

# SCIENCE

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## THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

### PRELIMINARY ANNOUNCEMENT OF THE MILWAUKEE MEETING

Edited by DR. F. R. MOULTON

PERMANENT SECRETARY

FROM June 19 to June 24, inclusive, the association will meet in Milwaukee, Wisconsin. This will be the one hundred fourth meeting of the association, exclusive of the meetings of the Pacific Division and the Southwestern Division. The Southwestern Division from May 3 to May 6 held its nineteenth meeting in connection with the dedication of the McDonald Observatory, near Alpine, Texas. The Pacific Division will meet at Stanford University, California, from June 26 to July 1, inclusive. Thus three meetings of the association will have been held in widely separated parts of the country within two months. The combination of the meeting of the Southwestern with the dedicatory programs of the great new observatory illustrates the possibilities of joint meetings of the

association with other organizations to the advantage of science.

The approaching meeting in Milwaukee is the first one held by the association in that city. Milwaukee, with about 650,000 inhabitants, is the twelfth city in population in the United States. It is delightfully situated on the shores of Lake Michigan at the entrance to the summer vacation area of the northern lakes. Milwaukee has many fine hotels and an auditorium building containing several meeting halls with seating capacities ranging from 300 to 8,000. Adequate and excellent accommodations will be available for all persons attending the meeting, and rooms for the sections and affiliated societies will be abundant and conveniently located.

Milwaukee is the home of Marquette University, Milwaukee-Downer College, Milwaukee State Teachers College, Alverno Teachers College, Concordia College, Mount Mary College, Milwaukee Public Museum, an Extension Division of the University of Wisconsin and a notable vocational school. It is a center of education and culture, as well as of industry and commerce. The fact that the association has not heretofore met in Milwaukee has been due to its proximity to Chicago rather than because of any lack of facilities for great meetings or of a lack of interest in science.

#### HOTELS AND HEADQUARTERS

The general headquarters of the meeting will be in the Hotel Schroeder, which has 850 guest rooms and numerous rooms for scientific sessions. The prices of single rooms, all of which have baths, range from \$3.50 to \$7.00 per day; double rooms are from \$6.00 to \$10.00 per day. Other hotels are as follows:

Ambassador: Single, \$3.50; double, \$5 to \$6.  
 Antlers: Single (no bath), \$1.25 to \$1.50; double, \$3.  
 Astor: Single, \$3.50; double, \$6 to \$7.  
 Knickerbocker: Single, \$3; double, \$5 to \$6.  
 La Salle: Double, \$5 to \$8.  
 Martin: Single, \$2.50; double, \$3.50 to \$4.  
 Medford: Single, \$2.50 to \$3.00; double, \$3.50 to \$6.  
 Pfister: Single, \$2.50 to \$5; double, \$4 to \$7.  
 Plankinton: Single, \$3 to \$4; double, \$5 to \$8.  
 Plaza: Double, \$3.50 to \$4.50.  
 Shorecrest: Single, \$3 to \$4; double, \$5 to \$6.  
 Tower: Single, \$3; double, \$4 to \$5.  
 Wisconsin: Single, \$3 to \$4; double, \$4.50 to \$7.

The Martin, Medford, Pfister and Wisconsin hotels also have rooms, without baths, at lower rates.

#### RAILWAY FARES

Regular round-trip railway fares to Milwaukee, including lower Pullman berth from several principal cities in the United States, are as follows: Boston, \$78.45; Cleveland, \$29.35; Columbus, \$27.75; New York City, \$70.95; Philadelphia, \$64.55; St. Louis, \$21.95, and Washington, \$61.74.

#### OFFICIAL MEETINGS

The council of the association will meet on Tuesday, June 20, at 9:00 A.M., in the Hotel Schroeder; thereafter at times to be determined by the council.

#### GENERAL SESSIONS

On Tuesday evening, June 21, Dr. Victor G. Heiser, distinguished author of "American Doctor's Odyssey," will deliver the eighth Maiben lecture on the subject, "The Influence of Nutrition on the Diseases of Middle and Old Age."

The third of the Science and Society series of conferences, organized by the Section on the Social and

Economic Sciences, under the direction of Dr. H. G. Moulton, will consist of five general sessions. The general subject of the conference is, "The Economic System in Relation to Scientific Progress." The first general session will be held at 8:15 on Monday evening, June 19; the second at 4:00 P.M. on Tuesday afternoon; the third on Wednesday at 4 P.M.; the fourth on Thursday evening; and the fifth on Friday evening. For names of speakers and titles of addresses, see program of the Section on Social and Economic Sciences (K) below.

#### SYMPOSIA

Comprehensive symposia on special fields of science, without reference to the boundaries that ordinarily separate the sciences, are among the most important features of the meetings of the association. Cross fertilization in the realm of ideas, as well as in biological organisms, is productive of vigor and variety.

*Section on Chemistry (C).* From June 20 to June 22 the section will participate in a symposium on "The Kinetics of Homogeneous Gas Reactions," organized jointly by the Division of Physical and Inorganic Chemistry of the American Chemical Society and the University of Wisconsin. This symposium will be presented at Madison, Wisconsin.

Following a successful research conference at Gibson Island, in Chesapeake Bay, last summer, the section is organizing three special research conferences to be held at the same place this summer. The first will be from June 10 to July 14, inclusive, on "Resinous Polymers"; the second, from July 17 to July 21, on "Vitamins"; and the third, from July 24 to July 28, on "Relation of Structure to Physiological Action." The details of the programs of these conferences will appear the next issue of SCIENCE. They are mentioned here because they are a part of the activities of the section and especially because they are a new type of symposium.

*Section on Astronomy (D).* The section will hold sessions for papers on Wednesday and Thursday, June 21 and 22, after which a special trip is scheduled to Williams Bay for a visit to the Yerkes Observatory, on invitation of the director, Dr. Otto Struve.

*Section on the Zoological Sciences (F).* On Tuesday morning, June 20, the section will hold a symposium on "The Relation of Genetics to Geographical Distribution and Speciation," under the chairmanship of Professor L. J. Cole, of the University of Wisconsin.

On Wednesday morning the section will hold a symposium on "Regeneration," under the chairmanship of Professor J. W. Buchanan, of Northwestern University. For details of these symposia see the program of the section below.

*Section on the Botanical Sciences (G).* On Wednes-

day morning the section will hold a joint symposium with the Ecological Society of America on "Land Use." A joint symposium with the American Society of Plant Physiologists on "Photoperiodism" is under preparation. Further details are given in connection with the program of the section which follows.

*Section on the Social and Economic Sciences (K).* The section will present two symposia, one of which is the third of the series of conferences on Science and Society, the general title of which is "The Economic System in Relation to Scientific Progress," and the other of which is a symposium, consisting of eight sessions, on population in the Northern Lake States. The symposia are outlined in the program of the section given below.

*Section on Engineering (M).* On Friday, June 23, the section will present a symposium, by arrangement with the Section on Geology and Geography and in cooperation with the American Society of Agricultural Engineers, on soil conservation, especially on those aspects of soil conservation in which engineers and geologists have a share in solving.

*Section on Medical Sciences (N).* On Tuesday afternoon, June 20, all day Wednesday and Thursday morning the section will present a comprehensive symposium on "The Gonococcus and Gonococcal Infection."

On Tuesday morning and afternoon the Sub-section on Pharmacy will present a symposium on "The Vitamins, with Particular Reference to their Standardization." Details are given under the program of the section, which follows.

#### SECTION AND SOCIETY PROGRAMS

*American Meteorological Society.* The society, which is affiliated with the Section on Physics, will hold sessions on Monday and Tuesday. In the absence of Robert E. Horton, president of the society, E. J. Misner will preside.

Four papers on hydrology and a sound film on flood weather will be presented at the session on Monday morning. The speakers will be Bertram S. Barnes, LeRoy K. Sherman, N. A. Matson, W. E. Barrow and L. W. Dick. The subjects of the papers are, respectively, "Problems of Stream-Flow Forecasting on Tributaries of the Upper Mississippi," "The Unit Graph," "Flood Frequency and Intensity in the Lacrosse District" and "Lower Ohio vs. Upper Ohio Floods."

On Monday afternoon two comprehensive papers will be presented on aerology. Homer W. Ball, of the Weather Bureau Airport Station at Omaha, Nebraska, will discuss "Radiosounding in Omaha"; Arthur W. Marks, Jr., of the Weather Bureau Airport Station at Chicago, will speak on "Airplane Meteorological

Flights and Flyers." In addition, a motion picture on "Exploring the Upper Air" will be shown.

The Tuesday morning program will consist of a symposium on radiation. The speakers will be I. F. Hand, Eric R. Miller, Winston M. Manning, and a final paper on "Some Effects of Temperature and Photoperiod upon Plant Growth" will be presented by R. H. Roberts and B. Esther Struckmeyer, of the Department of Horticulture of the University of Wisconsin.

On Tuesday afternoon Charles F. Brooks, director of the Blue Hill Observatory, will deliver an illustrated address on "The New England Hurricane of 1938." Following this address, John G. Albright, of Case School of Applied Science, Cleveland, will present "Some Biographical Notes on the Work of W. C. Redfield and W. Reid on the Rotating Nature of West Indian Hurricanes."

*Section on Chemistry (C).* On Monday, June 19, the section will hold a session in Milwaukee for the presentation of papers and the conducting of a business meeting. From June 20 to June 22 the section will attend the symposium at Madison, Wisconsin, on "The Kinetics of Homogeneous Reactions" given jointly by the Division of Physical and Inorganic Chemistry of the American Chemical Society and the University of Wisconsin. This symposium will consist of from 20 to 30 papers. Among the speakers from abroad will be Drs. Polanyi and Bonhoeffer.

For complete programs of the Special Research Conferences on chemistry to be held at Gibson Island in July, see the next issue of SCIENCE.

*Section on Geology and Geography (E) and Affiliated Societies.* With the collaboration of the Geological Society of America and of the Association of American Geographers, Section E will hold sessions on the geology and geography of the Great Lakes region. Although details of the program are still subject to change, it is expected that Monday and Tuesday will be devoted to geologic programs, Wednesday to an all-day field trip, Thursday to geographic papers, and Friday to a meeting with the American Society of Agricultural Engineers for a consideration of soil and land utilization problems in the Great Lakes country.

During the regular week of meetings two all-day field trips will be offered, one on the bedrock geology of eastern Wisconsin, under the leadership of Ira Edwards; another on the glacial geology, under the direction of F. T. Thwaites. Arrangements have also been made with R. M. Dickey for a three-day trip through the copper and iron country of northern Michigan, on June 15, 16, 17, in advance of the sessions at Milwaukee, and with E. F. Bean for a four-day trip to study land utilization problems in Wisconsin, immediately following the indoor meetings de-

voted to this subject. Advance registration is requested for the longer field excursions, and those interested are asked to communicate with the section secretary (Dr. Howard A. Meyerhoff, Northampton, Mass.) by June 1.

*Section on Zoological Sciences (F) and Affiliated Societies.* Section F and its affiliated societies will hold scientific sessions on Tuesday, Wednesday and Thursday. Two section symposia of unusual importance have been arranged. On Tuesday morning a symposium on "The Relation of Genetics to Geographical Distribution and Speciation" will be held under the chairmanship of L. J. Cole, of the University of Wisconsin. Included among those who will present important papers on this symposium are: A. H. Sturtevant, California Institute of Technology (Inter-racial Crossing and Mutation); Carl L. Hubbs, University of Michigan (Speciation in Fishes); M. R. Irwin and R. W. Cumley, University of Wisconsin (Speciation from the Point of View of Genetics); L. R. Dice, University of Michigan (Some Factors in the Geographical Distribution and Speciation of *Peromyscus*); and Alfred C. Kinsey, Indiana University (The Geographical Distribution of Gall Wasps).

On Wednesday morning a symposium on "Regeneration" will be held under the chairmanship of J. W. Buchanan, of Northwestern University. Included among those who will present important papers on this symposium are: W. C. Curtis, University of Missouri (Histological Basis of Regeneration and Re-association); L. H. Hyman, American Museum of Natural History (Aspects of Regeneration in Annelids); Olin Rulon, Wayne University (The Environmental Control of Regeneration in Euplanaria); and William Balamuth, University of California (Regeneration in Protozoa: a Study in Morphogenesis).

*Section on Botanical Sciences (G) and Affiliated Societies.* The sessions of the section will be held on Tuesday, June 20, in joint session with affiliated societies.

A joint symposium with Section F, arranged by L. J. Cole, on "The Relation of Genetics to Geographical Distribution and Speciation" will include as speakers R. E. Cleland, R. W. Cumley, M. R. Irwin and A. H. Sturtevant.

A symposium on "Land Use," which will be held jointly with the Ecological Society of America, has been arranged by Paul B. Sears, including as participants K. C. McMurry, A. Leopold, G. S. Wehrwein and R. Zon.

A symposium on "Photoperiodism," which will be held jointly with the American Society of Plant Physiologists, has been arranged by W. E. Tottingham, with K. C. Hamner, W. F. Loehwing and R. H. Roberts as speakers.

*Ecological Society of America.* The society will

hold sessions on Tuesday, Wednesday and possibly Thursday, June 20 to June 22, inclusive. On Tuesday the society will hold a joint session with the Section on Social and Economic Sciences on "Geographic and Economic Factors Determining the Population Capacity of the Lake States Area." On Wednesday the society will hold a symposium on "Land Use." Among the speakers on this symposium will be Aldo Leopold, K. C. McMurry, George S. Wehrwein and Raphael Zon. On Thursday the society will hold a second joint session with the Section on Social and Economic Sciences. On Thursday, Friday and Saturday members of the society will join with members of the Society of American Foresters in a three-day field trip for observing forest planting, selective logging, salvage logging of cutover areas, and to Forest Service Nursery and the virgin timber and selectively logged area on the Menomonee Indian Reservation. A trip is also being arranged to the Faville Grove Experimental Game Management Area for Friday or Saturday.

*Section on Anthropology (H).* The section will meet from Tuesday, June 20, to Thursday, June 22, inclusive, at the Milwaukee Public Museum. The central theme of the sessions will be the archeology of the Upper Mississippi area, in which archeologists from Iowa, Illinois, Wisconsin, Michigan, Indiana and Ohio will participate. There will also be discussions of the ethnology and ethno-history of the Indian tribes indigenous to the Great Lakes region. A trip to the Dewey effigy mound group, 24 miles from Milwaukee, is under consideration.

*Section on Social and Economic Sciences (K).* The program of the section consists of two symposia, two sessions for the presentation of general papers and a luncheon with the Pi Gamma Mu society.

Of the two symposia, one is the third conference in the Science and Society series upon "The Economic System in Relation to Scientific Progress." This symposium consists of five general sessions of the association, the first of which will be held on Monday evening. At this session Dr. George W. Edwards, College of the City of New York, will deliver an address on "The Capitalistic System and How it Evolved," and Dr. Rufus S. Tucker, of the General Motors Corporation, will speak on "Free Enterprise and Scientific Development."

The second session, to be held at 4:00 on Tuesday afternoon, will consist of a paper by Dr. Leo Wolman, National Bureau of Economic Research, on "Impediments to the Operation of the Price, Wage and Profit Mechanism"; and a paper by Dr. Emil Lederer, New School for Social Research, on "Cyclical Fluctuations under the Economic System."

The third session will be held on Wednesday at 4:00 P.M., at which Dr. Charles F. Roos, Cowles Commission

for Research in Economics, will present a paper on "The Application of Natural Science Methodology to Economic Studies" and a second paper will discuss "The Limitations of Natural Science Methodology in Economic Analysis."

At the fourth session on Thursday evening Dr. Lev-erett S. Lyon, the Brookings Institution of Washing-ton, will present a paper on "The Role of Government in the Economic System," and Dr. James W. Bell, Northwestern University, will present a paper on "Government Finance and Economic Stability."

The final session will be held on Friday evening, at which Dr. Charles H. Judd, University of Chicago, will discuss "Present Relations of Government to Science," and Dr. William F. Ogburn, University of Chicago, will present a paper on "Should the Government Finance Non-governmental Research Activities?"

Following the formal papers of each of these dis-cussions opportunity will be given for discussion from the floor.

The second symposium of the section, on population problems and planning in the Northern Lake States area, will consist of eight sessions running through four days, Tuesday, June 20, to Friday, June 23, inclu-sive.

The two sessions to be held on Tuesday, which are being prepared under the supervision of Professor Stanley D. Dodge, of the University of Michigan, will deal with factors determining the capacity of the Northern Lake States area to support population.

The Wednesday sessions will be devoted to Wiscon-sin specifically. The morning session will present an outline of the present composition and distribution of the population, in terms of its historical background, migration routes and nationality groups. The after-noon session will be devoted to planning activities of the Wisconsin State Planning Board and of the North-ern Lakes States Regional Committee. Among the speakers on this program will be Drs. M. W. Torkel-son, George Wehrwein and Samuel Teper.

On Thursday the policies and programs of the Federal Government relative to the area will be re-viewed, including land-use planning, agricultural eco-nomies and rural resettlement.

The first session on Friday on cultural areas will contain a paper by Dr. A. R. Mangus on "The Regional Approach to American Life," a paper by Dr. Philip Beek on "The Significance of Culture Patterns for Rural Planning Programs," and a paper by George W. Hill on the identification and significance of culture areas in Wisconsin.

The afternoon session on Friday will consist of papers on population mobility. Dr. C. E. Lively will discuss trends of rural-urban migration, Dr. Ray E. Wakeley will discuss the mobility of Iowa farm families, and Dr. J. F. Thaden will present a paper on

population mobility in Michigan communities and towns. Dr. R. C. Smith, Farm Security Administra-tion, Indianapolis, will serve as chairman.

A special session will be held on "The Theory of Durable Goods Demand," at which papers will be pre-sented by Drs. C. F. Roos, V. S. von Szeliski, John Kurie and Wendell P. Ayres. At a second session Dr. Horst Mendershausen will present a paper on "Differ-ences in Consumers' Savings between American Com-munities of Different Size and Location," and Wroe Alderson will present a paper on "Probable Effects of Redistribution of Income upon Changes in Family Status."

*Section on Engineering (M).* By arrangement with the Section on Geology and Geography, Section on Engineering (M), in cooperation with the American Society of Agricultural Engineers, will hold on Friday, June 23, a joint symposium on various aspects of soil conservation, and especially those aspects of soil con-servation in which engineers and geologists have a mutual interest.

Two papers will be presented under the auspices of the Section on Engineering with the cooperation of the American Society of Agricultural Engineers—the first, entitled "Mutual Problems of Conservation—Engi-neering and Geology," by M. L. Nichols, acting chief of the Division of Research, Soil Conservation Service, U. S. Department of Agriculture; a second paper en-titled, "Land Slides in Relation to Agricultural and Engineering Problems," by C. F. Stewart Sharpe, of the Soil Conservation Service of the Department of Agriculture.

The date of the proposed meeting, June 23, follows the annual summer convention of the American So-ciety of Agricultural Engineers which is being held in St. Paul, Minnesota, and it is anticipated that mem-bers of the American Society of Agricultural Engi-neers, following their meeting, will join with those attending the sessions of the Section on Engineering for the conference.

A four-day field trip is in process of organization, to follow immediately after the sessions of the section, plans for which will be made known in detail later.

*Section on Medical Sciences (N).* The program of the section consists of six sessions beginning on Mon-day morning and closing on Thursday noon. A group of twenty papers of general interest has been arranged for the two sessions on Monday. They cover such diverse fields as "Potassium Thiocyanate in the Treat-ment of Hypertension" and "A New Method for the Cultivation of the Pathogenic Trypanosomes."

The outstanding feature of the program of the sec-tion will be a symposium on "The Gonococcus and Gonococcal Infection," consisting of four sessions: Tuesday afternoon, Wednesday morning and after-noon and Thursday morning. A total of thirty-three

papers by eminent specialists will be presented. The titles have been assembled under four headings: I. The Biology of the Gonococcus. II. The Diagnosis of Gonococcal Infection. III. Sulfanilamide and Related Compounds. IV. Therapy and Control. The title of the introductory paper is: "The Problem of Gonococcal Infection," by G. W. Anderson. In the final paper, R. A. Vonderlehr will consider "The Public Health Aspects of Gonococcal Infection."

*The Sub-section on Pharmacy.* On Tuesday, June 20, the sub-section will present a symposium on vitamins, with special reference to their standardization. In the morning session Aaron Arnold will present a paper on "Vitamin B, Thiamin"; P. H. Phillips, a paper on "Riboflavin"; and C. A. Elvehjem, a paper on "Nicotinic Acid." In the afternoon session W. D. Woolley will read a paper on "Chick Antidermatitis Factor and Vitamin B<sub>6</sub>"; A. Black, a paper on "Vitamin A"; and Mrs. F. P. Dann, a paper on Vitamin E.

*The Society of American Foresters.* The society will hold sessions for the presentation of papers on Monday afternoon, Tuesday morning and afternoon, and Wednesday morning and afternoon. On Thursday the society will take a field trip to Forest Products Laboratory, Madison, and from Friday, June 23, to Sunday, June 25, it will take a field trip to Goodman operations, the Menomonie Indian Reservation and the Nicolet National Forest. An address will be delivered by Robert Goodman.

The program on Monday afternoon, under the chairmanship of C. P. Winslow, consists of an address of welcome by Clarence F. Korstian, president of the society, and four papers by Thomas R. Truax, Mark W. Bray, Arnold O. Benson and Arthur Koehler.

The program on Tuesday morning, under the chairmanship of T. Schantz-Hansen, is on the general topic, "Forest Rehabilitation in the Lake States." Addresses will be delivered by Ray Bassett, H. Basil Wales, Russell N. Cunningham and George Banzhaf. The program on Tuesday afternoon, under the chairmanship

of Henry Schmitz, will consist of papers by O. W. Swan, William Heritage, F. H. Eyre and D. M. Matthews. On Tuesday evening the society will hold a banquet, Stanley Wilson, toastmaster.

On Wednesday morning the society will hold a joint symposium with the Ecological Society of America on "Land Use." The four speakers are Aldo Leopold, K. C. McMurtry, George S. Wehrwein and Raphael Zon. On Wednesday afternoon the society holds a session, under the chairmanship of W. F. Ramsdell, the speakers on which are Clarence E. Knutson, L. E. Sawyer, J. Alfred Mitchell and P. A. Herbert.

*Section on Education (Q).* The Section on Education will hold three sessions, Friday morning, June 23, Friday afternoon and Saturday morning, on the general subject, "The Education of the Emotions." At the session on Friday morning, under the chairmanship of A. S. Barr, papers will be presented by Margaret Joseph (Milwaukee), W. Clark Trow (Ann Arbor), H. Meltzer (St. Louis), Robert S. Drews (Detroit), J. L. Kaukonen (Washington) and Benjamin C. Gruenberg (New York City), and Roy C. Bryan (Kalamazoo).

At the Friday afternoon session H. Meltzer will act as chairman and the papers presented will be by O. Irving Jacobson (Alton, Ill.), Kenneth Holland (Washington), Stanford C. Erickson (University of Arkansas), E. F. Van Buskirk (Stephens College, Columbia, Mo.), Sister Mary Berenice Rice (Catholic University of America, Washington) and Arthur H. Moehlman (Columbus, Ohio).

At the final session on Saturday morning, under the chairmanship of H. H. Remmers, papers will be presented by J. H. Farl y (Lawrence College, Appleton, Wis.), E. I. F. Williams (Heidelberg College, Tiffin, Ohio), Leo P. Clements (Creighton University, Omaha, Neb.), Mildred B. Mitchell (Psychopathic Hospital, University of Iowa), F. C. Dana (Iowa State College, Ames, Iowa) and M. Kendig (University of Chicago, Chicago).

## SCIENCE VERSUS UNEMPLOYMENT<sup>1</sup>

By Dr. ROBERT I. ALLEN

STETSON UNIVERSITY

SOME months ago, President Roosevelt addressed an open letter to Dr. Karl T. Compton, president of the Massachusetts Institute of Technology, and to the heads of other schools of applied science in the United States, the spirit and purpose of which is shown in the following sentences:

Events of recent years have brought into clearer per-

<sup>1</sup> Address of the president of the Florida Academy of Sciences, Rollins College, November 18, 1938.

spective the social responsibility of engineering. In respect of the impact of science and engineering upon human life—social and economic dislocations as well as advance in productive power—the facts are revealed with distressing clearness in public records of unemployment, bankruptcies and relief.

The design and construction of specific civil engineering works or of instruments for production represent only one part of the responsibility of engineering. It must also consider social processes and problems, and modes of more