

treated briefly, and the second of which is hardly mentioned. These approaches are generally useful to any one, because the more exact mathematical treatment is so difficult, and they are doubly useful in introducing beginners to the theory. In this respect the

book is insufficient. It may be impossible to accomplish both ends in one volume.

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THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE THE CLEVELAND MEETING

PROGRESS is being made in the preparation of programs for the Cleveland meeting, which will be held from September 11 to 16. Some of the important features and information regarding sessions of a number of sections and societies follow.

Dr. Isaiah Bowman's address as retiring president of the association is scheduled for Monday evening, September 11. Dr. Bowman has returned from his conferences in London and reports that his address has been written.

On Tuesday evening the annual Sigma Xi address will be delivered by Dr. Edwin J. Cohn, of the Harvard Medical School, on "Blood and Blood Derivatives," a subject of the highest medical importance, especially during the war period, to which he has recently made far-reaching contributions.

On Wednesday evening the annual Phi Beta Kappa address will be delivered by Dr. Harlow Shapley, director of the Harvard College Observatory. Dr. Shapley has selected as his subject "A Design for Fighting."

For Thursday evening arrangements have been completed for an illustrated lecture on the National Geographic Society-Smithsonian Institution Archeological Expeditions to Southern Mexico by Dr. Matthew W. Stirling, chief of the Bureau of American Ethnology and leader of the expeditions, and Mrs. Stirling.

Several important symposia are being organized on various phases of international cooperation in science after the war by Dr. Gardner Murphy, professor of psychology in the College of the City of New York; Lawrence K. Frank, chairman of the association's Committee on Science and Society, and Dr. Howard R. Tolley, chief of the Bureau of Agricultural Economics of the Department of Agriculture. Mr. Frank is also organizing a symposium on "Research after the War: The Need for a National Policy on Research."

The Section on Mathematics (A): Sessions on Tuesday afternoon and Wednesday morning for addresses by retiring vice-presidents.

The Section on Chemistry (C): Sessions on Thursday and Friday, mornings and afternoons. Symposia on catalysis and chemotherapy.

The Section on Geology and Geography (E): Sessions each day from Monday through Thursday, mornings and afternoons. A symposium on quartz, sessions on recent

geological research on the Eastern Interior Region, and the retiring vice-presidential address by Dr. M. M. Leighton on "Present Knowledge and Problems Concerning Glacial History of Illinois."

The Section on Zoological Sciences (F): The American Society of Zoologists will meet on Tuesday, Wednesday and Thursday. On Monday the American Society of Parasitologists will hold two sessions for papers and on Tuesday morning a joint session with the American Society of Parasitologists will be devoted to a symposium on "Parasitology in Relation to the War."

The Section on Botanical Sciences (G): The Section will meet on Tuesday afternoon with the session to be devoted to a program of papers by Dr. G. M. Smith, Stanford University, Dr. W. J. Robbins, New York Botanical Garden, and Dr. R. E. Cleland, Indiana University, retiring vice presidents of the Section. Section G will join with the Section on Agriculture (O) on Thursday morning for a session on "Nutrition—Some Current Views," with papers by a microbiologist, a plant breeder and a plant physiologist. The Botanical Society of America and the American Society of Plant Physiologists will hold sessions on Tuesday, Wednesday and Thursday, several of them jointly with other groups. The Mycological Society of America and the Sullivant Moss Society will also hold sessions.

The Naturalists' symposium on "Biology and Human Progress" will be held on Thursday afternoon. The Ecological Society of America will meet from Tuesday to Thursday. A joint session with the Section on Education (Q) on Wednesday morning will be devoted to a symposium on "The Teaching of Ecology" and "Ecology in General Courses in Biological Science." The Genetics Society will meet Tuesday through Thursday for invitation papers and demonstration papers, and will hold joint sessions with the American Statistical Society, the American Society of Zoologists and the American Society of Naturalists. On Friday and Saturday the National Association of Biology Teachers will hold business meetings and sessions for invited papers.

The Section on Anthropology (H): Sessions on Friday morning and afternoon and Saturday morning.

The Section on Psychology (I): The section will join with the American Psychological Association and the American Association for Applied Psychology on Monday and Tuesday for sessions that will be devoted almost wholly to organization problems. Section I will hold a joint session with the Section on Education (Q) on Tuesday evening.

The Section on Social and Economic Sciences (K): A session is being arranged to include the address of the retiring vice-president. The Biometrics Section of the American Statistical Association will hold sessions Monday through Thursday, including joint sessions with the American Society for Horticultural Science, the Genetics Society of America, the Econometric Society and the Section on Historical and Philological Sciences.

The Section on Historical and Philological Sciences (L): One of the features of the program of Section L will be a symposium on "Trends in Scientific Research." This session will be held on Wednesday afternoon. Three other sessions are planned.

The Section on Engineering (M): Sessions on Tuesday and Wednesday. The retiring vice-president, Dr. Thorndike Saville, will deliver his address at a luncheon at the Cleveland Engineering Society.

The Section on Medical Sciences (N): The Section is planning sessions for Monday, Tuesday and Wednesday. The Sub-section on Dentistry will hold a symposium on "Dental Caries and Fluorine" on Monday.

The Section on Agriculture (O): On Thursday morning Section O will join with Section G for a symposium on "Nutrition—Some Current Views." Papers will be read by Dr. R. E. Buchanan, Dr. R. J. Garber and Dr. A. E. Murneek. The American Society for Horticultural Science will meet on Tuesday, Wednesday and Thursday.

The Section on Education (Q): Section Q and Section I will meet jointly on Tuesday evening. The section also will hold a joint session with the Ecological Society of America for a symposium on the teaching of ecology.

The National Association of Science Writers is proposing a symposium on the role of the daily newspaper on the development of science in the United States.

On Tuesday and Wednesday, the Research Council on Problems of Alcohol will hold a symposium on alcoholism. The council will conduct part of its program in collaboration with the Cleveland Committee on Alcoholics, the chairman of which is Judge Lewis Drucker.

SOCIETIES AND ACADEMIES

THE ANNUAL MEETING OF THE ROYAL SOCIETY OF CANADA

THE 1944 meeting of the Royal Society of Canada was held at the University of Montreal from May 29 to 31. New fellows were presented at the first general meeting. Those elected to the scientific sections were as follows:

- Section III (Chemical, mathematical and physical sciences): R. C. Dearle, G. S. Field, John T. Henderson, G. deB. Robinson, W. Ure.
- Section IV (Geological sciences): J. W. Ambrose, G. V. Douglas, H. B. Yates.
- Section V (Biological sciences): J. A. Anderson, W. V. Cone, G. E. Hall, W. F. Hanna, Georges Maheux, D. S. Rawson.

Lieutenant General A. G. L. McNaughton, who had been elected an honorary fellow in 1941, while he was absent from the Dominion as Commander in Chief of Canada's Army Overseas, was presented at this meeting.

The society's medals were presented at the evening meeting on May 29, as follows: The Flavelle Medal to Professor Velyien E. Henderson, of the University of Toronto, in recognition of contributions to knowledge in the fields of pharmacology, physiology and therapeutics, including the discovery of the anesthetic properties of cyclopropane; the Henry Marshall Tory Medal to Professor Frank Allen, of the University of Manitoba, for his contributions to the subjects of optics and acoustics and especially to a border region of physics and physiology; the Tyrrell Medal to Professor Harold A. Innis, of the University of Toronto.

Following the presentation of the medals, the presi-

dent of the society, Mgr. Olivier Marault, rector of the University of Montreal, delivered his presidential address "Montréal—une synthèse." The popular lecture on "War, Peace and Commerce" was given on the evening of May 30 by Dr. B. K. Sandwell.

In Section III, the presidential address was delivered by Professor Thorvaldson, who spoke on "The Solid State," reviewing the various theories of chemical reactions in the solid state and the experimental evidence in support of them. This was followed by a symposium on the same subject, in which Professor M. A. Peacock described the methods of identification of solid phases by crystallographic means and Professor E. F. Burton showed some recent photographs taken with the Toronto electron microscope of the forms of solid particles of ultra-microscopic dimensions. The final paper of this symposium was on rubber by Dr. G. S. Whitby, who described the chemical constitution and related physical properties of several of the new artificial rubbers now being produced.

Among the thirty-two other papers presented to the section, mention may be made of one by Professor Frank Allen, in which results of experiments on the sensitivity of the color sensations were described. He finds that when the right eye, for example, is adapted to red light, the red sensation is reduced, but in the left eye all three sensations (red, green and violet) are enhanced. If the eye is rested after adaptation for three minutes, a reversal in sensitivity occurs. There is thus an oscillation of sensitivity. A paper on further simplification in thermodynamical calculations along lines previously developed was read by Profes-