

SPECIAL ISSUE CONTAINING PRELIMINARY ANNOUNCEMENTS OF THE FIFTH PHILADELPHIA MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE AND ASSOCIATED SOCIETIES, DECEMBER 27, 1926, TO JANUARY 1, 1927. EDITED BY BURTON E. LIVINGSTON, PERMANENT SECRETARY.

# SCIENCE

VOL. LXIV DECEMBER 3, 1926 No. 1666

## CONTENTS

<i>Preliminary Announcement of the Fifth Philadelphia Meeting of the American Association for the Advancement of Science and Associated Societies:</i>	
DR. BURTON E. LIVINGSTON .....	533
<i>Scientific Events:</i>	
<i>Exhibition at the Science Museum at South Kensington; Presentation of the Yosemite Museum to the Park Service; The Twenty-fifth Anniversary of the Bureau of Standards; Award of Medals by the Royal Society</i> .....	551
<i>Scientific Notes and News</i> .....	552
<i>University and Educational Notes</i> .....	555
<i>Discussion and Correspondence:</i>	
<i>What is "Metaphase"?: PROFESSOR M. A. CHRYSLER. The Reception of the "Origin of Species": PROFESSOR E. B. TITCHENER. Plasticine Models: CATHERINE V. BEERS. Lost X-ray Spectrometer: DR. PAUL E. KLOPSTEG</i> .....	555
<i>Scientific Books:</i>	
<i>Fernald's Applied Entomology: DR. L. O. HOWARD</i> .....	557
<i>Special Articles:</i>	
<i>The Configurational Relationship of Dextro-Methyl-ethyl Carbinol to Dextro-lactic Acid: DR. P. A. LEVENE, A. WALT, H. L. HALLER. Electrical Activation of the Nereis Egg: WARE CATTELL</i> .....	558
<i>Societies and Academies:</i>	
<i>The Summer Meeting of the American Mathematical Society: PROFESSOR ARNOLD DRESDEN. Utah Academy of Sciences: C. ARTHUR SMITH</i> .....	560
<i>Science News</i> .....	x

SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

## THE SCIENCE PRESS

Lancaster, Pa. Garrison, N. Y.  
New York City: Grand Central Terminal.  
Annual Subscription, \$6.00. Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

Entered as second-class matter July 18, 1923, at the Post Office at Lancaster, Pa., under the Act of March 8, 1879.

## PRELIMINARY ANNOUNCEMENT OF THE FIFTH PHILADELPHIA MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE AND ASSOCIATED SOCIETIES

### INTRODUCTION

THIS special issue of SCIENCE is sent to all members of the American Association, to those who regularly receive *The Scientific Monthly* as well as to those regularly receiving SCIENCE, in order that the preliminary announcements of the approaching fifth Philadelphia meeting may reach every member. The announcements contain as much information about the Philadelphia meeting as could be brought together at the time this issue went to press. The complete general program of the meeting will be distributed to all who register in the registration offices at Philadelphia, which will open at 9 on Monday, December 27, and will be open until 6. The office hours will be the same on the following days of the meeting. The registration offices will be in the same hall with the annual science exhibition, Weightman Hall, the gymnasium of the University of Pennsylvania, at 33rd and Spruce Streets. Members who have paid dues

Those planning to attend the fifth Philadelphia meeting should arrange for their hotel rooms at once. A list of Philadelphia hotels, with prices, has been published in SCIENCE for November 12.

Those who are to present papers at the meeting, whether they are members of the association or not, should send their manuscripts to the association news service as soon as possible, sending an additional copy of each paper to Science Service and a third copy to the society or section secretary in whose program the paper is to occur.

When purchasing railway tickets to Philadelphia, each purchaser should be sure to secure from the ticket agent a certificate for the meeting of the American Association for the Advancement of Science and Associated Societies, unless a round-trip ticket is purchased. After validation at the meeting, the certificate will entitle the holder to a half-fare rate for the return trip.

for the current year and who do not attend the meeting may receive the general program gratis if they send their requests for it to the Washington office of the association, in the Smithsonian Institution Building. Such requests should arrive by December 22; if received later, they can not be cared for till after the close of the meeting.

The importance of the annual science convention is being more generally appreciated each year, the membership rolls of the association and the associated scientific societies are being rapidly augmented, and the number of men and women of science who attend the annual meetings is correspondingly increasing. The Philadelphia meeting will surely be attended by a much larger number than were present at the Kansas City meeting last year, and it may rival in attendance the Washington meeting of the year before. Thirty-nine scientific organizations are planning to meet with the association at Philadelphia.

This meeting will be held under the presidency of Dr. L. H. Bailey, eminent systematic botanist, productive student of difficult plant families like the sedges and the palms, editor of our most useful books of reference on cultivated plants, and author or editor of numerous other volumes on nature and on rural life. Dr. Bailey was president of the International Congress of Plant Sciences, held last August in Ithaca, N. Y., and he holds the presidency of the Botanical Society of America. The retiring president of the association is this year Dr. Michael I. Pupin, of Columbia University, widely known for his physical discoveries and inventions, as well as for his autobiography, "From Immigrant to Inventor," which has been read by almost every student of American science. Dr. Pupin will deliver the address of the retiring president on the evening of Monday, December 27, at the opening of the meeting. The subject of his address will be "Fifty Years' Progress in Electrical Communication."

The fifth Philadelphia meeting will be the eighty-third meeting of the association. Earlier meetings in the Quaker City, exceptionally successful in every case, have occurred in September, 1848 (the first meeting of the association, at which its organization was completed); in September, 1884 (the thirty-third meeting); in December, 1904 (the fifty-fourth meeting and the third after the season of the annual meeting was changed from summer to winter); and in December, 1914 (the sixty-sixth meeting). At this time, when the association is again returning to the place of its birth, it is interesting to recall the names of the presidents who presided at the earlier Philadelphia meetings and of the retiring presidents who gave the main addresses on those occasions. These are as follows:

*First Philadelphia meeting, September, 1848.*—William B. Rogers acted as president until the election of W. C. Redfield, who presided throughout the latter part of the meeting.

*Second Philadelphia meeting, September, 1884.*—J. P. Lesley presided and C. A. Young gave the retiring presidential address, on "Pending Problems in Astronomy."

*Third Philadelphia meeting, December, 1904.*—W. G. Farlow presided and Carroll D. Wright gave the retiring presidential address, on "Science and Economics."

*Fourth Philadelphia meeting, December, 1914.*—Charles W. Eliot presided and the retiring presidential address was given by Edmund B. Wilson, on "Some Aspects of Progress in Modern Zoology."

#### LOCAL COMMITTEES AND LOCAL REPRESENTATIVES OF SECTIONS FOR THE FIFTH PHILADELPHIA MEETING

##### LOCAL COMMITTEE ON ARRANGEMENTS

C. E. McClung, *chairman*; professor of zoology and director of the laboratory, University of Pennsylvania.

Samuel W. Fernberger, *secretary*; assistant professor of psychology, University of Pennsylvania.

W. H. DuBarry; assistant to the president, University of Pennsylvania.

G. H. Hallett; professor of mathematics, University of Pennsylvania.

G. E. Nitzsche; recorder, University of Pennsylvania.

Reese James; professor of English, University of Pennsylvania.

W. T. Taggart; professor of chemistry, University of Pennsylvania.

Thomas Hart; director of Houston Hall, University of Pennsylvania.

Arthur W. Goodspeed (representing the American Philosophical Society); professor of physics and director of the laboratory, University of Pennsylvania.

T. Chalkley Palmer (representing the Academy of Natural Sciences); director of the Academy of Natural Sciences.

Howard McClenahan (representing the Franklin Institute); secretary of the Franklin Institute.

George Wheeler (representing the Philadelphia Public Schools); assistant superintendent, Philadelphia Public Schools.

##### CHAIRMAN OF SUBCOMMITTEES

*Finance*: W. H. DuBarry.

*Meeting Places*: G. H. Hallett.

*Hotels and Housing*: G. E. Nitzsche.

*Publicity*: Reese James.

*Exhibition*: W. T. Taggart.

*Transportation*: Thomas Hart.

*Entertainment*: G. E. Nitzsche.

##### LOCAL REPRESENTATIVES FOR SECTIONS OF THE ASSOCIATION AND RELATED SOCIETIES

*Section A (Mathematics)*: George G. Chambers.

*Section B (Physics)*: Arthur W. Goodspeed.

*Section C (Chemistry)*: Walter T. Taggart.

*Section D (Astronomy)*: Samuel G. Barton.

*Section E (Geology and Geography)*: Frederick Ehrenfeld.

*Section F (Zoological Sciences)*: D. H. Wenrich.

*Section G (Botanical Sciences)*: Rodney H. True.

*Section H (Anthropology)*: Frank G. Speck.

*Section I (Psychology)*: Edwin B. Twitmyer.

*Section K (Social and Economic Sciences)*: James P. Lichtenberger.

*Section L (Historical and Philological Sciences)*: Arthur C. Howland.

*Section M (Engineering)*: Robert H. Fernald.

*Section N (Medical Sciences)*: Wm. Pepper.

*Section O (Agriculture)*: John W. Harshberger.

*Section Q (Education)*: James C. Miller.

*Societies not specially related to any single section*: Samuel W. Fernberger.

All correspondence for the local committee or any of its members, concerning local arrangements for the meeting, should be addressed to the general chairman, Dr. C. E. McClung, Zoological Building, University of Pennsylvania, Philadelphia. Local representatives for sections may be addressed individually at the University of Pennsylvania.

#### OFFICERS OF THE ASSOCIATION FOR THE CALENDAR YEAR 1926, INCLUDING THE FIFTH PHILADELPHIA MEETING

##### *President*

L. H. Bailey, 103 Sage Place, Ithaca, N. Y.

##### *Retiring President*

M. I. Pupin, Columbia University, New York City.

*Vice-Presidents,<sup>1</sup> Retiring Vice-Presidents and Secretaries of the Sections*

##### *Section A (Mathematics)*:

*Vice-president*, Edward V. Huntington, Harvard University, Cambridge, Mass.

*Retiring Vice-president*, W. H. Roever, Washington University, St. Louis, Mo.

*Secretary*, R. C. Archibald, Brown University, Providence, R. I.

##### *Section B (Physics)*:

*Vice-president*, William Duane, Harvard University, Cambridge, Mass.

*Retiring Vice-president*, H. M. Randall, University of Michigan, Ann Arbor, Mich.

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

##### *Section C (Chemistry)*:

*Vice-president*, Lauder W. Jones, Princeton University, Princeton, N. J.

*Retiring Vice-president*, H. B. Cady, University of Kansas, Lawrence, Kans.

<sup>1</sup> Vice-presidents are elected for a term of one year, from the close of one annual meeting to the close of the next following one.

*Secretary*, Gerhard Dietrichson, Massachusetts Institute of Technology, Cambridge, Mass.

##### *Section D (Astronomy)*:

*Vice-president*, Robert G. Aitken, Lick Observatory, Mt. Hamilton, Calif.

*Retiring Vice-president*, A. E. Douglass, University of Arizona, Tucson, Ariz.

*Secretary*, Philip Fox, Northwestern University, Evanston, Ill.

##### *Section E (Geology and Geography)*:

*Vice-president*, G. H. Ashley, State Capitol, Harrisburg, Pa.

*Retiring Vice-president*, R. A. Daly, Harvard University, Cambridge, Mass.

*Secretary*, G. R. Mansfield, U. S. Geological Survey, Washington, D. C.

##### *Section F (Zoological Sciences)*:

*Vice-president*, Winterton C. Curtis, University of Missouri, Columbia, Mo.

*Retiring Vice-president*, H. S. Jennings, Johns Hopkins University, Baltimore, Md.

*Secretary*, Geo. T. Hargitt, Syracuse University, Syracuse, N. Y.

##### *Section G (Botanical Sciences)*:

*Vice-president*, B. M. Duggar, Missouri Botanical Garden, St. Louis, Mo.

*Retiring Vice-president*, Robert B. Wylie, University of Iowa, Iowa City, Iowa.

*Secretary*, Sam F. Trelease, Columbia University, New York City.

##### *Section H (Anthropology)*:

*Vice-president*, R. Bennett Bean, University of Virginia, University, Va.

*Retiring vice-president*, C. B. Davenport, Station for Experimental Evolution, Cold Spring Harbor, N. Y.

*Secretary*, R. J. Terry, Washington University School of Medicine, St. Louis, Mo.

##### *Section I (Psychology)*:

*Vice-president*, Margaret Floy Washburn, Vassar College, Poughkeepsie, N. Y.

*Retiring Vice-president*, C. E. Seashore, University of Iowa, Iowa City, Iowa.

*Secretary*, Frank N. Freeman, University of Chicago, Chicago, Ill.

##### *Section K (Social and Economic Sciences)*:

*Vice-president*, Joseph H. Willits, University of Pennsylvania, Philadelphia, Pa.

*Retiring Vice-president*, F. R. Fairchild, Yale University, New Haven, Conn.

*Secretary*, Frederick L. Hoffman, Babson Institute, Babson Park, Mass.

##### *Section L (Historical and Philological Sciences)*:<sup>2</sup>

*Vice-president*, W. Carl Rufus, University of Michigan, Ann Arbor, Mich.

<sup>2</sup> Section L has not yet been wholly organized. The recently affiliated History of Science Society represents a part of the history portion of this section. The recently organized and affiliated Linguistic Society of America was asked to take charge of programs on linguistics, but no program in this field will be presented this year, since that society meets elsewhere.

*Retiring Vice-president*, W. A. Oldfather, University of Illinois, Urbana, Ill.

*Secretary*, Frederick E. Brasch, Library of Congress, Washington, D. C.

*Section M (Engineering):*

*Vice-president*, C. R. Richards, Lehigh University, Bethlehem, Pa.

*Retiring Vice-president*, C. R. Richards, Lehigh University, Bethlehem, Pa.

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

*Section N (Medical Sciences):*

*Vice-president*, Rufus I. Cole, Rockefeller Hospital, New York City.

*Retiring Vice-president*, A. J. Carlson, University of Chicago, Chicago, Ill.

*Secretary*, A. J. Goldforb, College of the City of New York, New York City.

*Section O (Agriculture):*

*Vice-president*, C. F. Marbut, U. S. Department of Agriculture, Washington, D. C.

*Retiring Vice-president*, C. V. Piper, *deceased*.

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

*Section Q (Education):*

*Vice-president*, Melvin E. Haggerty, University of Minnesota, Minneapolis, Minn.

*Retiring Vice-president*, Otis W. Caldwell, Columbia University, New York City.

*Secretary*, A. S. Barr, University of Wisconsin, Madison, Wis.

*Permanent Secretary*<sup>3</sup>

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

*General Secretary*<sup>3</sup>

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

*Treasurer*<sup>3</sup>

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

*Secretary of the Council and Program Editor*

Sam F. Trelease, Columbia University, New York City.

*Executive Assistant*

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

*Auditor*

R. B. Sosman, Geophysical Laboratory, Washington, D. C.

<sup>3</sup> The permanent secretary, the general secretary and the treasurer are each elected for a term of four years; their terms of office expire at the end of the fifth New York meeting.

*Members of the Executive Committee of the Council for the Calendar Year 1926\**

J. McK. Cattell (1926), chairman, Garrison-on-Hudson, N. Y.

L. H. Bailey, president of the association (1926).

Burton E. Livingston, permanent secretary (1928).

W. J. Humphreys, general secretary (1928).

Herman L. Fairchild (1927), University of Rochester, Rochester, N. Y.

Vernon Kellogg (1928), National Research Council, Washington, D. C.

F. R. Moulton (1929), University of Chicago, Chicago, Ill.

W. A. Noyes (1927), University of Illinois, Urbana, Ill.

M. I. Pupin (1929), Columbia University, New York City.

Henry B. Ward (1926), University of Illinois, Urbana, Ill.

Edwin B. Wilson (1928), Harvard School of Public Health, Boston, Mass.

HOSTS FOR THE MEETING

The University of Pennsylvania is acting with the American Philosophical Society and the Franklin Institute, as hosts for this meeting. Those in attendance are invited to visit the rooms of the Philosophical Society, in Independence Hall, and those of the Franklin Institute. Most of the sessions are to be held in the buildings of the University of Pennsylvania, which will provide amply and admirably for the many simultaneous meetings of our convention. The Drexel Institute is to contribute the use of its auditorium, Drexel Hall. For the excellent preliminary arrangements the thanks of those who attend will be due specially to Dr. C. E. McClung and the other members of the local committees. Dr. Samuel W. Fernberger, secretary of the local committee on arrangements, has looked after the many details of the preparations with great efficiency and geniality.

THE FOURTH PRIZE AWARD

The fourth American Association Prize will be awarded at the fifth Philadelphia meeting. This has been noted in *SCIENCE* for November 26, where details concerning the prize may be found. The prize is given each year to the author of one of the outstanding contributions to science presented in the program of the meeting, without reference to whether the recipient is a member of our organization or not. There is no competition and no submitting of papers. Each section secretary, as well as the secretary of each organization meeting with the association at this meeting, is asked to make nominations for this purpose and the Committee on Prize Award will select

<sup>4</sup> The number in parentheses denotes the calendar year at the end of which the member's term of office expires.

the winner from the list of nominations thus secured. The name of the winner will be made known at the close of the meeting. The Committee on Award has the following members:

- C. E. Seashore, chairman; University of Iowa, Iowa City, Iowa.  
 Otis W. Caldwell; Lincoln School, Columbia University, New York City.  
 C. B. Davenport; Station for Experimental Evolution, Cold Spring Harbor, Long Island, N. Y.  
 Lauder W. Jones; Princeton University, Princeton, N. J.  
 C. F. Marbut; Bureau of Soils, U. S. Department of Agriculture, Washington, D. C.

#### MEETING PLACES

Most of the sessions of the Philadelphia meeting will be held in the buildings of the University of Pennsylvania, and the American Association greatly appreciates the cordially helpful and cooperative action of the authorities of the university, who are, through the local committee on arrangements, placing many of the university halls at the disposal of the association and its associated organizations for the period of the meeting. A few of the associated societies will hold sessions in hotels or other places outside of the university, as is mentioned below in some cases or as will be shown in the general program of the meeting.

#### GENERAL SESSIONS AND NON-TECHNICAL LECTURES

##### GENERAL SESSIONS

At the opening session of the meeting, in Drexel Hall on the evening of Monday, December 27, at 8:15, will be delivered Retiring President M. I. Pupin's address, on "Fifty Years' Progress in Electrical Communication." This should be heard by all who are interested in science. It will be followed by a general reception (in Houston Hall) to those who attend the meeting, given by the local committee and the host institutions.

On Tuesday afternoon at 2:30 a general session of the association will be devoted to certain phases of the work of the American Association's Committee of One Hundred on Scientific Research, Dr. Rodney H. True, *secretary*. This program is being arranged under the auspices of the Committee on Research in Educational Institutions, one of the subcommittees of the Committee of One Hundred. It is in charge of Dr. Maynard M. Metcalf, of the Johns Hopkins University, secretary of the subcommittee, who has been engaged in a study of the problem of research in colleges, not only with the subcommittee but also in connection with the work of the National Research Council. The general subject of this program will be

"Research, especially in Colleges and Professional Schools." The following papers will be presented: "Research as representing an Attitude of Mind," by Dr. John C. Merriam, of the Carnegie Institution of Washington. "Research in Medical Schools," by Dr. Florence R. Sabin, of the Rockefeller Institute for Medical Research. "Research in Jurisprudence," by Professor Walter W. Cook, of the Yale Law School and the Johns Hopkins University. Research in Colleges—Suggestions from Several Conferences," by Dr. Maynard M. Metcalf, of the Johns Hopkins University. "Research in Colleges—Experiences in One College," by Professor H. B. Goodrich, of the Connecticut Wesleyan University. There will be informal discussions from the floor.

Another general session on Tuesday afternoon, at 4:30, probably in Drexel Hall, will be devoted to the Fourth Annual Josiah Willard Gibbs Lecture, by Dr. H. B. Williams, professor of physiology in the College of Physicians and Surgeons of Columbia University. Dr. Williams will speak on "Mathematics and the Biological Sciences," a very timely topic, as most biologists and many mathematicians are aware. The Josiah Willard Gibbs Lecture is a regular annual occurrence under the auspices of the American Mathematical Society. This afternoon session will be held jointly by the Mathematical Society and the American Association.

On Tuesday evening the Fifth Annual Sigma Xi Lecture will be given in Drexel Hall, by a speaker whose name is to be announced later. The society unites with the association in this general session.

A general session on Wednesday afternoon (room 201, Bennett Hall) at 2:30 is planned for a special program and conference on "Hydrobiology." This is being arranged under the joint auspices of the Committee on Aquiculture of the Division of Biology and Agriculture of the National Research Council, and the Circle of Cooperating Hydrobiologists. Professor Stephen A. Forbes, of the University of Illinois, will read a paper on "Fundamental Features and Possible Improvement of the Yield of a River System." Professor Charles Juday, of the University of Wisconsin, will read a paper on "The Productivity of Wisconsin Lakes." A paper will be read by Professor A. G. Huntsman, of the University of Toronto, on "Limiting Factors," and Dr. Albert Mann, of the Carnegie Institution of Washington, will read a paper on "Bottom Diatoms, their Great Value and Possible Increase."

The general session of Wednesday evening (at 8:15, in Drexel Hall) will be of specially broad interest, unusually attractive to all other intellectual workers as well as to those interested in science and its development in the world. On this occasion the

association is exceptionally fortunate in having been able to secure an illustrated lecture on "Cambridge University," to be given by the eminent British biologist, Dr. George H. F. Nuttall, director of the Molteno Institute for Research in Parasitology, Cambridge University, Cambridge, England.

On Thursday afternoon of convocation week, at 4:30, in Drexel Hall, will occur a general session that will be of great fundamental interest to all students and workers in every field of science and for the public as well. Dr. Heber D. Curtis, eminent astronomer, director of the Allegheny Observatory, of Pittsburgh, Pa., will deliver an illustrated lecture on "The Unity of the Universe."

The general session of Thursday evening will be of great general interest, and of special interest to students of geography and anthropology. On this occasion the American Association will fortunately be unusually honored in having as lecturer the general secretary of the British Association for the Advancement of Science, Dr. J. L. Myres, who is to give an illustrated lecture on "Geographic Conditions of Ancient Greek Culture." It seldom happens that the British Association is represented by one of its general officers at one of our meetings. Dr. Myres's presence and his lecture are an illustration of the cordial relations between the British and the American organizations for the advancement of science.

#### NON-TECHNICAL LECTURES

Arrangements are in an advanced state of progress for a series of public and non-technical presentations of illustrated lectures and demonstrations of science topics for the people of Philadelphia, some of them specially prepared for students in the schools. It is recently becoming more and more thoroughly recognized that the truths of science and an appreciation of the scientific method of thought and research and of the basic principles and standards of scientific scholarship need to be presented at every opportunity to the general public and especially to adolescents. A plan has recently been developed by which the annual meetings of our association may be rendered more valuable in this respect, carrying a better appreciation of science to the people of the cities where our meetings are held and especially to the youth of those cities, who will be the active people of to-morrow. The excellent service given in recent years by the daily press, to the diffusion of scientific knowledge in general and to the annual meetings of the American Association in particular, assures a very wide influence beyond the audiences at the presentations themselves. The general program will give details of these non-technical lectures and demonstrations.

#### THE ANNUAL SCIENCE EXHIBITION

The American Association exhibition of scientific apparatus and methods, recent results of research and new publications on science subjects will be a very important feature of the fifth Philadelphia meeting. The exhibits will be partly by manufacturers and publishers and by dealers in scientific instruments, materials, etc., and partly by individual research workers and institutions. The latter group of exhibits will be mainly by invitation. Individuals who wish to exhibit newly developed apparatus and methods, or the results of recent research, will be accommodated as far as possible. Exhibitions will be held by a number of the science societies that meet with the association at Philadelphia and large numbers of special individual exhibits will be shown in these. The general exhibition will be housed in the great hall of the gymnasium of the University of Pennsylvania (Weightman Hall, 33rd and Spruce Streets) and the society exhibitions will be in rooms near those used for the scientific sessions of the respective societies. A catalogue of the general exhibition will be published and is to be available on Tuesday, the second day of the meeting, being printed on Monday night. Lists of exhibits in the society exhibitions will be included in the catalogue in so far as these can be secured in time. The association desires to be of as much service as possible, to make the society exhibitions a success in every way.

The general exhibition will be the social center of the convention. The hall will be appropriately decorated and the exhibits will be attractively arranged. The registration offices will occupy a central position in the exhibition hall, near the Christmas tree, and all who register will have occasion to visit the exhibition several times in the week of the meeting. Tea will be served there every afternoon. Two evening entertainments are being planned for the general exhibition this year, a Christmas-tree entertainment for Tuesday evening and a New-Year's-Eve entertainment for Friday evening. The general exhibition will be open daily from 9 to 6 and on the two special evenings until late. Those who attend evening sessions on these two evenings should visit the exhibition hall before retiring, even if the visit must be after 11, for the most interesting and amusing features of the entertainments will be placed near the end of the period. Statements about the annual science exhibition have been made in *SCIENCE* for November 19, page 491.

#### NEWS SERVICE AT THE PHILADELPHIA MEETING

The news service is this year in charge of Austin H. Clark, of the U. S. National Museum, who was chairman of the publicity committee at the recent

Washington meeting. Mr. Clark is the director of news for the American Association. The association news service will again have the cooperation of Science Service, which will furnish news of the meeting to a series of dailies that have already arranged for this. It will be remembered that Science Service has offices in the National Academy Building, Washington, D. C., that it was organized to supply reliable science news to daily papers, that it is the publisher of the *Science News-Letter*, and that the American Association is officially represented by three members on its board of directors. In addition, several other news organizations and a number of the great dailies will have representatives at the Philadelphia meeting.

The purpose of the American Association News Service, under the direction of Mr. Clark, is to supply press representatives freely with just as full and just as usable information as is possible, and to have this ready for use before the date of release. This can be accomplished only in so far as those who are planning to give papers or deliver addresses at the meeting will send their manuscripts, or at least abstracts thereof, to the director of news some time before the opening of the meeting. These manuscripts should each show the name of the organization before which the paper is to be presented, with information as to the date of presentation, as nearly as the latter can be given; at the top of the manuscript write, "Paper to be presented before the \_\_\_\_\_ (name) Society at its session on \_\_\_\_\_ (date)." Manuscripts for the news service should be sent to Mr. Clark, at the Washington office of the association, in the Smithsonian Institution Building. It needs to be emphasized that the efficiency of our news service will depend on the early sending of manuscripts by the authors; the material must be worked over and prepared for use by the representatives of the press and the greater part of this work must be done in Washington, before the meeting opens. The same applies to the working over of manuscripts by the staff of Science Service. *Prepare manuscripts in triplicate and send one copy to Mr. Clark, a second to Science Service and a third to the secretary of the society or section concerned.*

The material prepared by our news service will be freely available to the press representatives, marked for release only at the proper time, on the day of presentation of the paper in each case. The daily press is now the strongest ally of the association, in its efforts to cultivate and extend an appreciation of science and research among intelligent people. The news service will try to bring authors of important papers into touch with the press representatives, for interviews, and the men and women of science who

will be present at the Philadelphia meeting are asked to do all they can to facilitate the work of the newspaper men. Those who have news material are asked to cooperate with Mr. Clark, to the end that the news of the meeting may be consistently and efficiently released, and all press representatives and organizations are asked to cooperate in the same way.

#### SESSIONS OF SECTIONS AND SOCIETIES AT PHILADELPHIA

The several sections of the American Association and the many societies and other organizations that are to meet with the association this year will hold numerous sessions for reading of papers and delivering of addresses, by specialists and authorities in nearly all branches of science. A preliminary account of the programs that are being arranged, so far as the necessary information had been received from the secretaries when this account went to press, is given below. Full information will appear in the general program of the meeting, which will be available Monday morning when registration begins. The following account is arranged under headings that correspond to the sections of the association.

*A. Mathematics.*—The American Mathematical Society and the Mathematical Association of America will meet jointly with Section A of the A. A. A. S., on Thursday forenoon, December 30. Professor W. H. Roever, of Washington University, retiring vice-president for Section A, will deliver an address on "The Weight Field of Force of the Earth." Other addresses will include one by Professor F. D. Murnaghan, of the Johns Hopkins University, representing the Mathematical Association of America, on "The Duty of Exposition, with Special Reference to the Cauchy-Heaviside Theorem." The fourth annual Josiah Willard Gibbs lecture will be given under the joint auspices of the American Mathematical Society and the American Association, by Professor H. B. Williams, Dalton professor of physiology in Columbia University; the lecture will deal with applications of mathematics to physiology. The American Mathematical Society will hold its sessions for the reading and discussion of papers on Tuesday and Wednesday, December 28 and 29; Professor G. D. Birkhoff, research professor of mathematics in Harvard University, will deliver his retiring presidential address on "A Mathematical Critique of Some Physical Theories." The Mathematical Association of America will hold similar sessions on Thursday afternoon and Friday, December 30 and 31; addresses will be given by Mr. W. D. Lambert and Professors R. C. Archibald, D. R. Curtiss, E. R. Hedrick, E. V. Huntington, J. E. Rowe and F. M. Weida. The attention of those interested in mathematics is also drawn

to an address by Professor W. F. G. Swann, of Yale University, on "The New Quantum Dynamics," which will be given in connection with Section B (Physics). On Wednesday evening, December 29, an informal dinner for mathematicians and their guests will be held at the Aldine Hotel, 19th and Chestnut Sts.

*B. Physics.*—Section B will meet in association with the American Physical Society. The meetings will occupy three days, Monday to Wednesday, December 27 to 29. On Tuesday afternoon Professor H. M. Randall, of the University of Michigan, retiring vice-president for Section B, will deliver his official address on "Infra Red Spectroscopy." This will be followed by an address by Professor W. F. G. Swann, of Yale University, on "The New Quantum Dynamics." The attention of those interested in physics is directed to the address of Professor G. D. Birkhoff, of Harvard University, retiring president of the American Mathematical Society, which is entitled "A Mathematical Critique of Some Physical Theories."—The American Meteorological Society will hold its eighth annual meeting from December 30 to January 1. A symposium is planned on the meteorology of Greenland, a subject of great present interest. Mr. S. P. Fergesson, recently returned from Greenland, will lead the discussion. Results of renewed activity in the exploration of the upper air will be reported and the interesting subject of long-range weather forecasting will be discussed.

*C. Chemistry.*—Section C (Chemistry) is planning four half-day sessions, the papers all to be presented by speakers invited by the section committee. As far as possible, these will be scheduled to avoid conflicts with other sessions of interest to chemists. The address of the retiring vice-president for the section, Professor H. P. Cady, of the University of Kansas, will be given. Dr. S. E. Sheppard, of the Eastman Kodak Company, will discuss the sensitivity of photographic materials, and Dr. A. F. Lidbury will present a paper on the function of Section C in the association. It is hoped that the latter paper will lead to further discussion on the part of those present as to the kind of programs that seem most suitable for future meetings. Another feature of the program will be a half-day session on "Cosmic Chemistry." Dr. Henry N. Russell, Dr. George P. Merrill and Dr. W. J. Humphreys will discuss the chemistry of stars and meteors and of the air. Section C will join Section N for a session, on Tuesday forenoon, devoted to a discussion of "Growth and Development in Health and Disease," which will interest students of chemistry as related to physiology. (See under N, below.)

*D. Astronomy.*—The program on astronomical science will be in charge of the American Astronomical Society, with the exception of one session for

the presentation of the address by Professor A. E. Douglass, the retiring vice-president for Section D. It is planned that this address will be presented at a joint meeting with Section B (Physics), at which time also will be presented the official address of Professor H. M. Randall, retiring vice-president for Section B, and an address by Professor W. F. G. Swann, on "The New Quantum Dynamics." A local committee, of which the chairman is Professor John A. Miller, of Swarthmore College, is arranging the program of the American Astronomical Society. A joint session will be held with Section D and plans are being made for one or more other sessions with kindred societies.

*E. Geology and Geography.*—Section E will hold its sessions at Philadelphia under the chairmanship of Dr. G. H. Ashley, state geologist of Pennsylvania, on December 28 to 30, in conjunction with the Association of American Geographers. A joint dinner is planned for Wednesday night, the 29th, to be followed by addresses by Professor J. Paul Goode, retiring president of the Association of Geographers, and Professor R. A. Daly, retiring vice-president for Section E. Professor Daly's subject is to be "Dynamical Geology since 1900." Those who plan to attend the dinner on Wednesday, December 29, are requested to notify the section secretary, Dr. G. R. Mansfield, U. S. Geological Survey, Washington, D. C., by December 22 if possible.—The annual meeting of the Association of American Geographers, from December 28 to 30, will include a joint session with the American Meteorological Society, on the afternoon of December 30. A field excursion is planned and also an evening round table. The annual meeting of the National Council of Geography Teachers will be held from December 27 to 29, the theme of the meeting being "Geography in the Curriculum." Sectional meetings, with clinics and round-table conferences, will be devoted to the elementary grades, junior and senior high-school grades, and teacher-training institutions. The clinics will be conducted for two days, the same group of pupils being used in each section by the same instructor. Round-table topics will deal with: (1) the selection of geographical subject-matter and the determination of essential outcomes of geography lessons in terms of geographic facts and principles and attitudes of mind; (2) guiding principles in choosing worthwhile geographic materials—specimens, pictures, maps, graphs, etc.; (3) analysis and discussion of units of work successfully developed with pupils other than those used for the clinics. Reports of committees on elementary grades and junior and senior high-school grades will be presented and discussed, recent investigations in the general field of geography teaching will be presented and the president's address will be

given, on "Problems demanding Immediate Attention." There will be a geography dinner, followed by an address on a recent world tour. There will also be exhibits of materials for geography lessons in school grades and colleges, together with work done by pupils assembled here for observation and analysis. Special excursions will be conducted to points of special interest.—The American Alpine Club will meet on Wednesday, December 29. A business meeting is scheduled for 2:30, to be followed by several illustrated talks on recent climbs and expeditions. The annual dinner will occur in the evening, at the Bellevue-Stratford Hotel, with illustrated accounts of mountain experiences.

*F. Zoological Sciences.*—A program covering Monday, Tuesday and Wednesday, December 27 to 29, will be jointly sponsored by the American Society of Zoologists, the American Society of Naturalists, and Section F of the A. A. A. S. Programs for presentation of papers will be conducted by the American Society of Zoologists. Sessions for the reading of papers will be held on Monday, Tuesday and Wednesday mornings. Joint sessions with the Ecological Society of America and the American Society of Parasitologists are being arranged. This year the presentation of papers by laboratory demonstration or exhibit is being stressed, and it is planned to set aside all Monday afternoon and a part of Tuesday afternoon, exclusively, for this informal laboratory program. The business meeting of the American Society of Zoologists will be held on Tuesday afternoon. On Tuesday evening a dinner, to which all zoologists are invited, will be held under the auspices of Section F. A short business session will follow the dinner, after which the retiring vice-president for the section, Dr. H. S. Jennings, will deliver his official address.—The Entomological Society of America will hold morning and afternoon sessions Tuesday and Wednesday, December 28 and 29, under the presidency of Dr. W. A. Riley. A symposium on "Needed Lines of Investigation in American Entomology" will be held Tuesday afternoon. A feature of the program will be the annual public address of the society, to be delivered this year by Dr. George H. F. Nuttall, director of the Molteno Institute for Research in Parasitology, Cambridge University, Cambridge, England. The usual exhibits of specimens, apparatus and methods will be displayed.—The American Association of Economic Entomologists will hold its thirtieth annual meeting December 28 to January 1. The Section of Plant Quarantine and Inspection will meet Tuesday, the Section of Apiculture will hold two sessions on Wednesday and the general association will hold a business session Wednesday morning. On Thursday morning, President Arthur Gibson, chief of

the Entomological Branch, Ottawa, Canada, will deliver his official address. The program will continue Thursday and Friday and will be concluded Saturday morning, with a final business session. There will be exhibits of equipment, results of research, etc. The entomologists' dinner will be held Friday evening.

*G. Botanical Sciences.*—On Tuesday afternoon, December 28, Section G will hold a joint session with the several botanical societies, when Professor R. B. Wylie, of the University of Iowa, retiring vice-president for Section G, will deliver an address on "Leaf Structure and Wound Response." This address will be followed by invitation papers by Dr. W. J. V. Osterhout, of the Rockefeller Institute for Medical Research, and Dr. F. D. Fromme, of the Virginia Agricultural Experiment Station. The Botanical Society of America will hold its annual meeting December 28 to 30, under the presidency of Dr. L. H. Bailey, who is also president of the American Association. Programs are being arranged for all sections and there will be joint sessions with Section G of the American Association, the Ecological Society of America and the American Phytopathological Society. The program of the Crop Protection Institute will interest many botanists. The annual dinner for all botanists will occur on Thursday, December 30. The address of the retiring president will be delivered by Dr. J. R. Schramm, editor of *Biological Abstracts*.—The American Phytopathological Society will hold sessions from Tuesday to Friday, December 28 to 31. Two new features of the program are to be a conference on fungicides and a plant-disease-survey round table, on Thursday and Friday mornings, respectively. There will be a conference on extension work in plant pathology on Tuesday afternoon, and a joint session with the Mycological Section of the Botanical Society of America on Thursday morning. An excursion is planned for Friday, to the establishment of E. I. du Pont de Nemours and Company at Wilmington. The annual phytopathologists' dinner will be held Wednesday evening, December 29.—The American Society of Plant Physiologists will hold sessions on Tuesday, Wednesday, and Thursday, December 28 to 30. A joint session with the American Society for Horticultural Science and with the Physiological Section of the Botanical Society of America is being planned. There will be a series of invitation papers, also an exhibition of apparatus and methods.—The American Fern Society will meet on the morning of Saturday, January 1, and all interested in fern study are invited to attend. Illustrated talks of a non-technical nature will be given, including one on the ferns of the Philadelphia region.—The Sullivant Moss Society will meet December 28 and 29. The society is made up of a group of people

interested, chiefly as an avocation, in the collection and study of mosses, hepatics and lichens. The society collection of mosses is housed in Philadelphia and will be available for inspection and study during this meeting. Some of the papers to be read are as follows: Mr. C. M. Roberts, "The Ecology of the Mosses of Central Pennsylvania"; Mr. Edwin B. Bartram, "Notes on Arizona Species of Mosses not before collected in North America"; Dr. O. E. Jennings, "The Ancestry and Relationship of the Mosses"; Dr. A. J. Grout, "Collecting in Florida"; Mr. A. T. Beals, "Early Authorities and Writers on Mosses"; Mr. Robert H. Bowen, "Comparison of a Mechanism of Cells of the Male Heads of the Moss *Polytrichum* with a Similar Mechanism of Certain Animal Cells."

*F-G. Organizations related to both Sections F and G, Botanical and Zoological Sciences.*—The Wednesday afternoon symposium of the American Society of Naturalists, on "Quantitative Biology," and the address of its president, Dr. J. Arthur Harris, on "The Humanitarian Value of Quantitative Biology," will interest all biologists. The dinner of the society is to occur Wednesday evening, December 29.—The Ecological Society of America, with a membership of those interested in any phase of the interrelationship between organisms and their environments, will hold its twelfth annual meeting from December 28 to 31. On Wednesday afternoon a joint session will be held with the Botanical Society of America and Thursday afternoon will be devoted to a symposium on "Oceanographic Problems," the latter in charge of Dr. J. W. Harshberger, of the University of Pennsylvania, who is president of the society. At a joint session with the American Society of Zoologists papers will be read on animal ecology. There will be an informal dinner, to which all biologists interested in ecology are invited. Persons not members of the society may obtain copies of the advance program, with abstracts of papers to be given, by writing to the secretary after December 1.—The American Microscopical Society will hold two sessions for the transaction of business. The first of these will be the meeting of the executive committee, at 4:30 on Tuesday, December 28. A full meeting of the membership is being planned for Wednesday, December 29, at 4:30.—The Union of American Biological Societies will have a council meeting at a time to be arranged.—The Genetics Sections of the American Society of Zoologists and the Botanical Society of America will hold sessions on Monday, Tuesday and Wednesday, December 27 to 29. Many investigators will this year present their results by exhibits and informal demonstrations, instead of by the reading of formal papers. On Wednesday morning there will occur a joint ses-

sion with the Geneticists Interested in Agriculture, at which a symposium will be held on "Hybrid Vigor in Plants and Animals."—The American Nature-Study Society will hold its nineteenth annual meeting jointly with the American Nature Association. The program will concern itself with nature-education problems, with a consideration of the broad philosophy back of the nature-study movement and with the policies that have been followed by the various organizations in this field. The philosophy of the nature-study movement will be presented by L. H. Bailey, Mrs. Anna B. Comstock, Dan Beard, S. C. Schmucker and Hanor Webb. A society exhibition is being planned.—The Phi Sigma Society plans to hold sessions for reports by its members but details are still to be worked out. The society aims to devote its programs to contributions by beginners in science, for the encouragement of these junior members of the scientific group. This is an interesting movement.

*H. Anthropology.*—The American Anthropological Association and the American Folk-Lore Society will meet in affiliation with Section H during the period from December 28 to 30. Philadelphia is richly endowed with the anthropological collections of several institutions, which may be examined. Dr. Aleš Hrdlička, president of the organization, will give an illustrated address on the anthropology of Alaska and Northeastern Asia, presenting results of his recent explorations. The American Anthropological Association will hold its first council meeting on the morning of Tuesday, December 28, to be followed by the first session for the reading of papers. In the afternoon of that day the Folk-Lore Society and the second council meeting of the Anthropological Association will occur. The anthropologists' dinner will probably occur Tuesday evening, with the president's address. The first scientific session of Section H is planned for Wednesday morning, followed by its business session.

*I. Psychology.*—Although Section I of the A. A. S. is not preparing a program this year, an extensive one is being arranged by the American Psychological Association. On Tuesday evening there will be a joint session of Section I and Section Q (Education), with the annual Phi Delta Kappa dinner and the addresses of the retiring vice-presidents for these two sections. The retiring vice-president for Section I is Dr. C. E. Seashore, of the State University of Iowa, whose address will be on "Phonophotography in the Service of Psychology." The annual meeting of the American Psychological Association will be held in the Psychological Laboratory of the University of Pennsylvania from December 28 to 30. The mornings and afternoons will be devoted to sessions for the reading of papers. An apparatus exhibit will be an interesting and important feature.

On the evening of Tuesday, December 28, will be held the annual business meeting and the annual dinner, with the reading of the presidential address by Professor H. A. Carr, of the University of Chicago, will be held on Wednesday evening.

*K. Social and Economic Sciences.*—Section K has arranged an extended symposium on "Law Enforcement" for this meeting. The subject will be discussed from every point of view, introduced by an address on "Should the Tax Laws be enforceable and enforced?" by Professor Fred R. Fairchild, and an address on "The Importance of Research in Social and Economic Problems," by Professor Jos. H. Willits, vice-president for the section. Following these introductory remarks, Mr. H. H. Hart will speak on "Law Enforcement through Self Control," while the Honorable Edwin M. Abbott will speak on "Laws Men break and why." Among other important papers will be an address on "Crime in the Commercial Field," by Dr. Joseph Mayer, of Tufts College, and some remarks on "Local Crime Commissions," by Mr. Jas. M. Hepbron, of the Baltimore Criminal Justice Commission. Mr. Hepbron will be followed by Mr. H. B. Chamberlin, of the Chicago Crime Commission, and Mr. Chas. H. Pennoyer, of Boston, who will speak on "Native and Alien Criminals." The subject of "Immigration Law Enforcement" will be discussed by Dr. Donald Young, while "Lynching and Mob Violence" will be the subject of a discussion by Mr. Dubois, of New York City. In addition to the foregoing, there will be papers on the "Sale of Firearms," by the Honorable William McAdoo; on "Capital Punishment," by Warden Lewis E. Lawes; on "Burglary Insurance," by Professor Crooks; and on "The Changing American Prison," by Professor MacCormick. This symposium is planned to help concentrate public opinion on the imperative necessity for more effective law enforcement throughout this country, conforming to the general principles of procedure recently set forth by Chief Justice Taft. It goes without saying that lawlessness in this country is reaching menacing proportions to general welfare and that it is of the very first importance that there should be agreement on the essentials of the problem and its solution.—The Metric Association will hold its tenth anniversary meeting on Monday, December 27. Pioneers in the metric movement and younger people active in the metric campaign will cooperate in a special program of interest to manufacturers, engineers, scientists and educators. All who are interested are invited to attend the sessions and take part in the discussions. Alexander McAdie, of Harvard University; Theodore H. Miller, of the DeLaval Separator Company; S. J. Macfarren, of Washington; Walter Wood, of R. D. Wood and Company; Theodore A.

Seraphin, of the Pennsylvania Department of Weights and Measures, and others are scheduled to speak. A "Weights and Measures" luncheon will be held at 1 o'clock, at the Bellevue-Stratford Hotel, and the convention will close with a "Metric Dinner" at 6:30, at the same hotel.

*L. Historical and Philological Sciences.*—The second joint meeting of the History of Science Society and the History-of-Science group in Section L will be held on Wednesday, December 29, this being the sixth annual meeting of the group. The program will be of special interest and significance in view of the fact that much of the early scientific life of America centered about Philadelphia, and the papers to be read will bear upon this phase. An exhibition of historical apparatus and instruments of epoch-making importance will be on view. The sessions, the exhibit and a luncheon to the members of the History of Science Society, as guests of Dr. Edgar F. Smith, former provost of the University of Pennsylvania, will be held in the John Harrison Laboratory of Chemistry. A council meeting of the History of Science Society will occur in the evening.

*M. Engineering.*—Section M, under the presidency of Dr. C. R. Richards, president of Lehigh University, has arranged what will surely prove to be a very important program in the Philadelphia series. This will consist of a symposium on "The Contributions that have been made by the Fundamental Sciences to the Advancement of Engineering and Industry," together with several addresses on important topics. The symposium will be held in the auditorium of the Franklin Institute, with forenoon and afternoon sessions on Wednesday, December 29. The speakers will be as follows: *Astronomy*: Dr. Frank Schlesinger, director of Yale University Observatory. *Biology*: Dr. Vernon Kellogg, permanent secretary of the National Research Council. *Chemistry*: Dr. Charles H. Herty, president of the Synthetic Organic Chemical Manufacturers' Association. *Economics*: Dr. Joseph H. Willits, head of the Department of Industry, Wharton School of Finance and Commerce, University of Pennsylvania. *Geology*: Dr. Heinrich Ries, professor of general and economic geology, Cornell University. *Mathematics*: Dr. G. A. Bliss, professor of mathematics, University of Chicago. *Medical Science*: Dr. Randle C. Rosenberger, professor of preventive medicine and bacteriology, Jefferson Medical College. *Physics*: Dr. R. A. Millikan, director of the Norman Bridge Laboratory of Physics, California Institute of Technology. *Psychology*: Dr. J. McK. Cattell, president of the Psychological Corporation and editor of SCIENCE and other scientific journals. The symposium will be followed by a general discussion. For Wednesday evening at 6:30 a

subscription dinner at four dollars is being arranged. Those who plan to partake should immediately inform Mr. Charles E. Billin, at the Philadelphia Engineers' Club, 1317 Spruce Street. Should the dinner prove impracticable an evening session will be held. Addresses that will be delivered in the evening are as follows: Dr. W. R. Whitney, director of the Research Laboratory of the General Electric Co., Schenectady, N. Y.: "The Stimulation of Research in Pure Science that has resulted from the Needs of Engineers and of Industry." Mr. Harrison P. Eddy, consulting engineer, Boston, Mass., representing the *American Society of Civil Engineers*: "Imhoff Tanks." Dr. M. Luckiesh, director of the Lighting Research Laboratory, National Lamp Works, Cleveland, Ohio, representing the *Illuminating Engineering Society*: "The Scientific Aspects of Lighting." Mr. W. H. Fulweiler, chemical engineer, United Gas Improvement Co., Philadelphia, representing the *American Society for Testing Materials*: "The Relationship between Science and the Study and Testing of Engineering Materials."

*N. Medical Sciences.*—Section N will hold two sessions on Tuesday, December 28. The programs, as in recent years, have been arranged by the section committee with the aim of bringing together science workers in the more fundamental aspects of medicine and the fundamental sciences most closely related to medical science. The Philadelphia sessions will open with the official address of the retiring vice-president for Section N, Professor A. J. Carlson, of the University of Chicago, on "Tendencies in Research of Bio-Medical Sciences." A symposium on "Growth in Health and Disease" will include papers by Dr. Oscar Riddle, of the Station for Experimental Evolution of the Carnegie Institution of Washington; Professor Raymond Pearl, of the Johns Hopkins University; Professor W. J. V. Osterhout, of the Rockefeller Institute for Medical Research; Professor W. W. Swingle, of the State University of Iowa, and Dr. Frederick S. Hammett, of the Wistar Institute.—The afternoon session is to be devoted to papers on biological aspects of fundamental medical problems, with papers by Dr. C. L. Shear, of the U. S. Bureau of Plant Industry; Colonel J. F. Siler, of the U. S. Army; Dr. L. O. Howard, of the U. S. Bureau of Entomology, dean of American medical entomologists; Professor R. Bennett Bean, of the University of Virginia, and Professor Edgar Allen, of the University of Missouri.—All who are interested in the extensive and ramifying field where medical science and the fundamental sciences overlap are cordially invited to these sessions of Section N.—The Society of American Bacteriologists will hold its annual meeting December 28 to 30, with three symposia of invited papers as well as sessions for the reading of contribu-

tions. The titles of the symposia are: "Filterable Viruses," "Some Problems of Soil Bacteriology" (to be presented at a joint session of the Society of Bacteriology and Section O—Agriculture—of the American Association), and "The Teaching of Bacteriology in Institutions other than Medical Schools." The sessions of Tuesday and Wednesday will be of the society as a whole, while there will be two sections for Thursday, on Medical Bacteriology, Immunology and Comparative Pathology and on Agricultural and Industrial Bacteriology.—The American Society of Parasitologists will hold its second annual meeting from December 28 to 31. A prominent feature of the program will be an address by Professor George H. F. Nuttall, of Cambridge University, who is director of the Molteno Institute for Research in Parasitology. Dr. Nuttall will be a guest of the society at its annual dinner. At the annual business meeting, one of the items of chief interest will be the report of the committee appointed to study the teaching of parasitology in this country, under the chairmanship of Dr. F. D. Barker. Another important feature will be the address of the retiring president of the society, Dr. C. W. Stiles.

*O. Agricultural Sciences.*—Section O will hold two sessions on Thursday, December 30, with papers by well-known authors, on economic problems involved in production and disposal of farm crops. Owing to the much regretted recent death of Dr. C. V. Piper, who was chairman of Section O at the Kansas City meeting last year, there will be no vice-presidential address given before this section at the Philadelphia meeting.—On Thursday evening will be held the annual dinner for agricultural scientists, with an address on "Factors of Significance in the Development of European Agriculture," by Dr. J. G. Lipman, director of the New Jersey Agricultural Experiment Station. A joint session of Section O and the Society of American Bacteriologists will be held Wednesday afternoon, the program being a symposium on "Some Problems in Soil Bacteriology." A joint session of the American Society of Agronomy and the section will occur Friday forenoon, with a symposium on "The Improvement of Small Grains through Breeding," which is being arranged by Dr. T. A. Kisselbach, of the University of Nebraska.—The recent programs of the American Society for Horticultural Science have been very crowded and the meeting period is this year extended to include four days (December 28 to 31) instead of three as heretofore. The increasing physiological interest of students of horticulture will be accommodated and encouraged by a joint session with the American Society of Plant Physiologists and the Physiological Section of the Botanical Society of America. Dr.

L. H. Bailey, president of the American Association and of the Botanical Society, will give an address on "Trends in Horticulture." Other well-known speakers, whose names will be announced later, will appear in the program. Some of the topics to be discussed are: "Arsenical Residues in Apples," "Nitrogen Metabolism in the Apple," "Apple Propagation by Root Cuttings and Limbs," "Effects of Transplanting and Budding on Growth of Apple Seedlings," "Fruit Bud Formation in the Fig," "Summer Frost Prevention on Peat Lands," "Effect of Potash on Carrying Qualities of Tomatoes," "Influence of Root Desiccation and Root Pruning on Asparagus."—The Society of American Foresters will hold sessions on Wednesday and Thursday, December 29 and 30. Contributions will be read on many subjects. Two general discussions or symposia will be held on "The Practice of Forestry on Private Lands" and on "Weather and Forest Fires."—The Potato Association of America will have sessions devoted to discussions of the application of science to certified seed-potato production, as well as papers on potato-storage problems, potato production as related to environmental conditions and potato marketing. Details are to be announced later.—The Crop Protection Institute will hold its annual dinner meeting on the evening of Tuesday, December 28, promptly at 6 o'clock.

*Q. Education.*—Sessions of Section Q will be held Tuesday to Thursday, December 28 to 30, devoted to reports and addresses on educational investigation and related matters. There will be three sessions on problems of college education; one of these being on personnel and management of college freshmen, another on college and university instruction, and a third on university administration and curriculum building. Reports will be presented on several nation-wide investigations of college and professional education. One session will be devoted to scientific studies on character and personality education. A special feature will be a joint dinner meeting of the Phi Delta Kappa Fraternity and Sections I and Q of the association, with the annual Phi Delta Kappa dinner; this will occur on Tuesday evening. The official address of Dr. Otis W. Caldwell, retiring vice-president for Section Q, and that of Dr. C. E. Seashore, retiring vice-president for Section I, will be given at the dinner session. One or more joint sessions with the American Association of University Professors are planned. Attention should be called here to very interesting educational features of the program of the National Council of Geography Teachers (announcements under E) and the special program on research in colleges, to be given under the auspices of one of the subcommittees of the Amer-

ican Association's Committee of One Hundred on Scientific Research (see General Sessions, above).

*Organizations related to the American Association as a whole.*—The twelfth annual meeting of the American Association of University Professors, being the first annual meeting of this organization to be held in Philadelphia, will occur Friday and Saturday, December 31 and January 1. The program will be based primarily on important reports recently published by the Committee on Methods of Increasing the Intellectual Interest and Raising the Intellectual Standards of Undergraduates. The particular reports to be considered at Philadelphia are those dealing with college athletics, with a survey of the practice of different colleges and universities in regard to selection, retention and promotion of undergraduates. It is also expected that reports will be presented on cooperation with Latin-American universities, on freedom of teaching in science, on the promotion of research in colleges and universities, and on the status of women in college and university faculties. The Association of University Professors includes at present more than six thousand members, with local chapters in more than two hundred institutions.—The Gamma Alpha Graduate Scientific Fraternity will hold its annual meeting and banquet on Tuesday, December 28, at the Adelphia Hotel. The early date for the banquet will necessitate prompt registration at the Gamma Alpha booth in the general registration offices, in the exhibition hall (Weightman Hall, 33rd and Spruce Sts.).—The Sigma Delta Epsilon Graduate Women's Scientific Fraternity will hold two breakfast meetings at Philadelphia, probably Tuesday and Wednesday of convocation week. The first of these will be for members only and the second will be open to all women who are interested in the work of this organization.

#### TRANSPORTATION

##### RAILROAD TICKETS

##### *Reduced Rates and Dates*

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

Tickets to Philadelphia are to be purchased within time limits as follows. *December 23 to 29*, inclusive, for the following lines: Canadian Eastern lines, New England lines, Trunk lines, Central lines, Southeastern lines, Western and Transcontinental lines from

Illinois, St. Louis, Mo., Hannibal, Mo., and Keokuk, Iowa. *December 22 to 28*, inclusive, from Iowa (except Keokuk), Kansas, Manitoba (on Great Northern, Northern Pacific and Minnesota, St. Paul & Sault Ste. Marie Rys., also from Winnipeg *via* Canadian Pacific Ry.), Minnesota, Missouri (except Hannibal and St. Louis), Nebraska, Northern Michigan, North Dakota, South Dakota and Wisconsin, also from Julesburg, Colo. *December 21 to 27*, inclusive, from Colorado (except Julesburg), Montana, New Mexico, Utah and Wyoming. *December 17 to 23*, inclusive, from Arizona, British Columbia, California, Idaho, Nevada, Oregon and Washington. For the Southwestern lines the limits are *December 21 to 27*, inclusive, from Oklahoma and Texas; *December 22 to 28*, inclusive, from Kansas and Missouri; *December 23 to 29*, inclusive, from Arkansas and Louisiana. (The following Southwestern lines are not party to the reduced excursion fares: Arkansas & Louisiana-Missouri Ry.; Ft. Smith & Western R. R.; Graysonia, Nashville & Ashdown R. R.; Kansas, Oklahoma & Gulf Ry.; Louisiana & Arkansas Ry.; Mississippi River & Bonne Terre Ry.; National Railways of Mexico; St. Louis, El Reno & Western Ry.)

#### *Purchasing Tickets to Philadelphia*

1. *For persons residing in the regions of reduced rates* (almost all the United States and Canada, see above). Purchase a first-class, full-fare, one-way, through ticket to Philadelphia, and be sure to secure a certificate on Standard Certificate Form, reading for the Philadelphia meeting of the "American Association for the Advancement of Science and Associated Societies"; a receipt is not required.

2. *For persons residing outside of the regions of reduced rates.* Purchase a round-trip ticket to nearest station issuing through tickets to Philadelphia and lying within the region of reduced rates. At that station purchase a one-way ticket to Philadelphia and secure a certificate as directed in the preceding paragraph.

#### *Endorsement and Validation of Railway Certificates*

Upon arrival at the meeting, register immediately at the registration offices in the exhibition hall (33rd and Spruce Sts.). 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 if you pay it. 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 our office and then validated by the agent of the transportation

companies. Call for it later at the validation desk, 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 railway certificate validated.

#### *Purchasing Return Tickets from Philadelphia*

Ticket agents at Philadelphia will honor any properly endorsed and validated certificate if presented at least 30 minutes before the scheduled time of departure of the train for which it is to be used. To each person presenting an endorsed and validated certificate they will sell 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 Philadelphia. The last date on which certificates may be validated is December 31. The last date on which return tickets may be purchased is January 5.

#### TRANSPORTATION IN PHILADELPHIA

##### TO REACH HOTELS FROM RAILWAY STATIONS

Directions would be somewhat complicated. Inquire at information desk in station.

##### TO REACH THE MEETING PLACES FROM HOTELS

Since so many different hotels will be used by those attending the meeting, it is best for each person to make inquiry at his hotel, thus securing information as to how to proceed from that hotel to the university and return. Note that the registration offices are to be in Weightman Hall (the University Gymnasium), on the southeast side of 33rd Street, about a square and a half south of Walnut, just beyond where 33rd Street bends from south to southwest.

##### TO REACH THE MEETING PLACES FROM RAILWAY STATIONS

*From Broad Street Station (Broad and Market Sts.) or Reading Terminal (12th and Market Sts.)*—Take subway-elevated westbound on Market St. and leave cars at 32nd St. (West Philadelphia Station, Pennsylvania R. R.); thence proceed as from West Philadelphia Station. Or, take subway-surface cars westbound on Market St., marked 11, 34 or 37, leaving cars at Woodland Ave. and 33rd, 34th or 36th St. For Registration Offices (Weightman Hall, the University Gymnasium), walk south on 33rd St. Gymnasium is on left just beyond where 33rd St. bends to southwest.

*From Baltimore and Ohio R. R. Station (24th and Chestnut Sts.)*—Take surface car (marked 13) or bus (marked D) westbound on Walnut St. Leave conveyance at 33rd or 34th St. For Registration offices (Weightman Hall, the University Gymnasium),

leave conveyance at Walnut and 33rd Sts. and walk south on 33rd St. Gymnasium is on left just beyond where 33rd St. bends to southwest.

*From West Philadelphia Station (32nd and Market Sts.)*—Walk southwest on Woodland Ave. For Registration offices (Weightman Hall, the University Gymnasium), turn south on 33rd St. Gymnasium is on left just beyond where 33rd St. bends to southwest. Or, take surface cars southwest on Woodland Ave., to 33rd, 34th or 36th St. For Registration offices, leave cars at Woodland Ave. and 33rd St. and walk south to just beyond where 33rd St. bends to southwest (see just above).

#### TAXICABS IN PHILADELPHIA

Taxicabs may be secured at railway stations, at all hotels and by asking (and waiting a little) at the information desk in the Registration offices (Weightman Hall, the University Gymnasium). The taxicab rates are, for Yellow Cabs, 20 cents for initial two thirds of a mile and 10 cents for each additional one third of a mile. Quaker Cabs charge 10 cents more for initial two thirds of a mile. There is no extra charge for more than one passenger and four or five may go together at a reasonable cost per person. The trip from Broad St. Station to the Registration offices

(Weightman Hall, the University Gymnasium) costs about 70 cents. From the Bellevue-Stratford Hotel to the Registration offices it costs about 60 cents.

#### DISTANCES FOR PEDESTRIANS

From the West Philadelphia Station all the university buildings are within comfortable walking distance for most people (less than a mile). The same is true from the West Philadelphia Station to the Pennsylvania, Normandie and Bartram Hotels, and from them to the university buildings. From Broad Street Station and the neighboring downtown hotels the distance is about two miles.

#### LODGING ACCOMMODATIONS

A list of Philadelphia hotels, with prices, etc., has been published in SCIENCE for November 12, page 467. The hotel accommodations will be excellent this year and probably more than adequate, but those who plan to attend the meeting should reserve hotel rooms immediately, if they have not already done so, by writing directly to the hotel management in each case. The Bellevue-Stratford Hotel will be the general headquarters of the American Association and it can care for a very large number, but many of the socie-

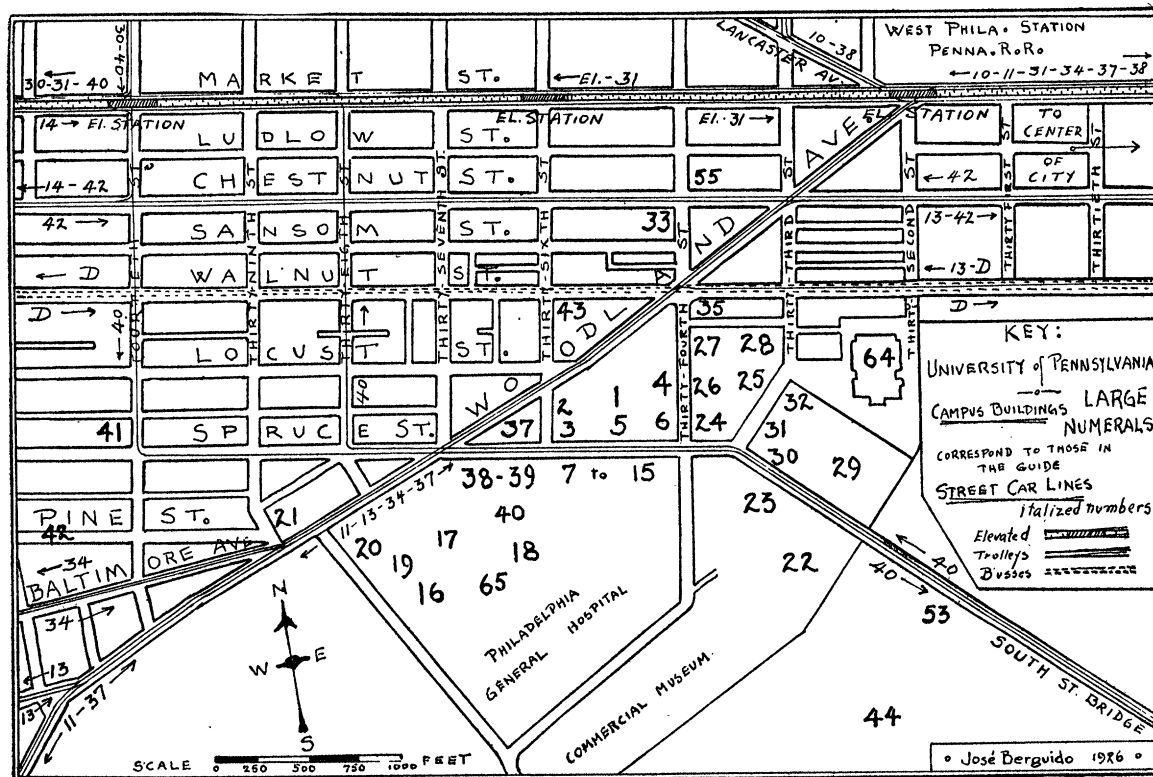


Chart showing streets in the vicinity of the University of Pennsylvania and locations of the university buildings, supplied by Mr. Thomas Hart, chairman of the local subcommittee on transportation. A guide to the university will be given to all who register.

ties meeting with the association this year will have other hotel headquarters. As far as possible, the hotel headquarters of each society is shown on the list of societies that plan to meet with the association (see below).

The Young Men's Christian Association (1425 Arch St.) will have about fifty rooms available for those attending the meeting. Prices of single rooms are \$1.50 and \$2.00 per day, the higher priced ones having running water. Rooms in private homes or in rooming houses near the university may be used for the meeting at less than usual hotel prices. Information regarding such rooms may be secured at the information desk in the registration offices.

#### REGISTRATION AT PHILADELPHIA

##### *Registration in General*

Those who attend any of the sessions of the fifth Philadelphia meeting, which will be fully open to all, whether they are members of the association or not and whether they are from away or reside in Philadelphia, should register as promptly as possible at the registration offices for the meeting, which will be in the exhibition hall (Weightman Hall, the University gymnasium) at 33rd and Spruce Sts. The offices will be open from 9 to 6 daily throughout the period of the meeting. They are to be in charge of Mr. Sam Woodley, executive assistant of the American Association. Registration is necessary, in order to secure the official identification card, the official badge and the general program, etc., and in order that railway certificates may be endorsed and validated.

A registration fee of one dollar is to be paid by each person registering for this meeting, excepting officially invited guests. The moneys thus collected will go into the fund for the meeting and will help to defray some of the costs. If you are a paid-up member of the American Association for the Advancement of Science you may, however, register without paying the fee. Registrants who are not paid-up members of the association may place themselves in the privileged category by paying their dues before registering. Officially invited guests are not to pay the fee. (For details regarding the procedure of those not paying the registration fee, see below.)

Registration will be accomplished by presenting a registration card, properly filled out, at the registration desk, whether the fee is paid or not. The registration clerk will keep your registration card and will give you a numbered official identification card, badge, program, etc., the identification card being specially stamped if the registration fee has been paid. Your name will be placed immediately in the visible directory of those in attendance. After registration each registrant should leave his railway certificate at the

validation desk, there having his identification card receipted for the certificate. (See above, under Railroad Tickets.)

Delegates from institutions and organizations, and all official guests, are specially requested to register as such, noting on their registration cards their exact status in this particular.

##### *Registration without Payment of the Registration Fee*

As has been noted, paid-up members of the American Association for the Advancement of Science are to have the privilege of registering without paying the registration fee, but this may occasion some delay in the registration procedure. The delay will be short, however, if the following paragraphs are accurately adhered to.

1. *If you are a life member of the A. A. A. S., or if you are an annual member not in arrears (i.e., if your dues for the current year, due last October 1, have been received in Washington before December 22), present your registration card (properly filled out) at the records desk before going to the registration desk at all. Your record will there be verified, by reference to the association roll, and your card will be stamped so as to authorize registration without payment of the fee. Then proceed to the registration desk and register.*

2. *If you are enrolled in the A. A. A. S. but are in arrears, present your registration card (properly filled out) at the membership dues desk instead of going to the records desk. The clerk there will have a copy of your last statement card and you should settle the account, getting your registration card stamped so as to authorize registration without payment of registration fee. Then proceed to the registration desk and register.*

3. *If you are not yet enrolled in the A. A. A. S., fill in the blanks on a membership application card and present it, with your registration card (properly filled out), at the membership-dues desk, paying the entrance fee (\$5) and the annual dues for the current year (\$5) and having the registration card stamped so as to authorize registration without payment of registration fee. Then proceed to registration desk and register. It should be noted that members of any affiliated organization may now join the association without paying the entrance fee. Each new member who joins at this meeting is entitled to the journal subscription (to SCIENCE or The Scientific Monthly) for the calendar year 1927. It is hoped that a large number of new members may be enrolled at Philadelphia; every one who attends this meeting should become a member of the American Association if he has not already done so.*

4. *If, to avoid delay in registering, you registered without first securing the remission of the registra-*

tion fee, you may afterwards have the fee refunded by applying at the Records desk (if you are paid-up) or at the Membership Dues desk (if you are not paid-up) *after 4 o'clock* on any day of the meeting. Authorization for refund will be shown by means of special card from the Records or Membership-Dues desk and refunding will be made at Cashier's desk.

#### INFORMATION SERVICE AT THE PHILADELPHIA MEETING

Those in attendance at the meeting may obtain information of all sorts by applying at the information desk in the registration offices, in Weightman Hall, the gymnasium of the University of Pennsylvania. Attention is called, however, to the visible directory of those in attendance, from which information regarding attendance and the addresses of attending members of the association and societies may be obtained without application at the desk.

#### MAIL, EXPRESS, TELEGRAMS, ETC.

Persons attending the meeting may have mail, etc., addressed to them in care of the American Association for the Advancement of Science, Registration Offices, Weightman Hall, University of Pennsylvania, Philadelphia, Pa. They should inspect the personal bulletin every day, which will be conveniently located. If a person's name appears on this bulletin, he should inquire at the proper desk for mail, etc.

#### ORGANIZATIONS MEETING WITH THE AMERICAN ASSOCIATION AT PHILADELPHIA

The following is a list of the scientific organizations that have intimated their intention to meet with the association at Philadelphia this year, together with the names and addresses of their respective secretaries and (as far as possible) the names of their respective hotel headquarters for the meeting.

- American Mathematical Society: R. G. D. Richardson, *Secretary*; Brown University, Providence, R. I.—*Hotel headquarters, Aldine Hotel, 19th and Chestnut Sts.*
- Mathematical Association of America: W. D. Cairns, *Secretary*; Oberlin College, Oberlin, Ohio.—*Hotel headquarters, Aldine Hotel, 19th and Chestnut Sts.*
- American Physical Society: Harold W. Webb, *Secretary*; Columbia University, New York City.—*Hotel headquarters, Bartram Hotel, 33rd and Chestnut Sts.*
- American Meteorological Society: Charles F. Brooks, *Secretary*; Clark University, Worcester, Mass.
- American Astronomical Society: Joel Stebbins, *Secretary*; Washburn Observatory, Madison, Wis.
- Association of American Geographers: Charles C. Colby, *Secretary*; University of Chicago, Chicago, Ill.
- National Council of Geography Teachers: George J. Miller, *Secretary*; State Teachers College, Mankato, Minn.
- American Alpine Club: Henry B. deV. Schwab, *Secretary*; 11 Broadway, New York City.
- American Society of Zoologists: Dwight E. Minnich, *Secretary*; University of Minnesota, Minneapolis, Minn.—*Hotel headquarters, Walton Hotel, Broad and Locust Sts.*
- Entomological Society of America: J. J. Davis, *Secretary*; Purdue University, Lafayette, Ind.—*Hotel headquarters, Hotel Normandie, 36th and Chestnut Sts.*
- American Association of Economic Entomologists: C. W. Collins, *Secretary*; Melrose Highlands, Mass.—*Hotel headquarters, Hotel Normandie, 36th and Chestnut Sts.*
- American Society of Parasitologists: W. W. Cort, *Secretary*; 615 N. Wolfe St., Baltimore, Md.—*Hotel headquarters, Pennsylvania Hotel, 39th and Chestnut Sts.*
- Botanical Society of America: I. F. Lewis, *Secretary*; University, Va.—*Hotel headquarters, Pennsylvania Hotel, 39th and Chestnut Sts.*
- American Phytopathological Society: R. J. Haskell, *Secretary*; Bureau of Plant Industry, Washington, D. C.—*Hotel headquarters, Hotel Normandie, 36th and Chestnut Sts.*
- American Society of Plant Physiologists: Scott V. Eaton, *Secretary*; University of Chicago, Chicago, Ill.
- Sullivant Moss Society: A. T. Beals, *Secretary*; 2929 Broadway, New York City.
- American Fern Society: Charles S. Lewis, *Secretary*; 835 Edgewood Ave., Trenton, N. J.
- American Society of Naturalists: A. F. Shull, *Secretary*; University of Michigan, Ann Arbor, Mich.—*Hotel headquarters, Walton Hotel, Broad and Locust Sts.*
- Ecological Society of America: A. O. Weese, *Secretary*; University of Oklahoma, Norman, Okla.—*Hotel headquarters, Walton Hotel, Broad and Locust Sts.*
- American Microscopical Society: H. J. Van Cleave, *Secretary*; University of Illinois, Urbana, Ill.
- American Nature-Study Society: E. Laurence Palmer, *Secretary*; Renwick Heights, Ithaca, N. Y.
- Joint Genetics Sections of the American Society of Zoologists and the Botanical Society of America: L. C. Dunn, *Secretary*; Connecticut Agricultural Experiment Station, Storrs, Conn.
- Phi Sigma Biological Research Society: C. I. Reed, *Secretary*; Baylor University Medical School, Dallas, Texas.
- Union of American Biological Societies: B. M. Duggar, *Secretary*; Missouri Botanical Garden, St. Louis, Mo.
- American Anthropological Association: A. V. Kidder, *Secretary*; Phillips Academy, Andover, Mass.
- American Folk-Lore Society: Gladys A. Reichard, *Secretary*; Barnard College, New York, N. Y.
- American Psychological Association: Samuel W. Fernberger, *Secretary*; University of Pennsylvania, Philadelphia, Pa.—*Hotel headquarters, Pennsylvania Hotel, 39th and Chestnut Sts.*

Metric Association: Howard Richards, Jr., *Secretary*; 156 Fifth Ave., New York City.

History of Science Society: Frederick E. Brasch, *Secretary*; Library of Congress, Washington, D. C.

Society of American Bacteriologists: J. M. Sherman, *Secretary*; Cornell University, Ithaca, N. Y.—*Hotel headquarters, Bellevue-Stratford Hotel*, Broad and Walnut Sts.

American Society of Agronomy: P. E. Brown, *Secretary*; Iowa State College, Ames, Iowa.

American Society for Horticultural Science: C. P. Close, *Secretary*; College Park, Md.

Society of American Foresters: E. R. Hodson, *Secretary*; Atlantic Building, Washington, D. C.

Potato Association of America: Walter M. Peacock, *Secretary*; Office of Horticultural Investigations, Washington, D. C.

Crop Protection Institute: Paul Moore, *Secretary*; National Research Council, Washington, D. C.—*Hotel headquarters, Lido Hotel*.

Society of Sigma Xi: Edward Ellery, *Secretary*; Union College, Schenectady, N. Y.

American Association of University Professors: H. W. Tyler, *Secretary*; Massachusetts Institute of Technology, Cambridge, Mass.—*Hotel headquarters, Bartram Hotel*, 33rd and Chestnut Sts.

Gamma Alpha Graduate Scientific Fraternity: C. W. Dodge, *Secretary*; 20 Divinity Ave., Cambridge, Mass.

Sigma Delta Epsilon Graduate Women's Scientific Fraternity: Edna M. Feltges, *Secretary*; Orlando, Fla.

#### SPECIAL PRIVILEGE FOR MEMBERS OF AFFILIATED SOCIETIES

New members of the association regularly pay an entrance fee of five dollars, which is now remitted, however, to members of any affiliated organization, including the affiliated state academies. Those who join at the Philadelphia meeting and take advantage of this privilege should fill in the blanks on a blue membership application card and present card and dues for 1926-27 (\$5.00) at the membership dues desk in the registration offices (Weightman Hall, Spruce and 33rd Sts.). New members who join the association at the meeting are entitled to register without paying the one-dollar registration fee.

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 Washington office in the Smithsonian Institution Building. 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. Members of the association may subscribe for the *Science News-Letter*, published by *Science Service*,

Washington, D. C., at the specially reduced price of \$3.00 per year.

#### BUSINESS SESSIONS AT THE PHILADELPHIA MEETING

The members of the executive committee of the American Association, the secretaries of the association sections and the secretaries of the scientific societies that meet with the association this year will dine together at Philadelphia, probably at the Bellevue-Stratford Hotel, on Sunday, December 26, at 6:30. The evening will be devoted to the annual secretaries' conference on the affairs of the association and its relation to the associated organizations.

The executive committee will hold its first Philadelphia session in the permanent secretary's room at the Bellevue-Stratford Hotel, on December 27, at 10 o'clock. Matters for consideration by the committee or by the council should be transmitted to the permanent secretary at the Washington office, to arrive by December 21. Other sessions of the executive committee will probably be held at 10 o'clock on Tuesday, Wednesday, Thursday and Friday mornings, in the council room at the University of Pennsylvania (Houston Hall).

The council of the association will meet in the council room at the university (see just above) on Monday afternoon, December 27, at 2 o'clock, and other sessions are scheduled to occur in the same room at 9 o'clock on Tuesday, Wednesday, Thursday and Friday mornings. It is probable that the annual election of officers of the association will occur at the council session Thursday morning. Business to be considered by the council must regularly be first brought before the executive committee.

#### FURTHER ANNOUNCEMENTS AND REPORTS OF THE PHILADELPHIA MEETING

Some later announcements about the approaching meeting will be made in *SCIENCE*. Full information will be contained in the general program, which will be available in the registration offices Monday morning and throughout the week of the meeting.

It is planned that a general report of the fifth Philadelphia meeting will appear as a special issue of *SCIENCE* about February 1. This is to contain reports on the main general features of the convention, the business transacted, and especially a full series of readable reports on the section and society programs, the latter reports based on material to be supplied by the secretaries of those organizations. All new members who join the association before the time of its publication will automatically receive the special issue of *SCIENCE*.

BURTON E. LIVINGSTON,  
*Permanent Secretary*