

quantity or value, or both, is much larger than the foregoing. In production next to the highest year are found for 1910 the crops of rice, hay, beet sugar and the total for all sugar. In the list of the crops that are next to the highest in value are wheat, oats, barley, tobacco, flaxseed, beet sugar and the total for all sugar. The potato crop was third in order of quantity and the corn crop and the total for all cereals were third in value. Barley and rye were fourth in production and potatoes fourth in value. Fifth in production was wheat and fifth in value rice.

The average production of the five years preceding 1910 includes the remarkably productive year 1906 and was generally a period of vigorous production. Notwithstanding the high character of the period, the production of 1910 is above the five-year average in the case of corn, oats, rice, rye, buckwheat, beet sugar, the total for all sugar, potatoes, tobacco and wool. In comparison with the average of the preceding five years the value of the crops of this year was greater in the cases of corn, wheat, oats, barley, rye, buckwheat, cotton, beet sugar, the total for all sugar, flaxseed, hay, potatoes, tobacco and hops.

The value of the farm products of 1910 shows both gains and losses in comparison with 1909. A gain of \$130,000,000 is made for cotton lint and seed, \$30,000,000 for hay and \$3,000,000 for barley. A loss was suffered in wheat, amounting to \$104,000,000; corn, \$98,000,000; oats, \$26,000,000; potatoes and wool, \$23,000,000 each.

The farm value of the cereal crops declined \$230,000,000 in 1910 from 1909, and the value of all crops declined \$119,000,000. A gain was made, however, in the value of animal products, amounting to \$424,000,000. It has been a year of high prices for meat and animals, for poultry and eggs and for milk and butter, and for these reasons the total value of all farm products increased in 1910 \$304,000,000 above the estimate for 1909.

THE MINNEAPOLIS MEETING OF THE AMERICAN ASSOCIATION

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

and the ninth of the "convocation week" meetings, will be held in Minneapolis, December 27 to 31, 1910, at the invitation of the University of Minnesota.

A meeting of the executive committee of the council (consisting of the general secretary, the secretary of the council, the permanent secretary and the secretaries of all of the sections) will be held at the office of the permanent secretary, in the Hotel Radisson, at noon, on Monday, December 26.

The opening session of the association will be held at 8 o'clock P.M. on Tuesday, December 27, in the First Baptist church, 10th Street and Harmon Place.

The meeting will be called to order by the retiring president, Dr. David Starr Jordan, who will introduce the president of the meeting, Dr. A. A. Michelson. There will be short addresses of welcome and a reply by President Michelson. The annual address of the retiring president, Dr. David Starr Jordan will then be given on "The Making of a Darwin."

At 9.30 there will be a reception to the members of the association and affiliated societies, after the presidential address, in the parlors of the Hotel Radisson, the headquarters.

On December 28 at 9 A.M. the Council will meet in Room No. 101, Folwell Hall, University of Minnesota.

The sections will organize in their respective halls and the regular program of papers will begin.

Addresses by retiring vice-presidents will be given at 2.30, as follows:

Vice-president Brown, before the Section of Mathematics and Astronomy. Title: The Relations of Jupiter with the Asteroids.

Vice-president McPherson, before the Section of Chemistry. Title: The Formation of Carbohydrates in the Vegetable Kingdom.

Vice-president Brock, before the Section of Geology and Geography. Title: Northern Canada.

Vice-president Ritter, before the Section of Zoology. Title: The Controversy between Mechanism and Vitalism: Can it be Ended?

A session will be held in St. Paul in the evening, the arrangements for which are in

charge of the St. Paul local committee and will be announced in the regular program. A public lecture will be given by Mr. A. B. Stickney on: Should Practical Agriculture and Field Athletics be added to the Curriculum of the City Public Schools?

The Section of Physiology and Experimental Medicine will hold a symposium on December 29, at 9.30 on Diseases Caused by Filterable Organisms. The topic will be subdivided into the following: Human diseases, animal diseases, plant diseases, experimental diseases.

Addresses by retiring vice-presidents will be given at 2.30, as follows:

Vice-president Bauer, before the Section of Physics. Title: The Physical Bearing of Problems in Terrestrial Magnetism.

Vice-president Minot, before the Section of Physiology and Experimental Medicine. Title: The Method of Science.

Vice-president Hayford, before the Section of Mechanical Science and Engineering. Title: The Relations of Isostasy to Geodesy, Geology and Geophysics.

Vice-president Holt, before the Section of Social and Economic Science. Title: Causes and Effects of High Land Values.

On December 30 there will be a symposium on Aviation under the auspices of Section D.

All meetings of the sections of the association and of affiliated societies will be held at the University of Minnesota. Beginning with Wednesday, the sections and societies will hold their regular sessions. It is expected that there will be joint meetings when the same subjects are covered, and that additional meetings will be arranged of general interest to all members of the association. No definite arrangements have been made as yet for some of the general evening functions after Tuesday night—such as dinners and meetings of special societies and groups, smokers and informal meetings.

Attention is called to the following resolutions of the council:

Resolved, That at the annual meetings of the association each section shall prepare a program of general interest to scientific men, which shall occupy an afternoon session, or, if desired by the

sectional committee, both morning and afternoon sessions of the same day. This program shall include the vice-presidential address.

Resolved, That, as it is the policy of the association to avoid competition with programs presented before the special national societies, the sections are recommended to arrange no programs of special papers for the annual meetings: *provided*, that the corresponding national society meets at the same time and place.

The following societies have indicated their intention to meet in Minneapolis during "convocation week" in affiliation with the association:

Botanical Society of America.—Meets on Tuesday, Wednesday and Thursday, December 27, 28 and 29. Will hold joint session with Section G as in former years. Room 29, second floor, Pillsbury Hall. Secretary, Dr. George T. Moore, Missouri Botanical Garden, St. Louis, Mo.

Botanists of the Central States.—Meets in conjunction with Section G and Botanical Society of America. Room 29, second floor, Pillsbury Hall. Secretary, Dr. Henry C. Cowles, University of Chicago, Chicago, Ill.

American Chemical Society.—Meets on Wednesday, Thursday, Friday and Saturday, December 28 to 31, in Chemical Laboratory. Secretary, Professor Charles L. Parsons, New Hampshire College, Durham, N. H.

Entomological Society of America.—Will hold meetings on Tuesday and Wednesday, December 27 and 28, 1910. Room 23, School of Mines Building. Secretary, Professor C. R. Crosby, Cornell University, Ithaca, N. Y.

American Association of Economic Entomologists.—Will hold sessions on Wednesday and Thursday, December 28 and 29, 1910. Room 24, School of Mines Building. Secretary, A. F. Burgess, Gipsy Moth Parasite Laboratory, Melrose Highlands, Mass.

American Federation of Teachers of the Mathematical and Natural Sciences.—Will hold meetings on Friday and Saturday, December 30 and 31, 1910. Joint meetings with Section L will be held on Friday, December 30, 1910. Room 301, Folwell Hall. Secretary, Eugene R. Smith, Polytechnic Preparatory School, Brooklyn, N. Y.

American Mathematical Society (Chicago Section).—Will hold sessions on Wednesday, Thursday and Friday, December 28, 29 and 30, in Room 102, Folwell Hall. Joint session with Sections A and D on Friday, December 30, in Room 209, Folwell Hall. (Report will be presented from the

Committee on the Teaching of Mathematics to Engineering Students.)

American Microscopical Society.—Will hold meetings on Wednesday and Thursday, December 28 and 29, 1910. Room 7, ground floor, Pillsbury Hall. Secretary, Dr. Thomas W. Galloway, James Millikin University, Decatur, Ill.

American Nature-Study Society.—Will meet on Friday, December 30, 1910. Room 308, Folwell Hall. Secretary, Professor Fred. L. Charles, University of Illinois, Urbana, Ill.

Western Philosophical Association.—Meets on Tuesday, Wednesday and Thursday, December 27, 28 and 29. Joint session with American Psychological Association on Thursday morning, December 29. Room 322, Folwell Hall. Secretary, Mr. Bernard C. Ewer, 614 Clark Street, Evanston, Ill.

American Physical Society.—Meets in conjunction with Section B, A. A. A. S. Physical Laboratory. Secretary, Professor Ernest G. Merritt, Cornell University, Ithaca, N. Y.

American Phytopathological Society.—Will hold meetings on Wednesday and Thursday, December 28 and 29, 1910. Room 29, second floor, Pillsbury Hall. Secretary, Dr. C. L. Shear, U. S. Department of Agriculture, Washington, D. C.

American Psychological Association.—Meets on Wednesday, Thursday and Friday, December 28, 29 and 30. Rooms 311 and 321, Folwell Hall. Secretary, Professor Arthur H. Pierce, Smith College, Northampton, Mass.

Sullivant Moss Society.—Will hold meetings on Tuesday and Wednesday, December 27 and 28, 1910. Room 4, ground floor, Pillsbury Hall. Acting Secretary, Dr. George H. Conklin, 1204 Tower Avenue, Superior, Wisconsin.

American Society of Zoologists (Central Branch).—Meets on Thursday and Friday, December 29 and 30, in joint session with Section F. Room 35, second floor, Pillsbury Hall.

By virtue of a resolution of the council of the association the programs of affiliated societies will be published by the association in the general program to be issued on the morning of December 27.

The local executive committee for the Minneapolis meeting is as follows: Wilbur F. Decker, *Chairman*, Frederic E. Clements, *Secretary*, Leroy J. Boughner, Frederic B. Chute, James F. Corbett, James F. Ells, Wallace G. Nye, Henry F. Nachtrieb, Edward E. Nicholson, Francis C. Shenehon, Albert F. Woods, Frederick J. Wulling.

The officers of the American Association for the Minneapolis meeting are:

President—Albert A. Michelson, University of Chicago, Chicago, Ill.

Vice-presidents:

A—Mathematics and Astronomy—Eliakim H. Moore, University of Chicago, Chicago, Ill.

B—Physics—Edward B. Rosa, Bureau of Standards, Washington, D. C.

C—Chemistry—George B. Frankforter, University of Minnesota, Minneapolis, Minn.

D—Mechanical Science and Engineering—A. Lawrence Rotch, Blue Hill Meteorological Observatory, Hyde Park, Mass.

E—Geology and Geography—Christopher W. Hall, University of Minnesota, Minneapolis, Minn.

F—Zoology—Jacob Reighard, University of Michigan, Ann Arbor, Mich.

G—Botany—Robert A. Harper, University of Wisconsin, Madison, Wis.

H—Anthropology and Psychology—Roland B. Dixon, Harvard University, Cambridge, Mass.

I—Social and Economic Science—Hon. Theodore E. Burton, Cleveland, Ohio.

K—Physiology and Experimental Medicine—Frederick G. Novy, University of Michigan, Ann Arbor, Mich.

L—Education—A. Ross Hill, University of Missouri, Columbia, Mo.

Permanent Secretary—L. O. Howard, Smithsonian Institution, Washington, D. C.

General Secretary—Frederic E. Clements, University of Minnesota, Minneapolis, Minn.

Secretary of the Council—John Zeleny, University of Minnesota, Minneapolis, Minn.

Secretaries of the Sections:

A—Mathematics and Astronomy—George A. Miller, University of Illinois, Urbana, Ill.

B—Physics—A. D. Cole, Ohio State University, Columbus, Ohio.

C—Chemistry—C. H. Herty, University of North Carolina, Chapel Hill, N. C.

D—Mechanical Science and Engineering—G. W. Bissell, Michigan Agricultural College, East Lansing, Mich.

E—Geology and Geography—F. P. Gulliver, Norwich, Conn.

F—Zoology—Maurice A. Bigelow, Columbia University, New York, N. Y.

G—Botany—H. C. Cowles, University of Chicago, Chicago, Ill.

H—Anthropology and Psychology—George Grant MacCurdy, Yale University, New Haven, Conn.

I—Social and Economic Science—Fred. C. Croxton, 1229 Girard Street, Washington, D. C.

K—Physiology and Experimental Medicine—George T. Kemp, Hotel Beardsley, Champaign, Ill.

L—Education—Charles Riborg Mann, University of Chicago, Chicago, Ill.

Treasurer—R. S. Woodward, Carnegie Institution, Washington, D. C.

SCIENTIFIC NOTES AND NEWS

THE Nichols gold medal of the American Chemical Society for the year 1909–10 has been awarded to Professor M. A. Rosanoff, of Clark University, and his pupil, Mr. C. W. Easley, for their joint study of the partial vapor pressures of binary mixtures. The formal award will take place at the meeting of the New York Section on January 6, 1911.

DR. ADOLF VON BAEYER, of Munich, has celebrated his seventy-fifth birthday.

THE Bolyai prize of 10,000 Kronen of the Hungarian Academy of Sciences has been awarded to Dr. David Hilbert, of the University of Göttingen.

PROFESSOR F. W. WOLL, chemist of the College of Agriculture of the University of Wisconsin, was elected president of the Association of Official Agricultural Chemists of America at the recent annual meeting in Washington, D. C.

THE Earl of Stair has been elected president of the Royal Scottish Geographical Society in succession to Professor James Geikie, F.R.S., who has held the office of president for the last six years. The anniversary meeting of the society was held on November 11, and was addressed by Sir John Murray on "The Deep Sea."

DR. OTTO HÖNIGSCHMID, of Prague, who last winter carried out at Harvard University an exact revision of the atomic weight of calcium under the direction of Professor T. W. Richards, has now begun a study of the atomic weight of radium at the new Radium Institute in Vienna.

THE council and fellows of the Chemical Society, London, honored five of their past-presidents who had completed their jubilee as

fellows by entertaining them at a banquet at the Savoy Hotel on Friday, November 11. We learn from *Nature* that a large gathering, numbering 250, including the presidents of the French and German Chemical Societies and eleven past-presidents, was presided over by Professor Harold B. Dixon, F.R.S., the president. The names of the past-presidents who were being honored were:

	Elected	President
Professor William Odling, F.R.S.	1848	1873–5
The Rt. Hon. Sir Henry E. Roscoe, F.R.S.	1855	1880–2
Sir William Crookes, O.M., F.R.S.	1857	1887–9
Dr. Hugo Müller, F.R.S.	1859	1885–7
Dr. A. G. Vernon Harcourt, F.R.S.	1859	1895–7

The president referred to the personalities of the jubilee past-presidents, and to the particular work in which each was more especially distinguished: Sir Henry Roscoe, for his research on vanadium and as a pioneer educationist; Sir William Crookes, for his discovery of thallium, his researches on the rare earths, the genesis of matter and diamonds, and his brilliant discoveries in physics; Dr. Hugo Müller, for his researches on cellulose and discoveries in connection with printing; Dr. Vernon Harcourt, for his researches on the rate of chemical change and his work as an enthusiastic teacher; and Professor William Odling, the doyen of chemistry, to whom all chemists will find it difficult to fathom their debt of gratitude. Unfortunately, Sir Henry Roscoe was absent through illness, and his address was read by the president. Addresses were made by the other past-presidents.

MME. CURIE is a candidate for the *fauteuil* at the Academy of Sciences, rendered vacant by the death of M. Gernez.

AT the quarterly meeting of the board of trustees of the American Museum of Natural History held on November 14 the following changes were made in the scientific staff: Dr. Louis Hussakof was appointed associate curator of fossil fishes; Mr. John T. Nichols, assistant curator of recent fishes, and Dr. William K. Gregory, assistant in the department of vertebrate paleontology.