever, Typhus and Q Fever Groups in the Embryonic Tissues of Developing Chicks." The award consists of one thousand dollars and a bronze medal furnished by Eli Lilly and Company. In his address Dr. Cox explained his important method of producing vaccines for a group of very serious diseases by inoculating fertile eggs of hens with their causative viruses. His method is relatively simple, inexpensive and is adaptable to quantity production.

In his introductory remarks, Dr. Langmuir, president of the association, alluded to the coincidence that Dr. Cox was awarded a prize for his development of a vaccine for rickettsial diseases, which were named after Dr. Howard Ricketts, a former member of the faculty of The University of Chicago, who discovered their causative agents. He recalled the fact that Dr. Ricketts died of the disease following an accidental infection while studying it in Mexico City in 1910.

On Monday, September 22, Robert R. Williams, chemical director, the Bell Telephone Laboratories, delivered an address on "The Social Implications of Vitamins."

On Tuesday, September 23, Donald Dexter Van Slyke, chief chemist, The Rockefeller Foundation for Medical Research, lectured on "The Physiology of Amino Acids."

On Wednesday, September 24, Lydia J. Roberts, chairman of the Department of Home Economics, The University of Chicago, delivered a lecture on "Textile Research in the Interest of the Consumer."

On Thursday, September 25, Florence Barbara Seibert, professor of biochemistry, The Henry Phipps Institute, University of Pennsylvania, delivered an address on "Tuberculosis as the Chemist Sees It."

On Thursday, September 25, Isabel Maitland Stewart, professor of nursing education, Teachers College, Columbia University, delivered a lecture on "Advancing Frontiers in Nursing Education."

On Thursday, September 25, Halvdan Koht, formerly professor of history, Royal Frederick University, Oslo, and formerly Secretary of State of Norway, delivered a lecture on "The Historical Interpretation of Art and Literature."

On Thursday, September 25, Reginald Aldworth Daly, Sturgis-Hooper professor of geology, Harvard University, delivered an address on "Glaciation and Submarine Valleys."

On Friday, September 26, Charles Herbert Best, professor of physiology, University of Toronto, delivered an address on "The Significance of Choline as a Dietary Factor."

On Friday, September 26, Ernest William Goodpasture, professor of pathology, Vanderbilt University, and vice-president of the A.A.A.S. for the Section on Medical Sciences (N), delivered an address on "Virus Infection of the Mammalian Foetus."

Symposia

Thirty-three symposia were presented on a wide variety of subjects, ranging from pure mathematics to the place of ethics in social science. The titles of nearly all of them and the names of the contributors to them were listed in the August 15 issue of SCIENCE. An exception was an extensive symposium on Aerobiology, which was presented at five sessions and which consisted of thirty-seven papers.

The symposium on Aerobiology was organized by the Section on the Medical Sciences, of which Dr.

Malcolm H. Soule is secretary, in cooperation with the Committee on Aerobiology of the National Research Council. Dr. E. C. Stakman was largely responsible for organizing the part of the symposium on extramural aerobiology and Dr. Stuart Mudd for the part on intramural biology.

The first session was devoted to eight papers on extramural aerobiology. Such subjects were discussed as "Air-borne Pollens as Allergens," "Air-borne Fungus Spores as Allergens" and "Long Distance Dissemination of Plant Pathogens."

The remainder of the program, consisting of twenty-nine papers, was devoted to problems of intramural aerobiology, including such subjects as "Air-borne Infection as a Basis for a Theory of Contagion" and "Disinfection of Air by Air-conditioning Processes." The third session was devoted entirely to papers on various aspects of "The Germicidal Action of Ultra-violet Light." The fourth and fifth sessions continued with reports of experiments, and of experiences in hospitals and other institutions, on the control of respiratory contagions by the use of ultra-violet radiation and other means.

It is expected that the symposium on Aerobiology will be published by the association.

A symposium on "Life at High Altitudes and Aviation Medicine" attracted special attention because two of its papers combined important scientific problems with matters of human interest. Professor Carlos Monge, of Lima, Peru, read a paper on "Life upon the Andes and Chronic Mountain Sickness," in which he discussed the effects of seasonal migrations from high plateaus to low levels, a change resulting in a reduction of atmospheric pressure by as much as 40 per cent. Naturally the radical change in important factors of the environment calls for corresponding physiological adjustments which Dr. Monge had investigated. For example, he reported on experiments on the reproductive capacity of various domestic animals when transported to high altitudes. In spite of the fact that domestic animals taken to high altitudes failed to reproduce themselves, the native inhabitants, both human and animal, at the same altitudes have the same birth rates as in low altitudes. It is reported that the Spanish Conquerors had no offspring until fifty years after they founded Potosi, at an altitude of 14,000 feet.

In a paper on "The Physiology of a Free Flight through the Air," Dr. A. C. Ivy and his associates reported on free falls from airplanes by A. H. Starnes through distances ranging from 8,400 feet to 16,500 feet before the opening of his parachute. With the aid of a large amount of auxiliary apparatus carried by Mr. Starnes in his leaps records were secured of the physiological and psychological effects on the parachutist. The apparatus for determining the orientation of the subject showed that he often gyrated or tumbled rapidly before his parachute opened. The experiments showed that during the period of free fall he suffered no appreciable unfavorable effects on heart rate, blood pressure, vision, hearing or mental alertness. The greatest falling speed attained in a drop of 16,500 feet was 158 miles per hour, appreciably below the flying speed of transport planes and much below the speed of combat planes. Consequently the shock on the jumper when the parachute opens is reduced by delaying its opening, and the danger of becoming entangled with his plane and from enemy fire is also reduced.

Surface chemistry has recently become a subject of great interest to both chemists and biologists—to the former, because in this field chemists deal with the chemical properties of matter under the relatively simple conditions when it is in layers one molecule or a few molecules thick; to the latter, because on a knowledge of the properties of the surface layers of living cells depends the understanding of many of the most important life processes. Primarily for this reason a symposium on "Surface Chemistry" was organized. A second reason for its organization was the fact that Dr. W. D. Harkins, of the University of Chicago, was a pioneer in this field and the program was partly in his honor. The symposium, consisting of eleven papers, was presented at three sessions. One of the contributors to it was Dr. Irving Langmuir, president of the association. It is expected that the association will publish this symposium.

MEETING OF THE EXECUTIVE COMMITTEE

On September 21, the day before the beginning of the programs of the meeting, the executive committee held an all-day session. Most of its actions were in the nature of recommendations to be presented to the council at the annual meeting, which will begin on December 29 in Dallas, Texas. There were, however, a few that from their nature were immediately effective.

1. Dr. Lewis H. Weed and Dr. Edward Harvey Cushing were appointed representatives of the association at a meeting of the Division for the Social and International Relations of Science of the British Association for the Advancement of Science, which was held in London from September 26 to 28, 1941. J. G. Winant, Ambassador from the United States to Great Britain, was chairman of the session for discussions of "Science and Human Needs."

2. The Permanent Secretary was authorized to send a cable of greetings to the divisional meeting of the British Association.

3. Dr. Raymond J. Seeger, of George Washington University, Washington, D. C., was elected secretary of the Section on Historical and Philological Sciences to succeed Dr. C. A. Browne, resigned, for the term which will expire at the close of the annual meeting in December–January, 1944–45.

4. It was voted to accept the invitation from the University of Michigan to hold a meeting in Ann Arbor, June 22–26, 1942.

5. It was voted to meet in Atlantic City in December, 1944, and in St. Louis in December, 1945, provided satisfactory arrangements for the meetings can be made.

6. The executive committee considered with favor the suggestion that, provided satisfactory arrangements can be made, summer meetings be held as follows: New Haven, 1943; Madison, 1944; Chapel Hill-Durham, 1945; Toronto, 1946.

ORIGIN AND IDEALS OF THE NATIONAL SCIENCE FUND[1]

By Dr. ALBERT F. BLAKESLEE

CARNEGIE INSTITUTION OF WASHINGTON, DEPARTMENT OF GENETICS, COLD SPRING HARBOR, N. Y.

I HAVE been asked to say a few words about how the idea of a national science fund got started and what the committee has done which was appointed to study the desirability of establishing such a fund. It should be emphasized at the start that no one person originates an idea entirely alone; there are always others who contribute. Although I happened to be the one who suggested a national fund for science along the lines of our present organization I was merely expressing what seemed a logical need from a background of the experience of many. Perhaps the most important contributing event was the two-day symposium organized by the American Philosophical Society on February 19 and 20, 1937, on "Administering Funds in Aid of Research" in which I was privileged to take part as a delegate of the Carnegie Institution of Washington. The late Dr. E. M. East, who also attended the symposium, visited us on his way back to Harvard. We naturally talked over the problems which had been raised in the meeting and he told of his experience as chairman of a committee of the American Academy of Arts and Sciences on their "Permanent Science Fund." The name fascinated me and later I began to wonder if there could not be established a fund which would be more national in character and which might perform a service not adequately cared for by any organization. In our discussions with East we had lamented the fact that those who make donations in support of science so frequently fail to investigate the likelihood of scientific dividends from their donations, although they might exercise great care when financial dividends were involved. An example of unwise generosity was presented at about this time when a local estate was offered as a clinic for a particular method of cancer treatment which later was found unable to stand up under critical tests of the medical profession.

The fund I had in mind might be of service, I felt, to possible philanthropists in preventing such an example as that just given and serve as a clearing-house of information on philanthropic investments in science. I tried the idea out on a number of people, including a friend in the Central Hanover Bank and Trust Company, who turned me over to their department of philanthropy. They seemed to think the idea had possibilities of service and showed me two booklets they had just gotten out giving the opportunities for philanthropy in the fine arts and in public health. They believed there was an opportunity for similar service in pointing out the opportunities for philanthropy in science. When told of the various scientific organizations in the country, both state and national, that might organize such a fund, they felt that the National Academy of Sciences would be the best because of its national character and its select membership. The pamphlets from the Central Hanover Bank and Trust Company, together with other information and suggestions which I had assembled regarding a possible national science fund, were turned over to Dr. Lillie, as president of the National Academy of Sciences, at the spring meeting of the academy in 1937. Later in the year I woke up to find myself a member of a committee of the academy to investigate the feasibility of a national science fund.

It soon became evident that our committee was not

[1] Remarks at first meeting of Board of Directors of National Science Fund at University Club, New York City, May 21, 1941. The newly appointed Directors of the Fund are: R. Adams, W. W. Aldrich, *Vice Chairman,* J. R. Angell, J. F. Bell, A. F. Blakeslee, I. Bowman, A. H. Compton, J. B. Conant, E. G. Conklin, J. W. Davis, L. P. Eisenhart, H. L. Ferguson, H. S. Gasser, W. S. Gifford, C. J. H. Hayes, H. Hoover, E. O. Lawrence, F. R. Lillie, R. A. Millikan, A. MacLeish, H. S. Mudd, A. N. Richards, W. J. Robbins, *Chairman,* E. Root, Jr., H. Shapley, T. K. Smith, L. L. Strauss, H. H. Swift, G. H. Whipple. *Ex officio:* The President, National Academy of Sciences, F. B. Jewett; The Treasurer, National Academy of Sciences, J. C. Hunsaker, *treasurer;* The Charman, National Research Council, R. G. Harrison; The President, American Association for the Advancement of Science, I. Langmuir; H. H. Sargeant, *Executive Secretary.*