

fully considered in my papers as the following quotations will show. Wieman says (p. 186), "The granules may therefore be of the nature of chromatin and actually represent the chromatin of the nurse cells. . . ." In my paper (1909, p. 274) is this statement, "the granules of the pole disc may be derived from the nuclei of the nurse cells which, in many insects, pass into the early oocytes." Again Wieman remarks (p. 186) "The fact that the pole disc occupies a position between the pole cells and the yolk gives a considerable foundation for regarding it as a source of nutrition for these cells." My suggestion reads as follows (1909, p. 275) "they may hasten the growth at the posterior pole of the egg, and that later they may possibly increase the vigor of the pole cells. That the pole cells need special means of nourishment is doubtless the case, for, contrary to the condition in the blastoderm cells, they are at an early period entirely separated from the yolk, and later use up energy in their migration."

Furthermore, Wieman unconsciously admits that the pole disc granules are really germ cell determinants in the following words (p. 186): "If then the pole disc represents a part of the nutritive stream of the ovum that has not been transformed into ordinary yolk, but instead has been reserved to supply the pole cells, the conclusion presents itself that the latter as a result of this special kind of nutrition, undergo a peculiar method of metabolism which differentiates them from the somatic cells."

An account of the significance of the germ cell determinants in chrysomelid beetles and other animals is now in press.⁴

R. W. HEGNER

UNIVERSITY OF MICHIGAN,
December 21, 1910

THE AMERICAN ASSOCIATION FOR THE
ADVANCEMENT OF SCIENCE
THE MINNEAPOLIS MEETING

REPORT OF THE GENERAL SECRETARY

THE sixty-second meeting of the American Association for the Advancement of Science

⁴*American Naturalist*.

was held at the University of Minnesota, Minneapolis, December 27 to 31, 1910. The registered number of members in attendance was approximately 500, but the actual attendance was probably not far from 1,200. Both in registration and attendance the meeting was an advance upon those of St. Louis and New Orleans. It also furnished an illuminating answer to the question whether a successful and well-attended meeting can be held in the middle west.

All meetings of the sections and affiliated societies were held on the campus of the university, with the exception of the Thursday sessions of the botanists and the entomologists, which were held at the college of agriculture. Three public addresses were held. On Tuesday evening, the retiring president, Dr. David Starr Jordan, gave his address, "The Making of a Darwin," in Minneapolis. On Thursday evening, Mr. W. A. Bryan gave an illustrated public lecture on the Hawaiian volcano Kilauea. On Wednesday evening in St. Paul, Mr. A. B. Stickney delivered a public lecture on the subject, "Should Practical Agriculture and the Physical Development of Childhood be Added to the Curriculum of the Public Schools." Of general interest also was the symposium on aviation under the auspices of Section D on Friday, and the unusually well-attended dinner and convention of Sigma Xi on the afternoon of the same day.

Section A and the Chicago Section of the American Mathematical Society met for the most part in joint session, with a total of 34 papers. On Friday afternoon they considered the report of the Committee on the Teaching of Mathematics to Students of Engineering. Section B and the American Physical Society met constantly in joint sessions, at which 33 papers were presented. In addition, a general interest session in charge of Section B was held on Thursday morning, while in the afternoon, B and D met jointly for the reading of the vice-presidential addresses.

In accordance with the present plan, Section C held no meetings apart from a session for the delivery of the vice-presidential address. All sessions of the general program

were essentially joint sessions, though under the auspices of the American Chemical Society. Two addresses and 8 papers were presented at the general meetings. Sixteen papers were read before the Division of Agricultural and Food Chemistry, 12 before the Division of Fertilizer Chemistry, 4 before the Division of Pharmaceutical Chemistry, and 8 before the Chemical Education Section. The largest number of papers, 47, was given before the Division of Physical and Inorganic Chemistry; 44 were read before the Biological Section, 27 before the Industrial Chemists and Chemical Engineers, and 17 before the Division of Organic Chemistry.

Twelve papers were presented before Section D in the symposium on aeronautics, and 10 were given on the regular program. Before Section E, the program consisted of 5 papers on Economic Geology, 7 on Structural Geology, 7 on Glacial Geology and 6 on Geography. Section F and the Central Branch of the American Society of Zoologists met regularly in joint session, with a program containing 43 papers. Fifty-eight titles appeared on the programs of the Entomological Society of America and the American Association of Economic Entomologists. The meetings of the Association of Horticultural Inspectors were given largely to reports of committees and to discussions. Five zoological papers were also presented at the meetings of the American Microscopical Society.

Section G, the Botanical Society of America, and the American Phytopathological Society met regularly in joint session, except on Friday morning, when simultaneous sessions of the section and the pathologists were necessary to complete the program. The features were the special addresses before the joint session on Wednesday afternoon, under the auspices of Section G, and the symposium on plant pathology at the College of Agriculture on Thursday, under the auspices of the Botanical Society. An interesting innovation was a conference on botanical teaching at the close of the botanical dinner on Thursday evening. Seventy-one papers were presented at the botanical sessions. The program of the

Sullivant Moss Society consisted of 12 papers on mosses, liverworts and lichens. The American Nature-Study Society held three symposia on Friday, devoted to the subjects: "The School Garden as a Nature Study Laboratory," "Natural History Museums in Relation to Nature Study Instruction" and "The Organization of Nature Study."

Section H held no meeting, but the American Psychological Association and the Western Philosophical Association were both in session. The two met in joint session on Thursday, and in session with Section L on Wednesday. Thirty-four papers were presented. Twelve papers were read before Section I. The symposium before Section K was devoted to the subject, "Diseases due to Filterable Organisms." In addition, a number of papers were presented in the general program. Section L met in joint session with the American Psychological Association, for the discussion of the topic, "Educational Psychology," and in joint session with the American Federation of Teachers of the Mathematical and Natural Science to discuss the topic, "Methods of Testing the Results of Science Teaching." The section also held a general interest session on university extension teaching, in addition to the program of 7 reports on investigations in education. The meeting of the American Federation of Teachers of the Mathematical and Natural Sciences was devoted to the reports of committees on various subjects.

The important actions taken by the council at the Minneapolis meeting were as follows:

1. A committee on organization and correlation was appointed, consisting of nine members, of which four were to be members of the council. This committee reported the following recommendations: "The committee recommends to the council that each section, when the corresponding affiliated society is meeting at the same time and place, shall confine its sessions at the annual meeting preferably to half a day or at most to two half days, and that the sectional program shall include the address of the vice-president and a series of papers of general interest prepared by in-

itation issued by the committee of the section." The recommendation of the committee was adopted, and on motion the council resolved further that it regards with especial favor holding all sessions under the joint auspices of the section and the appropriate affiliated society.

2. A resolution was adopted as follows:

WHEREAS serious injury and injustice would be done to scientific societies and scientific journals should such societies be forbidden to send scientific journals to members by second-class postage,

Resolved, that the American Association for the Advancement of Science, meeting in Minneapolis, request the Postmaster General and the Committees on the Post Office of the Senate and the House of Representatives to give careful attention to the effects of any ruling of the department that might limit the advancement and diffusion of science in this country.

Resolved, that copies of these resolutions be sent to the Postmaster General and to members of the Committees on Post Office of the Senate and the House of Representatives.

The officers of the association were instructed, officially and in the name of the association, to take such steps as will aid in the passage of the Dodds bill.

3. The election of fellows of the association was placed upon the basis of professional work in science, in the hope that greater uniformity will thus be secured in the action of sectional committees.

4. The usual grant of \$200 was given to the Concilium Bibliographicum, and an additional grant of \$75 to Professor G. J. Peirce for continuing the study of organisms in brines.

The general committee voted to hold the next meeting of the association in Washington from December 27 to December 30, and to reaffirm the action contemplating meetings in Cleveland and Toronto for 1912 and 1913 respectively. The following officers were chosen for the Washington meeting:

President—C. E. Bessey, University of Nebraska.

Vice-presidents—Section A, Mathematics and Astronomy, E. B. Frost, Yerkes Observatory; Section B, Physics, R. A. Milliken, Chicago Uni-

versity; Section C, Chemistry, F. K. Cameron, Department of Agriculture, Washington; Section D, Mechanical Science and Engineering, C. S. Howe, Case School of Applied Science; Section E, Geology and Geography, Bohumil Shimek, University of Iowa; Section F, Zoology, H. F. Nachtrieb, University of Minnesota; Section G, Botany, F. C. Newcombe, University of Michigan; Section H, Anthropology and Psychology, G. T. Ladd, Yale University; Section I, Social and Economic Science, no election; Section K, Physiology and Experimental Medicine, Dr. W. T. Porter, Harvard University; Section L, Education, E. L. Thorndike, Columbia University.

General Secretary—John Zeleny, University of Minnesota.

Secretary of the Council—T. S. Palmer, Washington, D. C.

FREDERIC E. CLEMENTS,
General Secretary

SECTION A—MATHEMATICS AND ASTRONOMY

As the Chicago Section of the American Mathematical Society held its regular Christmas meeting in affiliation with the American Association, the special program of Section A did not include any technical mathematical papers. The "general interest session" of the section was held on Wednesday afternoon. This was a joint session of the Chicago Section of the American Mathematical Society and of Section A, and the program of the session consisted of the vice-presidential address by Professor E. W. Brown, of Yale University, and the papers by F. R. Moulton and E. B. Frost, of the University of Chicago.

A very interesting feature of the meeting was the joint session of Sections A and D and the Chicago Section of the American Mathematical Society. This session was devoted to the report of the committee of twenty, appointed at a similar meeting in Chicago, in December, 1907, on the question: The teaching of mathematics to students of engineering. During the evening preceding this meeting members of Sections A, B and D and the Chicago Section of the American Mathematical Society discussed informally questions relating to this report and were afforded excellent opportunities to become better acquainted.

In the absence of their authors the papers by J. E. Siebel and H. E. Wetherill were read by title. The papers by J. A. Parkhurst and Percival Lowell were read by E. B. Frost and Frederick Slocum, respectively. All the other papers of the