

SPECIAL ISSUE CONTAINING THE PRELIMINARY ANNOUNCEMENT OF THE FOURTH CLEVELAND MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE AND ASSOCIATED SOCIETIES, DECEMBER 29, 1930, TO JANUARY 3, 1931. EDITED BY BURTON E. LIVINGSTON, PERMANENT SECRETARY

# SCIENCE

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## THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

### PRELIMINARY ANNOUNCEMENT OF THE FOURTH CLEVELAND MEETING

Edited by Professor BURTON E. LIVINGSTON

PERMANENT SECRETARY

THE fifteen sections of the American Association together with about forty independent societies will hold scientific sessions at Cleveland in convocation week. This will be the fourth time the association has met in Cleveland. Earlier Cleveland meetings were in July, 1853 (when the association was only five years old); in August, 1888, and in convocation week of 1912-13. Many persons will remember the third Cleveland meeting, which was very successful. Western Reserve University, the Case School of Applied Science and the Cleveland Chamber of Commerce have united in preparations for the meeting

this year and arrangements for an unusually large and interesting meeting are nearing completion. Much of the extra cost of the meeting is to be met from a locally raised fund, which has been guaranteed up to \$7,500. From registration fees and other current funds the association will probably expend \$6,000 or more in connection with this meeting.

The sessions for the natural and exact sciences are to be held mainly in the rooms of Western Reserve University and the Case School of Applied Science. These institutions are adjacent to each other and about four miles from the hotel district, with con-

venient and very efficient transportation. The societies dealing with social and economic sciences will hold their sessions in the hotels. These societies have preferred to make their own local arrangements and they will operate their own registration office. The American Association has arranged with the railway organizations for reduced railway rates, as usual. Any one may take advantage of these rates by securing a certificate for the A. A. A. S. meeting when purchasing his ticket to Cleveland. It is to be noted, however, that these association certificates may be validated only through the association's own registration office, which will be located in the gymnasium building, Western Reserve University. The office will open on Monday morning, December 29, at 9 o'clock and will remain in operation throughout the week; hours from 9 to 6.

This fourth Cleveland meeting will be the eighty-seventh meeting of the American Association and the annual meeting for the association year 1930-31, which began October first. All who are interested in the advancement of science and education are cordially invited to be present through the entire week of the meeting. All the scientific sessions are to be freely open to every one. The general program, published under the auspices of the association, will be available at the association's registration office at 9 o'clock on Monday and throughout the week. The book will be supplied free to all who register and may be purchased by others. Any person who does not attend the meeting may have a free copy of the program sent by mail if a request is addressed to the permanent secretary's office, Smithsonian Institution Building, Washington, D. C. Requests should be received before December 20.

General reports of this meeting are to appear in *SCIENCE* about February 1. A free copy of the reports may be secured if a request therefor is received by the permanent secretary before January 20. All who regularly receive *SCIENCE* will receive the reports without any special request.

The fourth Cleveland meeting of the American Association will be held under the presidency of Dr. Thomas Hunt Morgan, of the California Institute of Technology, eminent leader in zoological research. The retiring president this year is Dr. Robert A. Millikan, of the California Institute of Technology. Dr. Millikan is well known, not only for his eminently productive researches in physical science but also for his educational work and for his non-technical writings on the relation of science to human life. He will deliver the main lecture of the meeting at the opening session on Monday evening, December 29, in the Cleveland music hall, on "Atomic Disintegration and Atomic Synthesis."

The Sigma Xi lecture will be given at a general session on Tuesday evening, in the John Hay High School, the lecturer being Dr. C. E. K. Mees, of the Eastman Kodak Company. Dr. Mees's topic is announced as "The Science of Photography." The annual Josiah Willard Gibbs lecture, arranged by the American Mathematical Society, will be given at a general session on Tuesday afternoon by Dr. Edwin B. Wilson, of Harvard University. Dr. Wilson will speak on memories of Professor Gibbs and his work.

A general session is being planned on the various aspects of aquiculture, the growing of plants and animals in water. The Committee of One Hundred on Scientific Research is planning to hold a session on Tuesday at 2:30 in the Statler Hotel. Reports will be presented from some of the subcommittees, and plans for the future of the Committee of One-Hundred will be discussed. There will be evening general sessions on Wednesday and Thursday and several general sessions in the late afternoons. The Cleveland reception will be held on Monday evening, following the opening session.

The regular exhibition of apparatus, books and products useful in science teaching or in research will be unusually interesting this year. It will be housed in the gymnasium of Western Reserve University, along with the registration offices. There will be many exhibits of research methods and achievements of research as well as those placed by manufacturers and supply houses. This is the first time in recent years when special attention is being given to research exhibits and a new level of effectiveness is thus being introduced.

#### IMPORTANT NOTICES FOR THOSE PLANNING TO ATTEND THE FOURTH CLEVELAND MEETING

Those who plan to attend this meeting should engage hotel rooms at once, addressing the hotels. Whether the room desired is to be occupied by one or two persons should be stated, also the approximate price which the applicant wishes to pay and the date on which the room is to be occupied. If the sort of room requested is not available for the given date the hotel management will refer the request to the Cleveland Convention Board, which will tentatively assign a suitable room in another hotel, informing the applicant by letter. If the applicant does not wish to accept the assignment thus given he should inform the convention board, which will do its utmost to comply with his wishes.

All who are to present papers at this meeting should immediately send two copies of each paper to Mr. Austin H. Clark, director of the press service of the American Association, addressing them in the care of the permanent secretary's office in Washing-

ton. It is well to send a third copy to the section or society secretary in whose program the paper is to be presented. If the full manuscript can not be sent to Mr. Clark, be sure to send him two copies of an abstract.

When purchasing your railway ticket to Cleveland be sure to secure a certificate for the Cleveland meeting of the American Association for the Advancement of Science, and bring the certificate with you to the registration offices for the meeting.

#### LOCAL COMMITTEES AND SECTION REPRESENTATIVES

The general local committee for the Cleveland meeting has the following personnel. Most of the members are chairmen of special committees, as indicated.

*Honorary Chairman*, Robert E. Vinson, president of Western Reserve University.

*Honorary Vice-chairman*, William E. Wickenden, president of the Case School of Applied Science.

*General Chairman*, Harry W. Mountcastle, Western Reserve University.

*Chairman of the Special Committee on Finance*, Sidney S. Wilson, Western Reserve University.

*Chairman of the Special Committee on Hotels, Transportation, Registration and Signs*, Winfred G. Leutner, Western Reserve University.

*Chairman of the Special Committee on Meeting Places*, Harry W. Mountcastle, Western Reserve University.

*Chairman of the Special Committee on Equipment*, Theodore M. Focke, Case School of Applied Science.

*Chairman of the Special Committee on Luncheons and Dinners*, J. Paul Visscher, Western Reserve University.

*Chairman of the Special Committee on General Sessions and Public Lectures*, Dayton C. Miller, Case School of Applied Science.

*Chairman of the Special Committee on Exhibitions*, Henry B. Dates, Case School of Applied Science.

*Chairman of the Special Committee on General Reception and Entertainment*, Howard T. Karsner, Western Reserve University.

*Chairman of the Special Committee on Press Relations*, Charles F. Chapman, Case School of Applied Science.

The local representatives of the several association sections, who cooperate with the local committee in making arrangements for the society and section sessions, are named below.

#### LOCAL REPRESENTATIVES FOR SECTIONS

*Section A (Mathematics)*, W. G. Simon, Western Reserve University.

*Section B (Physics)*, D. C. Miller, Case School of Applied Science.

*Section C (Chemistry)*, H. P. Lankelma, Western Reserve University.

*Section D (Astronomy)*, J. J. Nassau, Case School of Applied Science.

*Section E (Geology and Geography)*, J. E. Hyde, Western Reserve University.

*Section F (Zoological Sciences)*, J. P. Visscher, Western Reserve University.

*Section G (Botanical Sciences)*, F. J. Bacon, Western Reserve University.

*Societies related to both Zoological and Botanical Sciences*, A. H. Herish, Western Reserve University.

*Section H (Anthropology)*, T. Wingate Todd, Western Reserve University.

*Section I (Psychology)*, H. Austin Aikins, Western Reserve University.

*Section K (Social and Economic Sciences)*, Frank T. Carlton, Case School of Applied Science.

*Section L (Historical and Philological Sciences)*, B. P. Bourland, Western Reserve University.

*Section M (Engineering)*, F. H. Vose, Case School of Applied Science.

*Section N (Medical Sciences)*, H. T. Karsner, Western Reserve University.

*Section O (Agriculture)*, F. J. Bacon, Western Reserve University.

*Section Q (Education)*, C. W. Hunt, Western Reserve University.

*Societies related to the A. A. A. S. in general*, T. M. Focke, Case School of Applied Science.

#### GENERAL OFFICERS OF THE ASSOCIATION AND COMMITTEES FOR 1930

##### *President*

Thomas Hunt Morgan, California Institute of Technology, Pasadena, Calif.

##### *Retiring President*

Robert A. Millikan, California Institute of Technology, Pasadena, Calif.

*Vice-presidents, Retiring Vice-presidents and Secretaries of the Sections*

*Section A (Mathematics):*

*Vice-president*, Gilbert Ames Bliss, University of Chicago, Chicago, Ill.

*Retiring Vice-president*, E. T. Bell, California Institute of Technology, Pasadena, Calif.

*Secretary*, Charles N. Moore, University of Cincinnati, Cincinnati, Ohio.

*Section B (Physics):*

*Vice-president*, F. K. Richtmyer, Cornell University, Ithaca, N. Y.

*Retiring Vice-president*, Charles E. Mendenhall, University of Wisconsin, Madison, Wis.

*Secretary*, A. L. Hughes, Washington University, St. Louis, Mo.

*Section C (Chemistry):*

*Vice-president*, James F. Norris, Massachusetts Institute of Technology, Cambridge, Mass.

*Retiring Vice-president*, Samuel Colville Lind, University of Minnesota, Minneapolis, Minn.

*Secretary*, R. R. Renshaw, New York University, New York, N. Y.

## Section D (Astronomy):

*Vice-president*, D. W. Morehouse, Drake University, Des Moines, Iowa.

*Retiring Vice-president*, Harlow Shapley, Harvard University, Cambridge, Mass.

*Secretary*, Philip Fox, Adler Planetarium and Astronomical Museum, Chicago, Ill.

## Section E (Geology and Geography):

*Vice-president*, Edson S. Bastin, University of Chicago, Chicago, Ill.

*Retiring Vice-president*, George Frederick Kay, University of Iowa, Iowa City, Iowa.

*Secretary*, Kirtley F. Mather, Harvard University, Cambridge, Mass.

## Section F (Zoological Sciences):

*Vice-president*, William Albert Riley, University of Minnesota, Minneapolis, Minn.

*Retiring Vice-president*, Charles Manning Child, University of Chicago, Chicago, Ill.

*Secretary*, Geo. T. Hafigitt, Duke University, Durham, N. C.

## Section G (Botanical Sciences):

*Vice-president*, E. J. Kraus, University of Chicago, Chicago, Ill.

*Retiring Vice-president*, J. Arthur Harris, *deceased*.

*Secretary*, Sam F. Trelease, Columbia University, New York, N. Y.

## Section H (Anthropology):

*Vice-president*, Carl E. Guthe, University of Michigan, Ann Arbor, Mich.

*Retiring Vice-president*, A. V. Kidder, Phillips Academy, Andover, Mass.

*Secretary*, Charles H. Danforth, Stanford University, Stanford University, Calif.

## Section I (Psychology):

*Vice-president*, Edwin G. Boring, Harvard University, Cambridge, Mass.

*Retiring Vice-president*, Madison Bentley, Cornell University, Ithaca, N. Y.

*Secretary*, John E. Anderson, University of Minnesota, Minneapolis, Minn.

## Section K (Social and Economic Sciences):

*Vice-president*, Leonard P. Ayres, Cleveland Trust Co., Cleveland, Ohio.

*Retiring Vice-president*, Henry Lewis Rietz, University of Iowa, Iowa City, Iowa.

*Secretary*, Charles F. Roos, Cornell University, Ithaca, N. Y.

## Section L (Historical and Philological Sciences):

*Vice-president*, no election.

*Retiring Vice-president*, Henry Osborn Taylor, 135 East 66th St., New York, N. Y.

*Secretary of the Committee on History of Science*, Joseph Mayer, 26 Jackson Place, Washington, D. C.

*Secretary of the Committee on Linguistics*, Leonard Bloomfield, University of Chicago, Chicago, Ill.

## Section M (Engineering):

*Vice-president*, Frank Baldwin Jewett, 195 Broadway, New York, N. Y.

*Retiring Vice-president*, H. F. Moore, University of Illinois, Urbana, Ill.

*Secretary*, N. H. Heck, U. S. Coast and Geodetic Survey, Washington, D. C.

## Section N (Medical Sciences):

*Vice-president*, Louis B. Wilson, Mayo Foundation, Rochester, Minn.

*Retiring Vice-president*, Ludvig Hektoen, University of Chicago, Chicago, Ill.

*Secretary*, Charles W. M. Poynter, College of Medicine, University of Nebraska, Omaha, Nebraska.

## Section O (Agriculture):

*Vice-president*, Walter Castella Coffey, University Farm, St. Paul, Minn.

*Retiring Vice-president*, Merritt F. Miller, University of Missouri, Columbia, Mo.

*Secretary*, P. E. Brown, Iowa State College, Ames, Iowa.

## Section Q (Education):

*Vice-president*, Leonard V. Koos, University of Chicago, Chicago, Ill.

*Retiring Vice-president*, Frank N. Freeman, University of Chicago, Chicago, Ill.

*Secretary*, Willis L. Uhl, University of Washington, Seattle, Wash.

*Permanent Secretary*

Burton E. Livingston, Johns Hopkins University, Baltimore, Md. (Association mail address: Smithsonian Institution Building, Washington, D. C.)

*General Secretary*

Frank R. Lillie, University of Chicago, Chicago, Ill.

*Treasurer*

John L. Wirt, Carnegie Institution of Washington, Washington, D. C.

*Secretary of the Council and Program Editor*

Sam F. Trelease, Columbia University, New York, N. Y.

*Executive Assistant*

Sam Woodley, Smithsonian Institution Building, Washington, D. C.

*Auditor*

A. G. McCall, U. S. Department of Agriculture, Washington, D. C.

*Director of the Press Service*

Austin H. Clark, U. S. National Museum, Washington, D. C.

*The Council of the Association*

The council consists of: (1) the president, the general secretary, the permanent secretary and the treasurer; (2) the members of the executive committee not otherwise members of the council; (3) the chairmen of the sections; (4) the section secretaries; (5) the representatives of the affiliated organizations, and (6) eight elected members. The elected members of the council are as follows, the number shown in parentheses being that of the calendar year at the end of which the member's term of office is to expire.

John C. Merriam (1933), Carnegie Institution of Washington, Washington, D. C.

Rodney H. True (1933), University of Pennsylvania, Philadelphia, Pa.

L. O. Howard (1932), U. S. Department of Agriculture, Washington, D. C.

D. T. MacDougal (1932), Desert Laboratory, Tucson, Ariz.

Austin H. Clark (1931), U. S. National Museum, Washington, D. C.

Arthur H. Compton (1931), University of Chicago, Chicago, Ill.

L. E. Dickson (1930), University of Chicago, Chicago, Ill.

David White (1930), U. S. Geological Survey, Washington, D. C.

*Members of the Executive Committee of the Council*  
J. McKeen Cattell (1930), *chairman*; Garrison-on-Hudson, N. Y.

Karl T. Compton (1933), Massachusetts Institute of Technology, Cambridge, Mass.

David R. Curtiss (1931), Northwestern University, Evanston, Ill.

Joel H. Hildebrand (1931), University of California, Berkeley, Calif.

Vernon Kellogg (1932), National Research Council, Washington, D. C.

Frank R. Lillie (1932), *general secretary*; University of Chicago, Chicago, Ill.

Burton E. Livingston (1932), *permanent secretary*; Johns Hopkins University, Baltimore, Md.

Robert A. Millikan (1933), California Institute of Technology, Pasadena, Calif.

Thomas Hunt Morgan (1930), *president of the association*; California Institute of Technology, Pasadena, Calif.

Henry B. Ward (1930), University of Illinois, Urbana, Ill.

Edwin B. Wilson (1932), Harvard School of Public Health, Boston, Mass.

*Members of the Committee on Grants for Research*<sup>2</sup>

Arthur H. Compton (1933), *chairman of the committee*, for Physics; University of Chicago, Chicago, Ill.

George H. Parker (1933), for Zoology; Harvard University, Cambridge, Mass.

Charles P. Berkey (1932), for Geology; Columbia University, New York, N. Y.

William Charles White (1932), for Medicine; Hygienic Laboratory, U. S. Public Health Service, Washington, D. C.

Walter S. Adams (1931), for Astronomy; Mount Wilson Observatory, Pasadena, Calif.

Karl F. Kellerman (1931), for Botany; U. S. Department of Agriculture, Washington, D. C.

W. Lash Miller (1930), for Chemistry; University of Toronto, Toronto, Ont., Canada.

<sup>1</sup> The number in parentheses denotes the calendar year at the end of which the member's term of office is to expire.

<sup>2</sup> The number in parentheses denotes the year at the end of which the member's term of office is to expire.

Oswald Veblen (1930), for Mathematics; Princeton University, Princeton, N. J.

*Members of the Finance Committee*

George K. Burgess (1932), *chairman of the committee*; U. S. Bureau of Standards, Washington, D. C.

Arthur L. Day (1931), Geophysical Laboratory, Carnegie Institution of Washington, Washington, D. C.

A. S. Frissell (1933), 530 Fifth Avenue, New York, N. Y.

Herbert Gill (1930), Bethesda, Md.

John L. Wirt (1932), *treasurer of the association*; Carnegie Institution of Washington, Washington, D. C.

*The Standing Committee of One Hundred on Scientific Research*

*Chairman*, Thomas Hunt Morgan, president of the American Association; California Institute of Technology, Pasadena, Calif.

*Secretary*, Rodney H. True, University of Pennsylvania, Philadelphia, Pa.

*The Secretaries' Conference*

*Chairman*, Philip Fox, Adler Planetarium and Astronomical Museum, Chicago, Ill.

*Secretary*, H. J. Van Cleave, University of Illinois, Urbana, Ill.

*The Academy Conference*

*Chairman*, D. W. Morehouse, Drake University, Des Moines, Iowa.

*Secretary*, Chancey Juday, University of Wisconsin, Madison, Wis.

*The Committee on the Place of Science in Education*

*Chairman*, Otis W. Caldwell, Columbia University, New York, N. Y.

*The Committee on Source Books in the History of Science*

*Chairman*, Gregory D. Walcott, Long Island University, Brooklyn, N. Y.

*The Committee on Popular Science Booklists*

*Chairman*, Joseph L. Wheeler, Enoch Pratt Free Library, Baltimore, Md.

*The Committee on Exhibition*

H. E. Howe, *chairman*, Editor, *Journal of Industrial and Engineering Chemistry*.

C. E. K. Mees, Eastman Kodak Co., Rochester, N. Y.

L. M. Potter, Spencer Lens Company, Buffalo, N. Y.

M. E. Leeds, Leeds and Northrup Company, Philadelphia, Pa.

J. Edward Patterson, Arthur H. Thomas Company, Philadelphia, Pa.

Edward Weston, Weston Electrical Instrument Corp., Newark, N. J.

Thomas H. Morgan, *president of the association*, California Institute of Technology, Pasadena, Calif.

Burton E. Livingston, *permanent secretary of the association*, Smithsonian Institution Building, Washington, D. C.

H. S. Kimberly, *manager of the exhibition*, Smithsonian Institution Building, Washington, D. C.

*The Committee on Research Exhibits*

F. C. Brown, *chairman*; Museums of the Peaceful Arts, New York.

Owen Cattell, *secretary*; The Science Press, Grand Central Terminal, New York, N. Y.

William Crocker, Boyce Thompson Institute for Plant Research, Yonkers, N. Y.

F. M. Delano, New York Electrical Society, 29 West 39th Street, New York, N. Y.

H. E. Howe, Editor, *Journal of Industrial and Engineering Chemistry*, Washington, D. C.

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

William A. Riley, University of Minnesota, Minneapolis, Minn.

# ORGANIZATIONS THAT ARE TO HOLD SESSIONS AT CLEVELAND, WITH DATES OF THEIR SESSIONS AND OTHER INFORMATION

*Note.*—Names of organizations are arranged in the order of association sections. Each affiliated society has one or two representatives in the association council, as indicated by one or two asterisks before the society name. A cross before a name indicates that the society is associated but not affiliated. The president and secretary are named for each society, and the council representatives for the affiliated societies. Officers of the sections of the association have been named in an earlier part of this announcement. Dates of meetings are to be read as inclusive. Hotel headquarters and meeting places are generally shown but in a few instances some data are omitted because of lack of information.

## A. Mathematics.

\*\* American Mathematical Society. December 29, 30 and 31. Headquarters, Hotel Statler; meeting places, Auditorium and Rooms 216, 219 and 312, School of Education, Western Reserve University. *President*, E. R. Hedrick; *secretary*, R. G. D. Richardson, Brown University, Providence, R. I.; *council representatives*, T. H. Hildebrandt and Louis Ingold.

\*\* Mathematical Association of America. January 1. Headquarters, Hotel Statler; meeting place, Auditorium, School of Education, Western Reserve University. *President*, J. W. Young; *secretary*, W. D. Cairns, Oberlin College, Oberlin, Ohio; *council representatives*, W. D. Cairns and Dunham Jackson.

## B. Physics.

\*\* American Physical Society. December 30 and 31. Headquarters, Hotel Statler; meeting place, lecture room, Physics Building, Western Reserve University, and Room 86, Physics Building, and Room 105, Chemistry Building, Case School of Applied Science. *President*, Henry G. Gale; *secretary*, W. L. Severinghaus, Columbia University, New York, N. Y.; *council representatives*, Dayton C. Miller and G. W. Stewart.

\* American Meteorological Society. December 29 and 30. Headquarters, Hotel Statler; meeting place, Room 206, Mining Building, Case School of Applied Science. *President*, John Patterson; *secretary*, Charles F. Brooks, Clark University, Worcester, Mass.; *council representa-*

*tive*, W. J. Humphreys, U. S. Weather Bureau, Washington, D. C.

## C. Chemistry.

Section C. December 30. Headquarters, Hotel Winton; meeting place, Room 23, Chemistry Building, Western Reserve University.

## D. Astronomy.

Section D. December 30 and 31. Headquarters, Hotel Statler; meeting place, Room 69, Main Building, Case School of Applied Science.

## E. Geology and Geography.

Section E. December 31 and January 1 and 2. Headquarters, Hotel Winton; meeting place, Room 206, Mining Building, Case School of Applied Science.

## F. Zoological Sciences.

\*\* American Society of Zoologists. December 30 and 31 and January 1. Headquarters, Hotel Hollenden; meeting place, John Hay High School. *President*, H. V. Neal; *secretary*, Dwight E. Minnich, University of Minnesota, Minneapolis, Minn.; *council representatives*, H. H. Newman and P. W. Whiting.

\*\* Entomological Society of America. December 30 and 31. Headquarters, Hotel Hollenden; meeting place, Room 10, Mechanical Building, Case School of Applied Science. *President*, Edith M. Patch; *secretary*, J. J. Davis, Purdue University, Lafayette, Ind.; *council representatives*, A. L. Melander and W. A. Riley.

\*\* American Association of Economic Entomologists. December 29 to January 3. Headquarters, Hotel Hollenden; meeting place, Room 24, Electricity Building, Case School of Applied Science. *President*, Franklin Sherman; *secretary*, Albert F. Burgess, 964 Main St., Melrose Highlands, Mass.; *council representatives*, W. E. Hinds and M. H. Swenk.

\*\* American Society of Parasitologists. December 29, 30 and 31 and January 1. Headquarters, Hotel Hollenden; meeting place, Amphitheater, Institute of Pathology, Western Reserve University. *President*, W. W. Cort; *secretary*, N. R. Stoll, Rockefeller Institute for Medical Research, Princeton, N. J.; *council representatives*, Franklin D. Barker and Henry B. Ward.

† Wilson Ornithological Club. December 29 and 30. Headquarters, Hotel Hollenden; meeting place, Room 32, Clark Hall, College for Women, Western Reserve University. *President*, J. W. Stack; *secretary*, Jesse M. Shaver, George Peabody College for Teachers, Nashville, Tenn.

## G. Botanical Sciences.

\*\* Botanical Society of America. December 30 and 31 and January 1. Headquarters, Hotel Hollenden; meeting place, Geology Building, Western Reserve University. *President*, Lester W. Sharp; *secretary*, Arthur J. Eames, Cornell University, Ithaca, N. Y.; *council representatives*, Margaret C. Ferguson and I. F. Lewis.

\*\* American Phytopathological Society. December 30 and 31 and January 1. Headquarters, Hotel Hollenden; meeting places, Tuesday morning, December 30, Auditorium, Medical Library Building; Tuesday afternoon, December 30, Room 35, Main Building, Western Reserve

University; Wednesday afternoon, Rooms 34, 35, and 37, Main Building, Western Reserve University; Thursday morning, Rooms 34 and 35, Main Building, Western Reserve University, and Auditorium, Medical Library Building; Thursday afternoon, Rooms 34, 35, and 37, Main Building, Western Reserve University. *President*, H. S. Fawcett; *secretary*, F. C. Meier, Bureau of Plant Industry, U. S. Department of Agriculture, Washington, D. C.; *council representatives*, C. W. Edgerton and Donald Reddick.

\*\* American Society of Plant Physiologists. December 29, 30 and 31 and January 1. Headquarters, Hotel Hollenden; meeting place, Freshman Classroom, Law School, Western Reserve University. *President*, H. R. Kraybill; *secretary*, W. A. Gardner, Alabama Polytechnic Institute, Auburn, Ala.; *council representatives*, Charles A. Shull and P. D. Strausbaugh.

*F-G. Societies related to both Section F and Section G.*

\*\* American Society of Naturalists. Headquarters, Hotel Hollenden; meeting place, Auditorium, Medical Library Building. *President*, A. F. Blakeslee; *secretary*, L. J. Cole, University of Wisconsin, Madison, Wis.; *council representatives*, Herbert Kendall Hayes and A. Franklin Shull.

\*\* Ecological Society of America. December 30 and 31 and January 1. Headquarters, Hotel Hollenden; meeting place, Room 33, Main Building, Western Reserve University. *President*, J. E. Weaver; *secretary*, A. O. Weese, University of Oklahoma, Norman, Okla.; *council representatives*, W. C. Allee and George P. Burns.

\*\* American Microscopical Society. January 2. Headquarters, Hotel Hollenden; meeting place, Room 205, John Hay High School. *President*, D. H. Wenrich; *secretary*, H. J. Van Cleave, University of Illinois, Urbana, Ill.; *council representatives*, H. J. Van Cleave and D. H. Wenrich.

† Phi Sigma Biological Research Society. December 31 and January 1. Headquarters, Hotel Hollenden; meeting place, Room 6, Main Building, Western Reserve University. *President*, P. B. Sears; *secretary*, A. I. Ortenburger, University of Oklahoma, Norman, Okla.

Genetics Sections, American Society of Zoologists and Botanical Society of America. December 30 to January 3. Meeting place, lecture room and laboratory, Biology Building, Western Reserve University. *Chairman*, L. J. Cole; *secretary*, P. W. Whiting, University of Pittsburgh, Pittsburgh, Pa.

#### H. Anthropology.

\*\* American Anthropological Association. December 29, 30 and 31. Headquarters, Hotel Winton; meeting place, School of Medicine, Western Reserve University. *President*, A. M. Tozzer; *secretary*, A. Irving Hallowell, University of Pennsylvania, Philadelphia, Pa.; *council representatives*, E. A. Hooton and Aleš Hrdlička.

† American Folk-Lore Society. December 29, 30 and 31. Headquarters, Hotel Winton; meeting place, School of Medicine, Western Reserve University. *President*, Edward Sapir; *secretary*, Gladys A. Reichard, Barnard College, New York, N. Y.

American Association of Physical Anthropologists. December 29, 30 and 31. Headquarters, Hotel Winton; meeting place, School of Medicine, Western Reserve University. *President*, Aleš Hrdlička; *secretary*, Dudley J. Morton, College of Physicians and Surgeons, Columbia University, New York, N. Y.

#### I. Psychology.

Section I. January 2. Headquarters, Hotel Winton; meeting place, Room 33, Main Building, Western Reserve University.

#### K. Social and Economic Sciences.

Section K. December 29. Headquarters, Hotel Cleveland.

† American Statistical Association. Headquarters, Hotel Statler. *President*, Malcolm C. Rorty; *secretary*, Willford I. King, 236 Wooster Street, New York, N. Y.

† American Sociological Society. Headquarters, Hotel Hollenden. *President*, William F. Ogburn; *secretary*, Ernest W. Burgess, University of Chicago, Chicago, Ill.

† American Economic Association. Headquarters, Hotel Cleveland. *President*, M. B. Hammond; *secretary*, F. S. Deibler, Northwestern University, Evanston, Ill.

Other societies meeting in Cleveland with the social-science group are named below. Our information concerning their plans is very incomplete at this time.

Meeting at Hotel Statler: American Political Science Association.

Meeting at Hotel Winton: Stable Money Association.

Meeting at Hotel Cleveland: American Association for Labor Legislation, American Association of Teachers of Marketing and Advertising, American Association of University Instructors in Accounting, Farm Economics Association.

† Metric Association. December 29. Headquarters and meeting place, Hotel Statler. *President*, George F. Kunz; *secretary*, Howard Richards, 156 Fifth Avenue, New York, N. Y.

#### L. Historical and Philological Sciences.

\*\* History of Science Society. December 30 and 31. Headquarters, Hotel Winton; meeting place, Room 27, Main Building, Western Reserve University. *President*, Henry Crew; *secretary*, Frederick E. Brasch, Library of Congress, Washington, D. C.; *council representatives*, F. B. Dains and Joseph Mayer.

#### M. Engineering.

Section M. December 30 and 31. Headquarters, Hotel Winton; meeting place, Room 12, Electricity Building, Case School of Applied Science.

\* Institute of Radio Engineers (Cleveland Section). *President*, Lee de Forest; *secretary*, Harold P. Westman, 33 West 39th St., New York, N. Y.; *chairman of Cleveland section*, D. Schregardus, Ohio Bell Telephone Co., 750 Huron Road, Cleveland, Ohio; *council representative*, J. C. Jensen.

#### N. Medical Sciences.

Section N. Headquarters, Hotel Hollenden.

American Society of Tropical Medicine. Headquarters, Hotel Hollenden; meeting place, Room 109, Institute of Pathology, Western Reserve University. *Secre-*

tary, E. Peterson, Box 131, Pennsylvania Ave. Station, Washington, D. C.

#### O. Agriculture.

\*\* American Society of Agronomy. December 29 and 30. Headquarters, Hotel Hollenden; meeting place, lecture room, Biology Building, and Law School, Western Reserve University. *President*, W. P. Kelley; *secretary*, P. E. Brown, Iowa State College, Ames, Iowa; *council representatives*, Jay B. Park and John B. Wentz.

\* American Society for Horticultural Science. December 29, 30 and 31. Headquarters, Hotel Hollenden; meeting place, Middle Classroom and Senior Classroom, Law School, Western Reserve University. *President*, A. T. Erwin; *secretary*, H. B. Tukey, New York State Agricultural Experiment Station, Geneva, N. Y.; *council representative*, W. H. Alderman.

† Association of Official Seed Analysts of North America. December 31 and January 1 and 2. Headquarters, Hotel Hollenden; meeting place, Room 29, Main Building, Western Reserve University. *President*, A. L. Stone; *secretary*, F. S. Holmes, College Park, Md.

† Potato Association of America. December 30 and 31. Headquarters, Hotel Hollenden; meeting place, Room 23, Main Building, Western Reserve University. *President*, John Bushnell; *secretary*, H. C. Moore, Michigan State College, East Lansing, Mich.

Geneticists Interested in Agriculture. December 29. Meeting place, lecture room, Biology Building, Western Reserve University. *Secretary*, Fred Griffiee, Agricultural Experiment Station, Orono, Maine.

#### Q. Education.

Section Q. December 29, 30 and 31. Headquarters, Hotel Winton; meeting place, School of Applied Social Science, Western Reserve University, 2069 Adelbert Road.

† Phi Delta Kappa Fraternity. Meets with Section Q. *President*, Shelton Phelps; *secretary*, Paul M. Cook, 1180 East 63rd St., Chicago, Ill.

#### X. Organizations related to the American Association as a whole.

\* American Nature-Study Society. December 30 and 31 and January 1. Headquarters, Hotel Hollenden; meeting place, Room 49, Main Building, Case School of Applied Science. *President*, Bertha Chapman Cady; *secretary*, Ellen Eddy Shaw, Brooklyn Botanic Garden, Brooklyn, N. Y.; *council representatives*, J. Andrew Drushel.

\*\* Society of Sigma Xi. December 30. Meeting place, Room 34, Main Building, Western Reserve University. *President*, George W. Stewart; *secretary*, Edward Ellery, Union College, Schenectady, N. Y.; *council representatives*, Edward Ellery and George W. Stewart.

\*\* American Association of University Professors. December 27 and 29. Headquarters, Hotel Statler; meeting place, Room 27, Main Building, Western Reserve University. *President*, W. B. Munro; *executive secretary*, Joseph Mayer, 26 Jackson Place, Washington, D. C.; *council representatives*, Henry Crew and S. A. Mitchell.

† Gamma Alpha Graduate Scientific Fraternity. December 30. Meeting place, Room 29, Main Building, Western Reserve University: *President*, C. C. Murdock;

*secretary*, Rodney W. Babcock, Kansas State Agricultural College, Manhattan, Kans.

Sigma Delta Epsilon Graduate Women's Scientific Fraternity. December 30 and 31. *President*, Helen Jean Brown; *secretary*, Mary Dover, University of Missouri, Columbia, Mo.

#### THE AMERICAN ASSOCIATION PRESS SERVICE AT THE CLEVELAND MEETING

(By Austin H. Clark)

The Press Service of the American Association for the Advancement of Science, which has developed from the earlier news service, furnishes to the public, by means of the press, readable and timely accounts of scientific news. It brings scientific workers and newspaper writers together for their mutual aid and for the dissemination of science news. For the Cleveland meeting releases for the press will be prepared beforehand, from manuscripts and abstracts received from those who are to present papers or give addresses at the meeting. All who are to present papers at Cleveland are asked to send, as soon as possible, duplicate copies of each of their manuscripts, to the A. A. A. S. Press Service (A. A. A. S. P. S.), Smithsonian Institution Building, Washington, D. C. *A single copy will not suffice and both copies are to be sent to the same address.* Each manuscript should bear, at the top of the first page, the name of the organization before which the paper is to be presented, with information as to the date of presentation as nearly as that may be stated.

Whenever a paper for this or any other scientific meeting is being typed it will be advantageous to all concerned, including the public, if several clear carbon copies are made; such manifolding is readily accomplished and results in copies enough so that two can be sent at once to the association. Other copies should be sent to the secretaries of the organization at whose sessions the papers are to be given. The manuscripts sent to the association are not for publication as such. They are used by newspaper writers in the preparation of science news. No news story is released before the date on which the paper is presented at the meeting. The Press Service supplies the representatives of the press with the material received from the authors, the date of release being marked on each sheet. It sometimes furnishes such additional information as may be available and it aids press representatives to secure interviews with authors when such interviews are requested.

All manuscripts for use in connection with the Cleveland meeting should reach the Washington office by December 20. Manuscripts that arrive later may not receive attention. The best science stories are written long before the meeting opens, when the writ-



ers may have time for consultation and study in their preparation. It is best to have manuscripts in the hands of the Press Service before December 1. If full manuscripts can not be sent, then authors of papers and addresses for this meeting should send two copies of an adequate abstract of each paper.

Both manuscripts and abstracts should be written in the simplest possible language, so as to be readily understood by any educated person with no presupposed knowledge of the subject treated. Especially should the broader aspects of the subject be presented and its possible bearing on work in other lines and on thought in general.

Until the date of release all authors' manuscripts are regarded as strictly confidential communications, accessible only to accredited representatives of the press and to the members of the association's committee on prize award. There need be no hesitation about sending accounts of new and unpublished work. Authors may themselves send additional copies to newspaper representatives or to the news-gathering agencies, but articles based on such copies may not always be used under the sponsorship of the American Association's Press Service. In any event, two copies are needed by the Press Service.

The director of the Press Service, Austin H. Clark, is ready at all times to answer questions regarding the work of the service and to aid authors and press writers as far as possible. But it must be remembered that Mr. Clark is apt to be pressed for time in the last ten days before a meeting opens. In that period it is difficult for him to do justice to all communications.

The press is now by far the most important medium for the dissemination of scientific knowledge among the people. It is consequently a duty of science workers to do their part, to the end that their findings and ideas may be clearly set before the public. Prepare readable manuscripts and send them early and in duplicate.

#### THE AMERICAN ASSOCIATION PRIZE

The eighth annual award of the American Association prize, of one thousand dollars, will be made to the author of a paper presented at the Cleveland meeting. Through the generosity of an anonymous member seven of these prizes have thus far been awarded. The prize is awarded each year to the author of a noteworthy paper presented at the annual meeting. It is not necessary that the author be a member of the association. All papers appearing in the General Program are automatically eligible, excepting invited papers and presidential and vice-presidential addresses, which are not eligible. There

is to be no open competition and no submitting of papers for the prize. It is supposed, however, that manuscripts of papers that may possibly be considered by the committee on prize award will all be in the hands of the Press Service, through the arrangements described above. No special action should be taken by authors who hope to be considered in this connection. The secretary in charge of each scientific program will be expected to present one or more nominations for consideration by the committee and the committee is expected to make selection from the nominations thus submitted. Nominations are to be in writing, signed by the secretary who sends them, and they are to be addressed to the committee on award, care of Sam Woodley, *executive assistant*, at the registration offices, or else they may be sent to Mr. Woodley in the Statler Hotel. Secretaries may examine the manuscripts that have been received by the Press Service, which will have offices near the registration desks. In making the award no attempt will be made to select the "best" paper presented, for useful comparisons are not possible in different fields of science; the intention is simply that the prize shall be awarded to the author of some notable contribution presented at Cleveland. Previously published work may be considered when pertinent. The donor of the prize desires to aid younger authors by this means rather than to honor older men. The prize is not to be awarded in the same field of science for two consecutive years. The permanent secretary and the other general officers of the association have nothing at all to do with the award, nor can they be in position to give out any information concerning the nominations until after the award has been officially announced. The proceedings of the committee on prize award are to be strictly confidential.

The rules by which the award will be made and announced have been modified and the announcement of the prize winner will not be made at the close of the meeting, as has been done heretofore. According to action taken by the executive committee at its last spring meeting, the award is to be first announced in connection with the meeting following the one at which the paper appeared on the program, and the subject of the winning paper is to be specially presented in a public lecture at the later meeting. (SCIENCE for June 6, 1930, page 588, paragraph 10.) Further details are to be decided upon by the council.

A list of the names of those to whom the association prize has been awarded is shown below, together with the topics dealt with in the winning papers.

- (1) The Cincinnati award, January, 1924. L. E. Dickson, for contributions to the theory of numbers.

- (2) The Washington award, January, 1925. Divided equally between Dr. Edwin P. Hubble, for contributions on spiral nebulae, and Dr. L. R. Cleveland, for contributions on the physiology of termites and their intestinal protozoa.
- (3) The Kansas City award, January, 1926. Dr. Dayton C. Miller, for contributions on the ether-drift experiment.
- (4) The Philadelphia award, January, 1927. Dr. George D. Birkhoff, for mathematical criticism of some physical theories.
- (5) The Nashville award, January, 1928. H. J. Muller, for contributions on the influence of X-rays on genes and chromosomes.
- (6) The New York award, January, 1929. Oliver Kamm, for contributions on the hormones of the pituitary gland.
- (7) The Des Moines award, January, 1930. A. J. Dempster, for contributions on the reflection of protons from a calcite crystal.

#### TRANSPORTATION TO AND FROM CLEVELAND

Reduced railway rates, by the certificate plan, have been granted for this meeting by the railway passenger associations of the United States and Canada, whose courtesy and public spirit will be greatly appreciated. The round-trip fare for a person attending the meeting is to be one and one half times the regular one-way fare.

Tickets to Cleveland are to be purchased within time limits as follows: December 25 to 31, inclusive, for the following lines: Canadian Eastern lines, Canadian Western lines, Central lines, New England lines, Southeastern lines and Trunk lines. For the Western and Transcontinental lines the inclusive dates are December 22 to 28 from California; December 23 to 29 from Arizona, British Columbia, Nevada, Idaho, Montana, Utah, Washington and Oregon (except *via* California); December 21 to 27 from Oregon (*via* California); December 24 to 30 from New Mexico, Wyoming and Colorado (except Julesburg); December 25 to 31 from Julesburg, Colorado, and from Illinois, Iowa, Kansas, Manitoba, Minnesota, Missouri, Nebraska, northern Michigan, North Dakota, South Dakota and Wisconsin. For the Southwestern lines the inclusive dates are December 24 to 30 from Oklahoma and Texas and December 25 to 31 from Arkansas, Kansas, Louisiana and Missouri; also from Memphis, Tennessee, and Natchez, Mississippi. The following Southwestern lines do not offer the reduced excursion fares: Arkansas and Louisiana-Missouri Railway, Fort Smith and Western Railroad, Graysonia, Nashville and Ashdown Railroad, Kansas, Oklahoma and Gulf Railway, Mississippi River and Bonne Terre Railway and National Railways of Mexico.

Persons residing in the regions of reduced rates (almost all the United States and Canada) should each purchase a first-class, full-fare, one-way, through ticket to Cleveland, being sure to secure a certificate on "Standard Certificate Form," reading for the Cleveland meeting of the "American Association for the Advancement of Science and Associated Societies." A receipt is not required and will not be useful.

Persons residing outside the regions of reduced rates should each purchase a round-trip ticket to the nearest station issuing through tickets to Cleveland and situated within the region of reduced rates. On arrival at that station a one-way ticket to Cleveland and a certificate, as directed in the preceding paragraph, should be secured.

Every one should register immediately upon arrival at Cleveland, at the registration offices for the meeting, in the Gymnasium, Western Reserve University. Be sure to fill in all blanks on the registration card and leave the card at the registration desk, where you will receive a numbered identification card, which will be receipted for the registration fee paid. (See Registration, below.) Then leave your railway certificate at the validation desk, being sure that the identification card (which you keep) is there marked to show that you have deposited a certificate. Your certificate will subsequently be endorsed by the association and then validated by the agent of the transportation companies. Call for it later at the validation desk, where you left it, presenting your identification card.

Unvalidated certificates will not be honored for the purchase of return tickets and unendorsed certificates can not be validated. Registration is therefore necessary in order to have a railway certificate validated. Each person registering is entitled to the validation of his own certificate.

For the return trip, railway agents at Cleveland will honor any properly endorsed and validated certificate if presented at least thirty minutes before the scheduled time of departure of the train for which it is to be used. Each person presenting an endorsed and validated certificate may purchase a continuous-passage, one-way, return ticket for one half of the regular fare, by the same route as that followed on the trip to Cleveland. Certificates may be validated from December 29, 1930, to January 3, 1931. The last date on which return tickets may be purchased is January 7.

Some trouble and delay has been experienced at past meetings in securing sleeping-car accommodations for the trip home. Delay may be avoided if reservations can be made at the railway station immediately upon arrival at Cleveland, before going to hotels or

meeting places or to the registration offices. It is often convenient to give the validated certificate to the porter of your hotel, with proper instructions for purchasing return ticket and sleeping-car accommodations. Arrangements for railway reservations may also be made at a special desk in the registration room.

#### TRANSPORTATION IN CLEVELAND

To reach the four headquarters hotels from the new Union Passenger Terminal, on the Public Square, visitors may find the following notes helpful.

Hotel Cleveland, under the same roof as the Passenger Terminal.

Hotel Hollenden, across Public Square to Superior Avenue, east on Superior Avenue to East 6th Street.

Hotel Winton, across Public Square to Euclid Avenue, east on Euclid Avenue to East 12th Street.

Hotel Statler, across Public Square to Euclid Avenue, east on Euclid Avenue to East 12th Street.

Most of the other hotels are reached by any east-bound street car marked "Euclid." Ask conductor for directions.

To reach the Western Reserve University and the Case School of Applied Science, eastbound street cars marked "East Cleveland," "Windermere," "Hayden—E. 140th," or "Euclid Village." Leave car at Adelbert Road.

The fare on street cars is eight cents, seven tickets for fifty cents. Taxicab rates are five cents per one third mile.

#### HOTEL ACCOMMODATIONS

The Hotel Statler is to be general headquarters for the American Association, and the headquarters hotels for many of the special societies are named in the list of societies on an earlier page of this announcement. Requests for room reservations should be sent to the hotels.

Those who plan to attend the Cleveland meeting should engage rooms at once. Whether the room desired is to be occupied by one or by two persons should be specified, also the price which the applicant wishes to pay and the date on which the room is to be occupied. If the sort of room requested is not available for the given date the hotel management will refer the request to the Cleveland Convention Board, which will tentatively assign a suitable room in another hotel, informing the applicant by letter. If the applicant does not wish to accept the assignment thus given he should inform the Convention Board, which will do its best to comply with his wishes. All the rooms in the hotel named as headquarters are equipped with baths and the daily charge for a single room is \$3.00 and up. For double rooms the daily charges

are: Hotel Cleveland, \$5.00 and up; Hotel Hollenden, \$6.00 and up; Hotel Statler, \$4.50 and up; Hotel Winton, \$4.50 and up.

An extensive list of Cleveland hotels has been prepared by the permanent secretary's office, with the assistance of the Cleveland Chamber of Commerce, and a copy of this may be had on request addressed to the American Association for the Advancement of Science, Smithsonian Institution Building, Washington, D. C. The list shows the hotel locations and their daily prices for single and double rooms, with and without bath. Those who desire inexpensive rooms should write at once for a copy of the list. Prices for single rooms generally range from \$2.00 or \$2.50 upward, for double rooms from \$3.00 upward.

#### REGISTRATION AT THE CLEVELAND MEETING

The registration offices for the meeting will be in the Gymnasium of Western Reserve University, as has been said, and they will be open from 9 to 6 daily throughout the week of the meeting. Registration will be necessary in order to secure the official identification card, the official badge and the general program and in order that railway certificates for the association meeting may be endorsed. All who attend any of the sessions arranged through the A. A. S. should register promptly, whether they are members of the association or not, using official registration cards that will be provided.

The registration fee will be two dollars, but life members and paid-up annual members of the American Association for the Advancement of Science may register by paying only one dollar. Associates for this meeting may register without paying any registration fee if they show their associateship cards. Foreign associates may show either their cards or their official invitations, received from the permanent secretary. The registration fees will be applied to meet some of the costs of the meeting.

Annual members who are in arrears for association dues may pay their arrearages at the registration offices before they register or at the same time. They may then register with payment of the reduced registration fee. Non-members may join the association or may become associates for this meeting by making the proper payments, thus securing the advantage of the reduced registration fee.

To register, fill in the blanks on a registration card and present the card at the registration desk, paying the proper registration fee. The registration clerk will keep the card and will return to you a numbered identification card, which will entitle you to the privileges of the meeting, including the official badge and a copy of the general program. If you have a rail-

way certificate for validation, leave it at the validation desk, where your identification card will be marked to show that a certificate has been left. (See above, under "Transportation to and from Cleveland.") Delegates from institutions and organizations, and all personally invited foreign associates are specially requested to register as such, noting on their registration cards their exact status in this particular.

#### MEMBERSHIP AND ASSOCIATESHIP IN THE ASSOCIATION

All members of the association are asked to secure new members or to send to the permanent secretary's office in Washington before December 15 names and addresses of persons who might be interested in joining the association. This request is effective throughout the year, but it is specially desirable that a large number of new members be enrolled before the opening of the meeting.

Copies of a booklet on "The Organization and Work of the American Association," as well as membership application cards and sample copies of the journals, may be secured at any time from the permanent secretary's office. Membership in the association includes a subscription to the weekly journal *SCIENCE*, or the *Scientific Monthly*, for the calendar year beginning at the close of the annual meeting. The journal alone is worth more than the annual membership dues. Annual members of the association may have both *SCIENCE* and the *Scientific Monthly* by paying \$3.00 in addition to the annual dues (\$8.00 in all), if the additional payment accompanies the remittance of annual dues. Annual members of the association may also subscribe for the *Science News-Letter* at the specially reduced price of \$3.00 per year, if the additional remittances accompany their payment of dues in each case. Life members may receive one or both of the extra journals by paying \$3.00 for each subscription.

New members of the association regularly pay an entrance fee of \$5.00, but this year that fee is remitted to members of any associated organizations, including the affiliated state academies. Those who take advantage of this privilege and join at the Cleveland meeting without paying the entrance fee should fill in the blanks on a blue membership application card and present card and dues for 1930-31 (\$5.00) when they register. All who attend the Cleveland meeting are asked to join the American Association when they register, unless they are already enrolled.

Those who are not members of the American Association and who do not wish to join at this time are invited to become associates for this meeting. The associate fee is \$5.00. Associates have all the privileges of the meeting, except voting, and they will

receive the general reports of the meeting when these are published about February 1. They are to register without paying any registration fee. Associate fees will be used to help defray the costs of the meeting.

#### FOREIGN ASSOCIATES

Visitors from outside of the United States and Canada who are not members of the association may be invited to the meeting as foreign associates. Members of the association may recommend to the permanent secretary persons who should receive official invitations, giving reasons. Such recommendations should arrive in the permanent secretary's office in Washington before December 20, and the present address, as well as the home address, of the recommended person should be given in each instance. Eligibility to this honor is about the same as eligibility to fellowship in the association.

#### INFORMATION SERVICE, MAIL, EXPRESS, TELEGRAMS, ETC.

Those in attendance at the Cleveland meeting may obtain information of all sorts by applying at the information desk in the registration offices. Attention is called, however, to the visible directory of those in attendance, from which may be obtained names and both home and Cleveland addresses of those who have registered.

Persons attending the meeting may have mail, etc., addressed to them in care of the American Association for the Advancement of Science, registration office, Gymnasium, Western Reserve University, Cleveland, Ohio. They should inspect the personal bulletin every day, which will be conveniently located in the vicinity of the registration desks. If a person's name appears on this bulletin he should inquire at the proper desk for mail, etc. Uncalled-for telegrams will be sent to hotels each afternoon when the registration offices close, unless the person addressed has failed to register and give his hotel address. Unclaimed mail, etc., will be mailed to home addresses after the close of the meeting.

#### BUSINESS SESSIONS OF THE AMERICAN ASSOCIATION AT CLEVELAND

The executive committee of the council is to meet at 10 o'clock on Monday, December 29, in the Statler Hotel, and the council is to hold its first Cleveland session at 2 o'clock on the afternoon of the same day, in the council room (Room 3, Main Building, Western Reserve University). This council session is to be followed by the Cleveland session of the Academy Conference. Unless otherwise decided, the council will meet at 9 on Tuesday, Wednesday, Thursday and Friday in the council room, and the executive com-

mittee will meet in the council room at 10 on the same days. The election of association officers for 1931 is to occur at the council session Wednesday or Thursday morning, as the council may decide.

Business to come before the council at Cleveland is to be referred to the executive committee first, and memoranda concerning such business should be in the Washington office by December 20. Communications that arrive late, especially those coming to the permanent secretary after the opening of the meeting, may fail to receive consideration, for the week of the meeting is a very busy one for all officers of the association.

#### THE SECRETARIES' CONFERENCE AND THE ACADEMY CONFERENCE

The Secretaries' Conference, a special committee of the American Association, plans to hold its annual dinner and session at Cleveland, time and place to be announced later. The secretary of this conference is Dr. Harley J. Van Cleave, secretary of the American Microscopical Society, who has charge of the program. The chairman is Dr. Philip Fox, secretary of Section D. The conference consists of the secretaries of the association sections, the secretaries of the associated societies and the members of the executive committee of the association.

The Academy Conference of the American Association is planning to hold its Cleveland session at the close of the first council session, on Monday afternoon, December 29. This conference consists of the council representatives of the affiliated academies of science and three representatives of the association. The secretary of the conference this year is Dr. Chancey Juday, of the Wisconsin Academy, who has charge of the program. The chairman is Dr. D. W. Morehouse, of the Iowa Academy.

#### SCIENTIFIC SESSIONS OF SECTIONS AND SOCIETIES AT CLEVELAND

Nearly all fields of science will be represented in the sessions of the sections and their related societies at the eighty-seventh meeting of the American Association. There will be many joint sessions of two or more organizations and many symposia of invited papers on timely topics, as well as a large number of society dinners, luncheons and smokers. A great many sessions will be devoted to the reading of technical contributions. The addresses of the retiring vice-presidents of the association and those of the presidents of the special societies will each be important in indicating the present status and the outlook in each of the several branches of science. It is, of course, impossible to present the numerous programs of the meeting in this announcement, for

which the reader must await the appearance of the society programs and the general program. The latter will be printed in the last two weeks before Christmas, edited for the permanent secretary's office by the program editor, Dr. Sam F. Trelease, of Columbia University. As has been said, the general program will be available at 9 o'clock, December 29, at the registration offices for the meeting, in the Gymnasium of Western Reserve University, and copies will be mailed promptly to those who are not going to attend the meeting, if they send in their requests early.

The following pages are devoted to preliminary notes on the special programs of the scientific sessions at Cleveland. These notes have been compiled by the permanent secretary from accounts furnished by the several secretaries of societies and sections, to whom we are greatly indebted for the material presented here. It is, of course, to be remembered that all statements are of a preliminary nature.

These notes on the plans of the many organizations that will take part in the meeting at Cleveland are arranged under headings that correspond to the sections of the American Association. Generally each of the associated and invited societies is related primarily to a single association section, but in some instances the societies can be properly classified only by reference to two sections or to the association as a whole. In connection with these notes see the list of organizations planning to hold sessions at the Cleveland meeting, in an earlier part of this announcement, where the names of the society officers and the dates of the society meetings are shown, as well as their hotel headquarters and most of the places for their meetings.

**MATHEMATICS.**—On Monday afternoon, December 29, there will be a joint meeting of the American Mathematical Society, the Statistical Association of America and Section A. Professor G. C. Evans, of Rice Institute, will speak on "Simple Types of Economic Crises and Cycles"; Professor Ragnar Frisch, of Yale University, on "A Method of Decomposing an Empirical Series into its Cyclical and Progressive Components"; Professor Harold Hotelling, of Stanford University, on "Recent Improvements in Statistical Inference." On Tuesday afternoon Professor G. D. Birkhoff, of Harvard University, will deliver an address on "Poincaré's Last Geometric Theorem, its Generalizations and Dynamical Applications"; this address is given at the request of the American Mathematical Society. Later, on the same afternoon, the eighth annual Josiah Willard Gibbs lecture, under the auspices of the American Mathematical Society and the American Association, will be delivered by Professor Edwin B. Wilson, of the Harvard School of

Public Health. On Wednesday afternoon there will be a joint meeting of the American Mathematical Society, the Mathematical Association of America and Section A. At this time the retiring vice-president for Section A, Professor E. T. Bell, of the California Institute of Technology, will deliver an address on the subject, "Mathematics and Speculation." A second address, entitled "Recent Developments in Abstract Algebra," will be given by Professor Oystein Ore, of Yale University, at the joint invitation of the American Mathematical Society and the Mathematical Association of America. There will also be sessions of the American Mathematical Society for the presentation of research contributions.

The Mathematical Association of America will hold sessions on Thursday morning and afternoon with a program of invited speakers, among these being Professor B. F. Finkel, of Drury College, on "The Early History of the *American Mathematical Monthly*"; Professor Tibor Rado, of Ohio State University, on "Mathematics in Hungary"; Professor C. F. Roos, of Cornell University, on "Theoretical and Statistical Investigations Concerning the Interrelations of Demands, Cost of Production and Profit"; and Professor J. R. Musselman, of Western Reserve University, on "The Equilateral Hyperbola." An informal dinner for the mathematics group is scheduled for Wednesday evening. A joint meeting of mathematicians and physicists is also projected, but definite arrangements have not yet been made.

PHYSICS.—Section B will hold joint meetings with the American Physical Society and with the American Meteorological Society. The retiring vice-president, Professor C. E. Mendenhall, will give an address on "Recent Developments in Photoelectricity." There will be a symposium on acoustics. The greater part of the program of the joint meetings will consist of the regular papers contributed by members of the two affiliated societies.

CHEMISTRY.—Section C plans to hold a session on Tuesday, December 30, in the Morley Chemical Laboratory, Western Reserve University. The program is being arranged by the Cleveland Section of the American Chemical Society.

ASTRONOMY.—Cleveland offers much of interest to astronomers. The mountings of many of the world's greatest telescopes were designed and built by Warner and Swasey, of Cleveland. This firm has been a pace-maker in instrument construction, combining in their designs facility of operation and precision. The original Michelson and Morley experiments on ether-drift were made in the laboratory of the Case School of Applied Science. Here also Professor D. C. Miller is continuing observations in this fundamental experi-

ment. The Municipal Observatory is a third item to attract the attention of astronomers.

Sessions for the presentation of papers in astronomy will be held in room 69, Main Building, Case School of Applied Science, on Tuesday, at 10 and 2 o'clock. There will be a joint session of Section D with Section L and the History of Science Society, in commemoration of the tricentenary of Johannes Kepler. On Wednesday afternoon Dr. Harlow Shapley, of Harvard University, retiring vice-president for Section D, will give an address on "Galactic Explorations."

GEOLOGY AND GEOGRAPHY.—Section E will hold sessions for the reading of papers on Wednesday, Thursday and Friday. On Thursday afternoon the retiring vice-president for the section, Dean George F. Kay, of the University of Iowa, will deliver an address on "The Classification and Duration of the Pleistocene Period." A dinner for geologists and geographers is being arranged for either Thursday or Friday evening. The scientific sessions will be so arranged as to permit the attendance of those who have been in Toronto earlier in the week for the meeting of the Geological Society of America at that place.

ZOOLOGICAL SCIENCES.—Section F will meet jointly with the American Society of Zoologists on Tuesday, Wednesday and Thursday. The section will not hold sessions of its own for the reading of papers, but a short business meeting will be held on one afternoon. A dinner for all zoologists will be held on the evening of either Tuesday or Wednesday. Dr. William A. Riley, of the University of Minnesota, the vice-president for the section, will deliver an address immediately following the zoologists' dinner, on "Some Present-day Problems in Zoological Teaching."

The Entomological Society of America will hold its twenty-fifth annual meeting on Tuesday and Wednesday, under the presidency of Dr. Edith M. Patch, of the Maine Agricultural Experiment Station. The Tuesday morning session will be devoted to business and reading of papers. The Tuesday afternoon session will include a symposium entitled, "Forest Entomology," headed by Dr. J. M. Swaine, of Canada. On Tuesday evening the annual public address of the society will be given by Professor H. J. Quayle, of the University of California, on "Observations Abroad on Subtropical Fruit Insects." Wednesday will be devoted to contributions, with a business session in the afternoon. The annual entomologists' dinner will probably be held Thursday evening.

The American Association of Economic Entomologists will hold its forty-third annual meeting from Monday to Friday. A varied and interesting program on many phases of entomological work is being

arranged. The morning and afternoon sessions on Monday will be devoted to the section of apiculture, under the chairmanship of Professor R. L. Parker, of the Kansas Agricultural College. On Tuesday the Section of Quarantine and Inspection, under the chairmanship of Professor E. N. Cory, of the University of Maryland, will hold morning and afternoon sessions. The general meeting will open on Wednesday morning, under the presidency of Professor Franklin Sherman, of Clemson College, who will deliver the annual address. Thursday and Friday will be devoted to scientific sessions. The Section of Extension Entomologists will hold a session on Thursday evening, with Professor C. R. Crosby, of Cornell University, as chairman.

The American Society of Parasitologists will hold its sixth annual meeting on Tuesday, Wednesday and Thursday. Of special interest will be a joint program on Wednesday with the American Society of Tropical Medicine, which is meeting with the association this year for the first time. The fact that frequently a majority of the papers presented at the meetings of either the American Society of Parasitologists or the American Society of Tropical Medicine have a primary interest as well for members of the other organization renders this joint meeting an event of considerable promise. On Tuesday morning there will be held the customary joint session with the American Society of Zoologists. The address of the retiring president, Dr. W. W. Cort, of the Johns Hopkins University, will be on "Recent Investigations on the Epidemiology of Ascariasis." Besides the usual sessions for the presentation of papers, there will be time allotted for demonstrations, as in previous years. The society will hold its annual business session and a luncheon.

The Wilson Ornithological Club will hold its seventeenth annual meeting on Monday and Tuesday, with morning and afternoon sessions. The annual dinner of the club will be held jointly with the Cleveland Bird Club and the Inland Bird-Banding Association.

**BOTANICAL SCIENCES.**—Section G will hold a joint session with the associated botanical societies on Tuesday afternoon, December 30. The program will include the following papers: "Hybridization and Inheritance in Ascomycetes," by B. O. Dodge; "Some Mycorrhiza Considered from the Viewpoint of Physiology," by Lewis Knudson; "Chromosome Structure and the Mechanism of Crossing-over," by Karl Sax; "Vegetation of the Ohio Valley," by E. N. Transeau.

The Botanical Society of America is to hold its twenty-fifth annual meeting on Tuesday, Wednesday and Thursday. Business sessions are to be held each morning at 9, followed at 10 by scientific sessions of

the five sections of the society. In the afternoons, joint sessions will be held with Section G of the American Association, the Ecological Society of America and the American Society of Naturalists. The annual dinner for all botanists will be held on Tuesday evening. At this time Dr. Margaret C. Ferguson, of Wellesley College, will deliver the retiring presidential address. The section programs of this society will be representative of their special fields and all branches of botany will be dealt with in the papers presented.

The American Phytopathological Society will meet Tuesday, Wednesday and Thursday, under the presidency of Dr. H. S. Fawcett, of the Citrus Experiment Station, University of California. A joint session with Section G will be held on Tuesday afternoon and a joint session with the Mycological Section of the Botanical Society of America will occur on Wednesday morning, the latter being devoted to a de Bary Memorial program. There will be a round table discussion Tuesday afternoon on extension work in plant pathology. The program on Tuesday morning will be made up of a series of invitation papers on subjects of general interest, which will be followed by a business session. Sessions on Wednesday afternoon, Thursday morning and Thursday afternoon will be devoted to contributions on diseases of vegetables, cereals, fruits and ornamentals, and to papers on other interesting topics. The annual dinner of the society is to occur on Tuesday; tickets should be secured before Tuesday noon, at the registration offices of the A. A. A. S. or in the lobby of the Hotel Hollenden. A program of great interest to all plant pathologists and botanists will follow the dinner.

The seventh annual meeting of the American Society of Plant Physiologists is to occur from Monday to Thursday. Sessions for the presentation of contributions and the transaction of business will be held on Monday, Wednesday and Thursday. There will be two joint sessions: one with the American Society for Horticultural Science, Tuesday morning, the other with the Botanical Society of America, Tuesday afternoon. The second award of the Stephen Hales Prize will be made at the annual dinner on Monday evening, at the Chamber of Commerce Club. Following the dinner there will be the presidential address, by Dr. H. R. Kraybill, of Purdue University, and an address by Dr. D. R. Hoagland, of the University of California.

**BIOLOGICAL PROGRAMS RELATED TO BOTH ZOOLOGY AND BOTANY.**—The forthcoming Cleveland convention of the American Society of Naturalists will be its forty-eighth annual meeting. The meeting will consist of two sessions on Thursday. According to recent cus-



tom, the afternoon session will be devoted to a symposium on a subject of general biological interest, held in conjunction with other biological societies. The general subject for this year is "The Future of Man in the Light of His Past." Among the speakers will be Dr. A. V. Kidder (Carnegie Institution) and Dr. E. M. East (Harvard). The report and recommendations of the special committee on policy, appointed at Des Moines last winter, will be presented and discussed, either at a business session following the afternoon symposium or at the annual dinner. The place and time of the dinner are to be announced later. Dinner tickets may be had from Professor J. Paul Visscher, of Western Reserve University, or at the general registration offices of the A. A. A. S.

The Ecological Society of America is to meet on Tuesday, Wednesday and Thursday. Two joint sessions with other organizations are planned, with the American Society of Zoologists on Wednesday morning and with the Botanical Society of America on Wednesday afternoon. Symposia or less formal groups of papers and discussions are planned on the following subjects: "Crop Ecology," in charge of President Weaver; "Plant and Animal Interrelations," in charge of Dr. H. C. Cowles (University of Chicago); "Environmental Units and Their Terminology," in charge of Dr. W. E. Allen (Scripps Institution). Other sessions will be devoted to papers of general ecological interest and to business. There will be an informal dinner.

The American Microscopical Society will hold its annual business meeting and election of officers on Friday afternoon, January 2, at 4 o'clock.

The Phi Sigma Biological Research Society will hold its annual convention and meetings on Wednesday and Thursday. The morning and afternoon sessions of the first day will be taken up with business. The second day will be devoted to the reading of research contributions. A banquet will be held for the delegates.

The Genetics Sections of the American Society of Zoologists and the Botanical Society of America will hold regular sessions for the reading of papers on Tuesday, Wednesday, Thursday and Friday mornings. There will be a short business session for the election of officers and to receive the report of a committee chosen at the Des Moines meeting to study the organization of geneticists. During the afternoons there will be informal laboratory demonstrations and exhibits. The Genetics Sections will meet Monday morning with the Geneticists Interested in Agriculture, in a symposium on "Inbreeding and Its Application to Improvement in Plants and Animals." (See under Agriculture, below.)

**ANTHROPOLOGY.**—The meetings of Section H will occur on Tuesday and Wednesday. The address of the retiring vice-president for the section will be given by Dr. A. V. Kidder at the anthropologists' dinner, details of which will be announced later. There will be joint sessions with the American Anthropological Association and the American Folk-Lore Society, at which papers of wide interest will be discussed. As is the custom when the various anthropological groups meet with the American Association, the program of Section H will be limited largely to papers and demonstrations relating to physical anthropology. Work in this latter field has been especially fostered at Cleveland and the present meeting promises to be one of unusual interest. The American Association of Physical Anthropologists will also hold sessions at Cleveland this year.

**PSYCHOLOGY.**—Section I will hold sessions on Friday, January 2. Professor Madison Bentley, of Cornell University, retiring vice-president for the section, will give the vice-presidential address in the afternoon. His title will be "Psychology's Family Relations among the Sciences." The remainder of the sessions will be devoted to contributions.

**SOCIAL AND ECONOMIC SCIENCES.**—Section K will hold no sessions by itself. A joint session with Section A (Mathematics), the American Mathematical Society and the American Statistical Association will be held Monday afternoon, the program being devoted to mathematical papers on statistics and economics. The invited speakers for this session are Professor G. C. Evans (Rice Institute), Professor Ragnar Frisch (Yale University) and Professor Harold Hotelling (Stanford University). Professor Evans will give a paper entitled "Simple Types of Economic Crises and Cycles," and Professor Hotelling will speak on "Recent Improvements in Statistical Inference." Professor Frisch's subject is to be announced.

Although the permanent secretary has little detailed information concerning the plans of the independent scientific societies of the social-economic group that are to meet in Cleveland in convocation week—since these societies have preferred to manage their own arrangements and their secretaries have consequently not kept the Washington office informed as preparations have proceeded—yet it is certain that the sessions of this group of societies will constitute a very important part of the unusual attractions of the Cleveland meeting. It is very unusual to have the social and economic sciences so strongly represented along with the natural and exact sciences, and the association is highly gratified by the presence of these important societies this year. The council has repeat-



edly expressed the hope that these two main groups of science workers may come into closer contact, for mutual benefit and appreciation and for the advancement of science as a whole.

The Metric Association will hold sessions at the Hotel Statler on Monday morning and afternoon, celebrating the fourteenth anniversary of the founding of the organization. The morning session will be devoted to problems of standardization in industry. There will be the usual Weights and Measures luncheon. The afternoon session will be devoted to legislation, education, publicity and business. The annual Metric dinner, at the Hotel Statler, will occur Monday.

**HISTORICAL AND PHILOLOGICAL SCIENCES.**—The History of Science Society will hold sessions on Wednesday and Thursday, in conjunction with the committee on the promotion of Chinese studies, of the American Council of Learned Societies. The first day will be devoted to the history of science in China, with papers on ephedrin, alchemy, tropical medicine, horticulture, agriculture, mathematics and the Chinese scientific method. A joint session with Sections D and L will be devoted to papers commemorating the tricentenary of the death of Johannes Kepler. A session is being planned for papers on the development of laboratories in the universities of the Middle Ages.

**ENGINEERING.**—Section M will hold sessions on Tuesday morning and afternoon and on Wednesday morning. The Tuesday sessions, arranged by a local committee, are to be devoted to recent developments in telephony, mechanics of the telescope, sewage and water problems of the Great Lakes region, and recent metallurgical developments. At the Wednesday session will be presented the retiring vice-presidential address of Professor H. F. Moore, of the University of Illinois, who will speak on "Engineering Culture." The education of engineers after leaving college will be the topic of another address.

The Cleveland section of the Institute of Radio Engineers is planning to hold sessions in convocation week, but further information concerning these important programs has not been received.

**MEDICAL SCIENCES.**—It is expected that Section N will hold a session of invited papers on medical topics of general interest. The American Society of Tropical Medicine has intimated that it will hold sessions at Cleveland, but definite information is still lacking.

**AGRICULTURE.**—Section O will hold morning and afternoon sessions on Tuesday, with the American Society of Agronomy, in a symposium on "Nitrogen Relationships in Soils," arranged by Professor R. M. Salter, of Ohio State University. The invitation papers will deal with the several important aspects

of the nitrogen problem. A joint dinner with the American Society of Agronomy and other associated societies will be held on Tuesday evening, at which time Professor M. F. Miller, of the University of Missouri, will deliver the address of the retiring vice-president for Section O.

The American Society for Horticultural Science will hold its twenty-seventh annual meeting on Monday, Tuesday and Wednesday. The annual horticulturists' dinner will occur on Tuesday evening, after which the address of the retiring president will be given by A. T. Erwin, of Iowa State College. There will be a joint session with the American Society of Plant Physiologists on Tuesday forenoon. A session will be devoted to floriculture and ornamental horticulture.

The Association of Official Seed Analysts is to meet on Wednesday, Thursday and Friday. The presidential address will be given Wednesday, by President A. L. Stone, of the University of Wisconsin. Thursday will be devoted to a symposium on variations and tolerances, at which the discussion will be led by W. H. Wright, of the Canadian Department of Agriculture. Among the speakers at this symposium will be Edgar Brown (U. S. Department of Agriculture), H. R. Kraybill (Purdue University) and M. T. Munn (New York Agricultural Experiment Station, Geneva). The annual dinner of this association will be held on Thursday evening. There will be the usual business session, with committee reports and a number of papers of general interest.

The Potato Association of America plans to hold sessions on Tuesday and Wednesday, with papers on many phases of potato culture, but the permanent secretary has no further information in this connection.

The Geneticists Interested in Agriculture will meet on Monday morning with the Genetics Sections of the Zoological and Botanical Societies. This session will be devoted to a symposium on "Inbreeding and Its Application to Improvement in Plants and Animals." The speakers will be F. A. Krantz (University of Minnesota) and W. F. Dove (University of Maine). Dr. Krantz will consider the subject with particular reference to improvement in potatoes and Dr. Dove from the standpoint of poultry breeding. On Monday afternoon there will be a joint session with the American Society of Agronomy, at which a program on "Inbreeding with Particular Reference to Maize" will be presented. The speakers will be R. J. Garber (West Virginia University) and F. D. Richey (U. S. Bureau of Plant Industry).

**EDUCATION.**—Six sessions of Section Q are planned for Monday, Tuesday and Wednesday. A joint din-

ner of the section with the Societies of Phi Delta Kappa and Kappa Delta Pi is planned for Tuesday evening. A brief program will follow the dinner, devoted to studies in administrative and supervisory research. At the Tuesday afternoon session the retiring vice-president for Section Q, Dr. Frank N. Freeman (of the University of Chicago), will present an address. The topics for the other sessions are: "Research in Elementary Education," Monday morning; "Research in Secondary and Collegiate Education," Monday afternoon; "Research in Social Studies and other Problems of Character Training," Tuesday morning; "Investigations in the Teaching of Science," Wednesday morning.

PROGRAMS RELATED TO SCIENCE IN GENERAL.—The Society of the Sigma Xi is to hold on Tuesday afternoon a business meeting beginning at 4 o'clock. The annual dinner will occur Tuesday at 6:30 and the

ninth annual Sigma Xi lecture will be given at the general session Tuesday evening, by Dr. C. E. Kenneth Mees, director of research of the Eastman Kodak Company. Tickets for the dinner may be secured, before Tuesday noon, at the general registration offices in the gymnasium of Western Reserve University. The American Nature-Study Society plans to hold sessions on nature-study problems of various kinds, especially nature education. A dinner of the society is planned. The Gamma Alpha Scientific Fraternity will hold its council meeting on Tuesday afternoon and a breakfast on Wednesday morning. A proposed revision of the constitution will be considered. Sigma Delta Epsilon, Graduate Women's Scientific Organization, will have two breakfast meetings, with interesting talks. The Tuesday breakfast will be for all women visitors, while the meeting on Wednesday will be specially for members of the organization.

## SCIENTIFIC EVENTS

### THE BRITISH FRESHWATER BIOLOGICAL STATION

ACCORDING to an article in the *London Times* the Freshwater Biological Association of the British Empire was founded in the early part of this year with the object of securing the establishment of a freshwater laboratory to prosecute research into the problems of freshwater biology. Although the movement originated among the professional biologists of Great Britain, it has secured the support of the leading scientific societies and of a large proportion of the economic bodies interested in river pollution, freshwater fisheries, and the like.

The conference convened by the council of the association at Fishmongers' Hall on February 21 last afforded evidence of the interest displayed and showed that there is a real and widely felt need for a freshwater research station. Promises of financial support in the form of annual grants have been received from many sources. They are conditional upon the actual founding of the station as a research center. The council are now making an appeal for contributions to a fund for the establishment and initial equipment of the station, and several hundred pounds have already been promised.

It is hoped that all who are interested in fresh waters, such as public bodies responsible for water supply, medical officers of health, water and sanitary engineers, fishermen and naturalists, will realize the importance of the projected station and will be prepared to help by contributing to the fund. Contributions of any amount, large or small, will be welcomed.

The council have prepared a pamphlet giving an outline of the aims of freshwater biology in the British Isles, which includes a scheme of work and plans for the projected station. This pamphlet, as well as the report of the conference at Fishmongers' Hall, can be obtained on application to the acting secretary, Professor F. Balfour Browne, Winsecombe Court, Winsecombe, Somerset.

### CELEBRATION OF THE TWENTY-FIFTH ANNIVERSARY OF THE THEORY OF RELATIVITY

ON November 10, the University of Colorado celebrated the twenty-fifth anniversary of the theory of relativity. It was on September 26, 1905, that Professor Einstein's first paper on relativity entitled, "Zur Elektrodynamik Bewegter Körper," appeared in the *Annalen der Physik*. As far as is known, this was the second celebration honoring the famous physicist, the first being that of the Royal Society in London some time ago.

The celebration opened with a banquet in the Memorial Union Building with places set for one hundred and seventy persons, consisting of students, faculty, townspeople and delegations from the Colorado School of Mines, Colorado State Teachers' College and the Colorado Agricultural College. At the dinner Dr. Junius F. Brown, of the department of psychology, gave reminiscences of Professor Einstein as he knew him in the seminar in Berlin last year.

After the dinner addresses were given by various members of the faculty. Dean O. C. Lester, of the Graduate School, spoke on "The Changed Outlook on