of the Eskimos of the Coast West of Cape Bathurst"; (*b*) "Social Organization and Daily Life of the Mackenzie River Eskimos"; (*c*) "The Treatment of Disease among Mackenzie River Eskimos."

DR. MAXIMILIAN HERZOG: "The Brain Weight of the Filippino."

PROFESSOR OTIS T. MASON: "Mind and Matter in Culture."

DR. SARAH NEWCOMB MERRICK: "A Unique Method for Preserving the Inscriptions in Our Historic Burial Grounds"; (*b*) "Present-day Beliefs in some Medical Superstitions."

GEORGE GRANT MACCURDY
YALE UNIVERSITY,
NEW HAVEN, CONN.

THE GEOLOGICAL SOCIETY OF AMERICA

THE Geological Society of America held its twentieth annual meeting, December 30 and 31, 1907, at the University of New Mexico, Albuquerque, N. M. The attendance was small, of course, as compared with that at the New York meeting, but it was satisfactory and there was time for considerable discussion. About thirty fellows of the society were present, besides other geologists, students and visitors to the number of nearly as many more. Seven members came from the Cordilleran Section, which extends from the Rocky Mountain region to the Pacific coast; five members and three visitors came from eastern Canada, and the remainder were from the eastern half of the United States, five of them being from the Atlantic coast. The local arrangements for the meeting, which were made by President W. G. Tight, of the university, were admirable, and the welcome extended by President Tight and his associates and the citizens of Albuquerque was most cordial and substantial. Furthermore, the Atchison, Topeka and Santa Fé Railway Company made considerable reductions in the rates for tickets, which were appreciated. The meeting was held under the following officers:

President—President C. R. Van Hise, Madison, Wis.

First Vice-president—Mr. J. S. Diller, Washington, D. C.

Second Vice-president—Professor A. P. Coleman, Toronto, Canada.

SESSION OF MONDAY, DECEMBER 30, 1907

President Van Hise presided, calling the meeting to order at 9:15 A.M. The secretary, Dr. E. O. Hovey, of the American Museum of Natural History, reported that the printed list of fellows contained 294 names. During the year the fourteen new fellows elected at the New York meeting qualified; two fellows, Professors Safford and Heilprin, were lost by death, and one was lost by resignation. After the reading of the memorials of the deceased fellows the regular program of papers was taken up as follows:

The Occurrence of Proustite and Argentite at the California Mine near Montezuma, Colo.: FRANK R. VAN HORN, Cleveland, Ohio.

Massive proustite and argentite occur with argentiferous galena and sphalerite in a gangue of siderite and quartz in a fissure vein in gneissoid rocks at the California Mine on Glacier Mountain, about three miles from Montezuma, Summit County, Colorado. The vein generally shows a banded structure, but in places, is more or less brecciated on account of faulting of the region. The chief ore is argentiferous galena, with considerable sphalerite irregularly mixed with it. In some parts of the vein proustite and argentite occur at the center in seams which sometimes have a thickness of two inches. In places the argentite has been reduced to silver.

The paper was discussed by C. R. Van Hise, George D. Louderback and H. E. Gregory.

Field Assay of Mine Waters: Alfred C. Lane, Lansing, Mich.

The theory of ore deposition and circulation by underground waters much needs to be supplemented by tests and analysis of mine waters. Some of the "field assay" methods are applicable, but the presence of calcium chloride makes the sodium acid sulphate test for carbonates inapplicable. It is well to make a preliminary test of the concentration of the water by a hydrometer or by a specially devised total reflectometer. In the stronger mine waters it is often best to add the water to a solution of the reagent.

The following papers were read by title:

The Phosphate Deposits of Florida with Relation to the Underground Water Level: E. H. Sellards, Tallahassee, Fla.

Asbestos Deposits of the Grand Canyon, Arizona: Joseph Hyde Pratt, Chapel Hill, N. C.

Ancient Tectonics of the Basin Ranges: Charles R. Keyes, Des Moines, Ia.

Rock-flora of Intermont Plains of Arid Regions: Charles R. Keyes, Des Moines, Ia.

The next paper read was

Glacial Periods and their Bearing on Geological Theories: A. P. Coleman, Toronto, Can.

Four well-defined glacial periods are known in geological history, occurring in the Pleistocene, the Permo-Carboniferous, the lower Cambrian and the lower Huronian, final proofs of the last-named glacial period having been obtained only recently. The wide distribution of glacial deposits in at least three of these periods proves that refrigeration was general and included both hemispheres. There is evidence of important interglacial periods in three of the ice ages. The importance of these facts as bearing on the origin and early history of the earth and on the factors which cause variations of climate was pointed out.

An active discussion was participated in by W. G. Tight, A. C. Lawson, I. C. White, H. M. Ami, G. K. Gilbert, H. E. Gregory and C. R. Van Hise.

The Chief Features of the Stratigraphy and Structure of Mount Diablo, California: George D. Louderback, Berkeley, Cal.

Mount Diablo is a distinctive feature of the central coast ranges because it rises from low valleys on practically all sides and is not merely a more prominent peak of a continuous range. It shows a remarkably complete stratigraphic series of the characteristic Coast Range formations. Structurally it is an overturned and overthrust anticline of very late origin. There is also evidence of an earlier structural form. The geology of Mount Diablo may be taken as showing a stratigraphic succession and an orogenic history characteristic of the coast ranges from the Klamath Mountains to the Tehachapi.

The paper was discussed by A. C. Lane, A. C. Lawson and H. P. Cushing.

The following papers were then read by title:

The Earthquake in Owens Valley, California, in 1872: William Herbert Hobbs, Ann Arbor, Mich.

Beginning and Recession of Saint Anthony Falls: Frederick W. Sardeson, Minneapolis, Minn.

The "Nebraska Loess Man": B. Shimek, Iowa City, Iowa.

The Distribution of Drumlins and its Bearing on their Origin: Frank. B. Taylor, Fort Wayne, Ind.

The Cirques and Rock-cut Terraces of Mt. Tobey, Mass.: B. K. EMERSON, Amherst, Mass.

The next paper was

The Lower Portion of the Paleozoic Section in Northwestern New York: H. P. CUSHING, Cleveland, Ohio.

In Jefferson County, N. Y., in the district between Watertown and Alexandria Bay, the Potsdam sandstone and the Lowville, Black River and Trenton limestones are present in quite normal expression. Between the Potsdam and the Lowville are two additional formations. The lower of these passes into the Potsdam by gradation and is lithologically like similar "passage beds" elsewhere in northern New York. It consists of alternating sands and sandy dolomites, varies in thickness from 15 to 75 feet, and has an erosion unconformity at its summit. It is overlain by an impure limestone formation which overlaps on the district from west to east, reaches a thickness of 125 feet, and holds a fauna not hitherto noted in New York, which is tentatively correlated by Dr. E. O. Ulrich with that of the upper Stones River formation of southern Pennsylvania. It has close relationship to the Lowville formation above. The Chazy formation is absent, as is also the entire Beekmantown. The physical break between the two formations is the most prominent one as yet noted in the New York Lower Silurian. The section was compared with those east and south of the Adirondacks, and the additional light which it throws on the physical oscillations of the region was considered. Discussed by H. M. Ami.

At 12:15 o'clock the society adjourned for luncheon in the dining room of the university, after which President Tight led the way to the flat roof of one of the pueblo-style dormitories, from which he pointed out the geological features of the surrounding country.

At 2 o'clock the afternoon session began with the reading of the annual address by the retiring president, President Charles R. Van Hise, of the University of Wisconsin, who chose as his subject "The Problem of the Pre-Cambrian." By request of the president, his address was thrown open to discussion, and remarks were made by A. C. Lane, A. C. Lawson, A. P. Coleman, H. M. Ami and C. R. Van Hise.

The following papers were then read by title:

The Red Sandstone Formation of Southeastern Minnesota: C. W. HALL, Minneapolis, Minn.

The Geological History of the Redstone Quartzite: FREDERICK W. SARDESON, Minneapolis, Minn.

Geology of a Portion of Central Wyoming: N. H. DARTON, Washington, D. C.

Some Features of the Geology of Arizona and Western New Mexico along the Santa Fé Railroad: N. H. DARTON, Washington, D. C.

After this the society listened to the reading of a paper on

Grenville-Hastings Unconformity: WILLET G. MILLER and CYRIL W. KNIGHT, Toronto, Canada.

The crystalline limestone and associated pre-Cambrian sedimentary rocks of southeastern Ontario and the adjacent parts of the province of Quebec, to which Logan and his colleagues long ago gave the names of Grenville and Hastings series, have never been satisfactorily classified as regards their age. Recent work by the present writers has shown that much at least of what has been called the Hastings series, consisting of limestones, conglomerates and other fragmental rocks, is much younger than, and forms a well-defined unconformable series with, the typical crystalline

limestones and associated fragmental rocks of what has been called the Grenville series proper. The view that the Grenville and Hastings constitute one series, the former being a more highly altered phase of the latter, is no longer tenable.

The writers find the Keewatin series of the Lake Superior region represented in southeastern Ontario by ancient rocks of like character. The Grenville limestones have been deposited on the surface of the Keewatin. The writers class the Grenville limestone as regards age with the Keewatin iron formation of Lake Superior, which it has not been found possible in that region to separate from the greenstones. The pre-Cambrian conglomerate and associated sedimentary rocks overlying, unconformably, the Grenville limestone, are classed as Huronian. The conglomerate contains not only ordinary fragments of the Grenville limestone, but "eozoon"-like boulders as well, thus showing that the limestone is much older than the conglomerate. Moreover, the "pebbles of cherty and ferruginous rocks resembling those found in the iron ranges of Lake Superior" in the conglomerate of eastern Ontario are found by the writers to have been derived from layers or bands of this material in the Grenville limestone.

The paper was read by Mr. Miller and the discussion was participated in by A. P. Coleman, H. P. Cushing, C. R. Van Hise, A. C. Lane and W. G. Miller.

The next paper was

Relation of the Equus Beds of Kansas to Reversed Mississippi Drainage: W. G. Tight, Albuquerque, N. M.

Discussed by A. P. Coleman, H. E. Gregory, A. C. Lane and F. W. Cragin.

The following two papers were read without intermission by Dr. A. C. Lane:

A New Siluric Fauna from Michigan: W. H. Sherzer, Ypsilanti, Mich., and A. W. Grabau, New York City. (By permission of the state geologist of Michigan.)

In the vicinity of Detroit some 275 feet of dolomites and limestones overlie the Sylvania sandstone, and constitute the Upper Monroe. This series has been traced through parts of Wayne and Monroe counties and into the adjoining regions of Ohio and Canada. A threefold division is possible in the Detroit region, but in most of the other localities one or more of the members disappear by overlap on the Sylvania as a basal bed or by pre-Onondaga erosion. A pronounced hiatus exists between these Upper Siluric beds and the Mid-Devonic Dundee limestone, which rests disconformably on various members of the Upper Monroe, or even on the Sylvania. Two distinct faunæ are recognizable in the Upper Monroe. In the lower two members the fauna is coralline, the middle member (Anderdon limestone) being in most localities a more or less continuous coral and stromatopora reef. A considerable number of species has been obtained from this limestone. The corals are nearly all closely allied to Mid-Devonic types. The stromatoporoids are chiefly Siluric, though two Devonic genera with one species each occur. The brachiopods are Siluric, but the pelecypods are of Devonic genera and species not heretofore known from the Siluric of America. The gastropods and cephalopods, on the other hand, are all of Siluric types. This remarkable fauna of the Anderdon bed is soon displaced in the overlying dolomites by a more strictly Siluric fauna, though even here species of Devonic affinities are not unknown. The fauna of Gothland is similar in many respects to the highest Siluric fauna, the species, while not identical, being closely representative. The bearings of these facts on the paleographic conditions of North America in late Siluric time will be discussed.

The Nomenclature and Subdivisions of the Upper Siluric Strata of Michigan, Ohio and Western New York: A. C. LANE, CHARLES S. PROSSER, W. H. SHERZER and A. W. GRABAU.

The Monroe formation of Michigan and Ohio comprises a number of paleontologic zones, each ranging through from fifty to two hundred feet of strata. The species of each zone are restricted to it, and the zones are recognizable at widely distant localities. The lowest of these extends into western New York, having been named by Grabau, in 1898, the "Greenfield formation," and being represented in eastern New York by the Cobleskill Limestone. The characteristics of the several divisions were discussed, and the conclusions reached by the four authors given. Names for the divisions were proposed and their distribution given.

The papers were discussed by A. C. Lawson, A. P. Coleman, A. M. Miller, H. M. Ami, I. C. White and A. C. Lane.

The concluding paper of the afternoon was

Structure and Stratigraphy of the Ouachita Ordovician Area, Arkansas: A. H. PURDUE, Fayetteville, Ark.

Discussed by A. C. Lane and G. K. Gilbert.

Soon after 5 o'clock the society adjourned and at 7:30 met again in the dining room of the Hotel Alvarado for its annual dinner, which was enjoyed by thirty-seven persons, including a few of the prominent educators of the territory.

SESSION OF TUESDAY, DECEMBER 31, 1907

The society convened at 9:10 A.M., with President Van Hise in the chair. The report of a committee favoring the establishment of a series of stations for the study of volcanic and seismic phenomena was adopted. The consideration of an overture on the formation of a Committee on Geological Nomenclature was deferred to the end of the session. The report of the council was accepted and ordered printed in the *Proceedings,* and the auditing committee was continued and given leave to report to council. The society then proceeded with the reading of papers, the first two being presented together by Professor J. E. Wolff. They were

Notes on the Crazy Mountains, Montana: JOHN E. WOLFF, Cambridge, Mass.

The Crazy Mountains were visited by the author in 1883 and 1889, and a paper on their geology was published in the *Proceedings* in 1892. Last summer, with Dr. G. R. Mansfield and Mr. H. E. Merwin, a review was made of their physiographic and geologic features, and some three hundred photographs were obtained, dealing with points of especial interest. One small glacier was discovered and visited, and another, not so readily accessible, was noted; the relative age of the granite-diorite stocks and of alkali-syenite was found and minor points determined. After a review of the geology of the mountains and of their special features, the results of last summer's work were described and the whole illustrated by a small selection of lantern slides. The accompanying paper, by Dr. Mansfield, was included in Professor Wolff's presentation.

Glaciation in the Crazy Mountains of Montana: GEORGE ROGERS MANSFIELD, Cambridge, Mass. (Introduced by J. E. Wolff.)

During the Glacial Period the Crazy Mountains were the seat of local glaciation. All the higher valleys contained small glaciers, as indicated by the numerous cirques. Some of the glaciers on the south and east slopes attained considerable size, notably those of Big Timber and Sweetgrass-American Fork canyons, which must have had

lengths of approximately 15 to 18 miles, as shown by the extent of morainic deposits. Glaciation is not yet extinct. A tiny glacier was seen at the head of Big Timber and another in Sweetgrass Canyon, and a third is reported by Assistant Forester Wilson at the head of Rock Creek. Glacial topography predominates throughout the southern section of the mountains and occurs locally in the southern section. Striæ and truncated valley spurs along the sides of the canyons show that the ice must have been 500 to 800 feet thick. The glaciation succeeded a long erosion period in which the region had reached an early stage of peneplanation. It continued long enough to form broad, deep troughs in the weaker rocks and to produce much of the sharp arête topography so characteristic of the southern section of the mountains. Later stream erosion has incised the glacial deposits and in some cases the old troughs.

The papers were discussed by A. C. Lawson.

The following papers were read by title:

The Shaler Mountains, Unalaska, a Granite Core to the Aleutian Islands: T. A. Jaggar, Jr., Boston, Mass.

The Growth and Destruction of Metcalf Cone, Bogosloff Island, 1906–7: T. A. Jaggar, Jr., Boston, Mass.

Then was read

The Sandia Mountains: W. G. Tight, Albuquerque, N. M.

The following papers were then read by title:

The Geology of the Alaska Range: A. H. Brooks, Washington, D. C.

The Paleozoic and Associated Rocks of the Upper Yukon Basin: A. H. Brooks and E. M. Kindle.

Discovery of Fish Remains in the Ordovician of the Black Hills: N. H. Darton, Washington, D. C.

The next paper read was

The Topaz-bearing Rhyolite of the Thomas Mountains, Utah: Horace B. Patton, Golden, Colo.

Extensive rhyolite flows occur in the Thomas Mountains of Juab County, Utah, associated with somewhat more basic eruptives. The rhyolite has been profoundly affected by mineralizing vapors that have removed all trace of dark-colored constituents and have caused the development of a surprising number of topaz crystals, with occasional garnet and specular hematite. The topaz crystals occur, first, in lithophysal cavities associated with quartz, and are then mostly clear crystals having a handsome brownish-yellow wine-color that quickly disappears on exposure to direct sunlight; second, imbedded in the solid rhyolite and having frayed out ends but fairly well developed prismatic faces. These are brownish in color before exposure to light, but are rendered opaque by numerous enclosures of quartz crystals. Similar crystals, but perfectly developed and with double terminations, were found imbedded in fragments of a very fine grained rhyolite tuff, the fragments being themselves inclosed in rhyolite. Discussed by G. K. Gilbert.

The next two papers were read without break.

Strata containing the Jurassic Flora of Oregon: J. S. Diller, Washington, D. C.

The Jurassic flora of Oregon has been described and designated by Professors Lester F. Ward and William M. Fontaine in the U. S. Geological Survey Twentieth Annual Report, pt. 2, p. 217 and Monograph 48. The localities of its occurrence have been greatly extended among the Klamath mountains of California, and several distinct faunas have been found at different places in the same strata. On the one hand it is clearly associated with a

characteristic Knoxville fauna, and on the other with a fauna that may be older than the Mariposa.

Local Silicification of the Knoxville: J. S. DILLER, Washington, D. C.

There are certain localities in the Riddles Quadrangle and the adjacent region of Oregon in which portions of the Knoxville strata are silicified and contain numerous small quartz veins. In these quartz-veined rocks *Ancella pioclii* and *Ancella crassicollis* are widely but sparsely distributed. When these fossils are abundant the cement is calcareous and the rocks are less firmly lithified. Discussed by A. C. Lawson.

On account of the special interest due to the excursion after the meeting to the Grand Canyon of the Colorado, the following paper was, in the absence of its author, read by Dr. C. W. Hayes:

Wind Erosion in the Plateau Country: WHITMAN CROSS, Washington, D. C.

The next paper was read by title:

The Association of Pegmatite with Hornblendic Border Beds of Granite and the Appearance of Large Isolated Masses of the Two together Deep in the Ground: B. K. EMERSON, Amherst, Mass.

The next paper was read by Mr. Louderback. It was

Benitoite, its Mineralogy, Paragenesis and Geological Occurrence: GEORGE D. LOUDERBACK and W. C. BLASDALE, Berkeley, Cal.

Benitoite and the associated minerals were briefly described and chemical analyses presented. The paragenesis and geological mode of occurrence were discussed and compared with geologically related but mineralogically different deposits in the same geologic province. Discussed by W. G. Tight.

The next papers were read by title, as follows:

The Igneous Rocks of the Ortez Mountains: IDA H. OGILVIE, New York, N. Y.

The Preglacial Drainage in Central Western New York: AMADEUS W. GRABAU, New York, N. Y.

Geographic Cycle in an Arid Climate: CHARLES R. KEYES, Des Moines, Ia.

The next paper read was

Shoreline Studies on Lake Ontario and Erie: ALFRED W. G. WILSON, Montreal, Canada.

The initial shore lines of these lakes were very complex because of the complex character of the basins in which they lie. The process by which the shore lines have been brought to their present stage of development is almost wholly due to the action of waves and the currents generated by them. Tides and other currents strong enough to be effective agents in transportation do not exist in the Great Lakes. The materials found on the shores are almost wholly of glacial origin. They are being distributed along the shores by the shore processes, and there is evidence of the existence of two nodal points on each lake, one on the north shore, and one on the south. East of these points the resultant general movement of shore débris is east, west of these points it is west. Locally there may be at any specified time movements in either direction, according to the direction of wind and wave at that time.

Some special features of the shore lines were described in detail—such as Toronto Island on Lake Ontario, Long Point, Rondeau Point, Point Pelee and Erie Point, on Lake Erie.

The place of the shore lines in the cycle of shore development was considered and they were classed as adolescent.

The following papers were then read by title:

Faults and Folds of the Grand Canyon District: Douglas Wilson Johnson, Cambridge, Mass.

Coon Butte, Arizona: John B. Hastings, Denver, Colo.

The Occurrence of Petroleum in the Coast Counties of California: Ralph Arnold, Washington, D. C.

Stream Conglomerate in the Mt. Diablo Range, Calif.: R. Arnold and R. Anderson.

Distribution of Gold in the Saddle and Leg Region of the Meguma Series of Nova Scotia: J. Edmund Woodman, Halifax, N. S.

Probable Age of Meguma Series, Nova Scotia: J. Edmund Woodman, Halifax, N. S.

The Giant Springs at Great Falls, Montana: C. A. Fisher. (Introduced by C. W. Hayes.)

After the end of the reading of formal papers, Dr. C. W. Hayes informally exhibited a set of photographs of the fossil woods of Arizona together with notes on them by Dr. David White, paleobotanist to the United States Geological Survey. Then President W. G. Tight exhibited and described a series of stereopticon slides illustrating glacial and other phenomena among the high Andes of Bolivia and the scientific program was declared finished.

The question of endeavoring to form a General Committee on Geological Nomenclature was thoroughly discussed by C. R. Van Hise, A. C. Lane, A. C. Lawson, A. P. Coleman, G. K. Gilbert, H. E. Gregory, R. D. George, C. W. Hayes and W. G. Tight, and the following action was taken unanimously:

The Geological Society of America recommends to the various organizations concerned:

1. That a general Committee on Geological Nomenclature be formed; one fifth of its members to be from the United States Geological Survey, one fifth from the Canadian Geological Survey organizations, one fifth from Mexico and one fifth from geologists at large selected by the Geological Society of America.

2. That this general committee have authority to appoint special committees on nomenclature from within or without its own membership for the investigation of the particular questions referred to them, the special committees to report back their conclusions to the general committee with full reasons therefor; the different sections to report in turn to their own organizations.

3. That the fact that any subject is under discussion by this general committee be made known to the scientific public at large.

The purpose of the recommendations is to provide a source from which any geologist may on application obtain advice regarding nomenclature.

The following resolutions of thanks were presented by Mr. G. K. Gilbert, seconded by President Van Hise and heartily adopted.

The Geological Society of America acknowledges with gratitude the many and substantial courtesies extended to it by the citizens and the Commercial Club of the City of Albuquerque.

The society also tenders its sincere and emphatic thanks to the University of New Mexico and particularly to President W. G. Tight for the hospitality it has enjoyed, a hospitality which included arrangements of exceptional completeness and attentions most assiduous.

The following fellows of the society registered as being in attendance at the meeting: Charles R. Van Hise, H. B. Patton, George E. Collie, G. K. Gilbert, George

D. Louderback, Herbert E. Gregory, W. G. Miller, T. L. Walker, Andrew C. Lawson, C. W. Hayes, G. D. Harris, Alfred W. G. Wilson, R. W. Brock, A. H. Purdue, I. C. White, Frank R. Van Horn, Alfred C. Lane, H. M. Ami, J. S. Diller, H. P. Cushing, A. P. Coleman, R. D. George, Samuel Calvin, W. G. Tight, John E. Wolff, Arthur M. Miller, F. W. Cragin and E. O. Hovey. There were in addition at least five visiting geologists, not members of the society, and many students and casual visitors.

The Cordilleran Section met with the general society. On Tuesday, December 31, the section held a business session at which Andrew C. Lawson and George D. Louderback were reelected chairman and secretary respectively.

The following officers were elected by the general society for the year 1908:

President—Samuel Calvin, Iowa City, Iowa.

First Vice-president—George F. Becker, Washington, D. C.

Second Vice-president—A. C. Lawson, Berkeley, California.

Secretary—Edmund Otis Hovey, New York City.

Treasurer—William Bullock Clark, Baltimore, Md.

Editor—Joseph Stanley-Brown, Cold Spring Harbor, N. Y.

Librarian—H. P. Cushing, Cleveland, Ohio.

Councilors—H. P. Cushing, Cleveland, Ohio, and H. B. Patton, Golden, Colorado.

The council voted to accept the invitation which had been received from the authorities of Yale University to meet in New Haven, Conn., next winter. It was decided to hold the meeting during the week of December 29, 1908.

EDMUND OTIS HOVEY,
Secretary

THE AMERICAN BREEDERS' ASSOCIATION

THE fourth annual meeting of the American Breeders' Association was held at Washington, January 28–30, 1908. This association now comprises about 1,100 members and includes the more active breeders of the country, both those engaged in plant breeding and those who are breeding animals. It has attempted to bring together those who are doing breeding work with scientific aims and those whose aims are primarily commercial or "fancy." This attempt has been successful to a marked degree; not only in the meetings of the association, which have been well attended by all classes of breeders, but also in the three year-books which have appeared and which undoubtedly have skimmed the cream of the stupendous yield of results of the breeding industry during the past few years. Take, for example, the last year-book. It contains papers on breeding horses by Professor C. W. Gay, of the Ohio State University; cattelo by C. J. Jones ("Buffalo" Jones), of Nevada; dairy cattle by M. A. Scoville, Director of the Kentucky Agricultural Experiment Station; swine by Professor D. A. Gaumnitz of the Minnesota Station, and Geo. M. Rommel, of the U. S. Department of Agriculture; poultry by Professor J. E. Rice, of Cornell University; sugar beets by J. E. W. Tracy, of the U. S. Department of Agriculture; corn by Eugene and J. D. Funk, of Funk Brothers, Illinois, leading commercial breeders; carnations by J. B. Norton; nut and forest trees by Messrs. Sudworth and A. D. Hopkins, of Washington. There are theoretical papers by Castle, Shull, Q. I. Simpson, C. W. Ward, Spillman and others, the commercial men uniting with the theoretical men in these papers also.

The Washington meeting was not behind its predecessors in interest. Reports of committees occupied, perhaps, a larger part of the program than hitherto. Among these reports may be mentioned that of Mr. David G. Fairchild on the "Introduction of Animals and Plants." He called attention to the danger of introducing