

SCIENCE

FRIDAY, NOVEMBER 26, 1909

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PRELIMINARY PROGRAM OF THE BOSTON MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE sixty-first meeting of the American Association for the Advancement of Science, and the eighth of the Convocation Week meetings, will be held in Boston, December 27, 1909, to January 1, 1910, at the invitation of Harvard University and the Massachusetts Institute of Technology.

The opening session of the association will be held at 10 o'clock A.M., on Monday, December 27, in Huntington Hall, Rogers Building, Massachusetts Institute of Technology. The meeting will be called to order by the retiring president, Professor T. C. Chamberlin, who will introduce the president of the meeting, Dr. David Starr Jordan. Addresses of welcome will be delivered by Dean W. C. Sabine, for Harvard University, and by President R. A. MacLaurin, of the Massachusetts Institute of Technology, and President Jordan will reply.

The addresses by retiring vice-presidents will be given as follows:

DECEMBER 27, AT 2:30 P.M.

Vice-president Keyser, before the Section of Mathematics and Astronomy. Title: "The Thesis of Modern Logistic."

Vice-president Sumner, before the Section of Social and Economic Science.

Vice-president Willis, before the Section of Geology and Geography.

Vice-president Herrick, before the Section of Zoology. Title: "The Evolution of Intelligence and its Organs."

DECEMBER 28, AT 2:30 P.M.

Vice-president Guthe, before the Section of

Physics. Title: "Some Reforms needed in the Teaching of Physics."

Vice-president Richards, before the Section of Botany. Title: "The Nature of Response to Chemical Stimulation."

Vice-president Kahlenberg, before the Section of Chemistry. Title: "The Past and Future of the Study of Solutions."

Vice-president Howell, before the Section of Physiology and Experimental Medicine.

DECEMBER 29, AT 2:30 P.M.

Vice-president Swain, before the Section of Mechanical Science and Engineering. Title: "The Profession of Engineering and its Relation to the American Association for the Advancement of Science."

Vice-president Dewey, before the Section of Education. Title: "Science as a Method of Thinking and Science as Information in Education."

Vice-president Woodworth, before the Section of Anthropology and Psychology. Title: "Racial Differences in Mental Traits."

In accordance with the resolutions of the council, there will be a day or session devoted by each section to a program of general interest which will include the vice-presidential address, but there will be no programs of special papers at the Boston meeting, provided that the corresponding national society meets at the same time and place.

At 8:30 o'clock on Monday evening the retiring president will give his address followed by a reception tendered by the local committee.

On the following days the sections and societies will hold their regular sessions. On Tuesday evening a popular lecture complimentary to the citizens of Boston will be given by Dr. C. W. Stiles, of the Public Health and Marine Hospital Service, on "The Hookworm Disease in the South." On Wednesday evening will be the annual dinner of the American Society of Naturalists. The dinners and smokers of other societies will be announced on their programs.

The Brunswick will be the hotel headquarters of the association. Other hotels near Copley Square are: Hotel Westminster, Copley Square Hotel, Hotel Lenox, Hotel Victoria, Hotel Vendome, Hotel Oxford, Hotel Nottingham and the Touraine.

A railroad rate of one fare and three fifths for the round trip, on the certificate plan, has been granted by the Eastern Canadian, the Central and the New England Passenger Associations (not including the Eastern and the Metropolitan Steamship Companies), and by the Trunk Line Association. From the states of California, Nevada, Oregon, Washington and west of, and including, Mission Junction, B. C.; the Transcontinental Passenger Association has on sale daily Nine Months Tourists fares, approximating two cents per mile in each direction, or about one fare and one third for the round trip. The nine months fares apply to the eastern gateways of the transcontinental territory, and station agents will advise delegates as to the eastern points to which it will be most advantageous for them to purchase nine months tickets in rebuying through to Boston. The Western Association has on sale revised one-way fares in effect to Chicago, Peoria and St. Louis. The fares to Chicago, Peoria and St. Louis from a large part of the Western Passenger Association territory are now on the basis of two cents per mile; hence, with the reduced fares from the three cities named, the net rate amounts practically to a rate of fare and three fifths for the round trip.

The provisional plan of meeting places is as follows:

At the Institute of Technology.—*Rogers Building:* General session and president's address, Huntington Hall. Meetings of Council, Room 16. Section A, American Mathematical Society, Huntington Hall. *Walker Building:* Section B, American Physical Society, Eastern Association of Physics Teachers and Physics Teachers Associa-

tion of Washington, Room 22. Section L, The American Federation of Teachers, Association of Mathematical Teachers of New England, Room 23. *Lowell Building*: Section C, American Chemical Society, Room 6, etc. *Engineering Building A*: Section D, Room 31. *Engineering Building B*: Section H, American Anthropological Association, Room 11. American Folk-Lore Society, Room 11. Section I, Room 20.

At the Harvard Medical School.—Section F, The American Society of Zoologists. Section G, The Botanical Society of America. Section K, American Physiological Society, Association of American Anatomists, Society of American Bacteriologists, American Society of Naturalists, Entomological Society of America, Association of Economic Entomologists, American Society of Biological Chemists.

At the Boston Society of Natural History.—The Sullivant Moss Society, American Nature-Study Society.

At Cambridge.—The American Psychological Association, Emerson Hall, Harvard University. The Geological Society of America, Geological Room, Agassiz Museum, Harvard University. Section E, Geological Room, Agassiz Museum, Harvard University. Association of American Geographers, Geological Room, Agassiz Museum, Harvard University.

The officers of the association for the Boston meeting are:

President—David Starr Jordan, Leland Stanford Junior University, Stanford University, Cal.

Vice-presidents—Section A—Mathematics and Astronomy—Ernest W. Brown, Yale University, New Haven, Conn. Section B—Physics—Louis A. Bauer, Carnegie Institution, Washington, D. C. Section C—Chemistry—William McPherson, Ohio State University, Columbus, Ohio. Section D—Mechanical Science and Engineering—John F. Hayford, U. S. Coast and Geodetic Survey, Washington, D. C. Section E—Geology and Geography—Reginald W. Brock, Canadian Geological Survey, Kingston, Ontario, Canada. Section F—Zoology—William E. Ritter, University of California, Berkeley, Cal. Section G—Botany—David P. Penhallow, McGill University, Montreal, Canada. Section H—Anthropology and Psychology—Wm. H. Holmes, Bureau of American Ethnology, Washington, D. C. Section I—Social and Economic Science—Byron W. Holt, 54 Broad St., New York, N. Y. Section K—Physiology and Experimental Medicine—Charles Sedgwick Minot,

Harvard Medical School, Boston, Mass. Section L—Education—James E. Russell, Columbia University, New York, N. Y.

Permanent Secretary—L. O. Howard, Smithsonian Institution, Washington, D. C.

General Secretary—Dayton C. Miller, Case School of Applied Science, Cleveland, Ohio.

Secretary of the Council—Francis G. Benedict, Nutrition Laboratory, Carnegie Institution, Boston, Mass.

Secretaries of the Sections—A—Mathematics and Astronomy—George A. Miller, University of Illinois, Urbana, Ill. B—Physics—A. D. Cole, Ohio State University, Columbus, Ohio. C—Chemistry—C. H. Herty, University of North Carolina, Chapel Hill, N. C. D—Mechanical Science and Engineering—G. W. Bissell, Michigan Agricultural College, East Lansing, Mich. E—Geology and Geography—F. P. Gulliver, Norwich, Conn. F—Zoology—Maurice A. Bigelow, Columbia University, New York, N. Y. G—Botany—H. C. Cowles, University of Chicago, Chicago, Ill. H—Anthropology and Psychology—George Grant MacCurdy, Yale University, New Haven, Conn. I—Social and Economic Science—John Franklin Crowell, 44 Broad St., New York, N. Y. (In absence of J. Pease Norton, Yale University, New Haven, Conn.) K—Physiology and Experimental Medicine—George T. Kemp, Hotel Beardsley, Champaign, Ill. L—Education—C. R. Mann, University of Chicago, Chicago, Ill.

Treasurer—R. S. Woodward, Carnegie Institution, Washington, D. C.

Local Executive Committee—Harry W. Tyler, chairman, Thomas Barbour, J. S. Kingsley, Edward R. Warren, John Warren, George W. Swett, secretary.

The following societies have indicated their intention to meet in Boston during Convocation Week:

The American Society of Naturalists.—December 29. *Eastern Branch*—Secretary, Dr. H. McE. Knowler, University of Toronto, Toronto, Canada. *Central Branch*—Secretary, Dr. Thomas G. Lee, University of Minnesota, Minneapolis, Minn.

American Mathematical Society.—December 28–30. Secretary, Dr. F. N. Cole, 501 West 116th St., New York City.

Association of American Geographers.—December 30 to January 1. Secretary, Professor Albert Perry Brigham, Colgate University, Hamilton, N. Y.

The Geological Society of America.—December

28-30. Secretary, Dr. Edmund Otis Hovey, American Museum of Natural History, New York City.

Association of Economic Entomologists.—December 28 and 29. Secretary, A. F. Burgess, U. S. Department of Agriculture, Washington, D. C.

American Nature-Study Society.—January 1. Secretary, Dr. M. A. Bigelow, Columbia University, New York City.

Association of American Anatomists.—December 28-30. Secretary, Dr. G. Carl Huber, Ann Arbor, Mich.

The American Chemical Society.—During the entire week. Secretary, Professor Charles L. Parsons, New Hampshire College, Durham, N. H.

American Society of Vertebrate Paleontologists.—December 28-30, with the Geological Society of America. Secretary, Mr. E. S. Riggs, Field Museum of Natural History, Chicago, Ill.

American Society of Zoologists (Central Branch in joint meeting with, and under the auspices of, the Eastern Branch).—December 28-30. *Eastern Branch*—Secretary, Professor Lorande Loss Woodruff, Yale University, New Haven, Conn. *Central Branch*—Secretary, Professor Charles Zeleny, University of Illinois, Urbana, Ill.

The American Physical Society.—Secretary, Professor Ernest Merritt, Ithaca, N. Y.

The American Psychological Association.—December 29-31. Secretary, Professor A. H. Pierce, Smith College, Northampton, Mass.

The American Physiological Society.—December 28-30. Secretary, Dr. Reid Hunt, U. S. Public Health and Marine Hospital Service, Washington, D. C.

American Anthropological Association.—December 27-31. Secretary, Dr. George Grant MacCurdy, New Haven, Conn.

The Entomological Society of America.—December 30 and 31. Secretary, J. Chester Bradley, Ithaca, N. Y.

The American Folk-Lore Society.—Professor R. B. Dixon, Peabody Museum, Cambridge, Mass.

American Federation of Teachers of the Mathematical and the Natural Sciences.—December 27 and 28. Secretary, Dr. C. R. Mann, University of Chicago, Chicago, Ill.

American Society of Biological Chemists.—Secretary, Dr. William J. Gies, 437 West 59th St., New York City.

Sullivant Moss Society.—December 30. Secretary, Mrs. Annie Morrill Smith, 78 Orange St., Brooklyn, N. Y.

Botanical Society of America.—December 28-31. Secretary, Dr. Duncan Starr Johnson, Johns Hopkins University, Baltimore, Md.

Society of American Bacteriologists.—December 28-30. Secretary, Dr. Norman McL. Harris, University of Chicago, Chicago, Ill.

Association of Mathematical Teachers in New England.—December 28. Secretary, George W. Evans, Charlestown High School, Charlestown, Mass.

Eastern Association of Physics Teachers.—Meets in conjunction with American Federation of Teachers of the Mathematical and Natural Sciences.

Physics Teachers of Washington, D. C.—Meets in conjunction with American Federation of Teachers. Secretary, Dr. Howard L. Hodgkins, George Washington University, Washington, D. C.

American Phytopathological Society.—Secretary, C. L. Shear, U. S. Department of Agriculture, Washington, D. C.

American Alpine Club.—December 30. Secretary, Dr. Henry G. Bryant, Room 806 Land Title Building, Philadelphia, Pa.

American Breeders' Association.—Meeting of Eugenics Committee. Secretary, Dr. Chas. B. Davenport, Cold Spring Harbor, N. Y.

OUR FOOD FROM THE WATERS¹

At the last meeting of the British Association in Canada (Toronto, 1897) I was able to lay before Section D a preliminary account of the results of running sea-water through four silk tow-nets of different degrees of fineness continuously day and night during the voyage from Liverpool to Quebec. During the eight days' traverse of the North Atlantic, the nets were emptied and the contents examined morning and evening, so that each such gathering was approximately a twelve hours' catch, and each day and each night of the voyage was represented by four gatherings. This method of collecting samples of the surface fauna of the sea in any required quantity per day or hour from an ocean liner going at full speed was suggested to me by Sir John Murray of the *Challenger* expedition, and was first practised, I believe, by Murray himself in crossing the Atlantic. I

¹ Abstract of evening discourse, delivered before the British Association at Winnipeg on August 31, 1909.