Annual report of the Wisconsin State Horticultural Society for the year 1898. Annual meeting at Madison, February 1, 2, 3 and 4, 1898. Semi-annual meeting at Appleton, June 23 and 24, 1898. Vol. XXVII...

Wisconsin State Horticultural Society
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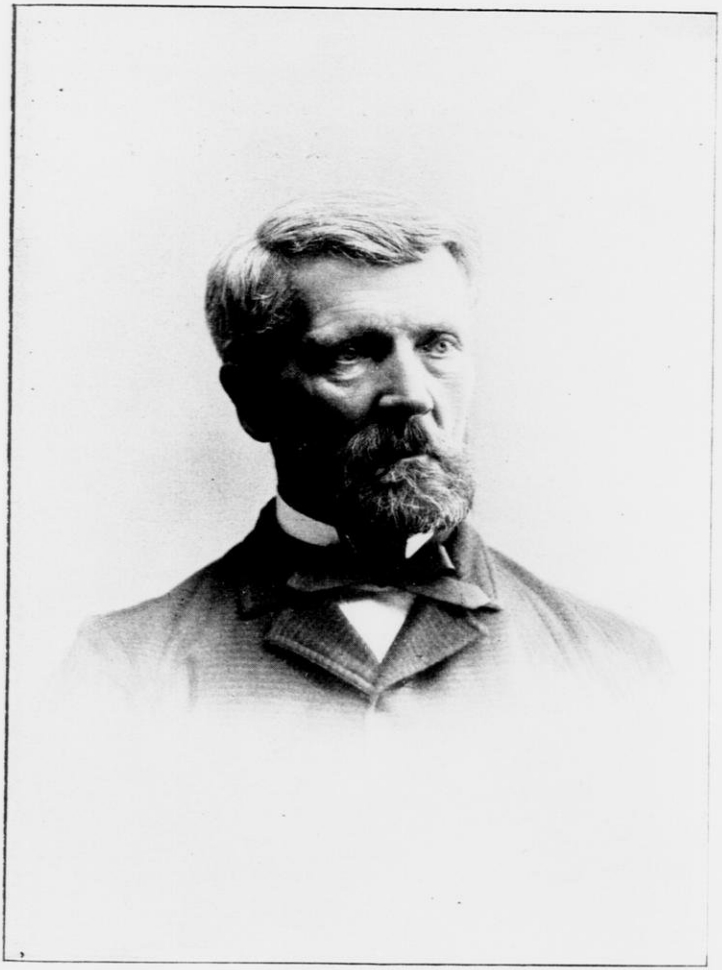

DANIEL HUNTLEY.

ANNUAL REPORT

OF THE

Wisconsin State Horticultural Society

FOR THE YEAR 1898.

Annual Meeting at Madison, February 1, 2, 3 and 4, 1898.
Semi-Annual Meeting at Appleton, June 23 and 24, 1898.

VOLUME XXVIII.

A. J. PHILIPS, Secretary
WEST SALEM, WIS.

MADISON, WISCONSIN.
DEMOCRAT PRINTING CO., STATE PRINTER,
1898.

LETTER OF TRANSMITTAL

To Hon. Edward Scofield,
Governor of Wisconsin.

Dear Sir:—I have the honor of presenting to you as is required by law the twenty-eighth annual report of the transactions of the Wisconsin State Horticultural Society, embracing the papers read and the discussions on the same at our yearly meetings, one of which was held in the city of Madison in February, 1898, and the other in the city of Appleton in June, 1898. We have published the reports of the local societies in different parts of the state, which show an increasing interest in horticulture. We also show the amount of money received from the state and the manner the same has been disbursed during the year. We have made further additions to our trial orchard, so that at the present time we are occupying about ten acres. It seems to be very promising of good results. The Omaha exposition is attracting our people, and if the fruit crop is as good this season as the prospect now is, I think we can make a very creditable showing of fruits raised in our state.

A. J. PHILIPS,
Secretary.

West Salem, June, 1898.

TABLE OF CONTENTS.

CONSTITUTION AND BY-LAWS.

CONSTITUTION.

ARTICLE I. This society shall be known as the Wisconsin State Horticultural Society.

ARTICLE II. Its object shall be the advancement of the art and science of horticulture throughout the state.

ARTICLE III. Its members shall consist of *annual* members, paying an annual fee of one dollar, which shall entitle the wife of such member to the privileges of full membership; of secretaries of local horticultural societies reporting to the state society, who shall be considered members *ex-officio*; or *life* members, paying a fee of ten dollars at one time; of *honorary life* members, who shall be distinguished for merit in horticultural and kindred sciences, or who shall confer any particular benefit upon the society; and *honorary annual* members, who may, by vote, be invited to participate in the proceedings of the society.

ARTICLE IV. Its officers shall consist of a President, Vice-President, Recording Secretary, Corresponding Secretary, Treasurer, Superintendent and an Executive Board, consisting of the foregoing officers and additional members, one from each congressional district of the state, five of whom shall constitute a quorum at any of its meetings. In addition to the foregoing officers, the presidents of all local horticultural societies reporting to this society shall be deemed honorary members and *ex-officio* vice-presidents of this society. All officers shall be elected by ballot, and shall hold their office for one year thereafter, and until their successors are elected; provided, the additional executive members may be elected by the county or local horticultural societies of their respective districts.

ARTICLE V. The society shall hold its annual meeting for the election of officers, commencing on the first Monday in February. It may also hold a meeting in December of each year, at such place and time as may be decided upon by the society, or the executive committee for the exhibition of fruit and for discussions, and such other meeting for discussions and exhibitions as the executive committee may direct, at such time and place as the executive board shall designate.

ARTICLE VI. This constitution, with the accompanying by-laws, may be amended at any regular meeting by a two-thirds vote of the members present.

AMENDMENT NO. 1.

The foregoing article four of the constitution was amended at the annual meeting, February, 1895, to read: The president, vice-president, treasurer, secretary and corresponding secretary shall be the executive committee of the society; also, that three of the aforesaid committee shall constitute a quorum to transcast business.

BY-LAWS.

I. The president shall preside at meetings, and, with the advice of the recording secretary, call all meetings of the society, and have general supervision of the affairs of the society, and shall deliver an annual address upon some subject connected with horticulture.

II. The vice-president shall act in the absence or disability of the president, and perform the duties of the chief officer.

III. The secretary shall attend to all the correspondence, shall record the proceedings of the society, preserve all papers belonging to the same, and superintend the publication of its reports. He shall also present a detailed report of the affairs of the society at its annual meeting. He shall also endeavor to secure reports from the various committees, and from local societies of the condition and progress of horticulture in the various districts of the state and report the same to the society. It shall be the duty of the secretary to make an annual report to the governor of the state of the transactions of the society, according to the provisions of the statutes for state reports.

IV. The treasurer shall keep an account of all moneys belonging to the society and disburse the same on the written order of the president countersigned by the secretary, and shall make an annual report of the receipts and disbursements, and furnish the secretary with a copy of the same on or before the first day of the annual meeting. The treasurer elect shall, before entering upon the discharge of the duties of his office, give good and sufficient bonds for the faithful performance of his duties subject to the approval of the executive committee.

V. The executive board may, subject to the approval of the society, manage all its affairs and fill vacancies in the board of officers; three of their number, as designated by the president, shall constitute a finance committee.

VI. It shall be the duty of the finance committee to settle with the treasurer and to examine and report upon all the bills or claims against the society which may have been presented and referred to them.

VII. The standing committees of this society shall be as follows: 1st, Committee on finance, consisting of three members; 2d, Committee on nomenclature and new fruits, consisting of three members; 3rd, Committee on observation, as now provided. Said committee to be appointed annually by the executive committee of the society.

ACT OF RE-ORGANIZATION

AND LAWS RELATING TO THE

WISCONSIN STATE HORTICULTURAL SOCIETY.

CHAPTER 151, LAWS OF 1879, AS AMENDED BY CHAPTER 14, LAWS OF 1887.

SECTION 1. The executive committee of the Wisconsin State Horticultural Society shall hereafter consist of the president, secretary and treasurer of said society, and of one member from each congressional district of the state, said members from the congressional districts to be chosen annually by the county and local horticultural societies in their respective districts.

SECTION 2. The present officers and executive committee of said society shall hold their respective offices until the Tuesday next succeeding the first Monday in February, 1880, and until their successors are appointed.

SECTION 3. It shall be the duty of said society to aid in the formation and maintenance of county and local horticultural societies, to promote the horticultural interests of the state by the holding of meetings for discussion; by the collection and dissemination of valuable information in regard to the cultivation of fruits, flowers and trees adapted to our soil and climate, and in every proper way to advance the fruit and tree growing interests of the state.

SECTION 4. The annual meeting of the society for the election of its officers, the transaction of general business, and the consideration of questions pertaining to horticulture, shall be held at such time and place as may be determined at the last preceding annual meeting. In case of the failure of such meeting to so determine, the executive board may call such meeting by giving at least thirty days' notice to each member of the society.

SECTION 5. All vacancies in the offices of said society may be filled by the executive committee; and should there be a failure to elect a

member of the executive committee in any district, the vacancy may be filled by a two-thirds vote of the members of the society present at any regular appointed meeting.

SECTION 6. It shall be the duty of the secretary of said society to make an annual report to the governor of the state of the transactions of the society, including an itemized account of all moneys expended during the year, in addition to such matters as are now specified in the law relating to the same.

CHAPTER 526, LAWS OF 1889.

SECTION 5. And further, there shall be printed annually upon the approval and order of the commissioners of public printing, ten thousand copies of the transactions of the Wisconsin State Agricultural Society, the same to embrace the reports of the county and other agricultural societies, and such matters pertaining to the agricultural industries of the state as shall be deemed important, provided the whole number of printed pages shall not exceed four hundred. Seven thousand copies of the transactions of the Wisconsin State Horticultural Society, the same to embrace such abstracts of reports of county and other horticultural societies, and such matters pertaining to the horticultural interests of the state as shall be deemed important, provided that the whole number of printed pages shall not exceed two hundred. Eight thousand copies of the transactions of the State Dairymen's Association, the same to embrace such other matters pertainingg to the dairy interests of the state as shall be deemed essential, provided that the whole number of printed pages shall not exceed two hundred. Twelve thousand copies of the report of the Agricultural Experiment Station of the State University, provided that the whole number of printed pages shall not exceed two hundred and fifty. Two thousand copies of each of said reports to be bound separately in cloth, all others singly in paper.

SECTION 6. The reports provided for in the preceding section shall be distributed as follows, through the superintendent of public property: Fifteen copies to each member of the legislature, fifty copies to the State Horticultural Society, ten copies to each county agricultural society, and district industrial association, which embraces two or more counties and furnishes the State Agricultural Society a report of its proceedings, to each of the four societies named in the preceding section, fifty copies of each of the reports of the other three societies, twenty-five copies of each of the reports to the library of the state university; to the governor, lieutenant-governor, secretary of state, state treasurer, attorney general, state superintendent of public

instruction, railroad commissioner and insurance commissioner, twenty-five copies each; to the state superintendent of agricultural institutes, fifty copies; to the superintendent of public property, commissioner of labor statistics, adjutant-general, quartermaster general, state board of health, each ten copies; to each public library in the state, two copies; to each state normal school, two copies; to each of the state charitable and penal institutions, one copy; and the remaining copies to the respective societies for distribution by their secretaries.

SECTION 7. In no case shall the number of printed pages in any report provided for in the act exceed the maximum number specified, except upon written request of the officers submitting the same, and then only upon previous written approval of a majority of the commissioners of public printing, such application and approval to be filed with the secretary of state.

CHAPTER 417, LAWS OF 1889.

SECTION 1. The governor is hereby authorized to set apart by proclamation one day in each year to be observed as a tree planting or arbor day, requesting all public schools and colleges to observe the same by suitable exercises, having for their object the imparting of knowledge of horticulture, in the department known as arboriculture, and the adornment of school and public grounds.

SECTION 2. This act shall take effect and be in force from and after its passage and publication.

Approved April 16, 1889.

Resolved by the Senate, the Assembly concurring, That the governor be and he hereby is authorized to have full control of all office rooms in the capitol, and to assign to each office or department such room or rooms as in his judgment may be required for the transaction of the business of the respective department, and for the proper care and preservation of the records and property.

All laws interfering with this resolution are hereby repealed.

This resolution shall take effect and be in force from and after its passage and publication.

In accordance with the above the governor has set apart Room 207 for the use of the Horticultural Society.

CHAPTER 148, LAWS OF 1895.

AN ACT to appropriate a sum of money to the Wisconsin State Horticultural Society.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. There is hereby appropriated the sum of fifteen hundred dollars out of the general fund annually, to the Wisconsin State Horticultural Society, and five hundred dollars to establish an additional experiment station.

SECTION 2. Chap. 117, of the laws of 1893, is hereby repealed.

SECTION 3. This act shall take effect and be in force from and after its passage and publication.

Approved April 8, 1895.

CHAPTER 339.

SECTION 3. There shall be printed seven thousand copies of transactions of Horticultural society, four thousand of which shall be bound in cloth, provided, the whole number of pages shall not exceed two hundred and fifty.

CHAPTER 239, LAWS OF 1897.

SECTION 1. Chapter 148, of the laws of 1895, is hereby amended so as to read as follows: There is hereby appropriated the sum of fifteen hundred dollars out of the general fund annually, to the Wisconsin State Horticultural Society, and two hundred and fifty dollars annually for the maintenance of experiment stations.

SECTION 2. This act shall take effect and be in force from and after its passage and publication.

Approved April 14, 1897.

MEMBERS OF THE SOCIETY.

LIFE MEMBERS.

Geo. J. Kellogg.....Janesville, Wis.
F. W. Loudon.....Janesville, Wis.
H. S. Woodruff.....Janesville, Wis.
Mrs. Ida E. Tillson.....West Salem, Wis.
George Raymer.....Madison, Wis.
Prof. E. S. Goff.....Madison, Wis.
A. D. Barnes.....Madison, Wis.
Charles A. Dolton.....Dolton, Ill.
W. L. Ames.....Oregon, Wis.
H. Floyd.....Eureka, Wis.
Marcus S. Kellogg.....Janesville, Wis.

HONORARY LIFE MEMBERS.

O. S. Willey, ex-Secretary.....Madison, Wis.
F. W. Case, ex-Secretary.....Chicago, Ill.
Prof. Wm. Trelease, ex-Secretary.....St. Louis, Mo.
J. S. Stickney, ex-President.....Wauwatosa, Wis.
A. G. Tuttle, ex-President.....Baraboo, Wis.
B. F. Adams.....Madison, Wis.
F. K. Phoenix.....Delavan, Wis.
J. C. Plumb.....Milton, Wis.
Peter M. Gideon.....Excelsior, Minn.
J. S. Harris.....La Crescent, Minn.
E. H. S. Dartt.....Owatonna, Minn.
C. G. Patten.....Charles City, Iowa.
M. E. Hinkley.....Marcus, Iowa.
Prof. L. H. Bailey.....Ithaca, N. Y.

ANNUAL HONORARY MEMBERS.

O. M. Lord.....Minnesota City, Minn.
J. C. Ferris.....New Hampton, Ia.
Miss Lillian M. Kayser.....Fort Atkinson, Wis.
H. L. Thurston.....Chicago, Ill.
Jonathan Perriam.....Chicago, Ill.
Clarence Wedge.....Albert Lea, Minn.

LIST OF MEMBERS FOR 1898.

By resolution the wives of members are Honorary Members of the Society.

Alsmeyer, E. C.....Arlington, Wis.
Abbott, C. A.....Appleton, Wis.

Babcock, O. W.....Omro, Wis.
Buck, J. P.....456 Walnut St., Appleton, Wis.
Burnham, M. A.....Waupaca, Wis.
Bounds, A. F.....Appleton, Wis.

Campbell, Vie H.....Evansville, Wis.
Chappell, F. H.....Oregon, Wis.
Cannon, A. A., & Son.....Marcellon, Wis.
Cheeney, L. S.....318 Bruen St., Madison, Wis.
Coe, R. J.....Fort Atkinson, Wis.
Converse, D. C.....Fort Atkinson, Wis.
Cook, Prof. F. L.....Spearfish, S. D.
Cairns, G. W.....Ellsworth, Wis.
Chandler, S. S., Jr.....Waupaca, Wis.
Carpenter, L. A.....Fond du Lac, Wis.

Drake, W. H.....Lake Mills, Wis.

Edwards, F. C.....Fort Atkinson, Wis.
Edwards, A. J.....Fort Atkinson, Wis.
Esterly, A. B.....Whitewater, Wis.

Filkins, Charles.....Bangor, Wis.
Fox, William.....Baraboo, Wis.

Huntley, Mrs. D.....Appleton, Wis.
Hoxie, B. S.....Evansville, Wis.
Hatch, A. L.....Sturgeon Bay, Wis.
Hoffman, Jacob.....Monroe, Wis.
Herbst, J. L.....Sparta, Wis.
Hardin F. A.....Weyauwega, Wis.
Hill, Chas. L.....Rosendale Wis.
Hanchett, Will.....Sparta, Wis

Howie, John.....Waunakee, Wis.
Hill, Geo. C.....Rosendale, Wis.
Houser, John, Jr.....Onalaska, Wis.
Harris, H. H., & Son.....Warrens, Wis.

Innis, W. T.....Ripon, Wis.
Ihrig, J. J.....Oshkosh, Wis.

Jeffrey, George.....Milwaukee, Wis.
Johnson, Franklin.....Baraboo, Wis.

Kellogg, L. G.....Ripon, Wis.
Kelly Bros.....Mineral Point, Wis.

Loomis, H. K.....Sheboygan Falls, Wis.
Loope, T. E., M. D.....Eureka, Wis.

Menn, J. J.....Norwalk, Wis.
Marshall, S. H.....Madison, Wis.
Moyle, W. J.....Madison, Wis.
Meixner, John.....North Bristol, Wis.
McKerrow, Geo.....Sussex, Wis
McGregor, E. L.....Appleton, Wis.

Nye, Edwin.....Appleton, Wis.

Philips, A. J.....West Salem, Wis.

Read, L. H.....Grand Rapids, Wis.
Richardson, E. A.....Sparta, Wis.

Single, Ed.....Wausau, Wis.
Smith, I. C.....Green Bay, Wis.
Stark, Frank.....Randolph, Wis.
Spry, John.....Fort Atkinson, Wis.
Smith, G. B.....Green Bay, Wis.
Seymour, A. N.....Mazomanie, Wis.
Smith, B. H.....Tiffany, Wis.
Simmons, Chas.....Stockton, Ill.
Stein, J. G.....Baraboo, Wis.

Toole, Wm.....Baraboo, Wis.
Tobey, C. E.....Sparta, Wis.
Tarrant, Henry.....Janesville, Wis.
True, John M.....Baraboo, Wis.
Tichinor, Wm.....Waupun, Wis.
Treselen, J. D.....Omro, Wis.

Uecke, J.....Seymour, Wis.

Voris, F. D.....Neoga, Ill.

Williams, Daniel.....Summit, Wis.
Wolcot, Mrs. Frank L.....Appleton, Wis.

BUSINESS CARDS OF MEMBERS, 1898.

Alsmeyer, E. C., Arlington, Wis., nurseyman and seed grower.

Barnes, A. D., Waupaca, Arctic nursery and fruit farm.

Cannon, A. A., & Son, Marcellon, nursery and small fruits.
Chappell, F. H., Oregon, grower and dealer in nursery stock.
Coe & Converse, Fort Atkinson, nursery stock and small fruits.

Edwards, F. C., Fort Atkinson, small fruits and nursery stock.
Edwards, A. J., Fort Atkinson, nursery and small fruits.

Hardin, F. A., Weyauwega, small fruit grower and nursery.
Hatch, A. L., Sturgeon Bay, nursery and small fruits.
Harris, H. H., Warrens, Oak Hill Berry Garden.
Herbst, John L., Sparta, seed potatoes and seedling strawberries.
Hill, Geo. C., Rosendale, small fruits and Guernsey cattle.
Hirschinger, Chas., Baraboo, orchardist and nurseryman.
Houser, John F., Onalaska, small fruits and vegetables.
Hanchett, Will., Sparta, small fruit grower.

Johnson, Franklin, Baraboo, small fruits and orchard.

Kellogg, D. G., Ripon, small fruit a specialty.
Kellogg, Geo. J., & Sons, Janesville, Belle Cottage Fruit Farm.

Loope, T. E., Eureka, orchard and small fruits.
Loudon, F. W., Janesville, originator of Jessie Strawberry and Loudon Raspberry.

McKerrow, Geo., Sussex, importer and breeder of mutton sheep.

Plumb, J. C., Milton, nursery and small fruits.
Philips, A. J., West Salem, Mount Zion Nursery & Fruit Farm.
Phoenix, F. K., & Son, Delavan, nursery and small fruits.

Reed, L. H., Grand Rapids, seed potatoes a specialty.
Richardson, E. A., Sparta, small fruits.

Seymouf, A. N., Mazomanie, small fruits.
Smith, I. C., Green Bay, vegetables and small fruits.
Spry, John, Fort Atkinson, grower of small fruits and plants.
Smith, J. C., Green Bay, gardener and seed potatoes.

Tuttle, A. G., Baraboo, small fruits.
Tobey, C. E., Sparta, Thayer Fruit Farm.
Toole, Wm., Baraboo, pansy specialist.

OFFICERS FOR 1898.

President, L. G. Kellogg.....Ripon
Vice President, Franklin Johnson.....Baraboo
Secretary, A. J. Philips.....West Salem
Treasurer, R. J. Coe.....Fort Atkinson
Corresponding Secretary, Walter J. Moyle.....Madison

EXECUTIVE COMMITTEE.

The President, Secretary, and Treasurer, ex-officio. Additional members, Prof. E. S. Goff, Madison; Franklin Johnson, Baraboo; Geo. J. Kellogg, Janesville; J. S. Stickney, Wauwatosa; H. K. Loomis, Sheboygan Falls; O. W. Babcock, Omro; Will Hanchett, Sparta; L. H. Read, Grand Rapids; Ed. Single, Wausau; P. H. Carnes, Ellsworth.

NOMENCLATURE.

J. C. Plumb, Milton; A. A. Parsons, Eureka; A. J. Edwards, Fort Atkinson.

LEGISLATION.

R. J. Coe, Fort Atkinson; Prof. Goff, Madison; Dr. T. E. Loope, Eureka.

FINANCE.

Franklin Johnson, F. C. Edwards, W. J. Moyle.

REVISION OF FRUIT LIST.

Geo. J. Kellogg, Will Hanchett, John L. Herbst.

RESOLUTIONS.

Mrs. Vie H. Campbell, Evansville; D. C. Converse, Fort Atkinson; A. L. Hatch, Sturgeon Bay.

Superintendent of Exhibits—Franklin Johnson.

Field Trials—A. L. Hatch.

Badges—Mrs. Vie H. Campbell.

COMMITTEE ON TRIAL ORCHARD.

Ex-officio, President and Secretary; Prof. E. S. Goff, Madison; Ed. Single, Wausau; Henry Tarrant, Janesville.

COMMITTEE OF OBSERVATION.

L. H. Read, Grand Rapids; O. W. Babcock, Omro; J. S. Case, Eau Claire; F. A. Hardin, Weyauwega; E. A. Richardson, Sparta; A. J. Edwards, Fort Atkinson; W. J. Moyle, Madison; John Menn, Norwalk; Daniel Williams, Summit; Franklin Johnson, Baraboo; D. E. Bingham, Sturgeon Bay; C. A. Abbott, Appleton; John L. Houser, Onalaska; Ed. Single, Wausau; P. H. Carnes, Ellsworth.

FRUIT LIST.

Pears—Flemish Beauty, Early Bergamot, Keifer.

PLUMS.

American varieties—De Soto, Cheney, Wolf, Rockford, Miner (if top grafted), Hawkeye, Fountain Garden, Wyant.

European varieties for lake region—Abundance, Green Gage, Lombard, Field, Hudson River, Purple Egg, Moore's Arctic.

CHERRIES.

Hardiest—Early Richmond.

Kentish—English Morello.

For trial—Wragg, Bessarabian.

STRAWBERRIES.

For shipment—*Warfield, *Crescent, Enhance, Wilson, Parker, Earle, Van Deman, Sandoval, Splendid.

For near markets—*Bubach, *Haverland, Greenville, *Crescent, *Warfield, Wood, Enhance, Jessie (on certain soils).

For home use—Jessie, *Bubach, *Warfield, *Crescent, Parker, Earle.

For furnishing pollen to imperfect flowering kinds—Parker, Earle, Jessie, Wilson, Wood, Enhance, Van Deman, Saunders, Capt. Jack, Rio, Wolverton.

Late—Eureka, Gandy, Parker, Earle, Brandywine, Enhance.

Early—Wood, *Crescent, Van Deman, Warfield, Rio.

For trial—Sparta.

NOTE.—The best sites for apples, cherries, plums, pears and grapes in Wisconsin, are elevated limestone soils, not too rich, and free from untimely spring frosts, or places under the influence of bodies of water. Plant those kind that are succeeding best on soils and sites similar to the one to be used; plant but few kinds with different kinds near each other, rather than in large blocks, and thus secure better fertilization of bloom; to prevent injury by insects and parasitic fungi spray and give good cultivation before July 1st each season.

Those marked with an asterisk have imperfect flowers and should be planted near those having perfect flowers.

GRAPES.

For market vineyards—Moore's Early, Worden, Concord, Brighton, Delaware.

For home use—Moore's Early, Worden, Brighton, Delaware, Massasoit, Moore's Diamond, Lindley.

Late keepers—Wilder, Lindley, Vergennes, Merrimac, Agawam.

Early—Moore's Early, Early Victor.

White Grapes—Pocklington, Niagara, Green Mountain.

BLACK RASPBERRIES.

Nemaha, Gregg, Ohio, Older, Kansas.

Early—Palmer.

RED RASPBERRIES.

Marlboro, Cuthbert, Shaeffer.

For trial—Columbia, Loudon.

BLACKBERRIES.

Snyder, Briton, Stone's Hardy, Badger.

DEWBERRIES.

For trial—Lucretia, Bartel.

CURRANTS.

White—White Grape, White Dutch.

Red—Prince Albert, Victoria, Holland, Red Dutch.

Black*—Lee's Black Naples.

GOOSEBERRIES.

For general cultivation—Houghton, Downing.

For trial— Red Jacket, Triumph, Columbus, Queen.

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*Winter protection recommended.

Grow best in shady places; used for cooking only.

APPLES.

NAME.	SIZE	FORM	SHADED SIDE	SUNNY SIDE.	CALYX.	STEM.	CAVITY.
Antonovka	Large	Med con ribbed	Greenish yellow	Yellowish brown	Partly open	Short	Yellow russet
Avista.	Medium to large	Roundish conical	Green	Yellow	Partly open	Medium, stout	Broad, shallow
Arabka.	Large	Flat, conical	Dark green	Dark red	Open	Long, thin	Deep, russety
Charlamoff	Large	Flat, round sh	Greenish	Yellow, dark brown	Closed	Long and thin	Deep and russety
Eureka.	Medium to large	Roundish, flat	Greenish yellow	Dark red	Open	Short, stout	Broad, shallow
Fall Orange.	Med um to large	Roundish	Pale yellow	Brownish, with dots	Large and partly closed	Short	Deep and narrow
Fall Spitzenberg.	Medium to large	Round and conical	Greenish yellow	Crimson, with dots	Closed	Medium in length	Wide and very deep
Fameuse.	Med um	Round, flattened	Pale red	Deep red	Small	Short and small	Narrow, funnel like
Golden Russet.	Med um	Roundish, oblate	Golden russet	Yellowish russet	Nearly closed	Short and small	Deep
Hibernal.	Large	Fl t and round	Dull red	Striped red	Large, closed	Short, stout	Broad, deep
Longfield.	Medium	Flat, conic l	Light green	Reddish ye low	Half open	Long, thin	Deep, smooth
Lubsk Queen	Medium	Model	Bright red	Shaded white	Closed	Short, stout	Deep, regular
McMahan.	Large	Round, conical	Yellowish white	Reddish blush	Large, open	Long, stout	Broad, deep
Newell.	Large	Round, flat and conical	Lemon yel ow	Orange blush	Closed	Stem short	Deep
N W. Greening	Large	Round, conical	Green	Yellowish blush	Mostly closed	Medium	Large, russeted
Oldenburg.	Large	Round, oblate	Streaked red	Yellow and red	Large, clos d	Short, stout	Broad
Patten's Greening	Medium to large	Round, oblate	Waxen yellow	Faint blush	Large, closed	Short	Broad, deep
Pewaukee.	Medium to large	Round, conical	Green sh yellow	Reddish streaked	Closed	Short	Shallow
Plumb's Cider	Medium	Round, conical	Reddish green	Green streaked	Closed	Short	Narrow
Raspberry	Small	Flat, conical	Greenish yellow	Carmine	Closed	Long, thin	Deep yellow

Basin.	Flesh.	Use and Value—Scale 1 to 10.			Season.	Tree.	Origin.
		Dessert.	Cooking.	Market.			
Deep ribbed	Greenish, white, firm	5	5	8	Early winter	Medium hardy	Russia
Broad, shallow	Very white	5	10	5	Winter	Hardy	Wisconsin
Ribbed, irregular	White and firm	5	7	5	Ear'y winter	Medium hardy	Russia
Flat and irregular	Greenish and tender	4	6	5	Fall	Medium hardy	Russia
Broad, deep	Yellowish white	4	5	5	Winter	Hardy with age	Wisconsin
Deep and narrow	White, tender	6	8	5	Late fall	Hardy	Massachusetts
Narrow and abrupt	White and tender	7	7	6	Late fall	Medium hardy	Vermont
Narrow, small	Very white	10	4	8	Late fall	Hardy	France
Deep, round, open	Yellowish white	7	5	8	Winter	Hardy	Massachusetts
Broad and shallow	White	4	6	4	Late fall	Hardy	Russia
Ribbed, wavy	White, fine grained, firm	6	6	5	Winter	Medium hardy	Russia
Shallow	White, firm	6	4	6	Fall	Hardy	Russia
Small, abrupt	White, fine grain	6	10	10	Late fall	Very hardy	Wisconsin
Rather deep	White, tender	8	6	5	Winter	Hardy	Wisconsin
Small, irregular	White, tender	6	8	6	Winter	Hardy	Wisconsin
Broad, regular	Juicy, white	6	10	10	Early fall	Very hardy	Russia
Large, closed	White, firm	6	7	6	Early winter	Hardy	Wisconsin
Shallow, irregular	Yellowish, white	6	7	8	Winter	Medium hardy	Wisconsin
Broad, deep	White, firm	5	5	5	Late fall	Medium hardy	Wisconsin
Narrow ribbed	Greenish, white	8	4	7	Fall	Medium	Russia

APPLES—Continued.

NAME.	SIZE.	FORM.	SHADED SIDE.	SUNNY SIDE.	CALYX.	STEM.	CAVITY.
Scott's Winter.	Small	Round, conical	Dark red, striped	Yellowish red	Closed	Short	Small, deep
Tetofski.	Medium	Oblate, conical, round	Reddish yellow	Whitish bloom	Closed	Short, stout	Narrow, deep
Walbridge.	Small	Flat, round	Whitish yellow	Pale reddish green	Small, closed	Short	Medium
Wealthy.	Medium to large	Round, oblate	Yellowish crimson	Dark red, striped	Partly closed	Short, medium, slender	Green, russet
Willow Twig.	Medium	Round, conical	Light yellow	Dull reddish	Partly closed	Short, slender	Narrow, deep
Wisconsin Russet.	Medium	Round, oblate	Yellow russet	Dark russett	Half open	Short	Broad, regular
Windsor Chief.	Medium	Round, oblate	Dull yellow	Dull red	Partly closed	Short	Regular
Wolf River.	Very large	Roundish, oblate	Reddish white	Pale green, yellow	Open	Very short	Large, greenish
CRABS.							
Transcendent	Medium	Roundish, oblong	Yellow crimson	Red cheek	Closed	Long, slender	Open, deep
Hyslop.	Large	Roundish, oblate	Light red	Dark red	Closed	Long, slender	Open, deep
Sweet Russet.	Large	Round, conical	Light yellow	Dark yellow.	Small, closed	Long, slender	Broad, deep
Whitney No. 20.	Medium to large	Round, conical	Golden yellow	Reddish crimson	Partly closed	Medium, slender	Broad, deep
Gibb.	Large	Round, oblate	Light yellow	Golden yellow	A little open	Short	Deep
Martha.	Large	Round, flat	Light red	Dark reddish	Closed	Medium	Shallow
Virginia.	Medium	Round, oblate	Light yellow	Reddish yellow	Closed	Long	Shallow

Basin.	Flesh.	Use and Value—Scale 1 to 10.			Season.	Tree.	Origin
		Dessert.	Cooking.	Market.			
Broad, deep	White, firm	6	5	5	Winter	Hardy	Vermont
Small, corrugated	White juicy	5	7	6	Summer	Very hardy	Russia
Small, plaited	White, fine, tender, juicy	1	7	5	Winter	Hardy	Illinois
Deep, uneven	Reddish white. fine grained	10	10	10	Early winter	Hardy	Minnesota
Broad, shallow	Yellowish green, hard	5	5	7	Winter	Medium hardy	Unknown
Irregular	Yellowish white, firm	4	5	5	Winter	Medium	Wisconsin
Regular, broad	White, half tender	5	6	8	Winter	Medium	Wisconsin
Large, very deep	White, coarse	6	6	8	Late fall	Hardy	Wisconsin
Shallow	Creamy yellow	6	5	5	Summer	Hardy	
Broad, shallow	Yellowish white	4	5	8	Early winter	Hardy	
None	Mellow, tender	8	5	5	Autumn	Hardy	Wisconsin
Deep	Tender, white, juicy	10	7	7	Autumn	Hardy	Illinois
Broad, shallow	Rich, yellow	5	5	5	Autumn	Hardy	Peffer, Wis
Broad, shallow	White, firm	5	7	6	Late autumn	Hardy	Minnesota
Shallow	White, juicy	5	6	5	Late autumn	Very hardy, best for top work'g	Iowa

TREES AND SHRUBS RECOMMENDED.

EVERGREENS.

For screens and windbreaks—Norway Spruce, Balsam Fir, White Pine.

For hedges and screens for shearing—Norway Spruce, American Arbor Vitae, Red Cedar.

For lawns and cemeteries—Norway Spruce for backgrounds. For groups—American Arbor Vitae, Hovey's Golden, Arbor Vitae Pyramidalis, Arbor Vitae Siberian, Arbor Vitae, Juniper Excelso, with Protection.

For small lawn decoration—Juniper Sucica, Arbor Vitae, Hovey's Golden Arbor Vitae, Arbor Vitae Pyramidalis.

DECIDUOUS TREES.

For cemeteries—Cut-leaved Birch, Wisconsin Weeping Willow, Weeping Poplar.

For lawns—All named above, and, in addition, Laurel-leaved Willow, Mountain Ash Oak-leaved, Mountain Ash American, Mountain Ash European, Maple Cut-leaved, Maple Norway, Kentucky Coffee Tree, Catalpa, Spiciosa, Elm American, Elm Scotch, Elm Weeping, European White Birch.

SHRUB FOR CEMETERIES.

Hydrangea, Paniculata, Cornus Philadelphus, Tree Lilac, Spirea, Japonica, Spirea Van Houtii, Wahoo (American Strawberry Tree), Exchordia Grandiflora.

For lawns.—All named above and, in addition, Purple Barberry, Purple Fringe, Upright Honeysuckle, Wigelia Rosea.

For screens and hedges—Upright Honeysuckle, Barberry Red Fruiting.

ROSES.

Twelve best varieties Hybrid Perpetual.—Paul Neyron, Mrs. J. H. Laing, Gen. Jacqueminot, Dinsmore, Marshall P. Wilder, Coquette des

Blanches, Earl of Dufferin, Jules de Margottin, Vick's Caprice, Magna Charta, Prince Camille de Rohan, General Washington.

Moss Roses, four best varieties.—Perpetual White, Salet, Paul Fontine, Henry Martin.

Climbers, five best varieties.—Prairie Queen, Russel's Cottage, Seven Sisters, Gem of the Prairies, Victor Verdier.

Hybrid China.—Madam Plantier, Madam Hardy.

Brier Roses.—Persian Harrison.

REPORT OF THE TRANSACTIONS

OF THE ANNUAL MEETING OF THE

Wisconsin State Horticultural Society

HELD IN

MADISON, FEBRUARY 1, 2, 3 AND 4, 1898.

Senate Chamber, Tuesday P. M., Feb. 1st, 1898.

President called the meeting to order.

Mrs. Campbell makes announcement regarding badges, submitting samples of medallion, which can be purchased for 20 cents.

B. S. Hoxie—I make the resolution that all members who wish to provide themselves with badges can do so, on the payment of 20 cents to the secretary.

Mr. Kellogg—I understand this is a little mixed. We can buy them and leave them with the secretary, but are we compelled to do so?

A. D. Barnes—Will this be the badge for the coming year or will we get up some new design next year.

Mr. Hoxie—I think Mrs. Campbell stated that they would last for a number of years, getting these instead of those on ribbon.

B. S. Hoxie's resolution was adopted.

Mr. Kellogg—In passing this resolution we do not request members or delegates to purchase. It is our privilege to

furnish to every member, subject to the return of the medallion, as I understand it.

Mr. Hoxie—It is understood that all visiting members are entitled to a badge while they are with us.

Mrs. Campbell—The thought that was in my mind was if you buy the badge and take it home, then you would be responsible for its appearance or non-appearance here at the next meeting. You will therefore be expected to leave it with the committee on Badges.

Pres. Kellogg—We have with us delegates from neighboring states. Minnesota is represented by Mr. Lord, Illinois by Mr. Voris, and the N. E. Iowa Society by Mr. Ferris. We welcome these members and ask them to take part in our discussions.

On motion the foregoing delegates were made honorary members of the Society for one year.

Mr. Ferris—Mr. President, Ladies and Gentlemen: I am proud of this honor. A good many years ago I used to live near the southern portion of your state and used to come over here sometimes to see the Badgers, and now I am here to learn what the Badgers are up to in horticulture. I bring you greeting from our state. We are rather proud of Iowa and we are proud of our neighbors. We are glad to shake hands with Wisconsin across the Great Father of Waters. We claim to be the garden state of the trans-Mississippi West, and that state has used us well as a Society, given us splendid rooms in its great capitol. We have a little of an advantage over you in regard to the size of your capitol. No words of praise which I can say will express my appreciation of your surroundings here. It is many years since I visited this state. I am proud to be made an honorary member of this Society. I remember a long time ago that a very excellent Plumb dropped in to our Society from your horticultural tree. You sent down Mr. Philips and the two Kelloggs (and they are good logs) too and Mr. Thayer, worthy people of your Society. The names of Wisconsin horticulturists have become household words among us. I thank you gentlemen for the honor, and promise to listen and carry back to our Society some of the wisdom of yours. You

have been sending it to us by your members when they meet with us. I propose to steal some of your wisdom and will carry it back with me to our Society in Iowa. (Applause.)

Mr. Lord—I thank you, gentlemen, but as I am known at home for never making a speech, I am entirely incompetent to address you.

Mr. Voris—Mr. President, Ladies and Gentlemen: I am like my friend from Minnesota. I do not make speeches at home. I came here to learn and not to speak. I will say that I am glad that I am here, as I see we will have a good time, no doubt. Gentlemen, I thank you.

On motion Miss Lillian Kaiser was also made an honorary member of the Society for one year.

The following members were then appointed: a committee on Program: S. H. Marshall, W. J. Moyle and F. A. Hardin.

Next followed the report of Planting of New Trial Orchard to Date, by Mr. A. J. Philips.

WISCONSIN'S NEW TRIAL ORCHARD.

Second Season After Planting.

I will not go into the details of the planting as that was fully explained in the July number of the Wisconsin Horticulturist, also in the June 3rd number of the Wisconsin Agriculturist, which has a wide circulation among the farmers of Wisconsin. I spent about one week in the spring of 1897 at the orchard, filling in some vacant places, and planting nearly one acre more in the experimental plat, which planting included some more plums and three varieties of cherries. The latter part of October, I spent about a week there, and while at Wausau the orchard was visited by President Kellogg and Professor E. S. Goff. I was anxious to have these gentlemen come, as it was the first visit any officer of the Society had made there since it had been located and planted. Professor Goff seemed pleased with the orchard as far as it had progressed and so expressed himself in the November number of the Horticulturist. Dur-

ing my stay I visited every tree and graft in it and will say I was more than pleased with the appearance of the orchard and the growth of the trees. Notwithstanding the fact that most of the trees were dug and planted the spring following two seasons of the worst drought that central Wisconsin has ever witnessed, still I found only twenty-seven trees that had failed to grow, and this I consider very good considering the condition of many of the roots of the seven hundred that were planted. In the commercial orchard I find the Repka, Patten's Greening, N. W. Greening, Wealthy, Longfield, McMahan and Peerless doing remarkably well. Every tree of the Peerless and Repka are growing, and only one each of Duchess, Hibernal, N. W. Greening, McMahan, and Wealthy failed, while three of the Newell and four Longfield will have to be replaced next spring. In the experimental orchard I find the Wisconsin seedling Windsor doing very well. It seems at home here and when we consider the fact that this is a winter apple and that the old tree bore a good crop last season in Dane county, over twenty years after the veteran horticulturist, J. C. Plumb, began propagating it and calling the attention of our Society to its value, we feel quite proud of it.

A seedling that originated in Waupaca county called Lind Center, and sent here by A. D. Barnes, is making an exceptionally fine growth. Of the Russians in this orchard none are looking better than the Juicy Burr sent by G. J. Kellogg; Patten's Greening and Wealthy, furnished from Iowa by the experimenter, G. C. Patten, are making a fine growth; one tree called Kaump, a Grant county seedling, is growing fine; this, too, was sent by G. J. Kellogg, who also sent the Shield's crab, which is doing well. The Crampton, the Cook Number 10, and Randall Number 9, the Ratsburg, the Lou and the Springer crab sent from the grounds at Madison by Prof. Goff have all made a vigorous growth and look promising, and while in many localities in the state I have found blight on the young trees, so far here it has not made its appearance.

This far I am satisfied we have selected a cool, good fruit soil, well located, and I find the McMahan and Wealthy, the

N. W. Greening, the Patten's Greening, the Wolf River, the Windsor, the Peerless, the Malinda, the Randall No. 9, the Okabena and Avista doing well. While there I held the plow to start the breaking up of more sod for spring planting, and I hope to see some of the best of that veteran seedling grower Joseph Zettle's pets, also some of the choicest of the late S. I. Freeborn seedlings on trial next spring. Both these lots when they are tried away from the favorable places of their origin may be found wanting, but should there be one in each collection that proves of value in our new trial orchard it will do to plant over a large territory, and the state of Wisconsin will be well paid for the expense of bringing it out, and not only Wisconsin but the other northwestern states will be benefited. The Duchess and Hibernal are starting very slow here, but I have no doubt that when they are firmly established they will push ahead vigorously. The North Star, or Dudley's Winter, from Maine, is doing well and seems to be at home though far from the place of its origin.

The two trees of the Aitken plum, a very large early and fine variety of the natives which had its origin in the northern part of Minnesota, was kindly donated and sent by the Jewell Nursery Company of Lake City; they have made a fine growth and indicate that they have come to stay. The different varieties of tame plums sent by Prof. Goff, and the native varieties, including the DeSoto and Cheeny, the Wyant and Rollingstone sent by the plum specialist of Minnesota, O. M. Lord, also the Mankato, a new variety sent by S. D. Richardson, of Minnesota, have all without a single exception made a good showing for the two seasons they have been planted, as have also the plum and cherry trees sent by our president last spring, all of which are growing. There should be, to carry out the work as begun here, some three or four hundred grafts put in next spring for which I have saved the cions and there will be quite an amount of pruning to do to shape the tops and prevent their becoming too heavy for the roots. I have not done nor had any pruning done the past season for the reason I wanted the trees to grow and become well rooted before doing it. In speaking of

the Aitkin plum I should have said it is the same variety that I spoke of in the description of the trial orchard in the July number of the Wisconsin Horticulturist as the Superior; the name has been changed. And by the way I am surprised to see and hear of so many people who have preserved that number of the magazine not only in Wisconsin but in the other states to keep our new trial orchard in their minds. In giving this brief description I desire to state that so far I am well pleased with the interest Mr. Single, who owns the land, takes in this new enterprise. Also the pains he takes doing the work as I have directed him. Though not much of a horticulturist previously, he is a good cultivator of the soil and catches on to the planting and caring for trees very readily and is anxious to do the work to please our Society if possible, and I feel that so far as selecting the site and the man to manage it, that we builded better than we knew. As I was entrusted with the planting and supervision of it by our Trial Station committee, I have and do feel it a duty that we owe to tax payers of the state, and our members, that they should be kept fully posted on the progress we are making. For I am fully satisfied that double the amount of money that it has cost to locate, plant and care for this orchard up to the present time has been taken out of La Crosse county the past fall by oily tongued agents for southeastern grown apple trees, and I fear will do the buyers no good, and may flood our county with San Jose scale. I did not have a chance to see their contracts for they gave me a wide berth, but one of their buyers told me he was to pay $75.00 for trees half cash and balance at the end of the five years when the trees would be bearing, and that the agent or seller was to prune and care for the trees during the five years. That waiting and pruning clause on the part of the benevolent seller caught the buyer, and fine sales were made to the farmers, and if the agent is providentially detained from ever coming back, the fifty per cent. received will amply repay him for his trees and trouble. Perhaps they will have leisure to return to all the localities where they have made sales each year, and do as they have agreed.

In conclusion will say that while I know we have members who do not think it a wise expenditure of money to experiment with apple trees in Wisconsin, and while I after a long experience do not recommend the planting of large commercial orchards in many parts of Wisconsin, still I honestly think that this is one of the best moves our Society has ever made to place themselves in a position to know what to recommend to the hosts of farmers in Wisconsin to plant, that they and their families may have a supply of healthy home-grown apples for their use. That is, if the planting as begun, is rightly carried out, and the people see fit to avail themselves of the knowledge to be gained therefrom, I concluded from the growth they made that it would be good policy to plant a small plum and cherry orchard in connection with the commercial orchard next spring, and reserve about one acre for the continuation of the top-working experiment. Prof. Goff favors this as his report shows, and Pres. Kellogg thinks it is a good plan. I feel an interest in this orchard second only to my own at home where I have much proof that these experiments are valuable, and I hope that whoever is entrusted with the continuance of this work will be particular to carry out every detail, as originally intended. Already this orchard with its straight rows of thrifty trees staked, and protected, running back from the highway, is attracting the attention of all passers-by, and many local visitors find their way to it.

Mr. Philips—I will say to this committee that has just been appointed that Prof. Goff wishes some changes made here and I will speak of it before I forget it. We have Professor Goff on for Wednesday afternoon on the Ravages of the San Jose Scale. Now he wishes Mr Lord's paper to come in on Plums, and the paper from Mr. Dennis, as they would like to discuss the plum question while Prof. Bailey is here.

President—The report is now open for discussion. Are there any questions you desire to ask Mr. Philips?

G. J. Kellogg—How many acres are there?

Mr. Philips—Ten.

Mr. Kellogg—How far apart did you set the trees?

Answer—Rows 30 feet apart and 20 feet apart in rows.

In experimental plat we set first a Wealthy tree, then 16 feet from that six to ten Wealthy root grafts intending to leave the best one stand. Then we set a Virginia crab to be top worked with Wealthy to test the different varieties. We intend to follow this for 3 or 4 years. Prof. Goff thinks these experiments are valuable.

Mr. Kellogg—How much have the root grafts grown?

Mr. Philips—They are a little slow. Perhaps when they get a hold in the ground they will push out faster.

Question—Do you mulch?

Mr. Philips—Not very much.

A. D. Barnes—I move that we accept the secretary's report and in making this motion I would like to say that I have made it my business as well as pleasure to visit it three different times during the season. It creates much enthusiasm in that part of Wisconsin. We are there demonstrating what we are preaching. It is the best object lesson we have in Wisconsin. I believe from the location and influence that have been brought to bear on that orchard, it is doing more good than any of the other experiment orchards in the state. In reference to the root grafts having made a slow growth, they were planted too late. I hope that the members of this Society and the tax payers will take an interest in this orchard. I believe it is the best place to do the most good. I would say about the location of this orchard. It is exposed from every direction. It is on top of a hill, and on good apple soil.

On motion the report on the trial orchard was adopted.

President—Next subject on our program is the report of manager and editor of new monthly magazine.

Mrs. Johnson reads report as editor.

Mr. Moyle reads report as manager.

Mr. Read—I would like to ask Mr. Moyle what the actual circulation is. We have heard that it has been more than doubled since last year.

Mr. Moyle—It is the actual membership of the Society,

and now we have doubled the amount to balance the number on the annual report of '96.

Question—Number published each month?

Mr. Moyle—It varies; sometimes 300; January we sent out 500 copies, and in December 400, and we send out sample copies occasionally.

On motion these reports were referred to the committee on Finance.

Mrs. Johnson—I have thought of one thing I intended to say, that is a word of appreciation for our printers. Our magazine has gone forth so well printed, and I have not been ashamed to send copies anywhere.

Mr. Hoxie—I suppose this afternoon we should have a full report of the work of this magazine, its costs, its receipts, etc., and who the subscribers are. Now if this matter costs us $400 a year and its circulation is only among the members, when the next appropriation is asked for the question will come up, is the state at large receiving the benefit it ought to. We are examined pretty closely. If you are getting value received for its expenditures, the question will come up, are we making the right use of it. Now shall we continue the magazine and under what conditions shall we continue it. We will have to take this into consideration during our meeting here. I wish to plead one excuse. When Mrs. Johnson was appointed editor, I offered to assist and contribute, etc., but I did not hear one word from the editor until the last part of the season.

Mrs. Johnson—The editor was waiting all that time to hear from Mr. Hoxie. (Laughter.)

G. J. Kellogg—Mr. Hoxie wants to know what we will do with this child of ours. Can we afford the money to pay for it. Is it doing what it ought to do?

Mr. Ferris of Iowa—I am interested in this question that you are discussing. I do not want to bring in too much Iowa, I want to bring Minnesota. I think they publish their report in installments. I suppose they preserve the type, they publish the installments of the annual report and the magazine goes to the members of the Society, but Mr. Lord can explain this to you.

Mr. Lord—The members are requested to give away each copy of the magazine they receive. Members are expected to pay one dollar per year for the magazine, but are asked to distribute them after they have read them. This means a large number are circulated outside the members of the Society. We get the magazine once a month and it is bound into the volume.

L. H. Read—I want to say about our magazine that the management, the printing work, and editorial work has been first class. It seems as if the child is not big enough to be of value to us, unless it has a large circulation. It should be studied and discussed at this meeting and methods adopted to increase the circulation. It should have from 2,000 to 5,000 circulation at two years of age. We could then get advertising.

Mr. Lord—I would like to say a word in regard to legislature. Our legislature refused to make an appropriation for the publishing of our magazine, but the committee on Printing recognized the value of it, and took hold of it and the magazine is going on. There was considerable difficulty experienced with our legislative committee last winter. They probably asked too much and got nothing, but by many members of our Society the magazine is considered necessary. For material we publish what constitutes our annual reports.

A. J. Philips—I would say that the way they publish it makes a larger circulation. They have 700 members. The bound volume is the same as the monthly, a book of 600 pages, larger than ours, and instead of going only to their 600 members they give them away, which doubles the circulation.

Wm. Toole—We agree on the value of our magazine and we want to keep it. We cannot take pattern after Minnesota or at the close of the year we would have simply a reproduction and no original matter. I think we would not be satisfied with a magazine of that kind. We must increase our circulation.

Mrs. Campbell—I do not suppose that the Wisconsin Horticulturist had a more critical reader than I. I am glad to stand here and commend that magazine. If there was the

right feeling among us, we ought not to wait for the subscriptions to come. Now this magazine must go out to the unconverted in horticulture. We ought to have someone to represent us at every institute. It seems to me that without any great effort we ought to have doubled the subscription during this year it seems to me that we can do better if we try. I hope we shall continue it. It has been good this year, it will be better if we put our hands to the wheel. Mr. Moyle has secured some premiums, and premiums will increase our subscriptions.

W. J. Moyle—The magazine to be successful must be illustrated. The cuts must not be taken out of the other magazines. This Society should appropriate $50.00 a year for cuts. We have very little trouble in getting people to write for the magazine. There is good material in the state. We can have it if we go to work at it rightly. We must spend money on it to make a good magazine.

A. J. Philips—One gentleman wrote an article on grape growing for the magazine that just struck me. He said it was all nonsense to cover up the grapes. This article has paid for my subscription, as I followed his advice. His head is level, I do not know how the grapes will be. (Applause.)

President—Shall we discuss this magazine question now?

A. D. Barnes—We could do this better if we knew what it has cost the Society for the past year.

A. J. Philips—What is the printing bill?

Mrs. Johnson—Printing bill $220, I think.

G. J. Kellogg—I have faith enough in the magazine to promise you 10 new subscribers. I hope it will be sustained another year.

B. S. Hoxie—I wish this magazine would do missionary work. To instruct farmers about the tree peddlers going through the country. Now we ought to have an agent and distribute one of our magazines at each farmer's house.

J. C. Ferris—I hardly feel as if this is a matter I should have a voice in. I am glad to see this movement here as we tried to get the same thing in Iowa. Now I will do what I can to get your magazine, to have it known in our country and I think I can promise a copy to another subscriber be-

sides myself. Now if each of your members agrees to get one new subscriber, you will soon have all the people in the state. I hope I can inspire Iowa.

Mrs. Johnson--I have given much thought to this matter. I hope that you will not adopt any financial policy without thinking it over. What I mean is about the price of the magazine or the management of it, until it has been thought over.

It was also resolved that the editor and business manager be left with the Executive committee.

It was also resolved that the editor and business manager be united as one.

G. J. Kellogg—I want to hear from these men who will increase the subscriptions.

Mrs. Campbell—I wish to move that all resolutions shall be given to the committee on Resolutions. I have found some years the committee have not had anything to report and we are then more careful in acting upon the resolutions.

President—Very good suggestion.

G. J. Kellogg—We would then hamper ourselves.

L. H. Read—I agree with Mr. Kellogg, it would be like legislative work. It might be pigeon holed.

Mrs. Campbell—I have been chairman on Resolutions for several years and not one has been pigeon-holed, it is simply to get a clearer record. In saying resolutions I do not mean motions, simply written resolutions.

Motion prevails.

Written resolutions will go to the chairman of committee on Resolutions.

A. J. Philips—There are one or two reports here from delegates and I wish to say one word just now on a matter concerning our annual meeting. I feel highly gratified with the send off we have here at this meeting. We have delegates here and more are coming.

Mr. Philips gives a talk on meetings in general, on students of the short course, stating that young men from other states are attending the short course at the University.

President—I have a matter here which I wish to bring before this Society. There is to be a trans-Mississippi ex-

position held at Omaha. Prof. Taylor has extended an invitation to this Society to make an exhibit at this exposition. I will bring this matter up at this time for you to take some action. The question seems to resolve itself into this. Can we as a Society be benefited in any way by making an exhibit at the exposition. Can we afford to make one. I will leave it with the Society to make some disposition of the matter.

G. J. Kellogg—How much funds have we to spend in this way. The state has made no appropriation.

A. D. Barnes—I am a member of this Society, but I hardly know what to say. As a member I feel we cannot do without making an exhibition at the exposition, and arrangements ought to be made to make an exhibition as a Society. We can all contribute something. It will add to the advantages of Wisconsin horticulture, perhaps we might make arrangements to make an exhibition during October when we could send up an exhibit of fruits and vegetables, etc. I for one will make an exhibit of some kind during this exposition.

G. J. Kellogg—In a Racine paper of January 13th, there is a picture of the state building of Omaha exposition.

The question is how much room can we have in this building, how much money can we spend, and what show can we make? The state of Nebraska has already nearly 200 barrels in cold-storage for the Omaha exhibit. Iowa has not as many barrels in cold storage, but Prof. Coleman told me that they would be on hand and would be at the head. He declined to take the exhibit of 140 plates at their winter meeting and try to keep them. They were a splendid lay out. Missouri will beat them all, and if we are not there, we will be behind. I believe with the promised crop of fruit and with the winter that we have we can make a splendid show if we have the money to back us. How much volunteer work can we get? How much room can we have? Who will take care of the exhibit? I am in favor of making a grand display from strawberry time on.

A. L. Hatch—I move Mr. Kellogg (G. J.) as Chairman, and that Mr. Barnes and Mr. Read be appointed with him to consider this question,

Afterwards, Prof. Goff and B. S. Hoxie were added to the committee.

A. L. Hatch—I move Mr. Kellogg (G. J.) as chairman, and a plan to do the work.

President—Reports of local societies will now be in order. Mr. Babcock of Omro reads report.

OMRO HORTICULTURAL SOCIETY.

Our annual meeting was held Jan. 14, 1898.

The following officers were elected:

President—L. F. Laiten.

Vice President—Thomas Tanner.

Treasurer—Mrs. Adda Pingry.

Secretary—Mrs. Jos. D. Treleven.

Executive Committee—Edith Treleven, S. O. Pingry, Mrs. S. Carver and O. W. Babcock.

The delegate elected to state meeting, O. W. Babcock, and R. T. Darrow, alternate.

We still continue to hold meetings monthly and at the residences of the members. We number over sixty members and were pleased to have the privilege of having the State Summer Meeting with us, also of having Mr. A. L. Hatch present at one of our meetings.

We are sorry to have to say that our friend J. L. Fisk, on account of sickness, has not been permitted to meet with us since last July. He is one of our most earnest workers in horticulture and floriculture. We expect to hold again this fall our Chrysanthemum show.

Mrs. Jos. D. Treleven,
Secretary.

Observations on new fruits and plants made by the Omro Society?

Soil a black loam with a red clay sub-soil. The Buffalo berry has made a fine growth, and is hardy.

June Berry made a small growth, seems to be hardy.

Wine berry is a failure.

May berry also a failure, neither one hardy enough for this climate, have tried them two different years.

Bangor blackberry worthy of cultivation, fruit good quality and the bushes being of a dwarf habit and a good many spurs, they will yield as well as the larger kinds. If I was setting a new plant I should set them one foot closer between the rows than other varieties. It is about half the work to cover them that it is other varieties, and the canes do not break as badly. One thing I have noticed they do not bear much the second year but improve every year afterward.

Bismarck apple is all right as a novelty (being a dwarf).

Strawberry raspberry plant as a novelty, will do, but not for general planting.

Ever Bearing raspberry, a failure, also Tree blackberry, Crandal Tree currant, fruit too small for general planting, good as a novelty.

Trees and shrubs for the lawn, I have some new kinds that I have not had set long enough to test them much.

The Sweet Pea shrub, I think is all right.

Althea is a very pretty shrub.

Tulip tree very pretty if it proves to be hardy.

Ginko tree, Flowering Peach and Fern tree, have not had long enough to test.

Report of plants received from the Horticultural Society and set April 20th, 1894, and are alive up to date:

1 Ruby Castle, Currant. Red. Good.
1 Crandall Tree, Currant. Black. No good.
1 Victoria, Currant. Black. Good.
2 Church Raspberry. Red. Good.
1 Kansas Raspberry. Black. Winter kills.
2 Palmer Raspberry. Black. Extra good.
3 Progress Raspberry. Black. Medium good.
6 Muskingum Raspberry. Black. Good and productive.
12 Parker Earl strawberry on rich ground, good.

1896

Plants set April 28th. Plants not in good condition when received. All died except,

1 Currant, Champion, black, has not fruited.
1 Currant, Victoria, black, has not fruited.
3 Currant, North Star, red, have not fruited.
1 Gooseberry, Lancastershire Lad, has not fruited.
2 Gooseberry, Red Jacket, have not fruited.

Plants marked good I would recommend for this part of state as valuable to the fruit grower.

Respectfully submitted,
C. B. Cope.

Small fruit set by Omro Horticultural Society for experiment:

Blackberries—Agawam, Erie and Minnewoski do well and I find them as hardy as the Britton, but all require winter protection.

Black Raspberries—Kansas winter kills. Older does not make good growth with me. Progress, Palmer and Hilbon, very productive and hardy. Wineberry and Lucretia Dewberry winter kill.

Red Raspberry—Columbia does well. Gaults does well. Logan winter killed. Strawberry raspberry made big growth and stood the winter good but did not fruit well. Am going to give it further trial.

Currants—North Star currants have not fruited yet. Ruby Castle and White Gondoin are good. Black Champion and Black Victoria, not fruited yet. Crandall makes large growth but I do not think it will be a success as the fruit ripens so slowly and uneven.

Gooseberry—Red Jacket gooseberry very small. Golden Prolific very good. Timbrell, Beverly and Bissel strawberry not as good as many others. H. W. Beecher, Marshall and Bubach are all right.

Lombard plums failed with me.

Jos. D. Treleven.

A. D. Barnes—I would like to ask the delegate regarding the Bismarck apple, is it a success? Has it ever fruited, and have you ever seen the fruit?

Mr. Babcock—No sir, I said it was a novelty, not a success.

Mr. Barnes—The Crandall currant was not a success?

Mr. Babcock—No sir.

Mr. Barnes—My experience is that it is the largest currant I have ever seen grown. There must be some mistake.

G. J. Kellogg—I am pleased with the report. The report of a live Society and three experiment stations. I suppose their report on the Crandall currant is correct.

H. Tarrant of Janesville—I would say of the Crandall currant, I purchased one five years ago, it was a miserable thing. I took it up. Is your blossom yellow?

A. D. Barnes—Yes.

H. Tarrant—It spread and got in my gooseberry bushes.

A. D. Barnes—Mine don't spread. It grows in a tree form, has yellowish blossoms, some of them as large as the end of my thumb.

J. C. Ferris—I have had five years' experience with the Crandall currant. I do not advise you to endorse it. My plants stand four and five feet high, and the currants are as big as a cherry. It does not ripen evenly, and does not bear abundantly, and it is not a valuable addition. My soil is a deep black loam.

A. D. Barnes—My soil is a sandy surface soil with a hard clay sub-soil.

J. C. Ferris—I would prefer the Lee Prolific to the Crandall currant.

Mr. Babcock—In our local society we purchase fruits and plants and then experiment with them to see whether or not they are productive. We do not take the word of any fruit grower, who grows them for sale. We have them there and we know whether they are good for our locality or not.

A. J. Philips—One word for the Bismarck apple. Prof. Hanson now at Washington reports that he has seen the Bismark apple bear in Germany and some other foreign countries. Its only value is its novelty. As a humbug it is a success; do not buy many trees.

Mr. Philips reads report of Mr. J. J. Menn of Norwalk.

President—Are there any other local society reports?

A. D. Barnes—We maintain our Society at Waupaca, and propose to maintain it as long as any of us are in ex-

istence. We have a Society of 30 families, we meet once a week or once every two three or four weeks as the spirit moves. We have a basket picnic, we have a strawberry, raspberry picnic, etc. We make it a point to visit the places where they have plenty of these. We have winter meetings, and sometimes we hire a hall in the city for our meetings. We joined or rather organized what is called the Waupaca Poultry and Pet Stock Association in connection with our Society. We last week held a three days' Winter Fair. We took the best hall and filled that hall with exhibits and people. We had something over 300 chickens and a nice display of vegetables. Our Society and the Poultry and Pet Stock Ass'n received many words of commendation and people came 30, 40 and 50 miles and brought birds and chickens. Next winter we will have a mid-Winter Fair. Our Society is growing.

Our officers are: President, E. L. Demorest; Vice President, M. R. Baldwin; Treasurer, Mr. McIntyre; Secretary, Henry Burnham.

G. J. Kellogg—We have had two reports on fine, live Societies, I want to report on one that is dead. (Laughter.) We had plenty of money a good while, but our money has given out. There is not interest enough to get up a monthly attendance. As a Society we are doing nothing. We have an Executive Board, and that is about all there is alive. I think that going from house to house is the only way of maintaining a live Society.

B. S. Hoxie—I want to make a half minute report with the advice—Do not elect a man for a figure head, elect a working man for president.

Mrs. Campbell—I wish to make a report on a Society that is alive, which is composed of ladies (men are generally dead). (Laughter.) We meet four times a year. We hold our annual meeting the first Tuesday in January at Evansville.

Dr. Loope—We have a Society where I come from. We have a meeting every month of the year, the first Saturday of the month. We have a pretty good sized Society (counting as some do we have over 100). We have an attendance every time, sometimes it is good. Sometimes we have pro-

grams, a sort of an entertainment, but more often we have discussions on some practical question. We do not have a great deal of wisdom. We are the only Society that dared to get up a Crysanthemum Show last season. Omro did not dare, or Oshkosh, for fear they would run behind. Some that attended our show thought it was better than the Show at Chicago. However, they might have been prejudiced. We gave premiums.

Mrs. Campbell—I wish to announce that I will give badges to all who have paid their dues.

G. J. Kellogg—I would like to invite the committee on the trans-Mississippi Exposition to remain so we can confer.

President—Before adjournment I wish to announce that we will hold a joint session with the State Forestry Association in the Senate Chamber this evening at eight o'clock.

On motion adjourned.

TUESDAY EVENING.

Senate Chamber, 8 P. M.

President Hoxie in the chair.

Joint session with the State Forestry Association.

The Relations of Forests to Agriculture in Wisconsin—Prof. F. H. King of the State University.

Reads a paper.

Needed Legislation regarding the preservation and management of Forests—Ernest Brunken, of Milwaukee, Secretary of the Wisconsin State Forestry Commission.

Reads a paper.

THE AESTHETICAL AND ETHICAL VALUE OF TREES.

Prof. L. E. Gettle, Department of Education, Madison, Wis.

"I said I will not walk with men to-day
But I will among the blessed trees —
Among the forest trees I'll take my way
And they shall say to me what words they please.

And when I came among the trees of God
With all their million voices sweet and blest
They gave me welcome. So I slowly trod
Their arched and lofty aisles, with heart at rest.

Then all around me as I went
Their loving arms they lightly bent
And all around leaf voices low
Were, calling, calling, calling soft and low."

From *The Trees.*

The primal object of this young association is forest preservation; for happily there is still some forest to preserve, and its secondary, though not less important object, is the promotion of tree planting and culture. It is popularly supposed that our American people are most effectively influenced to action by strictly business considerations; that a slight immediate utility is more apt to prompt the swinging of the destructive ax than sentiment is to prevent it. It is not difficult to understand that the man who has looked upon trees as cordwood, upon forests as yielding about so many thousand feet of lumber per acre, may not appreciate trees in an artistic or sentimental sense. It is not hard to see that our commercial enterprises induced by the utilization of superabundant natural resources, have in a measure stifled the study and appreciation of the beautiful. The practical man has been the hero, the practical thing the object of our admiration. School studies have had to stand the severest tests of practicality in order to find favor in the school curricula. It is, perhaps, figuratively true that like the Illinois farmer we have largely been entangled in a chain of commercial correlation expressed in his natural sequence of hogs, corn, land; sell hogs, buy more land, raise more corn, feed more hogs, buy more land. These are all good things, but life ought not to be absorbed wholly in them. There is no doubt that appeals to the spirit of economy, frugality, to the desire for conditions of climate

and soil and water supply without which the basic occupation of agriculture must languish, will awaken people to a realizing sense of the great losses which are threatened through too general annihilation of forests without replacement of fresh growths. The relation of the forests to these practical phases of health, protection, comfort and food supply has been strongly presented by forestry associations and scientists who have made a special study of the subject. From the dissemination of such knowledge, effective effort, through improvement societies and other associations, has resulted.

While this good work continues, those who love trees quite apart from their intrinsic or economic value will render the country a service by cultivating an admiration for their numerous other qualities, some not definable in words, but only discernible by peculiarly receptive natures. It is the ear cultivated by training that brings to the mind sensations of rapture, devotion, spirituality, as it receives the sounds of masterful melody. The dull, uncultivated sense perceives only noise, perhaps a little pleasanter than ordinary noises, because of the rhythmic regularity, but it is only the savage's enjoyment of the tom-tom. Thoreau has said: "The intellect of most men is barren. It is the movings of the soul with nature that makes the intellect fruitful, that gives birth to imagination." A certain degree of knowledge must always exist before there can be a deep conception of beauty or of moral usefulness. Thoreau did not mean that the "minds of most men" are barren of innate, latent possibility, but that they have not been aroused from the seed state through the warmth of sympathetic leadership, into quickened embryo, and nourished into stalwart trunk, expanded foliage and delicate flower by the roots of knowledge. Every child not only instinctively likes but *loves* flowers and trees with a demonstrative affection. The little boy or girl is not concerned about boards and planks and lumberistic utilities. They know that the tree is a thing of beauty, that it affords coolness, shade, protection, and leaves of living green which may furnish a score of childish uses.

It is at the age when the child mind is peculiarly receptive to all the charms of nature, and in fact through childhood's

years, that he should constantly receive instruction and inspiration.

It is for this reason that the great movement of Arbor Day celebration was begun. It is true that valuable instruction accompanies the annual tree-planting exercises observed in practically every school in Wisconsin and in many other states as well, but dry facts and harsh statistics would soon pall children's interest and destroy the chief charm and value of the day. It is the spirit of glory and joyousness of tree life that enters into the young hearts. There is a festival of gladness. The imagination that peopled the trees with Puck and the fairies, with Dryads and wood nymphs, has, in a more enlightened form, full sway with the children. Their attention is called to trees. They begin to compare and study tree forms. Recognition of the types of tree beauty takes root and they learn that not only trees of different species but those of the same species even have a marked individuality. As there is a glory of the sun, another of the moon and another of the stars, so the elm, the oak and the maple differ in glory of form and majesty of bearing. Some one has said, "We observe the face of nature so little that the few enthusiasts who have come to know her, speak to us, when they would describe her beauties, in an unknown tongue." Most of us need the assistance of the poets, the artists, the seers and prophets of Nature to comprehend the finer subtleties of tree grandeur. The single tree on the lawn, by the roadside or in the park, has most often excited admiration and poetic praise. Where there is an abundance of air, space and light on every side the tree reaches its highest perfection of symmetry. It is of such that poets have delighted to sing their rhythmic laudations. It is around single trees or small groups that the tenderest affections and associations usually cling.

Holmes declares that "Nobody knows New England who is not on terms of intimacy with one of its elms. The elm comes nearer to having a soul than any other vegetable creature among us." It was while Lowell was contemplating the supernal beauty, sturdiness and grace of an elm that he wrote,

"I care not how men trace their ancestry
To ape or Adam; let them please their whims;
But I in June am midway to believe
A tree among my far progenitors,
Such sympathy is mine with all the race,
Such mutual recognition vaguely sweet
There is between us."

And again in "Under the Willows":

"This willow is as old to me as life
And under it full often have I stretched
Feeling the warm earth like a thing alive
And gathering virtue in at every pore
Till it possessed me wholly and thought ceased
Or was transferred in something to which thought
Is coarse and dull of sense. Myself was lost,
Gone from me like an ache, and what remained
Became a part of the universal joy.
My soul went forth and mingling with the tree
Danced with the leaves; or, floating in the cloud
Saw its white double in the stream below."

Beecher in his masterly style speaks of the emotions aroused by the solitary majesty of a great tree. If you are half reclining upon a cushion of fresh new moss that swells up between the many-plied and twisted roots of a huge beech tree, and if you have been there half an hour without moving, and if you will still keep motionless, you may see what they who only walk through forests never see." Of a pasture-elm he writes: "Does a man bare his head in some old church? So did I, standing in the shadow of this regal tree and looking up into that completed glory, at which three hundred years have been at work with noiseless fingers! What was I in its presence but a grasshopper? My heart said, I may not call thee property and that property, mine! Thou belongest to the air. Thou art the child of summer. Thou art the mighty temple where birds praise God. Thou belongest to no man's hand, but to all men's eyes that do love beauty and that have learned through beauty to behold God! Stand there in thine own beauty and grandeur! I shall be a lover and a protector, to keep drought from thy roots and axe from thy trunk." No human king of power or princess of beauty ever received grander tribute from lips of devotee. Our poetry and prose literature teems with such lofty thoughts on noble trees.

Stripped of its leafy crown by the frost of autumn the tree is still beautiful. The rugged boldness of creviced bark is

exposed to full view, the somber and quiet harmonies of Nature's shades of gray become apparent; the scalloped lichens and delicate mosses decorate the otherwise bare limbs; the forking branches and multitudes of twigs show their wondrous ramifications and graceful proportions. Even when gnarled and bent a tree is yet a picturesque ornament to a landscape.

Occasionally in winter the trees are enveloped by hoar frost or a solid icy cloak that bends and interlocks the branches into the most weird and fantastic arches, wondrous canopied aisles, grottoes and deep caves of marvelous contour. The winter sun pours over all its flood of purest light and the trees become dreams of resplendent glory—fairy palaces of sparkling, scintillating, crystal splendor.

When bursting buds of leaf and blossom signal the awakening of Nature's forces, when sheltering arms spread out their many voiced foliage to sing whispering notes responsive to the breezes, when robins nest in the oaks and orioles in the elms, when lustrous burdens of fruit or flowers shimmer in the sunlight and when the spirit of autumn breathes upon the foliage changing the restful shades of green into soft yellow, royal orange, vinous red and warm, bright scarlet, the tree is ever an object worthy of our admiration.

Besides their aesthetic value and beauty as individuals, trees have special attractions when grouped, but above all is the attractiveness of the wood or forest. The vast extent of billowy masses of green rising and falling in graceful undulations to conform to hills and valleys, blending perchance with the deep blue of the sky or forming the foreground of the black clouds of a rising storm, impress us with a lofty and dignified grandeur.

Bryant is the great poet of the forest. Who does not remember his majestic verse

> "The groves were God's first temples, ere men learned
> To hew the shaft, and lay the architrave,
> And spread the roof above them—ere he framed
> The lofty vault, to gather and roll back
> The sound of anthems; in the darkening wood,
> Amid the cool silence, he knelt down
> And offered to the Mightiest, solemn thanks
> And supplication.
>
> * * *

Father, thy hand
Hath reared these venerable columns. Thou
Didst weave this verdant roof. Thou didst look down
Upon the naked earth and, forthwith rose
All these fair ranks of trees. They, in thy sun
Builded, and shook their green leaves in thy breeze,
And shot toward heaven."

With less dignity but more fully embodying the feeling we more often experience in the woods, Scott speaks:

"'Tis merry in the greenwood, thus runs the old lay,
In the gladsome month of lively May
When wild bird's song of stem and spray
Invites to forest bower;
Then rears the ash his airy crest,
Then shines the birch in silver vest,
And the beech in glistening leaves is drest,
And dark between shows the oak's proud breast
Like a chieftain's frowning tower."

The aesthetical and the ethical are closly blended. Beauty is an element of the soul quite as much as a possession of the object of veneration or admiration. Our conception of the beauty of an object is strengthened too by a sense of its utility. We do not consider it strange that men and women who have loved the trees and forests, have given to the world clean, noble, unselfish lives. Loving, planting, caring for trees, eagerly watching the slow developments of their growth, has broadened and deepened the sensibilities and admitted Nature's devotees into the charmed circle of forces in the world which purify and ennoble the heart. The process is subtle and cannot be described. It escapes the psychologist but is simple even to a child whose eyes are opened and ears tuned to responsiveness.

"Powers there are
That touch each other to the quick — in modes
Which the gross world no sense hath to perceive,
No soul to dream of."

We know that trees everywhere exert a large moral influence. How strongly the moral lessons they teach have always impressed themselves is revealed in almost the earliest biblical literature and in every subsequent literature.

Wordsworth speaks of the teaching power of the woods:

"One impulse from the vernal wood
May teach you more of man,
Of moral evil and of good,
Than all the sages can."

Lowell draws a lesson from a favorite oak:

* * *

"How towers he, too, amid the billowed snows,
An unquelled exile from the summer throne,
Whose plain, uncinctured front more kingly shows,
Now that the obscuring courtier leaves are flown.
His boughs make music of the winter air,
Jewelled with sleet like some cathedral front
Where clinging snowflakes, with quaint art, repair
The dents and furrows of Time's envious brunt.

* * *

So from oft converse with life's wintry gales
Should man learn how to clasp with tougher roots
The inspiring earth — how otherwise avails
The leaf creating sap that onward shoots?
So every year that falls with noiseless flake
Should fill old scars upon the stormward side
And make hoar age revered for age's sake,
Not for traditions of youth's leafy pride."

Mrs. Mary M. Adams, of this city, has apostrophized the trees on her lawn in noble verse:

"Ye proof of miracle in beauty wrought
By changing seasons, as they come and go
What speechless revelation do ye show
Of a great glory coming all unsought!

* * *

O tell me, can ye see, and do year hear
Something of that sublime melody
That lifts the life forever above fear?

* * *

Yet, why among your stately harmonies
Such thoughts intrude? The rather let me find
Your gift to win from storm and sun and breeze
The strength to live, to keep the quiet mind;
Like ye, serenely hold the upward gaze,
Like ye, find heavenward growth crown all my days."

Washington Irving esteems tree planting the very antithesis of selfishness, a work of generous impulses. He says: "There is something nobly simple and pure in a taste for the cultivation of forest trees. It argues, I think, a sweet and generous nature to have this strong relish for the beauties of vegetation, and this friendship for the hardy and glorious sons of the forest. There is a grandeur of thought connected with this part of rural economy. He who plants an oak looks forward to future ages and plants for posterity. Nothing can be less selfish than this."

If such sentiments as have been quoted were to take root among the people what a revolution of practice might result in reference to tree culture. Every school ground, at least

in rural districts, would have no less than five acres of ground a goodly portion of which would be devoted to groves of trees in whose cool shade the children could bathe body and spirit and in whose presence they could learn the multitude of lessons that trees can teach. There would no longer be seen schoolhouses, churches, and country homes standing out bare and bald, positively ugly in their isolation of tree and shrub environment. Every street of the cities and villages and every country roadside would be turned into arboreal avenues.

Cities would multiply their public parks where rich and poor alike might gratify the taste for woodland sights, and sweet songs of birds. Perhaps it might even not seem impractical for the state to acquire ownership of lands not well adapted to agriculture and a system of state parks inaugurated, cared for by the state and open at all times to all who love the woods and find among them a renewal of strength and keenest enjoyment.

I am sure too that trees that are planted would receive better treatment. It is necessary that dead limbs be removed, that the tree by pruning be assisted in growing more symmetrically beautiful, but this work ought to be done by an artist and not by a tree butcher. Public sentiment would be such that quick shrift would be made of the telephone and telegraph men who slash, mutilate and decapitate the trees like fiendish vandals. But then of course, they are practical men. The loss of a man's arm, or leg or head, if in a worthy cause, may make the man more interesting but it does not make him more handsome. Such a loss is regretted from an aesthetic standpoint almost as much as from a consideration of usefulness.

Better dig up a tree by the roots than to poll it. Polling trees is no more in the interests of natural grace and beauty than is polling cows. If any one doubts this let him take a glance at the east side of our capitol park and be instantly convinced.

George William Curtis has well said "A sapling is not to be cut into a bean pole, but carefully trimmed in accordance with its form. A tree which has lost its head will never

recover it again, and will survive only as a monument of the ignorance and folly of its tormentor."

It is hoped that through the earnestness of the Wisconsin Forestry Association that tree knowledge will be widely disseminated, that sentiment and utility will be jointly enlisted in securing practical results in protecting trees, in reforesting denuded districts, in cultivating a taste for the beautiful and in identifying the personal relation of the tree to human life, health and prosperity.

WEDNESDAY A. M.

Senate Chamber.

President Kellogg in the chair.

The president announced as a committee on Awards of Fruits: Mr. Clarence Wedge and Dr. Loope.

He also announced that we had with us Mr. Wedge of the Minnesota State Society.

On motion he was elected an honorary member of our Society, for the ensuing year.

Mr. Wedge—I take pleasure in being with you. I thank you very much for this honor you have bestowed upon me. Wisconsin was my native state. I have wandered in distant lands and fields, but I am very proud of Wisconsin and I am proud of your Horticultural Society. I have received your report and magazine, and while we feel that we are somewhat on the frontier we can give you some advice on hardiness of varieties. We do not come to you as an authority, and I feel today that I am privileged to learn a good deal on small fruits. Your Society is an authority on small fruits throughout the northwest. Again I thank you.

President—We should be pleased to have Mr. Wedge take part in all our discussions.

On motion—H. F. Thurston of Chicago was continued as an Honorary Member for another year.

Mr. Thurston—Gentlemen, I thank you for the honor.

President—Are there any further reports on observation?

Mr. Philips—There are no further reports on observation.

G. J. Kellogg—Are there any members here on this committee? I think these ought to be gone over.

Mr. Fisk's report of Omro, given by Mr. Babcock.

Mr. Hardin—"Small fruit was very good with us as far as I know. Apple crop was small.

E. A. Richardson of Sparta—"Strawberries were poor, our blackberries did very well, of course the frost the first part of June took a good share of them. The crop that escaped the frost did well. Currants, I have about 500 bushes, and last winter I worked and probably put in three tons of straw for mulch in order to save labor in cultivating this summer. In consequence they were far behind in sending out foliage. As far as apples are concerned, I do not know much about them. Our Horticultural Society has united with a Fruit Growers' Association there of about 180 members, I think. I will send my report to you."

G. J. Kellogg—I was informed that there were 10,000 bushels of strawberries at Sparta that were not picked.

E. A. Richardson—I know several fruit farms of two or three acres that did not get more than one picking.

I picked 173 crates and they netted me about 35 cents per crate and I suppose there were twice as many that I did not touch at all. Others that picked earlier in the season were not hurt so much by the frost. Their season was probably one or two weeks earlier than ours.

Question—How were your raspberries?

Some had good fields. Price was not very large. Black raspberries sold from 50 cents to $1.00 per crate. Bushes were well loaded. Others were not so good. I will say that some have plowed up their black raspberries.

G. J. Kellogg—What are the prospects for next year?

Answer—Well it is estimated that half are plowed up, but I think that is not quite true.

President—The lower price for fruit the more acreage we must have.

J. L. Herbst—I think they set out on the strength of the year before, when they got $2.00 per crate.

A. J. Edwards not being present Mr. Coe was called for.

R. J. Coe—I will say that we had a peculiar season. The

strawberry beds started out very promising with us, and along about the time of ripening we had a very dry and hot spell and the berries cooked on the vine. Then we had a rain and the berries were good. Of raspberries we had a very heavy crop. We could not ship all of them and we had to get a hustle on us and sell them in our neighborhood. They brought 7 cents per quart. Our gooseberries sold at a low price, but we had a good crop. Apples were very few and far between.

E. Single of Wausau—The secretary said all I have to say in his report on the orchard.

Mr. Philips—How much small fruit raised there?

Mr. Single—Hardly any.

Mr. Johnson being in exhibit room, Mr. Toole responded for Baraboo. I have prepared nothing. In a general way I can say we had the same experience with frost as in other parts of the state, perhaps a little more severe. Those that lost their berries entirely were better off than those that had some. One man sent good berries to market and got next to nothing for them. This brings to our mind the question of distribution of fruit when there is an over-production.

A. J. Philips—How was your apple crop?

Mr. Toole—Our apple crop was as great a failure as ever before. I probably had more apples to put in my cellar than large growers. Thanks to the Russet and Seek-no-Further, which is a very good bearer. It has the fault of the Golden rains came just in time to make a good crop. Currants in the way of prices were little better than the strawberries and for the gooseberries there is but a limited demand. I would not advise planting very largely. One reason is that the world in general thinks that a ripe gooseberry is not good for canning. But it is a fact that the green ones are not good. I might say that I spoke of the great failure in fruit three years ago this coming season in apples, and yet this failure had its compensation.

G. J. Kellogg—Is it necessary to spray after an entire failure?

Mr. Toole—I would think yes.

G. J. Kellogg—Could you not wait one year and then spray?

Mr. Toole—Of course we can wait and then fight when we Russet in wilting a little. We had very hot weather but the are obliged. We know that prevention is good, and should not neglect what we ought to do.

Question—What condition did the blackberry canes go into winter quarters.

Mr. Toole—I do not know, there were many canes not laid down. I do not know why. The growth of black and red raspberries was good.

Question—Were many of the canes injured by the frost?

Mr. Toole—I should say from my recollection of the frost there must have been an abundance of growth that was never effected by the frost, and that no fields ought to depend upon the canes injured by the frost.

Mr. Nye of Appleton called for.

Can you not give us a report of your observations in your district? A report on small fruits.

Mr. Nye—The price of strawberries was quite low, but on raspberries was quite high. Our red raspberries averaged from $1.60 to $2.00 per case. Apple crop, we did not have a full crop, still we had a fair crop. We had plenty of fruit to use and some to sell.

A. J. Philips of La Crosse county is called for.

Mr. Philips—We had very much the same experience as the rest. We lost a good many berries by the frost and the prices were low. One man in our town did not cover his berries last year, he had about one and one-half acres, and he had berries one week in advance of any one else. He picked and shipped them and got a good fair price. We have one plantation up there of 10 acres every alternate row Warfield and Beederwood. He began to pick and ship to Minnesota at $1.40 per crate. The price then went down to $1.00 and then fifty cents. Regarding the Seek-no-Further apple, people like it as well as anything they have. I tried to have Mr. Raymer come to this meeting. Last year he gave us a very good paper. He is now a life member. He has put in

an irrigation plant and can water each plant of his strawberries.

J. L. Herbst—I find that eight of our committees on Observation are not members of our State Society. I would suggest that you appoint members of our Society, then we will get reports.

Mr. Wedge—What is the fault of the Lovett Berry, it seems to be nearly a faultless berry in my state.

Mr. Kellogg—I have nothing to say against the Lovett, I have everything to say for it. The Lovett is not quite early enough to pollenize the Warfield. The Lovett comes nearer than any other variety I can name. Other three perfects are Wood, Splendid and Enhance. They are all subject a little to rust. I think the Lovett is one of the best perfect varieties.

Mr. Herbst—The Lovett did nicely at the Thayer farm. It is a very good yielder, good size, good quality.

President—This completes the committee work.

cussing the strawberry question at this time.

Mr. Philips—It will come later anyway.

President—This completes the Committee work.

G. D. Kellogg—There are eleven districts that have not reported. We ought to have a report from each district. I think it is a very important matter to place the fruit interest before the public and ourselves. I am surprised that there is such a failure in the fruit at Sparta.

J. L. Herbst—The frost hurt us so that on the 1st of June I went on a 5 acre patch, and every other two rows looked different. I took my memorandum and counted the blossoms, counted those that were ripe and those that were black, and I told the boys we would have no use for any more boxes. But the fact was, the showers came on and we then had a super-abundance, we had about 1,000 quarts. We had Enhance, two rows, 40 rods long, 240 quarts at one picking. We had Lovett alongside. The Beaderwood did not do as well. We sent some to Minneapolis and got as good returns as we got at home. I never saw so promising a failure and so great a success in a strawberry market that

is in the yield. There was a failure in price, but a success in the yield.

Mr. Richardson—In regard to reports from these delegates I will say that I did not know until about a week ago that I was on this committee of Observation.

In regard to Mr. Kellogg's being surprised at our not having a market in the northwest. I can account for that. You know along the last of May we had a heavy frost, and strawberries started about that time. We got good paying returns from $1.25 to $1.50 per case when they began to ship in berries from Michigan to Chicago, 40,000 cases a day, and they were getting 12 1-2 cents a crate. The consequence was when we commenced picking, our heaviest pick, we shipped two or three car-loads out to Minnesota and on the same train were several car-loads of Michigan berries. These fellows put their berries into our market and spoiled our prices. Our berries ripened so fast, that on the heaviest days pick, there were some that could not pick more than half of them.

Mr. Toole—I think that the interest we manifest in these reports goes to show that we ought to have full reports. We learned from the gentleman on the floor that he did not know until a week ago that he was on this committee on Observation. When I was on several years ago, Secretary Hoxie used to send us printed forms in spring with places to be filled out, and then we could make the seasons observation.

Mrs. Johnson—I had extra copies of the March number of the magazine, which I wanted to distribute, so I looked over the names of the committee on Observation, and sent to each member a copy. So the members were notified through the magazine.

J. C. Ferris—I have been interested in this small fruit discussion. The people of Hampton, the business men had to help us gather our berries. It seems too bad to let the berries spoil on the ground. This raises the question of distribution. There should be a quicker and cheaper way of distribution. I do not know as I want to outline a policy for you, yet what your neighbors are doing might interest you. We have 12 fruit districts and 12 directors, and each

director gathers information from those in his district and he condenses his report and brings it before his Society, and it is quite as effective as your way of calling on many. It is about time for us to consider this question of distribution, as horticulturists, when there is such an over-production in one place.

Dr. Loope called for.

Dr. Loope—In my earlier experience I used to draw my inspirations from Ripon. While we were raising some small fruit and got fairly good prices, when I went to Ripon they always told me that they got twice the amount net. We had a good crop of strawberries, not over two acres, and got between 8,000 and 10,000 quarts. I shipped several cases and got 10 cents a case net. I quit that right away and we went to selling on local market. I remember we had a large picking, we had two or three loads, and sent a man to Neenah and as far as Winneconne, who sold them at 50 cents. Raspberry crop was fair, not extra large, yet they were good and we got about 8 cents per quart. For blackberries we got $1.00 per case, about that, perhaps a little more. The acreage is not as large in our section as it has been. The blackberries are going out. There are very few there. Our canes seem to be thrifty and good. Of course our orchard is not yet in full bearing, but it grew very nicely and looks very good, with a promise of considerable fruit the coming year on the young trees. The neighbors there that have berries had fair crops although the frost injured them some, but on our grounds, the frost did not touch us. Our ground is higher and we got more strawberries than we wanted. We have increased our acreage in strawberries, I suppose because, hope springs eternal in the human breast. We have an increased acreage of red and black raspberries but not many blackberries. The acreage up there is not what it used to be several years ago, and you cannot expect as much from that section.

Mr. Barnes—I would like to say in this connection for the fruit interest of Waupaca, we were favored with a good fair crop in small fruit excepting blackberries. We did not have a large crop in our county owing to the plants being

killed by the drought. We have been fortunate in getting good prices by supplying home market. Our cherry crop was very fine and plums were never better than this year. Our apples were a small crop but were very good. The outlook has been all the fall and winter for a big crop of everything for next year. The winter is favorable and we feel sure we will have the best crop we have had for years. We are sorry for you other people if you must sell at such low prices. The best way to get a market for fruit is to cultivate the market at home. There are thousands of farmers that do not cultivate fruit and you ought to get them to buy it.

Mr. Stickney—I have given my report to the Horticulturist. Mr. Hatch once described me as a man who easily saw good in every thing, so what I may say to you may seem visionary. I did not market all of my currants. I have a couple of hundred bushels on the bushes waiting to be marketed. I marketed all that would pay for the handling, simply for the sake of distributing the pay-money among my pickers, all poor women and children. I have about eight acres of currants. I propose to take care of them the coming year about twice as well as I ever did before, whether I get a dollar out of it or not, as every business in all lines has some years of prosperity. Perhaps not next year, but within three years you will see good, prosperous, hopeful prices for your small fruits. There will be some faint-hearted people who will drop out. I think we all see indications of the return of prosperity after the hard times and short money supply. It will not be in a minute. It may take eight or ten years. But keep on in small fruits at moderate prices, do what you do a little better, and I think you will all feel right in the course of three or four years.

G. J. Kellogg—Please tell us about the Fay currant.

Mr. Stickney—I planted some 9 acres of the Fay currant, and gave them high culture. I found as they stood and came on that I could not stimulate them on a 10 acre lot. I gave them very good culture and fertilized them, but they would drop their leaves and fade. I have only about one acre now. I have got perhaps 10 square rods from which

I propagated. What I sold brought nice prices. I had perhaps 50 or 60 cases to sell. I am going to hold them out of the ground, I will prune them so that I will not have a crowded bush, and I think I will be able to show you a few crates of good fruit.

Mr. Kellogg—When do you prune?

Mr. Stickney—When I can.

Mr. Kellogg—When is the proper time to prune.

Mr. Stickney—Sooner do it in fall than in spring, but I never do as I have no time. March or the first part of April is a good time. In spring before the leaves start. The best time would be in October, immediatly after the leaves fall.

Question—Have you found anything among the new varieties that are superior to the old ones? The North Star or Ruby Castle.

Mr. Stickney—No, sir. I do not think anything will pay as well as the Holland and Prince Albert, I do not like the Victoria. I had an acre and threw it out.

Question—What is the objection to the Victoria?

Mr. Stickney—Not as strong as it ought to be. Fruit is not extra in size.

Question—What are the best?

Mr. Stickney—Prince Albert, next for dollars Holland.

Question—Do you grow black ones?

Mr. Stickney—I cannot get money out of them.

Question—Do you grow white for market?

Mr. Stickney—Not for market.

Mr. Barnes—I have customers that pay me 10 cents for black and white currants.

Mr. Kellogg—Did I understand you to say you planted 9 acres of Fay?

Mr. Stickney—Eight acres.

Mrs. Cary—We cannot get a case of strawberries in our place short of $1.50 (24 quarts), and I do not think anyone ships a case out of the city. I have never bought good strawberries for less than 10 cents per box.

Call for Mr. Converse.

D. C. Converse—It seems to be the opinion among the growers that the local market is the best, but from our ex-

perience I believe the most profitable way is to grow fruit that will give us a stated supply from the middle of June until grapes are ripe. I believe it is best to grow a larger assortment of currants, as Mr. Stickney recommends. You must have a succession, as you get a larger price for the early berries than for the late.

B. S. Hoxie—Mr. Stickney touched upon one point that we ought to give attention to, and that is to cultivate only the best. I buy strawberries at Evansville as soon as they come in, and sometimes I find a box that is very nice on the top, but at the bottom the berries were not good. Last fall I bought a couple of barrels of apples that were all right at both ends, but in the middle they were not. The demand for fruit is increasing. I have noticed since I live in Evansville (about 13 years) that there are now 10 quarts used to every one, twelve years ago. The amount of fruit that comes in is simply enormous. During the past season berries were not sold for less than 8 cents per quart.

J. C. Stickney—As to varieties, I received a variety, the Wilder. Its fruit is very nearly as large as the Fay. If you are interested in this, please test this variety. I got my plants from Mr. Wilder of New York.

E. H. S. Dart—Have you tried the North Star?

J. C. Stickney—I have fruited them for two years. It is a strong grower, very hardy and nice in every way, and very productive, but not what I expected in size. It is not any better than the Red Dutch. It may handle a little better than Red Dutch. Does this agree with your experience?

Mr. Dart—I have had very little experience with it. I had an impression that it would not prove as large.

Mr. Philips—I have a telegram from Prof. Bailey. "Trains are all late. Will arrive at 7:30 tonight."

Later telegram. "I will remain for tomorrow forenoon session, and perhaps for the afternoon."

Mr. Carnes of Ellsworth called for on apples.

Mr. Carnes—I have not come prepared. Of course a few years ago, immediately after the winter of '84 and '85, we had

no trees left except the crab. I had a few seedlings in my yard and they were killed. I saved a few of them from the suckers that came up from the roots. The last few years our supply has been increasing, so that the display at our fair covers a table 16 ft. long with as many plants as we can place on it. I am not able to speak of the varieties, because I know very little of them. We raise Wealthy, and Hibernal, which Mr. Philips recommended when he was up there. We have several other Russian varieties. I know little of the varieties of apples and their names, and in regard to names, we are very much mixed up. We ought to have some one look our territory over and give us the names of the varieties. Three or four persons, perhaps one-half dozen exhibited fruit that they did not know the names of. One man exhibited some very fine fruit, but as his apples had no name, our Society gave him no premiums. This so disgusted him he promised not to bring any more. Of course I am not a very extensive fruit grower. I notice that one of my neighbors has his fruit on sale at the grocery, and I think in time we will be able to grow all the apples we require in that country, but it is the prevailing opinion there that we could not grow apples. I think we ought to pay more liberal premiums, but as yet the horsemen have taken almost entire control of the county fairs, and at our next exhibit, I will bring it before our Society to try and have some competent men visit us at a moderate expense to judge our apples and give us names for those not properly named. The trees have been purchased from all kinds of agents, mostly New York agents, and of course we get them under names that are not generally right. We exhibit our fruit under the names that we got the trees for when we planted them.

Mr. Stickney called for to give remedy for currant worm.

Mr. Stickney—We use hellebore for our currants. We apply our hellebore there in solution, with a force pump, having two nozzles. It takes three men to operate, one man to pump. Hellebore will kill them. Buy about 25 to 50 pounds of a wholesale druggist. But as I am a man who

readily sees good in things, I will say that currant worms are good as they eat up other people's currants and leave ours alone.

President—Next thing on our program "Benefits Derived by the Wisconsin State Horticultural Society from the Hill Crest Trial Acre for the Past Five Years—A. L. Hatch, Ithaca, Wisconsin.

Reads paper.

Mr. Kellogg—Does the Windsor blight any?

Mr. Hatch—No.

Mr. Kellogg—Does the Transparent blight?

Mr. Hatch—A little. The Tetofski brought me $3.25 per barrel net. First apples they had in Milwaukee. The point of advantage is that we can produce the early varieties to compete with the southern apples of duller color.

Mr. Dart—How does the Transparent compare with the Tetofski?

Mr. Hatch—It is a better apple. The Tetofski does not furnish limbs enough. If the Yellow Transparent blights some, it can afford to over and above the Tetofski.

Mr. Dart—Does the Yellow Transparent ripen evenly on the tree?

Mr. Hatch—No, it does not. It would need two pickings. I pick the Tetofski with one picking. The Red Astrachan ripens unevenly, some would be over-ripe if you waited until they are colored. I suppose where you grow Yellow Transparent in quantities you would have to do the same thing.

O. W. Babcock—Is the Yellow Transparent short lived after it is picked?

Mr. Hatch—Yes, but the money is there.

Question—What about water-cored apples?

Mr. Hatch—There is a question I was talking with Prof. Goff about. It is a question of vitality, vigor and condition. The tree that is out of balance for want of water, of vigor or health, will produce water-cored apples. If the water is supplied evenly this difficulty is remedied. We can do much by good management.

Mr. Philips—There is a great diversity of opinion on one

apple. I want your opinion on the Patten's Greening. You have it bearing there.

Mr. Hatch—I really do not like it. In the first place it is of poor quality apple, it is coarse. It is an ill-looking apple. The tree has a stragling, sprawling growth. The apples tumble off a good deal.

Mr. Kellogg—How long does it keep?

Mr. Hatch—I market it about the same time as the Duchess. I cannot say anything in favor of it. I get no comfort out of it.

Mr. Toole—I would like to ask something regarding the Cheney plum. With me it is prone to plum-pocket. I get very little fruit out of it, other varieties are not troubled that way. Does any one know whether plum pocket is infectious.

Mr. Ferris—I would like to say a word on Patten's Greening. It has an advantage of great hardiness, which is impertant in some parts of your state, but I want to speak of the Yellow Transparent and emphasize what Mr. Hatch has said of it as a market apple. I am surprised that some enterprising man around here does not plant 10 acres of Yellow Transparent. It seems to me that he would receive good returns. I know of no market apple that is its superior for market growing, where it has good air and drainage. It can of course afford to blight some, it has more top than the Tetofski. The Yellow Transparent has the advantage of being the king bearer. It is handsomer, better and earlier. We have had Yellow Transparent good to eat as late as July 20th. You may expect ordinarily to have some Yellow Transparent to put upon the market for culinary purposes in July. It is certainly earlier than the Tetofski. I am not prepared to say how far north that tree can be successfully grown. It is probably more discussed than any other variety at present, more than any Russian apple. I believe that a man living near a good market, who has a good orchard of Yellow Transparent, who has no expense of barreling and storage, will realize better from it than from a winter apple. This is a question that your Society should consider. Now about the Rockford plum, it is too small for a market plum for us. It is not as large as the little wild

plum, but everything said about the Cheney I agree with. I have some plums, grafted on cherry, which have plum pockets, and standing beside these are plums that have no plum-pockets, which goes to prove that it is not infectious.

Mr. Toole—My Cheney is on its own roots.

Mrs. Johnson—I would like to ask why there should be a preference of the Yellow Transparent over the White Transparent?

President Kellogg—Is there any difference?

Mr. Hatch—I never fruited the White Transparent, but I do not know.

Mr. Johnson—In regard to the shipping qualities of the Transparent. It is true that it ripens unevenly. This can be remedied by picking off some of them. It should have at least two pickings. It will ripen after it is picked. The Red Astrachan, if you pick it before it is ripe, will never ripen, whereas you can pick a Duchess or a Transparent, it will ripen on its way to market. I consider the Transparent a wonderful keeper for an early apple. It is true if you leave it on the tree until it gets that beautiful color, of course it will not keep. It must be picked earlier.

Mr. Tarrant—I have some trees of the Yellow Transparent and some of the Red Duck, and also White Transparent. In fruiting them I can not tell the difference, but there is certainly some difference. I will say that so far the Yellow Transparent has blighted a little more, but it is a strong grower, and I have had the largest and best apples from the Yellow Transparent I set out. They fruit early with me, I have had a good many apples from trees that are not very large. I am well satisfied with this variety. I am surprised that it is not on your list. I want to say a word in regard to Patten's Greening. I like the Patten's Greening very much. It is a good, large apple. Fruited it for three years and I have had apples every year. It has a straggling growth, but it will fruit well. Of course it is in season with some of the other apples.

Mr. Philips—What is the season?

Mr. Tarrant—It is about October 1st. They do not all ripen at once but we had a good crop last year and the year before.

As long as I have had it, it seems to be practically hardy. It has a good appearance.

Mr. Wedge—I should think a man like Mr. Hatch would not condemn a tree for its straggling growth. I object to an upright growth. The Whitney is a bad tree, the Duchess is a bad tree. I wish Mr. Hatch would enlighten me a little, he has had a good deal of experience.

Mr. Hatch—I thank the gentleman for his criticism. What I mean by a straggling growth is when it does not have sufficient limbs, and does not furnish an abundance of fruit. The limbs will become bent and it looks awkward. The trouble with the Tetofski and the Repka is they do not have limbs enough. I want limbs enough, I do not want too few. That is what I mean. The strength of the limbs and fork is a good point, but that is not all. I look at it strictly from a business standpoint, there is money in those varieties I mentioned for large planting, for those who will take care of them and cultivate properly. Beginning with the Yellow Transparent, the Duchess, the Wealthy, the McMahan, the Fameuse, the Newell, the Windsor Chief and Scott's Winter. They are all business trees. You can plant 100 or 500 of each, and if you will learn what each kind wants you can make money out of it. Never plant less than 100 of each kind, and the advantage is you learn to take care of that number of trees. Secretary Philips, President Kellogg and Professor Goff visited me and saw my Fameuse. It looked so beautiful, President Kellogg could not get away from it. Still I have had flat failures with the Fameuse, but I learned this, if you do your duty by them, they will be the admiration of any man. You must do your duty and learn their characteristics. But you cannot for instance expect to treat the McMahan White as a Transparent and succeed. The same treatment you may give one, may be a failure with the other.

WEDNESDAY P. M.

President—I will say I am pleased to see so many of the young men of the short course.

First topic on our program is Benefits Derived by the Wisconsin State Horticultural Society from the Weyauwega Trial Acre for the Past Five Years—F. A. Hardin.

Mr. Kellogg—I want to make a one minute motion. I move we elect Mr. Perriam an honorary member of our Society. Motion carried.

Mr. Perriam—I am always glad to attend meetings of the Wisconsin State Horticultural Society. I seldom miss either a winter or summer meeting. I do not really know in which I would rather meet with you, in summer or winter. I always go home feeling a little better and knowing a little more than I did before I came. Gentlemen, I thank you.

BENEFITS DERIVED BY THE WISCONSIN STATE HORTICULTURAL SOCIETY FROM THE WEYAUWEGA TRIAL ACRE FOR THE PAST FIVE YEARS.

F. A. Hardin.

You can not imagine my surprise when on receiving a program of this meeting and on looking it over found that I was on for a paper. The subject, Benefits Derived by the Wisconsin State Horticultural Society from the Weyauwega Trial Acre for the Past Five Years, is a question that I have often had pass across my mind, but it never occurred to me that I would be called upon to answer it, much more write a satisfactory paper upon it for the State Horticultural Society. Now you, "The State Society" I mean, must know better than I what the benefits have been to the state and this Society.

Do not think for a moment that I am not aware that there have been benefits derived from this station. "But aye, there's the rub." Who have received them?

Before I attempt to say anything farther, or if I hit wide

of the mark that your worthy secretary intended me to aim at, all blame must rest upon him, for selecting such a subject and expecting me to tell you something you already know more about than I do.

I will try and bring out a few points of benefits the surrounding country and myself have derived from the trial acre and if the Society have received as much, it will be all they could ask or wish for.

We will take only the first acre set in the spring of 1890 under consideration, which was seven years ago. The location chosen for this acre was high, nearly level land, a trifle sloping to the north, and was originally timbered land, the timber being chiefly hard wood, such as maple, oak, hickory, butternut and ash.

It contained at the time of setting 121 trees, 114 apple trees or 50 varieties; 6 plums or four varieties, and one pear tree, and out of this number there are remaining 104 trees —100 apple trees or 48 varieties; losing only two varieties of apples, 4 plum trees, losing only one variety and we lost our only pear tree.

The trees were set 20 feet by 20 feet apart, which seems too close together as many of their tops are spreading so that they are not more than 10 feet apart now, and where will they be, if they continue to grow as they have, in five years hence. The trees have all made a fine growth each year although we have had severe drouths.

I will give you a list of the trees set and the condition of each at the present time, grouping them into four distinct classes as follows:

1st class—Those that are apparently healthy and show no blight.

2d class—Those that show a very little blight.

3d class—Those that have blighted very bad.

4th class—Those that have died and the cause.

Those that are in the first are—Duchess, Palmer, McMahan, Newell's Winter, N. W. Greening, Morris, Mary, Duchess No. 2, Manning's Red, Wolf River, Hebble White, Good Peasant, No. 46, Okabena, "Wild Goose and Marriana Plum."

Those in second class are—Bell Peppin, Wealthy, Crocker, Jenney, Whitney No. 20, Gold Drop, Seedling from Wolf River, Borsdorf, Borloff, Repka Malenka, Longfield, McMahan, top worked on Whitney No. 20, Johnson, Duchess No. 4 and 6, Patten's Greening and Maple.

Those in the third, class are—Windsor Chief, Raspberry Transparent top worked, Wisconsin Spy, Sport and Grundy.

Those in the fourth class are—Wisconsin Spy, Lalatoret, and Idaho Pear—by blight.

1 Baraboo, 1 Wolf River, President Smith, 1 Repka Malenka, Arabian Kesha and Rockford Plum—root killed.

In the past five years this acre has yielded about forty bushel of apples, though it took a great many varieties sometimes to make a bushel.

If they had been of one or two varieties they would have been more valuable for market.

This shows one that if they are going to plant an orchard for marketing that a few of the best varieties would be the most profitable.

The only way I can see how we are going to ascertain which are the best trees and varieties to set in different localities. which ones are the most hardy, most productive, those that blight and those that do not, the home or foreign grown trees, is to encourage the planting of trial orchards and setting side by side all varieties and watch their developments carefully and take note of the same, compare them and notice at the end the result.

There are some varieties on this acre for the past five years that have been more valuable and the trees more hardy than others.

Duchess, Duchess No. 2, Transparent, Palmer, N. W. Greening, Morris, Longfield, Nobles or Haas, have produced from one to three bushels each of apples.

In the same length of time there are others that have not had a single apple, while some have only produced a few scattering ones.

There are several varieties, The Snow, McMahan and others, top worked on Whitney No. 20, and in every incident except McMahan, the top has outgrown the stock, showing that the

Whitney No. 20 is too slow a growing tree to use for top working.

The Hybrid Seedling, Wisconsin Spy and Hartshorn have proven worthless, all producing small scabby apples.

This orchard can be of a great benefit to the surrounding country about it and elsewhere.

The people can visit it, see for themselves which varieties are doing best, and could select the same for their orchards. Thus, not only knowing what kind of apples they are going to have when they fruit, saving the purchase price and several years' experimenting with worthless varieties, and the expecting of something fine, which in the end, "as is nearly always the case," prove a complete failure. Alas, how many of us know this from sad experience.

I know this trial orchard has encouraged fruit growing in our locality, and is being watched with great interest by all fruit loving people.

We receive nearly every day many compliments from friends, also strangers, on the fine appearance of this orchard.

I believe, taking this orchard as a sample, apple growing may be made a profitable business, at least in favorable localities.

The most of the trees set for trial in this station have proven themselves worthy of a place of mention.

I think it has been a great benefit to one and all of us.

All that its promoters ever expected, and what the next five years will prove, is something to look forward to.

Mr, Philips—What has proved to be the best winter apple that you have tested?

Mr. Hardin—North Western Greening, I think.

Mr. Dart—Which is the next best?

Mr. Hardin—Palmer.

Mr. Philips—Who sent it to the station?

Mr. Hardin—Mr. Hirschinger.

Mr. President—What is the season?

Mr. Hardin—Winter.

Question—How does it compare with the Fameuse?

Mr. Hardin—About the same size.

Mr. Edwards—How many good, late winter apples have you?

Mr. Hardin—First class—Duchess, Longfield, Morris; 2nd class—Noble, Hass and Patten's Greening. The Windsor Chief is a winter apple.

Mr. Kellogg—Does it blight?

Mr. Hardin—Quite bad.

Mr. Ferris—Why did the gentlemen put Patten's Greening in the second class?

Mr. Hardin—It blights quite bad.

Mr. Wedge—Where are they top-worked?

Mr. Hardin—In the body. They are blighting badly.

Mr. Philips—Have you the Scott's Winter?

Mr. Hardin—Yes, but it has not fruited much though.

President—If there is nothing further we will pass this question, and take up the next question on the program.

Mr. Lord's paper will come in now instead of Prof. Goff's paper.

Mr. Philips reads communication from A. B. Dennis of Cedar Rapids.

President—We will now listen to Mr. Lord's paper before we discuss the plum question.

Mr. Lord reads paper and refers to specimens of plums preserved in salicylic solution.

THE VALUE OF OUR NATIVE PLUMS AND BEST VARIETIES TO PLANT.

By Dr. A. B. Dennis, Cedar Rapids, Ia.

The native plum industry has grown so rapidly the past ten years, that the number of varieties of the native species under cultivation numbers over two hundred varieties, that we can select from, and every year we add many new and valuable seedlings. This growth and development, marvelous as it has been the past few years, is but a feeble index pointing the way to a much greater success in the near future. The best to plant for market, are those that are large,

productive and red in color. With us, the following varieties have done the best: For early—Milton, Whittaker, Col. Wilder, Chas. Downing and Wild Goose. Medium—Hawkeye, Stoddard, Wyant, Wolf, Gen. Grant, Gaylord, Van Deaman, Dr. Dennis, Noyes Seedling, De Soto and Comfort. Late—Champion, Miner, Moreman and Garfield.

Chas. Downing and Milton are the most valuable of their class. Hawkeye and Stoddard, in medium season, and Champion and Miner the very best for late. We have lately eaten the fruit of three new seedlings that for size and quality bid fair to rival, if not outstrip all the older varieties. The names of these are Beatty, Fairchild, Omega, and Free-Silver. Some of these seedlings are doubtless the largest natives that have yet been originated. We are confident that our native plums are the only ones we can safely plant commercially in the northwest. In arriving at this conclusion it is not mere guess work with us, but rather the search-light of experience, that will convince any intelligent horticulturist that our conclusion is based upon solid facts. We have the largest collection of Japan plums in this section, and a goodly number of European varieties, and we have found that our best improved natives are superior as to hardiness, productiveness, annual crops, and as better sellers in our markets. It is true, most of them lack size and the desired quality, while a few named in this paper are superior to all others in quality, and compare very favorably in size with foreign sorts. We shall soon impart better quality and larger size through seedling productions, we will then have the finest plums not alone of this region but for the whole country. The foreign plums can only prove valuable as a commercial fruit in proportion that we have Americanized them by crossing with our hardy natives. It seems wondrous strange that so valuable a fruit as our native plum really is, should have been overlooked and neglected by our leading horticulturists, but the dawn of a new era for this fruit has finally reached the common sense of our horticulturists, as it came to them fifty years ago, in the development of our native grape through the Concord seedling; before Mr. Bull gave us the Concord by seedling

production of the common wild grape, grape culture in the United States previous to this advent had been a miserable failure, since then it has been a marvelous success. Under similar treatment such will be the destiny of all our native fruits.

THE PLUM AS A FRUIT FOR THE PEOPLE OF THE NORTHWEST.

By O. M. Lord.

In the discussion of this subject, we shall assume that the European plum is out of the question. More than thirty years ago, D. B. Wier, a prominent plum grower of northern Illinois, said: "Our only hope for the successful culture of plums west of Lake Michigan, is toward the native plum," and since then the experience of our most prominent and successful growers, has confirmed this opinion. Theodore Williams, who exhibited 150 varieties, including Japanese and European, at the late Nebraska state fair, says our best natives, are superior in every respect, to any others for this latitude. J. W. Kerr of Maryland has 250 varieties, and is probably the most extensive grower in the United States. Quoting from his catalogue, he says: "I have positive evidence, that every American home that can grow any other good tree fruit can grow native plums, with less trouble and expense, than attends the production of apples or pears." This statement applies to the N. W. with particular force. As forty or more of the varieties in his catalogue are indigenous, in the Mississippi and Missouri valleys, he also says, being guided by twenty years' experience, if I were to plant twenty acres, I would only plant native varieties.

Among the plums indigenous to the northwest, may be found those of the very best quality, for market and for home use, and also those of different seasons of ripening, and of peculiarities in bearing, affording a prolonged season of fruit; also, those of adaptability to different soils and conditions of culture. Now I wish to be understood, that

the consideration of varieties in this paper, is made from observations on my own grounds, and the opinion of their value or desirability for any other location, may differ widely from that of other growers. To illustrate this difference of opinion, I will name some prominent growers, and the varieties to which they would give preference. Mr. Wragg of Iowa, would name the Stoddard as the largest, best in quality, and most desirable for planting. Mr. Terry, probably the most prominent experimenter and grower of plums in Iowa, would name the Milton, the Hawkeye and Hammer; and Dr. Dennis would endorse the Milton. Mr. W. H. Guilford of Dubuque, says in the last Iowa Report, that the Rollingstone is the best all-around plum he has. Prof. Budd says the Wyant is the boss of all the natives. Mr. Watrous would give the Miner first place. Mr. Gaylord names his namesake. Mr. Geo. J. Kellogg champions the De Soto. Mr. Patten prefers the Rockford, Mr. Richardson the Mankato, Mr. Penning the Surprise, Mr. Harris has much praise for De Soto and Cheney. Mr. Cook of Windom names the Wolf, Mr. Heideman the New Ulm and Wolf. The Jewell Nursery Co. advertise the Aitkin as the earliest, largest and best. There are many others of more or less local notoriety, claiming to be superior. I have fruited all the varieties named except three, and many others, and if I were asked to name the best variety for any locality but my own I could not do so; but I may say that I have planted and shall continue to plant more Rollingstones than any other one variety. If the people of Wisconsin should ask for my opinion I would refer them to Prof. Goff, as I know that he, like myself, has room for all of them at least for trial, which is the only way to determine the varieties best adapted to any particular locality. There are, however, a few varieties better adapted to general cultivation than many others, notably the De Soto, a Wisconsin plum, may be named as one of the best, all things considered. This includes thrifty growth, early and abundant bearing, size, quality and appearance of fruit. Also adaptability to soil, altitude, climatic conditions, isolated or among others, neglect or care. No one has yet been found to have made a mistake in planting good trees and properly caring

for the De Soto. Now if this be true, is there room for other kinds? Yes. Why? Because we have earlier and later ones, thus prolonging the season, we have several varieties, owing to habits of blossoming or for climatic reasons, that sometimes bear abundantly when the De Soto is unfruitful under the same conditions, and this is true of all varieties. So that to be assured of fruit several kinds are very desirable.

Among the best early kinds ripening before the De Soto are the Cheney, another Wisconsin plum, the Rollingstone, the Gaylord and others. Later than De Soto are the Ocheeda, Stoddard, Comfort and Hawkeye. The Wyant, Rockford, Wolf, Weaver and some of the newer kinds as Surprise, New Ulm and Knudson's, ripen about with the De Soto, and the Wyant and Surprise are of superior quality.

In describing these varieties, a distinction should be made in regard to home use and for market. Nearly all kinds are adapted to home use when properly handled in the different forms for jellies, jams, preserves, canning etc., but for market, the main point to know is what sells best. It will be found for the general market, plums of deep red color, of large size, of firm texture, without particular regard to quality, will outsell those of small size, of dull color, and soft texture however good the quality.

For one who would only plant for home use, quality should be the first consideration. It unfortunately happens, that our best varieties if not adapted to their location or environment quickly degenerate, or revert and become inferior in all respects. This is the main reason why one grower will honestly recommend a kind that another will wholly condemn. Therefore, a failure with one or more varieties should not discourage any one from planting. Many of us here, can remember when prunes were not commercially grown in California; and last year the state produced 87,000,000 lbs., a crop of immense value, and California is no better adapted to the production of prunes, than the northwest is to the production of native plums, and when our people awake to the knowledge that several of our best varieties of natives, will

compare favorably with California prunes for domestic use, their value will be much more highly appreciated.

Advice as to planting—If only a few trees are wanted for home use, any of the large nurseries can supply them at reasonable prices. If one would plant largely for market purposes the methods of the nurseries in propagating may be resorted to. A few suggestions in this respect may not be out of place. Winter grafting of seedlings is unreliable. If the nurseries are successful with 60 per cent., they are fortunate. Some of them have abandoned winter grafting and have resorted to budding, which is more successful in producing trees. Others crown graft the seedlings without digging, which produces much better trees, though of course, attended with more expense. The budded trees are very liable to break off where the bud is inserted, especially if there should be a rank growth of foliage or top. A slower method, but a sure and satisfactory one, is to get a few trees of desirable varieties like the De Soto, Rollingstone, Cheney, etc., on their own roots, plant in well prepared ground, manure heavily, cultivate thoroughly and when they begin to bear, they will usually throw up sprouts from the roots, which should be taken up at one year old and placed in nursery rows, from which to grow permanent trees, or for grafting. These sprouts for practical purposes, are as good for grafting as seedlings are, and if for any reason the graft should fail we still have a chance for a good tree. The tendency of nearly all varieties is to grow too large a top for the size of the stem or body, making them very liable to twist or break down. They must be protected by close planting, staking, or thoroughly cutting back the top during growth. In conclusion I would say, I have seen some failures in attempts to grow plums, in which the reasons were obvious; want of care, and planting only one variety, are the most common. The Miner is a failure in my vicinity, probably from climatic reasons; it is unreliable in bearing though making a fine healthy growth. Some other excellent varieties where they originate, produce inferior fruit under other conditions; but these difficulties should not discourage

us, as they naturally occur in the production of many other fruits.

In the cultivation of fruits, and especially of plums, I am impressed with very much of the spirit of the Irishman, who importuned his friend t ofollow him to this country saying, there is no wurruck here at all, at all, and e get well paid just the same. Ye have only to mix the mortar and carry it, and the bricks up to the top on the platform, and there is a man to do all the wurruck. I only manipulate the materials. I take great pleasure in planting the seed, in watching the growth; the development of bud, leaf and blossom, reverently trusting to "One" much higher in the scale of being, to do all the work, assured that in addition to all my pleasure I shall be well paid and blessed in the fruitage, and this is enjoyed in no selfish miserly spirit, but all who will, are cordially invited to share in these bounties.

DISCUSSION.

Mr. Read—I would like to ask Mr. Lord if he has had any worked on the Marianna stock?

Mr. Lord—Marianna stock is important stock for top grafting.

Question—Is it hardy enough?

Mr. Lord—I do not know, our seedlings are better adapted to our grafts than the Mariana.

Mr. Dart—I would like to ask a question whether in propagating by root would it be better to cut off the roots than to wait for the trees to throw up sprouts?

Mr. Lord—If you are in a hurry, perhaps it would, though I have not met with success in this, and others have met with success.

Mr. Dart—How long are your cuts?

Mr. Lord—Four inches.

Mr. Dart—Upright?

Mr. Lord—No, slanting.

Mr. Wedge—How near the surface?

Mr. Lord—Beneath the surface.

Mr. Wedge—The upper end?

Mr. Lord—Yes.

Mr. Hatch—How many varieties and what varieties are you propagating by wood cutting?

Mr. Lord—Have not succeeded with any except Mariana, have tried many kinds.

Mr. Hatch—Can you make it grow from wood cuts readily?

Mr. Lord—No, I cannot.

Mr. Toole—At what time do you cut cions?

Mr. Lord—Immediately before I use them.

Mr. Hoxie—Do you find any difference between planting in clumps than single?

Mr. Lord—There are two or three varieties that will bear fruit standing alone without shelter. The De Soto, Rollingstone and Cheney will.

Mr. Hatch—What price do you get for your plums?

Mr. Lord—$1.50 per bushel.

Mr. Hatch—About what quantity did you market?

Mr. Lord—Nearly 100 bushels.

Mr. Hatch—What use is made of them by families that purchase them?

Mr. Lord—They are made into jam or canned or into jellies and preserves.

Mr. Barnes—I would like to add my testimony to Mr. Lord's paper on plum culture. I am growing over 20 varieties of the natives, I think he mentioned all I have excepting the Forest Garden. It is my experience that it is the best I have raised in two years. I can surely second all you say, that the natives can be grown with less care and attention than the majority of apples. I find them more hardy and easy to propagate, and the market first class. I got $2.00 per bushel. I could have sold hundreds of bushels in my neighborhood.

Mr. Lord—Regarding the Forest Garden, I have grown it for 20 years. It was one of the earliest, put out about the time with the De Soto. It is very popular. It always bears and bears abundantly but there are perhaps 50 other kind that are just as good, and I threw it away several years ago.

Mr. Barnes—I wish I had 10,000 to bear.

Mr. Lord—As I grew it, it was too soft for market, and too acrid for family use in cooking.

Mr. Seymour—I have a neighbor who says the Forest Garden is the best he has.

Mr. Lord—Tastes differ. I have heard people pronounce tobacco excellent, and it is a most disgusting thing to me. I am pleased when one likes the Forest Garden, they are sure to like the whole plum family.

Mr. Philips—What about the Aitkin?

Mr. Lord—I have some trees of the Aitkin.

Mr. Philips—Has it a round leaf?

Mr. Lord—Yes. It is distinct in character from any I have any knowledge of.

Mr. Edwards—In setting an orchard how far apart in the rows and how far between the rows?

Mr. Lord—I would put them 8 feet in the row and about 16 feet apart.

Mr. Kellogg—You spoke of the Miner as being unproductive.

Mr. Lord—I believe I have only had two crops of the Miner in 15 years.

Mr. Kellogg—Have you the Hawkeye near it?

Mr. Lord—Yes.

Mr. Hatch—How many varieties of plums have you?

Mr. Lord—Seventy-five varieties.

Mr. Hatch—What three would you choose as the best for real business purposes?

The De Soto and Rollingstone are the most profitable to me. The Cheney is very profitable.

Mr. Hatch—You know these three to be good?

Mr. Lord—Yes.

Mr. Herbst—Is there any difference in the bearing condition of the De Soto and Cheney, when planted isolated from each other?

Mr. Lord—The Cheney blooms and sets its fruit before the De Soto blossoms. (Refers to samples.)

Mr. Philips—What is your opinion of the Aitkin?

Mr. Lord—It was found growing wild in Aitkin county, Minnesota. It is entirely distinct in appearance. You can

distinguish it from any other by its leaves and twigs. It ripens in July, as early as the Cheney.

Mr. Moyle—How about the Mankato?

Mr. Lord—It looks like a true American.

Mr. Herbst—Have you any variety that plum-pockets as bad as the Cheney?

Mr. Lord—The Cheney is the worst. I have sometimes gathered large quantities of them, and the next year could not find one for a sample.

Mr. Toole—With me for four years it has been constant, and they have worried me. Would you chop them out?

Mr. Lord—I would not. Next year you may have all plums and no pockets.

About plum grafting, my method to succeed in making plum grafts grow. I have been asked that question by a good many N. W. nursery men. If your cions are fresh you will have no difficulty with grafting the native plums. You want fresh cions. If I cannot use them fresh, I pack them in leaves, or saw-dust or sand, or turned over sod and buried them in it.

Question—When do you cut cions?

Mr. Lord—Before the buds or blossoms start.

Mr. Kellogg—Is there any reason why you cannot graft before the frost is out of the ground?

Mr. Lord—I have done it with much success.

Mr. Kellogg—Do you graft in winter time?

Mr. Lord—With very poor success.

Mr. Hatch—Do you consider very high culture good for the development of the plum?

Mr. Lord—You cannot give it too much. The better the culture, the more success, and better trees you will have.

Mr. Toole—Do some suffer more from neglect than others?

Mr. Lord—Yes, but the De Soto will bear more neglect than others. I have had it in all conditions and stations.

Mr. Kellogg—The more neglect, the smaller the fruit and more of it?

Mr. Lord—Yes.

Mr. Hatch—Did you originate the Rollingstone yourself?

Mr. Lord—I found it on a creek near my place.

Mr. Toole—Are you troubled by any rotting on the trees?

Mr. Lord—Yes, it can be remedied by picking those which are too close together.

Mr. Kellogg—How about the curculio?

Mr. Lord—I have so many plums, the curculio has not time to attend to them.

Mr. Perriam—Is the Cheney a firm flesh plum?

Mr. Lord—No, it is not.

Question—What gave the Rollingstone its name?

Mr. Lord relates story of its origin dating back to 1837.

Mr. Barnes—Has the Rollingstone a round pit?

Mr. Lord—I have about 30 varieties of pits here. I will refer you to these.

Mr. Barnes—I know that mine have a round pit. I took that to be the reason it is called the Rollingstone.

Mr. Innis—How about the aphis?

Mr. Lord—It does not seem to materially injure them.

Mr. Edwards—Do you thin your plum trees?

Mr. Lord—If I wanted to raise large ones for market or for show I would thin them quite thoroughly. (Referring to samples.) These were not thinned at all.

Mr. Herbst—Why do you not try Mr. Dart's plan of girdling?

Mr. Lord—I have, but I have not seen any immediate results. Whether I did not do it at the proper time or effectually, or whether it did not have a marked effect, I do not know.

Mr. Toole—Do you not think that when they over-bear that they kill themselves?

Mr. Lord—That is one of their most valuable qualities. If they kill themselves overbearing, simply replant.

Mr. Perriam—What do you manure with?

Answer. Barn yard manure and ashes.

Question—Green manure?

Mr. Lord—Yes, even coarse marsh grass.

Question—Do you plow it under?

Mr. Lord—Well, I prefer to plow the ground every year.

Mr. Barnes—Would you not get a lot of suckers if you plow?

Mr. Lord—I find that is as valuable as any part of my business. I have never had too many. (Laughter.)

Mr. Seymour—Surface manure, is that the proper way?

Mr. Lord—By all means. Put it on in spring.

Mr. Kellogg—In root grafting in the house, would you wax them?

Mr. Lord—I have always done that. It makes them more firm.

Mr. Dart—Do you mean all over?

Mr. Lord—No, where they are spliced, simply take a paddle and spread over; it keeps the water out.

Pres. Kellogg—Have you any method to destroy aphis?

Mr. Lord—Kerosene emulsion, if you apply with a force-pump.

Question—At the time of the bursting of the buds?

Mr. Lord—Whenever you discover them.

Mr. Toole—They curl the leaves, so it is almost impossible to reach them if you wait too long.

Mr. Carns—Are there two varieties of wild plums?

One kind a thin skin and water pulp; the other is a thick skin or sometimes a medium. We find the thick skin on the bluffs. Now, this aphis works on the thin skin but not on the other.

Mr. Philips—Are there two distinct classes of native plums?

Mr. Lord—I do not know of any particular difference in that respect.

President—Have you had any experience with Japanese variety?

Mr. Lord—I have only a few. I have the Burger, Abundance, Starks, Gold, Ogon, Red June and Washura.

Question—Have you fruited any?

Mr. Lord—None but the Burger and Ogon.

Question—What do you think of the Ogon?

Mr. Lord—It is a beautiful thing.

Mr. Kellogg—Have you any of the European varieties on your grounds?

Mr. Lord—I have. A number of them.

Mr. Kellogg—Do you know of any Russian that is good?

Mr. Lord—No, sir; I have had ten, and would not give one cent for a car-load.

Mr. Kellogg—Can you name them?

Mr. Lord—Hungarian Prune, Muldovke, Nicholas, Richard and Early Red.

Mr. Kellogg—None of them good?

Mr. Lord—Not particularly good.

President—We will now take up the second topic—Considering the Evident Tendency to Lower Prices for Small Fruits, is it Safe to Continue Extensive Planting?

J. C. Ferris—I would like to say a word before this question of plums is closed. I have tried these Russians as spoken of, and have tried all domestics I could get hold of, and I wish to speak of the Prunus Domestica. Some years ago a lady in Galena imported sprouts from Europe. It bears abundantly. They call it the German Prune. Another is a native plum earlier than the Cheney. It is one that goes by the name Boone or Krause, and that plum is a red plum and very good size. For the earliest Americana I got 50c a peck. In regard to grafting the plum, I have had this experience that the sand cherry is the quickest thing to bring the plum into bearing, that I ever tried. If grafted on the crown, it will blossom, if not the next year, certainly the year after.

Mr. Toole—Do you find the trees long-lived?

Mr. Ferris—I have had it three years. I believe I have the honor to be the first one to place it on that stock some 12 years ago.

Mr. Dartt—Did you graft to get root?

Mr. Ferris—I did not graft below the union, or the plum tree would have been dwarfed.

Mr. Kellogg—I have 25 Miner that would not bear, and I took them up. I grafted De Soto limbs on Minor trees and I got them to bear. I think the De Soto plum is too early to polenize the Minor plum. It is a humbug, this Minor, unless you have it with another variety.

Mr. Wedge—I have a Miner bearing heavily.

Mr. Perriam—About this question of planting plum trees in clumps: Years ago we always found our bearing clumps

in thickets, and when we transplanted them, we got no fruit. Mr. Daniels, of Illinois, has good success in planting in clumps. As to the wild plum, they do certainly sell better in the Chicago markets, than even the California plum. There is something about the round, red plum, the flavor, perhaps.

Mr Lord—I know of no fruit so valuable as the Wild Plum. I have a group standing in a close thicket that have not borne a plum in 30 years. They blossom every year. I have some others that were taken up where they had borne always every year. They were remarkably early and I set them out, and resorted to every means I was master of, and I never got a plum.

Mr. Dartt—Did you girdle them?

Mr. Lord—No.

Mr. Dartt—There is where you made your mistake.

Mr. Lord goes on saying, "While there is another group that have not missed a crop in 30 years, which shows there is a vast difference in variety."

Mr. Loope—I am growing fruit and expect to get some money out of it. Would you advise me to take 500 plum trees, and set out and take care of them for a number of years, with the idea that I will get some money above the expense of caring for them, or would you advise me to set 2,000.

Mr. Lord—I am afraid you did not listen to my paper. I will just give you an instance. I had a fine crop of plums; I had that year 80 bushels; I loaded a wagon and went to Winona. They were Rollingstone plums, and I could not sell them. I gave some of them away, and tried among the citizens to sell them at 50c per bushel. I felt rather down in the mouth. I shipped my plums to St. Paul and received $2.10 clear per bushel.

Mr. Kellogg—There are two points that come in this question of clusters and clumps. Did you ever mix these two clusters?

Mr. Lord—Yes.

G. J. Kellogg—Have you bees?

Mr. Lord—Yes.

Mr. Kellogg—Then I do not know why they do not bear.

Mr. Lord—I was treated to a great surprise in the Gaylord plum. For several years they were remarkably fine. In the spring of the seventh year, I could not find a pistil in the blossoms and of course they bore no fruit.

Mr. Perriam—Has anybody succeeded with plums upon high, dry rolling ground?

Mr. Barnes—That is just the situation that my ground is on. I have high, dry ground, but I keep it well mulched.

Mr. Hatch—The Wisconsin Plum Crank would like to have a word. I have had 30 years' experience with native plums. My ground is high rolling ground. There is value in plums. I want to say this to you, there are great disappointments. I cannot discuss them in all of the features, as the time is too short. I will say that you must take this plum question and go slow until you have studied the matter thoroughly. Prof. Goff has known of my plums for years, and we have had frequent consultations, and this Bulletin embodies the best on the subject. (Refers to Bulletin.) I believe as far as this Soceity is concerned, it is the most important ever issued.

President—I think we have given this question time enough. We will take up the third question on the program, What is the most economical method to restore exhausted fertility to worn out orchard lands?

Opened by Mr. Hatch:

Perhaps there is no subject as seriously important to me as this. I have desired to learn how to do that and had to do it, to get my living. The question that comes to you as Horticultural Society members, is this: What shall we do with orchards that need something to make them more profitable? We have an orchard that does not bear. It needs to be renovated. Now, the question is, How can we do this economically? Now, if we have fertility in any form, and wish to apply it to the lawn, we want to apply it in such a way, that it will get to the tree itself. Now, that may be a rather forced statement, but it is a fundamental one. A great many expect to apply fertilizers to the trees, but the grass and weeds there probably take it. Now, a great many orchards are in grass, and it will take a tremendous lot of fertilizer to reach the trees. The grass will get it before

the trees get it. You will have to depend on a great deal of moisture to take it to the trees' roots. Now, how can we do this most economically? Then, the next question is, What shall we apply? We know that we can apply nitrogen in various forms, in barn-yard manure, etc. We can give potash and phosphoric acid in ashes. That is the cheapest thing. Then the next question is, When to apply it? This is one thing that has been ignored by some. It is just as important that you feed a tree at the right time as to feed a horse at the right time. Now, do you know why? Let us consider. The right time is when it needs it most—when it gets its growth, and when it makes its growth, in the early part of the season. If it is there available for the tree, get it to the roots as soon as you can. The tree will absorb it. It would be absurd, if you were going to put a horse on the race track, to feed him at 8 o'clock if you expect hard service of him at at 9 o'clock. So in feeding trees you want to do it at the right time. Now, since all the buds on an orchard tree, especially an apple tree, are out by the first of July, there is no use of feeding the tree after the first of July. Now, we have gone over the question of the time, ways and means. Now, the question comes back, How can we get the material, most economically. We have not fertility enough in the farm or barn yard manure, and if we have no ashes, what are we going to do? The next resort that we would have in this matter, would be green manure—that would be through the use of the clover plant. We suppose that we sow this and plow it in as a fall crop. This makes us begin the year before hand. Now, if we put on the clover, we can supply the nitrogen. How can we get that into the soil? Now, if a man has 5 or 10 acres of orchard he can get fertilizer from his stables; it is a different thing if you have 40 acres. If you lack potash, and phosphoric acid, and you cannot get wood ashes, there is a problem I cannot solve for you. I believe, however, that 9-10 of the so-called exhausted orchards are capable of renovations, good culture will make available what there is still in them. Mulching will protect against the loss of moisture, and I have done a great deal along this line with pruning, and if I had an orchard infested with bark louse, I would

take off 25 or 10 per cent. of the top of the trees. If it was lacking vigor, I would do it early in the season, if the winter was sufficiently mild. I would not prune after a severe winter. Next spring break up the soil, apply a fertilizer that is most economical. It is very likely if your trees are in sod, your roots will be so near the surface that you will mutilate them by cultivating. Break it up with the least mutilation; get as much feed to the tree as you can, and then couple it with good pruning, and if you can do so, join spraying to it, and then wait hopefully. Your orchard will then be renovated, and you can solve the question yourselves how you can most economically do all these things. I believe I have now covered the ground.

Question—Would it be well to put the manure on late in the fall instead of spring?

A. L. Hatch—If the tree has entirely stopped growing, I see no reason why it should not be all right, unless the rain should wash it away. If you visit the University, I wish to call your attention to some work done by Professor Goff. It is in line with washing out roots. Among other things, he washed out a McMahan apple tree, planted in 1890. It took him about three weeks to wash out the roots. The roots extended out 12 feet and 9 feet in depth. It is a most beautiful demonstration.

Now, think of your trees, drawing fertility out of your soil, crowded together with three times as many trees as ought to be, amidst grass and shrubbery, and then you wonder why they do not bear. They are probably covered with bark louse, and when summer comes, they have not enough vitality left to withstand the fungus.

A. G. Tuttle—I wish to mention that a remedy for bark louse which I tried and found to be perfectly true and simple in its application. When the trees were wet, I took dry ashes and sifted the top full; the ashes would stick to the tree, and I never saw any more bark louse. It is fully equal to washing with soapsuds. The ashes will stick to the tree all summer. It effectually destroys them.

Question—When do you apply it?

A. G. Tuttle—Before the leaves come out.

F. C. Edwards—How would Mr. Hatch trim or prune a tree?

Mr. Hatch—I suppose you want to know something about the mechanics on the subject. What I would take away and what I would leave, to leave it in good shape. Now, I can give you a few general ideas on that. Take away the most defective parts, leaving the best. Make the top symmetrical; get the limbs evenly scattered around the tree, so that the tree balances up. Most anybody can think this out for themselves. There is a Russian class of apples on which you will find it necessary to thin out all the limbs along the branches. The Wealthy has a tendency to bad forks. Like the Patten's Greening I should certainly nip the branches and make it branch and re-branch. You take some tall growers, like the Haas. They would grow to be sky-scrapers if you did not cut them down.

Mr. Dartt—I have had a good deal of experience in pruning and tree growing, but I have not had a great deal of what you might call real scientific trainng, but still what I might say would be as well understood by those in my condition, perhaps better than what those might say who have had this scientific training. We were told last night we must get a great deal of science, but I think all the common sense, and all the workmen do it practically, and that is the way for the common people to do. In pruning, I think that the correct thing is to prune with a main center stem, and side branches, so that the side branches do not get a leading position, and do not out-grow the center stem. One point in regard to fertilizer: Sometimes trees in an orchard will need alkali, the substance that comes from burning wood, the substance that is wood. That can be supplied very easily, by putting in concentrated lye in your mixture when you are spraying, especially if sprayed when not in leaf. It is not necessary to use so much science in our common every-day work. My opinion is that a tree that is a good, hardy tree, will stand abuse. It will stand cutting any way you want. I am working in that line in my experimental work, and I am abusing trees in order to see how much they will stand.

Mr. Reed—I think there is a point that orchardists ought to

look into. I find that the all-absorbing topic through Illinois and Missouri is to keep up the fertility, and the thing that is gaining in prominence is what is commonly called the Southern Cow-Pea. There are probably but very few locations where they can not grow it. You can gain more nitrogen through it than any other method known to man. It makes a very large growth of foliage, so that you can have the most amount of vegetable matter for their soil at once.

A. L. Hatch—What size are the seeds?

L. H. Reed—They vary. About the size of the navy bean.

A. L. Hatch—Color?

L. H. Reed—They come in all colors—white, gray and speckled.

J. C. Stickney—I have been experimenting with the Cow Pea seed I secured from St. Louis. The general trouble is that they are evidently not well adapted to our climate. We cannot plant them early enough and not earlier than June, and they take the rest of the season. Now, we want something that we can plant, so we get an early crop, first of July or after winter rye, and have them make growth enough for a good amount of foliage.

A. L. Hatch—There are two ideas in connection with them. Unless you have much rain after a crop of barley or rye, it will leave that ground so dry, that you will have much difficulty in growing. There is another feature, and that is the "weavel," which is playing havoc with the bean.

Mr. Stickney—I admit that this is a danger. Still the bean will bear deep planting.

Mr. Hatch—Cannot you get your peas in deeper?

Mr. Stickney—Peas do not suit me; they do not make quite growth enough.

Mr. Hatch—Now, if you go to Door county there is one variety called the Mammoth Marrowfat, that will exceed others five or six times.

Mr. Dart—There is one point that I ought to have mentioned now in the discussion of this question, and that is an orchard in grass. Now, this condition should never exist. It should be cultivated. You will find that cultivation is the thing

for an orchard. The sod and grass rob the trees of the moisture, and this should be avoided. We now must consider what should we put on. What shall we plow in or cart on. I think in this country that they cannot do better than cart on stable manure. If you live near cities, it can be had from livery stables, and if not, plow in green manure. When plowing in clover, cut off a crop, or mow off a little, and cultivate. This is, I think, the thing for orchards. I noticed, in particular, in a visit I made in Iowa, as a representative from Minnesota, I noticed that every orchard that was reported doing well was very highly cultivated, or else it was kept rich by use as a feeding lot.

Mr. Tarrant—I would like to say on this question of cultivation, I have plowed my orchard. I have sowed Marrowfat (peas). Now, they keep the orchard in pretty good condition. I turn in my pigs and young stock and let them eat. Do you think it is better for me to let it right on the ground or plow it in? My orchard is not trimmed, but I raise pretty good apples. I have not manured my orchard at all. Shall I plow my peas in?

Mr. Perriam—Now, if you sow clover you get humus, both in the roots and in the top, and besides that you get saltpeter or nitrate in some form. In Michigan the soil is sandy, and they have much difficulty. They have to use clover for producing more humus. In your clay soil you have it, but you must bring it to the surface. As to the plowing of green matter under, you do not need to plow an orchard very deep. All the feeding roots lie about 2 inches to 8 inches beneath the surface. If you plow under your green crops and keep on cultivating, you will not go far out of the way. The effect of mulching, is this, to draw the feeding roots right up to the surface. You seldom know a summer rain that will reach three inches through the loamy soil. Do not buy potash; you have it in the soil. About the cow bean: It is a bean, no pea at all. If you sow cow bean for a mulch on the ground, it is not considered necessary to plow the ground while the plant is drying out in the fall and winter. Everything goes into the ground and in the spring it is more easily plowed and turned under than in the fall.

Mr. Philips here gives advice to the short course boys, and reads a letter from Potosi.

Mr. Reed—I wish to make one point in regard to this cow-pea, why it is better than the common bean—it is a better storer of nitrogen.

Mr. Barnes—I have an orchard of 10 acres, which has been seeded down for six years. Seeded with clover. I have decided to plow this orchard in the spring. Now, shall I plow the grass under or burn it?

Mr. Perriam—Soil, black?

Mr. Barnes—Rather, on a sandy loam surface.

Mr. Reed—Do not burn it.

Question—I would like to ask Mr. Kellogg, When is the best time to prune?

Mr. Kellogg—The best time to prune is when you can rub off the bud with your thumb.

Question—When is the best time to manure an orchard?

Mr. Wedge—We ought to keep them fed all the time. It appears to me that a tree, when it is maturing its fruit buds and preparing for winter, it is at the time doing a great work and is preparing for the year hence. They need it at all times. It appears to me that we need a great amount of work in our orchards at all times of the year.

President—I think I will now have to close this question.

Mr. Johnson here brings up a point in the Constitution, stating: "In 1895 we passed an amendment which seems to conflict with our Act of Re-organization. Your president asked me to bring this up at this meeting. It is about this way: If you are going to tell a man which way he is to go to get at a certain place, he must know where to start from." (Refers to conversation had with the Attorney General.) Article 4, of the Constitution of the Wisconsin State Horticultural Society, adopted in annual meeting February, 1895, which reads, President, Vice President and Secretary shall be the Executive Committee. Then refers to Section 1459.

Mr. Philips—I would say that in trying to live up to that section, it was impossible to get an Executive Committee together when they wanted to do any business. It would mean 16 members. So the new committee of five

members was adopted. Mr. Hatch proposed it. This other should have been annulled. It was done to further the interests of the Society so that we could get the Executive Committee together without a great expense. There was nothing intentional done to injure the Society, and now we will probably have to wait until the legislature is in session again.

Mr. Hoxie—Cannot the Society amend its rules?

Mr. Johnson—With regard to that provision of the Constitution that provided that it may be amended by a two-thirds vote, we are not merely an association. Our Society was organized under the laws of the state of Wisconsin, and to a certain extent we are a corporation. As such we have powers and privileges that we cannot have otherwise. Our By-Laws must conform to the laws of the state. It is not proper for you to amend your Constitution so it does not conform with the state laws.

President—What power has the Society Article 6?

Mr. Kellogg—Can we not conform to the law until we can get it regulated by electing delegates in those congressional districts? Well, then, why not appoint in those districts, and go on with a quorum of 5.

Mr. Johnson—I do not wish any action taken on it.

Mr. Hoxie—I would be in favor of having the Constitution revised for the reason there would be difficulty in certain districts where we have not even membership. Now I would be in favor of having the Constitution revised, if necessary at the next session of the legislature.

R. J. Coe—This question is not before the house, and I move that we adjourn now and take it up tomorrow.

On motion adjourned.

WEDNESDAY EVENING.

Senate Chamber, 8 o'clock.

President Kellogg in the chair.

Committee on awards of potatoes. Mr. L. L. Olds will act in the capacity of judge, and make his awards on potatoes in the morning.

Mr. Kellogg—I would like to remind the committee on the trans-Mississippi exposition, that we have a meeting tomorrow morning at 8 o'clock.

President—The first topic on our program is "Horticulture in Our Schools," by Mr. William Toole of Baraboo.

THE WISCONSIN STATE HORTICULTURAL SOCIETY AND THE PUBLIC SCHOOLS.

William Toole, Baraboo, Wis.

If the benefits of our State Horticultural Society were confined to its members, the state at large would feel but little interest in its existence, and would certainly contribute nothing to its support.

We may, however, congratulate ourselves that the history of our state Society and its influence has been the measure of horticultural interest in our state, and of much of the promotion of horticultural interests in other states.

Its make-up through all its life has been of men and women ever ready to spread the gospel of beautiful homes, more bountiful supply of healthful fruit, and a higher appreciation of God's gifts to us in the vegetable kingdom.

Wishing to do the greatest good for the greatest number, the members of our Society, individually and as a body, have been always eager to promote and distribute horticultural knowledge, but in no one direction has so little been accomplished in proportion to our desires and the importance of the subject as the teaching of horticulture in our public schools.

Much has been attempted with good results, convincing us that a knowledge of the first principles, and reasons why,

of how to grow plants and trees, so necessary to the happiness of any enlightened community, is as important in its way as is a knowledge of the principles governing the study of language and mathematics.

A good beginning in any undertaking is more than half the assurance of its success, and being convinced of the importance of the subject, it behooves the members of the State Horticultural Society to consider well what is its best plan of action, and what course of instruction is most desirable and practical for general adoption. This much being accomplished we will find that there are as yet no text books suitable for common school use.

With suitable text books, either prepared or among future possibilities, there will be no trouble in persuading the educators of our state to make use of them. So many of our best teachers have felt the need of horticultural education in their work, and have realized the benefit of their own personal efforts in that direction so much, that in any educational assemblage we could from among them secure advocates for the cause we would promote. It is important to decide if most attention shall be given to horticulture as a science or an art—whether we shall give prominence to the reasons why, or the how to do—and we wlll venture to say here that our intended course of instruction must treat largely of first principles and reasons why of things, allowing the Horticultural operations, as seed planting, examinations of roots and sprouting of seeds, grafting, transplanting, etc., to be brought in incidentally as object lessons. Our book must be within the comprehension of children from eight to fourteen years of age, because so many finish their schooling before they are fifteen. Such a book could be mastered by any intelligent teacher without previous training. We would have our book treat of vegetable physiology and structure that the functions of various parts from minute rootlets to bud and leaf may be understood, as also the reasons for the different operations of providing most suitable soil and air conditions. The process of growth of plants should be made plain to a proper understanding of the reason for various operations of graftage, cuttage, etc. The reasons for dif-

ference in soil treatments when wet or dry, conservation of moisture by tillage proportions of plant food—all must be thought of.

Enough of the geography of plant distribution needs be given for a proper understanding of adaptation of species to different soil and climatic condition. In fact there is so much needs be taught, that careful thought must be given to keep the book within bounds of convenience for the purpose intended. Who shall prepare our book? Who is more capable than our own Professor Goff? Would any one venture to bring out such a book in advance of demand? Convince our educators that there is need for such instruction and they will champion it. With the recommendation of our leading educators our legislators, if necessary, would authorize its adoption and then there will be no trouble in finding publishers willing to bring out the book.

Our interest in school horticulture need not stop here. Premiums in various ways may be offered to promote more active interest in the subject. Following the lead of our more progressive superintendents nearly all of our counties have educational exhibits at the fairs. Our State Horticultural Society might offer a moderate premium for essays in competition within each county. The winning essays might then compete for a more valuable premium, the prize paper to be read at our winter meeting. Premiums also might be offered to teachers. Something in this way could be done to promote beautifying school grounds. The writer of this offers in his own county a premium for the following: "To the teacher making the best exhibit of pressed leaves and flowers from plants grown in school house and grounds." Much good might be done in the ways indicated, and with our Wisconsin Horticulturist to help promote the good work we would soon find ourselves able to look back over much valuable work done for the benefit of the young people of our state, and work, too, which would interest and benefit many parents as well.

President—This paper is now open for discussion.

Mr. Reed—I would say that this question is being agitated very much. The first steps in this direction were taken by

the state of Missouri. There will soon be a demand for teachers to teach horticulture in schools. All surrounding states have taken up the work, and there are now six or eight states interested in this direction. I hope that before this meeting closes, a committee will be appointed to take up this work.

Mr. Barnes—Our county school superintendent and the professor of our high school are agitating this question considerably and did talk of giving this winter, a few lessons in grafting and propagating.

Mr. Toole—At the meeting of the Northern Illinois Horticultural Society a committee of three was appointed to outline a plan to teach horticulture in the state.

Mr. Hatch—I am very much surprised that the vice-president of the Wisconsin State Horticultural Society does not know of the work that is being done in Wisconsin for the promotion of horticulture. I want to say that Professor Goff has prepared a text book for just this purpose. The first edition is all ready for use, and is being used in several agricultural schools and colleges besides our own. This book answers for the general reader, as well as for the teacher.

Mr. Perriam—I look upon this question as one of the most important that the State Horticultural Society of Wisconsin has taken up for many years. We know very well that the children, the little children, are nearer to nature. The farther they get along in years, the farther they get away from it. This work that Wisconsin is engaged in, has been called out from the absolute necessity of holding our younger children close to nature. It will be of immense value in their after education. I am heartily glad that this Society has taken up this question in earnest.

Mr. Toole—The vice-president is conscious of feeling somewhat shrunken, but still not much wiser by the remarks of our friend from Richland county. My paper was supposed to supplement Prof. Goff's work. We all feel quite sure there are thousands of children who will never take a short course in agriculture or enjoy the benefits of an education

here at Madison. Therefore some active steps should be taken.

Mr. Dolton—I do not rise to make a speech. I rise on a question of information. I would like to have brother Hatch tell me at what book-store these books of Prof. Goff, are on sale. I would like to take one home with me.

Prof. Goff—I am very heartily in sympathy with Mr. Toole's paper. He has treated the subject in a very excellent manner. As far as the publicity of my books is concerned, I have felt that if the book is right, it will find its way. I do not yet feel that we have a text book that is fully suited to the needs of the primary school. While I have attempted to make my book simple, I feel that I must make it yet more simple and elementary before it will answer for the common school. Text books for the common school must be exceedingly simple, to be useful. I hope we shall soon have one that will fully answer the purpose. The subject is one of very great importance, and I am glad that attention is being directed to it in so many states. The present winter, a bill is being introduced in the legislatures of several states to provide for a township high school of agriculture, but that does not reach the common school. I hope that I may live long enough to see the time when something in the line of elementary plant culture will be taught.

Call for Prof. Bailey.

President—Prof. Bailey will speak on conditions favorable, etc.

Prof. Bailey—It is a pleasure for me to be here. It is my first visit here, but I have always felt that Wisconsin is one of the first states in horticulture. (Applause.) I expected to speak tonight on some matters of education; however, I will do as you choose.

Prof. Bailey is asked by Mr. Philips to speak particularly for the benefit of the students of the short course, who have all turned out to hear him.

Prof. Goff—I would like to know if Prof. Bailey can be with us tomorrow.

Prof. Bailey—I can be here tomorrow morning and afternoon. I do not wish to infringe upon your program, I will

speak on either subject, but neither one will edify you. (Applause.)

Prof. Bailey—It is a very difficult matter to treat the subject of education of the rural community. During the past two or three years we have had this question up in New York state and we have endeavored to find some way by which we could introduce agriculture and horticulture into the schools. I believe that if we are to interest people in the matter of horticulture, we must begin further back than the school itself,—we must begin with some promulgations of the general truths. If I were to make any address upon the matter, I should divide my topic into three general heads. In the first place, What education is; second, I should give some of the reasons for education in the rural districts, and in the third place I would outline some of the means by which it can be brought about.

The education which is of most value, is that which enables us to understand and know principles, but much of our education has fallen largely from the mark. To explain. Our short course students come to us in the winter term, and I say to these bright young men, that it is not my purpose to teach them how to hoe turnips, but if they desire to know why we hoe turnips, we will teach them. In other words, I should like to teach a young man how he can hoe turnips by teaching him why. We often hear people say that they have forgotten much of the information and the subject matter which they learned in school, and they conclude that it was of no value to them. At a teachers' meeting, it was said by a teacher, that geometry and algebra were not much good, as he had forgotten much of his geometry and algebra. That man overlooked the fact that it is not the subject matter but the drill which is of importance. I have also forgotten my algebra and geometry, but these subjects were drilled into me as mental gymnastics. I look upon my own work and teaching in the same way. It is my privilege (and the students' misfortune) that I teach horticulture. The subject-matter I teach to them I consider to be of minor importance; but the methods may be useful. The purpose is to draw out the reasoning power of the student.

In other words, I do not think it is my business to try to make men farmers. If a man has any individuality and any choice of personality, it is that of choosing his vocation. I am glad to take farmers' sons and try to educate them. I think we have too many perfunctory farmers already. We teach therefore for the purpose, 1st, developing the powers of observation, and 2nd, to strengthen the power to draw inferences therefrom. We do not begin at practice, and arrive at theory; we begin at theory or principle, and thereby arrive at practice. Power of analysis is most important. If I were to teach a young man how to lay a drain, I would first teach him why I do it. The why can be applied whether you live in one state or another. How much more important is this than the mere fact of drainage.

The chief reason why we should educate the farmer, is that there is an evolution in society, resulting in revolution in agriculture. There are radical changes at the present time. Farms are being abandoned in New England as the result of these disturbances. In some regions nine out of ten of the farmers wish to sell their farms. They have been well-to-do, but cannot adapt themselves to the changing conditions. The remaining tenth, who do not want to sell, are in some specialty-farming. They are doing something better than the general run of their neighbors. The very fact that nine-tenths of those farmers of any section are desirous to sell, shows that there is some sort of a change. If they cannot adapt themselves to the changes, they must get out and let others have the place. We must admit that this struggle is going on; we must keep pace with it. We must put ourselves in line with the evolution. Agriculture has not kept pace with the evolution of transportation, and manufacturing. Not until agriculture has put itself in line with the economic and sociologic movements of the time, can we have our agricultural colleges as well filled as the mechanical colleges are.

We have heard much about the farmer's social position. We are apt to compare the farmer of today with the Washington, the Jefferson, or the Romans. The conditions of the men at those times were different. There were only three

great occupations then, theology, agriculture and war. At the present time the occupations of men are counted by the score, and many of them are filled by men taken from the farm. The boy has more avenues from which to choose. We therefore overlook the reasons why the farmer occupies a different position than he did formerly.

The best way to educate farmers is by means of farming. The best farms ought to breed the best boys. If we are to make progress with agricultural education, we must begin with the farm itself. A great variety of crops is itself a means of education. The old time farmer was a man of one idea, because he was a man of only one crop. They are men who rarely attend institutes. They work along narrow lines, and they have never been obliged to hustle. Diversity of cropping, therefore, educates the farmer. It broadens and deepens his life. I look upon the insects and fungi as direct means of education. Nothing will make a man read more intelligently than a case of San Jose scale. It will set him to work and to thinking. The man who works with only one or two crops, has none of the difficulties that come upon the specialty-farmer.

The itinerant teacher has had a great effect on rural communities. The itinerant teacher takes his own personality to the people, and presses his influence upon them. The institutes have been very successful, but institutes must occupy a higher plane each year, else they cannot keep pace with their constituency. We have endeavored to keep pace with this rising interest, by establishing different types of institutes, which we call schools. People are always asking if these institutes have an effect on the people. You can point to one decided effect, and that is that the people are calling for a higher method of education. Instruction which was given ten or fifteen years ago when the institute forces first went out, may not be adapted to the institutes of today.

The agricultural newspaper is a great means of education. Even though its instruction be superficial, it does awaken interest in the rural districts, and it is a powerful stimulator of thought. The experiment station bulletin is a most powerful educator. I am impressed with the difference be-

tween German and American experiment stations. The German agricultural experiment is a child of agricultural chemistry, and the experimenting is largely laboratory work. The American experiment is the laboratory plus the itinerant teacher.

I believe that the best results which may be expected from an agricultural education will be a general improvement amongst the farmers,—not an improvement of the farms as much as an improvement of the farmers. We are going to see men who are better educated, who are broader thinkers, who move in the better society of the country, that will act directly upon the farm interest. I am inclined to believe that we cannot introduce agriculture and horticulture in the rural schools as distinct subjects by themselves. This opinion may be contrary to common opinions. We cannot teach professions in our rural schools. I do believe, however, that we can teach those subjects which are of especial interest to the farmer. We can teach nature-study, awaken the pupil's mind to the principles of the tillage, plant life, etc. I am not this evening, in a condition to speak, but I wish to leave with you the thought that we may expect more from agricultural education in awakening the farmer than in improving his farm. Let the practice come after the theory. (Much applause.)

Mr. Kellogg—I move that we make Professor Bailey an honorary life member of our Society. Motion carried.

Motion to adjourn in order. Motion carried.

Adjourned.

THURSDAY A. M.

President Kellogg in the chair.

President—I would like to ask if the chairman of the committee on Awards is ready to report?

President—Report of the committee on the trans-Mississippi Exposition. Mr. Hoxie, chairman, will please report.

Mr. Hoxie—Let me say that I think it advisable that we

consult with the governor, who is at Milwaukee, before we report. I expect to see him this evening.

President—Under the circumstances we will continue this committee.

G. J. Kellogg—This question whether we can appropriate $500. We want this settled, we want to go with this to the governor. We are going to make an exhibit, whether the Society backs us or not.

Mr. Hoxie—I suppose that from the funds that the Society now has on hand, we could make this donation without crippling us. There is an implied supposition that the state will do as it did when we made an exhibit at New Orleans.

Mr. Barnes—I would suggest if our funds are short, that we try to secure some life members.

Mr. Hoxie—I move the adoption of the report of committee.

President—Are you as a Society willing to appropriate $500 for the purpose of making an exhibit at Omaha?

Mr. Johnson—Before we vote on that, I would like to have some one set forth the advantages that would accrue to this Society from such an exhibit.

G. J. Kellogg—I am fully convinced if we are left out from making a show from our state, it will be detrimental to us. Nebraska already has 200 bbls. of apples in cold storage, Iowa 80 bbls. They declined to accept the 180 varieties exhibited at the Winter Meeting, thinking that they could do better. Missouri has more in cold storage than Iowa. There will be a general exhibit of fruits by the states. I have a report of the Commissioners appointed throughout the state to carry forward that enterprise. It stands with us to do something. It is the 50th anniversary of our state and would be the proper time to go in and make an exhibit. The fruit can be gathered without expense. All we ask is the actual expenses. In connection with this amount we have about $700 in the treasury now, and if we go before the legislature with no money in our treasury, we will get an appropriation.

Treasurer called upon.

R. J. Coe—There is about $700 in the treasury. In the beginning of the year we had a little over $900. We need hardly

worry about the surplus. (Laughter.) I am heartily in favor of making a good exhibit. But whether we can leave the treasury almost empty. We have run behind this year about $200. We have voted to continue the magazine, and it seems to me we ought to go carefully on voting as large an appropriation as that. If the legislature will step forward and make this back to us, it is all right, but that is one of the uncertainties.

G. J. Kellogg—I do not think we need to have it made up to us. We have a surplus of $700. It will be reduced $100 before long.

R. J. Coe—We do not need to ask for any new appropriation. That appropriation is renewed each year.

President—I would like to see an exhibit made at the trans-Mississippi Exposition, this being our semi-centennial. The question occurred to me as Mr. Johnson placed it, What are we to gain in an exhibit with those large apple-growing states of Missouri, Iowa and Nebraska. That is the question. Mr. G. J. Kellogg proposes the holding of a large exhibit in our own state to celebrate the semi-centennial.

Mr. Loope—I would rather have the confidence and esteem of my own community, so in the same line of reasoning, I would prefer an exhibit in our own state, that would appeal directly to our own citizens.

Mr. Barnes—Friend Johnson and Mr. Loope express our opinion in the matter. We would rather make a show at home than abroad, and if we knew that Wisconsin was going to have this semi-centennial exposition, we would rather contribute to make a show at home. Could we not make this appropriation in this shape?

Mr. Toole—When this matter was first brought up I was heartily in favor of making an exhibit at Omaha, but I am glad these things were brought up to set me to thinking. If we make it here we will have the assurance that we will have help from the state. "Charity begins at home."

Mr. Hoxie—I look at this from the standpoint of a Wisconsin man and not a fruit grower. Wisconsin should not be left out. I do regret that there was no appropriation made last winter for this work, for it seems to me above all things of as

much importance as the appropriation for the World's Fair. How much we as a state derive from the exhibit, who can tell? Time will reveal that. I do not know as to whether or not they offer any premiums, but that is nothing compared with the interest of the state pride. We are needed abroad, and the position that we occupy in the northwestern states is very unique.

Mr. Dolton—It is rather strange that a man from Illinois should come here and advocate the interest of Wisconsin. I have stepped over the state line, come here to attend the winter meeting of the Horticultural Society of Wisconsin. I feel here today as though I had a right to say a few words in regard to this show, even if I am an Illinois man.

Mr. Philips—He has made himself a life member, too. (Applause.)

Mr. Dolton resumes—I am always willing to tear down the great state lines when it comes to advocating the interests of the great northwest. Gentlemen, for God's sake, make an exhibit at Omaha. Do not fail to make one of the grandest displays that will be made in the fruit line, if it is in your power to do it. (Much applause.) You speak of $500. The paltry sum of $500. I, too, like to have a good reputation at home, but our home, when we come to consider and transact business of this kind, is the entire United States. Step over the state lines and do not hesitate for a single moment for $500. It would not hurt this Society to take $500 out of the members' pockets. Gentlemen, I thank you. (Prolonged applause.)

President—Anything further on this subject?

Mr. Johnson—I asked what advantages would come to this state from an exhibit at Omaha? How it will benefit the horticultural interests of this state, I do not see. The money in our treasury is as a trust fund. The state gives it to us under the impression that it will benefit the whole state, and we ought to handle it wisely and for the benefit of the state. Yesterday it was indicated that we spend too much money on the magazine, and is it too much? If we make an exhibit simply to gratify our own pride, then it is a failure, unless we get some other benefit from it.

J. C. Ferris from Iowa—We dislike to miss Wisconsin, when Iowa, Missouri, Illinois and Nebraska make exhibits. We would like to compete with you and we want to see you down there at that exhibit. We may after all not outshine you. I also am willing to tear down the state lines for the interest of the great northwest.

Mr. Dolton—I am much elated that there is a gentleman here from Iowa representing the interest of Wisconsin at Omaha.

Now, about making an exhibit at home. Who will you show it to. Whereas, if you make an exhibit at Omaha and go there with your fruit, you will meet people from all over the world. You will meet people who think you cannot raise a good apple in Wisconsin. You will advertise the great fruit growing country of the northwest, and many will come to the conclusion that Wisconsin is a great fruit state. We, in Illinois, are going to make a great fruit show. I want to see Wisconsin represented there. I will be proud to show my membership badge and show that I am a member of the State Horticultural Society of Wisconsin. Gentlemen, by all means sustain the report of this committee. (Applause.)

L. H. Reed—I think this is a question of judicious advertising. The money here expended will come back to us.

B. S. Hoxie—I want to add one word. A gentleman visited our tables one day at Chicago, who was engaged in the fruit business in the city of Washington. He said, "I get my potatoes from Waupaca. If I could buy such apples as you have here on your tables, and take them with me to Washington, I could make a fortune." Prof. Bailey says, "I am surprised to see how nicely Wisconsin apples are colored up. We cannot do it in New York."

Mr. Kellogg—There seems to be a little reflection about the money in our treasury. We would not vote to spend a dollar of it if it were not for the interest of the state, and for horticultural territory. If we have a full treasury from year to year, we will get no appropriation. I am in favor of making this expenditure for the Omaha exhibit. I believe in making a show there.

President—I would like to see this resolution qualified. We may have no apple crop, then what?

Mr. Barnes—If we make this appropriation, if the contingency arises, we will know it before our summer meeting, and we can then rescind what we might do now.

Mr. Perriam—Wisconsin is famous in the northwest for her small fruit. Michigan cannot compare with strawberries, raspberries, etc. There is your great hold. Your apples are not of such excellent quality, but you are celebrated for your small fruits.

President—We will now vote on this resolution.

President states motion to appropriate $500.00 to make an exhibit at Omaha.

Motion carried.

Motion that the committee confer with the governor. (Carried.)

Mr. Plumb—I have a little matter here. Can it be presented now?

President—I will state that Mr. Plumb was a committee of one to prepare a History of Horticulture in Wisconsin. It is a matter pertaining to this largely that he will present to you now.

Mr. Plumb reads.

Mr. Herbst—In order to save time on this question, I move that this matter be referred to the executive committee.

Mr. Kellogg—May I substitute that we take up this question the first thing? Motion carried.

Mr. Toole, Vice President, takes the Chair.

Mr. Toole—We will now listen to the "President's Annual Address." Much applause.

Mr. Kellogg, President, reads address:

Friends and Members of the Wisconsin State Horticultural Society:

After another short but eventful year of labor, we come together in annual reunion to review the results of the past, lay plans for our future work, in anticipation that the same may be wisely made and faithfully executed. Custom re-

quires that I should on this occasion present some thoughts in harmony with the line of work in which we are engaged. In so doing I am continually reminded that I am speaking to many who have traveled the long road before me, are ripe in years of horticultural experience, and therefore I can be expected to say but little, if anything, that will be new to them. The season of 1897 has been an eventful one to the fruit grower; his pathway has not been strewn with roses, nor was he rewarded in a degree which is expressed in a "land flowing with milk and honey." While we cannot complain of the frosts or a lack of moisture the past season, the conditions as regards the fruit crop of 1897, are entirely changed from those of 1896. In 1896 the apple was king, and was first in the ranks as a means of supplying wholesome fruit to many nations of the earth. In 1897 the apple crop was nearly a failure in Wisconsin and small fruits were king. They ruled high in production and exceedingly low in price. We cannot only record the largest crop of all varieties of small fruits that were ever produced in the state of Wisconsin, but as well the least margin of profit to the producer. While nearly all other industries appear to show a marked improvement, the fruit grower, the florist, and the nursery-man were the last to feel the great panic of 1893, and consequently the last to recover. We meet again to transact the business of our Society, to perform the duties we as a Society owe the people of the state of Wisconsin. We are here for conference and mutual advice. We are here for better acquaintance with horticulture and with each other. We meet to renew our friendship, to get new ideas, receive new enthusiasm, and instruct each other in the line of work in which we are engaged. We are, as it were, instructors of the public and we should be careful and present nothing but what will stand the test of adverse criticism. It is the test of our ability to present to the public the most reliable information that can be obtained upon horticultural subjects. We are expected to determine and partially prove many things which go out to the people to assist in making and beautifying our homes and I trust we shall ever prove faithful. While we have occasion to feel proud of our many religious and educational institu-

tions through which our sons and daughters may become educated men and women, we feel there is no class of people doing more to elevate the standard of civilization, enrich and beautify our state than our workers in horticulture. In this connection I desire to call your attention to horticulture in our public schools. This subject is one that has recently awakened much discussion and its importance is attracting much attention at the present time. The agricultural press, horticultural societies and reports, and farmers' institutes, do a great work in educating the people, but they all fail to reach the children, who are to become the men and women of the future. If the school children of today could receive instruction in the elementary principles of horticulture (especially those who are crowded in the large cities), it would pay from the financial point of view to say nothing of its well known refining, moral, and elevating influence. The love for trees, fruits and flowers is almost universal and we must remember that horticulture is a part of the life of almost every home. Professor Hansen, who has traveled in the old world, tells us that the elementary principles of horticulture are taught in nearly all the schools of Germany. In almost every school yard there is a good garden and nursery, for the purpose of demonstrating the principles of horticulture. Is this example not worthy of emulation? Can our Society assist in the good work that has scarcely a beginning? These are suggestions for your consideration. At the last general assembly of the state legislature, chapter 148 of the laws of 1895, was amended appropriating the sum of $250.00 annually for the maintenance of experiment stations. We have practically but the one experiment station located at Wausau, Wisconsin, which is under the supervision of our society. In the month of November, in company with our secretary, I had the pleasure of inspecting this station and planning for future work. In the short space of two years we found the trees had made a remarkable growth and the station bids fair to meet with every success we had anticipated. Our secretary has given you an extended report in the columns of our monthly magazine, and I will only add that the residents of Wausau and vicinity have manifested a warm interest in this

station and express themselves in terms of the highest appreciation. We need more of these stations; northern Wisconsin is fast developing as an agricultural section of our state. The forests are disappearing before the ax of the woodman, and the settler is using all his energy for the building of a home. Can we not materially assist these home-builders in northern Wisconsin by establishing small experiment stations which will be object lessons and demonstrate that certain varieties of the apple, plum and cherry are hardy in certain sections of the state. I would recommend that this society the coming spring locate and if possible establish and stock at least one or more trial stations in northern Wisconsin. In accordance with the resolution the governor has set apart room No. 207 for the use of our Society. At our last annual meeting, it was found impossible to occupy this room, on account of a partition having been built dividing this room and we were assigned a room up in the garret. This Society has accumulated in past years quite an extensive library for which we should have a permanent home. Our rooms should be made pleasant and attractive. We should have a horticultural museum that would attract the attention of the student in horticulture. We should have an extensive collection of fruit samples, either prepared in wax or preserved in alcohol. Every new fruit produced in the state, or that becomes prominent in the state, should become a part of our museum and remain permanently on exhibition. This should be done not only as a reference for our members at annual meetings, but for the use of all who may chance to visit our rooms throughout the year. As a token of respect to their memory, we should have our walls hung with pictures of those who were prominent in the pioneer days of horticulture, and have since passed to their final resting place. As soon as the state historical building is complete, the state historical collection will no doubt be removed from the rooms in the capitol building, and with a well directed effort we may be able to secure these rooms. A permanent home for this Society is each year becoming more of a necessity, and I deem it of sufficient importance that immediate action should be taken, looking to the accomplishment of this purpose in the near future. I

will only briefly allude to our monthly magazine, as it has now been published two years and passed the experimental stage. Its usefulness will be extended as its circulation increases. I feel that it should become one of the permanent things of our Society and numbered among the leading horticultural magazines of the northwest. Provided satisfactory arrangements can be made for the editing and printing, I would recommend the continuation of the publication of this magazine, and its future management be vested in the executive board of this Society. In making these suggestions I have but one aim, the prosperity and upbuilding of horticulture in the state of Wisconsin. In conclusion I desire to thank the members of this Society for the honor and kindly co-operation in the pleasant work in which we are engaged. While there may have been some contentions in our ranks during the three years I have served here as your chief executive, I can assure you that the memories of the past will be always pleasant and at this time I desire to return to your hands the trust you have reposed in me.

Pres. Toole—We will now listen to the secretary's report.

Mr. Philips, secretary, reads report, including financial report.

REPORT OF SECRETARY A. J. PHILIPS.

Fellow Members: I now present you my fourth annual report and, like the one preceding it, it covers a period of disappointments to many horticulturists. Some complain of drouths, hail, low prices, over production and light yields, and very few of my numerous correspondents seem to be exactly satisfied. We as a class are inclined to be dreamers, or in other words, to live and bank largely on hope. Our best and most profitable crops are usually about one or two years ahead, and when the time for great profit arrives we ofttimes find ourselves disappointed. Our main business is horticulture and that is a broad term. It emraces almost everything that makes our country healthy, beautiful and desirable to live in, and were we so situated that we could in justice to ourselves, our families and our creditors, make dollar-hunting in

horticulture a secondary consideration and use our efforts to beautify our homes, our school grounds, the resting places of our dead, the roadsides and all public resorts, we could do more good. Three hundred years ago John Knox said there should be a school in every parish in Scotland, and now I say every horticulturist should be a missionary to help establish a fruit planting association in every school district in our land. As a Society I fear we have been too selfish and narrow and inclined to criticise and find fault with each other, thereby to a great extent destroying our usefulness in the community and the state. As your secretary, as I grow older, I am continually becoming more conservative; the less I favor large planting and over-production I am not favoring those who grow plants and trees for sale, but I am favoring those who will set a few plants for market and family use, whose numbers count up into the millions and whose trade would be better to the nurserymen. My desire is to see the day when every family, rich or poor, will have home-grown fruit on their tables and beautiful trees and flowers around their homes, be they ever so humble; and when every child in the land can have fruit to eat in its season without pilfering it. Then we would have fewer tramps, better citizens, better schools—and better children. I do not mean to discourage the growing of fruit for the markets, but we as horticulturists must study the question of a better distribution. Last season while thousands of bushels of apples and berries were a total loss in the large cities, there were people who lived a short distance from those places who had no fruit to eat. Perhaps we desire to do too large a business, and ship too much to large places. I think at this time that this subject demands our careful attention, and the subject of packing and marketing fruits demands attention. Apples from a distance were sold in my town last fall—well faced on both ends of barrel and poor, unsalable trash in the middle. Fruit production in our state has grown to be of importance, and the time has come to give it more thorough organization. From the large correspondence I have been receiving I am of the opinion that we have through our meetings and the institutes recommended fruit growing too strongly; some have

said with small plantation of fruit the grower could buy other farm products cheaper than to grow them. One man said they told him that with one bushel of strawberries (of which you can grow from seventy-five to one hudred bushels on an acre), you could buy fifteen bushel of oats. He said he tried it and when he took his berries to town he could not sell a bushel for enough to buy oats to feed his horses once. All the advice we give and every step we take must be with care and sincerity. I can name one locality where last season at the institute fruit growing received quite a boom—so much so that when a band of foreign tree-sellers, from a state much south of ours, traveled among the farmers for a few weeks—as a result of their labors they took twelve hundred dollars of good money from that town last fall and I do not think the trees are worth any thing in our climate. Horticulture is all right, but we need a lot of traveling missionaries to keep the people from being swindled.

During the year I have received several letters from horticulturists in sister and adjoining states urging a union to focalize the interests of the northwest—say Illinois, Iowa, Minnesota and Wisconsin. In referring to Secretary Wiley's report in 1871, the first of which I have a record in the office, I find he urged this at that time. It is interesting to read those reports of nearly thirty years ago. Vice President A. G. Tuttle said at that meeting that apples could be produced here in abundance and nowhere is the crop so certain. He also urged farmers to plant trees and if money was scarce plant seeds and raise seedlings—and now we are told seedlings are no good. I find at that meeting the fruit list was —Duchess, Astrachan, Fameuse, Tallman Sweet and Golden Russet, without a dissenting voice. Wilson headed the strawberry list, Delaware the grapes, Doolittle the raspberries and President Stickney spoke favorably of the Briton blackberry. I find in looking over and rearranging our library that this report of 1871 is the first on record. There is one report of 1872, one of 1874, none of 1873, none of 1875; plenty from 1876 to the present time except 1886, of which there are only three copies. Those old copies are

pleasant reminders of our history as a Society, and whoever is delegated to care for them should be careful that those of which there are so few should be kept carefully, so that they may be preserved. In looking carefully over our proceedings for all these years I am of the opinion that no one thing we have done since our organization will be of as much benefit to apple growing in Wisconsin as the locating and planting of the trial orchard at Wausau, of which a report has been made, providing the original plans are faithfully carried out by whoever has it in charge. Of course it will be somewhat difficult to find a man who can drink in and put in practice those things which the older ones have been studying on so faithfully for all these years. I feel a deep interest in it and am surprised to find that, so many are watching this new enterprise in other states. A lady in South Dakota writes: "If you Wisconsin people had gone into this twenty years ago it would have saved us much money spent in trying new varieties. In my own case I know it would have saved me time and money. I sincerely hope it will be a success for our state and the whole northwest.

Our summer meeting at Omro last June was one of unusual interest. The attendance was good, the exhibition of fruits, flowers and vegetables was unusually fine. Mrs. Smith, widow of our time-honored president, was there and it gave us older members an inspiration to hear her good counsels to the members young and old. In my own orchard I was favored the past season by a visit from President Underwood and Secretary Latham; also Wyman Elliott and the veteran J. S. Harris, all of the Minnesota society. My numerous and continuous experiments in top working were carefully noted and examined by them. One or two have found some fault with our report for 1897, but on the other hand I have received so many compliments from members and from horticulturists outside of our state that on the whole I am well pleased.

Being an off year for fruit the show at the state fair was not large, but Mr. Barnes, of Waupaca, Mr. Jeffrey, of Milwaukee, Mr. Tarrant, of Janesville, and Mr. Nye, of Appleton,

made good shows, and the fruit was of fine quality. Our veteran, J. C. Plumb, placed the ribbons and I felt that he worked faithully and hard to do the work right.

Our Society and the local society at Appleton will feel the loss of our honored member, Daniel Huntley, whose likeness appeared, as did also the touching account of the man, in a recent number of the Horticulturist by Mrs. Wolcot of Appleton. I cut it out and pasted in my scrap book beside that of his bosom friend, J. M. Smith. I congratulate the Society on the success of the Horticulturist in Mrs. Johnson's hands, and recommend that she be retained another year.

All of which is respectfully submitted.

FINANCIAL REPORT.

Wisconsin State Horticultural Society.

To A. J. Philips, Dr.

Postage, Feb. 2, 1896, to Feb. 2, 1898	$45 57
Printing for same time	31 40
Express and freight	52 66
Miscellaneous expenses	75 45
Salary of secretary	300 00
	$505 08

Credit.

Feb. 2, 1897, received on salary	$300 00
Received on miscellaneous expenses	205 08
	$505 08

President—The financial report will be acted upon by the Executive committee.

President—We will now listen to the treasurer's report.

REPORT OF TREASURER R. J. COE.

RECEIPTS.

1897.		
Feb. 5.	Balance on hand from last year	$934 21
Feb. 5.	Received from secretary's membership	65 00
Feb. 5.	Received from J. L. Herbst, ad. in Magazine	5 00
Feb. 5.	Received from L. G. Kellogg, ad. in Magazine	10 00
Feb. 5.	Received from F. C. Edwards, ad. in Magazine	2 50
Feb. 5.	Received from J. M. Edwards & Son, ad. in Magazine	5 00
Feb. 5.	Received from Jewell Nursery Co., ad. in Magazine	5 00
Feb. 5.	Received from J. P. Andrews, ad. in Magazine	5 00
Feb. 5.	Received from Chas. Hirschinger, bill at Minnesota meeting	2 25
Feb. 5.	Received from memberships and subscriptions	10 75
Feb. 5.	Received from state treasurer	750 00
Mar. 5.	Received from G. B. Smith, membership dues	1 00
May 11.	Received from A. J. Philips, membership dues	10 00
June 24.	Received from A. J. Philips, membership dues	11 00
June 24.	Received from A. J. Philips, membership dues and subscriptions	5 50
June 24.	Received from Mrs. Johnson, subscription	6 50
June 26.	Received from state treasurer	750 00
June 26.	Received from A. J. Philips, membership	5 50
		$2,584 21
	Expended	1,846 32
	Balance on hand	$737 89

EXPENDITURES.

Order No.		
7.	Hall, J. R., expenses, delegate, winter meeting	$5 85
8.	Single, Ed., expenses, delegate, winter meeting	5 88
9.	Taylor, Prof., expenses, delegate, winter meeting	20 00
10.	Babcock, E. F., expenses, delegate, winter meeting	4 32
11.	Tuttle, A. G., expenses, paper, winter meeting	1 98
12.	Johnson, Franklin, expenses, delegate and superintendent, winter meeting	2 96
13.	Parsons, A. A., expenses, delegate, winter meeting	7 50
14.	Hartley, J., expenses, delegate, winter meeting	5 35
15.	Wakefield, J., expenses, delegate, winter meeting	8 17
16.	Converse, D. C., expenses, paper, winter meeting	1 31

EXPENDITURES—Continued.

17.	Pingrey, expenses, delegate, winter meeting.....	3 96
18.	Read, L. H., expenses, delegate, winter meeting.....	5 55
19.	Barnes, A. D., expenses, paper, winter meeting.....	8 45
20.	Hoxie, B. S., expenses, paper, winter meeting.....	5 05
21.	Hirschinger, Chas., expenses, delegate, Minnesota meeting	12 30
22.	Sarles, J. D., expenses, delegate, winter meeting.....	4 00
23.	Hatch, A. L., expenses, premium, trial station and paper	13 95
24.	Wolcot, Mrs. Frank, expenses, delegate, winter meeting	9 55
25.	Barnes, A. D., expenses, premium, winter meeting....	8 00
26.	Herbst, J. L., expenses, salary, etc., winter meeting...	34 32
27.	Hirschinger, Chas., expenses, premium, winter meeting	7 50
28.	Tong, Geo. M., expenses, delegate, winter meeting....	8 45
29.	Plumb, J. C., expenses, premium, winter meeting.....	50
30.	Park Hotel, expenses, Prof. Green's bill.....	9 00
31.	Holmes, W. H., expenses, delegate, winter meeting...	8 45
32.	Campbell, Mrs. V. H., expenses, ed. Magazine.....	25 00
33.	Sterandt, Wm., expenses, premium, winter meeting...	4 50
34.	Kellogg, Geo. J., expenses, delegate, premium, etc., winter meeting	3 60
35.	Tarrant, Henry, expenses, premium, winter meeting..	4 50
36.	Tong, Geo., expenses, premium, winter meeting.....	2 00
37.	Toole, Wm., expenses, paper, winter meeting.....	1 50
38.	Schumaker, expenses, delegate, winter meeting.....	5 57
40.	Philips, A. J., expenses, ed. Horticulturist.....	100 00
41.	Huppeler, W. H., expenses, board of delegates, winter meeting	126 00
42.	Toole, Wm., expenses, winter meeting	80
43.	Taylor, Prof. W. F., expenses, board at Park Hotel....	3 00
44.	Coe, R. J., expenses, exchange and postage.....	6 50
46.	Lugger, Prof. Otto, expenses, winter meeting, R. R., etc., from Minnesota.....	21 10
47.	Kayser, Lillian, expenses, reporting, winter meeting..	50 00
48.	Griggs, H. W., expenses, stereopticon service.....	7 00
49.	Chappell, F. H., expenses, premium, winter meeting..	3 00
50.	Plumb, J. C., expenses, Horticultural History.....	10 00
51.	Goff, Prof. E. S., expenses, delegate to Washington...	32 44
45.	Philips, A. J., expenses, premium, winter meeting....	3 50
52.	Kellogg, L. G., expenses, Madison and Baraboo.....	19 17
53.	Alwood, Prof. W. B., expenses, Washington, account San Jose scale	10 00

EXPENDITURES—Continued.

54.	Hatch, A. L., expenses, Eureka and Omro meeting....	9 50
55.	Philips, A. J., expenses, first quarterly salary.....	75 00
56.	Philips, A. J., expenses, secretary's office.....	51 31
58.	Goff, Prof. E. S., expenses, acct. San Jose scale.....	5 22
59.	Toole, Wm., expenses, summer meeting.....	9 78
59½.	Menckler, L. A., expenses, premium, summer meeting.	9 50
60.	Pingrey, S., expenses, premium, summer meeting.....	50
60½.	Philips, A. J., expenses, secretary's office.....	34 91
62.	Humphrey, E., expenses, premium, summer meeting..	2 00
62½.	Floyd, H., expenses, premium, summer meeting.....	1 00
63.	Kellogg, L. G., expenses, premium, summer meeting..	1 00
63½.	Smith Sons, expenses, premium, summer meeting....	9 50
64.	Thayer, Farms, expenses, premium, summer meeting..	9 50
64½.	Crooker, Mrs., expenses, premium, summer meeting..	1 50
65.	Herbst, J. L., expenses, premium, summer meeting....	9 84
65½.	Kroll, Will, expenses, premium, summer meeting.....	1 00
66.	Kellogg, Geo. J., expenses, premium, summer meeting.	28 04
66½.	Holmes, W. H., expenses, paper, summer meeting.....	4 50
67.	Philips, A. J., expenses, premium, summer meeting...	1 00
68.	Tanner, Thos., expenses, premium, summer meeting..	6 50
68½.	Treleven, Mrs. J. D., expenses, premium, summer meeting	5 00
69.	Fisk, J. L., expenses, premium, summer meeting.....	5 00
70.	Hanson, Gertrude, expenses, premium, summer meeting	1 00
71.	Graves, Bertie, expenses, premium, summer meeting..	50
72.	Barteau, Miss, expenses, premium, summer meeting..	1 00
73.	Goff, Prof. E. S., expenses, summer meeting.....	6 48
74.	Johnson, Mrs. Mary C., expenses and editing, Horticulturist	74 63
75.	Coe, R. J., expenses, Omro and Madison.....	12 32
76.	Wakefield, J., expenses, paper, summer meeting.....	1 00
77.	Powers & Hood Bros., expenses, printing Magazine..	90 33
77½.	Wunt, Henry L., expenses, premium, summer meeting	1 00
79.	Kellogg, L. G., expenses, premium, summer meeting..	2 10
81.	Kayser, Lillian, expenses, reporting, summer meeting	22 22
82.	Traxell, Grace, expenses, premium and report, summer meeting	2 00
83.	Philips, A. J., expenses, second quarterly salary.....	75 00
84.	Philips, A. J., expenses, secretary's office.....	27 85
85.	Huntley, Mrs. D., expenses, summer meeting.....	2 25
87.	Philips, A. J., expenses, third quarterly salary.....	75 00
89.	Toole, Wm., expenses, executive board meeting.....	2 20
90.	Philips, A. J., secretary's office.....	32 54

EXPENDITURES—Continued.

93.	Kellogg, L. G., expenses, executive board meeting....	5 50
94.	Coe, R. J., expenses, executive board meeting and hotel bill	6 22
96.	Kroll, Will J., expenses, premium, summer meeting..	1 00
97.	Johnson, Mrs. Mary, expenses and editing, Horticulturist	61 91
98.	Toole, Wm., expenses, delegate, northern Illinois meeting	9 98
99.	Goff, E. S., expenses, delegate, Minnesota meeting....	18 75
100.	Baraboo Republic, expenses, printing Horticulturist..	128 48
101.	Coe, R. J., expenses, northeastern Iowa meeting.....	19 05
102.	Kellogg, L. G., expenses, president's office.....	25 00
103.	Campbell, Mrs. V. H., expenses and badges.....	20 63
104.	Philips, A. J., expenses, fourth quarterly salary.....	75 00
105.	Philips, A. J., expenses, secretary's office.....	58 47
106.	Johnson, Mrs. Mary C., expenses and salary.....	57 78
107.	Coe, R. J., expenses, treasurer's office	5 00
		$1,846 32

TRIAL ORCHARD FUND.

1897.

Feb. 5.	Balance on hand.....	$115 34
June 26.	Received from state treasurer.....	250 00
		$365 34

Expended.

Order No.		
1.	Single, Ed., rent of land for trial orchard.....	30 00
39.	Coe, R. J., cash paid for trees.....	$15 00
53½.	Philips, A. J., expenses at trial orchard.....	25 00
57.	Single, Ed., work and expenses, trial orchard.....	8 10
61.	Philips, A. J., expenses at trial orchard.....	31 06
78.	Hirschinger, expenses at trial orchard.....	5 00
80.	Kellogg, L. G., trees for trial orchard.....	4 00
86.	Goff, E. S., expenses at trial orchard.....	9 47
91.	Single, Ed., expenses, work and rent, trial orchard....	76 55
92.	Kellogg, L. G., expenses at trial orchard.....	11 55
95.	Philips, A. J., expenses and work at trial orchard.....	39 81
		$255 54
	Balance in trial orchard fund.....	$109 80

Madison, Wis., Feb. 4, 1898.

Members of the Wisconsin Horticultural Society.

We, the undersigned committee, having looked over the accounts of secretary, treasurer and business manager, and compared them with vouchers, we find them correct.

Franklin Johnson.
Frank C. Edwards.

Mrs. Campbell—There has been placed in my hands a resolution that reads: "Resolved that A. J. Philips be continued as superintendent of the trial orchard."

Resolution adopted.

On motion a committee of three was appointed to report upon the President's Address, consisting of Mr. Hoxie, Dr. Loope, and D. C. Converse.

G. J. Kellogg—I move that the secretary's report be referred to the same committee.

Motion prevails.

The Society then proceeded to the annual election of officers.

Mrs. Campbell—I move that Secretary Philips cast the ballot of the Society for Mr. L. J. Kellogg for president.

Motion adopted and ballot so cast and Mr. L. J. Kellogg declared elected president.

Much applause.

For Vice President the majority of votes were cast for Franklin Johnson of Baraboo.

For secretary Mr. Philips had a majority of votes cast and was declared elected secretary for the ensuing year.

On motion the secretary cast the ballot for Mr. R. J. Coe, for treasurer.

On motion the secretary was ordered to cast the ballot for W. J. Moyle as corresponding secretary for the ensuing year.

Mr. President:

Your committee have examined the reports of the president and secretary and would report as follows: We believe the time has come in the history of our Society when we should have a permanent room in the State Capitol as a

library and meeting room for the Society. Iowa and other states having such rooms provided for by the state, we, therefore recommend this part of the report of the President and advise that the Executive board consult with the acting governor for the purpose of securing such rooms and if necessary introduce a bill to that effect at the next session of the legislature.

In considering the present status and work of the state societies we do not consider it wise to organize a new Northwestern society.

We would also heartily endorse the action and effort of the state department of Public Instruction in cultivating a love of the plants, trees and flowers through the Arbor Day programs. We would also recommend that the State Horticulural Society suggest to the department of Education to urge the planting of trees and otherwise decorating the school yards of the state as an object lesson in horticulture.

We recommend the establishment of one or more trial stations in sections more trying than the one at Wausau. However, in view of the expenses of the Omaha exhibit, we deem it wise to postpone the matter until another meeting of the legislature,

B. C. Hoxie.
T. E. Loope.
D. C. Converse.

On motion adjourned.

THURSDAY AFTERNOON.

President Kellogg in the chair.

Mr. Henry Tarrant was duly elected a member of the Trial Orchard committee for the next three years.

President—Mr. Converse will report on the President's Address and Secretary's Report.

On motion the report made by the committee was adopted.

President—I do not think it advisable to take up more work on our program this afternoon as Prof. Bailey is here.

Call for report of committee on Awards.

On motion report of committee on Awards was adopted.

President Kellogg—We will now have the pleasure of listening to Prof. Bailey on

CONDITIONS FAVORABLE TO THE FORMATION OF FRUIT BUDS.

Prolonged applause.

Prof. Bailey—(Stenographer's report.)

Mr. President, Ladies and Gentlemen:—

It is a great pleasure to be with you this afternoon, and to say something about the setting of fruit buds, and the production of buds in general. Wisconsin has a distinct future in the production of native plums and apples. I have for a number of years been interested in the native plum question, and in our state we are growing 150 varieties or so. I am impressed with the fact that some that grow well with you, are inferior in New York. Each section has some distinct type of agriculture or fruit culture. I cannot give you any specific means for the development of fruit buds. The experiences I may have had in New York may not apply to Wisconsin. There are, however, some fundamental principles which will apply equally to New York or Ceylon, therefore when I talk to you on "The Conditions Favorable to the Formation of Fruit Buds," I will take a broad, general view. If therefore I give you a talk, I shall ask you to take a general view of the Philosophy of Pruning.

We are nearly always confounded in speaking of pruning, because we do not analyze the questions concerned therein. In the first place, pruning proper, has to do with the cutting of the plant for the well-being of the plant. In the second place, it has to do with the shaping of the plant or training, which is a matter of personal ideal. This question of training plants is a question of your personal opportunities, and we will leave it aside for this hour.

I will state the general reasons for pruning plants: 1st.

To modify the vigor of the plant. That is, to make it stronger or weaker.

2nd. To produce larger and better fruit or flowers.

3rd. To keep the plant within bounds.

4th. To change the habit of the plant in regard to growth, from wood-bearing to fruit-bearing, etc.

5th. To remove injured parts, those that are dead, etc.

6th. To facilitate in harvesting the crops, in spraying, etc.

7th. To facilitate or improve tillage.

8th. To train the plants to some desired form. It is almost futile to enter into controversy on this eighth subject as it depends upon each one personally.

The first principle which I have written, and which I conceive to be most important, is this,—heavy pruning of the top of the plant produces vegetable growth. Let us look at two great features in plant physiology. The root takes in material from the ground. There is a balance between root and top growth; the root supports the top and the top the root, and the cutting off of the top, will send out water-sprouts because the root is stronger than the top.

In the second place, a heavy pruning of the root tends to lessen the production of wood. I do not propose to enter into the subject of root-pruning. Root-pruning tends to the production of fruit-buds. It can be applied only in small areas. In the old world, where much effect can be expended upon one given plant, they can give attention to the pruning of the root. In our large orchards this cannot be done with practical success.

Again heavy pruning of the top of the plant tends to rejuvenate the declining or weak parts. In New York state during the past few years we have had much trouble with weeping birches. The tops tend to die out. We are not quite sure whether it is the result of fungous disease, but the best treatment, seems to be to cut out the injured parts, and thereby force the other parts to renewed energy. This proposition is really about the same as the first, but it has many different bearings. What shall we do with the trees severely injured by winter? I have had letters from several

well-known fruit growers of the Northwest (some are here in this audience), in regard to this question. The proper treatment for a tree that is so injured, is to prune it very heavily. This is the best thing we can do. It has been said that pruning trees in winter time is likely to be followed by serious injuries. This may be true in the Northwest where the atmosphere is very dry and the winter cold, because too much surface is then exposed to evaporation. I am convinced that this general opinion in the Northwest against the pruning of trees in winter, is founded on good observation. We need the whole covering of bark on our trees in dry winter climates. Yet, in general, the proper way to treat a winter-injured tree, is to cut it back heavily. The injured wood is comparatively useless anyhow, because the growth which takes place is just underneath the bark. If one can keep the exterior of the trunk and the bark alive, it does not matter if the heart-wood is dead. If we can force the tree to make a rapid spring growth, we can heal-in the whole of the injured wood. During the two or three cold winters we have had in New York, we tried this heavy spring pruning and found that the black-heart represented nearly all of the wooden cylinder, and around this was formed a deposit of clean, white wood as a result of the vigorous growth induced by heavy pruning. The black-heart is no injury to plants so long as decay does not set in; and the danger of decay is lessened by the enclosing growth of new wood. The question now is, whether this pruning shall be done in the winter time or in spring. Upon this question, I will not pronounce. I will only say that pruning in winter may expose too much of the wood by evaporating and dry freezing and may not be advisable. In the winter of 1894–5, two very cold snaps swept over Florida. Orange trees were frozen to the ground in some cases. Then arose the great question, as to how to treat them. There were many different treatments tried. It was my privilege to inspect the orange groves of Florida, for the purpose of endeavoring to find out which kind of treatment gave the best results. Those which had been cut back to the live wood, seemed to me to have done the

best because there was less old and dry wood left from which evaporation could take place.

Fourth, a pruned plant tends to resume its natural or original form or habit. Each plant has individuality. A Baldwin apple tree is different from a Northern Spy, and even no two Northern Spys are exactly alike. The proper pruning, therefore, is that which the plant or tree naturally accepts. A point which bears upon this question is the renewal of the leader. If the leader is destroyed a new one will appear whether upon the top or root. No matter how often you cut it off, the root will make an effort to renew its leader. Cutting off the tap root may not permanently affect the shape of the root. The plant tends to renew its root, the tap root tends to form just as completely as the leader of the top does. The more vigorous the plant, the greater the tendency to renew itself when pruned. The tap root is the leader of the root. During the past three years we have cut off the tap roots of many plants, but when the plants were dug again we find the tap-roots renewed.

Fifth:—The habit of the plant tends to vary according to age. Persons ask us if they shall head-in trees, but that is a question that must be decided by the age of the plants. The question is always asked, Shall we head-in the Kieffer pear? The Kieffer pear is a very vigorous grower, but a poor pear. It shoots up as straight as if it would run to heaven. (But it could not get there.) Laughter. When it begins to bear, however, it spreads and broadens. It may be advisable to head it in when young, but it does not follow that the operation should be repeated every year.

Sixth:—One part may live at the expense of another part. We know that a plant cannot make use of the material taken in by the roots, until this material has been elaborated by the leaves and green parts. Strong shoots draw very largely from the stored nutriment in the twigs. Water sprouts are robbers.

Seventh:—Water Sprouts. These are large, strong shoots from secondary buds. They are the result of a disturbed equilibrium of the plant. The formation of water sprouts

is influenced more by the vigor of the plant than by the seasonof the year in which the pruning is done. The season has an influence, a most decided one, but it is secondary. They are usually the result of heavy pruning.

Eighth:—The tendency of the plant is to grow from the uppermost bud, and this tendency is most pronounced on young plants.

Ninth:—The heading in of the young growths tends to develop the lateral and dormant buds. There are various opinions in respect to the merits of the practice of heading in trees. Heading-in has two distinct uses. It modifies the form of the tree. If a person wishes to grow a thick-head, round-top tree, let him head-in the limbs. This is a matter of personal preference, but heading-in has other effects. One of these is that it tends to develop laterals and fruit-bearing buds. We all know that trees which are headed-in grow broader and thicker, and the more you head in, the more you must prune in the interior. For example, if a man grows trees upon the plains in the west, where the sun is bright, he must grow a thick-top tree, otherwise the sun-scald will be severe. It is a matter of locality. I presume you would like to know my personal opinion as to whether or not to head-in fruit trees. I would head-in young trees which are very vigorous, especially of vigorous varieties. Trees vary in vigor from youth to old age. I should cease heading-in when the trees come to bearing. There are two reasons for heading-in trees when they are small: The first or principal one is, to make the tree strong and more or less thick and stocky. Second, I like to have the main or scaffold limbs grow comparatively low. It is the nature of a young tree to grow rapidly. What is the remedy for too heavy growth? It is to withhold moisture, tillage and nitrogen. It is a better plan to prevent too much growth in the first place than to depend upon cutting it off after it is grown. If bearing trees are growing too strong, the thing to be done is to withhold fertilizer if you are giving too much of that, or in some way to check the growth without too heavy pruning.

Tenth:—An obstruction just above a bud or limb tends to

produce strong longitudinal growth from that bud. If the obstruction is below the bud or limb it tends to thicken the bud or limb. The food materials carried down from the leaves are deposited at the obstruction and there is a great thickening at that point. This is illustrated by girdling or wiring trees.

Eleventh:—One of the fundamental prnciples, as laid down by Downing and many others, is that the checking of growth (so long as the plant remains strong and healthy) induces fruitfulness. A very strong growth is at the expense of fruit-bearing. Tillage and manuring may be carried so far as to make the plant too vigorous and over-productive of wood. Heavy pruning may do the same thing. In a word, a strong supply of wood sap tends to stimulate wood growth. Now, bear in mind, I do not say that a strong supply does always produce this result, but it has a tendency in that direction.

Twelfth:—The twelfth proposition is the most important. Fruit-bearing is determined more by the habitual performance and condition of the plant than by the kind or extent of pruning, and remedial treatment is more successfully applied to young plants than to old plants in full fruit-bearing. I imagine that much of the difference in fruit-bearing is a matter of individuality. Some of this variation is due to soil, some to other environments as the amount of food supply and conditions in which the plant lives. It is natural for plants to bear, and when they once come into bearing, they should be maintained in that habit by continuous good care. I cannot state a more important proposition to you than this. It is our business to maintain this bearing habit in plants. I am afraid we have not apprehended that simple truth as we ought. With fertile plants, any treatment which greatly disturbs their equilibrium tends to break up the bearing habit. Pruning for fruit is to be looked upon as an experiment. It is a secondary and incidental method of producing fruit. The fundamental treatment is continuous good care, which must be based upon knowledge of the individual plants. Some persons prune their orchards every two, three, four, or five years. By this time the trees become full of

wood and need much pruning. This intermittent pruning keeps the trees in a state of disturbed equilibrium. The proper way is to prune every year. Light pruning every year is more suitable than an equal amount of pruning every alternate year. If a plant once over-bears, it gets into the habit of alternate bearing. Plants that bear every alternate year are those of long life. Plants which live three, four or five years normally bear every year, as the berry fruits.

Thirteenth:—All means of obstructing the movements of sap, as by notching, girdling and the like, are methods of local practice and of training. European fruit books are full of directions for notching, etc., and we have been led to believe that this is very important in America. If I grow only two arms to an apple tree, and want to produce 20 buds on each arm, I must have those buds where I want them, in a certain place and to my liking; but in our American orchards we cannot resort to these local means for the purpose of inducing fruit-bearing. There is not a word in the German language that means the same as our word orchard. The German "Obst Garten" is a small plantation full of a great variety of plants. It was my privilege to examine many of the orchards which supply the markets of Berlin. Here is a pear tree, there a plum tree, here is a hill of beans, here a hill of potatoes. There are some orchards in Tyrol and some other parts of Europe which are much like ours. Referring to the bending and girdling of plants, I have here some notes from Koopmann. He says, "The less we are obliged to cut a tree, the sounder it remains and the finer it develops its fruit." This simple statement should be proclaimed the length and breadth of the land. He does not discourage pruning. He is an advocate of it. But he resorts to pruning as little as possible and still produce the desired result. The fertility of the land, tillage, and rational good care are more important than incidental pruning treatments.

Fourteenth:—Pruning may be made a means of thinning fruit, and thereby it encourages the bearing of the trees the

following year. I wish to make two or three practical applications. Alternate year fruit-bearing is largely a question of food supply. If, then, we are to make the tree bear every year, we must apply more food material to the tree or remove a part of the fruit. Now, as a rule, one spur or one branch of a spur matures one fruit. Therefore it must follow, if thinning of fruit induces bearing, it must be because that spur is made to bear one year and another to bear another year. There is an alternation in fruit-bearing, but the bearing year of a number of spurs have been changed. We cannot have a full crop of fruit on the same spurs every year. I do not believe that all the pruning you may give, will be of much value unless the other treatment you give your orchard is also right. We must determine which is the more desireable, to have the whole orchard bear every year, or bear largely one year and not much the next. It is a fact that the bearing year of fruit trees can be changed, but the trees also tend to return to their accustomed habit. I believe that it is a difficult thing to change the bearing habit of an old tree. Young trees are more amenable to treatment. Trees and plants which bear but a few years, do not get into that alternate habit so much as long-lived ones.

Fifteenth:—Heading-in induces fruitfulness in two ways,—by checking exuberant growth, and by encouraging the formation of short lateral growths, because lateral growths tend to develop into spurs. It is a question when we may head-back to check exuberant growth. Very severe heading-back may result the same as severe pruning, in which case we would get a heavy growth of wood. It depends upon how strong our trees are growing, but heading-in that is not so severe as to develop wood growth, tends to increase fruit growth.

Sixteenth:—The season in which pruning is done has some influence upon fruit-bearing, because winter pruning tends to produce wood, whereas, summer pruning does not. Heavy pruning in winter tends to produce water-sprouts, whereas summer pruning does not. If we prune in the summer sea-

son, the season of growth is done, and you cannot have water-sprouts. Why do they not form the next year? That I do not know. If you prune in the summer, the plant is still active, although the growth has very largely ceased. It has a chance to re-adjust itself to the new conditions. If you prune in winter, the plant is inactive, and it tends to break out in all directions in spring. It is a fact that winter pruning produces wood, while summer pruning does not.

Seventeenth:—The effect of pruning, as well as the necessity thereof, depends on the locality and climate. People in Nebraska and Missouri do not have the same ideas of pruning as we do in New York. They think we are wrong, but we know they are wrong. The fact is that both are right.

I have said that we must make trees bear by giving them good, rational treatment. If the orchard does not bear, what shall we do? I suggest that we change our method of tillage, change our fertilization, the orchard may need spraying to keep off the fungi, or if it makes too much growth, resort to pruning. Last year a man said to me, "What shall I do with my apple orchard?" I said, "I do not know. Are you satisfied with it? If you are leave it alone and pick the apples. If you are not satisfied with it, do what you are not doing now." We may resort to some of the experimental matters of pruning. Girdling the tree may bring it into bearing. The downward moving sap is caught above the girdle. The Hudson river grape growers girdle their grapes because they can get fruit earlier and larger. They get them larger because those grapes get more food, but it is at the expense of the root. The food cannot get to the roots. If, therefore, I have trees which I cannot bring to bearing any other way, I would girdle them. I wish to say, in conclusion, that the best pruning results come from a definite personal ideal or purpose and careful study of the local conditions.

Mrs. Cary of Appleton reads paper, inviting the State Society to hold their summer meeting with their society at Appleton.

Secy. Philips—(To Prof. Bailey) Our R. R. people had a fine

grove of elms and soft maples, and they sent for some men to trim those trees. They cut the tops almost entirely off, and now those trees are going to die, every one of them. What is the trouble?

Prof. Bailey—I do not know as I can answer that question. The trees have probably become diseased by the bad wounds which did not heal over.

J. C. Plumb—Have you noticed any difference between the trees where the grass is kept close-cropped, as in our city lawns?

Prof. Bailey—I have not observed it except that close-cropped pastured orchards give the best results, which is probably due to the droppings of the animals which are there.

A. L. Hatch—I would like to ask you about what time the growth of fruit trees ceases as far as the formation of new foliage or wood material is concerned. When does cell expansion cease? The idea would be this, understanding, when these operations of the trees cease, how long is it desirable to continue cultivating, with the idea of increasing the feeding of that tree?

Prof. Bailey—In the first place we cease cultivation to prevent too rapid growth. In the second place, as a general thing I should say to cease tillage about mid-summer, as a rule about as soon as plants cease their longitudinal growth, —about the middle of July, sometimes earlier. Sometimes we must keep up cultivation to preserve moisture.

J. G. Kellogg—When do fruit buds form?

Prof. Bailey—I do not know. The winter buds begin to form about the time that the longitudinal growth stops. I do not think that the heading-in and notching will produce fruit buds the same year that it is done, as a rule. It depends somewhat on the vigor of the tree.

J. G. Kellogg—When do you girdle to form fruit buds?

Prof. Bailey—We girdle as soon as the growth begins.

Mr. Philips—Do you recommend girdling to produce fruit buds?

Prof. Bailey—I do not, on general principles. If they will not bear by any other way, I then girdle them as an experiment.

Dr. Loope—The question I want to ask is this: I have an orchard of 4,000 trees, young trees five and six years old, they are vigorous and growing rapidly. When shall I prune, what time of the year?

Prof. Bailey—I do not want to answer it for this country. For our own section, I would prune in February, in March, and April.

I wish to say in conclusion that it has been a great pleasure to be here and have the honor to speak to this Society. The Wisconsin State Horticultural has a very good reputation. I also wish to thank you for voting me a member of your Society. (Much applause.)

President—What is the pleasure of the Society?

Mr. Hatch—Professor Bailey has given us something so complete that it seems too bad that we should discuss in any way anything that he has said. I believe that his conclusions are but little different from what I have advocated for years. The trouble with us is that we arrive at conclusions without examining everything.

G. J. Kellogg—I wish to call for the program.

F. H. Chappell—I want to say a word. Prof. Bailey recommends summer pruning. This is my theory, and has been for a number of years. My reasons are that when we prune in summer we do not bleed the tree, the sap is thickened. It has gotten through the leaves, and is now making the wood. Summer pruning will set the growth, and we must not force the growth too much as there is danger of winter killing.

G. J. Kellogg—I would like to hear from Mr. Dartt. I am not disposed to criticise the professor in any manner, but he asked when should we prune, and I thought anybody could answer that question. I have pruned a great many orchards at different times, and perhaps I may offer some to the suggestions in general. Then, I would say in regard to pruning, prune very little, do not cut off big limbs if you can avoid it, only when it is necessary to bring your tree into shape, and prevent the formation of large, outside prongs that take the growth away from the center stem. Time to prune—If you have little limbs you can cut them when convenient. If

they are hardy, they will stand it, and if not they ought to be killed.

J. C. Plumb—I want to express my thanks to Prof. Bailey for this discourse, which he has given us. As to pruning (addressing Mr. Loope), how long is your orchard out?

Dr. Loope—Five or seven years.

J. C. Plumb—Does it need pruning?

Dr. Loope—I suppose every orchard does, they are large trees.

J. C. Plumb—Prof. Bailey said it was not advisable to a very large extent, to give too much pruning. The month of June is probably about the right time. An orchard, an old orchard requiring severe pruning, ought to be done in March.

Mr. Babcock—I once asked a man when was the best time to prune, and he said, "I never enter my orchard without my jack-knife, and when I see a limb that needs pruning I cut it off."

Mr. Philips—I think Prof. Bailey made one very valuable statement. That is, pruning regularly every year. Do not wait four or five years, and then kill your orchard.

E. S. H. Dartt—Then it will never be necessary to cut any large limbs.

Mr. Philips—That is one of the valuable suggestions he made.

J. C. Innis—I have had quite an experience along this line. My most successful experience was not trimming too much. If my trees grow too much, I put on clover to stop the growth.

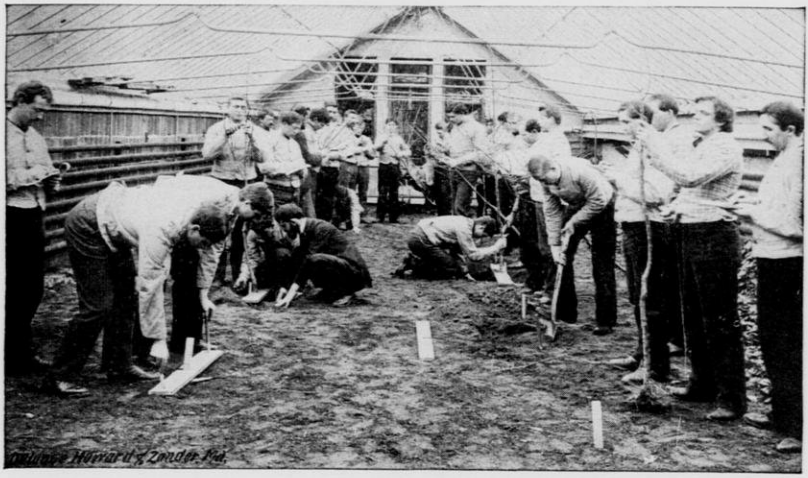
ANNOUNCEMENT.

Mr. Philips—This evening the "Short Course Boys" have a session here, to which we are invited.

Report of committee on Awards by Mr. Olds. Reads report.

The following papers pertaining to the Wisconsin Short Course School of Agriculture were published in the Wisconsin Horticulturist for March, 1898. But as so many of the peo-

R. A. MOORE.



STUDENTS PLANTING TREES IN GARDEN GREENHOUSE, HORTICULTURAL BUILDING.

ple of Wisconsin have access to and read our annual report that do not see the monthly magazine, we deem it proper to give a little space to it in the report, as it may be the means of bringing some young men to the school who are now unacquainted with its benefits.

A. J. Philips.

Mr. Moore was born in Wisconsin and received his early education in Wisconsin schools, supplementing the common school work with a course at the Normal in Oshkosh. During boyhood and early manhood he worked upon the farm, but afterward taught school for several years. In 1890 he was elected Superintendent of Schools in his native county, Kewaunee. This position he held until about Jan. 1, 1896, when he resigned to accept his present position, assistant to the Dean in the College of Agriculture. That Prof. Henry chose wisely when he selected his assistant is evinced by the growing popularity of the Short Course. At the beginning of 1896 there were 90 students in the course; this winter there are 157.

Mr. Moore, being himself a farmer's son, understands the needs of farmers' boys. In addition to the regular work of the course, he sets aside certain evenings for special instruction in book-keeping, debating and parliamentary practice. District School meetings, Town meetings, meetings of Farmers' Clubs, and so on, are organized and carried forward. In this way the young men are taught the duties of citizenship, and to become self-poised, intelligent, capable members of the community. One who knows tells us that Mr. Moore has been absent only once in two years from the students' Friday evening literary society. Under his care we predict for the Short Course increased success in coming years.

THURSDAY EVENING.

The "Short Course" Evening."

One of the many pleasant features of Convention week in Madison was the joint session, Thursday evening, of the State Horticultural Society and the Short Course Alumni Association of the College of Agriculture, University of Wisconsin.

Chas. Whitmore, president of the Alumni Association, was in the chair. The program for the evening had been arranged by the Short Course students under the leadership of Mr. R. A. Moore.

The excellent singing by the Short Course quartette proved that at least four young farmers will not "die with all their music in them." Papers were read by two students, L. P. Martiny and G. E. Douglas; then His Excellency the Governor gave an address, extolling the work of the College of Agriculture, and expressing his pleasure at being invited to speak at this meeting. Gov. Scofield's personality is of the scholarly type. While in his presence you think of him as an intellectual, cultivated, thoughtful statesman, and lose sight of his affiliation with any political party.

L. E. Gettle of the State Department of Education delivered an eloquent address which we have the pleasure of publishing in this number of our magazine. Although it fills several pages, we assure you it will *seem short* and you will miss a treat if you fail to read it.

The recitations by Miss Taylor and Miss Whitmore gave a charming variety to the entertainment; the pathetic rendering of "Bobby Shaftoe" was especially fine. Both young ladies received enthusiastic encores to which they graciously responded.

A. J. Philips, Secretary of the State Horticultural Society, made the closing speech. Mr. Philips has been a boy himself and is now a father of boys, so he knows how to talk to young men. His remarks were off-hand but very pleasing to the audience, and the students gave him their college salute.

MRS. MARY C. C. JOHNSON,
Editor of the Wisconsin Horticulturist.

OUR SHORT COURSE BOYS.

Part of an address by L. E. Gettle, Department of Education, Madison.

Gradually, but pretty slowly, we have made the remarkable discovery—compared to which the feat of Columbus is nothing—that brawn and muscle even when combined with proverbial Yankee cunning are not enough to equip an American farmer.

I am not so sure that an appreciation of this discovery is nearly as widespread as one would expect it to be. I suspect that there are numerous farmers who are prone to ridicule the idea that anything else beyond early rising, long days of hard labor, and frugality, is essential to the best success on the farm. Such men usually delight in belittling agricultural papers; in their own estimation confusing and confounding the institute conductor; and in advising the boys not to fool away their time at school if they would succeed at farming. They point with some weight of argument at their own success as conclusive evidence of their superior position.

My hardest and yet, in some ways, most valuable farm experience, was with such a man. I was his "hired man" during a college summer vacation which was, for financial reasons peculiar to some boys who attend college, lengthened out at both ends so as to make six months. He had a magnificent farm of two hundred and forty acres in central Illinois. His politics was work—with a little democracy thrown in. His religion was toil—with an occasional prayer for more strength to work harder. His patriotism was:—Protect, defend and work well the two hundred and forty acres of your blessed native land. His charity was:—Forgive last of all any real or apparent relaxation on the part of the "hired man" or the children. His educational maxim was:—"The proper study of mankind is man," so that when occasion offers you may do him if you can.

We lived on Slab-pork, often a little worse for wear, syrup, and hot biscuit. If ever a diet needed a divine blessing it was this. My devotional thoughts at meal time were not

such as were proper to express in the presence of the family.

Here was a man densely ignorant, yet he was the most practical of farmers. There was not a mule on the place that I did not love more and which was not a greater honor to its Creator and its country than was its master, yet I must give the devil his due. I had not been without practical experience on the farm, but that man taught me some valuable lessons. I learned to keep a straight furrow while ploughing; to pulverize the soil before planting, however much work it required; to set up a shock of grain so that it could stand against wind and rain; to stack hay so that the water would run down the outside of the stack, together with numerous other important accomplishments. Here was an extreme representative, perhaps, of a type of successful farmers. He accomplished with harshness, stinginess and unadulterated meanness what might have been accomplished by large-heartedness and knowledge. He should have been more than a mere despot in his own small kingdom. He should have been a citizen of worth and influence. A man with such energy as he had, if equipped with reasonable scholarship, with broad views, with generous impulses, would perforce not only make more money, but would in addition confer a dignity upon farming pursuits that the public is slow to accord them. The agricultural classes of our nation have heretofore furnished the conscience that has determined the balance on the right side of great public questions. From the sturdy sons of the soil, inured to physical hardships, possessing digestion and nerves unimpaired through enervating foods and drinks, with the courage and tenacity of purpose resulting from bodily vigor, have come the great majority of molders of public opinion, makers of laws, and directors of the world's great business enterprises. The farm as ordinarily conducted did not furnish a field of action commensurate with their ambitions and abilities. Thousands of boys of equal native capacity have remained on the farms. If all these young men could be made to see the vast possibilities in agricultural science and to seek training that would organize their splendid powers, what an industrial, political and moral force agriculture might become in this country.

When I have attended farm institutes or other farmers' meetings, some man has almost invariably arisen to assert with great vehemence that farming is as honorable an occupation as the profession of law, medicine or theology; that the farmer, because he supplies practically all the food products, is the very foundation and prop of society; that the farmer is just as good as any other person living. Now the fact is that these assertions are very largely true; at any rate there is usually no one present who is willing to deny the statements. But the very frequency of these self-laudations seems to indicate that the speakers feel themselves at some kind of disadvantage when compared with representatives of other employments. It is usually the homely girl who most frequently asserts that she is just as good looking as any girl in the community, and unmated maidens of uncertain and unascertainable age are generally the ones to embrace every opportunity to speak of frequent chances of refusing matrimonial co-partnership.

It will be a better day for agriculture when farmers shall recognize that their occupation is one for which there can be no surplus of individual training and knowledge.

It is not by reiterated assertion, that farming will take the rank it held when statesmen were proud to hold the plow—when Cincinnatus went from the field to guide the destinies of the Roman nation and later gladly laid down the reins of government to guide again the plow.

Our farmers must be better educated, both along the lines of their immediate interests and in literature, general science and citizenship. It is not enough that they be able to read, write and cipher.

Training is more and more recognized as a necessity even for fairly simple occupations. Teachers must be trained, lawyers must study longer than formerly before being permitted to practice. Plumbers, engineers, artisans generally, find careful preparation a prerequisite to measurable success in their work. Now, agriculture is not the simple process it seems usually considered to be. On the contrary it embraces the most complex and varied interests. An ideal technical

preparation involves the acquisition of practical knowledge of numerous departments of science, each one of which offers field enough for a lifetime of study and experiment by a specialist. Of a necessity the farmer must understand the principles of chemistry, the laws of physics, the elements of mechanics and force, the constituency, adaptability and effectiveness of foods, the importance and methods of hygiene, the geology of soils, the science of plant life and growth, entomology in its relation to horticulture, the prevention and cure of disease in animals, the principles of breeding and—but there can hardly be an end to the possible enumeration.

Of course every one who farms knows more or less—very often less or least—of some or all of these departments. But no one can know them sufficienly well without availing himself of modern means of instruction by specialists. Keeping in view the requirements of the calling,—and it is just as much a calling as preaching,—I venture to say that every young man wishing to farm should not be content with less than a high school education. This should be supplemented by a course at such a magnificent school of equipment as the Wisconsin Experiment Station and College of Agriculture. This college has the true idea, namely, that its function is not only technical science instruction, but that it shall also help the young men coming within its influence to become more intelligent along the line of their duties as citizens of the state and nation.

These short course boys will go out from their brief but vital contact with men of talent and genius,to all parts of the State, as missionaries and living examples of what this institution may do for large numbers of the young farmers of Wisconsin. Their influence will be felt in raising farming to higher planes, in building up and strengthening the common schools of the state, in making the farmer's voice and weight felt in securing better local and state government, and in speeding the day when the farmer shall not need to assert his claims to superiority over those of other callings, but when such fact shall be freely admitted by all.

THE ROUND OF PLANT LIFE.

I have been asked to write an article for the Annual Report, and I wish to state briefly some of the work in horticulture carried on during the "Short Course."

We have the good fortune to study the round of plant life under our worthy instructor, Prof. Goff. Our first hour is devoted to lecture work in the lecture-room of the new Horticulture-Physics Building, one of the best buildings, if not the best, of its kind in the country. The first few lessons are on germination. The next step naturally would be to study the structure of the plantlet, learning how the food is taken up by the roots and following it to the leaves, where it is prepared and sent back to the roots to be used by the plant.

The study of the roots is next in order, and we spend many days on this topic. A knowledge of the roots of plants, of the soil in which they grow and of the cultivation they need, is of the utmost practical importance. The leaves also serve a very important function, i. e., food preparation, hence we spend some time on the study of leaves.

As our plant has had good care and cultivation it is now in full bloom, so we will study the flowers, more particularly along the line of fecundation and pollenizing. We next take up the study of the seed and fruit, and as they ripen we learn how to gather and store them.

Having now taken our plant to its decline of growth and rest period, the remainder of the term is spent in studying the plant as affected by unfavorable environment, such as excessive cold, excessive heat, insufficient water, unfavorable light, etc.

This ends the first year's work, so we will now turn the plant over to the second year students. Our first lessons the second year are on the propagation of plants, by seeds and by division of the plant. We are taught the numerous methods of propagation by division, as by suckers, by stolons, by division of the crown, by layering, by cuttings and by grafting. We have the privilege of putting in our spare time in mastering the science of grafting.

We will next take a lesson in transplanting apple-trees, and as our plant has stood the career of a two years' course in horticulture, we will consider it worthy of a place in the garden house. As the study of transplanting comes in the second year, we will grant the second year boys the privilege of transplanting our apple tree as shown in the following cut.

LESTER E. BIRMINGHAM, Student.

IMPRESSIONS OF A STUDENT FROM THE "FAR NORTHWEST."

At Madison there are so many students that it is difficult to ascertain their number. They hail from the coast of Maine to the Gulf of California, young men of all nations, languages and colors. None of us feel ashamed of our relationship or attempt to deny our origin, through fear of error or misrepresentation.

Our first night here is confusion, and spent in imitating cats and opera singers and sawing fiddles. Next morning in the class room we are much like a colony of frogs, hemming and coughing and shaking our heads like professors. We are all anxious to have a peep at the professors, imagining them to be terribly wise, Quakerish and outlandish looking. When the gavel sounds we are speedily taught that these men work very methodically and with grim mathematical precision, and give us something else to think about besides the weather and our corns.

The boys are a conglomerate of brave, dapper, enterprising, bustling young chaps, who pay their own way, and expect a $20-a-month job with a nurseryman or a fruit grower, when they get through. Then there are the usual ten per cent. of crazy-headed, topsy-turvy slang-whangers, who pay their 50-cents-on-a-dollar way from their fathers' pockets, and don't know enough to make the best use of their college training. It is to be hoped their parents will whip them when they go home and send them back next winter without any spending money for the young ladies and bob-sleighs.

Every well-to-do farmer keeps stock, so we have lectures

on stock-feeding under Prof. Henry; he cracks it right to us with sledge hammer blows,—charges us right up to the muzzle with feeds and feeding; and every time we leave the lecture room we feel so proud and stuck up to think how ridiculously unenlightened are Uncle Sam's prodigious mass of "the great unwashed" farmers! We are taught just how many millions of gold dollars Wisconsin is wasting every year in uneconomical farming and in loss of soil fertility.

In order to know how to handle soil without gloves, how to get it into condition for plant growth and how to keep it there, we have the good fortune to be permitted to enter Prof. King's sanctum. Here we are initiated into the deeper mysteries of the earth, and he explains and demonstrates practically, in the laboratory, where for the past four years he has been propounding it to the boys, all about Campbell's New Soil Culture;—it is Prof. King's four-years-old idea, but the other fellow claims it to be new, and gets all the credit together with the rake off.

Then comes Prof. Goff. He gradually swells up above the usual ecclesiastical size, when on some pet subject; but the boys are just as much in love with horticulture as the professor, and ply him with questions relative to bugs, their size and habits, ants and their mode of destroying caterpillars, apples, plums, spinach, peaches and rhubarb, lettuce and onions; and all are interested in each others' ideas. He turns us loose with spades and shovels, Planet Juniors and Buckeyes, to transplant apple trees, make hot-beds, bud trees, prune them, graft trees, and the like. We are taught a lightning way to plant onions, strawberries and such things, in the least time, at the least cost and with the least labor. We are also taught the new onion culture, which has been taught here for four years now.

There's lots to learn. A few chapters each on bugs, grafting, budding, climate, frost, transplanting, would go a long way toward cleaning off old cobwebs.

Hope to be able to raise wind enough to return next winter and finish the subject.

THOS. DIXON.

FIFTEEN MINUTES OF THINKING.

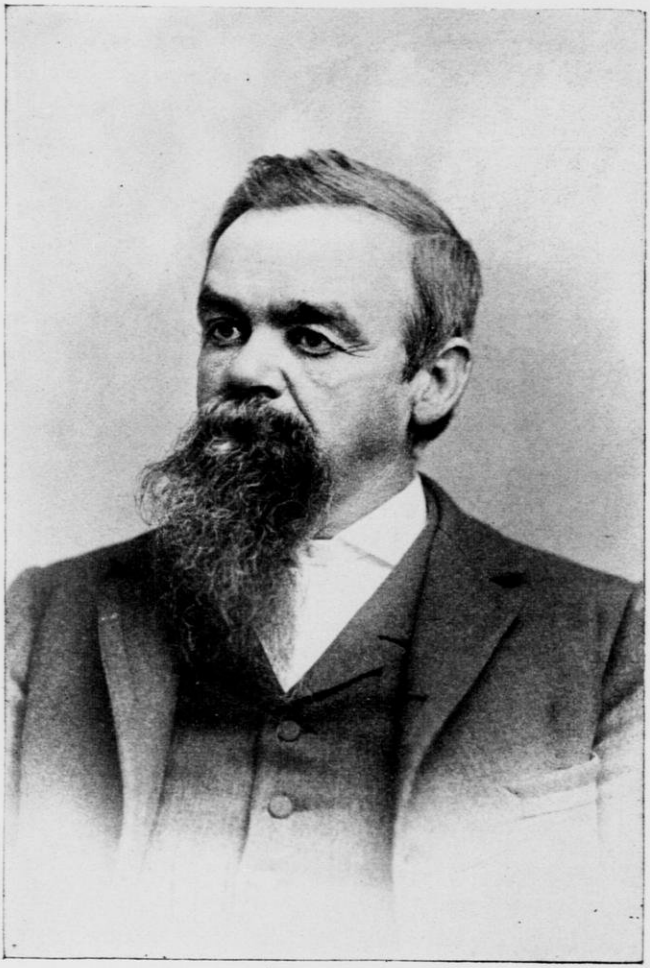
From Wisconsin Horticulturist, March, 1898.

A. J. Philips, Sec'y Wis. Horticultural Society.

I believe that the success of the Short Course has far exceeded the anticipations of its founders. When, years ago, at the annual conventions, Prof. Henry so earnestly entreated the farmers of Wisconsin to send their sons to the Agricultural College, to better prepare them for the successful handling of animal life on the farms, I am sure he never dreamed that the College would attain the national reputation it now has.

For one minute, think of bright young men from fourteen different States now taking the Short Course. For two minutes, think of the broadening influence on our Wisconsin boys, when discussing home questions in their debates, of having for their judges fellow-students from Tennessee, Nebraska, South Dakota,—in short from New York to Oregon, clear across the continent. For three minutes, think of the fact that young men who have taken the Short Course and the Dairy Course at Madison are now employed at different agricultural colleges, in noted creameries, and on the farms of rich men like the Vanderbilts, in nearly every State of the Union. For four minutes think, that scores of these young men have gone back to the homes of their birth and are now assisting in carrying on the old farm they love so well, and doing it in a much more intelligent way than their fathers did when they were young,—for which these same fathers feel truly thankful. In conclusion, for five minutes, think what you can do to encourage some bright young man to attend this school in future years, or what father and mother you can persuade to send a son.

The foregoing will afford you profitable reflection for more than the fifteen minutes which I have assigned to the different points.



A. J. PHILIPS.

MR. A. J. PHILIPS,

Whose cut appears in this issue of the Horticulturist, is worthy of special commendation for the deep interest he has taken in the College of Agriculture. Many of the young men who have reaped the benefits of the Short Course instruction, received their first knowledge of the advantages of the Course from Mr. Philips. Not only in his own County but in all portions of the State, Mr. Philips has been an earnest advocate of agricultural education. During the past seven years he has visited the college annually and addressed the students of the Short Course at their literary meetings, always giving them fatherly advice and kind words of encouragement. The students now look forward to his annual visit with a great deal of pride, and try to reciprocate by extending to him the marked respect and cordiality due one who is laboring faithfully for the general welfare of the young men from the farms. We are in need of many like Mr. Philips to help promote the agricultural industries of the State, and no better method can be pursued than by earnestly advocating agricultural education.—R. A. Moore in Wisconsin Horticulturist.

A. J. Philips was born near Philadelphia in 1834. His parents, of Welsh descent, were great admirers of fruit and flowers, hence Mr. Philips' horticultural education began in early childhood. He received a fair common school education, supplemented by a course in a Watertown (Wis.) school. In 1852 he decided to leave school and go to work on a farm in Jefferson County. This cutting short of his schooling he regards as a great mistake, for he has in later life felt the need of a better education. Since 1855 he has resided in La Crosse County. He followed general farming until 1868, when he began making a specialty of apples. In 1870 he joined the Wisconsin State Horticultural Society, since which time he has missed but two of its meetings.

In 1889, at the suggestion of ex-Gov. Rusk, the new Secretary of Agriculture, Mr. Philips was appointed to a position

in the Division of Pomology. This position he held for about two years, spending part of the time in Washington and part in traveling through Wisconsin, Minnesota and Iowa, searching for information regarding seedlings and new fruits. This has given Mr. Philips a wide acquaintance with horticulture and the noted horticulturists of the Northwest.

In 1894 he was chosen Secretary of the State Horticultural Society which position he still holds. He also selected the site and set the trees of the new State trial orchard at Wausau.

FRIDAY MORNING.

President Kellogg in the chair.

The following members of Executive Committee were then elected:

Geo. J. Kellogg, Janesville.

Prof. Goff, Madison.

Franklin Johnson, Baraboo.

J. S. Stickney, Wauwatosa.

H. K. Loomis, Sheboygan Falls.

O. W. Babcock, Omro.

Wm. Hanchett, Sparta.

L. H. Read, Grand Rapids.

Ed. Single, Wausau.

P. H. Carns, Ellsworth.

F. H. Chappell—Is there any difference between Keswick and American Codling?

G. J. Kellogg—Yes, there is. The American Codling is a yellowish apple.

Next was a paper by Mr. Alsmeyer of Arlington.

PROSPECTS FOR WISCONSIN NURSERYMEN.

The future is not so dark as many believe, while we see the cloud left over from last year, on account of the extraordinary big berry crop, which discouraged a great many

planters, as in many cases the berries did not pay for picking and the handling of the same; consequently the present outlook for a large sale of berry plants at a high price, or even a fair price is not so favorable as we would like to see it, but let us not shut our eyes to the silver lining of a better time coming.

No one can tell for certain all that will happen to-morrow, next week, in a month or in a few years. Even the most clear-headed men see themselves often disappointed, not only in their hopes, but also in their fears.

We may often cast a glance into the future and be inspired with hope and then find only to our sorrow some things cross this bright path of the future and throw some dark obstacle in our way, leaving us only to mourn our loss, but spring will follow winter, and by applying to the future the experience of the past three or four years of drought and hard times where we learned of men failing that we highly respected and considered in good, or at least in favorable, circumstances.

We should make the failures of the past serve as stepping stones to the future's success and triumph. As John Hunter has rightly said, "Is there one whom difficulties dishearten—who bends to the storm? He will do little. Is there one who will conquer? That kind of man never fails." Or as Moore says,

> "If what shone afar so grand
> Turn to nothing in thy hand,
> On again; the virtue lies
> In the struggle not the prize."

Verily, there is a streak of light in the nurseryman's horizon. Conditions are found in present history similar to those which formerly existed, with the better prices for farm produce and labor, money more plentiful than in the years just past, we may safely conclude from the laws of cause and effect that similar results will follow. From the reports of fellow nurserymen of different sections of the state, and reports of our agents in different parts of the state, we are safe to say that the time is near at hand when we will be able

to make the genuine good old time deliveries again, the past being in many respects the mirror of the future.

As nursery stock is ofttimes classed among the luxuries, and people will buy only the unavoidable necessities in "hard times," and consequently the price of nursery stock went down and down till the nurseryman lost money on every tree that he sold. This caused some of our nurserymen to buy a great deal of their stock from southern or eastern growers which they could buy far cheaper than they could grow it for at home, then they were sold for what they were supposed to be "home grown." As George Herbert says, "Honor and profit do not always lie in the same sack."

This has to my ideas been one of the main features to cause the hard times for nurserymen, as the above mentioned stock was in a great many cases not near to the standard, the trees being badly bruised and from handling, repacking and reshipping exposed to the air and not acclimated to our northern winters, they were of short life, while in many instances they had no life left at all when the planter received them, this has discouraged the general planter, so he thinks that because in past years when he bought Rochester, N. Y., grown stock and they lived and did well for him or his neighbors, that we in Wisconsin, or in any part of the West, cannot grow good first class stock, and in many cases prefers to pay $6.00 per dozen for eastern grown apple trees in preference to $2.50 per dozen for better home grown trees.

Now, this should not be, as we have combinations and trusts in almost every line of business why not have one in the nursery business, i. e., have more unison in price, as a first class apple tree cannot be grown to 6 or 7 feet and then sold for less than $3.00 per dozen, or $20.00 per 100, in order to make any profit. I think the sooner we get to this point of union prices the better it will be for us and far better for the planters, as this will lead them to patronize home trade and buying their stock of the nearest nurseryman instead of the tree tramps that come around and make special prices to just that individual and then in a great many cases

sell them something that neither they nor their neighbors want, but they bought it because it was cheap.

Another reason, if the prices were the same he would be more willing to patronize the local nurseries, and then he would get his stock fresh dug so the per cent. of loss would not be near so large, and would encourage him to buy and set more the next year.

Again, by so doing we would encourage a great many more men to start local nurseries all over this country, which, if left as it now is will only be a damper to the business as the large commercial nurseries are killing the local nurseries by sending their agents all over and selling for all there is in it the first year, replacing the dead stock and selling the second year and so the third time and then as a general result the agent bids adieu to that territory as by this time some of the trees begin to bear, and then the people find that the fruit in many cases is inferior to their expectations and far below what it should be, and the cheap stock is really cheap all around, which has discouraged a great many tree planters within the last few years, which can only be overcome by honest and fair dealing, as the old adage is right, "Honesty is the best policy." What material for reflection have we in this adage.

As for Wisconsin nurserymen, they will increase and prosper in the same proportion as the importation of eastern and southern nursery stock is discouraged and home nurseries encouraged. All taken as a general with us as well as our neighbor nurserymen, prospects for the future are very bright.

We shall not always remain at the bottom of the wheel.

L. H. Read—There is one point in Mr. Alsmeyer's paper which I would like to mention and that is the idea that you have to grow a tree 6 or 7 feet before you sell it. Nurserymen ought to get this idea out of their heads.

Mr. Alsmeyer—I do not recommend you to grow your trees to that size, but I just mentioned this fact that farmers buy a tree that is from 6 to 7 ft. high, in preference to a smaller one.

Mr. Wedge of Minn.—I am heartily in favor of that paper. Regarding the criticism, I am not so well in accord with it. It is hard to educate our farmers when nurserymen recommend large trees. I naturally favor a small tree, at the same time I would rather for my own part set a tree 6 ft. high than under that. I would not consistently recommend a smaller tree. There are many in our state that think the same. In regard to this matter of competition in nursery stock, I was brought up and lived in a section of country that is in favor of protection, and I hold in many respects, hereditary doctrines. I lean toward free-trade, but I must say in regard to nursery stock, that I am in favor of protection. I also believe in the practicability of such protection. I believe in State's Rights in this work. We had a law in Minnesota some time ago that gave a measure of protection in this matter, but it was not constitutional as it was framed. That was not only a good time for Minnesota nurserymen, but it was a better time for our planters. I believe that a law can be enacted that will discourage outside competition in Wisconsin and Minnesota. It would keep out eastern nursery-stock. Nothng we can do would be so beneficial to horticultural interests as this.

J. D. Vories of Ill.—I think the younger the tree the better they do with us. They are effected less by transplanting, and make a nicer shaped tree. I, too, believe we ought to have state laws to protect us. In our state we have 15 or 20 places where we have San Jose scale, and our scientists have run them out and found them to come from one nursery. We are trying to have a quarantine law passed, and we urge our people to trade at home.

R. J. Coe—One word regarding large and small trees. Nine-tenths or perhaps nineteen-twentieths of the trees planted in this state of Wisconsin are planted by farmers. The experience I have had goes to show that the larger tree gives the farmer better satisfaction than a small one. Perhaps a fruit grower can plant these small trees successfully, but the average farmer will have better success with a tree from 5 to 6 or even 7 feet.

Mr. Philips—That is true, they want big ones, but if you give them a few small ones for trial, they will come back in a few years for more small ones.

Mr. Philips here relates laws in regard to shipping trees to Michigan.

Mrs. Johnson—The Michigan law will be in the February number of the "Horticulturist."

President Kellogg—I think it is constitutional anyway.

F. C. Edwards—If a farmer has a small tree, he is pretty apt to take care of it.

Mr. Johnson—I succeed better with a fairly good sized tree. For if I get a little sprout, it is hard to keep it from being plowed under.

H. Tarrant—I am in favor of a good sized tree, a nice thrifty tree of good size, and I know the farmers prefer them to a small tree. A small tree will not take as good care of itself as will a large one. I am in favor of a good sized tree, not an old one.

A. G. Tuttle—Thirty or forty years ago we used to sell 2-year old trees. I could not grow a good two-year old tree 5 or 6 feet high, as long as I grew such trees as the King I could have 2-year old trees to sell, but when I commenced growing Russian trees, the trees of 2 years old were not fit to sell, they make such a slow growth. I used to think that a tree that was overgrown was not fit to plant. I had a lot of Duchess, 7 years old. I sold them at 5c a piece, I had an idea they were too old to plant. I had an orchard of Utter trees, set 2 rods apart each way, and I said, "I will plant some of those 5c trees, putting a tree between those others in the rows running north and south." The winter of '85 killed every one of the Utter trees, and I still have the Duchess. Lately I have set larger trees. A Russian tree is not fit to be set at 2 years old. Now, the Longfield, for instance, I have planted 200 or 300 of them. I do not plant a tree that is not as big as my wrist. They are now as large, the bodies, as my sleeve and bear splendid crops. The Longfield is a poor tree to grow in the nursery. It will start up and shoot sideways. A tree starting up obliquely will not

make a first class tree. Those who want to grow Russian trees, must, when they are one year old, cut them back to the ground, then they will grow straight.

Mr. Dolton—Not a word has been said about the roots, the first thing I look at are the roots. If a tree has a good root, you can set it at most any age and have it do well. If I buy a two-year old tree, I let it grow a year or two until it makes a root. My experience is I would rather have a 4-year old tree, than a two-year old, unless I put the two-year old tree in the row and let it grow a year or two, before I plant it. If your tree has a good root, plenty of fibrous roots on them, there is no trouble in having them grow. I prefer a four-year old tree to a 3 or 2-year old. I have been successful in growing trees, and my course is to see that the tree has a good root, if it has not, you cannot make it grow.

L. H. Reed—How about rabbits injuring trees? (Here he refers to the Philips Tree Protector as doing much injury to trees.)

Mr. Dolton—I do not think that rabbits do very much harm.

Mr. Philips—Mr. Tuttle sent me 100 Duchess trees. He said, "You will not be able to make all of these trees grow." I said I would. I washed the roots of these trees clean, and I scraped them a little. I made 98 of those Duchess trees grow. I would not advise anybody to accept such large trees, but if you give them plenty of care they will grow. I am glad I never sold Mr. Reed any protectors, but I find that when I show my trees to visitors they think the bark is fine. I have never lost a single tree by the protector rubbing or chafing it.

G. J. Kellogg—If you stick in a little straw at the top, it would prevent it.

F. H. Chappel—My customers want roots on the trees, they preserve the tree, and are equal to the top. If you set a big tree and it is properly grafted and has long roots, you will get side roots. When a tree is 4 or 5 years old, and has side roots, it will live.

A. G. Tuttle—In regard to this protection, I use little pro-

tection on my trees. I have several hundred trees that I have not done anything to protect, yet I advise any man if he does not want to protect his trees, not to plant. I have had trees destroyed by the sun striking the body, but I do not think it necessary to protect a tree until it is some size. The heat is not concentrated on the bark or body of the tree until it is considerable size. I noticed a flatness on the side toward the sun of some of my trees and it seemed as though the leaves were turning yellow on that side of the tree. I took three laths and set them up to that tree, the other I did not do anything to. That one with the laths in a year or two recovered, but on the other one the bark is all gone.

President Kellogg—I cannot understand how Mr. Reed's trees should have been killed by the protectors. I have inspected 4,000 trees equipped with these protectors, and found not one that was injured. The outside may have been chafed, but the tree was not injured a particle.

Mr. Wedge—I think we somehow are not getting at this idea of the necessity of protection from exactly the right standpoint. It is only in the last few years that the reason has come to me why we should protect the body, and that it is not natural for the trunk to be in the sun at any time. If you think of it as you come to the tree. Trees in the natural state of growth are in clumps, so that they are protected by a canopy of shade. You must give your trees shade in some way, do not expose it to the full sunlight. Regarding roots, a tree of 4 or 5 years ought to have good roots. I will here call your attention to the habit that some nurserymen have. If the tree is large enough, and the sales are not large, the nurseryman runs a digger under them and checks the growth. That is a very bad plan, and renders the tree unfit for planting.

J. C. Plumb—If I understand this question rightly, it is in regard to protection. One gentleman said, axle grease, but beware of any grease in the winter time. The simplest way to protect a tree is to take old newspapers and wrap them around it. I have wrapped many trees that way. A newly planted tree needs protection. The best thing for a

newly planted tree is to keep the sun away. For winter protection, I have no objection to laths. The first thing to do is to kill the rabbits. It is easily done. Ten cents' worth of strichnine and one hour's work will prepare doses to kill all the rabbits in the neighborhood. That law against the kiling of rabbits is all wrong.

Mrs. Johnson—Is there a law that would prevent a man killing rabbits in self-protection?

J. C. Plumb—That is the position I take, I claim self-defense.

Sec. Philips—I have here a short report of a special committee.

Mr. Philips reads report relative to a painting of Miss Tuttle's.

Mr. Philips—Mr. Chairman, I move that we make some special mention of these paintings, and award Miss Tuttle one dollar as a premium.

Motion prevails.

The following resolution was then adopted:

Resolved, That we go to Appleton to hold our summer meeting accepting the invitation of Mrs. Cary of that city.

Mrs. Cary thanks the Society.

Mr. Smith—About the date of holding this summer meeting. It seems to me that this should be very carefully set.

B. S. Hoxie—It occurred to me that we ought to have it on the 4th of July.

O. W. Babcock—I think we want the Appleton Society to fix the date.

Mr. Herbst—I think we are not keeping track of our constitution here. The Executive board shall designate the time and place.

It now being ten o'clock report of the Committee on the Omaha Exhibit was heard.

Mr. Hoxie—We called on the governor this morning, and laid before him our plans, and he heartily concurs with the Society to make an exhibit. Of course the governor will make a recommendation to the legislature. The matter of amount was brought up and talked over with him. The

opinion was that we ought to have at least $1,500 to make an exhibit, $500 from our own Society and then a loan of the other $1,000. While we are about it let us make a good exhibit.

G. J. Kellogg—He said further, that we can name five, and he would appoint a Horticultural Commission, that would take the matter in hand and appoint collectors in every part of the state. He is confident that we ought to expend $1,500, and that the legslature will reimburse the $1,000.

A. G. Tuttle—We made a show in Philadelphia, a better show than Michigan, and the whole thing did not cost us $500.

B. S. Hoxie—In reply to Mr. Tuttle's statement, we are larger now than we were then.

On motion the matter of the arangements of the details of the exhibit at Omaha is left to the Executive Board.

A call for the program.

Report of the Finance Committee, read by Mr. Johnson and adopted by the Society.

G. J. Kellogg—I move that a summary of this report as read by Mr. Johnson be published in our report.

Adopted.

Committee on Resolutions is ready to report. Mrs. Campbell reads a number of resolutions.

On motion the resolutions were adopted.

J. C. Plumb refers to the Agricultural Society, as being a life member thereof, he is heartily in sympathy with the new State Board of Agriculture.

Mr. Dolton—I am going to leave you now. I want to thank you for the kind and courteous treatment I received at this meeting, and I hope that God will give me life and health to meet with you again.

On motion a vote of thanks was tendered Mr. Dolton for the interest he has shown in our meetings.

J. C. Plumb—If Mr. Kellogg is in the room, he said he would present the matter which I presented yesterday afternoon in relation to the Horticultural history. You will recall that two years ago I was a committee of one to prepare a

history of the Horticulture of Wisconsin. This matter has been carefully and slowly pushed, but it is not consummated. The work has grown on my hands. Mr. Thwaites has reviewed my work and made suggestions, with the desire that our work in this line shall be in harmony with the work of the State Commission. He has reviewed that which I presented yesterday and has handed me a typewritten copy of the plan.

PLAN OF PIONEER HORTICULTURAL HISTORY OF WISCONSIN.

1. Natural horticultural divisions of the State, with conditions and advantages of the same. To be illustrated by maps.

2. Brief summary of results of the different periods and divisions.

3. Alphabetical list of all persons noteworthy in the horticulture of Wisconsin, with location, dates, and specialties of the same.

4. Personal history, biography, and autobiography of the horticultural pioneers of the State.

5. Local history, so far as can be secured, of horticultural work in each county, or distinct district of the State, with notable experiments briefly summarized.

6. History of organized pioneer horticultural society work in Wisconsin, with the present status of the same, showing our progress in the last half century.

7. Descriptive lists of fruits and other horticultural products of Wisconsin (with origin), which our State Society have commended.

Chapters 1, 4 and 7 should be illustrated as the limits of space and money will permit.

Mr. Plumb continues—I will say before we adjourn that I expect copies of the new circular to be sent in here for distribution.

VALUE OF SEEDLING SMALL FRUITS.

Geo. J. Kellogg, Janesville, Wis.

Without seedlings there would be very little improvement in any fruits. Transplanting and culture might increase size and quality.

Strawberries were first transplanted from the wild woods and meadows in the seventeenth century. The first improvements were by seedlings of cross fertilization of the European and South American species. There was no marked enthusiasm in strawberry culture till the advent of Hovey and Early Scarlet in 1834. Of 412 varieties catalogued in 1870 there are about ten now to be found.

Strawberry seedling production has become a craze; once start a good thing and the American horticulturist goes wild. For two years I watched a bed of 4,000 seedlings in full fruitage; it would have made a fortune or spent a fortune to have tested and put them properly before the public. I think there are now catalogud one thousand varieties in the United States and Canada. Every originator thinks his pet has something remarkable in it.

The improvements in the last ten years have been very great; and yet there is no one variety that fills all requirements. I see no way for an amateur to satisfy his tastes in season, size, quality and productiveness, but to plant ten of the best well know varieties and keep ten more of the new on his trial beds. In no other way will he know what is going on and how soon he may miss a bonanza.

In other seedling small fruits there has not been the same improvement as in strawberries, yet the grape has its 1,000 varieties and as many more now coming to fruitage. Probably the Campbell's Early will take the place of the Concord. I know of valuable seedlings now that a few years ago would have contained fortunes. Now the competition is so sharp that some good point of excellence, either hardiness, quality, size, vigor, freedom from disease, earliness or long keeping qualities, or a combination of these qualities, must

prove merit, or there is no use in trying to foist the seedling on the public.

Among other small fruits there is a large field open for successful competition by growing new varieties, and especially by cross fertilization. Chance seedlings are no longer worth their cost; we must breed to some specific purpose. The recent experiments of Prof. Budd, of Iowa, show what can be done among small fruits as well as among the roses. The tendency of growers of new fruits is to humbug the American people. As a nation we are a set of humbugs and easily humbugged. We always bite if the hook is concealed and the bait tempting.

THE ORCHARD.

A. D. Barnes, Waupaca, Wis.

The best varieties and the best way to grow an orchard certainly depends on conditions and the quality of the soil, site, surroundings, and the desired purposes of said orchard, whether for market or family use. Be it understood that certain varieties do best on different soils, so we have to eliminate at some length on these points.

First, as my experience and observations are most extensive in what we may term central northern Wisconsin, where we have a variety of soils, from sand hills to heavy stiff red clay ridges, with our sandy plains and clay loam soils, we will name the varieties and give a detail of our system of planting and care on the two predominating classes of soils in our section of Wisconsin, namely, sandy loam ridges and red clay subsoils. Experience has taught us that the following list of apples, crabs, cherries and plums can be grown and fruited to a success on any of our high sandy ridges if they have proper care and treatment, namely, Tetofski, Duchess, Haas, Hibernal, Switzer, Wolf River and N. W. Greening, Transcendent, Virginia, Hyslop, and Whitney crabs, Early Richmond cherry (if budded on Mazzard stocks), Forest Garden, Wolf,

Weaver, Rollingstone, Hawkeye, and DeSoto plums. Please pardon for quoting my own operations, but they have been so successful and are of themselves *prima facie* evidence of success, and as I want this paper to be so plain that he who runs may read and understand it too, and being most anxious to encourage and instruct planters in this northern district where similar conditions and surroundings prevail, I will give the history of an orchard of 600 trees which we planted in early spring of 1891 at Pine River in Waushara county, in a very sandy loam soil on a high ridge sloping some to the north and more to the east. The land was rather new, with a good many stumps yet in it, protected from the south and southwest by a higher range of hills and a belt of timber, entirely open and unprotected from the northwest, north, northeast and east winds. Knowing this to be a very sandy subsoil (not less than 100 feet deep) we were very cautious to not dig holes deeper than actually necessary to accommodate the roots, and were very careful to fill the excavations with as good surface soil as the site afforded. We planted small sized, low topped trees in broken rows 14 feet north and south by 18 feet east and west, with the lowest branches on the southwest side. We watered liberally while planting and mulched thoroughly soon as done planting, and the ground was carefully harrowed every few days until it was planted to potatoes and then once after they came up. This crop was carefully cultivated all summer. The following spring the ground was plowed shallow and planted to a small kind of corn. A careful system of shallow cultivation was kept up in this crop. This was followed the next year with buckwheat sown late in June, and this by a crop of cucumbers the following season, and this in turn by another crop of buckwheat and clover seed.

Meantime these trees were carefully pruned each season. Many of these trees were protected by artificial shade on the southwest side of the tree. This orchard has been liberally mulched every year; in the first years in the spring after heavy rains, and on top of the frozen ground or snow since beginning to bear fruit. This orchard has given us several

fine loads of fruit in the past three years, and its appearance is so fine and promising at present that it is the center of admiration of all who see it, and I credit this success to the following reasons: Early planting of small trees of the proper varieties; careful and systematic level cultivation and thorough mulching, to preserve moisture and the fertility that this mulching afforded; protection from sun scald and judicious pruning, and I am confident that this same orchard will continue to be a success so long as we continue to supply humus and fertility to the soil and preserve the moisture, which we can do by mulching. Be it noted that I never saw so little fire blight on the same number of trees in many years, owing, I think, to its arid location and the even temperature of the soil, and I am confident that the careful and painstaking planter can grow an orchard to a success on very sandy soil too in northern Wisconsin.

For a general purpose orchard on a clay loam or a heavy firm subsoil I would plant Yellow Transparent, Duchess, Haas, Snow, Hibernal, Wealthy, McMahan, Tallman and Price's Sweet, Plum's Cider, Wisconsin Russett, Wolf River and N. W. Greening, with a few each of our newer local varieties, such as Newell, Avista, Berlin, Lind, Ruth and Scott's Winter. Would add Telfer's and Briar's Sweet to the crab list and Lombard to the plums, and possibly a Russian cherry or two.

Experience has induced me to be a little more liberal with room, and on good strong soils I would plant from 16 to 20 feet north and south and from 20 to 24 feet east and west, always in broken rows, and in large plantations I would give a little more room to the five following varieties as their tops spread much wider and they require more circulation of atmosphere than the others, namely, Snow, Hibernal, Tallman Sweet, Wolf River and N. W. Greening, and in all cases plant the Greening in the outside rows and never in a solid mass or block for they need more room, more air and more sunlight to mature the fruit, and the fruit will stand more storms and winds than any other apple known to me, owing to the tenacity of the fruit and the long slim branches on which it grows.

I am convinced that we should pay fully as much, if not

more, attention to the intermingling of the different varieties of apples and crabs for the purpose of pollenization or securing fertility to the pistillate blossoms than we now do to the strawberry beds. Experience qualifies this assertion, and I hope that future generations may profit from my experience, for I have lost hundreds of dollars from having planted one solid block of some 300 Greenings in the center of my home orchard. The outside rows only, which came in close contact with other varieties, gave me the only perfect apples. I have attempted to repair this damage by top working many of the trees in the inside rows to a number of varieties.

Too much time and labor cannot be spent preparing the site for a fruit tree, especially so in a hard clay soil. The tree beds should be wide, deep and mellow, porous and well-drained. I have learned from practical experience that one pound of dynamite discharged with a fuse at the bottom of a hole, say three or four feet deep, made with an ordinary crow-bar in the bottom of a hole prepared for a tree, will more fully prepare a site or bed for the tree than can the best man in a whole day's labor with pick and shovel, and the growth made on trees planted by me in the terrible drouth of '95 and '96 by this process is remarkable.

A few more pointers and I will close, hoping that these few crude suggestions may meet the attention of some inexperienced or discouraged would-be planter who will follow this advice carefully and thereby receive a benefit, i. e., select high and arid sites protected from south and west winds; plant small trees of the proper varieties and those that are adapted to your site and soil; protect the southwest side of the tree trunk by some means; mulch liberally, cultivate often and shallow; the first few years seed to clover; maintain fertility and moisture; prune apple, crab and plum trees early in March, just before the sap starts to flow; prune out the inner branches only in the cherry trees in July just after the fruit is harvested; be diligent, careful and painstaking; destroy worms, nests, etc., and you can grow fruit in Wisconsin that will compare with the best.

Mr. Toole—I move the adoption of this plan, and that the

Executive Committee give as much assistance as possible.

Call for Mr. Wedge for the best varieties, and best way to plant an orchard.

Mr. Wedge—It seems like carrying coal to New Castle for a Minnesota man to come here and talk to you about the best varieties, etc. Perhaps as we are on the frontier line, there may be something that I may say that would be of interest. Of course in Minnesota we have more to contend with in orcharding than you have here. A few varieties that you feel confident of, like the North Western Greening and Tallman Sweet, and a few such with us they are utterly unreliable. I will express the opinion that we ought "In peace prepare for war", and in these years of mild winters, a favorable period of orcharding, we must not forget that we may still have a war with the elements, and we must not ignore the Russian blood in these varieties. You know what our Minnesota fruit list is. I have of late fallen in love with the Repka for a late winter apple with us. It matures its wood and becomes ready for winter as early as the Duchess. It is a valuable variety to cross with some of our native varieties. It is a good source of seed from which to originate improved varieties. In regard to the method of planting an orchard, I am in favor of planting an orchard in rows running north and south as an effort to give natural shading, allowing of abundant distance between the rows for cultivation. As I understand it our largest orchards and in Nebraska are planted by that system. This gives us a good opportunity to spray the trees, and renew our orchard.

G. J. Kellogg—How wide do you plant?

Mr. Wedge—Between 35 and 40 feet, depending on the value of the land. Where land is $50.00 an acre, I would want 40 feet between the rows. With us 25 years is considered about the life or usefulness of a tree. I plant my own orchard 12 feet apart in the row. The Hibernal should be planted a little further. It has a spreading growth. I think in orchard management we must feed our trees. That is very important. I was pleased to hear Professor Bailey say that we ought to

treat our orchard in a uniform way, and feed it as we feed our stock.

G. J. Kellogg—Give us some more varieties of apples.

Mr. Wedge—Hardiest: The Duchess, Hibernal and Charlamoff. We call this Charlamoff the Peterson Charlamoff. It is a spreading tree, the fruit will not keep better than the Duchess, and it is a regular yearly bearer.

Mr. Wedge continues—As a secondary list, Wealthy, Tetofsky and Malinda. The Wealthy is growing very much in favor in Minnesota.

F. H. Chappel—Have you tried the Patten's Greening?

Mr. Wedge—The Patten's Greening is highly regarded in Minnesota. It is at the head of our trial list. About the Greening being out of shape. With us it is very regular, and makes a fine show in the orchard. Quality is better than the Hibernal.

J. C. Plumb—Is the Patten's Greening similar to the Hibernal?

Mr. Wedge—It has more branches, more fruiting surface than the Hibernal. The Okabena has, in my opinion, very excellent fruit.

J. C. Plumb—Is it as highly colored as the Duchess?

Mr. Wedge—Yes, it is fully as highly colored.

G. J. Kellogg—Is it longer keeper?

Mr. Wedge—Yes. It keeps about a month longer than the Duchess. The Peerless is on our list for trial. We cannot see any particular room on our list for this variety. It is quite free from blight, a pretty upright grower. I have fruited it several years on my place. The fruit will not keep quite as long as the Wealthy. The quality is very good indeed.

G. J. Kellogg—Why have you no place for it then?

Mr. Wedge—I do not think it is hardy enough for us. It is no hardier than the Utter, if it is as hardy. The originators say it is a seedling of the Utter.

Question—What is the cause of our trees suffering so severely in the winter 1895?

Mr. Wedge—I believe the severe cold, the long continued cold on the tops, is about our chief enemy. Our president

claims that drought is the chief cause, but I think it is more due to the extreme cold. We have no variety for general planting but what is of Russian origin. The Duchess may not have originated in Russia. I believe the Patten's Greening is at least half Russian.

G. J. Kellogg—What is the origin of the Malinda?

Mr. Wedge—It is a Russian, but they are the variety that did not pass through our period of extreme cold, whereas the Hibernal and Charlamoff stood those hard winters.

Question—What about the Antonovka?

Mr. Wedge—It is a blighter when it is young. It behaves better when it is old. The fruit is not a good keeper.

J. C. Plumb—Have you tried Mr. Tuttle's Charlamoff

Mr. Wedge—We do not know much of it in Minnesota.

J. C. Plumb—Does it blight some?

Mr. Wedge—I do not know.

A. G. Tuttle—I have several and they do not show blight.

G. J. Kellogg—If you are troubled with the Wallbridge (crotching), it due to a lack of pruning.

F. H. Chappell—There are too many small apples on it.

G. J. Kellogg—They are using the Wallbridge in south Iowa very successfully.

A. L. Hatch—What do you think of the McMahan?

Mr. Wedge—Finest show of fruit I ever saw in my life was on a McMahan tree. It does not blight very badly.

A. L. Hatch—Have you known it to winter kill in Minnesota?

Mr. Wedge—No, I have not. It has fruited well. It has only one difficulty. It has such a light color, in carrying to market I should think it would become disfigured.

A. L. Hatch—I have sent hundreds of barrels and it markets well.

Mr. Wedge—In Minnesota we do not recommend fall setting. It is too much of a task for a young tree to go through a severe winter.

Question—Do you set your trees straight or on a slant?

Mr. Wedge—A moderate slant to the south is good.

F. H. Chappel—Would you set a tree with the heaviest balanced side to the northwest?

Mr. Wedge—Yes, sir. In pruning a tree we are careful not to prune too much on the south side.

A. L. Hatch—I believe we are giving little or no attention to the small fruits, now can we not have something on small fruits?

Mr. Toole's resolution to adopt the plan of History of Horticulture as recommended by Mr. Plumb was carried.

J. C. Plumb—Mr. Thwaites has handed me a few circulars to distribute.

G. J. Kellogg—Have you any law in regard to the San Jose scale in Minnesota?

Mr. Wedge—We tried to get a law last winter, and most of our people are in favor of the law, but the legislature let the subject slide along and it went by default. I think all states ought to have a law for this purpose.

I wish to acknowledge my great pleasure in your kind hospitality, and I shall carry home with me a feeling that I have learned a good many things, and enjoyed myself a good deal. I desire to have you come up to our Society, as many of you as possible, and we will try to treat you at least half as well. (Applause.) Bids the Society members good-bye.

Mr. Voris—I also want to say good-bye to you, as I leave after dinner. I thank you for your courtesy.

Adjourned.

FRIDAY AFTERNOON.

G. J. Kellogg—I would like to offer another suggestion in regard to our further work along the line of our magazine for the balance of this winter at the Farmers' Institute. That we urge the workers in the Horticultural Department to take copies of that Monthly and get all the subscribers possible.

R. J. Coe—I will endeavor to get subscribers at Institutes.

Mrs. Campbell also promises to get subscribers.

A resolution was passed asking Institute workers to distribute sample copies of the Monthly Magazine "Horticulturist," and try to get subscribers.

Mr. Edwards' paper called for.

BEST VARIETIES AND IN WHAT PROPORTION SHOULD A SMALL FRUIT FARM BE PLANTED.

F. C. Edwards, Ft. Atkinson.

Success being the object striven for, some latitude must be given to the persons discussing this wide question.

If the person who is to operate this fruit farm is an amateur he had better plant few acres to start with, because he has a business to learn as surely as a doctor or lawyer. With an increase of knowledge he can increase his acreage; but let a thorough experimental knowledge go first.

If he does not do this he is about as sure to fail as any man under like circumstances in business or professional life. The man who makes a success in life today, is the one who understands and personally looks after the details of his business or profession.

The amount of land should range from ten to forty acres, according to the amount of responsibility and work you wish to shoulder and how much help of your own and hired help you wish to employ.

Do not use more than one-half of all your fruit farm at any one time in fruit, as rotation of crops in small fruit is just as necessary as it is on a grain and stock farm. For rotation insures health to the stock and profit to the cultivator.

Large small-fruit farms do not pay any better than large grain farms, and in fact the past year the advantage was in favor of the large stock or grain farms, as their product was capable of being held till the market could use the product and on fruit farms large quantities went to waste.

This fruit farm must produce the living for the family of those that are operating it, in cereals and all necessaries for

the table, such as the whole line of vegetables, grains, etc. (with a possible exception of wheat), as well as the feed for the horses, cows, poultry, etc. There should be such a remainder sold as to at least cancel all grocery bills. If the farm does not do this the owner is apt to be a living skeleton financially. Gentlemen, you can plainly see I am taking the conservative side of this question, with experience all over our State to back my statements.

WHAT VARIETIES TO USE.

This depends somewhat upon your soil. But suffice to say, use staple sorts of all kinds of small fruit and not follow after strange gods. But to all rules there are a very few exceptions. Use new sorts in a small way and do not bury all your business profits in experimenting. Care and soil figure more for success than varieties. This is nicely illustrated by some patents being not as good as the original without the patent improvements.

The varieties recommended by this society are a concensus of opinions of the leading fruit men of our State. I will mention a few of them:

Strawberries: Warfield and Crescent, and for the perfect blossom Wilson, Splendid, Enhance, etc. But what perfect blossom sort you should use depends largely upon your soil.

Raspberries, Reds: Cuthbert, sandy soil; Loudon, good new sort; Marlboro, prairie soil.

Raspberries, Purple: Columbian and Schaffer.

Raspberries, Black: Ohio, Older, Kansas and Gregg.

Currants: Victoria and White Grape.

Gooseberries: Downing.

Blackberries: Snyder, sandy and clay soils; Ancient Briton, prairie soils.

Grapes: Concord, Worden, Brighton and Niagara.

The time has not come, and I hope it never will, when we use anything but natural manures in Wisconsin, aided by clover in our rotation.

The location should be near some town or village having

railroad facilities and plenty of help in harvesting the fruit, with low soil, having good dranage and composed of at least 1-3 sand, 1-3 clay and 1-3 decomposed vegetable matter, largely humus. This composition constitutes as good a soil as can be found.

WHAT PROPORTIONS OF SMALL FRUIT?

No positive proportion can be stated; this depends upon the demands of your market and what competition you have to meet. The answer to this question we have to learn by a close touch with our business. It is not what kind of fruit I like, but what my customer wants, although the customer's taste is capable of being educated to a certain extent in the appreciation of new sorts. To illustrate, because I like the Norman horse it does not follow I should not raise a hackney or Clydesdale if the market calls for these breeds.

The small fruit farm should be so divided among the fruits of different season, that an equal bulk of product should be ready each day for market, with few weeks of rest, from the time strawberries ripen till grapes are gone. To approximately get at this matter I would say, on 16 acres of fruiting land there should be: 3 acres of strawberries, 2 of red raspberries, 2 of black raspberries, 1 of purple raspberries, 1 1-2 of currants, 1-2 of gooseberries, 4 of blackberries, 2 of grapes.

Much fruit goes to waste each year by improper picking and by not putting it into neat packages and placing on the markets in the right manner. This is a part of the business to be learned by experience largely and does not fall under the scope of this paper.

Fruit consumption is largely on the increase in the west. At one time the city of Fort Atkinson or Jefferson would ues only a few cases per day, now they use in the fruiting season several wagon loads per day. This in my opinion is the history of all other towns.

The small-fruit farm owner and operator should look to the home markets for sale of his crop, as they are now, and

will be in the future, the largest consumers at a reasonable profit. Do not deceive yourselves too much by the thought that you are going to outstrip the multitude of local growers that are entering this branch of business, and you pay long transportation charges extra.

In conclusion I wish to say: It matters not so much what we do in life, but how we perform what we undertake. There is always room at the top, but below it is a perfect jam on the way to the road called success.

As a summary of all: A person must like his business; attend personally to its many details; choose staple sorts of all kinds of fruit; give good clean and regular cultivation to every kind; be always strictly honest in deal and try to acquire proficiency as a salesman; keep good proportions so as to be able to hold your customers' entire trade in fruit; use neat packages filled with clean fruit. Send out good fruit or none at all, and you are on the road we all like so well to travel, called Success.

President—If there is nothing more we will go on with the small fruit discussion. I am on for this small fruit discussion, but Mr. Edwards has covered the ground nicely. It is one object of our Society to promote the formation of Horticultural Societies throughout the state. Our state legislature in granting this appropriation had an idea that they would through it help the entire people of the state, and not only the people who make a business of Horticulture. No home is what it ought to be unless it has a fruit garden, and some ornamental shrubs and flowers.

Pres. Johnson continues—I remember the first Duchess apples I saw. While our Society is accomplishing very much, I think they might be accomplishing more by systematic effort. There are communities where you can go from one house to another and never see an apple tree or berry bush, and I have traveled along highways and seen house after house with no shade trees. In a community where men make a business of Horticulture, as you go around their places you do not find pleasant farm houses, and the farmers in the surrounding country raise berries a great deal more than in the

communities where there are no Horticulturists. It is almost indispensable in order to induce these farmers to have these berry bushes, there must be men who make a business of Horticulture. Young men ought to be enocuraged to go into the business, not only to raise fruit for the villages, but also supply plants for the surrounding country. This plant raising business is larger than we have any idea of. I would not advise them to go into the nursery business, but while he is taking orders for plants he might represent somebody that is reliable and take orders for fruit trees, and such things as he does not have. I rejoice in the belief that most of the men in this Society are good, strict, honest men, and send out good, honest stock. While there are great swindles going on in our state, they are not done by the members of the Wisconsin State Horticultural Society. I think we ought to unite along this line. There is one thing that very few of our berry men take up and they ought to carry this out. It is almost as important for a farmer to have a vegetable garden as a berry patch. The strongest reason I have heard why they do not is this: There is a time for everything. If he does not sow his seed at the right time he does not get a good crop. If the planting is not done at the right time he suffers accordingly. Now the reason is that the planting of the garden comes at the time when he must put in his crops. There is one thing that farmers do not have that they might have. You do not find one out of ten farmers who has an asparagus bed. You also find home after home where they do not raise any pie-plant. These would not interfere with his work.

Question—Could you not add raspberries to that?

Mr. Johnson—Yes.

Mr. Edwards—How would you tell a farmer to make a garden?

Mr. Johnson—If I were going to tell him, I would begin with the first letter in the alphabet and say asparagus. There is no reason why you should not have an asparagus bed.

Mr. Edwards—How would you map it out?

Mr. Johnson—I would say, plow up a strip near your house,

manure it highly, and then next year set out asparagus. My idea in regard to this is that you ought to work him in by degrees. There is no reason why he should not raise sweet-corn, but few of them do.

Question—Now half of the people of Wisconsin do not know that asparagus is fit to eat.

Mr. Carns—I do not know, but I would not be surprised if this is the case. I put out a small bed, and we had more than we needed, my wife cut a few bunches and took them to the butcher shop to see if they would sell. There was very little call for them. I simply speak of this as many people do not know that asparagus is fit to eat.

G. J. Kellogg—What varieties of strawberries would you set?

Mr. Johnson—Well, I depend on Crescents mainly. Where a person is buying plants to set out for family use, I think he ought to get more varieties than if he was simply raising strawberries to sell. If a person is going to raise strawberries by the acre to sell, why, I believe he will get more money out of it when he confines himself to a few varieties. With me the Crescent is the berry that furnishes the fruit.

Mr. Edwards—What do you fertilize with?

Mr. Johnson—Beaderwood is excellent. I have tried Enhance a little, the pickers will not eat it.

Mr. Chappel—Does not the Enhance in the first fruiting sometimes become a little out of shape?

Mr. Johnson—Yes, but that is not very bad.

Mr. Hatch—Give us five varieties for home use.

Mr. Johnson—Crescent and Haverland, I would pollenize with Beaderwood, and Bradywine for late, and Cumberland.

Mr. Hatch—If a man is going to make a business out of them, what then?

Mr. Johnson—Crescent, Haverland and Beaderwood.

In regard to shipping the Warfield.

Mr. Johnson—If you set out your bed and give it good cultivation and plenty of ashes, your berry will be good. If the Crescent is a soft berry, it holds its color beautifully.

It holds it better than the Warfield. The Warfield looks dark.

Mr. Edwards—I would recommend the Warfield and Crescent for garden. In regard to fertilizer, I set Wilson, Splendid and Enhance, but it depends largely upon your soil.

Mr. Johnson—I fully agree with Mr. Edwards in all he said. We want to encourage young men to go into the business of Horticulture in the vicinities of cities and villages, and to furnish plants to farmers in the surrounding country.

Mr. Hatch—Do you advise further encouragement of more extensive planting? Do you advise more business planting? Shall we continue to grow hundreds of bushels of currants, and strawberries, and sell them for 20 and 40 cents per bushel? What shall we do?

Mr. Smith (called for)—That must be determined by circumstances. Where you are located. What your market is, how large it is and how far you are from some possible outlet. As for varieties, we ship Warfield and Beaderwood almost altogether.

Mrs. Johnson—I would like to say a word. For two years past Mr. Johnson's crop has been cut off by the frost, so that some of the newer varieties he is trying he cannot report on as fully as the old varieties. We use the Lovett for fertilizer.

Prof. Goff—It seems to me that this Society and a good many others are wasting a good deal of time in discussing the merits and de-merits of the different varieties that grow on different locations. The whole subject lies right here, it is just as Professor Bailey said yesterday. The variety question is a local question. Mr. Kellogg can tell what does best on his grounds, but cannot recommend a variety for Sturgeon Bay. If I want a variety to plant I will do one of two things. Either go to my neighbors and find out what is doing best with them. Then in order to find out the newer varieties, I will read the catalogues. I can learn just as much by reading some of our leading catalogues as from the Reports of the Society.

Mr. Kellogg—Can we not have a comparison of the old and new kinds?

Prof. Goff—You can for your own grounds.

Vice Pres. Johnson—This question of varieties seems to me is something like this, there are varieties which do very well in a great many different localities, while there are others which must have a locality which suits them best, or they are a double failure. Amongst those which do well in many places, and which seem to be the most promising are Splendid, Enhance, Brandywine and Parker Earl.

Mr. Kellogg—What do you know of the Brandywine?

Mr. Johnson—I do not know very much of the Brandywine. It is a wonderfully vigorous and healthy plant with me. It bears very late. The latest berry I have, I think. For a very large berry, it will yield as well as anything except the Enhance, but unlike the Enhance, it is of excellent quality.

Mrs. Johnson—I only wanted to say that Mr. Johnson's principal trade is in fancy berries for home market.

Mr. Kellogg—About the Brandywine, it is fairly large and healthy, and that is all you can say about it. I had a good crop of Enhance. I had 492 quarts from 2 rows 40 rods long.

Mr. Coe called for—This year has been very discouraging to the small fruit grower. There has been a combination of circumstances in the first place, money has been very close. There is another thing, beginning in Louisiana, there has been an immense crop all along the line, and the berry crop was good in almost every locality. This may not occur again. These circumstances have combined to make the small fruit grower discouraged.

Mr. Seymour—Many berries were sold last summer at very low prices.

Mr. Kellogg—The prospects of the outlook for the future are good. Now is the time for you to pitch right in and plant. Some have become discouraged and are going out, which will improve the condition. Those that keep along in the even, steady tenor of their ways will be sure to win. I

believe that the Brandywine is almost identical with the old Gandy. This question, "In view of the present and prospective prices can we expect currants to be a profitable crop?" I would answer in the affirmative. This year we all know that the season of ripening of strawberries in the states of Michigan, Illinois, Missouri and Wisconsin all seemed to come together. The crop of fruit was not of a first class quality, and the best quality of fruit was packed together and sent onto the market in that condition. Those parties that did send a good quality of fruit, received about the same prices as those parties that shipped an inferior quality of fruit. This is discouraging. We have got to teach these growers who have not been in the business long enough, to grow better fruit and put it up in the nicest packages. You see competition is the life of trade, now in Minnesota and Dakota they are beginning to raise small fruit in small quantities and are increasing their acreages. This should stimulate the Wisconsin grower to grow better fruit.

Mr. Johnson—The wonder to me is that our local market uses as much fruit as it does considering the condition in which it comes in. There was a man in our locality who raised one of the finest crops of strawberries I ever saw, and he had great difficulty in selling, because they were not put up in neat packages. I had a few strawberries that I did not sell at home, and so I shipped them up to Duluth, and they brought good returns, and they said they hoped I would send some more.

Mr. Kellogg—Those were not Enhance?

Mr. Johnson—No, Crescents.

Mr. Hatch—Summary of discussion. First, the good crops in the South, which is not probable to occur again, at least we have this to consider in our favor. Second, the scarcity of money the last season. The money outlooks are probably better along all lines. This is to our advantage. Third, there will be a large number of growers going out. That is in our favor. Fourth, that the berries in Michigan and elsewhere ripen about the same time, come in competition with ours. Against us. Fifth, there is a great diffusion of fruit

culture. That may or may not be for us. I would rather count this against us. Seventh, prices on all kinds of fruit, are not likely to be as low as in '96. Eighth, the question of transportation, when we can by careful management and arrangement secure good transportation, it will be for us. As far as freshness is concerned, we will be a little ahead. Now, of these eight features, I would sum up six as decidedly in our favor, and one the chances are somewhat in our favor, and the other one rather against us. Take it all in all for the professional fruit grower, I think the situation is in our favor.

Mr. Babcock—Now, you have not said a word about the best varieties for the home, on the farm.

No answer.

Prof. Goff called on. Have you anything to say to us in regard to the San Jose scale?

Prof. Goff—I was not consulted about being put on for a paper, and I do not feel that I have very much to say. I did much talking on it last winter, and some will remember the difficulties we encountered. Wisconsin has not agitated the question generally, in other states the agitation increases. In Michigan they passed a bill more stringent than we intended to pass. Many nurserymen have written me about the stringent rules of inspection on fruit trees going to Michigan. We have no authority here to inspect orchards. The scale is in Wisconsin, that it will endure the winters here is known, it has endured several winters. It has endured at least the past winter in Minnesota. Last year I will say 60 members of this Society expressed their desire that they wanted the bill passed, but three members were persistent and so the bill went by default. It passed the senate, and but for a letter from Mr. Barnes, who wrote more than he knew about the matter, would have passed.

Mr. Kellogg is called upon to lay out a plant for a farmers' garden.

G. J. Kellogg—If they must have the Warfield, I caution against planting 2 varieties, one on each side. The best four varieties, Beaderwood, Lovett, Splendid and Enhance. If they want the Warfield put it in the middle.

Program called for.

Mr. Herbst's paper (not read as Mr. Herbst thought other matters were of more importance.)

On motion of Mr. Hoxie it was resolved that all business matters except the election of officers shall be referred without debate to the Excutive Board.

On motion adjourned.

REPORT FROM IOWA.

By Geo. J. Kellogg.

Mr. President, Ladies and Gentlemen: Having a little leisure I started early in December for Iowa, and spent two days very profitably with friend Cotta at Nursery, Ill. He has in charge one of the Experimental Stations of northern Illinois; he has several acres devoted to the work and is very enthusiastic; he expects good and paying results in his top-grafting of the apple and the pear.

For the apple he is using Virginia crab, Shields, Whitney, Haas and many of the Russians for stocks, and he offers 43 varieties of apples for commercial purposes. For the pear he thinks more highly of Peffer's Wisconsin seedling than anything else. For a stock, though, he is using Russian varrieties also; he has twenty varieties of pears top-grafted, free from blight, vigorous and promising. One of the most promising apples is the Milwaukee, a Wisconsin seedling, so far it is proving hardy, productive and a long keeper.

My next point of interest was Ames, Iowa. Prof. Budd spent a day with me looking over the experimental orchard and nursery grounds at the College; he has done an immense amount of work testing, sifting and proving the Russian fruits, he says he has got down to the cream of the Russians in apples, plums and cherries, he gave me a list of each, which if desired I will furnish. His work for the last ten years has been in crossing the most promising European and American fruits, shrubs and roses, and those seedlings and

hybrids are just beginning to bear and are fully up to his expectations.

In company with Prof. Budd, I was in attendance at the opening of the State Horticultural annual meeting at the $3,000,000 capitol building at Des Moines. With such men as Pres. Powell, Secy, Van Houghten, Prof. Budd, Pammel and Calvin, Capt. Watrous, Messrs. Wilson, Collman, Wragg, Berryhill, Edwards and 24 other live horticulturists, it could not but be a success. The following thoughts brought to the front were: that Haas was the best stock for Jonathan and Grimes Golden, and yet at Ames both varieties had frozen dead so worked; Whitney had proven worthless as a stock for some varieties. Some reported Haas for Jonathan and Virginia for Grimes Golden. Silas Wilson's experience with 2,000 Virginia top-grafted, they all went dead with blight, while in northern Iowa Virginia has been a success used 28 years as a stock; Walbridge was reported a success from all districts; Malinda valuable especially top-grafted.

Very few Russians recommended except in northern Iowa; only four varieties on exhibition. Plumb's Cider reported as a valuable winter apple. Duchess reported by W. C. Haverland, Ft. Dodge, Ia., as not a success kept in cold storage; but from 25 acres of Wealthy he harvested 500 bbls.; these are a success held till December or March, out-sell anything on the market; he would plant of every 1,000 trees 991 Wealthy. He has in orchard 1,000 trees, sales, 1897, $2,000. Hon. N. F. Murry reported orchard success in Missouri as high as $400 per acre; he reports a wonderful interest in their annual meeting by the distribution of badges to school-children in attendance. Iowa produces the best quality of Ben Davis and Missouri the highest color, that sell in Germany at $6.00 and $8.00 per bbl. Missouri Black Twig better and larger than Winter Wine Sap; Osceola the only seedling winning the prize for a seedling in Iowa; Windsor spoken of highly by Prof. Budd.

Best crabs reported, Florence, Martha and Sylvan Sweet. Wolf River was on exhibition, as was also Pewaukee, but are not as profitable as Ben Davis. Kaump, one of Platte-

ville's (Wisconsin) seedlings is in all northern lists; Longfield is recommended by three out of five, same as Wolf River. Their list of apples that all recommend are, Ben Davis, Fameuse, Grimes, Janet, Jonathan, Lowell, Maiden's Blush, Oldenburg, Red June and Wine Sap, for central and southern Iowa.

Mr. J. M. Bechtel, Fremont Co., reported a 10 acre orchard, first nine years bearing (three of them being failures), yielded 4,854 bbls., value, $4,687; 1897 crop, $2,193, net, $1,605, from the 10 acres.

M. G. Edwards of Glenwood read a valuable paper on Foreign Markets giving rates from Missouri river to New York 85 cents per bbl.; Buffalo, 66c; Boston, 90c; Philadelphia, 82c; ocean rates, 42c per bbl.; apples now selling in Glasgow, $8.00 per bbl.

The best new currant reported was Knight's Improved, believed to be Pomona. Pres. Powell recommended more premiums for the young; more active practical workings of Horticultural Societies in enlisting the boys and girls in home ornamentations and cultivation of fruit; the introduction of Horticulture into our common schools; the closer study of nature in all of its beauties and developments; the owning of a state journal of Horticulture; some laws protecting from swindling tree-agents and the introduction of insect pests; the encouragement of the youth in planting fruit seeds; and the recommendation of a united effort of all Horticulturists to aid in every way Prof. Collman in the fruit display at Omaha in 1898. The state having appropriated $10,000 for the general state exhibit. Pres. Powell stated that only 1 in 4,000 of the population were members of their five Horticultural Societies. The treasurer's report showed a balance of $1,929.13 before the expenditures of the winter meeting. The printing of the reports of the 11 Experiment Stations for distribution in bulletins in their several districts was referred to the Board with power to act. The secretary of the State Society gets $500 and as librarian, $100 salary, and the four auxiliary societies pay each secretary $100. Protection of trees by lime, sulphur and soap white-wash was recommended. The

protection by veneer is believed to be injurious, trees lacking light and air, wire screen said to be better. Sub-soiling every three years was highly recommended in all horticultural work.

The subject of San Jose scale was up for discussion; members reported none within the limits of the state but it is in three places in Missouri and many places in Illinois, one tract of 25 miles square which were imported from New Jersey. Very little faith is placed in inspection certificates by entomologists; the affidavit of the proprietors of the nursery would be of greater security than the examination by an entomologist. The matter was referred to the board with instructions to appoint a committee of which Silas Wilson should be chairman, to present this matter to the state legislature asking an appropriation and law to protect the state. Hon. Silas Wilson is also a member of a committee of five appointed by the National Nurserymen's Association at St. Louis to present this matter to the appropriate committee of congress asking an appropriation and to pass a law that shall be national, to stamp out this pest. A request was made that county and state grounds establish Experimental Stations that shall be a success and self-supporting.

Three acres of Snyder were reported as producing 11,320 quarts, Older was reported a poor market berry but best for family use and to stand drouth. Plums, properly thinned, were four times as profitable, Sand cherries a good stock for dwarfing. Larch the most profitable timber tree. That congress should plant and protect forest areas for timber growth. That flowering shrubs of upright habits were best propagated by cuttings, those of drooping habits by layers, and those whose seeds were prominent by planting the seeds. Conrath and Red Field raspberries were highly recommended. Best cherries, Early Richmond, Late Richmond, Wragg, Montmorency and English Morrello. Among the best of plums, Wyant, Tatage and Hawkeye. Best stock for plums, our native seedlings.

I find the most wonderful variations of soil in Iowa as well as the two extremes of climate. The election was in

the evening and passed off very quietly, only members of a year's standing were allowed to vote, and a few that had not renewed their membership last year were ruled out, only 42 votes were cast. Prof. Powell declined to serve longer than 2 years and C. F. Gardner of Osage was elected president; M. J. Wragg, Waukee, vice-president; Geo. H. Van Houton, Lenox, secretary and librarian; W. M. Bomberger, Harlan, treasurer. No corresponding secretary. Six of the twelve directors were re-elected.

My reception and kindly reciprocal relations could not have been greater or more pleasant. The meeting was very marked by the absence of the ladies, their papers were even read by the secretary. The show of fruit was light as there were no premiums offered, except for seedlings. Missouri brought up a very fine collection of apples and there were two other large tables filled. Prof. S. Calvin gave a very interesting paper on "Prehistoric Iowa."

By urgent solicitation I spent a day at Waukee with the Wragg Bros., who are up to the times in horticultural work, and are in charge of one of the Experimental Stations. Having been urgently solicited to atend the S. W. winter meeting, I took occasion, en route to Omaha, to side track at Council Bluffs and run down to the very center of the "Garden of Eden," Glenwood, Mills county, S. W. Iowa. My reception was very cordial (even the being run in by Prof. Powell to the institution for the "feeble minded"); my visit and attendance was a grand horticultural ovation.

The soil of S. W. Iowa is very much like the Rhine and probably the choicest for fruit of any locality in the United States; every location, high and low, seems equally adapted yet the best results are reached on the higher grounds. Ninety-six dollars were offered in premiums and Polk county with 140 plates, 108 varieties, took first, while Mills county, never before beaten, took second. The program was equal to the state meeting and the best men of the state were there, while most of the officers of the Nebraska Society were in attendance as delegates. Peter Younger, the superintendent of the Omaha exhibits for Nebraska, reported nearly 200 bbls. of apples

now in cold storage for the June opening; Prof. Collman, superintendent of Iowa's exhibit, does not intend to take a back seat, and Supt. Murry of Missouri is making calculations to take the lead. Omaha's exhibit in 1898 will be one grand collection of state products, worth going thousands of miles to see. While in Omaha I spent a half day on the grounds, and buildings are being pushed to completion very rapidly.

The following items of interest were brought out at Glenwood: Tree wash: 1 gallon soft soap, 1 pint of turpentine, adding soda, carbolic acid and lime. Collman recommended Borovinka as better than Duchess. While Wealthy is queen at Ft. Dodge, it is worthless south. J. Y. Stone, who has 750 acres in orchard, has best success by close planting and recommends 17 by 17 feet, while others plant 16 by 60 feet. Southern Iowa wants no Russians, yet Borovinka, Yellow Transparent and many others are recommended. It would seem that where Grimes Golden, Jonathan, Wine Sap and Ben Davis were grown in perfection there would be no need of new seedlings, but Mills county is offering premiums and is bringing out some very fine new fruits over which their best men are enthusiastic. Much good work is being done by the nurserymen by free donations to all school districts in ornamenting their school grounds. Greater care in handling, sorting and more uniform packages of fruit is absolutely demanded for home and foreign markets. Prof. Laird gave us a valuable paper on Geology, treating largely of the valuable deposits and formation of the soils of S. W. Iowa. There was a good attendance of ladies but only one of the six on the program presented her paper. Growers of gooseberries recommended Pearl ahead of everything and stated that Red Jacket was no better than Houghton. I have already too long a report and the secretary is at liberty to cut it down to suit circumstances.

REPORT OF THE GRAND CHUTE SOCIETY.

By Mrs. J. B. Carey, Delegate.

The Grand Chute Society is a real live Society. It is not like Mr. Kellogg's Society; it is neither dead nor dying.

Our Society is composed of representatives from twenty-three families, mostly women. That accounts for its being alive and wide awake.

Some time ago our president appointed a committee of men whose business it should be to go out and look over the farmer's farm where we were holding our meetings, and come in and make a report before the meeting closed. We wished them to report how they found the farm, garden, barns and stock. They would go out and smoke and tell yarns and forget what they were sent out for; consequently that part of the program would be lost. I made a motion that our president appoint a committee of ladies. The motion prevailed and they were appointed. I can assure you it had a good effect. The farmers went to work, cleaned up their barn yards, painted their barns, as far as possible; weeded their gardens and put their farms in order, and there were good reports brought in at every meeting.

I think it quite necessary for the farmer's wife to be thoroughly posted about all farm work, to know all about the stock, how many there are of each kind, and which is the most profitable to keep. For she does not know how soon the lines may fall into her own hands, and she will want to be able to so guide affairs that the only loss she will sustain will be the loss of her better half. We held our annual meeting the first Thursday in January and elected our officers: president, Mr. Bushnell; secretary, Mrs. Lester Finkel; treasurer, Mr. Buck; delegate to State Convention, Mrs. Carey.

OBSERVATIONS FOR 1897.

By J. J. Menn of Norwalk, Monroe County.

The season of '97 will be remembered by all small fruit growers as a season of disappointment. The spring opened with prospects of a bountiful crop of all fruits, the weather being very favorable during blooming time. Many an air castle was built on the good prospects of a big crop and high prices.

Everything went on smoothly until May 25th when Jack Frost turned on a damper. On that morning the thermometer at my place went down to twenty-five below zero. The damage done around here in the valleys was at first estimated a total loss of all fruit, but later on it proved to be not so bad.

Blackberries were ruined. Raspberries were half a crop. Strawberries half a crop. Apples, plums, cherries, all killed, except on the ridges where there was no damage done, and even in some of the valleys. Eight miles north of here strawberries were not hurt very much, it only gave them a set back of a week.

We had a good deal of rain during the growing season of the strawberries and up to August, from then on we had a drought that lasted until winter set in. The strawberry crop on the ridges and in the vicinity of Sparta was the largest ever raised there, and the price received was about the lowest, in fact so low that picking them did not pay. I visited one field of fourteen acres where people came fifteen miles to pick and paid twenty cents for a sixteen quart case, and hundreds of bushels rotted on the ground. If there had only been five acres in all probability none would have been wasted. I saw on the ridge one acre cared for and owned by two old people. They picked all they could themselves and sold them at 50c a case and allowed their neighbors to pick at 30c a case. They cleared eighty dollars. It would have taken ten acres of oats to have netted that much. This shows that it pays to raise strawberries at a very low price, but not too many acres should be planted by one man,

and then expenses should be cut down as much as possible. I venture to say the time of big prices is a thing of the past. Berries are now raised farther north of us every year. Many are going out of the business as fast as they rushed into it, and the horticultural interest has been losing ground in 1897.

The apple crop on the ridge was not as large as in '96, but better prices were received. Early ones sold from 50 to 75 cents a bushel; fall and winter, from 65 to 85 cents; and good late apples, $1.00. The fruit kept well and was of a good quality. Blight and insects were not very bad. The prospects for the '98 crop are good, the trees are loaded with fruit buds.

The winter so far has been very favorable, ground well covered with snow since November, so I think the drought of last fall will not do any damage.

I have been in the dairy business for a good many years, but never was No. 1 butter sold cheaper than last summer, and how often we could hear the remark, "It don't pay," and some went out of dairying. Fair prices were received last fall and this winter, not the prices of years ago, but such that it pays to keep right on with fewer cows and only the best.

It is the same with the fruit growers. The one that sticks to the business and gives better care to one-half the acres will surely come out with a profit. The older I grow the more I realize the benefits of having a good supply of tree fruits, dried and canned, in the cellar these long winter days. It seems to make home more pleasant and cheerful, and the children seem to enjoy the home more for these luxuries. What success I have had and what gave me the start was due to some of our State Horticultural reports I received before I became a member of the State Society.

REPORT OF THE FRUIT COMMITTEE.

In the list of apples we would suggest that another column be added to indicate the peculiarities of the tree as regards blight, if it blights or to what extent.

We would add to the list: Flushing Spitzenburg, Wis. Russett (?), Yellow Transparent, Malinda, St. Lawrence, Tallman Sweet, Utter, Hass, American Codling, Repka, Grimes' Golden. In crabs: Spitzenburg, Shields.

Geo. J. Kellogg,
J. L. Herbst,
Wm. Hanchet,
Committee.

AWARD OF PREMIUMS AT ANNUAL MEETING.

The exhibits at the annual meeting were in a separate room from that in which the regular sessions were held.

The display of apples was not large, no premium being offered this year for "Best display of varieties." The quality of the plates on exhibition was excellent.

The display of potatoes was large and the potatoes were very large. One firm, the Riverdale Seed Farm of Grand Rapids, Wis., had two long tables loaded with potatoes of sixty-six named varieties and nearly a hundred plates of seedlings. Their seedlings of the first year were remarkable for their size and attracted a great deal of attention.

LIST OF PREMIUMS AWARDED FOR PLATES OF APPLES.

Newell, 1st, F. H. Chappel, Oregon; 2d, Henry Tarrant, Janesville.

Hibernal, 1st, A. D. Barnes, Waupaca.

McMahan, 1st, A. D. Barnes; 2nd, F. A. Hardin, Weyauwega.

Fameuse, 1st, A. D. Barnes.

Wealthy, 1st, A. D. Barnes; 2nd, Edwin Nye.
Scott's Winter, 1st, Edwin Nye, Appleton.
Grimes' Golden, 1st, Henry Tarrant.
Pewaukee, 1st, A. D. Barnes.
Walbridge, 1st, Edwin Nye; 2nd, A. D. Barnes.
Windsor, 1st, Henry Tarrant; 2nd, F. A. Hardin.
N. W. Greening, 1st, A. A. Cannon & Son, Marcellon; 2nd, Henry Tarrant.
Golden Russet, 1st, Henry Tarrant; 2d, A. D. Barnes.
Repka, 1st, F. H. Chappel; 2nd, Henry Tarrant.
Longfield, 1st, F. A. Hardin.
Malinda, 1st, Henry Tarrant; 2d, F. H. Chappel.
Tallman Sweet, 1st, Wm. Toole, Baraboo; 2d, Edwin Nye.
Utter, 1st, A. D. Barnes.
Plumb Cider, 1st, O. W. Babcock, Omro.
Mann, 1st, Edwin Nye.
Flushing Spitzenberg, 1st, Henry Tarrant.
Arabska, 1st, F. H. Chappel.
Wolf River, 1st, A. D. Barnes.
Winter Seedling, 1st, F. H. Chappel; 2d, A. D. Barnes.
New Seedling, 1st, Edwin Nye.
Crab Apples, 1st, A. D. Barnes.

PREMIUMS ON POTATOES.

Best display, not exceeding ten varieties, 1st, Riverdale Seed Farm, Grand Rapids; 2d, J. M. Smith's Sons, Green Bay.
Best new seedling originating in Wisconsin within two years, 1st, Riverdale Seed Farm on No. 11; 2d, Riverdale Seed Farm on "Yukon."
Best half peck early, 1st, Riverdale Seed Farm on "Early Michigan;" 2d, Waupaca Seed Potato Co. on "Bovee."
Best half peck late, 1st, Riverdale Seed Farm on "Wilson's First Choice;" 2d, Riverdale Seed Farm on "Enormous."
We have not room for the long list of specials.

REPORT OF COMMITTEE ON DRAWINGS.

Miss Nellie Tuttle, the girl artist of Baraboo, has several drawings on exhibition which would do credit to a much older and well trained artist. The drawing of horses' heads, done by Miss Nellie when only 14 years of age, is deserving of special mention, and still more wonderful to learn that she had received no instruction at that time. Now, if you have not examined these drawings, I can only say go at once to the exhibit chamber and *see for yourself*. We are confident you will be both surprised and pleased at the work done by our little artist.

That she may meet with *deserving success* is the wish of all of her *Horticultural* friends as well as that of her much esteemed grandfather, Mr. Tuttle, and that she be awarded a premium of one dollar.

RESOLUTION ADOPTED.

Moved that we adopt the plan of our history as recommended by Mr. Plumb and that the Executive Board be instructed to give Mr. Plumb all necessary assistance in his work and take such action as is needed to bring the work in harmony with the State Historical Commission.

Resolved, That all business matters except the election of officers shall be referred without debate to the Executive Board.

That the Wisconsin State Horticultural Society pledge $500 towards paying the expenses of an exhibit, provided, however, that the expense of collecting and caring for the exhibit, shall be donated, except the actual expense of transportation and board of those in attendance, the exhibit charges of such fruit as exhibited be paid.

Resolved, That A. J. Philips be continued superintendent of the trial orchard at Wausau for 1898.

Recognizing now, as in the past, the mutual relations existing between agriculture and horticulture,

Resolved, That we, the Wisconsin State Horticultural Society, in convention assembled, pledge our hearty support to the Wisconsin State Board of Agriculture, in promoting agriculture and kindred interests. Amended by Mr. Plumb,

That, as a 30-year life member, I was fully in sympathy with the change in the form of the organization taking a Board of Agriculture, and that I had long felt that such change was necesary.

Whereas, in the death of Miss McKerrow, sorrow has come come to the home of one of our esteemed and worthy members,

Therefore, resolved, That we bow in submission to the dispensation of Divine Providence and hereby extend our heartfelt sympathy to our afflicted brother and his family in this great bereavement.

We request a copy of this resolution be sent to the family.

Resolved, That we send greeting to Mrs. B. F. Adams and express cordial sympathy for her in her illness, as we have missed her presence and that of her husband, Mr. Adams, at our meetings.

Resolved, further, That a copy of these Resolutions be sent to Mr. Adams as a token of our esteem and kindly regard.

Resolved, That in the death of our old friend, Mr. Daniel Huntley of Appleton, this Society has lost a valuable member, whose counsel and presence has in the past been of more than ordinary value to us. To the relations we tender our sincere sympathy, and we hereby instruct our secretary to have this Resolution with a suitable memorial page printed in the forthcoming volume, and that a finely bound copy be sent to Mrs. Huntley as a token of our esteem.

Whereas, after a protracted illness Mrs. Geo. J. Kellogg in April passed to a life beyond,

Resolved, That in the death of Mrs. Kellogg this Society has lost a worthy member, and that we hereby tender our sympathy to the bereaved brother and his family in their

sorrow and bid them remember that "God's ways seem dark but sooner or later they touch the shining hills of day."

Resolved, That this Resolution be printed in our transactions, and that a properly bound copy be presented to the family.

Resolved, That thanks are due and hereby tendered to Mr. Scott, superintendent of public property, for the use of suitable rooms for the holding of our annual convention and exhibits.

Resolved, That we express our thanks to the R. R. lines that have extended courtesies to us by the way of reduced rates.

Vie H. Campbell,
D. C. Converse,
A. L. Hatch,
Committee on Resolutions.

Meeting of the Executive Committee of the Wisconsin State Horticultural Society held at the Parlors of the Capitol at Madison, the evening of February 4th, 1898.

On motion it was resolved that this committee select five commissioners to make arrangements for the Omaha Exposition, and ask the governor to appoint the same. Said commission to report to the Society at the summer meeting of the Society.

On motion L. G. Kellogg, A. L. Hatch, Professor E. S. Goff, Wm. Toole, and A. J. Philips were selected as said commissioners, and that A. J. Philips inform Governor Scofield of the foregoing action.

On motion it was resolved to pay Mrs. Johnson two hundred dollars to edit and manage the magazine until January 1st, 1899, which offer she accepted, to be paid at the rate of two hundred dollars per year.

On motion it was resolved to continue the publication of the Horticulturist through the balance of the year 1898 and through the year A. D. 1899.

On motion it was resolved that the Society furnish the

magazine at the following club rates: 1 copy at 50 cts., 5 copies at 40 cts. each, 10 at 35 cts. each, 20 at 30 cts. each, and 25 at 25 cts. each.

On motion it was resolved to have the magazine printed at Baraboo for the coming year, providing it can be done on the same terms as last year.

On motion it was resolved that the secretary shall forward to Mrs. Johnson the names of the secretaries of the local Societies of the state.

On motion it was resolved that if Mrs. Johnson decides to send out any number of the Horticulturist as a souvenir number of the short course students, that she obtain Mr. Moore's picture for a frontispiece.

On motion it was resolved that the sum of fifty dollars, or so much as she may need, may be used for plates during the coming year.

On motion R. J. Coe, Franklin Johnson and Mrs. Johnson be a committee to fix a scale of advertising rates for the magazine.

On motion it was resolved to pay 25 per cent. to obtain advertisements for the magazine.

On motion it was resolved that the following rates be charged for advertising: 1 inch, 1 insertion, 50c; 1 inch, 3 times, $1.00; 1 inch, 10 times, $2.00; ¼ page, 1 time, $1.00; ¼ page, 3 times, $2.00; ¼ page, 10 times, $4.00; ½ page, 1 time, $1.50; ½ page, 3 times, $3.00; ½ page, 10 times, $6.00; 1 page, 1 time, $2.00; 1 page, 3 times, $4.00; 1 page, 10 times, $8.00.

The following members were present: Prof. E. S. Goff, L. G. Kellogg, R. J. Coe, O. W. Babcock, Geo. J. Kellogg, L. H. Reed, Franklin Johnson and A. J. Philips.

DANIEL HUNTLEY—IN MEMORIAM.

By B. S. Hoxie.

One by one the pioneers of our Society are passing away, and we pause to ask the question, Who will take their places? Earth to earth and dust to dust is the common lot of all animate life; to the outward vision we perish, but the lessons of earthly things teach us of the heavenly, the beyond, "for except we die we live not." So when the message was received by the writer that Daniel Huntley died at his home near Appleton, October 6th, 1897, aged 70 years, memories of the past, revealing something of his life and thought, were quickened as I saw him, student, teacher, director and superintendent of public works, farmer and home-builder; and in all places striving for the best in life's work. These were some of the points in the history of a well-spent life.

Mr. Huntley was nature's student, and it was not strange that everything pertaining to horticulture should engage the attention of a mind fitted by education to grasp and comprehend many of nature's seeming mysteries. So for many years Mr. Huntley, with his wife, had been members of the Wisconsin State Horticultural Society, and the pages of our volumes of transactions have been enriched with the productions from the pens of each. Mr. Huntley in mind and thought possessed more of vigor than the physical could perform, but ever active and cheerful, willing to do for the happiness of others was a marked trait of his character. Trees, plants, fruits and flowers early found a place where the home was founded. When the trees he had planted with his own hand gave abundant fruit and ample shade, many were the groups of friends which often gathered on the lawn to partake of the hospitality of the "Huntley Home," or gather in the social reunion of the local Society. It was the privilege of the writer to meet such a gathering of friends at his home, and it is the remembrance of these gatherings and the influence going out from them which form a part of the inheritance left by a good man. Mr. Huntley was not a member of any

church, but in the broadest sense a true christian. He worshipped at a holy shrine. Do good to all, live a true life, be a manly man and a womanly woman—these were some of the tenets of his faith. He believed that God *is*, and we now are His creatures as much as we ever shall be; therefore he put his trust in the divine Father working out his salvation by *doing*.

Mr. Huntley always took an active part in whatever was to benefit his town or neighborhood, and when the first Arbor Day proclamation was published, offering a prize to the several school districts in different counties of the state, he planned to secure the prize which was awarded to his own district.

Plant trees, have fruits of all kinds, beautify the home, were texts from which he preached many effectual sermons. To him life was always full of possibilities, but for the lack of a more robust constitution the actualities bore heavy on a mind always so hopeful for the best. We of his more immediate associates can only cherish his memory as a true friend and point to his life and his work as an example of American citizenship as one worthy of our emulation.

[The following questions were submitted to Prof. Bailey by our member, Mr. Geo. J. Kellogg, of Janesville, who has done as much to advance the interests of horticulture in his forty years of work in that line as any man in Wisconsin. I submit questions and answers, knowing that answers to them coming from such high authority will be of interest and benefit to all the readers of our report.—A. J. Philips, Secretary.]

QUESTIONS SENT TO PROF. L. H. BAILEY, FEBRUARY, 1898.

1. At what time do strawberries form the crown blossom buds?

2. Do not apple fruit-blossoms form after July 1st?

3. Can you produce the same effects on tree fruits by ringing for size, the same as on grapes?

4. If so, at what stage of the growth should it be done?

5. Will an isolated fruit tree reproduce itself from the seed, provided the bees do not visit it?

6. Why do we find the Russian fruits so near like each other in classes, there being only a little variation?

7–8. Can we be certain in cross fertilizations of getting only the two characteristics of the parents; or will there be out-croppings of former generations?

9. What is the difficulty in crossing the Domestica with the Americana plums?

10. Between what species of strawberries by crossings were the first marked improvement in this fruit?

11. Have you any record of strawberry cultivation back of the 17th century?

12. Was not the advent of the Hovey, in 1834, the first real improvement?

13. How far, under the most favorable conditions of the weather, will the pollen of fruits be carried without the aid of insects?

14. Is not fire blight, horticultural apoplexy, a death stroke on certain conditions of an overflow of sap?

15. Do not insects follow blight rather than precede it? (Those that are found in blighted wood.)

16. Have you proof that cutting and burning the dead limbs of blight has any sanitary prevention the following year?

17. Do you believe bees carry blight in blossom time?

18. Is it not a fact that blight seldom shows itself till July or August?

19. Is it not also a fact that it works worse among nursery trees than the orchard?

20. How are the blight germs carried over?

21. Will cions, cut from blighted limbs, carry the blight the next season?

22. Is it not the season that causes the blight rather than contagion?

22 1–2. What are the best preventions of blight besides free

circulation of air, selection of varieties, clay soil and moderate cultivation?

23. How much will it hasten the bearing of nursery trees if the cions are cut from bearing trees?

24. What new facts have come from spraying?

25. Can we catch the curculio and apple gouger by spraying? If so, when?

GEO. J. KELLOGG,
Janesville, Wis.

Ithaca, N. Y., Feb. 16, 1898.

Mr. George J. Kellogg,
Janesville, Wis.

My Dear Sir:—Many of your questions are such as cannot be answered categorically, because we have not yet sufficient knowledge on some of the points at issue. I return the list of questions as you request, and herewith answer them as best I may:

1. The crown blossom bud of the strawberry is usually formed in late summer or fall.

2. Nobody knows when the differentiation between leaf-bud and flower-bud takes place in the common fruits. It is an exceedingly difficult matter to investigate. It is very probable, however, that differentiation takes place earlier than we expect. I presume that as soon as the bud is well enough formed to be visible to the general observer, its character is already determined, and I presume that that character is fixed as soon as the vigorous wood growth begins to cease. This matter is discussed in my "Pruning-Book," which is now on the press and will be on sale early in March.

3–4. The same effects can be produced in ringing tree fruits as in ringing grapes, and the operation is usually performed about as soon as the fruits are thoroughly set.

5. An isolated fruit tree will not necessarily reproduce itself from seed; that is, the variation from seeds does not depend upon cross-fertilization.

6. The Russian fruits come nearly like each other because they have been so long propagated from seeds, with very lit-

tle interposition of grafting. This question is discussed on page 90 of my "Plant-Breeding."

7. We cannot be certain that crossed seeds will combine characteristics of the parents, or that they will produce only the characteristics of those parents.

8. There may be an out-cropping of former generations, and there may not. One cannot prophesy in these matters. This question is fully discussed in chapter 2 of "Plant-Breeding."

9. The difficulty in crossing the Domestica and Americana plums lies in the incompatibility of the two races. There are very many failures to every success. The crossing can be done, however, and has been done, and I am looking to such crosses for good results in the future.

10–11–12. This whole question is discussed in Essay 25 in my "Survival of the Unlike." In my opinion, the race of garden strawberries is not the result of crossing. We have a record of a garden variety of strawberry in 1660. The commercial cultivation of strawberries in North America may be said to date from Hovey.

13. One cannot say how far pollen will carry, for it depends entirely upon the kind of pollen and the weather conditions. Some pollen may be carried for miles. I imagine that that of the fruit trees will not be carried more than a few rods.

14. Fire blight on the pear and apple is due to a distinct germ microbe. Not all the points in the history of this organism are understood, but it is known positively that the organism is the cause of the trouble.

15. The blight being due to a specific organism, the insects are therefore not to be held as the cause; and if they occur in blighted wood, they simply follow the disease. However, there are some kinds of blight—that is, the twig blight—which are due to insect attack.

16. Cutting off the blighted limb and burning it positively kills or cures that attack, but the tree may be attacked again at any time. Sometimes the blight germs live over winter in the twigs, and when that is the case cutting off the limbs and burning them will have an effect in preventing the spread of the disease the following year.

17. I do not know that it is positively known that bees carry the fire blight in blossoming time, but I suspect that they do.

18. In this climate, blight often shows early in the season, but it is more commonly seen, I think, late in the season.

19. As I have observed, it is worse upon orchard or bearing trees than upon nursery stock. This may not be true with you in the west, however.

20. I have said in No. 16 that the blight germs are sometimes carried over in the twigs themselves. It is probable that they are carried over in the soil, but we need more light upon many of these points.

21. The answer to No. 16 will also apply to this.

22. This is answered in question 14. The season has something to do in increasing or accelerating the spread of blight, but the disease is caused by a specific organism or contagion.

22 1-2. The preventives of blight are to plant varieties which are least susceptible to the attack, and to prevent too rapid and rampant growth of wood. There are no other practicable preventives, so far as I know.

23. One cannot tell how much fruit bearing will be hastened by cutting cions from bearing trees. That will depend upon the habit of the tree from which the cions are cut. I should only want to say that I believe in general that cions cut from bearing trees would be likely to give a better bearing habit than those cut from trees which have never borne, but the matter of precocity is one upon which I would not like to express an opinion at the present time.

24. You ask what new facts have come from spraying. I suppose that there are hundreds of new facts which we have derived from that operation, because almost every insect and fungous disease has been treated with sprays, and the behaviors have been noticed, and every distinct result is a new fact. The general philosophy of spraying is discussed in one of the chapters of my "Principles of Fruit-Growing."

25. Some experiments show that the curculio can be lessened by spraying, but it is generally believed by fruit-growers, I think, that the results are hardly worth the while. About all

the proof we have that the curculio is lessened by spraying is in experiments which were made on cherries. The insect is so much more certainly kept in check by jarring on sheets that this latter method is the only one upon which much reliance can be placed.

Yours very truly,

L. H. BAILEY.

SUMMER MEETING

OF THE

Wisconsin State Horticultural Society

Appleton, June 23–24th, 11:25 A. M.

President called meeting to order.

Announcement: "I will appoint as a committee on Awards of Fruit R. J. Coe, Mr. Treleven and Mr. Carpenter. Committee on Awards of Flowers, Mrs. Huntley, Mrs. Bushnell, and Mrs. Frank Wolcott. As Program committee I will appoint the committee of Local Society, the Appleton Society."

The program has been somewhat varied as mapped out by our secretary. The address of welcome will be postponed until evening. The first thing upon our program this morning will be the matter of making an exhibit at Omaha, opened by Mr. A. L. Hatch of Sturgeon Bay.

Mr. Hatch—I think the announcement made by the Appleton man that dinner was ready has handicapped me somewhat in the matter and you will wish me to cut this short. We have nothing new or wonderful to announce. We are all informed as to the character of the exhibit as announced by the newspapers. This society contemplates an exhibit during the months of September and October. We have already arranged and paid for 300 feet of space. We have set aside from our funds $500, $150 of this having been used for space, leaving $350 with which to make an exhibit. To you who know anything about an exhibit of this character, it is evident that the money is inadequate. How to get the additional amount of money is the question to consider. If we can show the ad-

vantages to be gained by making this exhibit, we can secure the additional means. The exhibit, in order to be good and satisfactory, in my judgment, ought to be a simple affair. Those who attended the World's Fair will doubtless remember the Wisconsin exhibit. To me one of the finest things of the fruit exhibit was the directness. Much expense was made to arrange exhibits. The state of New York put in some shelving; the furniture cost some $1,600, and it did not add one cent's worth. The state of Illinois backed their exhibit by looking glasses. This, it seems to me, detracted from the exhibit. The state of Minnesota put in a whirl-a-gig. The motion was tiresome and ceaseless. The state of Michigan put their exhibit in show cases, and if you wanted to see it you had to peep over the show cases and look down. They endeavored to keep perishable fruit with ice. That was a failure as the glass steamed up and you could not see the fruit. Those were useless things.

Mr. Hatch here refers to the prune horse in the California exhibit, and asks what variety of prune it was.

Mr. Philips—Horse prune. (Much laughter.)

Mr. Hatch continues—Now that vast monument California reared of oranges. It simply demonstrated quantity, but was no show of variety. I think that our lack of funds will compel us to make an exhibit without furniture.

Mr. Kellogg—Mr. President, is it all right to offer a resolution on this?

President—We will let Mr. Hatch continue.

Mr. Hatch—There is not much to say. Any exhibit in order to be valuable ought to be suggestive of possibilities of horticulture. Not lessons of resource and capacity. Suppose you see a great pile of Duchess of Oldenburg apples, it is a great apple cheapener. You may pile them knee deep, and you only demonstrate the common capacity to grow that one apple. But if you were to exhibit a variety of cherries, plums, etc., that are not usually a success, it is an object lesson. Now, for instance, I will show you—I hold in my hands two varieties of European plum. They were grown in Wisconsin. If we exhibit those it shows we can grow them. It means we

have a locality where those varieties are successful, for on the other hand we know the Japanese plums failed for 5 years in succession in Racine county, 150 miles south of here. (Referring to plums.) These are three varieties of Japanese plums grown in Wisconsin. Shows they will grow in some locality. They grow right here. Here is a sample of sweet cherry, now that means something to us. So we can from various portions of the state gather up a significant exhibit, rather than duplicate an exhibit of the common kinds. Let the exhibit be significant, let it prove something. You can look at it from the standpoint of home use, from the standpoint of the fruit fancier, and another point is the commercial or money-making standpoint. Let the demonstrations show what we can grow for home use, or as commercial fruit growers. Now, I say, if we make an exhibit, let us consider these three distinct ways of proving the advantages. Here I leave the question with you.

Mr. Geo. Kellogg—I move that we dispense with the Omaha exhibit and sell the space.

President—Motion is open for discussion.

Mr. Philips—Here is the original resolution: That the Wisconsin State Horticultural Society pledge $500 towards paying the expenses of the exhibit at Omaha, provided that the expense of caring for and making the exhibit shall be donated, excepting the actual expense of exhibit charges and traveling expenses. As regards this Omaha exhibit I have had a number of inquiries, and you remember what the stockmen did. The stockmen of the northwest were asked to make an exhibit that would be second to none in the United States. They asked if there would be cash premiums, and when told that there would only be diplomas, the stockmen said the diplomas were all right, but they could not pay their expenses with them. Then they met and appropriated a large amount for premiums on stock. I have had four or five letters from persons desirous of making an exhibit, asking if there would be premiums. So I wrote to Mr. Taylor after we had decided to take the space, asking him if there would be cash premiums, and if so, to whom they would be paid, and to send

me a premium list. I received the following letter from Prof. Taylor. Reads letter, saying no cash premiums on fruits would be paid.

Now, I speak for myself in particular, and the rest of the horticulturists in the state in general. I do not see how a man can grow fruit, and get it to a state of perfection and take it there to show, without getting some pay for it. I cannot ask my boys to cultivate the orchard this summer, and prepare an exhibit, and have it go there and get nothing in return. It will not buy boots or clothes for the boys nor pay the hired help. There should be some money coming back. It seems so to me. I do not wish to oppose this if the majority of our people are anxious to make a show there. Mr. Hatch made one statement that is true. An exhibit at such a place should be valuable. It should be valuable, to whom? To us as a Society, or to the state. Mr. Coe, Mr. Toole, and Mr. Johnson raised the question last winter, What will the value be to the Society or to the state? That is a question we must consider. Governor Scofield had no doubt that if we would appropriate $500 and borrow $1,000, the state would re-imburse us next winter. If we can do something that will be of value to the state, then let us make it. Will it benefit us? Can we make a market for our trees, where they in that country grow a two year old tree as large as our four year old? I will take no more time on this question, gentlemen.

Prof. Goff—There are certainly two sides to this question. On one hand we have a peculiarly favorable opportunity to advertise what Wisconsin can do. People from all over will come together at Omaha, and I would like to see a fine exhibit. On the other hand is the question, Will it be of benefit to our state Society? Can our Society afford to make an exhibit for the benefit of the whole state? We ought to have help from the railroads, and from the Agricultural Society. It is too much for our Society. We ought to make a good exhibit. We should not let the opportunity go by, and if we cannot get help we ought to do the best we can.

Mr. G. J. Kellogg—Returning from Omaha last winter I wanted a fine show. But what can we do with the remainder

of the money we have. The exhibit may advertise a few varieties. I have no question that we can sell the space for its cost. And I would rather give them the $150 than make an exhibit.

President—Anything further?

Mrs. Johnson—I am the only representative from Sauk county. We had, a month ago, the promise of the finest apple crop, but our trees are now badly damaged by 17-year locusts.

Mr. Dartt—I do not wish to discuss this question at all. I only wish to reply to the remark made by Mr. Hatch in regard to the Minnesota exhibit at the World's Fair. He says that in an exhibit everything must be practical, but I say the more attractive the exhibit is, the more effective. Minnesota put up two turning tables. I saw the crowds pass through the whole building, everything was nearly common place, but when they saw something new and attractive they would stop. I noticed how they would stop at the Minnesota exhibit, and pass by the Wisconsin, and it is probably for this reason that Brother Hatch wished that the whirl-a-gigs had not been there, as it took attention from the Wisconsin exhibit. (Laughter.)

President Kellogg—I wish to know the feelings at Baraboo.

Mrs Johnson—I have heard nothing about it. Mr. Johnson feels as he did last winter; he will not oppose it, yet is not in favor of it; it is a question with him whether it will pay.

Mr. Toole—I do not like to back out of anything. If we gain by it, I say go ahead. It seems as though we certainly have a chance for a good showing of fruit. I believe we could do well with a smaller space than 300 feet. Go ahead with this thing and do the best that you can. I never yet was able to see that it would be of great advantage to us to make an exhibit. We have a great abundance of fruit this year, and that is a coincidence that may not happen again.

On motion the matter was laid over until after dinner.

On motion adjourned.

THURSDAY P. M.

President called the meeting to order.

Mrs. Finkle desires me to announce that the delegates to this Society and members of the State Society will report to the secretary for entertainment. If they will report now it will assist her in placing them. All visitors are included.

Mr. Philips' announcement—I wish to say in regard to membership in our Society: Some years ago we adopted a plan of having the local societies furnish us members. We made that requirement at Waupaca but it gave dissatisfaction throughout the state. We quit that plan last year. The Omro people were not required to furnish members. We have also reduced the life membership fee to $5.00. Annual membership is $1.00, which entitles you to our annual report and monthly magazine for one year. We want you here at Appleton to give us some members. We got five or six this morning and would like more. Mrs. Johnson will tell you about the magazine.

President—In the place of Mr. Treleven on awards of fruits I will substitute Mr. Abbott of Appleton. I will also ask this committee to judge the vegetables. We will now resume the discussion on the Omaha exposition.

Mr. Babcock—It seems to me that we are again discussing a question that was done away with at Madison last winter. There we voted to raise money, I think $500.00, and the Society authorized the Executive committee to appoint a committee to attend to the exhibit at Omaha, and leave all business to be done in the matter with the executive committee. That Executive committee met and appointed that committee to attend to the matter at Omaha; they have done it as far as they could. Was it not so understood that the business be left with the Executive committee. The great commonwealth of Wisconsin should not let this go by default. If we cannot do this now, we never can; we now have the space there and we must not let it go empty. We had better hold that exhibit.

Mr. Dolton—I am an Illinois man, and have but little to say on this matter. There is only one way to get at it, move

a reconsideration. A motion to reconsider would be the proper motion, and I hope there is not a gentleman in the room that will take the responsibility of reconsideration.

President—I think Mr. Dolton takes the right view of this question. That this resolution is out of order.

President—According to the wording of the resolution an appropriation of $500 was made with the understanding that the details of the exhibit were to be worked out at the summer meeting.

Mr. Philips—There are several contingencies.

Mr. Toole—I think we ought to be ashamed to back out now. It was suggested to sell the space. I do not think we are going to do much, selling it off second handed. After we have invested, we ought to make an exhibit. I do believe after careful consideration of the question we will be better satisfied to go ahead.

Mr. Philips here reads the resolution as passed at the winter meeting. Resolved, That the Wisconsin State Horticultural Society pledge $500, etc.

Mr. Hatch—Originally I was opposed to attempting it. By your recommendation, five gentlemen, of whom I am one, received commissions to go to Omaha to represent the state. Having received that great honor, I want to see this thing carried out. We must perfect the details here upon the contingencies Mr. Philips referred to. We all agree to this. If we are going to do anything, we must have means. I would suggest sending out a circular letter throughout the state to parties interested, and if the responses are favorable, let the Executive board take final action. I, therefore, move that Prof. Goff be appointed a committee of one to prepare a circular letter to ascertain if sufficient help can be obtained, and report of the Executive board for their action.

Mr. G. J. Kellogg—Your resolution is out of order.

President—I think we had better dispose of this resolution. It will take but little time—Mr. Kellogg's resolution. It is impossible to recall the action of our Society. Is there any further discussion of this question?

Mr. Smith, of Green Bay—The motion can be reconsidered

after 24 hours after it has been passed on. As to the Omaha exhibit, I say by all means carry it through.

President—Mr. Kellogg's resolution is all right then.

Mr. Kellogg—It is the expense that we want to get at. If it is just a little glory, we do not want to consider it for a moment. So far as selling the space, it can be sold at a premium. The money advanced will be returned to us. Now, about the circular letter; by sending a circular it would take a month or two months, and it will then be too late to sell the space. The final conclusions are for this meeting. We can make a good show, but will it pay? Can we make a creditable show for $350? There is no other money coming in that I know of. I for one was very favorable towards it, and think I introduced the resolution to make an exhibit, but they are paying no cash premiums; they are simply giving a glorious medal.

President—We are getting away from the question. It would place the officers of this Society in an embarrassing position if this resolution is adopted. We have traded horses, let us stick to it.

Mr. G. J. Kellogg—We have traded on a bridge. (Laughter.)

President—Before placing this question, I would like to say that it is expected that only the members of the state Society will be privileged to vote.

Mr. Coe called for.

Mr. Coe—The only objection I ever made on this question was the matter of expense. It is well known that the State Horticultural Society has laid out a line of work. This line of work takes all of their appropriation. In fact, for the last years we have run a little behind our appropriation. Now then, if we spend the $500, and I would say that if we make an exhibit, it will take more money, and we must make some provision for funds outside of our appropriation. Will the legislature give us back the money if we spend it for this? I would like to see this exhibit; it would be a good thing for the state. The only question is the question of funds. Our legislature would help us to some extent, to what extent I do not know. They have helped us when we have been in need,

always. I would like to see the exhibit. We have about $250 less in the treasury than we had one year ago today.

Mr. G. J. Kellogg—The question was raised last winter whether we could appropriate money given for horticultural purposes in Wisconsin, and take it to some other state.

Mr. A. L. Hatch (Substitute)—I move you that we appoint a committee of one to send out a circular to ascertain if we can get funds and have him report to the officers.

Mr. Dolton—One word. I feel a little delicacy in talking to a Wisconsin audience about keeping up the reputation of Wisconsin in Omaha. I belong to an anti-repudiating society. If this society is a repudiating society, I do not know but what I would like to have my money back. I hope you will not repudiate. Make an exhibit at Omaha that will be a credit to Wisconsin forever. This matter of appropriated money—the money was for the Horticultural Society of the state of Wisconsin. We in the northwest want to come to the front, and Wisconsin has been helping us. Do not think of taking a back seat for a few hundred dollars. Now, ladies and gentleman, do vote to make this exhibit. I know your next legislature will help you out by by an appropriation of the money you will spend in the interest of the state of Wisconsin. It is one of the grandest things that people can be engaged in. I am proud of the hour and day when I became a member of this association, and I hope the word will not go out that we are a repudiating association. Have confidence in the coming legislature to appropriate what you need at Omaha. What I have heard of the apple crops, your prospects never were better. If that is a fact, by all means make the exhibit. If you make an exhibit and it comes on to individual assessments of members you will find one in Illinois who will help you out. (Applause.)

Mr. Dartt—This is not the first time I have spoken when I knew the current was against me. What is repudiation? This matter of repudiation! It is going back on a contract. Now, if the conditions that attend an exhibit of this kind have been changed, if you change your views, it is not repudiation. I understood cash premiums were to be awarded that would partially pay the exhibitors. Now, the expenses of this thing

must all be borne by individuals. They must work without pay, without compensation, and contribute their stuff, and get no reward. So I think if you change your minds, and not make an exhibit, it would not be repudiation.

Mr. Dolton—Call a point of order.

President—The question is on the substitute. Are there any further remarks?

Mr. Toole—This is not a question of disposing of the previous question, but also brings up new things for us to consider. If this new question is substituted by appointing a committee to see what we can get, I wish to know how long it will take and what is expected to be found out in this circular letter. Could we not find it out from the people at this meeting instead of waiting for answers to the circular letter to be sent out.

Mr. Hatch—I believe that if we have a good Executive board it is not in good taste for the gentlemen to ask all these questions. If you cannot get the means you cannot go ahead. This substitute will determine the matter.

Moved and seconded as substitute, that Professor Goff be appointed a committee of one to ascertain if funds can be secured to carry on this exhibit at Omaha and report to the Executive board of this Society.

Mr. Philips—Fix a time.

President—I think, Mr. Hatch, this matter ought to go to the commission appointed by the governor, though I am not particular.

Mr. Hatch—You have no right to confer duties on that commission. You have an executive board that is to do this work. Dispose of it and get it out.

Motion prevails on substitute.

Professor Goff is so appointed.

President—Discussion on this matter will be closed, and the matter will be left with Professor Goff.

President—We will now return to the regular program. The matter of legislation against the San Jose scale at the next session of the legislature. Discussion opened by Mr. Wm. Toole of Baraboo.

Mr. Toole—It is more than a year ago that the matter of

legislation in regard to the San Jose scale was brought up before this Society, and we have all thought much on this subject and ought to be able to bring more mature thoughts to bear on this question now than when we first gave attention to it. The legislative committee consisted of Prof. Goff, and we all agree that the work was conscientiously done. We saw that modification was necessary. It seemed to members of this Society that the bill, as introduced, was not adapted to our wants. It is an unfortunate fact that a spirit of opposition seemed to grow up. Some of us seemed to occupy that position. There is not a horticulturist in the state that would be willing to occupy that position. It is possible that after the consideration we are able to give this question, we may still further improve on it. It is more than possible that we may be thankful from what we can judge of leading opinions in different parts of the United States, we may be thankful that we have not as yet passed any San Jose scale bill. That does not prove that we should not. We have lost nothing by it, and a good sentiment has been worked up on this subject. I would like to read some things brought up in some of the papers,—one from Stark Brothers of Missouri. This shows that the San Jose scale is not as bad as some other things we have had to contend with. This article is entitled "San Jose Scale a 'Bugbear.'" Professor Bailey, of Cornell Experiment Station, Dr. Smith, N. J. state entomologist, and other authorities, say that fruit growers already have to contend with "infinitely worse" enemies than the San Jose scale or any other scale insect, and that insects and fungi are sometimes literal "Bugbears." Practical, personal experience with San Jose scale will be of interest. The following is from Mac J. Crow, for years associated in the management of the leading California nursery and orchard at Napa, Cal., who has recently taken up his residence in Pike county, Mo. Mr. Crow writes us: "The San Jose scale is evidently thoroughly established in numerous localities east of the Rocky mountains. Orchardists should accept the fact, quit talking about legislation, and turn their attention to prevention or cure, as the case may be, in their individual orchards. Some are making a 'mountain out of a mole-hill,' and seem to overlook entirely the fact

that this scale problem was solved in California some six or eight years ago, and is today requiring much less attention than some fungous diseases which are so numerous throughout the eastern and middle states. It is far easier to combat the San Jose scale than the codlin moth, scab, blight or borers, the former can be kept thoroughly in check with less work and expense than any one of the latter. This is an indisputable fact—a fact thoroughly demonstrated in the California orchards. It is unnecessary to dig up and burn a badly infested tree, as the wise ones often say. Three thorough sprayings with lime, sulphur, and salt, or resin washes, properly applied at the right times, will clean any tree, no matter how many scales are on it; then one spraying a year is sufficient. Of course if the scale have been on so long as to almost kill the tree, then a new one had better be planted." Referring to an article in the American Gardening, Mr. Toole reads: "A few weeks ago a gentleman residing not 50 miles from New York, wishing to plant a number of trees, was advised to send to Michigan to get clean stock and which would be certified. He did so, and the trees arrived, certificate and all, complete. The gentleman, not feeling satisfied with their appearance, called in an expert at considerable expense, who pronounced it the worst case of San Jose scale he had ever seen. This then is all the value that can be placed upon the certificate."

Mr. Toole goes on to say: We might reason on in this way, that we have proceeded along this far without legislation on this pest, why not let it go longer. First of all consider: Can we accomplish anything by legislation? I believe we can and should. It is a mistake to say that we should legislate against San Jose scale and other insects. Do not make i an omnibus bill, as it will be looked upon as a humbug. In this matter of subduing insects we need legislation as well as the sentiment. I do not believe we ought to be allowed to send out the coddling moth wholesale all over the country. We cannot do this all at once; we must go over the matter carefully. Agree on something and have it brought before the legislature. I have probably said enough

to prompt discussion on the subject, and will now leave the matter in your hands.

President—The matter is open for discussion. Shall we attempt any future legislation?

Prof. Goff—I have been watching this matter with a good deal of interest since the last meeting of our legislature. Some of you remember that the Society decided at that time that we should endeavor to pass some sort of a bill, and a bill was then drawn up and referred to the legislature. The bill that was drawn up was a stringent one. I believe now it was not the right kind of a bill; the bill was revised twice. The second amendment relieved the state from all expense, the Horticultural Society from all expense, and individual members from all expense, unless they refuse to obey the demands. Whether this was wise or not, I do not know. I have been watching to see whether we need a bill, whether we can do anything with a bill. There is this about the San Jose scale: It can only be disseminated upon nursery stock. If we can see that the nursery stock is free from it, we can keep it out theoretically.

Mr. Dartt—Can it be carried by the feet of birds from one orchard to another?

Professor Goff—Possibly. Our national government has been considering a bill, which has not been disposed of, I think. It is more difficult to pass it before our national legislature than before our state legislature. The question now to be decided is whether or not we need a bill. I will say that the San Jose scale is in our state. That it lived over last winter at least. Dr. Ford of Illinois said that it has lived over several winters. That question is settled. We hoped at one time that our climatic conditions would render it impossible for it to live here, but we cannot hope that any longer. I have received half a dozen letters from nurserymen, asking what I could do to inspect their stock. They wanted to ship it into other states, and they would not accept it unless it was inspected. I wrote them that there were no officers who had authority to make such inspections. I received a letter from one of our leading nurserymen saying that

their difficulties had been increased by the San Jose scale laws of other states. They wanted to know if we could not do something to get rid of this obstacle. Mr. Toole quoted several articles on one side of the case. Most of you know in Michigan a bill was passed that was more stringent than we endeavored to pass. Yet Prof. Taft published through the Rural New Yorker that it is working satisfactory to the people of the state.

Mr. G. J. Kellogg—The inspection of the nurseries by any entomologist is almost an impossibility, the inspections must be thorough. The best entomologist could not inspect an acre in a week. Therefore can it be done? Can we protect ourselves by a law of inspections. Michigan has been very stringent, and we feared we could not ship anything into Michigan. I found no trouble. I was fearful Minnesota would get ahead of us; they are as lazy as we are though. I do not know what is best. The San Jose scale is in the central part of the state; it is in Milwaukee and various other parts of the state. You do not know that you have it until it is very bad. I do not know what we will do, certainly if the surrounding states pass stringent laws and enforce them, we cannot ship outside of the state, while they can ship in onto us. How to avoid getting it. Prof. Goff spoke of birds carrying it on their feet from the northern part of Illinois to southern Wisconsin. They might carry it 50 miles.

President—Prof. Goff, have you any distinct knowledge of its being anywhere except in Milwaukee?

Professor Goff—I have no positive knowledge.

Mr. Dartt—I have given a great deal of study to this San Jose scale question. I have read on it, and I have done it for the express purpose of beating off the nonsense of legislation on this scale. In one case I have been successful. The scale, the young one, is so minute that they can scarcely be seen with the glass, and to ascertain if they are on any tree, every branch, every twig, every bud must be put under the glass. One is capable of producing millions in a year. The idea of inspection to find such an insect is the height of nonsense, just as foolish as it would be to pass a law to ex-

terminate the mosquito. Now the professors want to do something if they can, to make themselves worthy of the positions that they occupy. We had a bill in our legislature, our representative sent me a copy of the bill and asked me what I thought of it. I said it was an abominable thing. He opposed the bill. I think that our congress had better fight Spaniards than San Jose scale. You will never see such a bill introduced into your legislature. The injury of this agitation, no, this great bug-a-boo, that you got up has caused the Canadians to prevent your shipping your goods to Canada. Same case in Germany. But what I wanted to speak of was this forestry agitation. A fellow in Minnesota wrote an article, and said that the destruction of our fruit was caused by the destruction of timber. Now the facts are that our country is well adapted to timber. All we need to reforest our country ten fold is to stop the fires, and it will re-forest itself. I think that we ought to be happy in our surroundings, instead of howling that we are in a dried-up region. We have a beautiful country, well adapted to the growth of fruit. I want these calamity howlers squelched.

Mr. Dartt—I know of a case in California where the disease had run its course in 5 years and then disappeared.

Mr. Perriam—I found them on oranges this winter.

Mr. Darrt—Did it hurt you?

Mr. Perriam—No, I peeled the orange.

Mr. Toole—If there is legislation in other states, we ought to have it. I formerly opposed it, but I do not wish to be congratulated on that. I opposed it because I wanted a bill that would specify what it was fighting against. The bill must have definiteness. The Michigan bill was very ambiguous. The wording of our bill was indefinite. I say, for one I hope we may have a scale bill, and I hope it will be a definite one.

Mr. Philips—One word. My reasons for putting this on the program were two. Prof. Goff has explained to you the difficulty to ship out of the state. Now, the express agent at La Crosse said he would not receive any goods, because they hold him responsible. He will not receive any goods for

shipment unless he knows there is no San Jose scale on them. He says, "I do not know it, so I refuse everything." The bill when it came before the legislature was too crude. One nurseryman says this is nonsense, another says we must have a bill. One member of the legislature told me, "You fellows do not know what you want. Make up your minds what you want and ask the legislature for it." It is a hard thing to fight. We tried to pass the law before we were ready for it.

Prof. Goff—I will say that the bill was never killed. It was laid on the table, and the gentleman who was expected to bring it up, went home the next day. It went by default.

Mr. Perriam—You ought to congratulate yourselves in being in Wisconsin. I do not believe Minnesota will ever meet the difficulties. Now, in Illinois we are peculiarly situated as a state having 400 miles of latitude, down to the latitude of Tenn., up to about 43, consequently the state is badly affected. There is one unfortunate thing about it, it infests our forest trees, especially the willows. It also infests various of our orchard trees, but I do not believe you will have any very serious difficulty if you will use the simple means that every man has in his possession. You can kill by spraying with kerosene emulsion and a hard winter will kill them off. We have seen 7 or 8, since I have lived in Illinois, distinct visitations of the oyster-shell bark louse, and then they would suddenly disappear. I think you are north of the danger line.

Mr. Babcock—I move that the president appoint a committee of 3 to get up a bill.

Seconded by Mr. Philips.

Mr. Kellogg—Have we not a Legislative committee?

Mr. President—Yes, we have.

Mr. Kellogg—This question should be referred to a special committee.

Prof. Goff—I do not see why this question goes before the committee on Legislation. It is a question of advisability.

Motion that the question of the San Jose scale be referred to a committee of three. I will name this committee later.

Motion prevails.

Mr. Philips here announces that he has just received a telegram from Professor Taylor, and reads as follows:

Mr. A. J. Philips, Horticultural Meeting, Appleton, Wis. Compliments trans-Mississippi exposition. Trust you may haye interesting meeting and arrange for fine exhibit here. Great success thus far.

"(Signed) F. W. TAYLOR."

Call for program.

President—Next subject, "What Horticulture Has Done for Southern Wisconsin," Geo. J. Kellogg of Janesville.

WHAT HORTICULTURE HAS DONE FOR SOUTHERN WISCONSIN.

Geo. J. Kellogg, Janesville.

Mr. President, Ladies and Gentlemen: Let me ask what southern Wisconsin would be to-day without horticulture—Only a shanty on the prairie and not a tree in sight; not a shrub, a flower or a fruit, not even vegetables, for horticulture takes the whole field of vegetables as well as fruit and arbor culture. But for this short paper on this hot day you need only to be reminded of a few pointers and then let lose among the fruits and flowers now before us. But you say this is not southern Wisconsin only; well, come down and see the southern two tiers of counties, look at our magnificent shade trees, planted sixty years, with their spreading branches on either side of 40 feet; see our farmers' homes, shade trees for miles and miles on either side of the highway, where once only the tall prairie grass and the wild flowers waved in the summer breeze. None know better the beauties of the wild horticulture of Wisconsin than the pioneers of 1835; then the wild Indians burned our groves and our prairies, for nothing must impede him on his hunting grounds. Now we have more acres of growing timber than in 1835 in southern Wisconsin; our homes are surrounded by shelter belts, shade, evergreens and fruit trees, ornamental shrubs have their appropriate place in the front yard; roses, herbaceous plants, bulbs, annuals, and perennials. True,

some homes, no, I will not say homes, some places where human beings live, have not a tree, a bush or flower; such places are the connecting links with barbarism and are yearly less. In small fruit culture there is need of improvement. Too many are dabbling with it for profit to any one. The quality of the fruit grown by many is so poor it breaks the market and injures the prices to the grower, as well as the appetite of the consumer. There is a lack of small fruits grown by the farmers, yet in driving 25 miles last week through the country we could not sell ten cases at 5c. a quart. Warfield was in about the best condition after that 25-mile ride; we did not have any of the firmer kinds on that load.

The farmer has no system of planting. Once in about three years he has the prevailing spring fruit-fever. He plants strawberries from his own old beds or his neighbors,—the result is failure and discouragement. Usually he plants all pistillates and he says, "Strawberries don't do anything on my ground, I can buy them cheaper than I can raise them," and the consequence is his family goes without. Then again others that know how and usually have plenty, often skip a year trusting to the old bed, which will not do; a new bed must be planted every year, and spring is the time to do it. Get it on ground that has been hoed for two years and plant only perfect flowering varieties, is my advice to the farmer. Pistillates are a great source of failure. Never plant more pistillates than perfects is my advice for the commercial grower. When we can grow Splendid so that we can reach 5 quarts at one sitting without getting out of those two tracks, what is the use of growing anything else? Or when a green boy of 15 can pick 230 quarts in ten hours without any extra effort, working at 60c. per day, what do you want better? Still I would have Marshall and Jessie for quality, Warfield for canning, Gandy and Brandywine for long shipments, Eclipse for beauty, Wm. Belt for monstrosities (12 to the quart), Enhance and Mt. Vernon for late, Clyde for quantity, Mary for size, Wood for early,—and I might give a list of 25 more each having some peculiarity; but now, Mr. President, let us profit by the show and beauty

of this exhibition. And let us vie with each other in beautifying our homes, ornamenting our grounds, planting for future generations, and when the *centennial* of Wisconsin's Jubilee comes may every hamlet, as well as every mansion, have enough of the poetry of horticulture to make life brighter, better, happier, and the fruits of our labors be found in every home on every hill-side, in every valley, and the waste places blossom with the rose, giving health, vigor and happiness to every toiler in our cities, and may the *curses* of *drink* be banished and may war never again darken our homes.

Mrs. Johnson—Is anybody growing the Henry strawberry in this state?

No answer.

Mrs. Johnson—Do you consider the Splendid more productive than the Warfield?

Mr. Kellogg—Yes, always. Two to one.

President—Next topic on the program, "Benefits to be Derived from a Good Working Local Society," by Mrs. J. D. Treleven, secretary of the Omro Society.

BENEFITS TO BE DERIVED FROM A GOOD WORKING LOCAL SOCIETY.

Mrs. J. D. Treleven, Omro.

When your secretary sent word that he would like to have me prepare a paper for the Appleton meeting, he took me by surprise, and he wrote that he would like a reply immediately. I suppose he thought if I had time to think about it, I would refuse. But, having had some experience in getting up programs for different gatherings, I can but have sympathy; it is discouraging to ask and be refused. As members of the local Societies, we should be ready and willing to respond to the calls made upon us for help in this work.

The benefits derived from a good working local Society are many. Farmers, as a class, do not have organizations as

trades people do, and they live more to themselves. In so doing they naturally grow selfish, and if they know a good thing, do not want the other farmers to know it. Living to himself it will soon be apparent that he *wants* to live to himself, and what is worse than a selfish man? The seed of selfishness is in each heart and a little fostering will soon bring it out. The various classes of farmers are of diverse opinions, and they are even jealous of each other instead of being of mutual benefit to one another.

Farmers should be organized as wisely, as thoroughly, as a military encampment. The farmers should organize because all other avocations are united for mutual benefit, and the motto of each farmer should be, "United we stand, divided we stay fallen." And what organization is better than the Horticultural Improvement Association, for the farmer? I do not know as all the local Societies exist under this name, but at Omro we do, and, therefore, do not confine ourselves to horticulture alone, but to all things pertaining to the advancement of the farmer.

Anything that tends to educate and enlighten the farmer is a benefit, not only to himself, but to the community in which he resides and to the public. Farmers need to be better educated, and the subjects are so varied in these Societies that if one farmer is not interested in a certain subject, another is; in this way a man is often led to make some remark or give his experience which is a great help to another. We have men in our organization who rarely attend meetings of any sort in the village or city but are regular attendants at our meetings, who have become thawed out, as you may say. For we must remember that the human being is more than a mere farmer; the development of body, mind and soul are of more importance than the mere cultivation of land. City people have outstripped us in many attainments, circumstances ofttimes favoring them; but we can secure these attainments if our mind is so cultivated that we have a desire to aspire higher. Where can we get more practical knowledge than through these local Societies, for they have an equal privilege with the state horticultural and agricultural societies, dairymen's associations and farmers' insti-

tutes, if we wish to avail ourselves of it. Who can attend any of these meetings without carrying away some enthusiasm in some particular line?

It rests with every individual to show himself greater than his occupation. City people and city papers often speak lightly of the farmers. There may have been some reason for it, but we can grow out of it. It is not the keen, energetic, intelligent farmers scattered here and there, living to themselves, that help us as much as the gathering composed of men and women, who command the respect of the world through their knowledge. Close and repeated contact with our fellow mortals is indispensable. City people dwell where knowledge is in the air, where the very nature of things compels them to rub with their neighbors, where they imbibe with little effort much information that a man in the country must struggle to procure. These local Societies furnish a means of procuring information, for we are never too old to learn. These gatherings cause enthusiasm, which is a means of encouragement. Who ever saw a discouraged and discontented man or woman accomplish much in the world? If we only lead one person to think that he does not have more to put up with than his neighbors and brother farmers, is not that a benefit to his family as well as the community?

In these local meetings new ideas on different subjects are brought forth and start us to thinking, which leads us to take a new interest in our work and we are built up in character. Our lives are broadened oftentimes from meeting with those of other Societies who are practical men, who have been successful, and it is certainly a benefit to have them impart their knowledge to us. We need a wider range of thought than the little circle of our daily work. We need to know the lives and works of other minds to inspire our own lives.

There are many men, who when young had not the privilege of as good an education as they desired, and in these local Societies, if a man is not just up with the times, he feels that the rest are nearly all farmers and he does not seem to be afraid to express his opinion on different subjects, and gradually we find this man has more intelligence than we

gave him credit for. In our community one can see a marked change among several that are our members. Some that never took any interest in fruits or flowers or in keeping their yards neat and attractive, are trying to vie with others in this respect. Who but will say that is a benefit?

Our local meetings are held at private residences of the members, as some of you are aware, and this is a greater benefit to each one than you might think. In so doing we get better acquainted with one another, and wherever we meet the host or hostess has some particular thing, either in the agricultural, horticultural or floricultural line to show their friends; for we are *all friends*, and do not have that coldness toward each other that is often seen when meeting in halls or public buildings, but we all have that home-like feeling that should prevail in all communities. I heard it remarked not long ago where I was attending a large gathering, "Why, you can tell all of those horticulturists, they are so social and friendly and seem like one family, so much interested in each other's welfare." Is not this also a benefit?

Another one I must mention. By getting the older ones interested in this work, it has a good influence over the young, for generally where the fathers and mothers are interested the children are. If instructed in their very young days, we find a growing interest, which in years to come will be a blessing, not only to themselves but to others. We have been drawing in the children, and in some instances it is easier for some of the parents to attend by being permitted to bring the little ones. We call on them for recitations, and some sing; they soon find we are interested in *them* and this causes an interest in their minds, they soon become listeners to our papers and discussions and look forward to the meetings with pleasure; often they are heard to say, "I am going to speak for the Horticulturists next meeting." At our last chrysanthemum show one of our boys had plants on exhibition which he had grown and cared for, who received prizes on the same; it was a credit for himself. Is not that a benefit to the young? What one does another

thinks he can do, for children are naturally ambitious, if you give them a chance, and like to imitate others. Secretary Philips once paid a visit to Omro and gave a short talk to the boys and girls, which so aroused them that I know they thought he loved the children, and if we could often have visits from other Societies it would prove a benefit, not only to the young but to the older ones.

It is also a benefit to the older ones to get the young men and young ladies interested in our meetings, for they are better educated and even better posted on some subjects, and generally willing to assist us in our programs. At our last meeting eight young men were present, and they took as much interest as the older ones. I doubt not but some of those young men will prove to be some of Wisconsin's leading Horticulturists, for, "As the twig is bent the tree is inclined." Boys become men and where is there a better place to make thinkers, to develop character, to provide the social nature with food, to lead them into the paths of usefulness than in the meetings of a good, live local Horticultural Society? Awakening in the mind a growing interest in the works of nature tends to cause a love for the most honorable of callings, as we all know there is nothing so stirs one in any particular line as a large number thinking in the same direction.

One other benefit I can not refrain from speaking of, and that is the chrysanthemum shows that we have held in connection with our local Society. The love of the beautiful flowers co-operates with education; association with them reveals and improves our natures; they have their mission upon earth and we find the good effect, not only with men and women but with the boys and girls. The holding of these shows has developed interest and attention in the growth of plants and flowers and we can see an improvement in the growing effects of them each year. The beauty of flowers is reflected in the natures of the growers. The good cannot be over-estimated. Without flowers what a desolate place this world would be; they are the stars of the earth.

Some persons cherish diamonds,
And others jewels rare,
But give *me*, next to loved ones,
The fragrant flowers fair.

The rich may boast of pleasures
The poor can never know;
But all may have the flowers
That by the road side grow.

G. J. Kellogg—I wish to commend that paper. There is one question that she asks, "What is worse than a selfish man?" It is a selfish woman. (Laughter.)

Mr. Perriam—I think Brother Kellogg ought to be censured.

Mr. Hatch—I think there is one thing more selfish than a selfish man, and that is two men. (Laughter.)

Prof. Goff—I wish to commend that paper. The sentiments in it are most commendable. These local Societies are what we need to help the state Society. We ought to have a local Society in each community.

Mr. Hatch—That paper is the practical outgrowth of what they are doing there. I commend that paper.

Mrs. Treleven—I would like to say that we think it a very great improvement to hold our meetings at private residences, it creates a social feeling that we have got to have. The people are not interested if you are not friendly with them. They feel more at home than they would in a hall.

Mr. Philips—I have noticed that in the neighborhoods where there are good working Horticultural Societies, that the people of those communities attend church and school meetings better. They get into the habit of going out. We need good, live Societies.

G. J. Kellogg—I want to say a word about that dead Society. I am in debt $500 to them, they have done me that much good. The only horticultural gatherings we now have are in my strawberry bed and rose garden.

Mr. Dolton—When I heard that paper read, I thought it was one of the best papers I ever heard on the subject. I move you that a vote of thanks be extended to this lady for her paper, and that the resolution shall carry it that it be printed in the records of this meeting.

Mrs. Treleven—I thank you for this.

Mr. Dartt—To my friend over here, Mr. Kellogg, I want to offer a suggestion. He says he owes that Society $500. I suggest that he pay them the money, and it may bring them to life.

PROGRESS AND MISSION OF THE WISCONSIN HORTICULTURIST.

Mrs. Franklin Johnson, Baraboo.

"Write something that will interest the ladies." This was the message that came to me from Secretary Philips two or three weeks ago. So I "invoked the Muses" and "racked my brain" and did all those thing that the people who write story books do. At last some thoughts were evolved which I flattered myself might be acceptable even to the ladies of this fair and cultured college town.

Then came the program, and lo! the subject assigned to me,—"The Mission and Progress of The Wisconsin Horticulturist!" For a moment I felt as if a bombshell from Admiral Sampson's fleet had exploded not far off, and all my beautiful thoughts "folded their tents like the Arabs and silently stole away."

Hence, ladies, it has come about that instead of offering you "angel's food" I must cordially and hospitably invite you to a repast of bread and butter.

The Wisconsin Horticulturist is a little magazine of thirty-two pages, published monthly by the State Horticultural Society. Its mission is to disseminate horticultural information among the people of Wisconsin. While cordially welcoming readers from sister states, it aims to especially adapt itself to the interests of Wisconsin.

Its pages are open for the discussion of all horticultural problems. Men from different localities give their experience and recount their experiments. If their methods are successful our readers can emulate them; if they are faulty—"by others' faults wise men correct their own."

This magazine has helped to teach the people how to raise

the magnificent berries for which Wisconsin has become famous. Fruit dealers tell us that the Wisconsin strawberries are the finest in the world. Through our pages you are learning how to plant orchards with varieties that are adapted to Wisconsin soil and climate.

Now that you have learned to excel in raising fruit, the magazine hopes, in the future, to give many helpful pointers in regard to selling it.

The Wisconsin Horticulturist has recently felt impelled to undertake another mission, that of educating the people to a larger use of fruit. To this end a little space each month will be devoted to the publication of well-tested recipes.

One or more practical articles on the culture of plants and flowers is given each month. One reader, whose ample grounds are among the most beautiful in this part of the state, assured us that Mr. Jonathan Perriam's article on the Canna in the February Horticulturist, was worth many times the price of the magazine for a year. The June issue contains a beautiful article on the Clematis written for our pages by Prof. Goff of the state university. Such articles from such contributors indicate our progress and place us well up among the horticultural journals of the land.

All members of the state Horticultural Society receive the Horticulturist without extra charge, which should be a strong inducement to join the state Society.

One feature of the magazine is the excellent portraits which it gives of prominent horticulturists of the state. The June number contains a good photograph of the late J. L. Fisk of Omro. In the March number was a portrait of Secretary Philips. It is a beautiful picture. If Mr. Philips will pardon my saying so, I really think it was an improvement on the original!

G. J. Kellogg—I commend Mrs. Johnson's short paper. I do not see how any horticulturists who have two sq. rods of strawberries can not spend that 50c. for the magazine. It is the combined efforts of horticulturists throughout the state. I promised 10 members last winter, and I will increase it to 20 for this year.

Mr. Tanner—I think it is a benefit to any horticulturist. I wrote an article for it last winter, and in less than two weeks I was swamped with orders. It is very well read.

Mr. Toole—I for one am glad that it is such as it is. It is fitted to our especial needs. We have a number of magazines but nothing that could take the place of the Wisconsin Horticulturist. About the advertisements, it is important for us that these increase. It will become a source of income.

Mr. Perriam—My experience is that the papers which have the largest circulation, are not always the best. Those that have a special circulation are the best. They go among the better class of farmers who have money to buy, and experience to know they must keep pace with the times. I hope to see the Horticulturist continue right along, and will say that I get much good from it.

Mr. Dolton—One word in favor of the Wisconsin Horticulturist. I hope it will live and prosper, and be conducted on about the same principle as it is now. I would like to see it just as it is now, and not run into advertising bicycles, patent medicines, etc. I am glad I subscribed for it.

Mr. Perriam—One thought that Dolton brought out. It costs as much money to print a single copy as the entire edition, whether 1,000 or 2,000. Only difference is the press work and the paper. I never expected your paper to cater to medical advertisements. You must prosper through your advertisements, unless you wish to put your hands to your pocket. Those who deal in flowers, for instance, can afford to advertise in your paper.

Mr. Dolton—Just one word more in regard to these farmers' journals. The Farmers' Review has found a way in my home for several years. Only objection I have to it, are the advertisements and love-sick stories. They are building up an interest for something else but not for farmers. Farm papers are being neglected very much.

Editor of the Farmers' Review corrects the statement made by Mr. Dolton.

Mr. Thurston—We run a 16 page paper. Three pages are devoted to story and miscellaneous. I am opposed to con-

tinued stories, I do not believe stories are a good thing. We run short stories and devote the other space to household matters. The rest of the paper is devoted to legitimate advertisements, one page to dairy, one to horticulture, one to poultry, and two pages to general news and editorial subjects.

Mr. Dolton—I did not intend to call up a discussion on this subject, the Farmers' Review is one of the best agricultural papers, but I only took it as an example to say to our Wisconsin friends in running the Wisconsin Horticulturist, keep it free from advertisements. Keep it filled with information directly for horticulturists, agriculturists and floriculturists.

Mr. Toole—Our paper would lose half its value if, after we have read a good article on these things, and we would not know where we could find them. I would feel the paper was behind in that particular line. What we need is more advertisements.

President—This completes the program as mapped out for the afternoon.

Mr. Reed—There was a resolution passed at the meeting of the Executive board last winter at Madison which I wish to bring up at this time and make a few inquiries for the benefit of the members of this Society. At the meeting the Executive board passed a resolution that went to the committee of Observation and made the appointments of that committee. Then passed a resolution instructing the secretary to at once notify each one of these persons on that committee of Observation of their appointment and asking them to fulfill their duties. I wish to ask why the secretary did not do as he was supposed to do.

Mr. Babcock—There is one other thing I would like to suggest, and that is that the secretary should make a list of the questions to be asked throughout the country. There are a good many of these men that were asked to report on observation, and they would not know what to report. The secretary was asked to make out a printed list.

Mrs. Johnson—It was my fault that the names were not printed in the Horticulturist. I had the list in the printers' hands, but the copy overrun, and they wanted to know what to leave out, and I said that list.

Mr. Kellogg—It seems too bad that those 300 plates of strawberries should lie on the exhibit table and go to waste. The most satisfactory exhibit we ever had was at Waupaca. The berries were placed on the tables in the morning, judged in the afternoon and eaten at night.

Mr. Abbott of Appleton—You talk as though we have no strawberries here. We do not want your berries; we have plenty of our own.

Mr. Philips reads from annual report list, relative to committee on Observation.

On motion adjourned.

FRIDAY A. M., 10 O'CLOCK.

Report of committee on Awards, by Mr. Coe.

Motion that same be adopted. Motion prevails.

Mr. Hatch—I wish to ask why the premium list does not include cherries, and possibly some other fruits. Cherries ought certainly not be omitted as they are as worthy of encouragement as pie-plant.

President—The matter was probably overlooked by our secretary.

Mr. Hatch—I have written Mr. Philips in regard to this matter. They are in season now and ought to be included.

President—There is a growing interest in the cherry business in the state of Wisconsin, and we could encourage it by offering premiums.

Mr. Hatch—Let us have this premium list amended.

Mrs. Treleven—I think it is hardly fair to allow Mr. Kellogg, as professional, to compete with us in roses.

Mr. Hatch—I think that also holds good in the fruit exhibit. Heretofore we have had distinctions. He himself, Mr. Kellogg, is against general competition. There should be a difference between amateurs and professionals.

Mr. Toole—It would be well to have a motion that would hold our attention. I move that we have collections of roses

and collections of strawberries, both professional and amateur.

Mr. Hatch—We have no right to take action on this. It should be referred to the executive committee for action.

Dr. Loope—How will we get the matter before them? Can we not make a motion to call their attention to it?

President—In a matter of this kind it will relieve the responsibility from the Executive committee if we dispose of these matters here in the Society. It will be a matter of a very few moments.

Mr. Dolton—I do not want to interfere with your legislation here, but a rule that applies in one part of the world should apply in another. The matters referred to the Executive committee should be attended to between the sessions. It means that it should be referred to the Executive committee when the body is not in session. I hold that this meeting has a right to revise the premium list, and make such as they see fit, irrespective of the executive committee.

President—In order to avoid any further discussion on this matter I will entertain Mr. Toole's motion if it receives a second.

It has been moved and seconded that we have collections of roses and collections of strawberries, both professional and amateur, and revise our premium list accordingly.

Mr. Hatch—I do not wish to prolong this discussion; I would say we prepare this resolution and refer all this business to the Executive committee. It was intended that this action should govern the meetings, to take the discussions from the meetings. The matter of mentioning the business is all right, but action on this matter is out of order. You have no right to entertain Mr. Toole's motion.

Mr. Loope—Probably Mr. Hatch is correct, but it seems to me that by some means we must get this matter before the Executive committee, if we cannot act on it ourselves. They may not hear this motion, or hear of the discussion.

Mr. Hatch—I rise to a point of order. These matters are to be referred without discussion. Now you can introduce

the business, but it is your duty as president to simply refer this to the Executive committee.

Gentleman from Appleton—I make a motion to rescind that resolution.

Mr. Reed—Perhaps here is a little misunderstanding in regard to this resolution. It was passed, not to obstruct but to expedite matters. When any business is brought in to our state legislature, it is referred to the Executive committee, and if they do not agree on it, they bring it before the body. I think this business should be referred.

President—I recollect now that the resolution as passed referred all business to the Executive committee for action.

President—Is there anything further before we proceed with our regular program.

President—There is a little matter that I should be pleased to have the Society take care of. The matter of appropriation. We have secured 300 square feet of space at a cost of $150; there were $500 appropriated, leaving $350, which is not enough to make a good exhibit. I would ask that this Society at this time appropriate at least $250 more, or so much as is necessary to make a commendable exhibit.

Prof. Goff—In order to bring it before the house, I move that the Society appropriate $250, or so much more to make a good exhibit.

Mr. Coe—Do I understand that this will be enough to make a creditable exhibit at Omaha? We must make a good one if we make any at all. The $250 appropriation is all right but we must make some further provision. The Society might perhaps borrow a certain sum of money and use as much as necessary for that purpose. At the coming winter ask the state legislature to refund it to us, and if they will not, we will pay it from the Society's funds; $250 will, I think, hardly be adequate to make a creditable exhibit. Make a good show, if you make any at all.

Mr. Loope—In connection with that then, if you require more than $250 to make a creditable showing, and if you intend to borrow the remainder to make it sufficient, it might

be well to borrow the whole; I am in favor of this. As I understand it the sum would reach at least $650. We will therefore want about $1,000.

Mr. Toole—I hope when the amendment is offered, it will be sufficient to cover the expense fully. I am sure that our future legislature will help us in so worthy an object. We must make provision to have enough to act on.

Prof. Goff—With the consent of my second, I will offer a new motion and withdraw the other motion. That the Society authorize the Executive committee to borrow so much money as may be necessary to make a creditable exhibit at Omaha.

Mr. Loope—I would prefer to have the sum stated for various reasons; because, suppose I were on the Executive committee, I might borrow too much money.

Mr. Coe—Limit it to $1,000.

Motion received a second.

Mr. Kellogg—I am opposed to making any exhibit at all. I will vote against any appropriation.

President—Any further remarks? It has been moved and seconded that the Executive Board of the Wisconsin State Horticultural Society be authorized to borrow a sum not to exceed $1,000 for the purpose of making a creditable exhibit at Omaha.

Motion prevails.

Mr. Kellogg of Janesville makes announcement, calling attention to the Oberst Jessie strawberry from Racine. I move we recognize it as the Oberst, and that a vote of thanks be sent to Mr. Bones.

President—I think it will be necessary to compare the variety with the Jessie, to determine whether it is the Jessie in plant and fruit also.

Mr. Hatch makes an examination of the fruit.

Mr. Reed—Before we recognize a new variety, we should know something of its parentage. It has been examined by a large number of the strawberry growers present, and I heard one express his opinion that there was really no distinction. We should not hasten to recognize a new variety

until we see a difference. I move to lay the matter on the table, until we know whether there is any difference.

President—If there is nothing further we will take up the regular program of the morning.

THE SPRAY PUMP IN HORTICULTURE.

Prof. E. S. Goff.

Mr. President, Ladies and Gentlemen: The information that most people need is not knowledge of the newest discoveries, but to have the principles reiterated. Most people assent to the idea that spraying is beneficial, and they often spray without any definite idea of what they are spraying for. For example, a man said last evening that the curculio was bad on his plums this year; he sprayed with kerosene emulsion and Paris green, but the spraying did no good. Had he asked me before he commenced, I would have told him that these things would not help. He was not attacking the insect in the right way. It is with insects and diseases as with a doctor, who has diseases to deal with. He cannot treat them all in the same way; he cannot find any remedy that will cure all diseases. We must learn how the insects work, and how to attack them. Before I begin to talk on spraying, therefore, I will talk on the insects and how they work their harm, and then I will consider how to prevent the harm. The plum curculio is an insect that most of us know. It injures the fruit by boring a hole into the plum, and there deposits its eggs. Now, how can we prevent its doing so? The codling moth deposits its eggs on the outside of the fruit. One class of insects eats the plant directly; another does not eat it directly, but sucks the juices out of the foliage. The insects that eat the foliage directly, we can almost always destroy by one of the poisons. Paris green is one of the best for this purpose. We can apply it in water or mixed with some powder. The other class that sucks the juices from the foliage, which includes the whole army of plant lice, the

squash bug and the chinch bug we cannot destroy by poison. They do not eat the poison. The proboscis of the insect is inserted through the epidermis, and it sucks the juices. The first thing to be settled in regard to spraying is, how is the insect doing the mischief? One of the best remedies for the eating insect is Paris green and water. One of the best remedies for insects that suck the juices but do not eat the foliage is kerosene. This oil is readily absorbed by the insect, and is destroyed very quickly. There are larger insects like the squash bug that cannot be destroyed very easily by kerosene, and we must knock them off into a pail of kerosene. There is another class that bore into the wood, fruit or leaves. We must use another method to destroy these. We must destroy the egg, if possible, before it hatchs and the maggot enters the part. In the case of the plum curculio, we must prevent the laying of the egg. Spraying will not do this. Kerosene will not destroy it. We jar the insect off. Then we also spray for diseases of plants. There are a large number of fungous diseases, of which the apple scab is one, that are propagated by spores, which alight on the surface of the plant. We can prevent such diseases by applying something that destroys the spores before they have time to germinate. For this the Bordeaux mixture is used. In order to make the spraying effective, it must be made before the plant shows any evidence of disease. There is another class of fungous disease that we call blight, of which the common pear or apple blight is an example. These cannot be prevented by spraying, so far as we know. The reason is that the germs alight on the extreme tips of the growing shoots, where fresh tissue is constantly forming, and unless we could apply the remedy constantly, we cannot prevent the disease. So much for the general principles.

Mr. Dartt—Is the plum curculio and the one on the apple the same thing?

Prof. Goff.—The two are not the same. The apple curculio works in a similar manner to plum curculio, but is a distinct insect.

Mr. Kellogg—Does the apple curculio work in the night same as the plum?

Prof. Goff.—They both work in the day. We catch them in the morning when they are stiff.

Question—Does the plum curculio work on the cherry?

Prof. Goff.—It does, but is not usually so destructive as on the plum. It can be prevented in the same way.

Mr. Dartt—How can you protect the apples?

Prof. Goff—That I cannot answer. We cannot afford to jar the apple tree. I have recommended to keep chickens under the trees, but that is a doubtful remedy.

Mr. Kellogg—Will chickens eat curculio?

Prof. Goff—I doubt that they will eat the full-grown curculio, but they probably destroy the larvae as they escape from the fruit.

Mr. Kellogg—At what stage in the life of the apple does the curculio stop its work?

Prof. Goff—I cannot answer that. I have found the insect in apples nearly full grown.

Mr. Babcock—I read in an agricultural paper the experience of a man in his orchard to prevent apples from being stung. He placed barrels half full of water, hung a lantern in the barrel, and in that way caught the moths.

Prof. Goff—The curculio could not be trapped in that way for it does not fly at night. Certain moths may be, but more injurious ones are rarely trapped in that way. The coddling moth cannot be taken that way.

Mr. Kellogg—Could the leaf-roller be caught that way?

Prof. Goff—It is quite possible that the moth might be.

Mr. Reed—Why cannot the squash bug be caught in that way?

Prof. Goff—Because it does not fly at night. We can destroy the squash bug with kerosene emulsion, by making it very strong, but there is danger of damaging the foliage. Pure kerosene would instantly destroy the bug, but you cannot use it on the vine. I think a better way is to go out in the morning, and brush them into a pail of water containing kerosene; the bugs are then stiff.

Mr. Toole—Does the coddling moth pierce the fruit any place but at the blossom end?

Prof. Goff—The coddling moth usually enters at the blossom end, but not always.

Mr. Kellogg—Where is the egg deposited.

Prof. Goff—Generally on the leaf. You will find it stated in the books that the egg is deposited on the apples, but only in rare cases is it deposited on the fruit at all. It crawls to the stem end and enters there, where there is an opening already. If you will notice you will find that a wormy apple has a minute deposit of dust at the blossom end. The hole we find in a wormy apple on the side is, 99 cases out of 100, the place where the maggot came out.

Mr. Loope—Did you spray this year?

Prof. Goff—I sprayed my private orchard.

Question—How and when?

Prof. Goff—When the blossom opened we sprayed for apple scab and leaf-roller. Then we spray again when the blossoms have fallen for the coddling moth.

Mr. Dartt—How does the leaf-roller do damage?

Prof. Goff—By eating the foliage.

Mr. Reed—With what do you spray?

Prof. Goff—With Bordeaux mixture for the apple scab, and we put in Paris green for the coddling moth.

Lady of Appleton—We have a great deal of trouble with rust that attacks our currant bushes. What can we do for it?

Prof. Goff—It can be prevented by using Bordeaux mixture, if you spray early enough. When the plants come into blossom is the time.

Mr. Dartt—How much salt can you use in a gallon of water in spraying without injuring the foliage?

Prof. Goff—I have never used salt in that way. What is your object in spraying with salt?

Mr. Dartt—Because a man south of Madison recommended salt for trees.

Prof. Goff—My experiments with salt for insects have not been very successful. I have used it for caterpillars. They

crawled off with the salt crystals all over them. I did not succeed in destroying them.

Mr. Babcock—I noticed in my orchard this spring that one side of some of my apples would be eaten off smooth, perfectly smooth. What caused that?

Prof. Goff—The leaf-roller often eats a little hole in the fruit, but I did not know that it would work that way.

Mrs. Treleven—I have found the same thing, some places looked as though it had been taken off with a knife, perfectly smooth.

Prof. Goff—I do not know what it was. I have never seen the trouble that I know of.

Mr. Reed—I wish to call your attention to an insect in our orchard. I would like to know if any members present have had any like experience. Young trees, two, three and four years old, will be entirely dis-budded, when the bud is bursting.

Mr. Toole—Have you any brush woodland any distance from your orchard?

Mr. Reed—Yes, within 20 rods.

Mr. Toole—Without seeing it, I think it is a little black insect that infests the brush wood.

Mr. Dartt—I think that is done by the lead-colored beetle, about $\frac{1}{4}$ to $\frac{3}{8}$ inches long, with a long mouth that looks like a horse's head, and when you approach the trees where they are on they remain dormant and drop to the ground, and play dead. Whether they do this damage I do not know.

Mr. Reed—This must work in the night; we have never found it in the day time, and have hunted for it faithfully.

Mr. Toole—We have a black beetle that eats our asters.

Mr. Reed—They have done more or less damage on 50 to 60 trees. Twenty trees are perhaps growing; they throw out buds and try to make a growth.

Mr. Dolton—I have had much experience with the squash bug. I have tried everything, glass and netting. You must get the glass off to give them air. I used to grow cucumbers and squashes for market, and the best remedy I ever found was the thumb and finger.

Mr. Toole—I would like some information in regard to the coddling moth. We find a later brood. Is it possible that it comes from a neighboring orchard, where they did not spray?

Prof. Goff—The late brood does the most harm. The wormy apples, among the later varieties, are from the late brood. If we could destroy the first brood, we would have no late brood. The reason why we need to be so thorough in our early spraying is to make the damage from the late brood as little as possible.

Prof. Goff advised members to procure a spraying calendar from some experiment station. This will give full directions for spraying.

Mr. Toole—It is a good thing to have such a bulletin to refer to. Last year I wanted to do some spraying, and I had not committed the formula to mind. I could not find just the formula I wanted.

Gentleman from Fond du Lac—I noticed on melons this year that there was some insect that cut them off when they got up to the surface.

Prof. Goff—That must have been the ordinary striped beetle. It eats the leaves and stem right off to the ground.

Mr. Reed—I would like to ask Prof. Goff about another insect that bores a hole in the small branches where they come out of the limb of apple trees.

Prof. Goff—I have seen its work but do not know what it is. I suppose the egg is laid on the outside of the limb, and we might be able to destroy that with the kerosene emulsion.

Vice President Toole takes the chair.

President—We will call on Mr. Philips now for a report on the trial orchard.

Mr. Philips—Our legislature appropriated 3 years ago $500 to establish a trial orchard about the latitude of Antigo, to test the different hardy varieties. Prof. Goff was appointed on a committee to locate that trial orchard. We decided to locate it near Wausau, on a high piece of rolling land, formerly

timber land. There were plenty of stones in the land, and as that kind abounds in northern Wisconsin, we thought it was a good place to locate it. We set out 700 trees in the part we would call the commercial orchard, 36 or less of a kind. Then we set out another experimental plat, where we try them on their own roots, next by grafting, and third, setting the Virginia crab to top work with the same varieties. Then we can see best how to buy the trees, whether it is best to buy the trees on their own roots, buy grafts, or buy some good stock and top-work the tree. There are object lessons in that orchard valuable for any man that will visit it. Professor Goff was there last fall and President Kellogg. We set a small orchard of plums and cherries in connection with it. It looks as though they were at home on that soil. We set last spring 140 cherry trees and 135 plum trees, 10 of a kind of best native plums we could find, and of those 300 trees only two failed to grow. Everything is growing very promising. About plums I will state: We have set out DeSoto 20, and Cheney 20, 10 of the Rollingstone, 10 Wolf, 10 Mankato, etc.

That is about what we have been doing in the trial orchard. If it does as well in the next two years as it has in the past two years, it will be an attractive place to look at. We have thought if we could stir up a little interest in Wausau, and I think we can, to have the summer meeting there in two years from now. It would give our members a chance to see it. We have the rows straight from the road back, and people that pass by keep their eyes on the rows and also visit the orchard. It is valuable to the state.

Mr. Buck of Appleton—How far from the city.

Mr. Philips—Three miles. The schoolhouse is on the corner of the lot. On Arbor day I took out a No. 20 tree and gave it to the children to plant. And it is growing fine and will be an object lesson to that school, as it is close by the fence of school ground.

In planting I made a chart of that orchard, 36 Duchess, 36

Hibernal, N. W. Greening, Longfield, McMahan, obtained from 4 different nurseries. I can show you a Duchess from Ft. Atkinson, from Mr. Kellogg's, etc. These will be object lessons.

In the commercial orchard are Peerless, McMahan, Avista, Ocabena, Repka, Hibernal and Duchess. The plum that made the finest growth is the Aitken.

Mr. Reed—I would like to say a word about the object lesson. Unless it is destroyed by chance it will be an object lesson for the next 50 years. There is no method by which you can interest your neighbor quicker than by doing something along this line. We have a trial orchard of our own containing some 300 apple trees, nearly 100 cherry trees, and 150 plum trees, most of which are native wild plum. Our experience in the last four years, proves the McMahan to be the best apple trees we have.

Question—Do you believe in the Alabama trees?

Mr. Philips—This is a northern orchard.

Mr. Reed—We ought to show up the good and bad qualities in southern grown trees. Experiments ought to be made.

Mr. Philips—I think eastern grown trees are better than southern grown trees. They do not grow fast in our clay soil.

Mr. Reed—It is not so much the soil as the atmospheric conditions.

Mr. Philips—Then please tell me why 4 Wealthy trees and 6 No. 20 trees that I planted 18 years ago, are all dead and gone, while the same varieties 6 miles from there on a different soil, are loaded with fruit this year, after being planted 18 years, and one is just as far from Lake Michigan and the Mississippi river as the other. Why have they died?

Mr. Reed—Well, that is owing to the later growth of the tree.

Mr. Philips—No, it is due to the soil. My idea is that good soil in Marathon county, 200 miles from the state line, is a better place to grow an apple tree and have it fruit, than to go to the state line of Illinois, and plant on soil that is not suitable for the trees.

Mr. Dartt—Do you think that a Duchess apple tree, brought from Alabama and brought to Wisconsin in good condition, is just as good as a Wisconsin grown tree of the same variety?

Mr. Philips—No, sir, it has not grown as firm a wood.

Mr. Dartt—Do you know?

Mr. Philips—I have seen it.

Eben E. Rexford called for.

Mr. Rexford—It is hard for me to talk when I am on my feet.

Mr. Dartt—Let the gentleman have a chair. (Laughter.)

Mr. Philips tells a good story. Much laughter and applause.

Mr. Rexford called for, saying they wished to see his mouth go, whereupon Mr. Rexford says: "You will see my mouth go at dinner time." (Laughter.)

On motion adjourned.

FRIDAY P. M.

President called meeting to order.

First subject will be paper on Evergreens, by Mr. W. D. Boynton, of Shiocton.

EVERGREENS FOR ORNAMENTAL PURPOSES.

W. D. Boynton, Shiocton, Wis.

Mr. President: It has fallen to my lot to present to you the claims of the Evergreen as a beautifier of the home. I am always glad to say a word for the Evergreen. It fills a great place in the beauty and economy of nature, more particularly in this northern country where for so many months the deciduous trees stand leafless and bare. Were it not for our liberal supply of native Evergreens, northern Wisconsin would indeed present a bleak, bare appearance during the long dormant season.

But we must face the fact that this magnificent fringe of Evergreens which nature kindly provided as a barrier against the piercing Arctic winds, is becoming sadly depleted. The axe of the lumberman, paving the way for the even more destructive forest fire, is pushing its devastating course up through this magnificent protective belt towards the southern shore of Lake Superior. We have already begun to feel the effects of this destructive policy. Who can say where it will end? Our seasons are not what they used to be. Our rivers, brooks and lakes are dwindling and, in some cases, even disappearing. Our supply of rainfall and moisture is more variable, and our old protective blanket of snow is no longer to be depended upon to carry our plants and winter grains through the long dormant season.

These changes have certainly come to us, and is it not reasonable to suppose that they were directly brought about by the destruction of our protective belts of timber in which the Evergreen figures so prominently?

On the other hand portions of Kansas, Nebraska and Iowa find the climatic conditions becoming more favorable to the pursuits of agriculture and horticulture, and therefore much pleasanter and more desirable as places of residence. Moisture, temperature and winds are coming to be more uniform and moderate.

Why is it that these climatic conditions are becoming more favorable there and rather the reverse here? Evidently because the people of the plains are and have long been planting small bodies of timber and protecting belts of Evergreens about their buildings and grounds, while we have industriously given our attention to the destruction of that native growth which nature had supplied to us. It would seem that the object lesson is so clear and plain in these comparative conditions that our good people will take the hint. I feel quite positive from my own experience and observation that such is the case. I know positively that there is vastly more

tree-planting being done in this state than there was a few years ago.

I trust that you will pardon me for coming to my subject in so round-about a fashion, but the features of ornament and utility in the matter of tree-planting are so closely allied that it is almost impossible to treat of one without touching upon the other. Doubtless thousands of the good people of Kansas were planting Evergreens for the purpose of beautifying their homes, but practically the aggregate of these many individual plantings wrought out great climatic changes.

In planting Evergreens for ornamental purposes we usually plant, if it be on the farm, near our buildings. The favorite plan, and no doubt the best, is to almost surround the garden, orchard, stock yards and buildings with these Evergreens. Now, there is an awkward, angular way to do this and also a graceful, natural way. The first is brought about by planting in stiff, regular rows, boxing in the premises on three sides in a rectangular form. Even when left open on the front, this arrangement gives the sensation of "boxing in," to say nothing of the awkward, angular appearance. The graceful, natural arrangement, by which all purposes of utility are served, is brought about by giving a somewhat longer frontage on the street, gradually swinging back around behind the premises to be inclosed, and drawing back to the street again some distance beyond, giving the inclosure a sort of oblong, half circle form. Nor should the Evergreens be planted in a continuous row, even in this case. They may be grouped and scattered along in a natural, irregular way, but at the same time be so arranged as to form an almost continuous belt.

The lawn proper will of course be within this inclosure, and nothing will bring out the beauties of a lawn like a dark green back-ground of Evergreens. If the lawn be of considerable extent, a grand opportunity is afforded for grouping different varieties of Evergreens. In no other way perhaps can the beauties of the Evergreen be so fully brought out as by group-

ing. The individual tree in this case does not have to maintain a symmetrical form. Nearly its whole strength is thrown into the outer branches on that side which forms the outer edge of the group. Even such coarse growing Evergreens as the Austrian Pine and Norway Spruce adapt themselves nicely to such grouping. Some prefer to plant the ranker growing Evergreens in the centers of the group, with those of smaller and more delicate form and growth on the outside. There is not an Evergreen on our lists which will not work into the grouping plan.

Where the lawn is more restricted in size, such as we find in villages and residence portions of small towns, grouping would not be admissible. A fine, single specimen here and there will be found best for small lawns, with perhaps an Arbor Vitae hedge for a back-ground. These single specimens should be selected from varieties that have a compact and symmetrical habit of growth, such as the Blue Spruce, both the Colorado and eastern varieties, the Red Cedar and other members of the Juniper family, Arbor Vitae, etc.

The Scotch and Austrian pines, while very good for single specimens in a large park, are of too free, coarse and rapid growth for a small lawn. They are most excellent to intersperse with Norway Spruce for a shelter belt.

While Evergreens will stand almost any amount of pruning and shaping, it is hardly to be commended. The low, ornamental hedge must, of course, be kept sheared down to proper height and shape, and that is about the only place that cutting is advisable. I always dislike a pruned stem. Let those great, massive lower limbs lie flat on the ground if they wish to, and above all things don't try to contort a beautiful Evergreen by cutting into the form of a cube, sphere or other unnatural shape.

Mr. Toole—You indicated that some of our Evergreens cannot be used in small lawns. How many could we use in small lawns?

Mr. Boynton—The Custer Pine is hardy, all the pines I have tried I have found hardy. Your lawn must, indeed, be very small if you cannot have at least one.

Mr. Toole—About Hemlocks?

Mr. Boynton—It is hard to make them succeed.

Mr. Reed—What is the best time to plant?

Mr. Boynton—Spring; I have planted many in fall, but then lost heavily. If conditions of moisture are good, spring is the best time, just when the growth is starting.

Mr. Toole—Can you prune?

Mr. Boynton—You can prune Evergreens to almost any extent. It destroys the beauty to prune too much. The head must be pruned. The beauty of the Evergreen is its natural growth.

Mr. Dartt—What do you think of the Dwarf Mountain Pine?

Mr. Boynton—I think it is magnificent.

Mr. Dartt—It is a perfect success in Minnesota.

Mr. Toole—How about the Rocky Mountain Evergreen?

Mr. Boynton—Great success; I like it very much.

Mr. Toole—Would you not prefer the Wisconsin White Spruce to the Norway Spruce?

Mr. Boynton—The Wisconsin is quite ragged and colors up in winter.

Mr. Philips—What about the Black Hills Spruce?

Mr. Boynton—I have had no experience with it.

Mr. Dartt—Do you recommend the Scotch Pine for lawn?

Mr. Boynton—If I had a large lawn.

Mr. Dartt—Will the cones bother you in mowing?

Mr. Boynton—They can be picked up easily. They hardly ever work onto the lawn; they fall below the tree.

Mr. Reed—What would you suggest as a screen for an orchard along the river bank?

Mr. Boynton—Red Cedar.

Mr. Toole—We use it, as it clings to the rocks. The White Pine is found along the lake.

President—Any other questions?

President—I will announce that we have quite a number of copies of the Wisconsin Horticulturist. If there are any that desire a copy, they can obtain one at the table.

Questions on pansies to be answered by Mr. Toole of Baraboo.

Mr. President—Between hay and grass I would like to say that we ought to have nice flowers. I think you ought to prolong your pansy blooming season. Sow your pansy seeds the middle of July; they need a little care and protection. Start them in July; do not put the glass over them. Transplant them early in September, so you can give them protection when the cold nights come on. In transplanting set 4 inches apart. Have perfect drainage so that no ice can form. You can have the ground unfrozen in the frame long after the ground in the fields is frozen. Cover in winter with brush and leaves, no straw, or the plants will be rotted off on the surface. Letting in the sunlight in the spring time you can have pansies in that frame much quicker than elsewhere, much earlier. Then again, if you wish pansies to bloom in the house, transplant them into boxes, and if your rooms are not too warm, you can have pansies in bloom a long time in winter. I might say much more, but it would be a repetition of what I have said before. We have with us Mr. Rexford, who might be able to answer questions better than I.

Mrs. Barnes—In what soil do you plant the seed?

Mr. Toole—In ordinary garden soil, with well rotted manure. There must be no lumps in the soil. I cover the bed with a little wood dirt. Use soil that will crumb and break if you rub it. If the soil is not naturally sandy, add a little sand. I use this same soil for the many delicate seeds in the seed house.

Mr. Kellogg—Would not clean sand be better than leaf mould?

Mr. Toole—I think not, it packs together, and fine seeds, like the Chinese Primroses, come up better in the mould.

Mrs. Johnson—What variety of honey-suckle is most hardy?

Mr. Toole—Perhaps Mr. Rexford can answer that question.

Mr. Rexford—The Trumpet honey-suckle is perfectly hardy.

Mr. Boynton—I would like to say that the upright honey-suckle is hardy; I have both the pink and the white.

Mr. Kellogg—For a private family bed of pansies, can you plant in March?

Mr. Toole—Yes, or even later.

Mrs. Treleven—Do you always transplant?

Mr. Toole—Yes, because you would hardly sow thin enough. Some people sow onions in the same way.

Mrs. Barnes—Do you plant all at once?

Mr. Toole—If I had time I would transplant all at once. I just completed before I came away a large acre of pansies; we transplanted those right from the seed without any watering. I do not plant on a warm day.

Mr. Reed—One word in regard to soil. There are many different kinds, from heavy clay to sand. The question is, what is the best soil we can use for plants? We think we have solved the question. The best soil we can use for either vegetable or green-house is a swamp muck, divide it up into ridges, then in spring we sift it, mix sand with it, and it makes a very rich soil.

Mr. Toole—Make your soil the best you can; a sandy loam would be the best for pansies. As I am situated, I have clay. I lighten it up with well rotted manure. Do not plant flowers under trees. Some people think pansies ought to be planted in the shade. Have an eastern or northern exposure. I have an inclination to the south; I would prefer it to the north.

President—Mrs. Bushnell wishes me to announce a reception to be held here this evening to which all delegates and their visiting friends are invited. The program has been prepared and no doubt you will all have a very enjoyable time.

President—I suggest the idea of taking up the question of the strawberry, and spending 20 minutes in discussion of this berry. There may be some things that we have learned dur-

ing the past season, and some things that we may learn through discussion. I will take the liberty of calling upon Geo. J. Kellogg, of Janesville, to see if he has learned anything this year.

Mr. Kellogg—Any man who cannot learn something in 12 months, ought to be knocked in the head. The less acreage we will plant, the more money we will get, the better care we will take of our plantation. There are too many dabbling in this, growing too much poor fruit. The curse of our market of small fruit is the southern berry, shipped in here early in the season, sour and good-for-nothing. In regard to varieties I think the tables will show, and the classified report on varieties shows what we have learned as to the varieties we can and do grow. We ship strawberries very satisfactorily and they go through in nice condition 500 miles during the fore part of the shipping season. I do not know but if I had to ship my berries I would go for kinds that ship best. We sell everything almost in our local market. We probably have a market for about 50 acres right there in Janesville. The market went down from $1.50 a crate to 50c. I heard that one man by the name of Smith sold at 35c a crate. But I am not sure that this is so. Our dealers claim they bought good berries for 40c; we sold for no less than 50c. If I could have but one variety it would be Splendid, if but two, I would add Lovett, for size and quality, and for good looks I would have Marshall. I know of nothing better for canning than Warfield, Brandywine and Gandy for shipping; the Splendid we have shipped 500 miles. We have shipped, carefully packed, Bubach 500 miles. If the late pickings hold up to where I hope they will, I will have plenty of Clyde. They showed up well this year. On berries that give us 12 to a quart, I have the William Belt. I understand that Mr. Smith took first premium on the William Belt. It is good for nothing but show. I will say nothing further, unless you ask questions. I want to charge Professor Goff with lack of interest in not bringing up some of his varieties.

Mrs. Treleven—Has anybody had experience with the Miller raspberry? Two years ago it did not do very well with us, but they are getting along very well now.

Mr. Kellogg—In regard to the Marguerite: I perhaps had the first Marguerite in the state. I am afraid it is a humbug.

Mr. Reed—I would like to ask who has tested the Cobden King and Queen?

President—I will say I have it on trial this season. I can give no experience with it as yet.

Dr. Loope—I am going to take the issue of my brother, Geo. J. Kellogg. He is a little older than I am. His methods are a little old fogyish. I do not know whether I want to recommend my plan or not, but last year I set our two or three acres of strawberries. I cultivated them, soon had them growing, and I hoed them three times. Soon we were busy and began to neglect the strawberries. The weeds began to grow, and I hoed one corner out, but weeds grew so big we could not cultivate. I was ashamed, because I had been educated like Kellogg, and I said, "We must mow these weeds down," but still we did not get at them. The strawberries came out, and I picked 24,000 quarts. The whole business did not cost us $50.00.

Mr. Dartt—Best varieties?

Dr. Loope—Warfield, fertilize with Wood, Enhance and Brandywine.

President Kellogg—We had a large crop but got small returns. Our berries averaged us net 60c per case, some selling as low as 40c. We have an association that handles the bulk of the strawberry crop, or we would not have realized 30c for the entire crop.

Mr. Dartt—Your best varieties?

President—Best variety for perfect flowering: Beader Wood, Enhance second, pistillate varieties, Warfield first, Haverland second. Beaderwood is the best staminate for shipment, the Warfield the best pistillate.

Mr. Kellogg—Have you the Splendid?

President—We have not. I was in Milwaukee last week and there was one interesting feature on the market. The Beaderwood opened up the best of any varieties.

Dr. Loope—We use the Beaderwood for fertilizer.

President—The Beaderwood has been very productive with us.

Gentleman from Shiocton—We must not make too many plants, keep it thin like the Warfield, and it is very productive. I find the Bubach the most productive. It has this advantage: it makes enough plants to occupy the ground.

Prof. Goff called for on the William Belt.

Prof. Goff—I do not remember where we got the William Belt. Is is a late variety. We ordered it, I think, from Michigan, I am not positive; we ordered it 3 years ago, and we have ordered since.

Mr. Kellogg—What varieties have you?

Prof. Goff—Splendid, William Belt and several others.

Mr. Boynton—Now, as to the Bubach, it has a national reputation. In the southern states, in the eastern states, and it stands at the very head. It has been tested thoroughly. I have a continuous crop year after year. I never fail on the Bubach. It makes a few plants and I recommend planting more of those than of the perfect.

Question—What do you fertilize with?

Mr. Boynton—Beaderwood.

Mr. Toole—While the location makes a difference, I cannot use the Bubach near Baraboo. The blossom is not there; it does not form a blossoming stem. What the reason is I do not know.

Prof. Goff—I wish to say in regard to Mr. Kellogg's criticism. He thinks it is my duty to bring strawberries to these meetings, but there are two sides to these questions. I have had drawings made of all of our varieties of strawberries. I shall publish descriptive notes, and every member of this Society who wishes a copy of these may have a copy. We do not consider it our duty to travel over the state and exhibit our products. The strawberry is only one small branch of

our work. There is only one object to us and that is the lesson it teaches, and that we can do by description. Another point on which I have spoken before, and that is the value of this whole variety discussion. I question more and more (I have attended these meetings for 9 years) there is not a variety mentioned now that was mentioned when I first attended. Varieties change all the time. The only way we can find out which will do the best on our soil is to plant it.

Mr. Kellogg—I agree with Prof. Goff in regard to the value of his report, but the show he once made at one of our meetings was something very fine.

Mr. Reed—I think a good deal of emphasis should be put on what Mr. Kellogg said and that is the limitation to farmers of only those varieties that have perfect blossoms.

Prof. Goff—Before any more members leave the room, I wish to offer a resolution "Vote of thanks to the Grand Chute Society," etc.

Motion prevails.

Mr. Dartt called for.

Mr. Dartt—I am a crank on girdling. I have been at it 3 or 4 years and I find it a good thing, and I believe it should be generally understood, and would be a good deal better understood were it not for the fact that men all have hobbies, and they advocate their own and fight everybody else's hobby. If this was not my hobby they would have embraced it and preached it, but now they go back on it. By girdling we can bring trees to bear a great deal quicker than to wait for the tree to come into bearing naturally. Now, the first intimation I had of this girdling, the first evidence I had was by the incidental girdling of my trees by wires. In going through the orchard I found a little twig that was girdled by a wire, and had 5 good sized apples on it. That set me to observing and I saw many other limbs that had been girdled in the same manner. I found some limbs in full blossom, where there was not another blossom on the tree. I had never heard of girdling at that time, but I commenced to girdle a few trees. The following year I girdled more extensively, and then I began

to girdle spirally. Next year I tried a new method. I thought I would girdle close to the ground. Some say that this is a method of killing the trees, but in killing in this way the survival of the fittest is brought out. By girdling you do not have to wait for the hard winter to come to show you how hardy the tree will be; you test them right away. If you are at all scarry about trying this method, select some limb that you can spare and girdle that; it is a good time to girdle now. Girdle by the spiral method. Girdling will not kill a hardy tree.

Mr. Kellogg—Do you girdle near the ground?

Mr. Dartt—Where I girdled near the ground I took a saw and sawed around the tree. The method has not much to do with it.

Mr. Philips—I did not call him out because I was anxious to have you adopt his foolish method. It is not practicable. There is no tree you can benefit permanently by girdling. We paid Prof. Bailey $100 last winter to tell us about girdling, and he said it was not practical. I say Mr. Dartt may do his preaching here and his girdling on the other side of the river.

Mr. Dolton—Most people girdle to make trees die, and he advocated that you girdle to make them live. I am glad that he now confesses that if a tree is thoroughly girdled it dies. It dwarfs its growth, weakens the tree, even if it produces more fruit. You might cut a man's arm off and say he will accomplish more work than if it were not cut off.

Prof. Goff—I will say that girdling has been known for 2,000 years. It is stated that not far from Greece the growers of the dried currant have been in the habit of girdling their vines, and are still doing it, just beneath the bunches, to make them grow larger, and you often see that recommended for growing grapes. Girdling a branch of a tree or vine will often make that branch bear fruit when it would not otherwise. It has been recommended many years ago in some of our agricultural papers as a means of making apple trees bear. Girdling is injurious to the tree or vine. The material rises from the roots into the leaves, and is elaborated, and

the tendency is to distribute this elaborated food throughout the tree. If you dam it up, it will stay in the branch, and produce a surplus of food, which causes flowers and often fruit. As to the wisdom of doing it, that is another question. It more or less damages the tree by starving the roots. Brother Dartt's idea is good to this extent. We are anxious to know early whether or not it is a good variety. By girdling one branch of a seedling tree when it is 3 or 4 years old, we can ascertain the next year something of the quality of that fruit. If we find the tree bears good fruit we can let it grow and girdle it no more. Such tests apply only to the kinds of fruit, it does not test the hardiness of the tree.

Mr. Dartt—"Father, forgive them; they know not what they do." They have an idea that this girdling kills trees. I know that it does not; I have tried it year after year, and so far as this being a new thing, it is not a new thing. I have found out that it was practised in Iowa 14 or 15 years ago. It was also practiced in western Minnesota.

Mr. Floyd of the Omro Horticultural Society extends an invitation to the members of the Grand Chute Horticultural Society, the state Society and all kindred societies to visit the chrysanthemum show to be held at Omro next fall.

On motion adjourned.

ABOUT THE LIND CENTER APPLE.

Never saw such a prospect for fruit in my life. Blossoms are very large, profuse and strong. No signs of frost as yet, and an abundance of moisture in the ground to insure a full set. I have nearly 2,000 apple trees, 200 cherry trees and 25 plum trees in full bloom, and three acres of strawberries setting finely.

Thousands of trees and many acres of small fruits have been planted in this section this spring.

Regarding the Lind Center apple trees that Secretary Philips inquired about in the last issue of the Horticulturist, I

will say that the tree originated at Lind Center in Waupaca county, from seeds planted by one Calvin Parker or A. M. Mickelson. The original tree is some twelve or fifteen years old, and a very beautiful, symmetrical tree. It seems to be perfectly hardy and not susceptible to blight, and fruits every year. The fruit is so exactly like the Longfield (with the exception that it is all of three times as large) that many people call the apples extra large Longfields. The flavor and texture of the fruit is exactly like the Longfield, and it will keep about the same length of time, and resembles it so much that I have changed the name of this variety from Lind Center to Linfield, which locates the variety and describes the fruit. I am delighted with its behavior so far, and it is a remarkable grower. Two-year-old nursery trees of this kind will average in size with ordinary three-year-olds, and some of them fruit in four years from the root graft and all of them in five or six years, and bear every year. They do not overload, hence their size.

I believe this to be one of Wisconsin's grandest productions of seedling apple-trees. I will be glad to distribute a few cions this fall to painstaking planters, free of charge to those who will grow them on trial. Will have trees to sell at a fair price.—A. D. Barnes, in Wisconsin Horticulturist.

AWARD OF PREMIUMS AT SUMMER MEETING.

Best display of strawberries—Geo. J. Kellogg.

Best seedling—A. F. Bounds.

Best for general cultivation—G. J. Kellogg, 1; J. M. Smith's Sons, 2.

Best pistillate for market—A. L. Hatch, 1; G. J. Kellogg, 2.

Best perfect-bloom for market—J. M. Smith's Sons, 1; G. J. Kellogg, 2.

Best three for farmer—G. J. Kellogg, 1; J. M. Smith's Sons, 2.

Best Warfield—E. L. McGregor, 1; G. J. Kellogg, 2.

Best Jessie—G. J. Kellogg, 1; A. L. Hatch, 2.

Best Haverland—G. J. Kellogg, 1; A. L. Hatch, 2.

Best Bubach—G. J. Kellogg, 1; A. L. Hatch, 2.

Best Enhance—G. J. Kellogg, 1; A. L. Hatch, 2.

Best Crescent—G. J. Kellogg, 1; Wood Co. Society, 2.

Best Beder Wood—G. J. Kellogg, 1; A. L. Hatch, 2.

Best Parker Earle—E. L. McGregor, 1; J. M. Smith's Sons, 2.

Best Eureka—G. J. Kellogg, 1; Wood Co. Society, 2.

Best Greenville—G. J. Kellogg.

Best Wilson—J. M. Smith's Sons, 1; G. J. Kellogg, 2.

Best Gandy—E. L. McGregor, 1; G. J. Kellogg, 2.

Best Sparta—Wood Co. Society, 1; G. J. Kellogg, 2.

Best Timbrell—G. J. Kellogg.

Best Wm. Belt—J. M. Smith's Sons, 1; G. J. Kellogg, 2.

Best Marshall—G. J. Kellogg.

Best Brandywine—G. J. Kellogg, 1; J. M. Smith's Sons, 2.

Best five other new varieties [Eclipse, Mary, Splendid, Cylde, Edith] —G. J. Kellogg.

Best five on stem—G. J. Kellogg.

Best show currants on bush—C. A. Abbott, 1; H. Floyd, 2.

Best show raspberries on cane—Thos. Tanner, 1; C. A. Abbott, 2.

Best show gooseberries on bush—H. Floyd, 1; C. A. Abbott, 2.

Best display vegetables—J. M. Smith's Sons.

Best display vegetables—Wood County Horticultural Society.

Best peck of peas—F. A. Grant, 1; J. M. Smith's Sons, 2.

Best six heads lettuce—Smith's Sons, 1; Wood Co. Society, 2.

Best six bunches radishes—Smith's Sons, 1; Wood Co. Society, 2.

Best onions—J. M. Smith's Sons.

Best beets—J. M. Smith's Sons.

Best asparagus—J. M. Smith's Sons.

Best six stalks pie plant—C. A. Abbott, 1; Smith's Sons, 2.

Committee recommended a premium of $1.00 on exhibit of strawberries brought in too late for entry by J. Uecke.

FLOWERS.

Collection house plants—Mrs. Frank Wolcott.

Collection ferns and native plants—Mrs. Frank Wolcott.

Show of ferns and wild plants for Mr. Toole's special—Mrs. Frank Wolcott.

Best show wild flowers—Mrs. Barnes, 1; Mrs. Wolcott, 2.

Moss roses—Geo. J. Kellogg, 1; Mrs. Barnes, 2.

Collection of roses—Geo. J. Kellogg, 1; Mrs. Barnes, 2.

Bouquet of roses—G. Kellogg, 1 and 2; Mrs. Barnes, 3; Mrs. E. B. Clark, 4.

Bouquet white roses—G. Kellogg, 1; Mrs. Barnes, 2.

Pansies—Wm. Toole, 1; Mrs. Barnes, 2.

Cut flowers not grown by exhibitor—Mrs. Barnes.

Show cut flowers—Mrs. Barnes, 1; Wm. Toole, 2.

Floral design—Mrs. Barnes.

Bouquet of wild flowers by boy or girl—Roy Barnes.

THE SUMMER MEETING OF THE HORTICULTURAL SOCIETY AT APPLETON JUNE 23–24, 1898.

(Taken from the Wisconsin Horticulturist of July, 1898.)

"We have had so many conventions of late," half sighed one of Appleton's gracious matrons. And we thought, "If Appleton desires fewer admirers she must make herself less charming." So long as she sits a queen of beauty, enthroned upon the bluffs which overlook her busy river and her fair lake, people will flock to do her homage. In "traveling east and traveling west," we have seldom seen a prettier town than Appleton with its shaded avenues, its ample lawns and its comely and commodious homes.

The adjoining farming country is a practical illustration of the beautifying effect of horticulture. Many of the farm houses are as handsome, convenient and "modern" as city residences, and are surrounded by well-kept grounds adorned with roses and lilies, ornamental trees and flowering shrubs. In such homes dwell the members of the Grand Chute Horticultural Society who were our hosts. We almost felt that we were also the guests of the Congregational parish, the doors of its elegant church were thrown open to us with such unreserved hospitality.

The room in which our daily sessions were held was flanked by two smaller rooms, the one devoted to the flower exhibit, the other to fruit and vegetables. The display of roses was fine. Geo. J. Kellogg told us that he cut a thousand roses with which to make his exhibit. Mrs. Barnes, of Waupaca, brought a fine collection of roses and other cut flowers. Both she and Mr. Toole, of Baraboo, made a display of pansies, not so large a display as Mr. Toole usually makes, but containing many choice individual specimens.

The exhibit of ferns and wild flowers was especially attractive and decorative. These were taken from their native woods and dells two or three weeks before the meeting, placed in boxes of suitable soil and given good care, so that when needed for decoration they were living, growing plants, as

beautiful as palms. Conspicuous among these was a group of "lady's slipper," one of our native orchids.

The fruit exhibit was chiefly strawberries; the plates of brilliant-hued berries filled a long table, and their aroma filled the room. There were several exhibitors, though G. J. Kellogg showed the "lion's share." We missed the fine display usually made by the Thayer Fruit Farms. Mr. Bones sent from Racine a sample of the Oberst Jessie.

Mr. Tanner, of Omro, brought a specimen of the Bangor blackberry—green, of course, but a marvel of productiveness; the branches were weighed down with fruit.

The display of vegetables must not be passed by. The scarlet and white radishes, the red beets and green heads of lettuce were certainly as pleasing to the eye as the berries, if not quite as luscious to the taste. In this department Smith Brothers of Green Bay, Wood County Horticultural Society, Mr. Abbott, and Mr. Grant were the chief exhibitors.

The out-of-town attendance at the convention was unusually good. More than fifty were provided with entertainment by our cordial hosts. Among the more noted guests were Prof. Goff of the University of Wisconsin, Eben E. Rexford, the poet, Mr. Thurston of The Farmer's Voice and the genial and courtly Jonathan Periam, formely of The Prairie Farmer. There was a delegation of twenty-five from Omro.

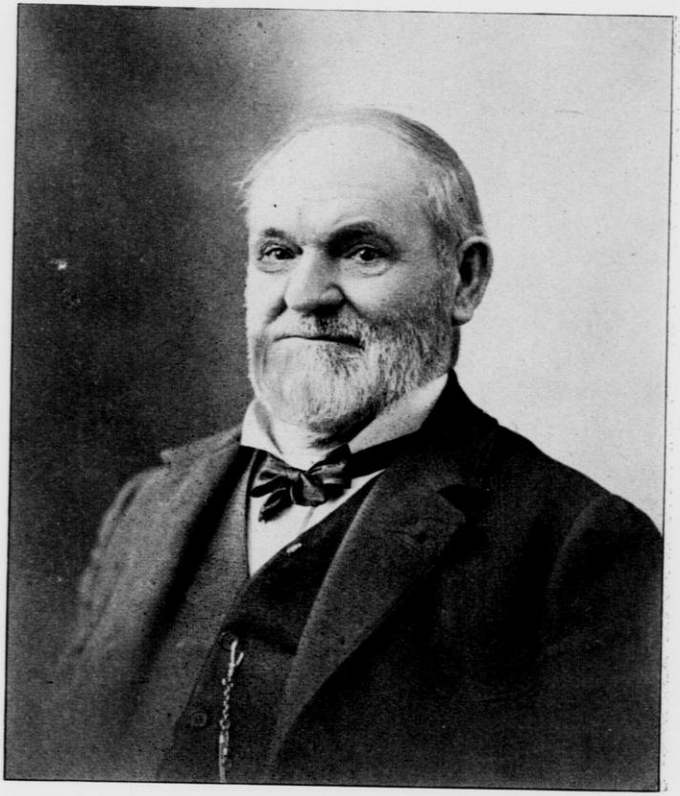
The Trans-Mississippi Exposition at Omaha sent a telegraphic greeting.

We must not close without mention of the fine musical and literary entertainment given in our honor Thursday evening, —a "home talent" program of which any first class professional entertainment bureau might be proud.

The convention closed Friday afternoon, but a delightful banquet, with music and toasts, was in store for those who remained that night.

Among the pictures on memory's wall will hang one of the beautiful city near Lake Winnebago; and we shall hold in grateful remembrance the Grand Chute Horticultural Society. "May you live long and prosper."

Baraboo, Wis.



E. H. S. DARTT.

[As the subject of the following sketch is an old settler of Wisconsin and a life member of our Society, and visits us annually, I am glad to give it a place in our report.—A. J. Philips, Sec'y.]

E. H. S. DARTT.

(Wisconsin Horticulturist, July, 1898.)

This is not an obituary; it is a brief sketch of a "live" man.

Mr. Dartt was born in Salisbury, Addison county, Vermont, Nov. 24, 1824. His English ancestors were among the early settlers of New England.

In July, 1844, Mr. Dartt came from Vermont to Dodge Co., Wis., being eighteen days in making the trip. In 1846 he settled at Kingston, Wis., where he married and remained until 1868. After traveling in Kansas and Minnesota in search of a desirable location for a home, he finally settled at Owatonna, Minn.

From boyhood he had cherished an interest in horticulture, and soon began planting trees in his new possessions. At one time his orchard contained more than 5,000 trees.

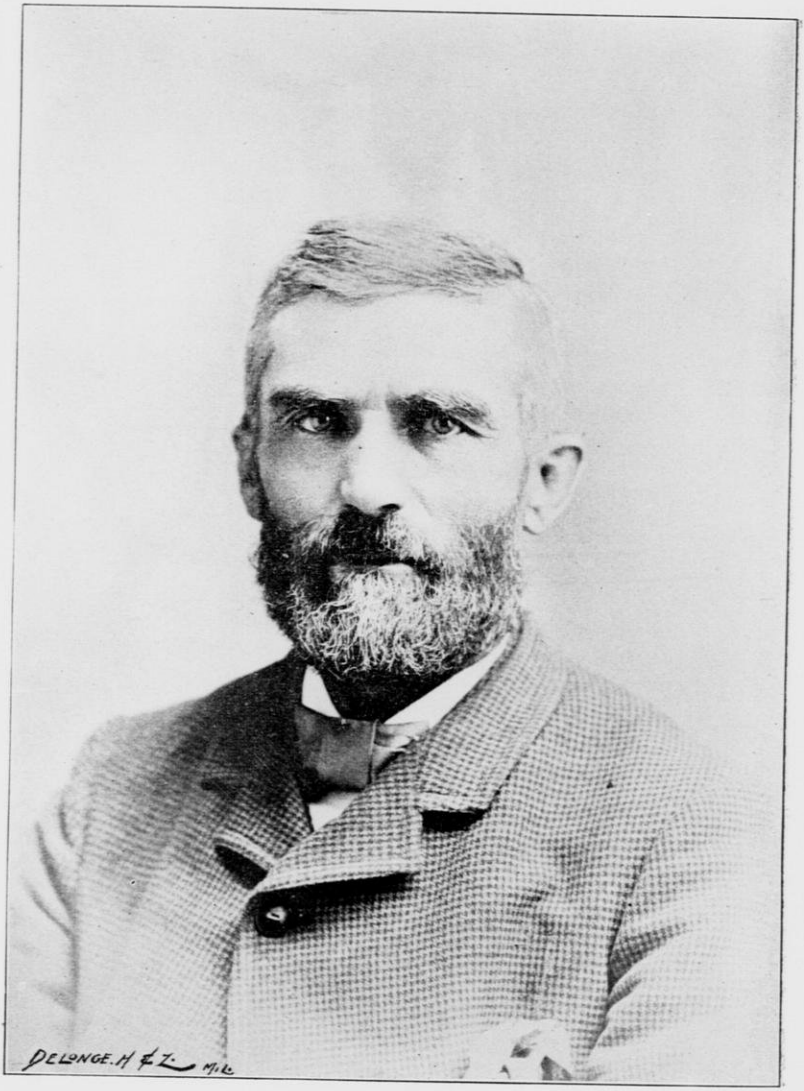
He induced the Minnesota legislature to establish an experiment tree station on the grounds of the School for Indigent Children, located at Owatonna, and was appointed superintendent of this station, a position which he still holds. Mr. Dartt is a charter member of the Minnesota State Horticultural Society and an honorary life member of the Wisconsin Society. He attended the recent meeting at Appleton and read an original poem, "The Pioneer," which he began in Wisconsin in 1844 and finished in Minnesota in 1898. The entire poem is too long for our pages, but we take pleasure in giving our readers two extracts, one describing the founding of the pioneer home, the other vividly portraying an experience painfully familiar to most old settlers."

"He stakes his claim, rears house of logs;
He buys some oxen, cows and hogs;
He wants a wagon, no cash to buy it,

And he must build one, at least he'll try it.
From huge round logs he saws the wheels,
For tongue and reach a sapling peels;
The rest he hews from solid oak;
The thing when done has never a spoke;
And yet it often loudly talks
In language formed of squeaks and squawks."

* * * * * *

"A feeling strange creeps o'er his frame;
He's never felt before the same.
He feels so cold—he builds a fire,
But colder grows as he comes nigher;
At length his teeth begin to chatter,
And loose floor boards begin to clatter,
Some awful power within increases,
And tries to shake him all to pieces;
Then comes a calm; he takes to bed,
With unstrung nerves and aching head;
Then raging fever, awful thirst,
It seems as if his head must burst;
And after hours of torturing pain,
He tries to be himself again.
Day after day the scene's repeated;
From all the joys of life he's cheated,
And worst of all his head is turned
By these sad lessons he has learned.
The doctor comes with monstrous bills,
Almost as bad as ague chills;
And Shylock with his wonted greed,
Takes off the wheat he's saved for seed."



JOHN L. FISK.

In Memoriam.

JOHN L. FISK.

(From the Wisconsin Horticulturist, June, 1898.)

Another pioneer of horticulture, Mr. J. L. Fisk of Omro, has been laid away to rest.

Those who have never been entertained at his lovely home will hardly realize the life work of that painstaking and persevering man. It would take an abler pen than mine to describe the beauty of his grounds and the care exercised in laying them out,—the fine evergreens, the luxuriant shrubbery and the beautiful flowers, including nine varieties of seedling peonies which he himself originated. Hours could be spent by a lover of flowers in examining and admiring his beautiful specimens.

Then a visit to his home was worth miles of travel. The ingenuity of his sons, and the pains they took when traveling in the south and west to collect and send to their father rare specimens of nature's work, is manifest upon the walls and in every nook and corner of the dwelling. The rooms are really miniature historical rooms.

When visiting there my thought has been, "Oh, would that this beautiful spot were located where all our members and ten thousand others could see it often! It would inspire many a man to do more to beautify his own home and surroundings." Once after visiting Mr. Fisk's place I traveled half a day in a county in eastern Wisconsin, and counted in passing, twenty-seven farm houses where the aggregate

growth of trees, plants and flowers around them was not half as much as surrounded Mr. Fisk's home.

I write this, feeling that his work in horticulture deserves more than a passing notice.

A. J. PHILIPS,
Secretary Wis. State Horticultural Society.

John L. Fisk was born in Dryden, N. Y., Jan. 3, 1832, and died at his home in Omro, May 11, 1898.

He was of English descent; his grandfather was a descendant of Symond Fiske, Lord of the Manor of Stadborough, Suffolk county, England, from the time of Henry IV. He was the sixth child of a family of ten children. His father's family came to Wisconsin in 1838, and settled in Watertown. In 1847 they moved to Waukau, and in 1848 moved onto the farm where Mr. Fisk has lived ever since, near the village of Omro. He was married Jan. 19, 1855, to Miss Adaline D. Houston of Oshkosh, and had four children, two of whom are living, Fred and Elmer.

Mr. Fisk has been an honored member of the State Horticultural Society since its organization, and was looked up to throughout the state as an authority on matters pertaining to horticulture and floriculture. Ed.

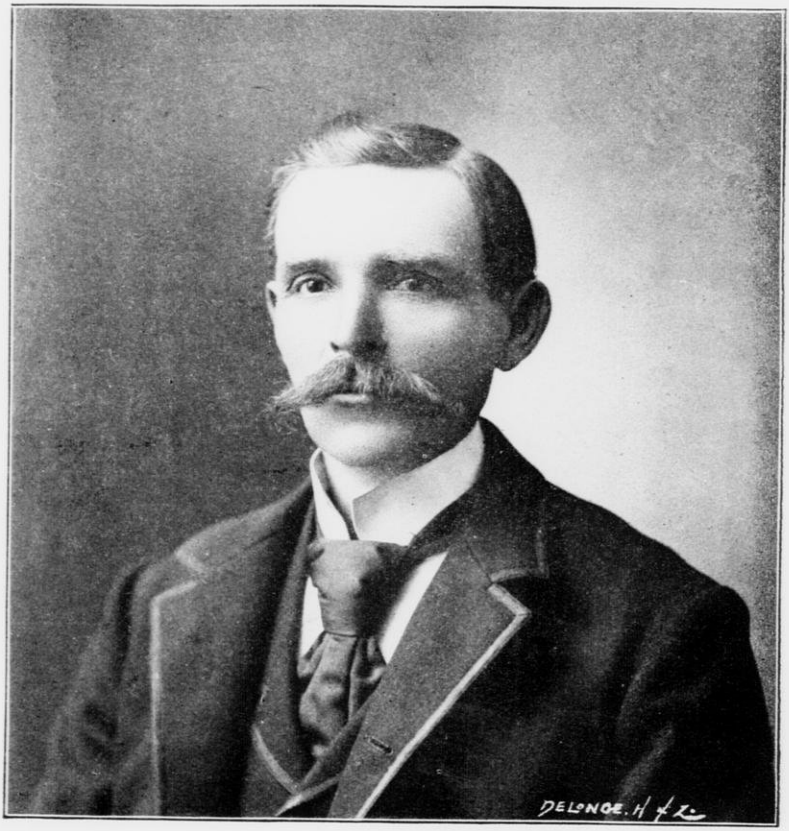
EMERY J. SCOFIELD.

(Wisconsin Horticulturist, July, 1898.)

Emery J. Scofield was born in Plymouth, Wis., January 17, 1853, and died at his home in Plymouth, May 6, 1898.

His father moved from Pennsylvania and was one of the early settlers in this section. E. J. Scofield was the eldest of a family of three children. He was married July 7, 1872, to Miss Clara V. Hatton of Plymouth. They had five children, three daughters and two sons, all of whom survive him.

In the fall of 1873, Mr. Scofield moved to Iowa, there to follow his chosen avocation of farming. After a period of eight



EMERY J. SCOFIELD.

years, in the fall of 1881, he moved back to his native town in Wisconsin and settled on the place now known as Cottage Grove Fruit Farm, which has since been his home and where he died. Here he was engaged in the fruit and nursery business, and had established an enviable reputation for carefulness and reliability. To have procured your plants from "Cottage Grove Fruit Farm" was a guarantee of their genuineness.

Mr. Scofield died of heart disease after an illness of three months' duration.

He was a cousin of Gov. Scofield.