

SPECIAL ISSUE CONTAINING REPORTS OF THE FIFTH PHILADELPHIA MEETING OF  
THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE AND  
ASSOCIATED SOCIETIES. EDITED BY BURTON E. LIVINGSTON,  
PERMANENT SECRETARY.

# SCIENCE

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to January 1, 1927*

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### THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

### THE PERMANENT SECRETARY'S REPORT ON THE FIFTH PHILADELPHIA MEETING

#### GENERAL FEATURES

BETWEEN Monday, December 27, 1926, and Saturday, January 1, 1927, at Philadelphia and mainly in the halls of the University of Pennsylvania occurred the eighty-third meeting of the American Association for the Advancement of Science and Associated Societies. It was the annual meeting for the association year 1926-27. It was the fifth Philadelphia meeting, at which the association returned to the place of its organization; the history of the association begins with the first Philadelphia meeting, of September, 1848.

President L. H. Bailey, eminent plant scientist, author and editor, of Ithaca, New York, presided at this meeting and took active part in many sessions. The retiring president was Dr. Michael I. Pupin, professor of electromechanics in Columbia University, and Dr. Pupin's retiring presidential address was delivered before a crowded audience in Drexel Hall on the opening evening, Monday, December 27. Thoughts and aspirations aroused by this address, on "Fifty Years' Progress in Electrical Communications," will occupy many minds for many hours in the new year just begun. The address has been printed in SCIENCE for December 31, 1926.

Besides the fifteen sections of the American Association, forty-three independent organizations of science workers met with the association at Philadelphia. Most of these are officially *associated* societies, the majority of which are officially *affiliated*. Associated organizations are approved by the council of the association, by which they are admitted to official association. The council has elected many associated organizations to official affiliation with the association, and these have representation in the council and thus take part in directing the affairs of the association. Affiliated organizations each name one council member and those that have on their respective membership lists one hundred or more fellows of the association each name an additional council member. There are now one hundred and twelve associated organiza-

tions, of which eighty-one are affiliated. Of the affiliated organizations, thirty-eight have one and forty-three have two council representatives. In the first group of affiliated organizations are included the twenty-one affiliated state academies of science.

The names of the independent science organizations that met with the association at Philadelphia, together with the names and addresses of their secretaries, are shown in the following list. Names of unassociated organizations are enclosed in brackets and those of affiliated organizations are preceded by either one or two asterisks, the number of asterisks indicating the number of council representatives in each case. The names are arranged according to the association sections with which the organizations are most closely related.

#### ORGANIZATIONS THAT MET WITH THE ASSOCIATION AT PHILADELPHIA

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

\*\*American Mathematical Society: R. G. D. Richardson, secretary, Brown University, Providence, R. I.

\*\*Mathematical Association of America: W. D. Cairns, secretary, Oberlin College, Oberlin, Ohio.

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

\*\*American Physical Society: Harold W. Webb, secretary, Columbia University, New York City.

\*American Meteorological Society: Charles F. Brooks, secretary, Clark University, Worcester, Mass.

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

\*\*American Astronomical Society: Joel Stebbins, secretary, Washburn Observatory, Madison, Wis.

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

\*\*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.

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

\*\*American Society of Zoologists: Dwight E. Minnich, secretary, University of Minnesota, Minneapolis, Minn.

\*\*Entomological Society of America: J. J. Davis, secretary, Purdue University, Lafayette, Ind.

\*\*American Association of Economic Entomologists: C. W. Collins, secretary, Melrose Highlands, Mass.

\*American Society of Parasitologists: W. W. Cort, secretary, 615 N. Wolfe St., Baltimore, Md.

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

\*\*Botanical Society of America: I. F. Lewis, secretary, University, Va.

\*\*American Phytopathological Society: R. J. Haskell, secretary, U. S. Bureau of Plant Industry, Washington, D. C.

\*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.

[Wild Flower Preservation Society: Clara M. Cheatham, secretary, 3740 Oliver St., Washington, D. C.]

##### *Related to Sections F and G:*

\*\*American Society of Naturalists: A. F. Shull, secretary, University of Michigan, Ann Arbor, Mich.

\*\*Ecological Society of America: A. O. Weese, secretary, University of Oklahoma, Norman, Okla.

\*\*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.

Phi Sigma Biological Research Society: C. I. Reed, secretary, Baylor University Medical School, Dallas, Tex.

[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.]

[Union of American Biological Societies: B. M. Duggar, secretary, Missouri Botanical Garden, St. Louis, Mo.]

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

\*\*American Anthropological Association: A. V. Kidder, secretary, Phillips Academy, Andover, Mass.

American Folk-Lore Society: Gladys A. Reichard, secretary, Barnard College, New York City.

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

\*\*American Psychological Association: Samuel W. Fernberger, secretary, University of Pennsylvania, Philadelphia, Pa.

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

Metric Association: Howard Richards, secretary, 156 Fifth Ave., New York City.

##### *Related to Section L (Historical and Philological Sciences):*

\*\*History of Science Society: Frederick E. Brash, secretary, Library of Congress, Washington, D. C.

##### *Related to Section N (Medical Sciences):*

\*\*Society of American Bacteriologists: J. M. Sherman, secretary, Cornell University, Ithaca, N. Y.

##### *Related to Section O (Agriculture):*

\*\*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.]

[Geneticists Interested in Agriculture: R. J. Garber,

secretary, West Virginia University, Morgantown, W. Va.]

*Related to Section Q (Education):*

Phi Delta Kappa Fraternity: Clayton R. Wise, secretary, 10403 St. Clair St., Cleveland, Ohio.

*Related to the Association as a Whole:*

\*\*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.

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

[Sigma Delta Epsilon Graduate Women's Scientific Fraternity: Julia T. Colpitts, secretary, Ames, Iowa.]

[Pi Mu Epsilon Mathematical Fraternity: E. D. Roe, Jr., director general, 123 W. Ostrander Ave., Syracuse, N. Y.]

ATTENDANCE

The success of one of these great annual conventions is in some degree indicated by the attendance. Three thousand one hundred and eighty-one were registered at Philadelphia. With the single exception of the fifth Washington meeting, two years ago, this is the largest registration in the history of the association. The registration records for the last seven annual meetings are as follows:

Third Chicago Meeting (Dec., 1920), 2,413.  
Second Toronto Meeting (Dec., 1921), 1,832.  
Fourth Boston Meeting (Dec., 1922), 2,339.  
Third Cincinnati Meeting (Dec., 1923), 2,211.  
Fifth Washington Meeting (Dec., 1924), 4,206.  
Kansas City Meeting (Dec., 1925), 1,931.  
Fifth Philadelphia Meeting (Dec., 1926), 3,181.

It is certain that the number of persons actually in attendance was, in each case, considerably larger than is indicated by the registration record, for many local people and some from away failed to register. But these registration figures are probably accurately indicative.

The residence distribution of those who registered at Philadelphia is shown below.

*Registration at Philadelphia, by States and Provinces*

Alabama .....	4
Arizona .....	4
Arkansas .....	3
California .....	31
Colorado .....	17
Connecticut .....	116
Delaware .....	25
District of Columbia .....	226
Florida .....	18
Georgia .....	16
Illinois .....	133

Indiana .....	45
Iowa .....	40
Kansas .....	23
Kentucky .....	16
Louisiana .....	16
Maine .....	30
Manitoba .....	1
Maryland .....	118
Massachusetts .....	194
Michigan .....	69
Minnesota .....	45
Mississippi .....	7
Missouri .....	40
Montana .....	6
Nebraska .....	14
New Hampshire .....	26
New Jersey .....	147
New Mexico .....	2
New York .....	665
North Carolina .....	30
North Dakota .....	9
Ohio .....	162
Oklahoma .....	6
Ontario .....	36
Oregon .....	5
Philadelphia .....	202
Pennsylvania (outside of Philadelphia) .....	316
Quebec .....	14
Rhode Island .....	41
South Carolina .....	15
South Dakota .....	2
Tennessee .....	19
Texas .....	13
Utah .....	2
Vermont .....	11
Virginia .....	72
Washington .....	2
West Virginia .....	30
Wisconsin .....	58
Wyoming .....	1
Miscellaneous, outside of United States and Canada .....	38
Total .....	3,181

SESSIONS AND PAPERS

Altogether there were 222 scientific sessions held at the Philadelphia meeting. Omitting about forty papers that were presented by title only, 1,449 papers and addresses were delivered at Philadelphia. It is interesting to compare these data with those of earlier meetings, as shown on next page.

It is clear that the fifth Philadelphia meeting ranks next to the fifth Washington meeting in sessions and in the number of papers presented, as well as in registered attendance.

MEETING PLACES AND FACILITIES

The Philadelphia sessions were held mainly in the rooms of the University of Pennsylvania, use being

Meeting	Registration	Membership on Dec. 31	No. of sessions	No. of papers	Sessions each day						
Third Chicago (Dec., 1920)	2,413	—	184	—	Mon. 9	Tu. 53	Wed. 59	Th. 53	Fri. 8	Sat. 2	
Second Toronto (Dec., 1921)	1,832	11,414	123	—	Tu. 13	Wed. 34	Th. 44	Fri. 30	Sat. 2		
Fourth Boston (Dec., 1922)	2,339	11,537	159	1,019	Tu. 2	Wed. 45	Th. 54	Fri. 52	Sat. 6		
Third Cincinnati (Dec., 1923)	2,211	12,015	190	1,140	Wed. 2	Th. 29	Fri. 62	Sat. 56	Sun. 4	Mon. 22	Tu. 11
Fifth Washington (Dec., 1924)	4,206	13,695	252	1,781	Wed. 49	Th. 71	Fri. 69	Sat. 42	Sun. 16	Mon. 5	Tu. 4
Kansas City (Dec., 1925)	1,931	14,316	117	985	Mon. 14	Tu. 35	Wed. 34	Th. 25	Fri. 7	Sat. 2	
Fifth Philadelphia (Dec., 1926)	3,181	14,430	222	1,449	Mon. 22	Tu. 62	Wed. 71	Th. 54	Fri. 11	Sat. 2	

made of the following buildings of the university: College Hall, Bennett Hall, Harrison Laboratory of Chemistry, Hare Laboratory of Chemistry, Engineering Building, Logan Hall, Medical Laboratory, Zoological Laboratory, Veterinary Laboratory, Pearson Hall, Weightman Hall, McFarlane Hall, Houston Hall, Morgan Laboratory of Physics, Laboratory of Hygiene.

The auditoriums of the Drexel Institute, the Franklin Institute, the Academy of Natural Science, the Girls' Trade School and the Church of the Transfiguration were also used, as well as rooms in the Bellevue-Stratford Hotel, the Benjamin Franklin Hotel, the Hotel Walton, the Rittenhouse Hotel, the Hotel Pennsylvania, the Hotel Normandie and the Hotel Bartram.

The general hotel headquarters were at the Bellevue-Stratford Hotel, which very generously placed a number of complimentary rooms at the disposal of the association. A number of other hotels were headquarters for societies and supplied session rooms in some cases. To the management of the Bellevue-Stratford and other hotels the association is very thankful.

The registration offices, in charge of Mr. Sam Woodley, executive assistant, the news offices, in

charge of Mr. Austin H. Clark, news manager, and the general science exhibition, in charge of Major H. S. Kimberly, exhibition manager, were in Weightman Hall, the university gymnasium, where the arrangements were ample and exceptionally satisfactory for these purposes.

Most of the lanterns used at the numerous sessions were very kindly loaned by the Bausch and Lomb Optical Co., of Rochester, N. Y., and the association expresses its cordial thanks for this great and tangible help.

The cash registers used in the registration office were loaned to the association through the courtesy of the National Cash Register Company. The use of these machines was a new feature in the registration procedure and resulted in greatly aiding the accounting work of the registration office. The association expresses its appreciative thanks to the National Cash Register Company, through Mr. John P. Watson, manager of the Philadelphia office.

The cordial thanks of the association and of all who attended the great Philadelphia meeting are due and are here expressed to the authorities of the University of Pennsylvania, without whose cooperation and generosity the meeting could not have been held. The

Drexel Institute, the Franklin Institute, the Academy of Natural Sciences, the American Philosophical Society and the Philadelphia School Board were also very helpful in caring for the meeting and their help is heartily and gratefully acknowledged. To the members of the local committee and their coworkers are here expressed the cordial thanks of the association and the associated societies that joined with it in the fifth Philadelphia meeting. Many thanks are also due to the representatives of the local press and of more distant newspapers and to the representatives of the many news agencies; many of these people worked indefatigably to present the work of the meeting to the public at large and throughout the country.

#### LOCAL COMMITTEES 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.

##### *Chairmen 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*

*Section A (Mathematics):* George C. 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.

#### OFFICIAL REPRESENTATION AT THE PHILADELPHIA MEETING

Cards of invitation were sent out, as usual, asking research institutions and laboratories and scientific organizations to name representatives for the meeting. Following is the record of the names of those who did so:

British Association for the Advancement of Science; New Zealand Institute; University of California; Stanford University; University of Denver; Trinity College; Wesleyan University; University of Delaware; U. S. Department of Agriculture; Carnegie Institution of Washington; Georgetown University; Smithsonian Institution; War Department; Georgia School of Technology; John Crerar Library; Northwestern University; Iowa State College; University of Kentucky; Tulane University, of Louisiana; Colby College; University of Maine; Goucher College; Boston University; Clark University; Harvard University; Massachusetts Agricultural College; Mount Holyoke College; Radcliffe College; Tufts College; Wellesley College; Worcester Polytechnic Institute; University of Michigan; Michigan State College; State University of Montana; New Jersey Agricultural Experiment Station; Rutgers University; Brooklyn Botanic Garden; Cooper Union; Eastman Kodak Company; Fordham University; General Electric Company; Hamilton College; Hunter College of the City of New York; New York Botanical Garden; New York Zoological Society; Rensselaer Polytechnic Institute; University of Rochester; Rockefeller Institute for Medical Research; Syracuse University; North Dakota Agricultural College; Case School of Applied Science; University of Cincinnati; National Lamp Works of General Electric Company; Ohio Wesleyan University; University of Toledo; Wittenberg College; Academy of Natural Sciences of Philadelphia; Carnegie Museum; Drexel Institute; Lafayette College; Lehigh University; Mellon Institute of Industrial Research; Haverford College; Pennsylvania Railroad System; University of Pittsburgh; Philadelphia College of Pharmacy and Science; Swarthmore College; Temple University; Rice Institute; University of Texas; University of Virginia; West Virginia University; Lawrence College; University of Wisconsin.

Many other organizations and institutions were unofficially represented at the meeting.

THE PRELIMINARY ANNOUNCEMENTS AND THE  
GENERAL PROGRAM

Following the new plan introduced last year, the preliminary announcement of the fifth Philadelphia meeting was published in *SCIENCE*. It occupied eighteen pages of the special issue of December 3. A copy of the special issue was sent to every subscriber to *The Scientific Monthly*, as well as to every name on the subscription list of *SCIENCE* itself. In this way the announcement was promptly placed in the hands of all members in a very convenient form, and at a very low cost to the association.

Most of the material for the general program was in hand by December 15 and the actual work of printing the book was accomplished after that date. Considerable additions and alterations had to be cared for while the book was in press. The program editor, Dr. Sam F. Trelease, and Mrs. Trelease who ably assisted him in the editing and publishing of the general program, went to Philadelphia ten days before the opening of the meeting and remained there, working day and night, till the book was finished. It was available for the secretaries conference Sunday evening, December 26, and was supplied to all who registered, beginning Monday morning. Sunday, Monday and Monday night were devoted by Dr. and Mrs. Trelease, with the additional assistance of Mr. Wm. E. L. Drake, to the preparation and publication of a supplement to the program, which was available Tuesday morning. The work of the program editor is greatly appreciated by the association. This work is perhaps the most exacting of all the exacting details that require attention just before the opening of the annual meeting. The association is grateful to the Botanical Department of Columbia University, which made it possible for Dr. Trelease to give much time to editing and publishing the program during more than a month just preceding the meeting. The efficient cooperation and the helpful attitude of the many section and society secretaries, who furnished the special programs to the Washington office with generally unusual promptness this year, is greatly appreciated by the permanent secretary and the program editor.

The general program is a book of 245 pages, 14.5 cm high and 21.5 cm wide, containing the usual material of this publication. The paper stock is somewhat thinner than has been used for the purpose in recent years and the book is less than a centimeter thick. The cover is white, crossed at the upper left corner by bands of red and blue, the colors of the University of Pennsylvania.

Thirteen pages of selected advertising are included in the general program this year, the income from which helps to pay the cost of printing the book. The association appreciates the help given in this

way by the advertisers and bespeaks a careful reading of the advertising pages by the members.

The unusually difficult work of printing the book was performed by the John C. Winston Company, of Philadelphia. The permanent secretary, the program editor and the local committee on arrangements are deeply appreciative of the excellent service given by the Winston Company, and especially for the personal interest and unlimited cooperation of Mr. Charles H. Clarke, of that company.

The supplement to the program contains eight pages, presenting a summary of the science exhibitions, including the several society exhibitions, and a very few slight corrections and additions for the general program.

Copies of the Philadelphia general program and the supplement may be had on request, from the permanent secretary's office, in the Smithsonian Institution Building, Washington, D. C.

FINANCIAL ARRANGEMENTS FOR THE PHILADELPHIA  
MEETING

There must be special arrangements for securing funds to care for the extra expense of each annual meeting, and the undertaking of the preliminary work for one of these large conventions is now a very considerable financial affair. Only a small portion of the extra cost of such a meeting as the one just ended can be cared for from the regular current funds of the association. There are four general sources from which this extra cost may be met: (1) The current funds of the association; (2) funds raised by extra contributions from those attending the meeting, in the form of certificate validation or registration fees; (3) funds realized from profit-making aspects of the meeting itself, as from advertisements in the general program; and (4) funds raised by contributions from institutions and organizations of the city in which the meeting is held.

The fourth of these sources is always the most important, and the association and the associated societies that meet with it are the recipients of very much local financial support. In the case of the fifth Philadelphia meeting this support was in the form of a large contribution secured by the local finance committee from the University of Pennsylvania, which very generously contributed not only the use of its wonderfully suitable halls and rooms and general facilities, but also gave a large fund of money. To the university authorities and especially to Mr. W. H. DuBarry, chairman of the local finance committee, who personally gave very generously of his knowledge and experience and time and energy, the association and all who enjoyed the fine Philadelphia arrangements are deeply and very gratefully indebted.

The association has been reluctant to increase in any way the expense incurred by those who attend the annual meetings, for these people generally find attendance very expensive, especially when they have to travel far. But some sort of small individual tax has seemed necessary in recent years. A fifty-cent certificate-validation fee was collected from those who used railway certificates at the recent Washington and Kansas City meetings. Such an individual contribution from those who attend from a distance seemed to be fair because the association secures the reduced railway rates and cares for the very troublesome and exacting task of looking after the thousands of certificate-validations that are required—a responsibility that consumes a great deal of the very valuable time and energy of the executive assistant, Mr. Sam Woodley, during the rather hectic period of the meeting.

Many attend the annual meetings, however, and receive the advantages there provided, without being members of the association, while another large part of the attendance is by regular members of the association. The latter have contributed toward the support of the association by the payment of the regular dues. Many non-members who attend the meetings are members of associated societies, to which they pay dues, but this is true of most of the association members also. On account of these considerations a regular registration fee of one dollar was inaugurated at the Philadelphia meeting instead of the validation fee, but provision was made by which the registration fee might be remitted to all members of the association. That is, it was not required that the fee be paid by those who had already contributed to the support of the association for the current year. It should be remembered that membership in an associated organization involves no financial contribution to the association itself, for the associated organizations make no contributions in any form to the funds of the association. If there are any who misunderstood the implication of the registration-fee arrangement at Philadelphia, with its apparent partiality to regular members of the association, such misunderstanding may have arisen from an erroneous feeling, occasionally encountered, that membership in an associated society constituted actual membership in the larger organization. The association cooperates closely with the associated organizations, receiving and giving support of many kinds, but each organization is quite independent financially. The affiliated state academies of science, which have a special form of affiliation and receive small funds annually from the current funds of the association, constitute an exception to the last clause.

The income from registration fees paid at Philadelphia amounted to \$1,303.00, and \$10.50 was re-

ceived for extra copies of the general program, while the income from advertising in the program was \$425.00.

An approximate statement of the expenses incurred because of the Philadelphia meeting follows. An accurate statement can not be made as yet. It is interesting to note that the extra cost of the meeting was on the average about \$2.75 per person registered as in attendance.

Preliminary announcement (extra printing and distribution) .....	\$ 600.00
General program and supplement (preparation) .....	538.50
General program and supplement (printing) .....	2,085.00
News Service .....	170.00
Travel (preliminary trips, Washington to Philadelphia) .....	51.90
Printing (cards, notices, etc.) .....	244.77
Signs, electrical equipment, etc. ....	759.75
Popular lectures .....	305.10
Reception .....	1,270.15
Clerical assistance and supplies (for registration) .....	941.75
Miscellaneous items .....	612.04
Final reports of meeting (extra printing and distribution) .....	1,200.00
<b>Total .....</b>	<b>\$8,778.96</b>

#### THE SCIENCE EXHIBITION

The Committee on Exhibition, the chairman of which is H. E. Howe, editor of the *Journal of Industrial and Engineering Chemistry*, with the very helpful and valuable cooperation of Professor W. T. Taggart, of the University of Pennsylvania, chairman of the local subcommittee on exhibits, made great advances this year. The Philadelphia exhibition was the largest and most satisfactory display of this sort that has ever been held in connection with an annual meeting. The details were largely due to the work of Major H. S. Kimberly, manager of the general exhibition, and to the fine cooperation of the numerous exhibiting firms, as well as to the aid of Professor Taggart. The large hall of the gymnasium of the University of Pennsylvania, Weightman Hall, was well filled with exhibits, very conveniently and attractively arranged. In the midst of this hall, around a large, well-decorated Christmas tree, were the registration desks for the meeting. The general exhibition was the main social center of the convention. Tea was served here every afternoon and there were several attractive evening entertainments. The expense of the general exhibition was borne wholly by the commercial exhibitors, who paid at a regular rate for their booths. These exhibitors expressed themselves as well pleased with the arrangements.

It is planned that the Nashville exhibition, next year, will be held in one of the large hotels, where

surroundings will be more attractive than is possible in a gymnasium. Members of the association and of the associated societies are asked to keep the Nashville science exhibition in mind throughout the year, exerting their influence, whenever possible, to secure an even larger number of commercial firms as exhibitors.

The following is a list of the firms and organizations that occupied booths at Philadelphia.

*The American Association for Medical Progress:* Charts and literature showing the value of research in medical science.

*The American Home Economics Association:* *The Journal of Home Economics* and other literature.

*The American Medical Association:* Journal and literature.

*The American Public Health Association:* Literature.

*The Bausch and Lomb Optical Co.:* Microscopes and accessories, projection apparatus, photomicrographic cameras, refractometers, spectrometers, colorimeters, centrifuges, field glasses and other optical products. The Bausch and Lomb Optical Company again this year loaned most of the lanterns and daylight screens used at the meeting.

*P. Blakiston's Son and Co.:* Medical and science books.

*The Chemical Foundation:* Literature.

*The Christian Science Monitor Committee of Philadelphia:* *The Christian Science Monitor*, an international daily newspaper which reports much scientific work unusually well.

*The Coleman and Bell Co.:* Laboratory reagents, stains, etc.

*The Commission on Standardization of Biological Stains:* Stains and literature.

*The Denoyer-Geppert Co.:* Classroom teaching-aids, charts, models, preparations, especially for biology.

*Dow Chemical Co.:* Dow metal.

*The Eastman Kodak Co.:* Organic chemicals, sensitizers, light filters, special cameras and projectors.

*Fiala Outfits, Inc.:* Altimeters, tabloid medicine kits, photographic reagents.

*General Biological Supply House:* Models and specimens for the teaching biologist.

*The Kewaunee Manufacturing Co.:* Laboratory furniture and fixtures.

*The Kny-Scheerer Corporation of America:* Laboratory apparatus, preparations, supplies.

*The Leeds and Northrup Co.:* Precision apparatus for H-ion determination, for conductivity, temperature, etc., recorders for humidity, light temperature.

*E. Leitz, Inc.:* Microscopes, projectors, special photographic apparatus, range finders, museum jars, etc.

*The Mallinckrodt Chemical Works:* Chemicals, etc.

*The Matheson Co.:* Compressed gases.

*The Spencer Lens Co.:* Microscopes and other optical instruments, a new microtome, etc.

*The Arthur H. Thomas Co.:* Apparatus for the chemical and biological laboratory, of many kinds.

*The Union Switch and Signal Co.:* The Junction Rectifier, by L. O. Grondahl.

*The D. Van Nostrand Co.:* Science text and reference books.

*The Victor Talking Machine Co.:* Apparatus for reproduction of total musical range.

*The Weston Electric Instrument Corporation:* Precision electric instruments of many kinds.

*The World Book Co.:* Intelligence and achievement tests from kindergarten to college, science books, etc.

Besides the commercial exhibits, there were a number of attractive and instructive exhibits by individuals and institutions, including exhibits by the U. S. Bureau of Standards, the U. S. Bureau of Fisheries, the Biological and Microanalytical Laboratories of the Philadelphia College of Pharmacy and Science, the Laboratory of Plant Physiology of the Johns Hopkins University, Mr. C. Francis Jenkins, and others. All these showed the results of scientific research.

Members who learn of scientific results or research methods that can be shown advantageously in an exhibit are asked to bear this feature of the annual meeting in mind and make suggestions to the permanent secretary at any time. The committee wishes to invite such exhibitors to take part, and a portion of the Nashville exhibition is to be set aside for invitation exhibits of a special scientific nature. The annual science exhibition is now on its feet as a vigorously going affair of the annual meeting, but we need more exhibits of a non-commercial nature than we have succeeded in securing in recent years.

A number of societies held special exhibitions in rooms near their meeting places, but it has not been possible to secure satisfactory lists of these society exhibitions. Great gain to all concerned will be achieved if those in charge of society exhibitions will, in future years, prepare good catalogues of their exhibits and have such lists in the hands of the program editor at the opening of the meeting.

#### THE FOURTH AWARD OF THE AMERICAN ASSOCIATION PRIZE

For the fourth time, the annual prize of the American Association for the Advancement of Science was awarded at the fifth Philadelphia meeting. These thousand-dollar prizes are awarded from a fund given to the association by one of its members, who wishes his name withheld. Funds are available for two more annual prizes, after the one just awarded. According to the terms of the gift and rules adopted by the association council, the prize is to be awarded to some person presenting at the annual meeting a notable contribution to the advancement of science. All papers presented on the programs of the Philadelphia meeting were eligible for consideration, whether or not their authors were members of the association. The secretary of each section and society that met at Philadelphia was asked to consult others and submit



titles of papers presented in the sessions of his organization, for consideration in the making of the award. These nominations were thoroughly investigated and considered by the Committee on the Award of the Philadelphia Prize, and the name of the winner was announced Saturday at the close of the meeting.

The Committee on Award was composed of the following members:

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

To the chairman and other members of this committee are here expressed the cordial and appreciative thanks of the association. The importance of the American Association Prize is very great to American science and to the association and the task of deciding on the award is difficult and delicate.

The Philadelphia prize was awarded to Dr. George D. Birkhoff, professor of mathematics in Harvard University. The paper for which the prize was awarded was Dr. Birkhoff's address as retiring president of the American Mathematical Society, on "A Mathematical Critique of Some Physical Theories."

Earlier winners of the American Association Prize are as follows:

- (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.

Special attention should be called to these prizes and to the purpose for which they are awarded; that is, to stimulate interest in high-class contributions at the annual meetings and to encourage the presentation of the best American scientific work on these occasions. The more noteworthy advances made during the year in every field of knowledge should always be presented at the annual meeting. It is the hope of the donor of the American Association Prize that it may serve each year as a concrete and tangible aid to some American science worker, enabling him to go farther along his chosen line.

#### LUNCHEONS, DINNERS, ETC.

The numerous luncheons, dinners, etc., of the Philadelphia meeting were well attended and were successful in every way. A list of these follows:

##### *Monday noon, December 27:*

Luncheon of the Metric Association.

##### *Monday evening, December 27:*

Dinner of the American Nature-Study Society.

Smoker for all biologists.

Dinner of the Metric Association.

##### *Tuesday evening, December 28:*

Dinner of the National Council of Geography Teachers.

Dinner for all zoologists.

Bio-Medical Mixer and Dance.

Smoker for all entomologists.

Smoker of the Society of American Bacteriologists.

Dinner of the Crop Protection Institute.

Joint dinner of Section Q and the Phi Delta Kappa Fraternity.

Dinner of the Society of Sigma Xi.

Dinner of the Gamma Alpha Graduate Scientific Fraternity.

##### *Wednesday morning, December 29:*

Breakfast of the Sigma Delta Epsilon Graduate Women's Scientific Fraternity.

##### *Wednesday noon, December 29:*

Luncheon of the American Society of Parasitologists.

##### *Wednesday evening, December 29:*

Joint dinner of Section A, the American Mathematical Society and the Mathematical Association of America.

Dinner of the American Physical Society.

Dinner of the American Astronomical Society.

Joint dinner of Section E and the Association of American Geographers.

Dinner of the American Phytopathological Society.

Dinner of the American Society of Plant Physiologists.

Dinner of the American Society of Naturalists.

Dinner of Section H, the American Anthropological Association, and the American Folk-Lore Society.

Dinner of the American Psychological Association.

Dinner of Section M.

Dinner of the Society of American Bacteriologists.

##### *Thursday morning, December 30:*

Breakfast of the Sigma Delta Epsilon Graduate Women's Scientific Fraternity.

##### *Thursday noon, December 30:*

Luncheon of the Council of the American Meteorological Society.

##### *Thursday evening, December 30:*

Dinner for all entomologists.

Dinner for all botanists.

Smoker for all ecologists and their friends.

Dinner of Section O and all associated societies.

Dinner of the American Society for Horticultural Science.

##### *Friday evening, December 31:*

Dinner of the American Association of University Professors.

## NEWS SERVICE AT PHILADELPHIA

(Report by Austin H. Clark, News Manager)

The outstanding feature of the Philadelphia meeting, in its relation to the general public, was the exceptionally high quality of all the representatives of the press. For the first time in its history the association was regarded by all the local papers, as well as by all the general news services, as worthy of the best efforts of really first-class men.

For some years past the officers of the association have been making a sincere effort to provide the press with a complete account of its activities for inspection and interpretation to the general public. During the same period the press has shown itself more and more appreciative of the work of the association, and at last complete understanding of each by the other has been reached.

One of the important functions of the association at its annual meetings is the general dissemination of scientific information through cooperation with the representatives of the press. Through this cooperation with the press the public is informed of the latest application of discoveries in science; is interested anew by the recital of recently discovered facts, and is enabled to follow the various and diverse efforts which are being made to correlate groups of disconnected facts and thus to make them into a useful whole.

In order most effectively to carry out this part of the work of the association, there has been established in connection with the annual meetings a clearing house for scientific news, the object of which is to make readily available for the representatives of the press the subject matter of the talks delivered and also information relative to the activities of the association. In other words, this news service aims to assist the press in interpreting the activities of the association to the world at large.

Every one who was to read a paper at this meeting was asked, by means of a special letter from the permanent secretary, to supply the news service with copies of the manuscript and also an abstract, for submission to the press in advance of the reading of the paper. If the representatives of the press have this material well in advance they are able to go over it at leisure and to make inquiries in regard to points that may not be quite clear to them, thus being able to make better and more extended presentations.

Adequate publicity for the fifth Philadelphia meeting would not have been possible had it not been for the able assistance rendered by Mr. Henry Herbert, head of the publicity bureau of the University of Pennsylvania. Called upon to act only a few days before the meetings began and wholly unfamiliar with the enormous scope and volume of the material to be

handled, Mr. Herbert showed himself to be able easily to master a most difficult situation. A large amount of material had been sent to Philadelphia a week in advance of the opening of the sessions, for advance study by the press representatives. When Mr. Herbert was asked to take charge of the local work this material could not be found, and it was not located until the actual opening of the meetings on Monday morning. Over two hundred of the abstracts sent to Philadelphia were not yet dated, and it was necessary to supply the dates from the printed program before they could be made available for use. There were also many other things to be done, while during the entire day the news office was under very heavy pressure from outside. By midnight on Monday night practically all the material had been dated, other necessary details had been attended to and everything was in smoothly-running order.

As in previous years, though at this meeting to a greater extent than formerly, the association enjoyed and profited by the cooperation of Science Service. Mr. Watson Davis and Mr. James Stokley, of Science Service, who were in constant touch with the news manager not only during the sessions, but also for the three weeks preceding, and rendered every possible assistance. The association greatly appreciates this help.

The total number of abstracts and papers received was 622. As these came in they were divided into six classes which were designated by the letters M, A, B, C, D and X.

Abstracts marked M were those that included material of general interest, written in good popular style and of a length not exceeding two mimeographed pages. These were mimeographed, fifty copies of each being run off. When they were accompanied by a complete paper the fact was noted on the mimeographed sheet and the additional manuscript was made available for study at the news office. The heading of the mimeographed sheets had the following form:

*Release:* Friday, December 31; evening papers.

*Note:* Additional information available at the News Office.

*Title:* Building codes modified by white-ants or termites.

*Author:* Dr. Thomas E. Snyder, Bureau of Entomology, U. S. Department of Agriculture.

The text of the mimeographed sheets was double-spaced, to allow the insertion of explanatory or other pencil notes.

Abstracts or papers marked A were those that included material of general interest written in such a manner as to be intelligible to any one with a good education. Many abstracts or papers marked A

would have been mimeographed had they not been too long. Short abstracts marked A were for the most part those which, though excellently prepared, were somewhat limited in their popular appeal, or of more or less local application.

The dividing line between the mimeographed abstracts and those marked A is of course a more or less arbitrary one. The number of mimeographed papers available at a meeting of this sort should be about ten for each day, or between 50 and 60 in all. If there are more than this there is always the possibility that too much reliance will be placed on the mimeographed sheets and the incentive for examination of the other material by the representatives of the press may be decreased.

The letter B was used to indicate material of less, though still considerable, popular interest. The letter C indicated material which, though easily intelligible, was of little general interest. The letter D was used for abstracts and papers including technical terms not generally understood.

Abstracts marked X were those which were judged not to be suitable for press notice, either because they included symbols which can not be set in newspaper type, or because of the nature of the subject-matter. However, these were laid out with the others, for examination by the representatives of the press. These men know public sentiment in regard to the various different lines of science, and experience has shown that they can be relied upon never to publish anything that might prejudice the association or science in general in the public mind.

This classification of the abstracts and papers for the news service, it should be remembered, has nothing to do with the intrinsic value of the subject-matter. It concerns merely the relative value of the papers from the standpoint of immediate newspaper availability.

At the Washington meeting all the material was made available for examination by the press as soon as it was received. This enabled the reporters to go over it at leisure and to make up fairly complete stories for each day of the meetings before the meetings actually began. With this preliminary work done, they were able to spend their time in seeking interviews and in developing various leads which they had discovered from a study of the abstracts. Also in many cases accounts of the meetings were mailed in advance to distant papers, which were later supplemented by telegraphic additions.

At Philadelphia the mimeographed sheets were assembled in fifty complete sets which were distributed on Monday morning. There were four release times for each day, morning (for papers read the preceding evening), noon, afternoon and evening. The release

date marked on a paper or abstract was final, and was not changed if the reading of the paper happened to be advanced or postponed. The reason for this is that many of the reports were sent in long in advance and it was not possible to follow these up. If such changes were attempted it might easily happen that one paper in a city would print a story two or three days in advance of the date of release for the same story in the office of another paper. For the same reason authors can not make changes in their papers after they have been made available for examination by the press representatives. All the newspapers are entitled to the same treatment, and it would be obviously unfair to insert a correction, no matter how trivial, in a paper after the story had been sent out by one or more of the reporters present.

The 622 abstracts and papers received in connection with the Philadelphia meeting were classified as follows: M, 51;<sup>1</sup> A, 28; B, 71; C, 196; D, 236; X, 40.

Through the courtesy of Radio Station WOO (Wanamaker's) and Station WIP (Gimbel Brothers) and the cordial cooperation of Science Service, represented by Mr. James Stokley, a series of five radio talks was arranged, one for each day from Monday to Friday inclusive. These radio talks were as follows:

*Monday evening, December 27th, Station WOO.*—"What Science means to Humanity." Dr. Vernon Kellogg, secretary of the National Research Council, Washington, D. C. (read, in the absence of Dr. Kellogg, by Mr. James Stokley).

*Tuesday evening, December 28th, Station WIP.*—"Artificial Lighting and Civilization." Dr. M. Luckiesh, director of the Nela Laboratories, Cleveland, Ohio.

*Wednesday evening, December 29th, Station WOO.*—Address by Dr. Michael Pupin, the retiring president of the American Association.

*Thursday evening, December 30th, Station WIP.*—"Why Plants need Water." Dr. Burton E. Livingston, director of the Laboratory of Plant Physiology, Johns Hopkins University, Baltimore; permanent secretary of the association.

*Friday evening, December 31st, Station WOO.*—Science News from the Association Meetings. Dr. Edwin E. Slosson, director of Science Service, Washington, D. C.

#### THE GENERAL AND COMPLIMENTARY PROGRAMS AT PHILADELPHIA

There were nine general sessions of the association at Philadelphia, and four evening lectures especially for the high-school students of the city. The presentation of non-technical lectures in connection with the annual meetings is being more strongly empha-

<sup>1</sup>Of these twenty were accompanied by complete papers.

sized as an important part of the work of the association and plans are being made to improve this feature still further in future years.

At the opening session, on Monday evening, December 27, the convention was opened by Dr. C. E. McClung, chairman of the local committee on arrangements, who, as he said, introduced the introducers. Dr. Josiah H. Penniman, provost of the University of Pennsylvania, graciously welcomed the association and associated societies to Philadelphia and Dr. Penniman's cordial remarks were responded to by the president of the association, Dr. L. H. Bailey, who expressed the great pleasure of American men and women of science in coming together again in Philadelphia. The main address of the session was that of the retiring president of the association, Dr. Michael I. Pupin, who spoke on "Fifty Years' Progress in Electrical Communications." This address has appeared in full in *SCIENCE* for December 31, 1926.

At the close of the opening session the large audience went to the Franklin Field-Palestra, the new indoor stadium of the University of Pennsylvania, for the annual general reception, when music and refreshments were generously provided. The Field-Palestra was used for the first time on this occasion.

Two general sessions were held on Tuesday afternoon. One was devoted to the Fourth Annual Josiah Willard Gibbs Lecture, of the American Mathematical Society, the lecturer being H. B. Williams. Dr. Williams spoke on "Mathematics and the Biological Sciences." The other general session was devoted to a program on "Research, especially in Colleges and Professional Schools," arranged by Maynard M. Metcalf, secretary of the sub-committee on research in educational institutions, of the committee of one hundred on research. Research as an attitude of mind, research in medical schools, research in jurisprudence and research in colleges were presented by John C. Merriam, Florence R. Sabin, Walton W. Cook, Maynard M. Metcalf and H. B. Goodrich. An outcome of this session was the subsequent adoption, by the association council, of a resolution inviting several other organizations to name representatives to meet with a representative of the American Association, to consider the encouragement of research in American colleges. (See Legislative and Executive Proceedings, as printed on page 87 in this issue of *SCIENCE*.)

The Tuesday evening session was devoted to the Fifth Annual Sigma Xi Lecture, given by Mr. Herbert Hoover, on "The Nation and Science." This inspiring address appeared in *SCIENCE* for January 14.

Two general sessions occurred on Wednesday afternoon. One was devoted to a program on "Hydrobiology," dealing with life in rivers and lakes especially. Papers were presented by Stephen A. Forbes,

Chancey Juday, A. G. Huntsman and Albert Mann. It may be predicted that this branch of biology will be increasingly cultivated. The other general session of Wednesday afternoon was devoted to an illustrated, non-technical lecture on "The Unity of the Universe," by Heber D. Curtis.

At the evening session on Wednesday was given an illustrated lecture on "Cambridge University," by George H. F. Nuttall, Quick professor of biology and director of the Molteno Institute for Research in Parasitology, in the University of Cambridge.

A general session on Thursday afternoon was devoted to a program illustrating some of the relations of science to education, arranged by Otis W. Caldwell, chairman of the association's committee on the rôle of science in education. After an introductory statement by Edward A. Wildman, director of the division of science of the high schools of Philadelphia, the work of the committee on the rôle of science was briefly discussed by its chairman. Then followed papers on "The Vocation of the Scientist," by L. H. Bailey; "Biology and Better Beef," by Wilber A. Cochel; and "Recent Contributions of Chemistry to Human Nutrition," by Henry C. Sherman.

An illustrated lecture on "The Geographic Conditions of Ancient Greek Culture" was given at the Thursday evening session, by J. L. Myres, general secretary of the British Association for the Advancement of Science and special representative of the British Association at the Philadelphia meeting.

The four non-technical lectures specially planned for high-school students, for which some fifty thousand printed announcements had been previously distributed in the schools of Philadelphia, occurred on the evenings of Monday, Tuesday, Wednesday and Thursday of convocation week, in the auditorium of the newly opened Girls' Trade School. Details for these lectures were very efficiently arranged by G. E. Nitzsche, recorder of the University of Pennsylvania, and George Wheeler, assistant superintendent of the Philadelphia public schools, to both of whom the association is very grateful for this opportunity to bring the science meeting to the minds of the youth of Philadelphia. All the lectures were well attended and this experiment was remarkably successful. The lectures were as follows:

On Monday evening an illustrated lecture, with elaborate experimental demonstrations, on "Radio Communication," was given by Raymond Morgan, of the University of Pennsylvania.

On Tuesday evening Clyde Fisher, of the American Museum of Natural History, New York City, gave a lecture on "A Journey in Lapland," illustrated by original colored lantern slides and motion pictures.

On Wednesday evening George A. Dorsey, of the New School of Social Research, New York City, gave a lecture on "Why We behave like Human Beings."

On Thursday evening a lecture on "Wild Life in Wildest America," illustrated by motion pictures, was given by Norman McClintock, of the University of Pittsburgh. He dealt with the life of the Shiras Moose and other wild animals in the region of the headwaters of the Yellowstone, in Wyoming.

#### THE SECRETARIES' DINNER AND CONFERENCE

On Sunday evening, December 26, the secretaries of the association sections and of the organizations meeting with the association dined, at the Bellevue-Stratford Hotel, with the members of the executive committee and joined in a conference after the dinner. This dinner of the executive committee and the secretaries has recently become established as an informal but very important feature of the annual meeting. It is complimentary on the part of the association. It offers a much needed opportunity for exchange of ideas among those who are most active in directing the affairs of the association. Twenty-eight were present and the discussions were animated and prolonged.

#### GENERAL OFFICERS FOR THE 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, Bio-Physical Laboratories, Harvard University, Boston, 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 was presented this year, since that society met elsewhere.