

SCIENCE

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OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION
FOR THE ADVANCEMENT OF SCIENCE.

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THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

EXECUTIVE PROCEEDINGS: REPORT OF THE GENERAL SECRETARY.

THE first meeting of the American Association for the Advancement of Science was held in the City of Philadelphia, September 20th, 1848. There were then 461 members of the Association, but we have no record of the number in attendance. The second Philadelphia meeting was held September 3, 1884. The Association then numbered 1,981 members and the attendance was 1,261, including 303 members of the British Association for the Advancement of Science and nine other foreign guests. The third Philadelphia meeting was held December 27 to 31, 1904. The total membership was nearly 4,000 and the registered attendance numbered 588 members and 104 members of affiliated societies, making a total registered attendance of 692 members. From 200 to 400 did not register, so that we may safely conclude that the total attendance was at least 890, and perhaps very much larger.* The present meeting is, therefore, the third largest in point

* We estimate the number of scientific men in attendance to have been in the neighborhood of 1,200. 240 members of the American Chemical Society were registered, but only 75 for the Chemical Section of the Association. There were nearly 100 members of the American Psychological and Philosophical Associations in attendance, very few of whom registered. The conditions were probably similar in other sciences.—ED.

of numbers since the year 1884. While numbers are not an index of the value of a meeting, they do show the amount of interest taken in its proceedings, and from that standpoint we may conclude that the third Philadelphia meeting was a success. It was also a success from the standpoint of number of papers read and the general interest in the papers, as well as in all of the proceedings of the association.

Tabulating the members according to the sections for which they registered, we find the following numbers:

| | |
|-----------------|-----|
| Section A | 57 |
| Section B | 66 |
| Section C | 75 |
| Section D | 16 |
| Section E | 79 |
| Section F | 104 |
| Section G | 103 |
| Section H | 44 |
| Section I | 14 |
| Section K | 25 |

giving a total of 581 who signified their preference as to sections.

These figures show that where a national scientific society met in conjunction with the association, the corresponding section was large and where a national scientific society did not meet, the attendance was very small. This would seem to indicate that members of the association prefer to attend a meeting of the national society rather than the meetings of the association unless the two meet together.

The University of Pennsylvania placed its halls and laboratories freely at the disposal of the association and each day furnished a lunch to the members. The association has never received more careful attention than it received at this meeting. A vote of thanks was extended to the university, the details of which will be found later on in the report.

In former years a daily program has been published, showing the papers to be

read that day and giving a list of the members in attendance. This has always been a severe drain upon the resources of the association and it was decided this year to use but one program, which was distributed to members on the first day papers were read. This single program seemed to answer its purpose as well as the daily programs have in the past, except that many members missed the lists of those in attendance. If some method can be devised by which members may know who are present, there can be no objection to the single program.

Since the last meeting of the association 377 members have been elected; although this is not as large as the number elected in previous years, yet it shows a steady growth and a growing interest on the part of the public in the work of the association.

There has always been great difficulty in getting reports of the association and its work published in the daily papers, except those in the city where the meeting is held. This year the Committee on Policy of the Association instructed the permanent secretary to appoint a press secretary. The permanent secretary appointed Mr. Theodore Waters. Reports of the meetings were prepared each day and sent to most of the prominent newspapers of the country. It was impossible to make the reports as full as desired, as some of the members of the association who read papers did not give their abstracts to the press secretary, although they were requested to do so. If the readers of papers will take pains to see that their abstracts are in the hands of the press secretary, entirely satisfactory reports can be sent out in future. It is greatly to be desired that the press of the country give some attention to the meetings of our greatest scientific society.

The two questions of general interest were the time of meetings of the association and our relation to the affiliated so-

cieties. These questions have been actively discussed before, but they do not seem to be definitely settled in the minds of many. The sections which have been in the habit of giving excursions and those who study objects out of doors, prefer a summer meeting, but it seems that a large majority of the association is in favor of the winter meetings, as the general committee unanimously decided to hold the next meeting during the winter. The committee on policy reported that it had considered this matter and would recommend that this general committee request the next general committee to hold a summer meeting in Ithaca during the summer of 1906. The success of this meeting will undoubtedly have a great deal to do with settling the question of summer meetings.

There seems to be no objection on the part of the association to holding two meetings each year, one during the winter and one during the summer. The expense involved would be considerable, but the association can bear it and perhaps the best solution of the problem will be two meetings. This is a question which the future must decide.

AFFILIATED SOCIETIES.

The following Affiliated Societies held sessions in conjunction with the association:

American Alpine Club.
 The American Anthropological Association:
 The American Chemical Society.
 The American Folk-Lore Society.
 The American Geographers' Association.
 The American Mycological Society.
 The American Philosophical Association.
 The American Physical Society.
 The American Psychological Association.
 The American Physiological Society.
 The American Society of Naturalists.
 American Society of Vertebrate-Paleontologists.
 Association of American Anatomists.
 The Association of Economic Entomologists.
 The Astronomical and Astrophysical Society of America.

The Botanical Club of the Association.
 The Botanical Society of America.
 The Society for Plant Morphology and Physiology.
 The Society for the Promotion of Agricultural Science.
 Sullivant Moss Chapter.
 The Wild Flower Preservation Society of America.
 The Entomological Club of the Association.
 Eastern Branch of American Society of Zoologists.
 The Fern Chapter.
 The Geological Society of America.
 The Sigma XI Honorary Scientific Society.
 The Society of American Bacteriologists.
 The Society for Horticultural Science.
 The Southern Society for Philosophy and Psychology.
 The Pelee Club.

The association is still pursuing the policy of encouraging the great national societies to meet at the same time and place with it. The association secures rooms, provides accommodations, makes arrangements with hotels and railways and in all points takes charge of general arrangements without expense and without trouble to the affiliated societies.

Nearly, if not all, of the societies meet in perfect harmony with the respective sections. In almost every case the sections have charge of the general session in one half of the day and the affiliated societies have charge of the meetings during the other half of the day. Thus there is no friction and papers are presented before both bodies, while there is the additional advantage of a larger attendance at both the section and the society. It is hoped that this arrangement will appeal still more to the national societies until all of them enter into this arrangement with the association.

The attendance of the members of the societies this year indicates that they are willing to cordially cooperate with the association and turn out in large numbers to attend these joint meetings. There is

nothing in the arrangement which prevents an affiliated society holding a separate meeting at any other time of the year if it chooses.

The first session of the fifty-fourth meeting of the American Association for the Advancement of Science was called to order in College Hall Chapel, University of Pennsylvania, Philadelphia, Pa., at 10 A.M., Wednesday, December 28, 1904, by the retiring president, Dr. Carroll D. Wright. Dr. Wright introduced the president-elect, Dr. William G. Farlow, who made a brief address. Provost Harrison, of the University of Pennsylvania followed with an address of welcome.

President Farlow thanked Provost Harrison for his words of welcome and then asked the general secretary to make the announcements from the council.

Mr. Howe (general secretary): The Council has voted to extend the privileges of associate membership for this meeting to members of the local committee, residents of Philadelphia and vicinity and to members of the affiliated societies.

The following committees have been appointed to serve during this meeting:

Committee on New Members: The permanent secretary and the secretary of the Council.

Committee on Fellows: The general secretary and the vice-presidents of the sections, Mr. Howe, chairman.

Committee on Grants: The treasurer and the vice-presidents of the sections, Mr. R. S. Woodward, chairman.

It has been decided to hold sessions of the Council at nine o'clock in the morning, but there will be no other general session until Saturday morning at ten o'clock.

Dr. Calvert, secretary of the local committee, made some announcements in behalf of that committee in regard to the arrangements which had been made for the comfort and convenience of the association.

After the adjournment of the general session the several sections were organized in their respective rooms.

In accordance with a suggestion from the committee on the policy of the asso-

ciation, the vice-presidential addresses were scattered throughout the week, instead of being given on the same date.

It was thought best to have in addition to a vice-presidential address, one or more papers of general interest, which would follow the address, thus taking up the greater part of that session.

The general program of the week was as follows:

GENERAL EVENTS.

The council of the association met daily from December 28 to December 31, inclusive, at 9 A. M., in the auditorium, Houston Hall.

WEDNESDAY, DECEMBER 28, 1904.

Meeting of the council at 9 A. M., as above.

First general session of the association at 10 A. M., in the chapel, College Hall.

The meeting was called to order by the retiring president, Dr. Carroll D. Wright, who introduced the president-elect, Dr. W. G. Farlow.

Addresses of welcome were delivered by members of the local committee.

President Farlow replied.

Announcements by the general, permanent and local secretaries.

Agreement on the hours of meeting.

Adjournment of the general session, followed by the organization of the sections in their respective halls.

At 1:00 P. M.

Luncheon to the members of the association and societies in the gymnasium.

At 2:30 P. M.

Addresses of vice-presidents as follows:

Vice-President Tittmann, before the Section of Mathematics and Astronomy, in College Hall. Subject, 'The Present State of Geodesy.'

Vice-President Bancroft, before the Section of Chemistry, in the Harrison Laboratory of Chemistry. Subject, 'Future Developments in Physical Chemistry.'

Vice-President Russell, before the Section of Geology and Geography, in Geological Laboratory, College Hall. Subject, 'Cooperation among American Geographical Societies.'

At 8:00 P. M.

Address by Dr. Carroll D. Wright, the retiring President of the Association, in the gymnasium. Subject, 'Science and Economics.'

At 9:00 P. M.

Reception by the Provost of the University of Pennsylvania, Dr. C. C. Harrison and Mrs. Harrison, in the Museum.

THURSDAY, DECEMBER 29, 1904.

Meeting of the council at 9 A. M.

Meetings of the sections at 10 A. M.

At 1:00 P. M.

Luncheon to the members of the association and societies in the gymnasium.

At 2:30 P. M.

Addresses of vice-presidents as follows:

Vice-President Hall, before the Section of Physics, in Morgan Laboratory of Physics. Subject, 'A Tentative Theory of Thermo-Electric Actions.'

Vice-President MacBride, before the Section of Botany, in Biological Hall. Subject, 'The Alamogordo Desert.'

Vice-President Mark, before the Section of Zoology, in Laboratory of Physiology and Pathology. Subject, 'The Bermuda Islands and the Bermuda Biological Station for Research.'

Vice-President Baldwin, before the Section of Social and Economic Science, in Logan Hall. Subject, 'The Modern Droit d'Aubaine.'

At 8:00 P. M.

The retiring President of the American Chemical Society, Dr. Arthur A. Noyes, delivered a lecture, illustrated by experiments, on the 'Preparation and Properties of Colloidal Solutions,' in the Harrison Laboratory of Chemistry.

FRIDAY, DECEMBER 30, 1904.

Meetings of the council at 9 A. M.

Meetings of the sections at 10 A. M.

At 1:00 P. M.

Luncheon to the members of the association and societies in the gymnasium.

At 2:30 P. M.

Addresses of vice-presidents as follows:

Vice-President Woodward, before the Section of Mechanical Science and Engineering, in the Mechanical Laboratory. Subject, 'Recent Progress in Engineering Education.'

Vice-President Saville, before the Section of Anthropology, in the Museum of Science and Art. Subject, 'Mexican and Central American Archeology.'

At 10:00 P. M.

Meeting of the General Committee at the Hotel Walton.

SATURDAY, DECEMBER 31, 1904.

Meeting of the council at 9 A. M.

Final general session at 10 A. M., in the chapel, College Hall.

Meeting of the sections following the adjournment of the general session.

At 1 P. M.

Luncheon to the members of the association and societies in the gymnasium.

EXCURSIONS.

Excursions to the following plants were arranged by the local committee:

Belmont Filtration Plant (filtration of city water).

F. A. Poth & Sons Brewery.

J. P. Baltz Brewing Company.

Eddystone Print Works, Eddystone, Pa. (bleaching and dyeing of all kinds of cotton goods, engraving and preparing the rolls).

Barrett Manufacturing Co. (refined coal-tar chemicals).

Baldwin Locomotive Works.

Atlantic Refining Co. (petroleum oils).

Cramp's Ship Yard.

Camden Coke Company (Otto-Hoffman by-product coke ovens).

United Gas Improvement Co. (coal and water gas).

Hulton Brothers (dyeing and finishing).

Forth & Foster (dyeing and finishing).

United States Arsenal.

United States Mint.

United States Navy Yard.

Gillinder's Glass Works.

High Pressure Fire Service Plant, kindness of Mr. F. L. Hand, Chief of the Bureau of Water, Philadelphia.

Philadelphia Electric Co.'s new Power Station, through the kindness of Mr. J. B. McCall, President Phila. Electric Co.

Philadelphia Subway, through the kindness of Mr. W. S. Twining, chief engineer, and Mr. Charles M. Mills, principal assistant engineer, Subway and Elevated Railway Construction.

Wm. Sellers & Co., Inc., through the kindness of Mr. William Sellers and Mr. Coleman Sellers, Jr.

On Monday evening, December 26, 1904, the American Physiological Society held a smoker at the University Club.

On Tuesday evening, December 27, 1904, Professor W. F. Osborn gave a lecture before the American Society of Naturalists

in the Academy of Natural Sciences on the subject, 'Recent Discoveries of Extinct Animals in the Rocky Mountain Region and their Bearings on the Present Problems of Evolution.' On the same evening the American Society of Naturalists and the affiliated societies gave a smoker at the University Club.

Wednesday afternoon, December 28, 1904, was held the annual discussion of the American Society of Naturalists on the question 'Mutation Theory of Organic Evolution.' This was participated in by Dr. D. T. MacDougal, Professor W. E. Castle, Professor E. G. Conklin, Professor W. B. Scott, Professor T. Dwight, Professor L. H. Bailey and Dr. W. M. Wheeler. In the evening the annual dinner of the American Society of Naturalists was held.

On Thursday evening, December 29, the American Chemical Society held a comers at the University Club. The same evening the Psychological and Philosophical Association held a smoker. The same evening the Society of the Sigma Xi held a convention in College Hall.

Friday evening, December 30, the American Alpine Club held its annual dinner at the University Club.

The council elected as members of the council at large, J. McK. Cattell, J. M. Coulter and H. F. Osborn.

Professor C. R. Barnes, of the University of Chicago, Dr. H. C. Cowles, of the University of Chicago, and Mr. C. L. Shear, of the U. S. Department of Agriculture, were appointed as representatives to the International Botanical Congress to be held in Vienna in 1905. The reports of committees and the list of fellows elected will be printed in the next issue of SCIENCE.

AMENDMENTS.

The following amendment to the constitution which was proposed at the St. Louis meeting, favorably acted upon by

the council and reported to the general session, was adopted:

Amend Article 34 by the omission of the words "On the election of any member as fellow, an additional fee of \$2 shall be paid."

The proposed amendment of article 4, line 2, to read "The members of at least one year's standing, who are professionally engaged in science and have, by their labors, aided in advancing science" was unfavorably reported upon by the committee on policy.

POLICY OF THE ASSOCIATION.

The council appointed Mr. R. S. Woodward permanent chairman of the committee on policy of the association.

The council voted that the committee on policy of the association be requested to exercise a general executive control of the preliminary arrangements for meetings and of the publications, subject to the control of the council.

The committee on policy of the association reported the following resolutions which were adopted:

"That the permanent secretary be authorized to offer sets of the back volumes of the *Proceedings* to libraries, which shall be approved by the committee of the association appointed by the president."

"That the publishers of SCIENCE be requested to announce prominently that cut copies will be sent to members who request it."

"That the committee recommends as members, and if they become members, nominates as fellows, members of the national scientific societies not now members of the association in cases in which the national scientific society has a qualification for membership equal to that of the qualification of the association for fellowship. The following societies are accepted as having such qualifications:

The American Society of Naturalists.
 The American Philosophical Society.
 The American Academy of Arts and Sciences.
 The Association of American Anatomists.
 The Association of American Physicians.
 The Association of Pathologists and Bacteriologists.

The Astronomical and Astrophysical Society of America.

The Botanical Society of America.
 The Geological Society of America.
 The American Mathematical Society.
 Active members of the American Ornithological Union.

The American Philosophical Association.
 The American Physical Society.
 The American Physiological Society.
 The American Psychological Association.
 The American Society of Bacteriologists.
 The Society of Plant Morphology and Physiology.
 The American Zoological Society.

The following resolution was referred to the committee on policy of the association:

Resolved, that the year book of this association be hereafter sent bound to such members as may notify the permanent secretary of their desire to receive it in that form. Binding to be in cloth or boards, as the treasurer and secretary may think proper.

Dr. W. H. Hale introduced the following resolution, which was adopted:

Resolved, That the American Association for the Advancement of Science hereby extends its hearty congratulations and best wishes to Dr. Martin H. Boye, a founder of this association, and the only surviving founder of the parent association, that of American Geologists, afterwards called the American Association of Geologists and Naturalists, which was founded in this city in 1840, Dr. Boye being present at that time, as well as at the founding of the American Association for the Advancement of Science in 1848.

Professor C. M. Woodward introduced resolutions thanking the officers of the University of Pennsylvania and other institutions that had entertained the association and these were unanimously adopted.

At the meeting of the general committee, Friday evening, it was decided to hold the next meeting in New Orleans, the work of

the association to begin Friday, December 29, 1905. Boston was recommended as the place of the meeting in 1906.

The following officers were elected for the New Orleans Meeting.

President—Professor C. M. Woodward, St. Louis, Mo.

Vice-Presidents:

Section A—Professor W. S. Eichelberger, Washington, D. C.

Section B—Professor Henry Crew, Evanston, Ill.

Section C—Professor Chas. F. Mabery, Cleveland, Ohio.

Section D—Professor F. W. McNair, Houghton, Mich.

Section E—Professor Wm. North Rice, Middletown, Conn.

Section F—Professor H. B. Ward, Lincoln, Neb.

Section G—Dr. Erwin F. Smith, Washington, D. C.

Section H—Dr. Geo. Grant McCurdy, New Haven, Conn.

Section I—Professor Irving Fischer, New Haven, Conn.

Section K—Professor Wm. T. Sedgwick, Boston, Mass.

Permanent Secretary—Dr. L. O. Howard was elected for a period of five years beginning August, 1905.

General Secretary—Professor C. A. Waldo, Lafayette, Ind.

Secretary of Council—Professor John F. Hayford, Washington, D. C.

Secretary Section K—Dr. Wm. J. Gies, New York City, N. Y.

CHARLES S. HOWE,
General Secretary.

LINES OF PROGRESS IN ENGINEERING.*

THE engineering army, like the myriads of well-trained, well-equipped and well-organized soldiers of the Mikado, stretches from high ground to high ground along an extended front, facing the hosts of conservatism who are entrenched behind moats

* Address of the vice-president and chairman of Section D—Mechanical Science and Engineering, 1904.