arc was very much below the melting point of zinc.

The residue remains within the still. This should be digested out from time to time, depending upon the condition of the impure mercury. Where one is dealing with comparatively pure mercury 50 to 75 pounds may be distilled off during a single run.

CHAS. T. KNIPP

LABORATORY OF PHYSICS,
UNIVERSITY OF ILLINOIS,
January, 1911

THE ASSOCIATION OF AMERICAN GEOGRAPHERS

THE seventh annual meeting was held at Pittsburgh, December 29–31, 1910, under the presidency of Dr. H. C. Cowles, of the University of Chicago. His address was upon the subject, "The Causes of Vegetative Cycles." Public lectures were given by Professor Mark Jefferson on "Rocky Mountain Forms," and by Dr. Cowles on the "Origin and Destiny of the Everglades." Professor Rollin D. Salisbury conducted a round table conference on the "Purposes of Geographic Instruction, and the Phases of the Subject best adapted to these Purposes." About twenty-five papers were read by the members.

The following officers were elected: *President* Professor Ralph S. Tarr, Cornell University; *First Vice-president,* Alfred H. Brooks, U. S. Geological Survey; *Second Vice-president,* Henry G. Bryant, president of the Geographical Society of Philadelphia; *Secretary,* A. P. Brigham, Colgate University; *Treasurer,* Professor N. M. Fenneman, University of Cincinnati; *Councillor* (for three years), Professor Herbert E. Gregory, Yale University.

The following were appointed as delegates to the Geographical Congress to be held in Rome in October, 1911: Cyrus C. Adams, A. P. Brigham, H. C. Cowles, W. M. Davis, H. W. Fairbanks and Ralph S. Tarr.

Members newly elected are: Charles A. Davis, U. S. Bureau of Mines; F. V. Emerson, University of Missouri; Otto E. Jennings, Carnegie Museum, Pittsburgh; Wolfgang L. G. Joerg, American Geographical Society; Alexander G. Ruthven, University of Michigan; Victor E. Shelford, University of Chicago; L. H. Wood, Western State Normal School, Michigan.

The association has voted to establish a publication, and has appointed the following publication committee: Richard E. Dodge, chairman and editor, Alfred H. Brooks, Henry C. Cowles and Ralph S. Tarr.

Following the discussions of the round-table conference, the association adopted the resolutions herewith appended.

"The Association of American Geographers at its Pittsburgh meeting, December 29–31, discussed the present status of physical geography in secondary education and passed the following resolutions:

"*Resolved,* that in the opinion of this association physical geography fully deserves to retain a place in the high school.

"That the disappointment or dissatisfaction sometimes expressed regarding the results of teaching this subject is in large measure due to inefficient teaching.

"That as a means of removing this dissatisfaction, superintendents and principals are urged to procure teachers of physical geography adequately prepared in their subject, and to entrust the subject only to such teachers.

"That no teacher of physical geography should be appointed in any educational grade who has not made serious and special study of the subject in a higher educational grade."

A committee on state educational bulletins was appointed to report at the next meeting: N. M. Fenneman, chairman, W. M. Davis and R. H. Whitbeck.

The next meeting will be held in Washington in connection with the American Association for the Advancement of Science.

ALBERT PERRY BRIGHAM,
Secretary

SOCIETIES AND ACADEMIES

THE FOURTH ANNUAL MEETING OF THE ILLINOIS STATE ACADEMY OF SCIENCE

THE fourth annual meeting of the Illinois State Academy of Science was held Friday and Saturday, February 17 and 18, at the University of Chicago.

About two hundred persons attended the combined sessions of the two days, and the excellence of the papers and the general air of enthusiasm which prevailed was on a par, if not in excess, of previous meetings. The total membership is now four hundred and eight; of this number, thirty-seven were elected at the Chicago meeting. A study of the geographic distribution of the membership is significant, as the annexed table shows.

Chicago	118
Urbana	114
Springfield	30
Evanston	12
Decatur	10
Scattered	122

The above condition is a very gratifying result of the four years of the academy's efforts, but it is fully realized that it falls far short of the ideal toward which the state academy is aiming. There is no apparent reason why the Illinois State Academy of Science should not, in a few years, have an enrolment of a thousand members and wield an influence for good which will be felt not only by the educational institutions and the citizens of our great commonwealth, but also by our sister states whose state academies preceded ours by several decades.

The following officers were elected for the ensuing year:

President—W. A. Noyes, Illinois State University, Urbana, Ills.

Vice-president—J. C. Udden, Augustana College, Rock Island, Ills.

Secretary—Frank C. Baker, The Chicago Academy of Sciences, Chicago.

Treasurer—J. C. Hessler, James Millikin University, Decatur, Ills.

The following committees were appointed or continued:

Membership Committee—H. C. Cowles, Chicago; Marion Weller, De Kalb; E. N. Transeau, Charleston; C. C. Adams, Urbana; J. W. Read, Jacksonville.

Committee to Investigate the Status of High Schools as to Practical Science—Worrallo Whitney, Otis W. Caldwell, J. P. Gilbert, J. C. Hessler, J. T. Johnson.

Committee to Arrange for the Editorship and the Publication of a Series to be known as the State Academy Leaflets on High School Science—T. J. McCormack, William C. Bagley, J. G. Coulter, R. D. Salisbury, H. S. Pepoon.

Publication Committee—The president, the secretary and A. R. Crook.

Committee on Ecological Survey—Stephen A. Forbes, V. E. Shelford, Frank C. Baker, Charles C. Adams, H. A. Gleason.

Committee to Influence Legislation to Restrict the Collection of Birds and Eggs to Institutions and Accredited Individuals—F. C. Baker, I. E. Hess and F. L. Charles.

Committee to Cooperate with Existing Agencies for Advancement of Nature Study in Elementary Schools—F. L. Charles, Ira Meyers and Ruth Marshall.

The program was as follows (the papers and addresses will be published in Volume IV. of the *Transactions*).

FRIDAY, 10:00 A.M.—*Botany Building*

Address of Welcome, Dean R. D. Salisbury.

"Charles R. Barnes: In Memoriam," John M. Coulter.

"Frank G. Barnes: In Memoriam," R. O. Graham.

"J. A. West," S. A. Forbes.

"J. C. Stine: In Memoriam," Frank Smith.

"The Postglacial Life of Wilmette Bay" (lantern), Frank C. Baker.

"Description of Mine Rescue Stations" (lantern), H. H. Stoek.

FRIDAY, 2:00 P.M.—*Botany Building*

"Mollusca of Piatt, Vermillion and Champaign Counties" (lantern), James Zetek.

"Oil Investigation in Illinois" (lantern), R. S. Blatchley.

"Seasonal Succession in Old Forest Ponds" (lantern), W. C. Allee.

"Demonstration of Movement of Water in Leaves" (lantern), A. H. Cole.

"The Chinese Mantis in Southern Illinois," C. A. Hart.

"Eastward Extension of Certain Shales as Shown by Deep Wells," J. A. Udden.

"Present Status of Illinois State Museum," A. R. Crook.

"Demonstration of the Use of Oxygen in Mine Rescue Work," J. M. Webb.

"Metallic Colors in Birds and Insects" (lantern), A. A. Michelson.

FRIDAY, 8:00 P.M.—*Mandel Hall*

Presidential address, "The Problems of Plant Breeding," John M. Coulter.

SATURDAY, 9:00 A.M.—*Mandel Hall*

Symposium on Radio-Activity: "Radio-Activity and Geological Phenomena," T. C. Chamberlin, University of Chicago; "Some of the Physical Properties of Radium," Henry Crew, Northwestern University; "Radium in Relation to Celestial Bodies," E. B. Frost, Yerkes Observatory; "Radio-Chemistry," W. A. Noyes, University of Illinois; "The Biological Effects of Radium," W. A. Pusey, University of Illinois.

Address: "The Relation of the Soil to Plants," H. C. Cowles.

SATURDAY, 2:00 P.M.—*Botany Building*

"A Preliminary List of the Ants of Illinois," M. C. Tanquary.

"The Channahon and Essex Limestone," T. E. Savage.

"Occurrence of *Glœotœnium* in Illinois," E. N. Transeau.

"Ecological Studies of the Prairie and Forest of Illinois," C. C. Adams.

"A Handbook for Students of Animal Ecology," C. C. Adams.

"Reproduction by Layering in the Balsam Fir and other Conifers" (lantern), W. S. Cooper.

"Evaporation and Plant Succession on the Sand Dunes of Lake Michigan" (lantern), George D. Fuller.

"Structure of Adult Cycad Stem" (lantern), C. J. Chamberlain.

"An American Lepidostrobus" (lantern), John M. Coulter and W. J. G. Land.

Following the presidential address, a social hour was enjoyed in Hutchinson Hall. The social possibilities of the meetings were also taken advantage of during the noon-day luncheons served in the men's commons.

FRANK C. BAKER,
Secretary

THE BIOLOGICAL SOCIETY OF WASHINGTON

THE 482d regular meeting of the society was held March 18, 1911, with President David White in the chair.

Under the heading "Brief Notes," C. D. Marsh called attention to a recent paper on the "Geographic Distribution of Diatomes," by Tollinger, published in *Zoologische Jahrbücher*, Jena. The paper is chiefly remarkable for its completeness. A separate map of the distribution of each species is given.

The following communications were presented:

Raising Trailing Arbutus from the Seed: FREDERICK V. COVILLE.

A brief account of scientific phases of the experiments, the results of which were outlined, appears elsewhere in SCIENCE. The speaker exhibited a number of pots showing magnificent specimens produced from the seed and grown in the greenhouse.

Notes on Java Natural History and Salt Makers of Tjihara, Java: WILLIAM PALMER.

This was a narrative of experiences and observations made during a somewhat lengthy collecting trip to Java in 1909 and 1910. It included observations on the physical features of the island, the vegetation, the inhabitants, their mode of life and industries, the birds, mammals and other animals. The speaker closed with an account of his visit to the salt-makers of Tjihara.

D. E. LANTZ,
Recording Secretary

THE BOTANICAL SOCIETY OF WASHINGTON

THE 72d regular meeting was held at the Cosmos Club, Tuesday, April 4, 1911, at eight o'clock P.M. Both president and vice-president being absent, Dr. A. Mann was chosen chairman *pro tem.* Thirty members were in attendance.

The following papers were read:

The Study of Soil Organisms: Dr. N. A. COBB.

Notes on some of the Edible Aroids: R. A. YOUNG.

The edible aroids are of great importance in the tropics, since they form a readily available source of starch food. Practically all desirable varieties must be referred to the genera *Xanthosoma* and *Colocasia*, very few of those belonging to the genus *Alocasia* having any possible use. Although the three genera can be distinguished with little difficulty the exact botanical nomenclature of the several varieties, especially those of the genera *Xanthosoma* and *Colocasia*, is in general uncertain.

The acrid properties of the aroids, due to the presence of raphides composed of calcium oxalate in their tissues, are very pronounced. However, the tubers of many forms are non-acrid, and in *C. gigantea* Hooker the entire plant is non-acrid. A peculiarity of the older leaves of this species is the development on the ventral surface of sharply defined, irregular, dark green discs on either side of the midrib.

When the corms of the aroids are cooked a violet color develops, the source of which is at present unexplained.

Inheritance of Aleurone Color in Corn Hybrids: G. N. COLLINS.

This paper reported the behavior of the aleurone color in a series of hybrids between diverse types of maize. The aleurone color of corn, while of no practical importance, affords exceptional opportunities for studies of inheritance. Being a part of the endosperm the characters of the aleurone cells are subject to xenia, that is, they develop from the union of the second nucleus of the pollen tube and the endosperm nucleus and may be looked upon as belonging to the same generation as the embryo. Ordinarily in tracing the behavior of

characters it is necessary to grow hundreds of the hybrid plants or animals in order to secure reliable averages, while with xenia characters similar numbers can be secured by a single pollination and can be observed the same season that the cross is made.

Crosses between white varieties and those possessing a variety of aleurone colors has shown that the law of dominance holds with considerable regularity. Instances of partial dominance occur but are comparatively infrequent. One case was reported in which a blue aleurone color was definitely recessive to white. In the second or perjugate generation segregation, while comparatively definite, seems not to result in the usual ratios. Out of 200 different combinations only 16 approximated the usual ratios of a monohybrid. There was a great variety in the ratios obtained, the most frequent being one colored to two colorless, or 33⅓ per cent. This was approximated within twice the probable error in 22 instances out of 200. It was pointed out that this 1:2 ratio could not be explained by supposing that pure recessive or pure dominants were unable to develop. The regular arrangement of seeds on the ear would render omissions of this kind apparent.

Since the number of seeds on the individual ears was large enough to afford reliable averages, it was held that the differences found were significant, while any attempt to explain the unusual ratios by assuming different combinations of distinct factors for the same character would reduce the whole conception to an absurdity.

W. W. STOCKBERGER,
Corresponding Secretary

THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON

THE 452d regular meeting of the society was held in the hall of the Public Library, February 21, 1911, 8 P.M., with Mr. George R. Stetson, vice-president of the society, in the chair.

Dr. Daniel Folkmar presented a paper on "Some Questions Arising in the First Census of European Races in the United States." The speaker, who is chief of the section on the foreign-born in the thirteenth census, and author of the "Dictionary of European and other Immigrant Races," dwelt at some length on the new feature introduced in the present census, namely, of classifying the foreign-born by their mother-tongue, in addition to that by country or political allegiance. The main part of the discourse was, however, occupied with a defense of the terminology, or nomenclature, adopted in the schedules of the census and in the dictionary, viz., "race" to designate the linguistic divisions of the immigrants, and "nationality" for the country of birth. The speaker admitted that in anthropology and biology the term race is applied to physical traits, but maintained that with the census it was not strictly a scientific question but a practical one, to designate and distinguish given groups of peoples who come to the shores of this country. "Race" seemed to him justified to designate linguistic groups, inasmuch as it points out something essential, which descends by heredity.

The paper as well as the dictionary, which the author laid before the society, were discussed at some length by Drs. Hrdlička, Michelson and Hough, and by Mr. Disserond.

I. M. CASANOWICZ,
Secretary

THE AMERICAN CHEMICAL SOCIETY
NEW YORK SECTION

THE seventh regular meeting of the session of 1910–11 was held at Rumford Hall in conjunction with the American Electrochemical Society, on April 7. Professor Chas. Baskerville presided.

The chairman announced that the section would be deprived of the pleasure of listening to Mrs. Ellen H. Richards at the May meeting by her death, which took place a short time ago, and called upon the secretary, one of her former students, to speak of her life and work. The chairman further announced the death of Mr. B. G. Amend, a former member of the section, and asked Dr. Chas. A. Doremus to say something in this connection. Following Dr. Doremus's remarks, the meeting rose in memory of the two deceased.

The chairman spoke of the work of the Municipal Explosives Commission and called upon Dr. C. F. McKenna to speak on "Suggestions as to Public Safety." The subject was further discussed by Dr. Wm. Jay Schieffelin and Mr. G. W. Thompson.

Professor Wm. H. Walker, president of the American Electrochemical Society, then made his presidential address entitled "Chemical Research and Industrial Progress."

At the conclusion of the address the chairman asked President Walker to preside. Dr. Walker took the chair and called upon Dr. H. E. Patten, of the Bureau of Soils, to present his paper on "The Relation of Surface Tension to Electrochemical Action."

C. M. JOYCE,
Secretary