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Proceedings of the Thirty-Sixth Annual Session of the Iowa Academy of Science, Drake University, Des Moines, April 28 and 29, 1922: Minutes of the Meeting; Staff & Committee Reports

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PROCEEDINGS OF THE THIRTY-SIXTH ANNUAL SESSION OF THE IOWA ACADEMY OF SCIENCE

Drake University, Des Moines, April 28 and 29, 1922

The meetings of the thirty-sixth annual session were held at Drake University on Friday and Saturday, April 28 and 29, 1922. President Morehouse called the session to order at 1:30 p. m. on Friday in the Auditorium. After the transaction of business the president announced the following committees for the session:

Nominating, Messrs. Conard, Knight and Stewart.
Resolutions, Messrs. O. H. Smith, Jaques, Cable, Baker.
Membership, The Treasurer, the Secretary.
Conservation, Messrs. Pammel and Bennett.
Secretary's Report, Messrs. Doty, Raiford, Norris.
Necrology, Messrs. B. H. Wilson and Kay.
Auditing, Messrs Reilly and Ross.

After announcements by the local committee President Morehouse gave the Presidential Address on "The Cosmology of the Universe." The Academy then separated for the section meetings and at 6 o'clock the sections met for dinners.

At 8 o'clock the Academy convened at the Municipal Observatory to listen to the public address on "Some Aspects of Science," by President Edgar O. Lovett of Rice Institute, Houston, Texas. After the address President Holmes of Drake and the members of the University tendered a reception to the visiting scientists and opportunity was given for inspection of the Observatory and using the 9-inch telescope.

On Saturday morning the sections met for the completion of the reading of papers and at 10 o'clock the Academy gathered to hear several papers of general interest.

At 11 o'clock the President called the Academy to order for the closing business meeting. The first order of business was the reports of committees. The president called for the reading of the minutes of the meeting of the executive committee at Grinnell on October 22, 1921. These were read as were also those for the

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meeting of the executive committee held at 9 a.m. on Saturday, April 29, 1922. It was then moved that the action of the executive committee be endorsed and approved by this body. A rising vote was called for and the motion was carried unanimously.

Invitations for the next meeting were received from Cornell, Grinnell and Penn Colleges and from the Tri-State Science Club of Oskaloosa, and Doctor Pammel invited the Academy to meet with the State College in 1924, when he will have been with the College thirty-five years. The invitations were referred to the executive committee which later decided to meet with Cornell in 1923.

The temporary committees gave their reports and in the absence of Mr. Ben H. Wilson, Professor Jaques reported the death of Professor C. C. Norwood of Iowa Wesleyan College. The report was adopted and a memorial will be found in this volume.

Doctor Conard for the committee on nominations reported as follows:

For President, R. B. Wylie, State University.

Vice-President, Orrin H. Smith, Cornell College.

Secretary, James H. Lees, Iowa Geological Survey.

Treasurer, A. O. Thomas, State University.

It was moved and carried that the report be adopted.

The following members were elected chairmen of sections and as such are members of the executive committee:

Botany, H. S. Conard, Grinnell College.

Chemistry, Edward Bartow, State University.

Geology, S. L. Galpin, State College.

Mathematics, C. W. Emmons, Simpson College.

Physics, L. D. Weld, Coe College.

Zoölogy, H. W. Norris, Grinnell College.

After the discussion of new business the Academy adjourned.

REPORT OF THE SECRETARY

Members of the Academy:

The duties of the secretary of an organization like ours are somewhat diversified, despite an expressed opinion as to "his simple tasks," and hence I beg that in this so-called report of the secretary I may be permitted some latitude in the scope of my remarks. As one of the officers of the society who is presumably keeping the welfare of the Academy in the forefront of his

thought there are several directions from which impressions come to the secretary's mind and varied channels through which he may in thought or action effect desired results. It is desirable first of all that the secretary, in common with the officers and members of the Academy, keep continually the welfare of the general body as one chief goal of attainment. Another aim of large importance is the improvement and quickening of scientific research in general, and in particular in the schools of our own state and those represented in this body. And the still broader desideratum is the bringing of the value and results of such study and research to the attention and comprehension of a public which still knows and appreciates all too little of the import of the work we are doing. In fact, to what degree do we ourselves appreciate the general signification of the work of our fellow investigators? How far is the mathematician cognizant of the universal value of chemical research? To what extent does the psychologist appreciate the personal application of the studies of a botanist? Of course the geologist must enlist all sciences to aid in his advance — from the highest heavens to the profoundest depths — and therefore he must needs realize the value of all scientific endeavor and achievement.

Closely connected with research in pure science is its application to subserve the needs of the public which is perpetually clamoring for new means of bettering its physical and mental condition. Research for research's sake is fascinating and worthy of appreciation, but research for the uplift of humanity is more worthy still. During the year there appeared in one of the technical journals an advertisement which impressed this thought so strongly that I have taken the liberty of reproducing it in part here. It read as follows:

HOW DO HOT THINGS COOL?

"The blacksmith draws a white-hot bar from the forge. It begins at once to cool. How does it lose its heat? Some is radiated, as heat is radiated by the sun; but some of it is carried away by the surrounding air. Now suppose the bar to be only one-half the diameter; in that case it loses heat only half as fast. Smaller bars lose in proportion. It would seem that this proportion should hold, however much the scale is reduced. But does it? Does a fine glowing wire lose heat in proportion to its diminished size?

The research laboratories of the General Electric Company began a purely scientific investigation to ascertain just how fast a glowing wire loses heat. It was found that for small bodies the old simple law did not hold at all. A hot wire .010 inch diame-

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ter dissipates heat only about 12 per cent more rapidly than a wire .005 inch diameter instead of twice as fast as might be expected.

The new fact does not appear very important, yet it helped bring about a revolution in lighting."

The statement then describes in detail the method of using a helix of fine tungsten wire in a gaseous medium by means of which "a new lamp was created which at the same cost gave more and better light." In conclusion the advertisement says:

"Thus pure research, conducted primarily to find out how hot things cool, led to the invention of the gas-filled lamp of to-day — the cheapest, most efficient illuminant thus far produced.

"Sooner or later research in pure science enriches the world with discoveries that can be practically applied. For this reason the research laboratories devote much time to the study of purely scientific problems."

It may be argued that there is a selfish motive behind the pure research in this case, but may it not be conceded that beyond the utilitarian incentive there is also a humanitarian wish to elevate and improve living conditions. Thus it may be in all research. That accomplishes the greatest good which most helps mankind, be it in physical, mental or spiritual channels.

The work of the year has been very much like that of other years. There has been quite a large and varied correspondence — with members regarding various phases of the Academy's work, with others who are interested in our publications; and in addition, despite the fact that we have issued no volume of Proceedings during the past two years, there has been a large number of books distributed to various parts of the world.

The problem of the publication of our Proceedings is like the proverbial poor — it is ever with us. At risk of becoming wearisome may I restate the situation? The 38th General Assembly abolished the offices of state printer and state binder and provided that all public printing should be done by contract. But it provided also that no awards should be made at prices beyond those previously paid under the old law. The war caused prices to soar and this automatically put a stop to publication until the 39th General Assembly unscrewed the lid. When that was done the Printing Board which was created by the new law proceeded with the authorization of the printing of the accumulated documents, among which were two volumes of Academy Proceedings. The contract for these two volumes was awarded the Torch Press of Cedar Rapids, and the first volume is now under way.

As soon as possible the second volume will be turned over to the printer.

The Secretary regrets that the Printing Board saw fit to limit the pages of these volumes to 400 each. This was done after the Secretary had explained to the Board the purposes of the Academy and its publications and with full knowledge of recent procedure. If the members would exert themselves to urge upon the elective members of the board—the Attorney General, the Auditor of State and the Secretary of State—the undesirability of limiting the size of our volume, it might have some effect. Let it be remembered that this is election year.

The Secretary will freely admit that much of the delay in issuing the Proceedings occurs in his own office. With the work of the Academy added to the work of the Geological Survey it is not within the limits of his time or strength to read the copy and then the proof as quickly as he would like to do. So long as the Academy must choose a secretary from those of its members who are already busy with other work the outlook for more prompt publication does not seem very hopeful. It should be said, however, that because the Survey's reports have been denied publication as have those of the Academy the situation this year is worse than usual and hence may be expected to be somewhat relieved by another year.

The Academy has experienced a healthy growth during the year. The Treasurer reports that a year ago the membership numbered 313. At the Simpson meeting there were elected five fellows and fifty-four associates of whom forty-four accepted their election. During the year twenty-two names were dropped from the roll, chiefly, I believe, because of the constitutional provision calling for such action after two years financial delinquency. This leaves a net increase of twenty-seven in our membership, bringing it to the number of 340. This number is distributed as follows: Honorary Fellows, 6; Life Fellows, 24; Fellows, 167; Associates, 143.

The present Secretary took office following the meeting for 1914. At that time there were enrolled 260 members of all classes. Today, as already indicated, the membership is 340. The program for that meeting included fifty-nine titles and was the largest presented to the Academy up to that time. The program now in your hands contains 103 titles and nine additional were received too late for publication. These figures reveal not merely the material development of the Academy in the past eight years,

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but, going deeper than that, they show that Iowa has an Academy of Science of which its members are sincerely proud and for which they are glad to work and for which they do work.

For the achievements already won I congratulate you. To the results yet to be accomplished I urge your attention and your thoughtful energy. What we may do is scarcely to be measured by what we have already done.

Respectfully submitted,

JAMES H. LEES,
Secretary.

TREASURER'S REPORT

RECEIPTS

Balance on hand April 30, 1921.....	\$ 73.69
Income from Entrance dues.....	55.00
Income from Annual dues.....	276.00
Income from Transfer fees.....	25.00
From sale of Proceedings.....	6.00
From Life Fellows.....	45.00
Interest on Bonds \$2.75, on deposits \$13.88.....	16.13
Overpayments by members.....	4.00
A. A. A. S. dues collected.....	536.00
For Membership List, Vols.....	7.50
Refund from A. A. A. S.....	4.00
Transferred from Savings Account.....	85.00
	<u>\$1133.32</u>
Check No. 34 in transit.....	1.00
Total	<u>\$1134.32</u>

DISBURSEMENTS

Iowa Printing Company Stationery and Inserts.....	\$ 21.45
Programs for 35th meeting.....	25.15
Postage for Treasurer.....	19.00
Postage for Secretary.....	11.00
Group photos at Simpson for Secretary's Archives..	2.50
J. P. Goode, Address and traveling expenses.....	142.82
Stenographic work, treasurer.....	19.13
Refund to members, overpaid.....	4.00
Traveling Expenses, called meeting Executive Committee, October 22, 1921.....	45.74
Honorarium to Secretary.....	75.00

Honorarium to Treasurer.....	25.00
To Miss Newman, distributing Proceedings.....	10.00
Dues remitted to A. A. A. S.....	528.00
For A. A. A. S. membership lists.....	7.50
Deposited in Savings Account.....	60.00
Fifty Dollar Liberty Bond — Second Loan 4 $\frac{1}{4}$ %.....	43.36
Fifty Dollar Liberty Bond — Victory Loan 4 $\frac{3}{4}$ %.....	50.46
	<hr/>
	\$1090.11
Balance on hand.....	44.21
	<hr/>
	\$1134.32

UNPAID DUES OF LESS THAN TWO YEARS' STANDING:

11 Fellows in arrears 1 year.....	\$ 11.00
4 Fellows in arrears 2 years.....	8.00
19 Associates in arrears 1 year.....	19.00
9 Associates in arrears 2 years.....	18.00
	<hr/>
	\$ 56.00

ASSETS OF ACADEMY, APRIL 29, 1922, ARE AS FOLLOWS:

Balance in Bank.....	\$ 44.21
Savings Account.....	375.00
Bond, Second Loan 4 $\frac{1}{4}$ % — value to-day.....	49.91
Bond, Victory Loan 4 $\frac{3}{4}$ % — value to-day.....	50.35
Accrued Interest on Savings Account, to date.....	5.00
Back Dues.....	56.00
	<hr/>
	\$ 580.47

A. O. THOMAS,
Treasurer.

APRIL 28, 1922.

REPORT OF COMMITTEE ON CONSERVATION

Your committee on conservation is pleased to note that there is a feeling that conservation is on more stable ground in the United States to-day than ever before in the history of the country. However, we wish to warn the members of the Academy that we need to be on the alert in order to protect conservation interests. Your committee begs leave to report the following:

Forestry

We consider the matter of forestry of great importance to the welfare of the country and especially to Iowa. The forests are essential to our civilization. It is therefore of great importance that adequate provision be made for the growing of forest trees, not only because of the economic use of timber, but for the protection of wild life and recreation. We recognize that Iowa is a great agricultural state, where fertile lands must produce large agricultural crops and that much of the soil can not, from an economic standpoint, be used to produce a forest crop. We also recognize that there are 3,000,000 acres of land in the state which are not producing adequate agricultural crops, and which should be made to produce something in the way of a crop suited for these lands. By planting such idle lands to a forest crop, the state will be much richer. We, therefore, urge the importance of utilizing such lands for the growing of trees. Cut over lands in the state should receive proper care so that the regrowth of good forests may start at once. We urge upon our legislature such needed legislation as will materially reduce the taxation on privately owned forest lands so that a remunerative crop can be produced; that in taxation a distinction shall be made between forest lands and other farm lands; that the taxation on such lands shall be reasonable. We commend the present tax exemption law where forests are not taxed when the same are not used for pasture purposes, and a good stand of timber is found thereon. The law, however does not meet all of the requirements of good forestry and should be amended to properly safeguard the state. The state should encourage small forest areas and for this purpose small areas might well be set aside as state forests. We urge that state owned lands subject to overflow shall be utilized for the growing of timber; that the state stop the sale of such public land and allow it to grow up with forest trees. We would urge that cities where possible establish municipal forests, especially along streams or hillsides. We realize that our largest returns ultimately will come from the public forests of the government, or in some states from state forests. We also realize that these public forests in Iowa can never be large and that it must be individual enterprise, and any state aid that can be given the private individual should be encouraged in every way. We deplore the burning of some of the woodland tracts in northeastern Iowa and there should be a law to stop this.

Erosion and Conservation of Water

Newspapers have given us only a partial idea of the devastation of floods during the last month; over 75,000 people were rendered homeless in the Mississippi valley, in spite of the fact that expensive levies have been built to protect individuals, cities and states. These floods will continue as long as our waters are rushed down the small streams and creeks and emptied into the larger streams causing them to go out of their banks. We, therefore, view with concern the straightening of streams and the building of large drainage ditches, changing the channels of the small streams, causing a rapid run-off of water which is thrown into the main channels with disastrous results to property owners farther down the stream. The water should be kept back by reforesting the hillsides and keeping the trees of the slopes in good condition, so that the water may enter the soil through the humus. During the early days in Iowa the streams were clear soon after a rain, perennial springs were numerous. Lakes, no matter of what kind, should be preserved to hold back water so that along with the water percolating through the soil of a forest this water will be made available for agricultural crops. We are opposed to spending millions of dollars for the kind of reclamation work advocated by the Mississippi Valley Association. We are an agricultural state and water is of vital importance for our welfare.

Aquatic Resources

There are something like seventy meandered lakes in the state, besides such meandered streams as the Des Moines, Cedar, Iowa, Wapsipinicon, the Missouri on the west and the Mississippi on the east. These lakes and streams abound in animal life which adds materially to the wealth of Iowa. We will seriously curtail this wealth of Iowa by shutting off the food supply of fish, wild game and muskrats by draining the lakes or destroying the sloughs of the Mississippi and Missouri. Aquatic plants, with few exceptions, cannot grow in rapid running streams, and many of these plants which furnish the food for these aquatic animals will not grow in water much more than three to four feet deep, though a few occur in eight to ten feet of water. Therefore, if we expect to retain this source of wealth, this plant life must be maintained and more shallow bodies of water must be provided. We must view with alarm some of the drainage projects of the state. This problem is connected with recreation, and is therefore a problem of conservation as well as a problem of economic production.

According to the biological station at Fairport the annual net fish production is as follows: The average annual net fish flesh production of the Fairport farm pond, measuring 0.22 acre in surface area, has been for the four years from 1918 to 1921 inclusive, 65 pounds, 6 ounces, or per acre 297 pounds 2 ounces. The maximum annual net fish flesh production has been 82 pounds, 7 ounces, or per acre, 374 pounds, 11 ounces. The maximum annual production of fish of edible size has been estimated at 20 per cent of the total net annual fish flesh production. The total annual production of fishes of the current year has varied from 6.3 to 26 per cent of the total net production, while the bass were held in the pond. After these were removed and the bluegills alone were held as the experimental fish, the per cent of the total net production of the pond based on this factor increased to 57.5 and 59.7 in the years 1920 and 1921, respectively.

Forestry and the National Government

We are opposed to the transfer of the forests and forest service from the U. S. Department of Agriculture to the Department of the Interior. The national forests have been wisely administered by the National Forest Service and should therefore remain in the U. S. Department of Agriculture. The forest is an agricultural crop which requires a long time to mature. Such problems as diseases caused by fungi and insects and the ecology all must be considered by trained experts and no other agency of the government is so well able to take care of the problem as is the U. S. Department of Agriculture. A faithful steward should be rewarded.

Wild Game Protection

We commend the last session of the legislature for legislation in protecting the quail and we would ask that the bag limit on other game be materially reduced. We are pleased to note that the migratory bird law is respected much more than it formerly was. There are still violations but it is because of the inadequacy of the force at work to stop these violations. Wild ducks and geese should have larger areas in which to breed in the state of Iowa, and therefore ponds and sloughs should be preserved and owned by the state. We commend the last legislature in passing a law pertaining to the meandered streams and lakes of Iowa as a step in the right direction. We commend the quarantine regulations of the U. S. Department of Agriculture, especially regu-

lations No. 37, which should not be abrogated but enforced to the letter.

Historic Trees

We urge the keeping of unique, large and old trees of Iowa for scientific and historic purposes; we urge that some of these giants of the forest be used to memorialize important events in the history of the state and to perpetuate the memories of those who served in the late or previous wars. We would commend the action of our governor in issuing a proclamation for planting trees on Arbor Day and hope this custom may be continued in the state.

Flowers

Your committee feels that it is important to conserve our native wild flowers; that the state parks of Iowa shall be sanctuaries not only of wild animal life, but the wild flowers, trees and shrubs as well. The committee would like to go a step further and recommend to the citizens of Iowa that they refrain from the picking of wild flowers, especially the rarer species like the bluebell, wind and pasque flowers, columbine, moccasin flower, mandrake and many others. We would like to suggest that every community in Iowa do a little missionary work in trying to save the wild flowers. In order that the question may be brought nearer home, we would suggest that we have a day set aside as a state flower day.

Iowa Conservation Association and Federated Women's Clubs of Iowa and Wild Life School

We wish to commend the work of the Iowa Conservation Association for its activity in connection with conservation and the great work of the Federated Women's Clubs of Iowa in behalf of conservation. We are glad to note the progress of the School of Wild Life at McGregor, Iowa. These organizations reach a large number of the people of the state, and the conservation movement is greatly helped.

Signed L. H. PAMMEL
(T. C. STEPHENS, absent)
GEO. BENNETT

REPORT OF THE COMMITTEE ON RESOLUTIONS

WHEREAS this thirty-sixth annual meeting of the Iowa Academy of Science, which is now drawing to a close, has been one of the most successful in the history of the Academy,

COMMITTEE ON SECRETARY'S REPORT

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BE IT RESOLVED that we extend to the president and faculty of Drake University and to the city of Des Moines our sincere appreciation of their cordial and gracious welcome, generous hospitality, and efficient provisions for the successful entertainment of this meeting.

BE IT FURTHER RESOLVED that we express our great pleasure in the masterful address of President E. O. Lovett of Rice Institute, Houston, Texas.

BE IT FURTHER RESOLVED that we recognize in the success of the meeting and in the work of the Academy in general the faithful, efficient, and intelligent efforts of our officers and executive committee and especially of our secretary and treasurer whose efforts, continued year after year, have entered so effectively and so largely into the policies of the Academy.

BE IT FURTHER RESOLVED that we commend the governor and the executive council of the state and the state conservation board for their work in conserving of our natural resources.

WHEREAS the hand of death has entered the homes of some of our members,

BE IT RESOLVED that we extend to Professor B. Shimek our deep sympathy and regret of the loss of Mrs. Shimek from his family circle.

BE IT FURTHER RESOLVED that, on the occasion of the passing of Mrs. Rockwood, we extend our heartfelt sympathy to Professor E. W. Rockwood.

O. H. SMITH,
H. E. JAQUES,
E. J. CABLE,
J. A. BAKER,
Committee.

REPORT OF COMMITTEE ON SECRETARY'S REPORT

Your committee appointed to consider the suggestions of the secretary recommend the acceptance of the report in full. We wish to commend the secretary for his endeavors to bring about the means whereby a prompt publication of the Proceedings of the Academy will be assured.

Respectfully,

H. S. DORR,
(For the Committee)

REPORT OF THE MEMBERSHIP COMMITTEE

Transferred Members. — Ainslee, G. N., Sioux City; Baldwin, F. M., Ames; Bode, I. T., Ames; Brown, F. E., Ames; Davis, George E., Ames; Emerson, F. W., Oskaloosa; Ellison, C. W., Waterloo; Gilman, Henry, Ames; Gouwens, C., Ames; Johns, Erwin W., Northfield, Minn.; Lindly, John M., Winfield; Laird, Don, Iowa City; McKelvey, J. V., Ames; Patton, Leroy, New Concord, Ohio; Sawyer, Louise, Galesburg, Ill.; Simpson, Margery, Green Castle, Indiana; Stecher, Lorle I., Iowa City; Smith, Don M., Ames; Willey, Florence, Ames; Williams, N. J., Arnolds Park; Weida, F. M., Iowa City; Wentworth, C. K., Iowa City; Wilson, B. H., Mount Pleasant; Young, Paul A., Cedar Rapids, (Coe College).

Fellows. — Carr, A. B., Indianola; Clokey, Ira W., Ames; Evans, J. E., Ames; Hart, Hornell, Iowa City; Hulbert, E. O., Iowa City; Leicht, W. F., Indianola; Popoff, Stephen, Iowa City; Theobald, John, Dubuque (Columbia College); Whiting, P. W., Iowa City; Woodrow, Jay W., Ames.

New Members. — Adams, John E., Iowa City; Baltz, James, Mount Vernon; Becker, A. G., Clermont; Bell, Ruth, Des Moines; Berry, June, Mt. Pleasant; Butcher, Fred D., Ames, Zoölogical Department; Cain, Edith, Des Moines, 2840 University Ave.; Carnahan, Marye, Mount Pleasant; Castetler, E. F., Ames; Chittum, John, Wapello; Corlette, Donald D., Mount Vernon; Cox, Benjamin B., Chicago, Ill.; Culbertson, Prof. J. B., Mount Pleasant; Damerow, Arthur, Mount Vernon; De Ryke, Willis, Iowa City; Elmer, O. H., Ames; Emmons, Prof. C. W., Indianola; Evans, Arhette R., Oak Bluffs, Mass.; Fenton, Carroll Lane, Chicago, Ill., Walker Museum; Gauet, Foster, Mount Pleasant; Giddings, Glenn, Mount Vernon; Hauber, Ulrich A., Davenport, (St. Ambrose College); Havens, Hale, Mount Vernon; Hockett, Prof. S. W., Oskaloosa, Penn College; Jensen, Lloyd, Alta; Kadesch, W. H., Cedar Falls; Lantz, Prof. C. W., Cedar Falls; Larson, H. W., Des Moines, 1607 E. Walnut St.; Leonard, Ray, Avoca; Lewis, Harry F., Mount Vernon; Littlefield, Max, Iowa City; Malone, Howard E., Keokuk; McLaughlin, H. M., Ames; Morgan, Russell, Clinton; Muncie, J. H., Ames; Olson, T. C., Alta; Over, W. H., Vermillion, South Dakota; Phillips, George, Des Moines, 1149 28th St.; Potter, George E., Iowa City; Poulter, Susannah, Mount Pleasant; Reagan, Albert B., Cornfields, Ganado, Arizona; Searight, Walter V., Iowa City; Slaght, Prof. W. E.,

MEMBERS IN ATTENDANCE

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Mount Vernon; Sternberg, J. C., Iowa City; Taylor, Joseph H., Wapello; Van Horn, Max., Mount Pleasant; Van Zandt, Fritz Nelle, Des Moines, 1344 27th St.; Wellhouse, Walter H., Ames; Windenburg, Dwight, Mount Vernon; Verbeck, L. M., Grinnell.

A. O. THOMAS,
 JAMES H. LEES,
Committee.

LIST OF MEMBERS IN ATTENDANCE

Abbott, Roy, Cedar Falls; Albert, O. W. Grinnell; Almy, Frank F., Grinnell; Arey, M. F., Cedar Falls; Baker, J. Allen, Indianola; Bakke, A. L., Ames; Baldwin, F. M., Ames; Baltz, James I., Mount Vernon; Bartow, Edward, Iowa City; Begeman, L., Cedar Falls; Benedict, A. A., Ames; Bennett, George, Iowa City; Beyer, S. W., Ames; Bird, Kenneth L., Ames; Bond, Perry A., Iowa City; Brown, F. E., Ames; Brunk, Amos, Des Moines; Butler, L. W., Ames; Cable, Emmett J., Cedar Falls; Carnahan, Miss Marye, Mount Pleasant; Carr, A. B., Indianola; Castetler, E. F., Ames; Chittenden, E. W., Iowa City; Clark, Norman A., Ames; Clokey, I. A., Ames; Conard, Henry S., Grinnell; Conklin, R. E., Des Moines; Corlette, Donald D., Mount Vernon; Crary, R. I., Ames; Crone, Neil L., Grinnell; Culbertson, J. B., Mount Pleasant; Damerow, Arthur, Mount Vernon; Davis, George, Ames; Doty, H. S., Indianola; Emmons, C. W., Indianola; Evans, J. E., Ames; Fenton, F. A., Ames; Galpin, Sidney L., Ames; Getchell, R. W., Cedar Falls; Giddings, C. W., Mount Vernon; Gilman, Henry, Ames; Gose, Bert C., Indianola; Goshorn, Arthur, Winterset; Goshorn, Mrs. Gertrude Rhodes, Winterset; Harrison, B. M., Ames; Hart, Hornell, Iowa City; Hartzell, Albert, Ames; Haven, H. A., Mount Vernon; Hayes, Anson, Ames; Heaton, Vincent E., Ames; Heitkamp, G. W., Dubuque; Hendrixson, W. S., Grinnell; Hersey, S. F., Cedar Falls; Irion, Clarence E., Ames; Jaques, H. E., Mount Pleasant; Jones, Miss Eunice, Grinnell; Kay, G. F., Iowa City; Kelly, Harry M., Mount Vernon; King, George E., Mount Pleasant; Kinney, C. N., Des Moines; Knight, Nicholas, Mount Vernon; Kuerth, Wm., Ames; Lamb, A. R., Ames; Lantz, C. W., Cedar Falls; Larson, G. A., Des Moines; Larson, H. W., Des Moines; Lawson, D. F., Waterloo; Lees, James H., Des Moines; Leicht, F. V., Indianola; Lewis, H. F., Mount Vernon; Lowman, O. E., Fayette; Lu, K. Y., Grinnell; McClennon, R. B., Grinnell; McGaw, F. M., Mount Vernon;

Martin, John N., Ames; Mason, O'Neal, Mount Vernon; Maxwell, Harold L., Ames; Meister, Charles J., Ames; Mooers, Miss M., Grinnell; Morehouse, D. W., Des Moines; Morgan, R., Mount Vernon; Norris, H. W., Grinnell; Pammel, L. H., Ames; Popoff, Stephen, Iowa City; Poulter, Miss Susannah, Mount Pleasant; Raiford, L. Charles, Iowa City; Read, O. B., Cedar Falls; Reed, Charles D., Des Moines; Reilly, John F., Iowa City; Rietz, H. L., Iowa City; Rockwood, E. W., Iowa City; Ross, L. S., Des Moines; Rowe, Paul R., Glenwood; Schultz, J. A., Ames; Sherman, L. P., Grinnell; Sieg, L. P., Iowa City; Smith, D. M., Ames; Smith, John E., Ames; Smith, Orrin H., Mount Vernon; Stanley, F. C., Oskaloosa; Stewart, G. W., Iowa City, Iowa; Stiles, H., Ames; Stromsten, Frank A., Iowa City; Suydam, V. A., Grinnell; Sylvester, Reuel H., Des Moines; Taylor, Joseph, Mount Pleasant; Thomas, A. O., Iowa City; Thompson, George E., Ames; Trowbridge, A. C., Iowa City; Verbeck, L. M., Grinnell; Wester, C. W., Cedar Falls; Whiting, P. W., Iowa City; Wifvat, Samuel J. A., Des Moines; Willson, L. H., Ames; Wilson, Ben H., Mount Pleasant; Woodrow, J. W., Ames; Wright, H. V., Ames; Wylie, R. B., Iowa City.