AMERICAN POMOLOGICAL SOCIETY.


AMERICAN POMOLOGICAL SOCIETY - FOUNDED 1848.
MARSHALL PINCKNEY WILDER, PRES.


QUARTER CENTENNIAL
BOSTON,
SEPTEMBER
1873.

PROCEEDINGS

OF THE

FOURTEENTH SESSION

AND

QUARTER CENTENNIAL CELEBRATION

OF THE

American Pomological Society

HELD IN

BOSTON, MASS.,

SEPTEMBER 10, 11 & 12, 1873.

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AMERICAN POMOLOGICAL SOCIETY.

FOURTEENTH SESSION AND QUARTER CENTENNIAL CELEBRATION.

Whereas the American Pomological Society, at its last session, accepted the invitation of the Massachusetts Horticultural Society, to hold its Quarter Centennial Celebration, and Biennial Session, in the City of Boston, in 1873;

Therefore, in conformity with said acceptance, the undersigned give notice, that the Fourteenth Session of this National Association will be held in the Hall of the Massachusetts Horticultural Society, Tremont Street, in Boston, commencing Wednesday, September 10th, 1873, at 10 o'clock, A. M., and continue for three days.

All Horticultural, Pomological, Agricultural, and other kindred associations, in the United States and British Provinces, are invited to send delegations, as large as they may deem expedient, and all persons interested in the cultivation of fruits, are invited to be present and take seats in the Convention.

The coming session will be especially interesting, commemorating, as it will, the termination of the first quarter of a century of the existence of the Society, and, it is believed, will be one of the most important and useful that the Society has ever held. On this occasion there will be brought together the best cultivators and fruits of our widely extended country, when may be examined and compared the fruits, not only of the cooler climes of the North, but of the South, the West, and the Pacific Slope. It is, therefore, very desirable that every State, Territory, and Province of America should be fully and ably represented in this convention, thereby promoting the advancement of one of the great resources of our national wealth,—the extension and perpetuation of the amicable and social relations which have heretofore existed among the members of the Society,—and the diffusion throughout the land of our deliberations, for the benefit of our constantly expanding territory.

It is, therefore, hoped that there will be a full attendance of Delegates from all quarters of our country, thereby stimulating more extensive cultivation, by the concentrated information and experience of cultivators, and aiding the Society in perfecting its Catalogue of Fruits. This will be one of the prominent subjects which will come before the Society, and we therefore respectfully urge the various State and Local Committees, which have not already responded to the Circulars of P. Barry (Chairman of the General Fruit Committee, Rochester, N. Y.), to do so, with such information and lists of fruits as may aid in determining what varieties are best adapted to their several localities.

At this session the Society will appoint the place for its next meeting, and also decide what action it will take on the invitation to participate in the International Exhibition at the Centennial Celebration of 1876, in Philadelphia, and it is respectfully requested that members come prepared to express their opinions in regard to this subject.

Arrangements will be made with hotels, and as far as possible with the various railroad companies, terminating in Boston, for a reduction of fare, and of which notice will be given in a future Circular. Similar arrangements can undoubtedly be made by the various delegations, with roads in their localities.

Members and Delegates are requested to contribute specimens of the Fruits of their respective districts and to communicate in regard to them whatever may aid in promoting the objects of the Society and the science of American Pomology. Each contributor is requested to prepare a complete list of his collection,

and to present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as early as practicable.

The Massachusetts Society for Promoting Agriculture have kindly appropriated five hundred dollars, and liberal sums have been promised by other generous patrons. See premium list.

An increased interest will be given to the occasion by the Grand Exhibition of Plants and Flowers by the Massachusetts Horticultural Society, which will occur at the same time.

Packages of Fruits, with the name of the contributor, may be addressed as follows: "AMERICAN POMOLOGICAL SOCIETY," care of E. W. BUSWELL, Massachusetts Horticultural Society, Boston.

All persons desirous of becoming members can remit the fee to THOMAS P. JAMES, Esq., Treasurer, Cambridge, Mass. Life Membership, Twenty Dollars; Biennial, Four Dollars.

MARSHALL P. WILDER, *President*,
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Newspapers and Periodicals that take an interest in Pomology, are respectfully requested to publish the above.

PREMIUM LIST.

FIVE HUNDRED DOLLARS has been offered by the Massachusetts Society for Promoting Agriculture, and ONE HUNDRED DOLLARS, each, is tendered by the following gentlemen, for Premiums, and the promotion of the objects of the Society, viz:—

Hon. ALBERT FEARING, President of the Hingham Agricultural Society.

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Dr. NATHAN DURFEE, Ex-President Bristol Central Agricultural Society.

WILLIAM KNOWLTON, Esq., Ex-President Worcester South-East Agricultural Society.

CHARLES O. WHITMORE, Esq., of Boston.

GARDNER BREWER, Esq., of Boston.

The following Prizes will therefore be offered, in accordance with the above generous donations:

Apples.—For the largest and best collection of Apples, correctly named, from any State or Society, three of each variety,

1st Premium, The Society's Silver Medal and Fifty Dollars.
2d " " " Bronze Medal and Twenty-Five Dollars.

For the largest and best collection of Apples, correctly named, grown by one individual, three specimens of each variety,

1st Premium, The Society's Silver Medal and Fifty Dollars.
2d " " " Bronze Medal and Twenty-Five Dollars.

Pears.—For the largest and best collection of Pears, correctly named, from any State or Society, three of each variety,

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Grapes.—For the largest and best collection of named Native Grapes, from any State or Society, three bunches of each variety,

1st Premium, The Society's Silver Medal and Fifty Dollars.
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For the largest and best collection of named Native Grapes, grown by one individual, three bunches of each variety,

1st Premium, The Society's Silver Medal and Fifty Dollars.
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For the largest and best collection of named Grapes, grown west of the Rocky Mountains, two bunches of each variety,

Premium, The Society's Silver Medal and Fifty Dollars.

For the largest and best collection of Native Grapes, correctly named, grown south of the Southern line of Virginia, Tennessee, Missouri, &c., two bunches of each variety,

Premium, The Society's Silver Medal and Fifty Dollars.

For the largest and best collection of Grapes grown under glass, two bunches of each variety,

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Peaches.—For the largest and best collection of Peaches, correctly named, from any State or Society, three of each variety,

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Plums.—For the largest and best collection of plums, correctly named, from any State or Society, three of each variety,

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For the largest and best collection of Plums, correctly named, grown by one individual, three specimens of each variety,

1st Premium, The Society's Silver Medal and Fifty Dollars.
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Seedling Fruits.—For the best collection of seedling Apples, grown by one individual,

Premium, The Society's Silver Medal.

For the best collection of seedling Pears, grown by one individual,

Premium, The Society's Silver Medal.

For the best collection of seedling hardy Native Grapes, either from native seeds or hybrids, grown by one individual,

Premium, The Society's Silver Medal.

For the best collection of seedling Plums, grown by one individual,

Premium, The Society's Silver Medal.

For the best collection of seedling Peaches, grown by one individual,

Premium, The Society's Silver Medal.

Figs.—For the best collection of fresh Figs grown in open air,

Premium, The Society's Silver Medal.

For the best exhibition of Dried Figs, grown and cured in the United States,

Premium, The Society's Silver Medal.

Oranges.—For the best collection of Oranges grown in open air,

Premium, The Society's Silver Medal.

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Premium, The Society's Silver Medal.

Raisins.—For the best exhibition of, grown and cured in the United States,

Premium, The Society's Silver Medal.

Dried Fruits.—For the largest and best collection of, with full description and expense of process,

Premium, The Society's Silver Medal.

Canned Fruits.—For the largest and best collection of, giving full description of process and expenses,

Premium, The Society's Silver Medal.

Premiums are subject to the general rule of restriction, that where objects are not worthy, prizes will be withheld. No State, Society, or individual can compete for more than one premium with the same variety or varieties of fruits.

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Bryce Stewart	Clarksville,	Tennessee.	
Henry L. Stewart	Middle Haddam	Connecticut.	
C. W. Spalding, M. D.	St. Louis,	Missouri.	
J. L. Stephens	Booneville,	Missouri.	
Josiah Stickney	Watertown,	Massachusetts	
W. C. Strong	Brighton,	Massachusetts	
J. M. Stone	Calhoun Station,	Mississippi.	
Howard Swineford	Richmond,	Virginia.	
Edward P. Taft	Providence,	Rhode Island.	
Thomas Talbot	Billerica,	Massachusetts.	
Edward Tatnall	Wilmington,	Delaware.	
John N. Taylor	Brooklyn,	New York.	
Dr. Thomas Taylor	Washington	District Columbia.	
Joseph O. Taylor	Newport,	Kentucky.	
John T. Temple	Davenport,	Iowa.	
J. J. Thomas	Union Springs,	New York.	
Geo. Thurber	New York,	New York.	
William B. Towne	Boston,	Massachusetts.	
B. C. Townsend	New York,	New York.	
F. Trowbridge	Milford,	Connecticut.	
Geo. R. Underhill	Locust Valley,	New York.	
Jacob Van Gelder	Saugerties,	New York.	
J. A. Warder, M. D.	Cincinnati,	Ohio.	
W. H. Wardell	Boston,	Massachusetts.	
William Watson	Brenham,	Texas.	
D. B. Weir	Lacon,	Illinois.	
Aaron D. Weld	Boston,	Massachusetts.	
Jesse M. Wellborn	Conyers,	Georgia.	
Leander Wetherell	Boston,	Massachusetts.	
Joseph V. Whelan	Montgomery,	New York.	
John B. Whitehead	Norfolk,	Virginia.	
Chas O. Whitmore	Boston,	Massachusetts.	
John Wieland	Farmersville,	Ohio.	
Edward B. Wilder	Dorchester,	Massachusetts.	
Marshall P. Wilder	Dorchester,	Massachusetts.	
Marshall P. Wilder, Jr.	Dorchester,	Massachusetts.	
W. C. Wilson	Baltimore,	Maryland.	
O. F. Winchester	New Haven,	Connecticut.	
John D. Wolfe	New York,	New York.	
A. Work	New York,	New York.	
Dr. A. P. Wylie	Chester,	South Carolina.	
W. H. Yeomans	Columbia,	Connecticut.	
J. M. W. Yerrington	Boston,	Massachusetts.	
James Younglove	Bowling Green,	Kentucky.	

Biennial.

William Adair	Detroit	Michigan.
Isaac Anderson	New Haven	Connecticut.
P. M. Augur	Middlefield	Connecticut.
Wm. C. Barry	Rochester	New York.
M. B. Bateham	Painesville	Ohio.
James H. Bell	Woburn	Massachusetts.
G. B. Brackett	Denmark	Iowa.
Wm. D. Breckenridge	Gowerstown	Maryland.
William Brocksbank	Hudson	New York.
Charles E. Brown	Yarmouth	Nova Scotia.
Arthur Bryant, Sr	Princeton	Illinois.
B. Bryant	Derby Centre	Vermont.
Rev. Robert Burnet	Hamilton	Ontario.
Isidor Bush	Bushburg	Missouri.
Wm. S. Carpenter	Rye W. Chester Co.	New York.
Isaac C. Chapman	Newburgh	New York.
Seth P. Chapin	Navysink	New Jersey.
C. W. Churchill	Geneva	New York.
G. W. D. Churchill	Geneva	New York
Eliphallt Clark	Portland	Maine.
Daniel W. Coit	Norwich	Connecticut.
John S. Collins	Morestown	New Jersey.
S. H. Colton	Worcester	Connecticut.
William W. Conover, Jr.	Red Bank	New Jersey.
W. W. Cook	Worcester	Massachusetts.
Henry Cornell	Newburgh	New York.
Wm. D. Cowles	New York	New York.
William H. Cox	Anchorage	Kentucky.
Franklin Dare	Bridgeton	New Jersey.
Daniel S. Dewey	Hartford	Connecticut.
Charles S. Dickerman	New Haven	Connecticut.
James Dougal	Windsor	Ontario.
John S. Eastmond	Port Monmouth	New Jersey.
J. W. Elder	Derby Centre	Vermont.
Wyman Elliot	Minneapolis	Minnesota.
H. B. Ellwanger	Rochester	New York.
H. H. Farley	Union Springs	New York.
E. T. Field	Red Bank	New Jersey.
Henry Field	Red Bank	New Jersey.
G. T. Fish	Rochester	New York.
Charles L. Flint	Boston	Massachusetts.
Arthur C. Ford	Atlanta	Georgia
Ashall Foote	Williamstown	Maine.
Henry F. French	Concord	Massachusetts.
E. Gale	Manhattan	Kansas.
J. R. Gaston	Normal	Illinois.
Z. A. Gilbert,	East Turner,	Maine.
Chalkley Gillingham	Acotink	Virginia.
Dr. C. C. Hamilton	Cornwallis	Nova Scotia.
Samuel Hape	Atlanta	Georgia.
J. S. Harris	La Crescent	Minnesota.
A. W. Harrison	Philadelphia	Pennsylvania.
Wm. Heaver	Nashville	Tennessee.
J. A. Hendrickson	Red Bank	New Jersey.
M B. Hillyard	McComb City	Mississippi.
J. C. Holmes	Detroit	Michigan.
Albert S Holland	Barre	Massachusetts.
H. E. Hooker	Rochester	New York.
Abner Hoopes	West Chester	Pennsylvania.
Josiah Hoopes	West Chester	Pennsylvania.
William Howe	No. Salem	New York.
Dr. Wm. M. Howsley	Leavenworth	Kansas.
Stephen Hoyt	New Canaan	Connecticut.
Samuel H. Huntington	Hartford	Connecticut.
George Husmann	Sedalia	Missouri.
Thomas P. James	Cambridge	Massachusetts.
Frank J. Kinnly	Worcester	Massachusetts.
Edward W. Lincoln	Worcester	Massachusetts.
John T. Lovett	Red Bank	New Jersey.
J. W. Manning	Reading	Massachusetts.
J. S. McCalla	Philadelphia	Pennsylvania.
T. C. Maxwell	Geneva	New York.
J. A. Mendenhall	Richmond	Indiana.
Mark Miller	Des Moines	Iowa.
Elisha Moody	Lockport	New York.
John B. Moore	Concord	Massachusetts.
J. Sterling Morton	Nebraska City	Nebraska.
Josiah Newhall	Lynnfield	Massachusetts.
Ambrose F. Page	Billerica	Massachusetts.
Geo. C. Penniman	St. Michaels	Maryland.
Francis Pentland	Lochland	Ohio.
E. A. Powell	Syracuse	New York.
J. S. Prettyman	Milford	Delaware.
Edwin Ray	Boston	Massachusetts.
Dr. D. Redmond	Pass Christian	Mississippi.
W. H. Risley	Berlin	Connecticut.
James H. Ricketts	Newburgh	New York.
James A. Root	Skaneateles	New York.
J. W. Ross	Perrysburg	Ohio
John Saul	Washington	District Columbia.
William Saunders	London	Ontario.
Wm A. Seaman	Washington	District Columbia.
Wm. L. Schaffer	Philadelphia	Pennsylvania
William Schley	Savannah	Georgia.
J. R. Shotwell	Rahway	New Jersey.
Daniel Smith	Newburgh	New York.
James Smith	Des Moines	Iowa.
Frederick Smyth	Manchester	New Hampshire.
Calvin Spaulding	Hallowell	Maine.
Wm. H. Spooner	Jamaica Plains	Massachusetts.
Dr. J. Stayman	Leavenworth	Kansas.
Dr. H. A. Swasey	Mobile	Louisiana.
E. W. Sylvester, M. D.	Lyons	New York.
Charles S. Taylor	Burlington	New Jersey.
E. Y. Teas	Richmond	Indiana.
George M. Thompson	Waltham	Massachusetts.
Thomas C. Thurlow	W. Newbury	Massachusetts.
B. F. Transou	Humboldt	Tennessee.
Richard Van Dusen	Thompsonville	Connecticut.
H. K. Vickroy	Champaign	Illinois.
F. Wellhouse	Leavenworth	Kansas.
Mortimer Whitehead	Middlebush	New Jersey.
E. Williams	Mount Clair	New Jersey.
H. C. Williams	Vienna	Virginia.
H. T. Williams	New York	New York.
T. B. Yall	Rochester	New York.

FRUITS ON EXHIBITION.

From the Nebraska State Horticultural Society.—Apples, two hundred and twenty-nine varieties; Pears, forty-three varieties; Grapes, eight varieties; and Peaches, seven varieties. Total, two hundred and eighty-seven varieties.

From the Kansas State Horticultural Society.—Apples, one hundred and seventy-four varieties; Pears, ten varieties; Grapes, five varieties. Total, one hundred and ninety-three varieties.

From the Fruit Growers' Association of Ontario.—Apples, one hundred and sixty varieties; Pears, one hundred and twenty-two varieties; Grapes, fifty-one varieties; Plums, fifty varieties; Peaches, fifteen varieties. Total, three hundred and ninety-eight varieties.

From Marshall P. Wilder, of Boston.—Pears, four hundred and four varieties.

From Hovey & Co., of Cambridge, Mass.—Pears, three hundred and twenty-eight varieties.

From Ellwanger & Barry, of Rochester, N. Y.—Pears, three hundred and seventeen varieties.

From the South Haven (Michigan) Pomological Society.—Apples, one hundred varieties; Grapes, twenty-five varieties; Pears, twenty varieties; Plums, ten varieties; Peaches, three varieties. Total, one hundred and fifty-eight varieties. Also, thirty-four varieties Evaporated Fruits; fourteen varieties of Canned Fruits and one Crate of Peaches.

From the State of Vermont, B. Bryant, *Chairman*.—Apples, one hundred and seventeen varieties; Pears, twenty-six varieties; Crab Apples, twenty-four varieties. Total, one hundred and sixty-seven varieties.

From the Polk County (Iowa) Agricultural and Horticultural Society, Mark Miller, *Chairman*.—Apples, one hundred and fifty-one varieties.

From the Cambridge (Mass.) Horticultural Society.—Pears, one hundred and twenty-eight varieties.

From the Connecticut State Board of Agriculture.—Pears, one hundred and twenty-two varieties.

From E. Moody & Son, of Lockport, N. Y.—Pears, one hundred and twelve varieties.

From Rev. Robert Burnet, of Hamilton, Ontario.—Pears, one hundred and eight varieties.

From J. W. Ross, of Perrysburg, Northern Ohio.—Apples, one hundred and one varieties.

From the State of Indiana, by Mr. Mendenhall.—Apples, about one hundred varieties were sent, but only a small portion arrived.

From F. & L. Clapp, of Dorchester, Mass.—Pears, eighty-six varieties of Seedlings.

From Charles Dickerman, of New Haven, Conn.—Pears, eighty-six varieties.

From the Deseret (Utah) Agricultural and Manufacturing Company.—Apples, thirty varieties; Pears, twenty-one varieties; Plums, fifteen varieties; Peaches, nine varieties. Total, seventy-five varieties.

From the Farmers' Club, of Sacramento, Cal.—Apples, thirty-eight varieties; Pears, fourteen varieties; Peaches, four varieties; Grapes, nine varieties. Total, sixty-five varieties. Also, Brandied Peaches in Glass Jars.

From Smith & Powell, of Syracuse, N. Y.—Pears, seventy-three varieties.

From John B. Moore, of Concord, Mass.—Seedling Grapes, fifty-six varieties.

From John Saul, of Washington, D. C.—Pears, fifty-five varieties.

From James H. Ricketts, of Newburgh, N. Y.—Grapes; Native varieties and Seedlings.

From Hoag & Clark, of Lockport, N. Y.—Native Grapes.

From James Rutter, of Florin, Cal.—Grapes grown west of the Rocky Mountains.

From Alexander Dickinson, of Cambridgeport, Mass.—Pears, fifty varieties.

From W. D. Breckenridge, of Gowerstown, Md.—Pears, forty-seven varieties.

From Robert Cushman, of Pawtucket, R. I.—Pears, thirty-eight varieties; Grapes, two varieties; and one variety of Apples. Total, forty-one kinds.

From the Delaware Fruit Growers' Association.—Pears, twenty-four varieties; Peaches, twelve varieties; and Apples, four varieties. Total, forty varieties.

From Charles W. Read, of Sacramento, Cal.—Pears, thirty-nine varieties.

From Nova Scotia.—Apples, twelve varieties; Plums, twelve varieties; Pears, nine varieties. Total, thirty-three varieties.

From John J. Howe, of Birmingham, Conn.—Thirty-two varieties of Seedling Pears.

From the Concord (N. H.) Horticultural Society.—Grapes, twelve varieties; Pears, eleven varieties; Apples, four varieties. Total, twenty-seven.

From Dr. N. Durfee, of Fall River, Mass.—Peaches, twenty varieties.

From David S. Myer, of Bridgeville, Del.—Peaches, eighteen varieties.

From George B. Durfee, of Fall River, Mass.—Grapes, grown under glass, fifteen varieties.

From G. F. B. Leighton, of Norfolk, Va.—Pears, fourteen varieties.

From Joshua Coolidge, of Watertown, Mass.—Pears, fifteen varieties.

From Charles Arnold, of Canada.—Grapes, eighteen Seedlings.

From D. Redmond, Mississippi.—Oranges, eight varieties.

From L. I. Rose, of California.—Oranges, two kinds, Shaddock, and a Pomegranate variety.

From F. Trowbridge, of New Haven, Conn.—Cranberries, three varieties.

And additional Fruits from the following sources:—

From Chas. E. Brown, of Yarmouth, Nova Scotia; C. H. Greenman, of Milton, and G. P. Pepper, of Pewaukee, Wisconsin; Parker Earle, of South Pass, Ill.; Geo. W. Campbell, of Delaware, Ohio; W. B. Weeks and Geo. R. Wilson, of Norfolk; E. Daniels and Geo. Pervis, of Nelson County, Richmond, Va.; J. J. Toon, of Atlanta, Ga.; Lewis Slack, of Brookline, George Hill, of Arlington, A. Foote, of Williamstown, N. B. White, of Dedham, and Geo. Haskell, of Ipswich, Mass.; John Copp, of Wakefield, N. H.; H. McLaughlin, of Bangor, Me.; E. Ware Sylvester, of Lyons, and H. E. Hooker, of Rochester, N. Y.; Stephen Hoyt, of New Canaan, W. W. Turner, of Hartford, and F. P. D. Stillman, of Connecticut; I. M. F. Farquhar, of Providence, R. I.; Col. N. O. Irish, of Nebraska; James Dougall, of Canada; and Miss Cooke, and numerous other contributors, from whom no lists were received, making altogether a grand total of over SIX THOUSAND DISHES OF FRUIT.

PROCEEDINGS

OF THE

American Pomological Society.

In conformity with the announcements made in the previous circular and invitations, delegates from all parts of the Union gathered at the hall of the Massachusetts Horticultural Society in Boston, on the morning of September 10, 1873. Nearly the entire available space of both halls being occupied with the overflowing abundance of the Pomological fruit contributions, the assembly met in Wesleyan Hall, immediately adjoining, and were called to order at 10 A. M. by the President, Hon. MARSHALL P. WILDER, who introduced W. C. Strong, President of the Massachusetts Horticultural Society, who gave the Society a cordial welcome to the city in the following words:

Mr. President and Gentlemen of the American Pomological Society:—The Society which I have the honor to represent met you two years since in a city 500 miles nearer the center of our Union than we now are, though that city is itself 1,000 miles east of the center. It was asking a good deal in inviting you to come to this land's end. You have come hundreds, some of you thousands, of miles to reach a city, for whatever else distinguished, at least noted for two great natural products —granite and ice. But it is our good fortune that you are here. The great transportation problem, so far as we at present are concerned, is happily solved.

It has, indeed, seemed to us appropriate that your Quarter-Centennial Celebration should be held in the city which has been from the first a staunch supporter of your Society, and which is the home of your President. (Applause.) And we hope to be able to show you in our city and surroundings, and by our exhibitions, that granite and ice are not our only products. We welcome you most cordially to our city, to our halls and exhibitions, to our homes and our hospitality. And we trust that while engaged in your important work, you will still find time for such observations and enjoyments as will make your stay with us pleasant and profitable to all. In behalf of the Massachusetts Horticultural Society, I extend to you a cordial welcome.

President WILDER responded as follows:

In behalf of the American Pomological Society, I beg to assure you of our sincere thanks for this cordial welcome, and those kind words you have addressed to us. No place could be more appropriate than this city, where our Pilgrim Fathers planted the germs of a new civilization, where were planted the first fruit-trees of New England, and from whence has gone forth much of that great interest which has spread throughout our country. I beg to assure you that nothing could be more agreeable than thus to receive your courtesy, and from the Society with which, as you know, I have been for more than forty years intimately connected. It is well, sir, that we are here, and we accept with gratitude the courtesies you have extended to us, and we hope that you

and your members will favor us with your presence and take seats in the convention. And now, gentlemen of the American Pomological Society, after having passed the introductory services of the morning, I beg to congratulate you on this large assembly of citizens and delegates from almost all the States and Territories of our country. In token of friendly regard, and as a memorial of this Quarter-Centennial, I beg to say to you that, as I cannot have the opportunity to take each of you by the hand this morning, I now propose that we have a general shaking of hands. I give my hand to my friends on my right and left, and thus complete the joyful salutation, and extend to you all a hearty and cordial welcome. (Applause.)

The suggestion of the President was carried out in a very hearty manner, and when order was again restored, Col. Wilder invited the Vice-Presidents to take seats on the platform, and then said:

It is my duty to say, gentlemen, that we meet for business purposes, but we have courtesies offered to us which we cannot refuse. I shall endeavor, with your good help, so to arrange the business, that the hours which are usually devoted to work shall not be infringed upon by the acceptance of these courtesies. I have letters of that character, which I will now read. The first is from the Mayor of the city, Hon. Henry L. Pierce, addressed to your President:

DEAR SIR,—It would give me great pleasure, as the representative of the city government of Boston, to meet and welcome the members of the American Pomological Society in Faneuil Hall, on Wednesday, the 10th inst., at one o'clock.

The letter which I shall now read is from Mr. Wm. Gray, Jr., in the immediate vicinity of this city:

HON. MARSHALL P. WILDER:

DEAR SIR,—It will give me great pleasure, if the members of the American Pomological Society, which is to hold its Quarter-Centennial Celebration next week, will breakfast with me on Thursday morning, the 11th inst., at half-past seven o'clock.

The following letter is from Mr. H. H. Hunnewell, whose place is renowned throughout our country. He says:

"Would your friends of the Pomological Society have a leisure moment during their intended visit to this city, and you think I have anything here in the way of horticulture of sufficient interest to compensate for the trouble of coming so far, I need not assure you that it will give me the greatest pleasure to receive them any day you may name, and to do every thing in my power to render the visit agreeable."

These invitations were accepted, and the thanks of the Society ordered to be returned therefor.

The President then announced the appointment of the following committees:

CREDENTIALS.—Messrs. Rev. R. Burnet, of Canada West; I. Bush, of Missouri; Dr. Hamilton, of Nova Scotia; George W. Campbell, of Ohio; and W. B. Smith, of New York.

RECORD OF FRUITS EXHIBITED.—Messrs. Fuller, of New Jersey; Sylvester, of New York; Hoopes, of Pennsylvania; Davis, of Massachusetts; and Saul, of the District of Columbia.

NOMINATION OF OFFICERS.—Governor Furnas, of Nebraska, Chairman; Messrs. Tichenor, of Alabama; Perkins, of California; Saul, of District of Columbia; Breckenridge, of Maryland; Sehley, of Georgia; Bryant, of Illinois; Teas, of Indiana; Miller, of Iowa; Howsley, of Kansas; McLaughlin, of Maine; Hyde, of Massachusetts; Lyon, of Michigan; Elliot, of Minnesota; Redmond, of Mississippi; Bush, of Missouri; Starr, of Nova Scotia; Moody, of New York; Towne, of New Hampshire; Browne, of New Mexico; Kidder, of North Carolina; Bateham, of Ohio;

Beadle, of Ontario; Buist, of Pennsylvania; Moore, of Rhode Island; F. Transon, of Tennessee; Deledale, of Washington; Gale, of Wisconsin; Elder, of Vermont; Dr. Swasey, of Louisiana.

Mr. F. R. Elliott, in a brief speech, thanking all for past kindness, and acknowledging his continued love and sympathy with the name and object of the Society, declined a re-nomination as Secretary, and the Society adjourned to FANEUIL HALL.

The reception was largely attended, yet informal, and occupied but a brief time.

His Honor the Mayor received the delegation of the Society with the following cordial address:

Mr. President and Gentlemen of the American Pomological Society:—I esteem it a great privilege to meet you here to-day in Faneuil Hall, and to extend to you, in behalf of the city government and our citizens, a cordial greeting to the metropolis of New England. Gathered as you are from every portion of the country, to spread abroad useful knowledge, experience and observation, you cannot fail to promote the well-being of the citizens and add greatly to the prosperity of the people. The development and improvement of fruit culture, which is the object of your Society, cannot fail to administer in a great degree to the happiness and prosperity of the country. The fruits of the garden, the field and the orchard are some of the leading elements of national wealth. I need not remind you of the benign influence it exerts in promoting the health and enjoyment of the country. I take especial pride in meeting you here, to-day, from the very fact that you have selected the home of your distinguished President (applause) in which to hold your twenty-fifth anniversary. I may say that he is known and beloved by all of us; his noble life is engaged in every good and noble work. I know that we all feel under the greatest obligations to you, and in coming here you have done all his fellow-citizens honor. I trust, gentlemen, that you will have a pleasant visit amongst us, and that the deliberations of your Society will accomplish all the good that you most fondly desire. (Applause.)

To which President Wilder responded:

Mr. Mayor:—In behalf of the American Pomological Society, I return you our sincere and heartfelt thanks for the cordial reception you have extended to our National Association. I know I speak the languge of every heart when I say that we are most happy to be received by you here, in old Faneuil Hall—in the old Cradle of Liberty, consecrated alike to American freedom and the rights of man. And could these portraits speak from the canvas, I doubt not, Mr. Mayor, they would unite with you most heartily in the cordial welcome you have so graciously given these representatives of our common country. And could they step to this platform, we should hear the immortal Washington again, with still more emphatic voice, declare the great industrial pursuit of which our favorite art is an important branch, "to be the most healthful, the most useful, and the most honorable employment of man." Then, too, should we hear the immortal statesman—our own Webster—commend to us the science of the soil, and declare again, from the spot where I stand, "that our pursuit is one which attracts, gratifies and delights all—a common field in which every degree of taste, refinement and education may unite and find opportunities for gratification." Then, also, would he "commend the power of association, and declare that the great practical truth of the present generation is that public improvements are brought about by combinations and voluntary association; that the practice of bringing together men bent on the same general object, uniting their physical and intellectual efforts for that purpose, is the greatest improvement of our age." We come, sir, from different, and some of us from very distant, sections of our land, to bring for your examination the products of our orchards, gardens and vineyards, to compare the results of our experience, and by the discussions, reports and the publication of our proceedings, to build up and perpetuate a pomology for this Western World. Already the star of American pomology, rising like the sun on our eastern shores, has made its transit across our continent, and

illumined not only the Pacific slope, but sheds its genial influence throughout the length and breadth of our happy land; and here, to-day, in this Northern clime, we have the fruits of the North, the South, the West, and the East, united in one grand display never surpassed by any nation on the globe. Our Association already embraces within its fold fifty States and Territories, with which we are more or less in communication, bringing together the wisest and best cultivators in our land, and forming a truly national association, whereby a community of interest is established for the advancement of one of the most rational and beautiful arts of life, and the promotion of a great source of national wealth and human happiness. In order to promote the convenience of all, and to increase its usefulness, the Society has held its sessions in different sections of the Union. New York, Pennsylvania, Ohio, Massachusetts, Missouri and Virginia have extended their hospitalities to us, and now, for the third time, we have the pleasure of accepting the welcome of Boston, which you have so graciously extended to us. Our time is precious, and we must return to our hall for business. In conclusion, permit me again to thank you for your kindness and courtesy, and to hope that you will honor us by an examination of our exhibition, and especially by your presence at the banquet on Friday evening. (Applause.)

The Mayor and other city officials were then introduced to the Vice-Presidents and other prominent members of the Society, and after spending a short time in examining the portraits and other objects of interest in the historic hall, the company separated.

WEDNESDAY — AFTERNOON SESSION.

Shortly after 3 o'clock, the delegates assembled in Wesleyan Hall in such numbers as to fill every available seat.

The President, at the opening of the session, appointed the following judges to examine and report upon the fruits on exhibition, and award the prizes named in detail as published in the preliminary circular issued by the Society:

APPLES.—Messrs. Charles Downing, of New York; Bateham, of Ohio; Redmond, of Louisiana; Bowditch, of Massachusetts; Moore, of Rhode Island.

PEARS.—Berckmans, of Georgia; Hooker, of New York; Manning, of Massachusetts; Earle, of Illinois; Harrison, of Pennsylvania; Quinn, of New Jersey.

GRAPES.—Farley, of New York; Hamilton, of Nova Scotia; Sargent, of Massachusetts; Thurber, of New York; Beadle, of Canada; Hape, of Georgia.

SEEDLING FRUITS.—Messrs. Thomas and Ellwanger, of New York; Hovey, of Massachusetts; Burnet, of Canada; Meehan, of Pennsylvania.

FIGS, ETC.—Messrs. Leighton, of Virginia; Breckenridge, of Maryland; Swasey, of Louisiana.

PEACHES.—G. W. Campbell, of Ohio; William Adair, of Michigan; Judge Schley, of Georgia; Dr. E. W. Sylvester, of New York; L. Saltonstall, of Massachusetts; Dr. Prettyman, of Delaware.

PLUMS.—P. T. Quinn, of New York; Dr. W. M. Howsley, of Kansas; Dr. F. M. Hexamer, of New York.

President Wilder then announced that on Friday evening there would be a grand banquet to the delegates, given by the Massachusetts Horticultural Society, which would be to them a source of great pleasure, and would be celebrated in the most enjoyable manner.

The Society then listened with closest attention and interest to the President as he delivered the customary Biennial Address.

ADDRESS OF THE HON. MARSHALL P. WILDER.

Gentlemen of the American Pomological Society:—With the close of this session a quarter of a century will have elapsed since the establishment of our National Association.

Most heartily do I congratulate you upon the pleasant circumstances under which we are assembled, and upon the progress and prosperity of our Society. We meet on this occasion, not only to assume the labors, discussions, and duties incident to another biennial session, but to commemorate by appropriate exercises a period which will ever be memorable in the record of our existence. We accept with great pleasure the cordial welcome extended to us by the Massachusetts Horticultural Society, whose liberality has made such ample provision for our accommodation; and, while acknowledging these courtesies, we desire also to express our obligations to the Massachusetts Society for Promoting Agriculture, and to the gentlemen who with them have presented funds for the promotion of our cause.

Nothing could be more grateful to my feelings than your presence at our old homestead, and in my own behalf I bid you welcome to the privileges and enjoyments of the occasion. We meet as representatives and co-laborers from different and widely distant sections of this great republic. We come from various districts, but with no other rivalry than a laudable ambition to promote a great industrial pursuit, whose salutary influences are for the benefit of our common country. From whatever section you come,—whether from the sunrise or the sunset shores of our continent, from the Dominion of the North, the valleys and prairies of the great Central West, or from the broad plains and hill slopes of the sunny South,—I extend to all a hearty welcome to our time-honored metropolis of New England.

Especially do I welcome you to our own beloved Commonwealth, the home of the Pilgrims, where our fathers planted the germs of a civilization which we believe will ultimately be extended to the remotest nations of the globe. Here the tree of liberty was planted under whose genial shade our whole land now rejoices; and here Concord, Lexington and Bunker Hill rear their monuments of historic fame, to remind us of the priceless blessings we enjoy. Here were the gardens and orchards of Gov. Endicott, whose pear-tree at Danvers still survives the revolutions of two hundred and fifty years. Here, at Marshfield, are the relics of the apple-tree planted by the first male child born of the Pilgrims. Here, on Boston Common, were the orchards of William Blackstone, the first settler. Here were the gardens of Gov. Winthrop, of golden-pippin renown, and here, at a later date, the gardens and orchards of John Hancock, the first signer to the Declaration of American Independence, Gardiner Greene, and others, from whence were disseminated some of the first fruits introduced into this country from the mother-land. Here is the home of the Massachusetts Society for Promoting Agriculture, of whose munificence I have before spoken: the home of the Massachusetts Horticultural Society, under whose auspices we meet, both of which institutions were the second of their kind permanently established in America. In this vicinity were the fields of labor of Lowell, Dearborn, Manning, Kenrick, the Perkinses, Downer, and other early pomologists; and here are the homes of many now living, whose names will be remembered as promoters of our cause when they also shall be gathered to their fathers. Here, within the limits of our city, were planted the first Bartlett and the first Flemish Beauty pear-trees imported to this country, both of which survive to this day. And here the Dix, the Dearborn, Dana's Hovey, Clapp's Favorite pears, and the Downer Cherry were born. And here, within a few miles, were originated the Hovey's Seedling Strawberry, the Concord, Diana, and Rogers' Hybrid Grapes.

Many of those who participated in the formation of this Society, and to whom we are indebted for much of its success, have ceased from their labors, and gone to receive their reward. But I am

most happy to recognize among those present to-day some of the noble pioneers who aided in the establishment of our Society, who rocked the cradle of its infancy, and who now rejoice with us in the grand development which this day witnesses. We recognize, also, many others, who in later times have contributed and shared with us in this march of improvement, who like them have stood as faithful sentinels on the watch-tower of duty, and whose efforts to advance our objects will demand and receive, in coming time, the thanks of millions of grateful hearts. To no one is this occasion of more interest than to him who, by your kind indulgence, has occupied this chair for so many years, and who, in the course of nature, cannot again witness the assembling of its members in this city of his home. With feelings of no ordinary gratification we receive you here, where some of the first efforts were made in the cause of fruit culture, and from whence, in the early history of our country, as well as in later years, so much has emanated for its extension throughout our land.

HISTORICAL SKETCH.

In my former addresses I have often spoken of the acquisitions and usefulness of our art; but in the presence of so many intelligent cultivators, who from scientific attainments and practical skill have become renowned as teachers themselves, I would not trespass on your time by a repetition of well established opinions, but would rather offer my congratulations on the progress we have made, and draw therefrom motives and inducements to increased efforts and perseverance in our benevolent work.

I have heretofore alluded briefly to the history of our Society, but it might be deemed an omission of duty did I not on this quarter-centennial make a record of its origin and progress, not only for the benefit of those present, but for the information of those who are to come after us. I propose, therefore, even at the risk of repeating what may be well-known to our earlier members, to place in the annals of our Society a page which shall survive when we are gone. Thus shall we "bind fast and find fast" the record of our times.

Briefly, then, let me state that the idea of a pomological convention appears to have occurred to individuals in different States at about the same time,—as new ideas in regard to progress frequently do. Thus, in the summer of 1848, consultation was had with Andrew Jackson Downing, the great American landscape gardener, and editor of the "Horticulturist," then on a visit to the city of Boston, in regard to the chaotic condition of our pomology,—the want of accurate and well-defined knowledge of our fruits, whereby correct conclusions could be drawn as to their various merits; the best means for improving the condition of fruit culture, and the expediency of establishing an American society, so that, by interchange of experience, and more cordial intercourse, by general consent we might preserve those fruits which were valuable, discard those which were worthless, correct the confused nomenclature, and establish a pomology for our whole country. To establish such a society was a great work, but it was considered as the only means which could accomplish the desired object. A correspondence was immediately opened with some of our prominent agricultural and horticultural societies, and with the leading nurserymen and pomologists of our land. This resulted in the proposal of the American Institute of New York to have a convention held under its auspices in that city. Pursuant to these arrangements, a circular was issued signed by committees of the Massachusetts, Pennsylvania, New Jersey, and New Haven Horticultural Societies and the American Institute of New York, proposing to hold a "Great National Convention of Fruit Growers" in the city of New York, October 10, 1848.

Of the fifteen persons whose names were appended to this call, three only remain. All the rest have joined the great procession of the dead.

The convention met, and the Society was organized as the "American Congress of Fruit Growers," by the choice of Marshall P. Wilder as President, a Vice-President from each of the several States represented, and three Secretaries. Of these, S. B. Parsons and P. Barry are here to-day.

The first National Pomological assemblage, solely for the consideration of pomological subjects, met at Buffalo, September 1, 1848, at the call of the New York State Agricultural Society, and after an interesting session resolved to perpetuate itself under the name of the "North American Pomological Convention." But it was plain that there could be but *one national* organization that could carry due weight. A conference was therefore had, which resulted the next year in the consolidation of the two associations under the name of the "American Pomological Congress." The first meeting of the united associations was held at Cincinnati, 1850. In consequence of a death in the family of the President he was absent, and Dr. W. D. Brinckle was chosen to preside, but at the next meeting declined a re-election, and the present incumbent was again called to the chair, which he has occupied to this date.

Its sessions, since the first three, have been held biennially. There have been three in New York city; one in Cincinnati; three in Philadelphia; three, including the present, in Boston; two in Rochester; one in St. Louis; and one in Richmond. The first session at Philadelphia, in 1852, will ever be memorable as the occasion when a eulogy was pronounced by the person who now addresses you, on Mr. A. J. Downing, one of the chief projectors of the Society, whose sudden death had occurred a short time previous. At this session a constitution and by-laws was adopted, and the name was changed to the "American Pomological Society."

PROGRESS.

We hail the present anniversary as one of the most interesting in our progress, commemorating as it will the history of this Society from its infancy to its present stature of manhood. Nor can language express the grateful sensations which I experience, that my life has been spared to this time; that I have been permitted to witness the rapid growth and increasing influence of our institution; and that you have so kindly consented to come once more to the city of my adoption, to my own home, to celebrate with me the silver wedding which, after so long a service, has still found us united in the bonds of affection and regard. There may be, and probably will be, periods in the future history of our Society, when equal or greater progress will be made; but it is a peculiar and grateful privilege to be able to record what has already been accomplished; to look back to its early beginnings; and here, perhaps for the last time, to join with you in congratulations on its success, and to look forward with confident hopes to the time when every section of our wide-spread territory shall be embraced in our association, and our standard of pomology be established throughout the Western Continent.

The marvelous growth of our country has constantly been opening up new States and Territories for fruit culture. These have been embraced within our fold, thus bringing together the wisest and best cultivators, and combining not only the men, but the fruits of our rich and varied clime, and States which had no place in our Union at the formation of this association have become the most fruitful in resources. Thus we have gone on, step by step, encouraging whatever was worthy, rejecting what was unworthy, treasuring up the best information, and promulgating, for the benefit of our whole people, the results of our wide-spread researches.

Few are aware of the great revolution which has taken place in fruit culture since the establishment of this National Pomological Society, or of the laborious efforts of those patient pioneers and investigators who have spent their lives for the promotion of our art. Nor can we omit here to acknowledge the influence of the press, to which we are so much indebted for the dissemination of our experience. Some are now living who can remember the time when there was not an agricultural or horticultural paper, nor a book on fruit culture, published on this continent. Look back and compare that period with the present time, with its flood of books, newspapers, and periodicals which are wholly or in part devoted to the spread of pomological knowledge, and we shall appreciate the great advantages arising therefrom. Many of those present can remember the time when there were but few apples sent from our Western States to the Eastern coast. Com-

pare this with the thousands of barrels of fruit that are now annually sent to the markets of the East. But time would fail me were I to enumerate the vast quantities of pears, peaches, grapes, and small fruits which come from the Western, Southern, Middle and Pacific States to our great Northern and Eastern cities. Some are present who can remember the time when there was not a nursery of any note west of the Hudson river, where now, as from the great commercial nurseries at Rochester, Geneva, and other Western cities, there are annually sent out millions of trees and plants to other sections of the Union.

The thought, therefore, which most impresses me on this occasion is the rapid progress in American Pomology, the beneficial results which have arisen from the establishment of this national institution, and the duty of perpetuating and preserving it for all coming time. No modern event connected with the culture of the soil, and the sanitary condition of our people, has been fraught with more salutary effects than the establishment and operations of this Society. The more I reflect on its benign influence in promoting the wealth, health and happiness of the nation, the more am I desirous to do what I can in my day and generation for its advancement. True, much had been done by the Pennsylvania and Massachusetts Horticultural Societies, the leading pioneers in the East, to open the way for this new epoch in the fruit culture of our country; much has been done by other associations and individuals in the way of co-operation; but here was a new departure, here was a union for concerted action, which should thenceforward embrace every section of our constantly increasing territory. How grateful to the feelings of our departed associates, could they have seen the growth and influence of our Society! How would the hearts of Downing, Brincklé, Walker, Hancock, not to speak of the living, have swelled with joy could they have seen, as we see now, the progress of fruit culture in our land, and the prospect which is opening up in the great future of our science.

How striking the progress in our day! It is but about fifty years since the first Horticultural Society was established on this continent. It is but twenty-five years since the formation of this, the first National Pomological Society in the world. And what do we see in the grand cornucopial display of to-day? Not merely the fruits confined mostly to the Eastern States, where our exhibition is held, but the fruits of almost all climes of the habitable globe. Here in counsel are assembled the representatives of our wide-spread territory, laden with rich experience and with precious fruits, far excelling the fabled gardens of antiquity.

Here the Canadas, Nova Scotia, and New England warm to the genial influences of the sunny South; here the great Central West responds to the East; here California, with golden fruits more precious than her golden sands; here peaceful Kansas brings her crimson fruits; here youthful Nebraska, representative from the great American desert, where sixteen years ago not a fruit tree had been cultivated, comes with her car of precious products and with her Governor at the head; and here from territories, where but a few years since the track of the wild beast and the trail of the wild man had only marked the soil; to-day, in this northern clime of granite and ice, on this rock-bound coast, we meet as representatives of a united and prosperous people, to rejoice together in a jubilee crowned with fruits surpassing those of any other nation of the earth. Such is the progress of American pomology; such the harvest we are permitted to reap; such is the fruition of our fondest hopes.

But who can even estimate the progress of our art, the importance of this industry to our nation? Whose prophetic eye can survey the grand expanse which is to open on our course during the next twenty-five years? Ere that time shall have arrived, much of the unoccupied territory of our country, now greater in extent than that of all our present States, will by the aid of our trans-continental railroads be opened to cultivation, and Columbia River, Puget Sound, and the whole Pacific coast, with its untold treasures, be united with us in the great work of promoting the pomology of this land. Give us twenty-five years more, and from ocean to ocean, from the Dominion to the Gulf, our hill-sides shall be clad with the vine, our great valleys adorned with orchards and gardens, and the fig, olive and orange of the South and Pacific shores shall rival

those of exotic growth. Give us twenty-five years more, and our catalogue of fruits shall be filled with native varieties, and dedicated to American pomologists, who, by their labors and benevolent efforts, have contributed to the wealth of our country and the happiness of its people.

NEW FRUITS.

But to accomplish this most desirable result, and to fulfill our mission of supplying every section of our country with fruits suited to its own locality, we must rely mainly on those originated on American soil. Bound by my promise in former addresses to ever recognize the importance of this duty, I again invoke your attention to the consideration of the subject. The good results already attained are but the harbingers of still more glorious rewards. We have discussed at length the various processes of Van Mons, Knight, Esperen, and others of the Old World: but whatever may be said of the superior fruits produced by them, we have the strongest proofs that the clear sky and warm summers of our American climate are far more favorable for propitious results than theirs, and that such circumstances will conduce to the health and longevity of a variety. Especially is this the case in California, where almost all the products of the vegetable world come to perfection. From past experience it seems probable that the deterioration of certain varieties of fruits will exist in the future as in the past, and that the same causes, whether from the removal of the forests, or from whatever circumstances, will still continue. Hence the necessity of raising new varieties to supply the places of those that decline. Happily this degeneracy is confined to the apple and pear, affecting the pear more particularly, while in the cherry, peach, plum, strawberry, and small fruits generally, there are no signs of this deterioration.

That as fine fruits can be raised from seed here as have been produced in any other country, there is no longer a doubt. That this is the plan prescribed by our bountiful Creator for their production and improvement, is equally true. That there is any limit to its progress and extent, we have no reason to believe. True, the number of superior fruits is small compared with the host of indifferent varieties that have come down to us from the past. One reason for this is, that our taste for finer fruits has been elevated to a higher standard, and those of an indifferent or medium quality fall out by the way: and we have no doubt that the old pears so highly lauded by historians, were most, if not all of them, only coarse, unmelting kinds.

When we reflect upon what has been accomplished in the improvement of animals and vegetables in our own day, and how many splendid acquisitions have been brought forth that command the admiration of the world,—when we reflect upon the many fine American fruits already obtained with but comparatively little effort,—we surely have cause for great encouragement and perseverance. There is no limit to progress now or hereafter, and we believe that the fruits of this earth are to become more and more perfect as time advances. The march of science is ever onward and upward, and it is our duty to keep pace with it. What has been done can be done again, and will be done, until the final culmination of all created things. Then let us not be discouraged by obstacles or disappointments, but—

> "Let us act, that each to-morrow
> Find us farther than to-day."

If a pear like the Bartlett or Beurre d'Anjou can be produced which shall be suited to every section, then another of like or better quality can be created and possess the same adaptation. Nor is there any reason why a strawberry like the Wilson, or a grape like the Concord, may not be raised of far better quality, and yet possess all the other valuable characteristics of these varieties. That there may be a point beyond which a fruit is not susceptible of improvement, as believed by

some, we cannot aver, but that most of our varieties fall short of this perfection, all will agree. When we consider the character of the fruits which have come down to us from antiquity, the wonder is, not that we have no more strictly first-class varieties, but that we have already produced so many superior sorts. These considerations afford ample evidence of the tendency towards improvement, and lead us to the belief that by planting the seeds of our best varieties, we shall advance still further towards perfection.

Duhamel, Poiteau, and their contemporaries, after repeated trials with the seeds of the old varieties, produced but few worthy of note. It was reserved for Esperen, Gregoire, Bivort, Berckmans, and other modern experimenters, who sowed the seeds of improved sorts, to give us most of the fine new varieties which now adorn our tables. In confirmation of this opinion, we have numerous instances in our own country. Witness the seedling pears of the Messrs. Dana, Clapp, and Shurtleff, of this vicinity, and those from other places, which grace this department of our exhibition. In these we have an illustration of what can be accomplished in the space of a few years, by the sowing of the seeds of modern varieties. In the extraordinary collection of Mr. Fox, of California, sent to me last year, we have also an evidence of the influences of virgin soil, high temperature, and clear atmosphere, giving us tokens of like advantages which we expect to derive from the new lands of our western friends, in the production of fine varieties. We may add in regard to Mr. Fox's seedling pears, that we know not how to account for the strong evidence of natural cross fertilization which they exhibit, unless it was caused by the favorable climatic influence which we have just mentioned.

Formerly we were obliged to rely mostly on imported kinds for our best fruits, but as time progresses these are gradually disappearing, and their places are being filled by those of American origin. Of the forty-three kinds of plums in our catalogue, more than half are American. Of fifty-eight kinds of peaches, more than two-thirds are American, and in fact very few others are much in cultivation. Of the nineteen kinds of strawberries, all but three are American. Of thirty-one varieties of hardy grapes, all are American. Thus, of these fruits we have in our catalogue at the present time, one hundred and fifty-one varieties: with the exception of thirty-seven, all are of American origin. Thus may we go on, rising higher and higher in the scale of excellence, looking forward with bright anticipations to the time when, through the influence of these examples, and of our own and kindred associations, our catalogue shall be filled with varieties of American origin, and every part of our country rejoice in fruits born on the soil on which we live.

Why, it is only about a century since Van Mons, Knight, and the great pomologists of Europe were born. It is within the present century that Coxe, Thomas, Buel, Prince, Lowell, Manning, and Kenrick commenced their efforts to improve the pomology of our country. It is within a much later period that the Downings, the younger Thomas, Kirtland, Hovey, Ellwanger and Barry, Brincklé, Kennicott, Warder, Elliott, Berckmans, commenced their operations for the advancement of this cause. These considerations should excite us to greater enterprise and renewed exertions. This is the great work of the American Pomological Society. We have but just entered upon it. How vast and inviting the field that lies spread out before us! Some of these thoughts, perhaps in another form, I may have presented to you before, but it is by line upon line and precept upon precept that I desire to enforce my advice; and were I never to address you again, I would repeat the counsel I have so often given, in regard to the production of new and fine fruits, namely: "*To plant the most mature and perfect seeds of the most hardy, vigorous and valuable varieties; and as a shorter process, ensuring more certain and happy results, cross or hybridize your best fruits.*" Before many years shall have passed my voice will be hushed in that stillness which knows no waking; but while I live I would continue to impress on your minds the importance of the beneficent work of providing these blessings for generations to come; and when I am dead I would by these words still speak to you. Thus will you advance one of the most delightful and important industries of the world; thus will you build up a pomology for the most

favored nation upon which the sun ever shone; thus will you contribute to the welfare of home, kindred and country, and transmit your names to future generations as benefactors of your race—

"Our lips shall tell them to our sons,
And they again to theirs,
That generations yet unborn
May teach them to their heirs."

CATALOGUE.

In this connection I desire to refer to our catalogue of fruits, as the most important achievement of our Society. This was the first attempt in this country to suppress, by common consent, our inferior fruits from cultivation, and to define the adaptation and value of approved varieties to a wide-spread territory. Few can have any idea of the patient investigation which this has received from the committee, from its first preparation by Mr. Barry, in 1860, down to the present time. With the issue of this catalogue commenced a new era in the literature of American Pomology, by which every section of our country and the Provinces of British America were to be acknowledged and recognized in its classification.

At the time of its first publication it was issued in octavo form, but in less than ten years we have been obliged to enlarge it to quarto form, so as to admit additional columns for the new States and Territories coming within our jurisdiction. Instead of the fifty-four varieties of fruit recommended in 1848, this catalogue now contains the names of five hundred and seventy-seven kinds, and with the list of six hundred and twenty-five rejected varieties passed upon by the Society, makes a total of twelve hundred and two on which the Society has set its seal of approval or rejection. An important part of this work, not shown by these figures, is the reduction of our list as compared with former catalogues, by striking out varieties too good to be placed in our rejected list, yet superseded by better sorts. In pears alone, this reduction has been from one hundred and twenty-two to ninety-one kinds. And thus it should ever be our aim to condense our list into as small a number of varieties as possible. When we consider that our catalogue embraces in its columns fifty States and Territories, including the Provinces of British America, with great diversities of soil and climate; that some of the new districts have but little experience in fruit culture: and that from them we have consequently but limited reports, we can readily appreciate the difficulties attendant on this great work.

It was an important step taken by the Society when it placed its mark of condemnation on the long list of unworthy fruits which were then in our collections, thereby saving to cultivators a vast amount of time, trouble and expense in the propagation of useless varieties. But a great and important work, requiring the utmost caution, is still before us, to avoid in the future the insertion in its pages of the names of inferior or insufficiently tested fruits, and to establish a correct nomenclature for all time, so that with every revision of our catalogue it may more nearly approximate to perfection. To aid in this most desirable work, the various State and local committees should keep well organized, and from time to time transmit to the General Chairman of the Fruit Committee all the information which is acquired in their several districts. It was the original object of the catalogue, and must always continue to be its aim, to restrict the worthless or indifferent kinds, to discover and retain the most valuable, and to furnish to all sections the fruits best adapted to their respective localities.

For the purpose of perfecting our catalogue, a meeting of the Committee on Revision was held at Rochester, New York, soon after our last session.

After several days of deliberation, the present form, and the new plan of making three general divisions, and arranging the States in their order of climatic and characteristic association in regard to fruit culture, was adopted. This was a work of much difficulty, but I am happy to learn

that it is regarded with great favor as a most important improvement, and will constitute, it is believed, through the united efforts of our members, ultimately, the acknowledged authority of the country.

DECEASED MEMBERS.

While we rejoice in the presence of so many of our members on this occasion, we are reminded of the absence of some who have been removed by death. Since our last biennial session, two Vice-Presidents and one Ex-Vice-President have deceased.

I allude to Lawrence Young and John S. Downer, of Kentucky, and Dr. J. S. Curtis, of California. Mr. Lawrence Young was an early member of our association, and for a long course of years held the office of Vice-President for the State of Kentucky. He was born on the 6th of December, 1793, in Caroline County, Virginia. He showed an early taste for knowledge, and made himself well acquainted with all branches of learning, especially with the science of Agriculture and Horticulture, and by his interest and example he taught others to appreciate what he so dearly loved. He was not only a scientific, but a practical cultivator of fruits, and for these labors his own and adjoining States often expressed their obligations. For many years he was the Agricultural Editor of the "Louisville Journal." In later years he edited the "Western Ruralist," and for thirty years he compiled a monthly meteorological table for the Smithsonian Institute. Besides being Vice-President of this Association, he held the offices of President of the Jefferson County Horticultural Society, and President of the Kentucky Pomological Society. Energy, perseverance, and a love of nature were prominent traits in his character through life. He died at the ripe old age of seventy-nine years.

Mr. John S. Downer, our Vice-President for Kentucky, who was with us at our last session, has also been removed by death. He was born on the 19th of June, 1809, in Culpeper County, Virginia. His taste for horticulture and pomology dawned with his early years, and while yet a youth he discovered an ardent love for these pursuits which continued through life. In early manhood he established the Forest Nursery, and here, from obscure youth, without fame or fortune, he built up an enviable reputation as a nursery-man and pomologist. He tested under his own inspection many varieties of fruits, and has done much to improve pomology in the Central and Southern States, having produced several varieties of fruits which are now extensively cultivated. He devoted much time and patience to the production of new varieties of strawberry, and the Downer's Prolific, the Charles Downing, and the Kentucky, bear witness to his success. By testing and disseminating other fruits, he has conferred blessings on the pomology, not only of his own region, but on our whole country. He died on the grounds where he first settled, and where, in addition to his many attainments, he has left the name of "an honest man, the noblest work of God."

The seat of Dr. Joshua S. Curtis, of Sacramento, California, is also vacated by death. He was one of the representatives of that State, and was elected Vice-President at our last session. He was a gentleman of noble bearing, and much interested in the progress of science and the elevation of our art. Some of us can remember the interest which he manifested, although for the first time with us, in the welfare of the Society, and the words of counsel and approval which he spoke to us at the festival that closed our meeting at Richmond; and it was his intention to be with us at this session. Dr. Curtis was born in North Carolina, and died in San Joaquin County, California, November 18, 1872, aged sixty-three years. He graduated at Chapel Hill College, and was also a graduate either of Philadelphia or Baltimore Medical College. He went to Tennessee in 1832, where he was extensively engaged in farming and his profession. In 1837 he removed to Holly Springs, Mississippi, owned a cotton plantation, and was the Treasurer of the State. He went to Sacramento, California, in 1850, where he resumed his practice as a physician. A few years afterward he gave up his profession, and was engaged in farming in Yolo County until the

time of his death. He represented that county in the State Legislature. His home was ever open to the poor, and his house was the home of the destitute.

Nor can I close this record of deceased members without allusion to another, formerly connected with us in official relations, who has been called from this to the spirit-land. I allude to the Rev. Jeremiah Knox, of Pittsburg, Penn., who died of apoplexy, November 13, 1872, aged fifty-eight. His father was a minister, which profession he also adopted while at the age of seventeen. He removed to Pittsburg, early in life, and became eminent in his profession. He was social and sympathetic in his instincts, prepossessing in personal appearance, and gifted with oratorical powers. He was an old member, often attended the sessions of this Society, took part in its discussions, and was known throughout our land for his interest in the culture of the grape, the strawberry, and other small fruits. His enterprise in the culture of these was remarkable, and his plantations of the strawberry and the blackberry were very extensive. He gave to the Triomphe de Gand a new and extensive fame, and distributed far and wide the strawberry, No. 700, of his collection, which subsequently proved to be Jucunda, an European variety. He entered largely into the grape excitement, which existed a few years since, propagating immense quantities of vines, especially Concord, Delaware, and Martha. His name as the "Strawberry King," and the proprietor of the Knox fruit farm, will ever be remembered in the annals of American Pomology.

These associates have gone. It has pleased a wise Providence to remove them from the sphere of duty here, but we trust in the hope that we shall one day join them in that better land, where friends shall part no more.

CONCLUSION.

Pardon me, my friends, for the time I have occupied in the performance of a duty required of me by your Constitution.

With the close of this session will terminate the first quarter of a century in the history of our national association. We are now about to enter on the second era of its existence. A great work has already been accomplished, but more remains to be done. We have but just entered on the broad field which lies open to us, and gathered a few of its first fruits. Many of its former members have paid the debt of nature, and we, who are among the founders of our institutions, shall soon be called to follow them. But this Society, we believe, will live on to bless the world, and as time progresses, the results of your labors in the development of our wonderful resources, will be more and more appreciated. And as our nation advances in wealth and refinement, so will the culture of fruits be better understood, and their importance and usefulness be more fully realized. Willing hands and generous hearts will labor for the same cause, and generation after generation will enjoy the fruits which your hands have planted for them. Persevere, then, my friends, with the noble work in which you are employed. Go on, until our ultimate object is attained, in perfecting one of the most useful and beautiful sciences of the world.

We have traced the progress of American Pomology from a period within fifty years. But who shall predict its development for the half century to come? Judging from the past, we may anticipate that ere that day shall dawn, our whole continent will be opened up for use, and the cultivation of fruits become scarcely secondary to any other branch of rural art. Look at the progress of the past, and estimate, if you can, the increase of the future, when the population of our country shall exceed one hundred millions of souls, as many now living may expect to witness; when our fruits shall be adapted to every section of our land, and become not merely a condiment, but a necessary portion of our food.

Standing, as we do, on the line which divides the past from the present, let us remember with gratitude the labors of those who laid the foundations of this institution; let us remember those who have so assiduously co-operated with us for the advancement of its objects, and let us transmit to posterity the priceless blessings our calling is destined to confer. And as our members,

from time to time, shall assemble to gather up the fruit of their research, may they have reason to rejoice more and more in the benefactions which it bestows on mankind; and when at last we shall be called to relinquish the cultivation of our orchards, gardens and vineyards on earth, may we be permitted to participate in the cultivation of

> "That tree which bears immortal fruit,
> Without a canker at the root;
> Its healing leaves to us be given,
> Its bloom on earth, its fruit in heaven!"

(Prolonged applause.)

Upon motion of Dr. Sylvester, of New York, the thanks of the Society were presented to Col. Wilder for his eloquent and valuable address, and a copy requested for publication in the Transactions.

Mr. P. T. Quinn, of New Jersey, then read the report of the Committee on Nomination of Officers, the list being the same as published on previous page of the proceedings.

The report was, on motion of Dr. Sylvester, of New York, accepted, and on motion of Mr. Moody, of New York, it was voted that the ballot be cast by some person to be designated by the President. The Chair appointed Dr. Howsley, of Kansas, to cast the ballot, and the officers nominated were declared elected.

In the absence of Mr. Flagg, the Secretary elect, Mr. H. T. Williams, of New York, editor of the "Horticulturist," was appointed Secretary *pro tem.*

On motion of Mr. Schaffer, of Pennsylvania, seconded by Mr. Barry, of New York, the thanks of the Society were tendered to Mr. Elliott, the retiring Secretary, for his long and faithful services.

Mr. Elliott returned his thanks for the vote, and expressed the hope that the Society would continue to prosper, and be doubly valuable during the next quarter of a century.

REPORTS OF COMMITTEES.

Report of Committee on Credentials.

Mr. Bush, of Missouri, on behalf of the Committee, reported the lists of Delegates appointed by the various States, Territories, and Provinces, embracing in all the names of 313 persons.

The following comprises the list of the delegates, members, etc., present, as complete as it is possible to be made:

Alabama—*Agricultural College.*—Rev. J. T. Tichenor, President.

California—*Southern District Agricultural Society.*—S. C. Perkins. *State Agricultural Society.*—G. S. Simmons, Joseph Crackbon.

Connecticut—*State Board of Agriculture.*—T. S. Gold, Secretary; D. W. Coit, W. H. Bond, Sam'l F. West, E. G. Miles, Prof. Noah Cressey, Dr. Jno. J. Howe, F. Trowbridge, Chas. Dickerman, W. H. Risley, S. H. Huntington, C. T. Webster, W. H. Yoemans, W. Howe, T. B. Wakeman, D. W. Clark, A. L. Loveland, and J. H. Dickerman. *Hartford Horticultural Society.*—Dan'l S. Dewey, President; Wm. W. Turner, Ex-President; P. D. Stillman, Jas. Winship, E. W. Ball, W. C. Harding, B. S. Kellam, R. Quigsley, John S. Yoemans, J. H. Ranney, R. D. Hawley.

Delaware—*Central Fruit Growers' Association.*—Dr. J. S. Prettyman, Stephen Wood, Jr., and S. Todd Jenkins. *Farmers' and Mechanics' Club.*—A. H. Butler.—David S. Myer.

District of Columbia—*Department of Agriculture.*—J. B. Russell, Librarian; Dr. Thomas Taylor, *Microscopist*, and Wm. H. Seaman, *Patent Office.*—Jas. S. Grinnell. *Potomac Fruit Growers' Association.*—John Saul, Dr. E. P. Howland, N. W. Pierson, H. P. Troth, Jno. A. Willis.

Georgia—*State Board of Agriculture.*—P. J. Berckmans, President; Hon. Wm. Sebley, Rev. J. T. Tichenor. *State Horticultural Society.*—J. J. Toon, S. J. Toon, Sam'l Hape, Arthur C. Ford.

Illinois—*State Horticultural Society.*—Arthur Bryant, Sen., Parker Earle, H. K. Vickroy, Mrs. Geo. Graff, J. R. Gaston.

Indiana—*Indiana Horticultural Society.*—J. A. Mendenhall and E. V. Teas.

Iowa—*Polk County Agricultural and Horticultural Society.*—Mark Miller. *State Horticultural Society.*—G. B. Bracket and D. W. Adams.

Kansas—*State Horticultural Society.*—Dr. Wm. M. Howsley, President; Dr. J. Stayman, Hon. F. Wellhouse and Prof. E. Gale.

Louisiana—*Fruit Growers' Association.*—Dr. H. A. Swasey, D. Redmond, Col. M. B. Hillyard.

Maine—*State Pomological Society.*—Z. A. Gilbert, President; A. L. Simpson, Vice-President; Geo. B. Sawyer, Secretary; Henry Ingalls, W. P. Atherton, Calvin Spaulding, H. C. Atherton. *State Board of Agriculture.*—S. L. Boardman, Secretary. *Portland Horticultural Society.*—Eliphalet Clark, Sam'l Rolfe, V. H. Sprague, J. S. Wheelwright. *Bangor Horticultural Society.*—Henry McLaughlin, A. L. Simpson.

Maryland—Wm. D. Breckenridge, Geo. Balderson.

Massachusetts—*Massachusetts Horticultural Society.*—Wm. C. Strong, President; and the members generally. *State Society for Promoting Agriculture.*—Hon. Leverett Saltonstall, Vice President; Henry Saltonstall, Hon. A. A. Lawrence, Theodore Lyman, C. S. Sargent, Col. H. S. Russell, E. F. Bowditch, B. S. Rotch, Wm. Robeson, E. N. Perkins, and John G. Cushing. *State Board of Agriculture.*—Chas. L. Flint, Secretary; Hon. Albert Fearing, Wm. Knowlton, Eliphalet Stone, Avery P. Slade and O. B. Hadwen. *State Agricultural College.*—His Excellency William B. Washburn, Wm. S. Clark, President; Dr. Nathan Durfee, Hon. Chas. G. Davis, Hon. Henry Colt and Jno. Cummings. *Worcester Horticultural Society.*—Geo. E. Francis, President; Edward W. Lincoln, Secretary; Stephen Salisbury, O. B. Hadwen, D. W. Lincoln, Jos. C. Lovell, Jno. C. Newton, Edward Earle, Henry H. Chamberlin, Wm. T. Merrifield, G. Cruickshanks, Wm. W. Cook, Wm. H. Earle, Jas. Draper, Sam'l Flagg and F. I. Kinney. *Essex Agricultural Society.*—Gen. Wm. Sutton, President; Hon. Allen W. Dodge, Hon. D. H. Stickney, Dr. Geo. B. Loring, Jno. L. Shorey, G. W. Gage, B. P. Ware, Jno. M. Ives, T. C. Thurlow, Jno. Keeley,

Josiah Newhall and E. T. Curtis. *Essex Institute.*—Dr. Henry Wheatland, President; Frank Putnam, Vice-President; G. D. Phippen and Jno. Robinson. *Hingham Agricultural and Horticultural Society.*—Hon. Amos Bates, Vice-President; Alfred Lovett, Vice-President; Fearing Burr, Secretary; Tho. T. Bouve, Eliel Bates, Loring H. Cushing, Edw. Hersey, Jas. L. Hunt, P. Hersey, Thorp Kilby, Jas. S. Lewis, E. Shute, Joshua Tower, I. D. Long. *Middlesex Agricultural Society.*—John Cummings, President; John B. Moore, Richard Barrett, Geo. Heywood, H. L. Shattuck, Jas. B. Munroe, James Eustis.

Michigan—William Adair, Geo. Miller.

Minnesota—*State Horticultural Society.*—Wyman Elliot.

Missouri—*State Horticultural Society.*—Isidor Bush.

Nebraska—*State Agricultural Society.*—His Excellency Robert H. Furnas, President; J. Sterling Morton.—*State Horticultural Society.*—J. H. Masters, President; J. T. Allan, J. H. Rohwer, Adna H. Brown.

New York—*Western New York Horticultural Society.*—P. Barry, President; Jno. J. Thomas, Dr. E. Ware Sylvester, Geo. Ellwanger, Hon. Elisha Moody, T. C. Maxwell, H. E. Hooker, T. B. Yale, C. L. Hoag, Thos. Smith, P. C. Reynolds, Dr. H. Farley, W. C. Barry, Jas. A. Root, H. B. Ellwanger, E. A. Powell. *Queens County Agricultural Society.*—Hon. John A. King. *Newburgh Bay Horticultural Society.*—Charles Downing, Chas. St. J. Vail, Thos. S. Force, Alfred Bridgeman, E. H. Clark, D. Smith, J. C. Chapman, Jno. Baldwin, J. H. Ricketts, H. Cornell, Chas. H. Cornell, W. Cornell, Jas. Haggerty, Rev. E. P. Roe, Francis Scott, A. Weed, Daniel Gindra, C. Gilbert Fowler, George Woolsey. *Rural Club New York.*—Sam'l B. Parsons, President; Dr. F. M. Hexamer, B. K. Bliss, H. T. Williams, P. T. Quinn.—Thomas Hogg, W. S. Carpenter, Chas. Butler, H. H. Farley, Wm. Howe, Wm. Lawton, J. Van Gelder, Jas. A. Root, E. A. Powell, G. W. D. Churchill, C. W. Churchill, W. D. Cowles, J. V. Whelan, J. W. Smith.

New Hampshire—Ex-Gov. Frederick Smyth. *State Board of Agriculture.*—Moses Humphries, President; Jas. O. Adams, Secretary; B. F. Hutchinson. *Hillsborough Agricultural Society.*—Jno. Snow, C. C. Shaw, Wm. B. Towne, Abel Chase, C. S. Averill, Gardner Blanchard. *Concord Horticultural Society.*—Charles S. Eastman, Austin T. Sanger, F. S. Crawford, Calvin Eaton, Albert Leavens.—A. Dwight Abbott, Wm. Stevens, D. G. Burnham, Col. D. W. King, Geo. H. Keys, Gen. Israel Hunt, John Copp, P. B. Cogswell, C. S. Averill.

New Jersey—*State Agricultural Society.*—P. T. Quinn, Secretary; Jno. Crane, E. Williams, J. R. Shotwell, A. S. Fuller, Prof. George Thurber. *Monmouth County Agricultural Society.*—Jno. T. Lovett, A. Hance, Benj. B. Hance. *Cumberland County Farmers' Club.*—Franklin Dare. *Bricksburgh Farmers' Club.*—J. S. Calkins. *Farmers' Conference Club of West Jersey.*—J. S. Collins, Chas. S. Taylor, Dr. Geo. C. Brown. *Pioneer Grange.*—Mortimer Whitehead. —Edwin Allen, E. T. Field, H. Field, J. A. Hendrickson, J. S. Eastmond, S. P. Chapin.

North Carolina—Edward Kidder, F. Kidder.

Nova Scotia—*Fruit Growers' Association.*—Dr. C. C. Hamilton, President; R. W. Starr.

Ohio—*State Board of Agriculture.*—M. B. Bateham, Secretary; Geo. W. Campbell, F. R. Elliott.

Ontario (Canada)—*Fruit Growers' Association.*—Rev. Robert Burnet, President; W. Saunders, Vice-President; D. W. Beadle, Secretary; A. B. Bennett.

Pennsylvania—*Pennsylvania Horticultural Society.*—Wm. L. Schaffer, President; Robert Buist, Vice-President; A. W. Harrison, Secretary; Thos. Meehan, Corresponding Secretary; Wm. Hacker, Josiah Hoopes, Chas. H. Miller, Sam'l W. Noble, T. T. Mather, Robert Scott, Christopher Wetherill. *State Agricultural Society.*—Wm. S. Bissell. *Fruit Growers' Society.*—Abner Hoopes, Chas. E. Heister.

Quebec—Charles Gibb.

Rhode Island—*Society for the Encouragement of Domestic Industry.*—Ex-Gov. J. Y. Smith, Hon. Edw. D. Pearce, Hon. J. H. Bourn, Capt. C. B. Manchester, Silas Moore. *Rhode Island Horticultural Society.* —Robert Cushman, B. W. Ham. *Woonsocket Agricultural Society.*—J. P. Childs, Arnold Wakefield, G. A. Wilbur, H. S. Mansfield, Amos Sherman, R. Gillson.

South Carolina—B. F. Wickersham.

Tennessee—*West Tennessee Fruit Growers' Association.*—B. F. Transou.

Vermont—J. G. Elder, Z. E. Jameson, Dr. T. H. Hoskins, Editor Vermont Farmer, H. L. Hurlbut.

Virginia—*Norfolk Horticultural and Pomological Society.*—G. F. B. Leighton, President; Geo. B. Wilson. *Virginia Horticultural and Pomological Society.* W. H. Haxall, Franklin Davis. *Amherst County Horticultural Society.*—Sam'l Patterson, Edw. Daniels, Editor State Journal, W. W. Pierson.

Treasurer's Report.

CAMBRIDGE, September 10th, 1873.

To the President and Members of the American Pomological Society:

GENTLEMEN,—I submit a statement of the receipts and disbursements of the funds of the Association, as the Treasurer, for the term 1871–1873, viz.:

STATEMENT.

Receipts.

1871.		
Sept. 7.	To balance on hand per report,	$124 16
	To cash received for premiums offered by the Society, viz.:	
	Virginia State Agricultural Society, for best collection of fruit,	100 00
	Ellwanger & Barry, Rochester, N. Y., for best collection of apples,	50 00
	Marshall P. Wilder, Boston, for best collection of pears,	50 00
	Chas. Downing, Newburgh, N. Y., for best collection of American grapes,	50 00
	Thomas P. James, Philadelphia, Pa., for best collection of peaches,	30 00
	Gen. R. S. Page, Norfolk, Va, for best Flowers grape,	10 00
	G. F. B. Leighton, Norfolk, Va., at the disposal of the Society,	20 00
	C. D. Barbot, Norfolk, Va., for best Scuppernong wine,	20 00
	L. Berkeley, Norfolk, Va., for best Flowers grape wine,	10 00
	W. H. C. Lovett, Norfolk, Va., for best dried figs,	10 00
	Hon. Jno. B. Whitehead, Norfolk, Va., for best Scuppernong grapes,	20 00
	W. S. Butt, Norfolk, Va., for best figs, and at disposal of the Society,	10 00
	H. M. Smith, Richmond, Va., for best cider apples,	10 00
	Downard Anderson & Co., Richmond, Va., for best Norton grapes,	10 00
	Chas. T. Worthen & Co., Richmond, Va., for best Delaware grapes,	10 00
	S. Zetelle, Richmond, Va., for best twelve peaches,	5 00
	Southern Fertilizer Co., at the disposal of the Society,	20 00
	Rudolph & English, Richmond, Va., at the disposal of the Society,	5 00
	Smith, Clark & Powell, Syracuse, N. Y., for best ten pears,	10 00
	J. S. Downer & Son, Fairview, Ky., for best Kentucky apples,	25 00
1873.		
Sept. 10.	To cash received of thirty-two life members, $10.00 each,	320 00
	To cash received of fifteen life members, $20 each,	300 00
	To cash received of nineteen biennial members, $2 each,	38 00
	To cash received of fifty-six biennial members, $4 each,	224 00
	To cash received of a member, extra,	1 00
		$1,482 16

Disbursements.

1871.		
Sept. 8.	By cash paid to successful competitors for premiums, viz.:	
	Kansas State Agriculture, for best collection of fruit,	$20 00
	John Hopkins, Wilmington, N. C., for best Scuppernong grapes,	20 00
	Mrs. C. H. Rowland, for best figs,	5 00
	J. W. Porter, Charlotteville, Va., for best Norton grapes,	10 00
	Michigan State Pomological Society, for best Delaware grapes,	10 00
	Dollins & Bro., Albemarle Co., Va., for collection of apples,	10 00
1873.		
Aug. 26.	By cash paid Henry Mitchell for sinking the medal die,	250 00
	By cash paid for striking 5 silver medals and 5 bronze medals,	37 00
	By cash paid for 5 medal cases,	3 50
1871.		
Sept. 9.	By cash paid F. R. Elliott, balance of salary as Secretary, term 1869–71,	50 00
	By cash refunded F. R. Elliott, for circulars and postage stamps,	11 00
Dec. 14.	By cash paid F. R. Elliott on acct. of salary, by order of President,	100 00
	By cash paid for printing and paper of circulars to members,	4 50
	By cash paid freight from Philadelphia and from Cleveland to Cambridge,	25 70
	By cash paid Fairbanks, Benedict & Co., for paper, printing, etc., etc., of the proceedings of the 13th session of the Society, 600 copies,	575 00
1873.		
Sept. 10.	By cash paid for postage on proceedings, on circulars and on letters,	42 04
	By cash paid for labor and paper for enveloping, and paper for corresponding,	8 85
	By cash paid for printing and paper of return passes on railroads,	5 50
	By balance on hand,	294 07
		$1,482 16

Respectfully submitted,

THOS. P. JAMES, *Treasurer.*

ACKNOWLEDGMENT OF DONATIONS.—The following competitors have generously relinquished to the Society the premiums awarded to them, viz.:

The Nebraska State Horticultural Society, for best collection of fruit,	$100 00
The Iowa State Horticultural Society, for best collection of apples,	50 00
Ellwanger & Barry, Rochester, N. Y., for best collection of pears,	50 00
George Hooper, Wilmington, N. C., for best Scuppernong wine,	20 00
Dr. A. P. Wylie, Chester, S. C., for best hybrid grapes,	5 00
R. W. Furnas, Nebraska, for seedling grapes,	5 00
California State Horticultural Society, for a collection of fruits,	10 00
	$240 00

Report of Committee on Revision of the Catalogue.

Mr. Barry, of New York, next read the report of the Committee on Revision of the Catalogue.

The Committee on the Revision of the Society's Catalogue of Fruits respectfully report that, shortly after the adjournment of the last biennial session, held in Richmond, Virginia, in 1871, a circular was issued calling a meeting of the committee at Rochester, New York.

The meeting was accordingly held on the 21st of November, 1871, all the members being present except P. J. Berckmans, of Georgia, and Geo. Hussman, of Missouri.

Mr. Berckmans communicated his views very fully in writing.

After a careful examination and comparison of the various plans submitted, it was finally agreed to adopt the one which has been incorporated with the last volume of transactions. The difference between this and former editions consists in the following:

1st. The former editions represented only twenty-four (24) States and the Canadas; the new one forty-seven (47) States and Territories, besides Ontario, Nova Scotia and New Brunswick.

2d. In the old editions the States and Districts were placed over the columns in alphabetical order. In the new they are grouped into three divisions—Northern, Central and Southern. This brings together the States and Territories most alike in climate and productions.

3d. The descriptive columns are increased in the new edition, as, for instance, in apples and pears there are seven columns, instead of two in the old.

To give sufficient space for fifty columns for States and seven for description—57 columns in all—besides the names of the fruits and corresponding numbers, with a margin for remarks, a very wide page was necessary, and hence the adoption of the present form and size. The original design was to make up the catalogue in two parts or divisions, as stated in the first edition. In that case we could have adhered to the former size, but the majority of the committee preferred the present plan.

The chief defect in the form of the present catalogue is in the closeness of the columns; this can be obviated by dispensing with the marginal remarks, and perhaps some of the descriptive columns. The intention was to have the columns wide enough for convenient reference.

The lists of varieties were all carefully revised. Some varieties, having but one or two local recommendations, were stricken out, and others of established merit added. In some of the fruits, the varieties in the new are more numerous than in the old, and in the others less; for instance, apples are increased from 175 to 188 varieties; pears decreased from 117 to 91; apricots, peaches, plums and foreign grapes are slightly increased; all the others decrease, showing that the general tendency is to diminish numbers.

In the old edition of the catalogue there were but two indications of merit—the single and double star; a third is now added—the dagger—to indicate new varieties of great promise.

In the early years of the Society an attempt was made to construct a catalogue of fruits for *general* cultivation, but the differences of climate and other circumstances affecting fruit culture soon made it apparent that this work was impracticable. Two adjoining States could not agree upon the same list. Hence the adoption of the present plan.

To prepare a catalogue of fruits that will indicate with tolerable accuracy the most valuable and popular fruits of all the fruit-growing districts of our vast country, with its diversified climate, soil and other circumstances, is a work of considerable magnitude and importance. This Society has been the first to attempt such a work—a beginning has been made; the foundation is laid, and its practicability, we think, has been demonstrated; but time, labor, and the active co-operation of local societies, fruit growers and pomologists in every part of the country will be needed to carry it forward to completion.

MARSHALL P. WILDER, Pres. *ex officio*,
PATRICK BARRY, Rochester, N. Y.,
F. R. ELLIOTT, Cleveland, O.,
CHAS. DOWNING, Newburgh, N. Y.,
W. C. FLAGG, Alton, Ill.,
ROBERT MANNING, Salem, Mass.,
GEORGE HUSSMAN, Bluffton, Mo.,
P. J. BERCKMANS, Augusta, Ga.,

Committee.

NOTE.—The following successful competitors have generously relinquished, for the benefit of the Society, the amount of the premiums awarded to them at the Quarter-Centennial at Boston, 1873:

Nebraska State Horticultural Society, for best collection of apples,	$50 00
Kansas State Horticultural Society, for second best Society collection of apples,	25 00
Connecticut State Board of Agriculture, for second best Society collection of pears,	25 00
Carried forward,	$100 00
Brought forward,	$100 00
Ellwanger & Barry, Rochester, N. Y., for best individual collection of pears,	50 00
George B. Durfee, Fall River, Mass., for best grapes grown under glass,	50 00
Ontario Fruit Growers' Association, viz.:	
Best collection of native grapes,	50 00
Second best collection of peaches,	25 00
Best collection of plums,	50 00
	$325 00

Report of Committee on Medal.

The Committee appointed to procure a design for a medal of the Society and cause a die to be made, made the following report read by Thos. P. James:

At the thirteenth session of the American Pomological Society, held in 1871, it was thought desirable that the premiums of the Society should be given in the form of medals; and whereas some of the funds offered for premiums generously contributed by friends of the Society had not been awarded, the following resolution was adopted, viz.:

That all such moneys and such other sums as may be acquired by donation be, and they are hereby appropriated for the purpose of procuring a *die* for a medal of the Society. Whereupon the undersigned were appointed a committee to procure such a die.

Your committee have the honor to report that the wishes of the Society have been carried out, and a die bearing the likeness of our President has been prepared, which they confidently hope will receive the approval of the Society; and your committee beg that, in honor of the worthy President of our Society, who has devoted more than one-third of his lifetime to its interests, the medal shall be known as, and styled, "*The Wilder Medal.*"

Respectfully submitted,

JOHN WHITEHEAD.
P. J. BERCKMANS.
THOS. P. JAMES.

The report was accepted, and the recommendation adopted with hearty satisfaction.

President Wilder. — *My Friends,* — Language is utterly inadequate to express my gratitude for this token of regard by the Society. And when I recollect that this impress will soon be laid aside, not to be recognized again, I confess that this dedication is grateful to me. I accept it with pleasure, and thank you for your vote. [Applause.]

The next place for holding the regular meeting of the Society came up for discussion.

Mr. Schaffer suggested a suspension of the usual Biennial Meeting of 1875, and that one be held in connection with the Centennial Exposition at Philadelphia in 1876, but the feeling being generally expressed that this would be too long a period between sessions, Mr. Schaffer's motion was withdrawn.

Dr. Howsley moved that the next meeting be held at Chicago. Your finest fruit on exhibition to-day has come from the West. Now come West to our Hub of Fruits.

Parker Earle said,—Dr. Howsley has relieved the Illinois delegates from the necessity of a special invitation. Her delegates were not specially authorized to invite the Society formally to that city. Chicago is the Metropolis of Illinois, and also the West, and all the Western States will feel we are complimenting them, if we meet at Chicago, and, I assure you, you will be warmly received.

After considerable further discussion by the members, the question of holding the next meeting at Chicago was proposed, and unanimously adopted.

Mr. Schaffer proposed that there be held a special and extra session of the Society three years from now in 1876, in Philadelphia, at the Centennial Exhibition.

Mr. Quinn would add to this the amendment, that in case of obstacles of By-Laws of the Society, the executive committee be authorized to carry out the wishes of the Society in this respect.

Motions carried, and Society adjourned for the day, most of the members visiting Music Hall, and enjoying the rare and tasteful collections of flowers and ornamental plants.

THURSDAY — MORNING SESSION.

At an early hour in the morning a majority of the delegates of the Society took their departure in four open cars of the Highland Horse Rail Road, for the residence of Wm. Gray, Jr. After a cordial welcome and the partaking of breakfast in his elegant mansion, the guests were shown over the extensive and beautifully planted grounds, and enjoyed, for several hours, a ramble over the smooth lawn, among the pleasantly shaded walks, and beheld not only rare plants, but peculiarly ornamental combinations in sub-tropical gardening. Returning from their visit highly delighted, the assembly met in Wesleyan Hall at 10 o'clock, and was opened for business by the introduction of the following resolution from Mr. Schaffer:

Resolved, That the thanks of the American Pomological Society be tendered to Wm. Gray, Jr., for his elegant hospitality extended to its members, as well as for his kind offices in showing us over his beautiful place.

The Secretary then read an invitation from the New Jersey State Agricultural Society to the members to visit their exhibition, which would be held there next week.

The President then nominated the General Fruit Committees, for the various States. [See list of officers.]

President Wilder then announced that he had received a request from the northern part of Vermont, that a Committee on Crab Apples should be appointed. Thousands of trees are producing very abundantly in that section, and it is a topic of great interest. The chair therefore assigns the subject to the Committee on Apples, who will take the supervision of it.

Reports of Committees.

J. J. Thomas, chairman, presented the following report from the Committee on

"REJECTED FRUITS AND SYNONYMS."

The Committee on Synonyms and on Rejected Fruits, in presenting a partial report, ask leave to offer a few considerations which seem appropriate in the present state of Pomological knowledge, as a reason for varying somewhat from the course which, from their appointment, might be expected from them.

During the early period of fruit culture in the country, a long list of varieties was regarded as a special merit in any collection, and the nursery-man who could present the largest catalogue stood at the head of his profession. This led to the cultivation of many sorts of little value, and it became an object of importance to separate the valuable from the worthless. Lists of rejected fruits, as well as of those worthy of general and particular cultivation, were then required as guides for the novice. A great change has taken place of later years, and collections of fruits for profit, as well as for home use, have been reduced to a few select sorts, the amateur and pomologist only desiring a wider range. The nursery-man no longer desires to present a formidable array of names, but those only of fruits of real value. The lists which are now wanted, are of such sorts as the cultivators may plant for use. Rejected lists are no longer inquired for. In a recent letter from Charles Downing, in answer to inquiries on this subject, he remarks: "It is difficult to determine what fruits should be included in such lists, because what is poor in one place is good in another. In fact, it is hard to name an apple that some one would not like. Some years since, the American Pomological Society rejected the Alexander; now many say it is the most profitable apple of the season. Also, Dodge's Early Red, which is Sops-of-Wine, and which you know is quite popular. The Blenheim Pippin was rejected, which is esteemed by several growers who know what good apples are, besides some other rejected sorts named in the list." Robert Manning writes on this subject, "that the fact that there has been little or no call for a list of Rejected Fruits, since the last elaborate report by Mr. Cabot, shows that none is wanted."

The committee is therefore of the opinion, that really worthless varieties will, from their own want of value, find their proper level and be forgotten, and

that it will not be necessary to make a list or memorandum to help us forget them.

A much more important and larger class of fruits consist of the many hundreds which the Society has neither placed on its list of valuable nor on its rejected list, and the public may wish to know what we have to say about them, but this matter does not belong to the present committee.

The other department of the committee's labor, namely, the determination of correct Synonyms, appears to be a subject of much importance. The discussion at our meetings will doubtless bring out many, from time to time, and it will be useful for committees to collect the facts brought to light and present them in condensed form. As a contribution of this character, the committee has been favored with the following list from Charles Downing, as the result of some of his examinations of local names:

Boston Pippin is a Synonym of Golden Pippin (p. 195, Downing); Belle Rose is a Synonym of Primate; Comic June is a Synonym of Kirkbridge White; Copps' Mammoth is a Synonym of Gloria Mundi; Early Baldwin is a Synonym of Primate; English King is a Synonym of Alexander; Highland Pippin is a Synonym of Primate; Lodge's Early is a Synonym of Summer Rose; Montgomery Sweet is a Synonym of Autumn Sweet Bough; Shelborne Sweet is a Synonym of Spice Sweet; Tennessee Early Red is a Synonym of Early Strawberry; Whitewater Sweet is a Synonym of Wells Sweet; Yellow May Pippin is a Synonym of White Juneating; the celebrated Southern Hoover is Black Coal.

In relation to the Synonyms of Pears, Charles Downing adds: "A few days since, on examining some fruits, the grafts of which came from M. Mas, of France, I find the Nana pear is our Manning's Elizabeth, which was one of Van Mon's unnamed seedlings sent, I think, to Mr. Manning. There are many new Synonyms of pears, and many old ones that are incorrect, and the different authors disagree about them. There is so much confusion that I am not prepared to say which is correct, but am trying to unravel the matter."

On behalf of the Committee,

J. J. THOMAS, *Chairman.*

REPORT OF GENERAL FRUIT COMMITTEE.

The President then called upon Mr. Barry, Chairman of the General Fruit Committee, for a report.

Mr. Barry.—In behalf of the committee, I would state that, early in the spring, I sent a circular to the chairmen of the different State committees, requesting them to take steps at an early day to procure reports from their States. In response to that circular, I have received reports from twenty or more States. These reports I have not been able to prepare for publication; they are just as received from the chairmen of the various State committees. Some of these reports are remarkably interesting and instructive, and some of them contain a great deal of matter which will have to be expunged before they are printed; for instance, unnecessary descriptions of old fruits. I move that they be referred to the proper committee, to be prepared for publication. [Agreed to.]

Discussion of Fruits.

The President suggested that the Society proceed to the next point in order of business, viz., the Discussion of the Fruits. The assent of three persons from each State would be necessary to agree to any change in published lists.

Mr. HEXAMER, of New York.—It seems to me that a great deal of useful time is lost in this "starring" business, for many States and Territories have but one delegate, and some none at all. It seems to me it would be much more practically done, if the chairman of each State committee would send out these blanks to the prominent fruit growers of his State, and let them consider this list, and return it, and then he could make out his catalogue.

Mr. BARRY, of New York.—I think the gentleman is perfectly right, and the practice of starring these varieties that he recommends is the very one that has been followed, with the exception of a very few recommendations made at one or two of the last meetings. These State reports are expected to give all the information necessary in regard to the value of these varieties. These reports show which varieties should be starred, single, double, or whatever it may be.

Mr. BRYANT, of Illinois.—In our State, we have three distinct districts—the northern, southern and central. Fruits which do very well in the northern and central parts of the State do not succeed in the southern part, and *vice versa.* We must, therefore, have three representatives here, one from each of these districts, to make the information obtained of any value, and these we have not got.

The PRESIDENT.—The reports of the State committees are our main reliance, and upon them we must ever depend.

Subject of Awarding Premiums.

The question of the policy of awarding premiums by the Society, was introduced by the President in the following words: "Let me say here that, formerly,

we awarded no premiums. We brought our fruits for examination without competition; but at Philadelphia large premiums were awarded by the Philadelphia Society to exhibitors, and so at Richmond; and I confess that I felt a little sensitive about having Boston take the initiative in backing out. But we have extended our invitation, and you have come up here in large numbers. I solicited the $1100 which is offered for premiums and medals, not that I wished to have it understood as an expression of my opinion in favor of premiums, but that Boston might do as well as other cities have done; and here I leave the subject. But I think it should be settled, now and forever, what the policy of this Society shall be in relation to the award of premiums."

Dr. Howsley, of Kansas.—I offer the following motion:

Resolved, That the American Pomological Society shall never offer or award premiums for anything brought before it.

This motion was seconded by several delegates.

Mr. Barry, of New York.—I am in favor of the adoption of that resolution. I think that is the true policy for this Society to pursue, and I believe it has pursued it so far. I think this Society has never yet offered a premium for fruits. The first premiums that were offered in any way, directly or indirectly, at these exhibitions, were offered at Philadelphia. The Society had no control over that matter. The Pennsylvania Horticultural Society offered those prizes in connection with our meeting. We could not prevent it. It was an act of courtesy and liberality on the part of that Society, and that people, and all we could do was to accept it with thanks. When we went to Richmond, the Richmond Horticultural Society did the same thing. We could not prevent that. When we voted to come to Boston, some of the wealthy gentlemen of Boston, in the same spirit that had been manifested at Philadelphia and at Richmond, raised a fund for premiums. We could not say to them that they should not do it. It was an act of courtesy and liberality on their part over which we had no control. All we can do is to thank them for bringing here this magnificent exhibition of fruits, without any cost to us. But the true policy for us is just the policy which we have pursued up to this time, not to offer premiums. Our Society is in a great measure a scientific society. We come here out of pure love of the science, not to compete with one another for premiums. We leave that to other societies.

While I am up I will say a word in reference to the medal that was ordered at Richmond. That medal, sir, I hold should be awarded to meritorious persons—to the discoverers of new and valuable fruits, or new methods of cultivation of fruit trees, or for the prevention of disease or insects, or something of that kind; it should not be offered for fruits, except new fruits.

Dr. Howsley, of Kansas.—Allow me, in support of the motion I have made, to state that the object of this Society has been, from its organization, the development of fruit culture, the comparison of fruits grown in different parts of this nation, brought together for the purpose of showing the influence of climate, soil and cultivation upon the same variety in different portions of the country, to settle doubtful questions in regard to them, and to cultivate a cordial feeling of brotherly love one toward another. Our fruits are here to show for themselves, but we deprecate the feeling that would be engendered by the competition for prizes. I hope, therefore, it will be stopped just here, and go no further. (Loud applause.)

The President.—The prizes now offered must be awarded.

Mr. Barry, of New York.—That is understood; that the action of the Society is only to take effect after this meeting.

Mr. Harrison, of Pennsylvania.—It seems to me very ungracious to refuse such premiums as are offered by societies and individuals for the purpose of stimulating horticulture in such a way as may be desired. These premiums are offered by the Massachusetts Society for Promoting Agriculture, and by six gentlemen, under the auspices of this Society simply. The object of the resolution offered is to prevent competition in the Society, which I am entirely in favor of; but when societies or private persons are disposed to offer money for the promotion of the interests of Horticulture, it seems to me the Society should be ready to accept it.

The President.—The chair would be very much obliged to Mr. Harrison if he would offer a resolution of thanks to the Massachusetts Society and to those gentlemen who have contributed, which is assuredly deserved.

Mr. Harrison, of Pennsylvania.—I beg to offer my thanks to you, sir, for the suggestion, and I would move that the thanks of the American Pomological Society be tendered to the Massachusetts Society for Promoting Agriculture and to those gentlemen who have so liberally given of their funds for the advancement of our cause.

The resolution was adopted, unanimously.

Dr. Howsley, of Kansas, then modified his resolution, to read as follows:

Resolved, That the American Pomological Society shall at no time offer money premiums for the exhibition of fruit during any of its sessions. It is under-

stood, however, that this action shall not interfere with awarding the Wilder medal to meritorious objects.

Mr. Adams, of Iowa.—This Society has never offered any premiums, but it has awarded premiums of money offered by other persons. I would move to amend the resolution by striking out the word "offer," and inserting "award." I think that would meet the sentiments of gentlemen present.

The question was then put, and the resolution of Dr. Howsley adopted, without dissent.

Starring of Fruits.

The President.—I call upon you to settle the Rules by which we shall proceed with the discussion. How shall we Star the Fruits?

Mr. Barry, of New York.—I think that some of the starring of the catalogue that has been done at our meetings has not been quite judicious, and my impression is that we should follow the plan that we adopted originally, not to star the catalogue at our meetings, but to state the merits of the different varieties, as we understand them—whether they are good, very good, or the best, and I therefore offer this motion:

Resolved, That hereafter the starring of varieties of fruits in the Society's Catalogue shall be fixed by the Fruit Committee, taking the Discussions of Meetings and State Reports, as their guides.

P. T. Quinn.—I second Mr. Barry's motion with gratitude. The resolution will produce great good, and, if adopted, will give us a catalogue that can be relied on, and enable us to make it the greatest Pomological authority of the Continent.

The President.—I desire to say, that the plan proposed by Mr. Barry, the original plan, is the true one. When you bring thirty or more States together, and hear the various reports in relation to a certain point, you get all the information to be received on the spot. Then, when the reports of the various State committees and local associations come in, the Chairman of the General Fruit Committee has all the material that can be obtained. That is the true way. The record is easily kept, and then the committee can prepare a catalogue that may be relied upon. It is simple, it is effective, and I approve of it entirely. I believe you understand it, that hereafter in our discussions there is to be no starring. Gentlemen will express their opinions in relation to various kinds of fruit, a record will be made, and from that, and the information acquired from State and local reports, and whatever other material is accessible, the General Fruit Committee will do the starring themselves.

Discussion on Fruits.

Before proceeding with the discussion, the following resolution was offered and accepted:

Resolved, That no member can occupy the time of the meeting with remarks, unless the standing of each variety is to be altered for better or worse, or some new variety to be added.

DISCUSSION ON APPLES.

Alexander Apple.—W. S. Carpenter, of New York.—I have 20 trees, in various locations, on heavy and light soil. I esteem it as a valuable apple. It brings a high price in the market.

Dr. Hamilton, of Nova Scotia.—It is often picked too early. Let it remain on the tree as long as it will, then pick it. It will keep well, and be a very good apple.

Summer Pearmain.—Carpenter, of New York.—Is worthless with me on light soil.

Foote, of Massachusetts.—Is worthless with me on clay soil.

Hooker, of New York.—Worthless with me in Western New York. Poor grower and very inferior looking.

Dr. Howsley, of Kansas.—One of the best apples we have. We grow it on rich alluvial soil.

Dr. Swasey, of Louisiana.—I see no stars for it in Louisiana or Mississippi. I think it entitled to two.

Beauty of Kent.—Carpenter, of New York.—I esteem it one of the most valuable apples in cultivation, and I have a large orchard.

Ben Davis, New York Pippin.—Dr. Swasey.—I would give it one star in Alabama, Mississippi and Louisiana. It is an apple to be recommended for the South.

Benoni.—Copp, of New Hampshire.—In the Northern part of New Hampshire I consider it one of the most valuable apples that can be cultivated. The tree is hardy, and the fruit of excellent quality.

Mark Miller, of Iowa.—The same remarks will apply also to Central Iowa.

D. W. Adams, of Iowa.—In the Northern part of Iowa the climate is so severe, the tree winter-kills and blights. In Central and Southern Iowa, does very well.

Bohannan.—Dr. Swasey, of Louisiana.—It should receive one star in Alabama, Louisiana and Mississippi. Does very well.

Buckingham.—Dr. Howsley, of Kansas.—It is one of the finest varieties grown on the alluvial soil of

Kansas. A leading variety. The Synonyms for it are numerous. *Fall Queen of Kentucky, Equinetely, Ladies' Favorite, Frankfort Queen, Blackburn,* etc. This apple originated in Buckingham County, Virginia; was taken to North Carolina. When it fruited it was called Buckingham, from the county of its origin in Virginia. From North Carolina it traveled through the South under the name of *Buckingham.*

Dr. SWASEY.—*Fall Queen of Kentucky* is valuable at the South, but not so valuable as the *Bachelor.* The *Buckingham,* as I know it, is not worth a straw.

B. F. TRANSOU, of Tennessee.—The *Buckingham* is one of the best fall apples in Tennessee, also in North Carolina. It is also known there as *Never Fail.*

CARPENTER, of New York.—I have fruited it for several years. Is very promising. Bears heavily every year in Eastern New York.

Carolina Red June.—D. W. ADAMS, of Iowa.—The Iowa State Horticultural Society rejected it from its list at its winter meeting of 1872.

Dr. SWASEY, of Louisiana.—It should have three stars for the South.

MARK MILLER, of Iowa.—Throw away one-half of the crop, and then it will bear better than the average of other varieties.

CARPENTER, of New York.—It seems to be adapted to Eastern New York—a very fine fruit.

P. BARRY, of New York.—Succeeds very well in Western New York.

A. S. FULLER.—Splendid at the West, all through its season.

B. F. TRANSOU, of Tennessee.—One of the most popular apples in Eastern Tennessee.

HAPE, of Georgia.—Succeeds well in Georgia.

J. J. THOMAS, of New York.—In Western New York, on strong soil, it was very fine, but became so scabby that I rejected it.

A. BRYANT, Sr., of Illinois.—It was popular in the Northern half of the State of Illinois for some years; is now very generally rejected.

MENDENHALL, of Indiana.—In many parts of Indiana it is so scabby that it cannot be cultivated.

STAYMAN, of Kansas.—Succeeds well in Kansas.

Chenango Strawberry (*Sherwood's Favorite*).—Dr. HAMILTON, of Nova Scotia.—Very good with us.

MARK MILLER, of Iowa.—Succeeds well in Central Iowa.

Cogswell (*Walbridge, Mahaska*).—ADAMS, of Iowa.—The apple cultivated in Wisconsin under the name of *Walbridge* is entirely distinct from the *Cogswell.* One bears the winter well, while the other (*Cogswell*) winter kills. The *Walbridge* is a longer keeper and a more hardy tree, and the habits of the two trees are decidedly distinct.

Cole's Quince.—STAYMAN, of Kansas.—One of the best in Kansas.

MILLER, of Iowa.—One of the best in Central Iowa.

Cornell's Fancy.—MEEHAN, of Pennsylvania.—It is one of those apples the trees of which bear young and constantly every year.

CARPENTER, of New York.—Very valuable in Eastern New York, bearing every year. First quality.

Danvers' Winter Sweet.—AUGER, of Connecticut.—Does not do well in Connecticut.

Dominie.—Dr. SWASEY.—A perfect failure in the South.

FOOTE, of Massachusetts.—Nearly worthless in Western Massachusetts from overbearing. Fruit is all small.

CARPENTER, of New York.—Worthless with me.

STAYMAN, of Kansas.—Liked very much in Kansas.

MILLER, of Iowa.—A great bearer in Central Iowa. Tree hardy.

Duchess of Oldenburgh.—ADAMS, of Iowa.—One of the very best we have in Northern Iowa; reliable. You could hardly give it too many stars.

MILLER, of Iowa.—The same for Central Iowa.

Dr. SWASEY, of Louisiana.—Succeeds well in the South.

STAYMAN, of Kansas.—One of the best in Kansas.

MOODY.—One of the best in Western New York.

FOOTE, of Massachusetts.—Best apple in its season with which I am acquainted.

Early Harvest.—Dr. SWASEY.—Best early apple in the South.

HAPE, of Georgia.—Does well in Central Georgia.

QUINN, of New Jersey.—Good in New Jersey.

COPP, of New Hampshire.—Utterly worthless in New Hampshire.

STAYMAN, of Kansas.—One of the best we have.

EARLE, of Massachusetts.—One of the best in New England.

MILLER, of Iowa.—Very shy bearer in Central Iowa.

Dr. HOWSLEY, of Kansas.—For profit, it is one of the finest known.

FOOTE, of Massachusetts.—Good for nothing on clay; needs our best and warmest localities, and rich, warm soil.

AUGER, of Connecticut.—Needs rich treatment, high culture, warm soil.

FULLER, of New Jersey.—Ninety-nine out of every one hundred farmers will take *Early Harvest.*

MOODY, of New York.—Not worth cultivating in Western New York.

BRYANT, of Illinois.—Only a moderate bearer in Northern Illinois, but it is an apple we can not afford to do without.

Early Pennock.—MILLER, of Iowa.—Does well in Iowa.

Dr. SWASEY.—One of the nicest in the South.

FOOTE, of Massachusetts.—The *Early Strawberry, Early Harvest, Sweet Bough,* and some other varieties that have originated considerably south of our latitude, fail in Massachusetts, unless under very favorable circumstances.

Esopus Spitzenberg.—CARPENTER, of New York.—Does not do well in Eastern New York.

AUGER, of Connecticut.—Nor in Connecticut.

Dr. HOWSLEY, of Kansas.—Have never succeeded with either tree or fruit in Kansas.

STAYMAN, of Kansas.—Blights very much, in Kansas.

BRYANT.—Worthless in Illinois.

COPP, of New Hampshire.—Old trees grafted, have borne very bountifully. With care, succeed as well as the Baldwin.

Fallawater (*Farnwalder Tulpehocken*).—ADAMS, of Iowa.—I do not know any place where it succeeds. Nearly all the trees in the State were killed last winter. Strike it from the Catalogue.

Dr. HOWSLEY, of Kansas.—On high magnesian limestone regions, it is one of the most beautiful, fairest, largest, and most productive apples we have.

QUINN, of New Jersey.—Does splendidly in New Jersey.

CARPENTER.—Lately introduced into New York, and does splendidly—one of the most promising apples.

MENDENHALL.—Could not do without it in Indiana. It is not an apple of first-rate quality, but it is large and sells well.

AUGER, of Connecticut.—It is popular throughout our State, bearing every year—always large, smooth and handsome, but not of first quality.

Fall Pippin.—CARPENTER, of New York.—Was once a rejected variety, but for three years past has borne very heavily. Is now growing in favor, and becoming one of our popular apples.

ADAMS, of Iowa.—Can not be grown with profit in Iowa. A few raise the trees for family use.

MOODY, of New York.—This year it is exceedingly fine in Western New York—very few apples as good, but we can not depend upon it.

FULLER, of New Jersey.—Twenty-five years ago it was one of our leading fruits.

LOVELAND, of Connecticut.—In Connecticut, in orchards that have been standing fifty years, it bears alternate years—nice, handsome fruit, most delicious in its season.

TURNER, of Connecticut.—Very best in Hartford.

FOOTE, of Massachusetts.—In my section, on clay, it is worthless—on warm soil, good.

J. J. THOMAS, of New York.—Thirty or forty years ago, in Western New York, it was exceedingly fine and large. One specimen which I saw, weighed as high as twenty-three ounces. It has receded in character, and is now exceedingly variable. Those large specimens were grown on decidedly heavy soil.

CARPENTER, of New York.—On heavy clay soil, I have seen it as fine as I ever saw anywhere.

BRYANT, of Illinois.—It is almost always fine, but the tree is uniformly a shy bearer in Illinois.

STAYMAN, of Kansas.—Not popular in Kansas. Tree grows well, tolerably hardy, but not profitable.

STARR, of Nova Scotia.—Not profitable in Nova Scotia. Very apt to spot there on any soil. About once in ten years we get good crops.

AUGER, of Connecticut.—Rather variable in Connecticut. On rich, strong soil, with good management, it is very fine, but if trees are neglected, becomes scabby and worthless.

P. BARRY, of New York.—I think it is unsafe to come to any conclusion about a variety doing well or badly on certain soils. If you discuss that question, you will find the most contradictory evidence. One cultivator will state that a variety has done very poorly on heavy soil, and his neighbor will say that with him it has succeeded remarkably well on heavy soil. Generally speaking, statements about soils are not reliable. If a soil is dry, I think it does not matter much whether it is pretty heavy or pretty light.

Fameuse (*Pomme de Neige, Snow Apple*).—CARPENTER, of New York.—Worthless with me, or nearly so.

STARR, of Nova Scotia.—Requires careful cultivation in Nova Scotia, or it will have black spots upon it.

AUGER, of Connecticut.—Good in Connecticut, generally.

STAYMAN.—Excellent in Kansas.

SAWYER, of Maine.—Very good in Southern and Central Maine.

BRYANT, of Illinois.—One of our best fall apples.

ADAMS, of Iowa.—It is the most profitable apple, if fine, that we have in the northern part of Iowa.

COPP, of New Hampshire.—A very fine apple in New Hampshire.

TURNER, of Connecticut.—Very fine in Central Connecticut.

Golden Russet of Western New York.—ADAMS, of Iowa.—Considerably subject to twig or fire blight, on richest land; otherwise generally reliable in Iowa.

Dr. SWASEY.—Succeeds very well at the South.

FOOTE, of Massachusetts.—It is exceedingly difficult to identify the true *Golden Russet*. I have had specimens from half a dozen locations, in three or four States. Either the same apples differ very much in different localities, so as to make it very difficult to distinguish them, or else there are several sorts that resemble each other.

J. J. THOMAS.—The *Golden Russet* of Western New York, is booked incorrectly by some authors as the *English Golden Russet*. It is distinguished from all others by its peculiar speckled shoots.

CARPENTER, of New York.—Is it distinct from the *Poughkeepsie Russet?*

P. BARRY.—The one called the *Poughkeepsie Russet* is what I know as the *English Russet*. The speckled shoots in the *Golden Russet* distinguish it.

Judge FRENCH, of Massachusetts.—What we know as the *Hunt Russet* in this neighborhood, originated in Concord, Massachusetts, where I reside. It has been known there a great many years, bears abundantly, and is a very fine fruit. Not large size, uniform russet color, oblong, remarkably light, so that you notice, by picking it up, that it is different from other apples. I never saw it grow well in any other place except in the neighborhood of Concord. Years ago, when I lived in Exeter, New Hampshire, I carried some of the trees there, and grafted other trees with it, but I could not raise either the tree or the apple, where most other varieties flourished. I think the *Hunt* apple is not the apple that has been described.

AUGER, of Connecticut.—The *American Golden Russet* is much esteemed in some parts of Connecticut.

P. BARRY.—That is not the apple under discussion.

Golden Russet of Massachusetts.—Dr. SWASEY, of Louisiana.—We have three *Russets* with us, the *Golden Russet* of Western New York, described by Barry, the *Hunt* or *Massachusetts Russet*, described by Mr. French, and the *Poughkeepsie* or *English Russet*. They all succeed with us, but none so well as the *Golden Russet* of Western New York. There has been a *Golden Russet* cultivated in the West considerably, called the *New England Golden Russet*, to distinguish it from the *English Golden Russet*.

BRYANT.—The *New England Russet* can be distinguished from the *English Russet* by a splash of dull red on one side. Is grown very much with us in Illinois. It has a very distinct flavor, and the trees are likewise quite distinct.

Golden Sweet.—Dr. HOWSLEY, of Kansas.—I obtained this apple in 1837, from McKendrick of Nonantum Hill, near here, under the name of the *Sawyer Sweet*. I also obtained an apple under the name of *Orange Sweet*. I have trees of both varieties growing side by side, and they are fruiting now. They are distinct in tree and fruit, as distinct as apples can be, except that they are both sweet, yet the books put them the same. I have had the trees growing side by side for the last thirty-five years, and they are entirely distinct except in color. They are of different shape and ripen four weeks apart. The *Orange Sweet* has dark to grayish brown shoots, with a heavy growth, while the *Golden Sweet* has much lighter shoots, but makes a fine spreading top tree. The *Golden Sweet* is round, with a moderately long stem, while the *Orange Sweet* has a heavy, thick stem. The *Orange Sweet* ripens, in Kansas, from the last week in August to the first week in September, while the *Golden Sweet* ripens the last week in July or the first week in August. They are both fine apples, and I wish the matter to be corrected, because I got them here, and here is where the difficulty can be unraveled.

FOOTE, of Massachusetts.—Is the *Orange Sweet* earlier or later than *Sawyer Sweet?*

Dr. HOWSLEY.—The *Orange Sweet* is earlier than *Sawyer Sweet*.

FOOTE.—They are very distinct fruits. The *Orange Sweet* is often known here as the *Sweet Belle et Bonne*. It is a larger apple than the *Golden Sweet*, colored as you describe, several weeks later, and a coarser apple in flesh than the true *Golden Sweet*.

TURNER, of Connecticut.—The *Golden Sweet*, for more than half a century, has been raised in Hartford and vicinity. It is a fruit as well known and generally esteemed as any other apple. We esteem it one of the best early sweet apples. It is large and fine, good flavor, sweet juice, and for baking is unsurpassed.

CARPENTER, of New York.—I have the *Golden Sweet* known in Connecticut, and esteem it a very valuable apple, bearing every other year very heavy crops.

SWASEY, of Louisiana.—I give the *Golden Sweet* my unqualified endorsement as the best sweet apple in the South.

Dr. HOWSLEY, of Kansas.—The *Golden Sweet* is one of the best apples we grow in Kansas. There is no better sweet apple, and none more beautiful. It succeeds admirably there. The other is a fine apple, also

TURNER, of Connecticut.—They are not Synonyms in Connecticut. I never heard of any other name given it but *Golden Sweet*.

REYNOLDS, of Rochester, N. Y.—It is the most difficult apple to sell in Western New York. It commands the lowest price, and some years it is very difficult to sell it at any price.

Gravenstein.—HAMILTON, of Nova Scotia.—How long ago was it introduced?

J. J. THOMAS.—I saw it forty years ago.

COPP, of New Hampshire.—A splendid apple where I live, but an uncertain bearer; not profitable to raise. One tree of the *Maiden's Blush* is worth four *Gravensteins*.

STARK, of Nova Scotia.—If I were setting out an orchard for profit, I do not know any apple tree that would bear as well or be as profitable as the *Gravenstein*. We often get six, seven and eight dollars a barrel for them. They are taken to England and esteemed there as one of the finest apples.

CARPENTER, of New York.—It is perfect in tree and fruit with me.

SHAW, of New Hampshire.—In Northern New Hampshire, one of the best growing and best bearing trees, and certainly one of the best selling apples.

FOOTE, of Massachusetts.—Fine grower in Western Massachusetts, a little liable to canker. Fruit magnificent.

STAYMAN, of Kansas.—Not very profitable in Kansas. Late in coming into bearing, and does not bear very full; subject to blight.

AUGER, of Connecticut.—Very well esteemed in Connecticut.

BRYANT, of Illinois.—Worthless with us.

Grimes' Golden Pippin.—MASTERS, of Nebraska.—Succeeds well in Nebraska.

AUGER, of Connecticut.—I would like to inquire whether it is usually large enough to be salable?

MASTERS.—Rather below medium in Nebraska.

Hawthornden.—ADAMS, of Iowa.—It is not recommended by our State Society. I don't think it could find an advocate in the State.

CARPENTER, of New York.—It is a very poor grower and unprofitable apple.

Holland Pippin.—Dr. SWASEY, of Louisiana.—Succeeds well in the South.

CORNELL, of New York.—Also on the banks of the Hudson.

Dr. HAMILTON, of Nova Scotia.—I have seen very fine specimens in Nova Scotia.

The audience then adjourned till afternoon.

AFTERNOON SESSION.

THE Discussion on Apples was resumed, the next variety being the

Holly.—Mr. CARPENTER, of New York.—One tree is sufficient. Although a very valuable apple, it is a shy bearer.

THOMAS, of New York.—I have been acquainted with it for thirty years. When you get a first-rate specimen of the *Holly*, you can hardly get an apple to surpass it, but that is a very rare thing. The tree is a shy bearer, very poor bearer, and the fruit very often cracks.

Horse.—SWASEY, of Louisiana.—Perfectly successful through the Gulf States.

Jefferis.—CARPENTER, of New York.—Promises to be a very valuable apple. Heavy bearer; very handsome.

BALDERSTON, of Maryland.—It is considered *the* apple where it originated.

Jonathan.—CARPENTER, of New York.—Worthless with us.

CORNELL, of New York.—On the banks of the Hudson, first rate. Good bearer and excellent fruit.

Dr. HOWSLEY, of Kansas.—As far as grown in Kansas, one of the finest apples we have.

Dr. SWASEY.—Good in the South.

King of Tompkins County.—CARPENTER, of New York.—In our section has proved a failure.

BALDERSTON, of Maryland.—Worthless in the South of Maryland.

AUGER, of Connecticut.—I have got fruit almost every year, but it is a shy bearer.

FOOTE, of Massachusetts.—So in Western Massachusetts, apt to water core.

HOOKER, of New York.—Unprofitable in Western New York as a market fruit.

Lawver.—BARRY, of New York.—That is a new

apple, put into the catalogue at Richmond for the first time; promises well. If any gentleman has had any experience with that variety, I would like to hear from him.

Dr. HOWSLEY, of Kansas.—I live within some twenty or thirty miles of where that apple originated, on the banks of the Missouri River. It is a fine, beautiful market apple, promising well.

CARPENTER, of New York.—It is a good grower in Eastern New York. It has not yet come into bearing.

THOMAS, of New York.—Exceedingly beautiful, but not very good.

McLellan.—CARPENTER, of New York.—Very promising with me, bearing every year; fruit smooth and beautiful.

Col. WILDER, of Massachusetts.—Good with me.

Lyscom.—A DELEGATE.—In Essex County, Massachusetts, it has cracked badly within the last few years.

Maiden's Blush.—MILLER, of Iowa.—That is first-rate in Central Iowa.

Dr. HOWSLEY, of Kansas.—On high lands in Kansas, there is no more beautiful or highly flavored apple than that.

Dr. PRETTYMAN, of Delaware.—With us it is highly esteemed, and one of the most beautiful apples we have.

BRYANT, of Illinois.—The standard apple in its season, throughout Illinois.

CARPENTER, of New York.—Has the fault of dropping early; otherwise a good bearer.

Mangum.—MYER, of Delaware.—Succeeds well with us.

Dr. SWASEY, of Louisiana.—Does well in Louisiana.

Melon.—CARPENTER, of New York.—A failure in Eastern New York.

FOOTE, of Massachusetts.—A failure in Western Massachusetts. A very beautiful, fine apple, but feeble tree.

HOOKER, of New York.—An unprofitable apple in Western New York.

Monmouth Pippin (*Red Cheek Pippin*).—CARPENTER, of New York.—Very promising in Eastern New York. Late keeper; good bearer every year.

FULLER, of New Jersey.—In Monmouth County, where it came from, it rots badly, and drops early.

SWASEY, of Louisiana.—Succeeds in the South.

HOOPES, of Pennsylvania.—A failure in Eastern Pennsylvania.

MILLER, of Iowa.—Excellent in Eastern Iowa—one of our best bearers.

HOOKER, of New York.—It will not prove valuable with us in Western New York.

Mother.—A DELEGATE.—Does well in Central Massachusetts.

BEADLE, of Canada.—Does well in Ontario.

Dr. HOWSLEY, of Kansas.—In Kansas it has the peculiar habit of the Northern Spy, which is a winter apple here, but there ripens early in September, or earlier than its season.

FOOTE, of Massachusetts.—Drops its fruit too early in Western Massachusetts. Fine specimens are of great excellence.

CARPENTER, of New York.—Not of much value in our section.

Newtown Pippin (*Albemarle Pippin*).—Dr. SWASEY, of Louisiana.—Fails in the South.

MENDENHALL, of Indiana.—Worth scarcely anything in Indiana.

BALDERSTON, of Maryland.—Does not do well with us—bore only once in thirty years.

HANCE, of New Jersey—Worthless in Monmouth County.

Dr. HOWSLEY, of Kansas.—In Kansas, the tree, if root-grafted, will always become hide-bound, and blight, and give us but little fruit; if top-grafted on a healthy seedling, it is one of the finest apples grown.

BALDERSTON, of Maryland.—In Montgomery County, I have seen orchards of it as fine as any apples ever grown.

TROTH, of Virginia.—Near Winchester, in Virginia, I was shown a tree that the man sold fifty dollars' worth of apples from in one season.

FOOTE, of Massachusetts.—Not worth cultivating in Western Massachusetts.

SAUL, of District of Columbia.—Remarkably salable. Thousands of barrels find their way to Washington, and from there to Europe.

CARPENTER, of New York.—The Western country produced probably ten thousand barrels or more last year, as perfect as ever grown.

H. T. WILLIAMS, of New York.—I was shown a section of country in Virginia this summer, where eight thousand barrels were gathered and sent to London, and sold for five dollars a bushel.

HOOKER, of New York.—I have an old top-grafted tree which has given me perfect satisfaction.

CORNELL, of New York.—On the banks of the Hudson, it does first-rate, under good cultivation.

BEADLE, of Canada.—Worthless in Ontario.

AUGER, of Connecticut.—On my farm it has been

worthless for fifteen or twenty years. The last three years, it has been very much better, and the fruit is looking very well this year.

Northern Spy.—CARPENTER, of New York.—A failure in Eastern New York.

Dr. HOWSLEY, of Kansas.—One of the finest Kansas apples—mellow—splendid.

FOOTE, of Massachusetts.—I get a fair crop every year—is as valuable as the Baldwin.

AUGER, of Connecticut.—In Connecticut, nearly worthless.

COIT, of Connecticut.—It has been worthless with me for twenty years. Very little fruit sets on well-grown trees, in good loamy soil.

Ortley (White Bellflower, Woolman's Long).—Dr. HOWSLEY, of Kansas.—One of the finest apples we grow.

Dr. SWASEY, of Louisiana.—Succeeds well at the South.

FOOTE, of Massachusetts.—Fails entirely in Western Massachusetts.

SAUL, of District of Columbia.—Succeeds in the District.

Pomme Grise.—Rev. Dr. BURNET, of Canada.—A most excellent apple, bearing every other year.

J. W. MANNING, of Massachusetts.—I saw them this year about Quebec quite full of fruit.

Porter.—CARPENTER, of New York.—I can not say too much in favor of the *Porter*, being an annual bearer, and bearing heavily.

THOMAS, of New York.—The best fall apple we have.

Dr. SWASEY, of Louisiana.—It succeeds very well at the South.

FOOTE, of Massachusetts.—Horticultural Hall says enough for the *Porter* in Massachusetts. There are three plates of that to two of other varieties.

A. HANCE, of New Jersey.—One of our finest varieties; bears every other year.

Primate.—Rev. Dr. BURNET, of Canada.—One of the finest with us. An excellent dessert apple; a little tender for market purposes.

A. HANCE, of New Jersey.—Good for dessert, not for market.

Rawle's Genet.—Dr. HOWSLEY, of Kansas.—Of French origin, imported into Virginia, and between the latitudes 36 deg. and 41 deg. from the Rocky Mountains to the Alleghanies; it is one of the best apples grown—splendid.

Dr. SWASEY, of Louisiana.—Almost an entire failure throughout the Southern States.

TRANSOU, of Tennessee.—An entire failure in Tennessee.

SAUL, of District of Columbia.—One of the best apples grown in the District of Columbia.

TOON, of Georgia.—Succeeds well in middle Georgia.

Dr. SWASEY, of Louisiana.—As a matter of explanation, that by "the South," I mean the Gulf States.

BRYANT, of Illinois.—Of very little value in Northern Illinois.

Red Astrachan.—Dr. SWASEY, of Louisiana.—One of our best early apples.

MILLER, of Iowa.—In Central Iowa, almost a total failure. Liable to crack and drop.

Dr. PRETTYMAN, of Delaware.—Succeeds well in Delaware, and is one of the most profitable early apples we have. All our profitable apples are early apples.

COIT, of Connecticut.—As an early apple, it is one of the handsomest and best.

FOOTE, of Massachusetts.—It sold readily for two dollars a bushel this season.

CARPENTER, of New York.—Not worth growing with me.

MEEHAN, of Pennsylvania.—How does it happen that it fails over the whole of Iowa, and is a total failure in New York, when the Central Road pours thousands of barrels into New York?

THOMAS, of New York.—I will explain in regard to the *Northern Spy*. As far as my observation extends, in any locality in the Eastern or Northern States, where it is well cultivated, and kept in good condition, not too thick growth, the apples are fine: but when it is allowed to grow in grass orchards, it is very poor.

Dr. HAMILTON, of Nova Scotia.—The *Red Astrachan* grows well in Nova Scotia, but we must sell it as soon as picked.

BRYANT, of Illinois.—Most profitable apple in Northern Illinois. Brings a higher price in the Chicago market than any other, in its season.

Dr. HOWSLEY, of Kansas.—If you root-graft it, it is a long time in coming into bearing, but when it does bear, it is of fine quality and does well. But if you will top-graft it, you will get fine fruit much sooner.

Col. WILDER, of Massachusetts.—Mr. Barry and myself have taken a trip across the continent, and seen it from the Canadas down to Florida. It was the most popular apple; we heard no objection to it. It was astonishing how finely it succeeded.

BARRY, of New York.—I think it is the most

popular apple we have. I mean, that it succeeds over a greater extent of territory, north and south, than any other apple known.

Rhode Island Greening.—Dr. SWASEY, of Louisiana.—Fails at the South.

SAUL, of District of Columbia.—A total failure in the District.

MILLER, of Iowa.—At an early day it was a failure in Central Iowa. At present, I know there are places where they are raising them very profitably.

Ribston Pippin.—BEADLE, of Canada.—It should be double starred for Ontario.

Dr. SWASEY, of Louisiana.—It always succeeds in the South.

LOW, of Massachusetts.—Drops early in Essex County.

Roxbury Russet.—Dr. SWASEY, of Louisiana.—Succeeds well in the South as a September apple.

Roman Stem.—PRETTYMAN, of Delaware.—We consider it one of the finest apples we have in Delaware; an excellent bearer.

Shockley.—Dr. SWASEY, of Louisiana.—One of the best winter apples in the Gulf States.

Soulard.—QUINN, of New Jersey.—Pays well in New Jersey.

BRYANT, of Illinois.—There is a *Soulard* apple and a *Soulard* crab. The *Soulard* crab has been discussed in our local Societies in the northern part of Illinois, and has been recommended by many. It is pretended to be a hybrid between the cultivated apple and the wild crab of the West, but I could never perceive any difference between that and the genuine wild crab. It has every characteristic of the wild crab, only it is much larger than the wild crab usually grows; but I have in many instances seen the wild crab in the central part of Illinois growing as large as the *Soulard* crab.

Stevenson's Winter.—Dr. SWASEY, of Louisiana.—One of the few good winter apples we have at the South.

TRANSOU, of Tennessee.—One of the best we have in Tennessee.

Swaar.—CARPENTER, of New York.—Worthless in Eastern New York.

FOOTE, of Massachusetts.—Comparatively so in Western Massachusetts; unprofitable, at any rate.

Taunton.—Dr. SWASEY, of Louisiana.—One of the best we have.

Tewksbury Winter Blush.—BALDERSTON, of Maryland.—The best winter apple, keeping perfectly. I have eaten them after they have lain under the snow all winter.

Dr. SWASEY, of Louisiana.—It fails at the South.

FOOTE, of Massachusetts.—A great keeper. I have exhibited the same apple at two successive annual fairs, perfectly sound.

Tolman's Sweet.—Dr. SWASEY, of Louisiana.—Fails at the South.

STAYMAN, of Kansas.—Blights badly with us.

CARPENTER, of New York.—Valuable in Eastern New York.

MENDENHALL, of Indiana.—Bears well in Indiana, but it is so hard that it never seems fit to eat.

HOOKER, of New York.—It never ought to be eaten unless baked. It is the best baking apple.

Wagener.—Dr. SWASEY, of Louisiana.—A failure in the Southern States.

MILLER, of Iowa.—One of the earliest and best bearers we have.

STAYMAN, of Kansas.—One of the best in Kansas.

ADAMS, of Iowa.—One of the best in Iowa.

CARPENTER, of New York.—A very bad grower; not worth putting into an orchard.

Williams' Favorite.—Col. WILDER, of Massachusetts.—Unquestionably the most popular early apple in Massachusetts; brings now from five to eight dollars a barrel.

CARPENTER, of New York.—Very successful in Eastern New York.

STAYMAN, of Kansas.—Very profitable with us. The very best successor to the *Red Astrachan.*

SAUL, of District of Columbia.—Succeeds well in the District.

———.—It does well in Maine.

Willow Twig.—STAYMAN, of Kansas.—One of the best. A long keeper. Will keep two years.

Willis Sweet.—CARPENTER, of New York.—One of the finest baking apples I have in my collection. It is a large apple, and the tree a good bearer.

Dr. SWASEY, of Louisiana.—On new trees, it succeeds very well at the South; on old trees, it fails.

York Imperial.—HOOPES, of Pennsylvania.—Not of the finest quality, but remarkably productive, bearing every year.

STAYMAN, of Kansas.—It grows very finely in Kansas, as far as tried.

Dr. SWASEY, of Louisiana.—Succeeds very well with us as a summer apple. It ripens in August.

Yellow Bellefleur.—BALDERSTON, of Maryland.—It has borne but one crop in Maryland for fifteen years, and that was last year.

Dr. HOWSLEY, of Kansas.—There is something very peculiar about that apple. It is slow in coming into bearing, but bears very well when it does come. It is an utter failure on white-oak land in Kansas; but on the deepest and richest river bottoms we have there, we grow the finest *Bellefleurs* I have ever seen.

Dr. HAMILTON, of Nova Scotia.—It succeeds very well with us on loamy or sandy lands, but not on clay ground.

NEW VARIETIES NOT ON THE CATALOGUE.

The PRESIDENT.—I call upon you to make any statements in regard to varieties not upon the catalogue, which promise to be worthy a place there.

Cooper's Early White.—MEEHAN, of Pennsylvania.—In going through the Western States, I met an apple which is in common cultivation, which I miss upon the Catalogue. I allude to *Cooper's Early White*. If it is as good as I suppose it is, from its universal use, it deserves to be on the Catalogue.

STAYMAN, of Kansas.—I cultivate it extensively. It is one of the best fall apples we have, and the best market apple I know of. Very fine, most productive, know of none better.

MYERS, of Delaware.—We have an apple which we call the "*Cooper*," without the "*White*," that succeeds very well. It is a white apple, larger than the *Porter*, and something like it in appearance.

Tuttle Apple.—TROWBRIDGE, of Connecticut.—This is a seedling, somewhat like the *White Seeknofurther*.

Pewankee Apple.—ADAMS, of Massachusetts.—I would inquire if the Pewaukee is as hardy as its parent, and worthy of dissemination.

SEYMOUR, of Wisconsin.—The Pewaukee is a very fine, large red apple. I think that with us it will take the place of the *R. I. Greening*.

Vermont Strawberry —CARPENTER, of New York.—A very promising apple, of large size and fine quality, possessing every requisite for a desirable orchard and profitable apple. I have seen specimens weighing at least a pound, very handsome in color. It is a late fall apple—lasting some time.

Congress Apple.—FOOTE, of Massachusetts.—It has been cultivated in Western Massachusetts for seventy or eighty years, supposed to have come from Connecticut originally. The fruit is large, and the tree a very strong grower and heavy bearer. I have known eighty apples, as picked from the tree, to fill a bushel. It is of the finest quality as a cooking apple, and esteemed by many as a good eating apple; keeps till midwinter. In Berkshire County it is one of our most valuable sorts; somewhat resembles *Twenty Ounce*.

AUGER, of Connecticut.—Is raised in Connecticut to some extent, but not very generally. Specimens are fair.

President WILDER.—Grows well along our coast.

————.—Is esteemed very highly in my part of Connecticut, because of its remarkable quality, and long period of duration. It possesses excellent cooking qualities, but is rather too acid for most people for eating purposes.

Dr. SWASEY, of Louisiana.—It succeeds very well in the Southern States.

FOOTE, of Massachusetts.—How long has the *Congress* been known with you?

Dr. SWASEY.—Twenty years. It came from Mr. Charles Downing.

FOOTE.—I presume I furnished the scions.

Julian and Garrettson's Early.—Dr. SWASEY.—They are some of our best sorts in the South.

Orange Pippin.—HANCE, of New Jersey.—The *Orange Pippin*, of Monmouth County, has brought more money into that county than any other, and yet it is not on our Catalogue. Fully seven-eighths of the trees are of this sort; showy, cooks well, comes right after the *Maiden's Blush*.

Hurlburt Apple.—ADAMS, of Iowa.—We find it to be the very best grower we have in Iowa, somewhat resembling the *Hubbardston Nonesuch* in color and quality, being nearly sweet. Ripe in October.

FOOTE, of Massachusetts.—I have had the *Hurlburt* in cultivation for a number of years, and find it vigorous, hardy and productive in Western New York, and the fruit most highly esteemed.

Park Apple.—CARPENTER, of New York.—This is a seedling apple, which originated in Eastern New York. We esteem it as very promising.

DOWNING, of New York.—Not new, is it?

CARPENTER.—No; it has been grown for twenty or thirty years.

DOWNING.—It is of very good quality.

Dr. HOWSLEY, of Kansas.—The *Park* apple is the same as the *McAffee's Nonesuch*. That has something like fifteen synonyms in our country. *Large Striped Pearmain*, *Winter Striped Pearmain*, *Park's Keeper*, *Missouri Superior*, *New Missouri*, *Storr's Wine*, and a dozen others, almost.

DOWNING, of New York.—The apple to which Mr. Carpenter refers is an entirely different apple from those.

Bevan's Favorite.—Dr. SWASEY, of Louisiana.—*Bevan's Favorite* is one of our best June apples and entitled to a place on the list.

FOOTE, of Massachusetts.—It ripens with me in August, and is not at all a prolific bearer. A beautiful apple.

THOMAS, of New York.—I formerly cultivated the *Bevan's Favorite*, and although it is a very fine apple, it was perfectly worthless in New York. It had two defects—hard to get, and good for nothing when we got it.

Hick's Apple.—CARPENTER, of New York.—There is another new apple that I would like to have Mr. Downing speak a good word for—the *Hicks*. A large and beautiful sweet apple, good for dessert, and very fine for baking.

DOWNING, of New York.—It is an early apple, ripe about the time of the *Bough*, and many of the Long Island people think it is better than the *Bough*. I do not think it is. Not sufficiently tested.

Congress Apple.—FOOTE, of Massachusetts.—Will Mr. Downing give us his impression of the *Congress* apple, that has been spoken of?

DOWNING.—Well, it is a first-rate apple for market people, but not good enough for the amateurs.

FOOTE.—I would only recommend it as a cooking apple.

New Varieties from Ohio.—BATEHAM, Ohio.—Our State Society, in revising the Catalogue, requested these varieties to be entered: *Fink Seedling*, late, long keeper; *Park Sweeting*, (ripening in October, originating in Ohio); *Stark; Evening Party*

BATEHAM, of Ohio.—Our State Society requested that these four varieties be added to the Catalogue of this Society. They are all well known in some of our Western States: the *Fink*, *Park Sweeting* (ripening in October—originating in Ohio); the *Stark* and the *Evening Party*. We wish these starred for Ohio.

The PRESIDENT.—The *Evening Party* is well known with us, as having been introduced by our late beloved friend, Dr. Brinckle, and is a very beautiful little apple, cultivated by amateurs.

Bradford's Best.—TRANSOU, of Tennessee.—We have an apple that we call *Bradford's Best;* it is also called *Kentucky Streak*. It is not new with us, having been in cultivation twenty years or more. We regard it as one of the best winter apples we have in Tennessee. It does well, also, in Arkansas and Mississippi. We think it worth all the rest of the apples on the list.

Dr. SWASEY, of Louisiana.—It succeeds very well in Louisiana and Mississippi.

Davis.—MILLER, of Iowa, exhibited a very handsome apple, medium size, which he said was very hardy and a great bearer. It was known as the *Davis* apple, from the man in whose orchard it was grown. Mr. Davis set the trees twenty-one years ago, getting them of a peddler, who said he got them from McWhorter, of Illinois, but he disclaims all knowledge of the apple. It is now grown in Polk County, Iowa.

Robinson's Superb.—Dr. SWASEY, of Louisiana.—I would like to ask Mr. Downing's opinion of *Robinson's Superb*.

DOWNING, of New York.—I cannot find out what it is. Some Southern people say it is the same as *Furrar's Summer*. How's that?

Dr. SWASEY.—Entirely distinct, in my experience.

DOWNING.—What I have received as *Robinson's Superb* looks more like the *Full Queen* than any thing else. There seems to be a great deal of confusion about it.

Dr. SWASEY, of Louisiana.—I will say that the apple you sent me as *Robinson's Superb* is not the apple that we cultivate in the South under that name.

Baker.—AUGER, of Connecticut.—There is an apple cultivated in Fairfield County, Connecticut, somewhat resembling the *Baldwin*, called the *Baker*. I will inquire of Mr. Downing if he has ever seen it.

DOWNING.—Yes, sir; it is a very good winter apple.

CARPENTER, of New York.—A very promising apple in Eastern New York. Not a showy apple, but a good bearer.

Red Stripe.—BRACKETT.—Some one has named the *Red Stripe*. It is one of our best apples. There is no tree that bears uniformly such good crops of fair, good cooking and eating apples.

MENDENHALL, of Indiana.—It is one of the best summer apples we have in Indiana, and uniform in bearing. Dr. Warder described it as originating in Indiana.

Dr. HOWSLEY, of Kansas.—The apple we have in Kansas under the name of the *Red Stripe* appears to be identical with the *Early Red Margaret*.

Buffington Early.—MR. MASTERS, of Nebraska.—We have had it in cultivation twenty years, and find it our most profitable early variety. The tree is healthy, bears every year, never overbears, and the apples sell readily in our market at two dollars a bushel. It ripens at the same time with the *Early Harvest*.

THOMAS, of New York.—I have cultivated it, but not of late years. It is an early apple, very white and delicate, with a red blush, but not a good bearer.

DOWNING, of New York.—It is not very well suited to our State.

BRYANT, of Illinois.—I have cultivated it for thirty years. It is an apple of excellent quality, but a moderate bearer. That is the only objection to it.

Blenheim, or Orange Pippin.—STARR, of Nova Scotia.—We think a great deal of the *Orange Pippin*.

DOWNING.—It does very well in cool climates, not South. Valuable in Northern New York, the Canadas and Nova Scotia.

Shiawassee Beauty.—A DELEGATE.—Does anybody know anything about the *Shiawassee Beauty*, which originated in Michigan?

DOWNING.—I regard it as a very good apple; better than the *Fameuse*, and similar to it.

Yellow June.—Dr. SWASEY, of Louisiana.—The *Southern Yellow June* should be found upon the catalogue as the best yellow summer apple in our climate. There are no synonyms that I know of.

TRANSOU, of Tennessee.—A very valuable apple in Tennessee.

DOWNING.—There are a great many *Yellow Junes*, so that it is difficult to tell which is correct.

Jersey Greening.—BALDERSTON, of Maryland.—The *Jersey Greening* is an apple of good quality, keeps well, about the size of the *Tewksbury Winter Blush*; very bright and handsome. Those who have had it ten or fifteen years say it is uniformly a good bearer.

Holden Pippin.—HADWEN, of Massachusetts.—I wish to name the *Holden Pippin*, which originated and succeeds well in Central Massachusetts. Not known much elsewhere. Is worthy of cultivation. It ripens in October, and is one of the best apples.

Col. WILDER.—The Chair can corroborate what Mr. Hadwen has said of the *Holden Pippin*. Perhaps Mr. Downing knows it.

DOWNING.—Oh, yes, sir. It has a dozen names. *White Graft* and *Westbrook*, or *Speckled*, are among the names; also *Fall Orange*, *Red Cheek* and *Hogpen*, the last being the original name.

MEEHAN, of Pennsylvania.—The trees are different in growth, but the fruit is identically the same.

DOWNING.—I have examined them carefully, and believe them to be identical.

Tift Sweeting.—LEAVENS, of New Hampshire.—I consider the *Tift Sweeting*, which is not on the catalogue, one of the most valuable sweet apples I ever met with. It is marked in a very peculiar manner.

DOWNING, of New York.—It is one of the very old apples, gone out of use pretty much. The quality is high, but it is not profitable.

LEAVENS.—It has been prolific wherever I have seen it.

DOWNING.—But it is not profitable, because there are a great many poor apples on the tree.

Crab Apples.—HOOKER, of New York.—I do not see any *Siberian Crabs*. I think it would be well to name a few crabs, well tested, to go in this catalogue.

JAMESON, of Vermont.—I have had that in my mind for some time. We find the improved varieties of great value. We are planting quite extensively *Siberian Apples*, of the approved varieties, or crab apples, as they are called, and we find them valuable. We value them for the hardiness of the tree, for their early and abundant bearing, for their value for cooking, and some of the varieties are loved by children and the ladies, and, in fact, by all for eating. They are valuable for preserving, and valuable for sauce to be used upon the table constantly, not requiring the amount of sugar that is put into preserves. They are valuable for jelly and also for cider, and from the cider some persons have made a very fine quality of wine, as they declare, but I maintain that we are not very good judges of wine up in that cold region. Now, if you can do any better for us at the West, or in New York, it will be doing a good work for these cold climates. If you value your fruits, so abundant and delicious, you must give us the privilege of looking with some interest toward the improvement of *Siberian Apples*, for we must look to them to realize our hope of fruit in the cold parts of our country.

GEORGE CRUICKSHANKS.—I can endorse all that my friend has said of the *Crab* apple. I spent four years in Vermont ten years ago, and had some experience.

BARRY, of New York.—In the report from Vermont is a very interesting statement in regard to these *Crabs*. It will be published in the Transactions.

MASTERS, of Nebraska. The *Siberians* do well in our State. We consider the *Transcendent* and the *Hyslop* as the best. They are both good apples, the *Hyslop* keeping all winter, if well cared for.

BRYANT, of Illinois.—In regard to the *Crab* apple, I will say that A. R. Whitney, of Franklin Grove, Lee County, has raised a great many varieties of the *Siberian*, and one which he calls his No. 20 is of very superior quality, and large size for that species of fruit, and well worthy of notice.

Milding Apple.—COPP, of New Hampshire.—We have a new apple in our neighborhood, called the *Milding* apple, a native. I have probably cultivated one hundred different varieties of apples, and have never found one equal to it, in its hardy, strong and rugged growth, well worthy of being tried. It is a large apple; I raised some last year nearly a foot in circumference. It does not keep quite so well as the *Baldwin*, but it is good to eat early in the winter, and where it is known, altogether preferred to the *Baldwin*. It is a yellowish-red apple; I do not know any apple that it resembles so much as the *Gravenstein*; it is about the same size—a little larger, if anything.

DOWNING, of New York.—I had a box of the *Milding* sent to me last fall by Mr. Copp, and was very much pleased with them. *Milden* is the true name.

Geneva Crab Apple.—Thomas, of New York.—I have had a number of different Western *Crabs* sent to me, and among them I received half a peck of a variety called the *Geneva Crab*, and it was so immeasurably better than any other *Crab* I ever saw, that I mention it for the purpose of getting some further information about it. It ripens late in autumn or early in winter, and the impression that I received on eating it, (after eating half a peck, one gets a very distinct idea of the quality,) was that it was very much better than any other *Crab* I ever tasted. It occurred to me that if it was sent to market, it would be far superior to the *Lady Apple* for an evening party. The *Lady Elgin* is another.

Hooker, of New York.—It came from Mr. Andrews. I have eaten some of that fruit, and it will bear all that Mr. Thomas has said in its favor.

President Wilder.—The chair concurs.

Maxwell, of New York.—I have eaten something less than half a peck of it. It is a very desirable *Crab* to have. Crisp, tender, and such as you like to fill your pockets full with.

Copp, of New Hampshire.—I have a *Crab* apple that I have raised for several years. The tree came originally from Mr. Converse, on Long Island. Two years ago, I sent a specimen of that apple to the Horticultural Society of Massachusetts; they awarded me a gratuity of a dollar for the apple, and Mr. Robert Manning wrote me asking me where I obtained it, saying that it was unlike any *Crab* apple he had ever seen. The *Transcendent Crab* in the Hall looks more like that than any other I have seen.

Jameson, of Vermont.—Among the twenty varieties from Northern Vermont, we have *Clark's Beauty*, a summer apple, *Queen's Choice*, *Lady's Favorite* and *Rose of Stansted*, fall apples, and *Gold Drop* and *Bawl's Winter*, for winter use—all desirable apples. I have heard several ladies declare that the *Lady's Favorite* was the most beautiful apple they ever saw.

Tetofsky.—McLaughlin, of Maine.—I have raised the *Tetofsky*, and consider it very desirable. I have had a *Tetofsky* from New York, that was claimed to be a very distinct apple. I should like to know if there is any difference.

Powell, of New York.—I suppose the gentleman from Maine refers to the *Accubæfolia*. That is an apple which we imported some years ago, at the same time that we imported the *Tetofsky*. The *Accubæfolia* came as a *Crab*, and was represented to us as a *Crab*. The *Tetofsky* came as a *Russian* apple. The two apples are entirely distinct, not being alike in foliage, tree or fruit. The *Accubæfolia* is an apple that will keep until the middle of January or the first of February. It is rather larger than the *Tetofsky*, a darker red, and has more of a *Crab* in its nature. There are specimens of it to be seen in the hall, and every gentleman can see it for himself. We think it desirable.

J. W. Manning, of Massachusetts.—The *Tetofsky* I fruited for fifteen years. It bears very abundantly, even on trees two or three years from the bud. The fruit is of small size. Robert Manning said his father grew it thirty-five years ago.

Col. Wilder.—Oh, yes, it is an apple well known here.

Barry.—Has been well known in the nurseries for thirty years or more.

Copp, of New Hampshire.—The *Foundling* is not in the catalogue. I consider it as hardy for a cold climate as the *Duchess of Oldenburg*, and it is a very much larger and better apple every way. It will keep until October. [Adjourned.]

Visit to the Residence of Mr. H. H. Hunnewell.

The afternoon session closed at four o'clock, and the delegates at once proceeded to the Boston & Albany Railroad, where they took the cars for Wellesley, the residence of H. H. Hunnewell, Esq. The company numbered nearly three hundred, and on their arrival at Wellesley, several omnibuses and carriages were found in waiting, by which they were conveyed to Mr. Hunnewell's charming villa, where they were met by the host, and cordially welcomed. A most delightful hour was spent in rambling through the grounds, where the highest art and the most cultivated taste have been called into requisition to enhance the natural beauty of the place, which has now scarcely an equal on this side of the ocean, at least. The green expanse of lawn, the rare, deciduous and evergreen trees, the tasteful and unique beds of flowers, and, above all, the terraced garden upon the border of the lake, its hedges, so evenly trimmed as almost to tempt one to walk upon them, or cut in many a quaint and curious form,—all these possessed peculiar attractions for such a company of cultivated ladies and gentlemen, many of them experienced botanists and horticulturists, fully capable of appreciating them.

The inspection of the grounds and hot-houses ended, the party were invited into the house, where an elegant repast awaited them, of which they partook with infinite zest and satisfaction. At the conclusion of the feast, the company bade farewell to their generous and courteous host, and proceeded to the depot, where they took the train for Boston, reaching the city about eight o'clock.

FRIDAY—MORNING SESSION.

THE Association convened at the usual place at 10 A. M., President Wilder in the Chair, who announced that reports of judges and committees were now in order.

Mr. Foote, of Massachusetts, moved that these reports be deferred to a later time.

President Wilder suggested that they be handed in first this afternoon.

Mr. P. Barry suggested the Essays be handed in and referred to the Secretary for publication.

After discussion by Mr. Carpenter, it was finally moved and carried that the essays be prepared and read by title, and referred to the proper committee.

Mr. Barry therewith submitted two essays—on Pear Blight and Fig Culture.

Mr. Barry also moved that the reading of the reports of Standing Committees be dispensed with, and be printed in the Transactions.

Mr. Loveland, of Connecticut.—There is a general complaint by fruit-growers that there are no lists of those fruits adapted to each State. He therefore moved that the President appoint a committee for each State to select lists of fruits adapted to said State.

Mr. Hance, of New Jersey.—I would amend by adding sub-committees for different sections.

Mr. Adams, of Iowa.—This plan will tend to meet the requirement needed. We have in Iowa lists for each section, in which but three apples run through the whole list.

Mr. P. Barry.—In our National Catalogue we thought these subdivisions were not necessary. It is not our intention to go into localities, the same as State societies do. The reports of the States, in the hands of the Fruit Committee, contain just that information.

President Wilder.—Mr. Barry has had correspondence with all the State societies, and has gained this information. We have State Committees, and a chairman for each State, appointed for such purpose, and their reports will be published.

Appointment of Officers.

The President here presented the names of members for the various Standing Committees, viz.:

1. The Executive Committee.
2. General Fruit Committee.
3. Committee on Native Fruits.
4. Committee on Revision of Catalogue.

The President.—If it is the pleasure of the assembly, and no objection is offered, we will consider this report confirmed.*

Discussion on Fruits—Continued.

The Discussion on Varieties of Fruit was then resumed.

PEARS.

Belle Lucrative (Fondante d'Automne).—CARPENTER, of New York.—In New York, is not to be recommended for general cultivation; an amateur's pear, but not a pear for market. One tree is enough.

LOVELAND, of Connecticut.—Not to be recommended for market purposes; for a home fruit, rich and desirable. It does not bear transportation to market very well.

Beurre Clairgeau.—Dr. SWASEY, of Louisiana.—Succeeds very well in the Southern States.

CARPENTER, of New York.—Drops its leaves and liable to blight.

Beurre d'Anjou.—Col. WILDER, of Massachusetts.—Has anybody ever cultivated the *Beurre d'Anjou*, and found it unsuccessful?

CARPENTER, of New York.—It is growing in favor wherever it is planted. With me it is one of the most thrifty trees, and holds its leaves until frost.

COPP, of New Hampshire.—In my section, it is a very hardy tree. It grows to good size. I know a

* NOTE.—Full lists of above officers appointed appear at beginning of this volume.

gentleman in Stratford County who raised a barrel, and sold them in the market in Dover for twenty dollars.

President WILDER.—The inquiry simply was, if anybody knew anything against it.

FOOTE, of Massachusetts.—I have heard but one objection to it, that in some instances there are hard lumps in the flesh of the pear on one side, which do not become melting. I have seen that defect to a very slight extent, in my own grounds. I hope time will remedy it effectually.

SAUL, of District of Columbia.—I have observed that in the District of Columbia.

WILLIAMS, of Delaware.—Grown on the dwarf in Delaware, it is apt to be too productive and small.

Beurre d'Amanlis.—FOOTE, of Massachusetts.—Rots at the core very soon.

Beurre Diel.—CARPENTER, of New York, FOOTE, of Massachusetts, TURNER, of Connecticut.—Cracks badly.

HANCE, of New Jersey.—Worthless in New Jersey.

COPP, of New Hampshire.—Worthless in New Hampshire.

———, of Massachusetts.—Good in Central Massachusetts.

BARRY, of New York.—It is no longer reliable in Western New York; both foliage and fruit have become defective, though healthy and fine this season.

SWASEY, of Louisiana.—Generally a failure in the Gulf States.

LOVELAND, of Connecticut.—Should be condemned in Connecticut.

———.—In Wayne County, New York, blights very badly.

Beurre Giffard.—BARRY, of New York.—Very fine.

CARPENTER, of New York.—One of our most promising in tree and fruit.

FOOTE, of Massachusetts.—Nothing so fine preceding the *Bartlett* in Western Massachusetts.

BERCKMANS, of Georgia.—Does well in Georgia.

SWASEY, of Louisiana.—Succeeds in the Gulf States.

WILLIAMS, of Delaware.—Our handsomest pear in Delaware.

Beurre Langelier.—HANCE, of New Jersey.—Worthless in our part of Jersey.

FOOTE, of Massachusetts.—Very slow in coming into bearing, and quality not satisfactory.

CARPENTER, of New York.—A good tree in Eastern New York, and pretty good fruit.

BARRY, of New York.—Hardly anybody plants it now.

Beurre Superfin.—SWASEY, of Louisiana.—The best pear in the South, taken in its season.

BERCKMANS, of Georgia.—Succeeds well in Middle Georgia.

CARPENTER, of New York.—One of our best pears, but decays very soon.

QUINN, of New Jersey.—Does well in our part of New Jersey.

Brandywine.—BERCKMANS, of Georgia.—Does well in Middle Georgia.

WILLIAMS, of Delaware.—Splendid in Delaware.

SWASEY, of Louisiana.—Not desirable in the Gulf States.

BARRY, of New York.—Fine with us.

TURNER, of Connecticut.—Very good in Connecticut.

Buffum.—LOVELAND, of Connecticut.—Always hardy in Connecticut. Bears largely every year, and is a fair pear.

CARPENTER, of New York.—Those who have planted the *Buffum* in Eastern New York, are grafting it over. Notwithstanding its bearing qualities, it has not a market value.

Clapp's Favorite.—FOOTE, of Massachusetts.—Was once condemned, but is not now. It should be picked three weeks before its maturity and ripened in the house, when it becomes a fine, juicy, delightful fruit.

CORNELL, of New York.—Has failed in Eastern New York. Rots badly at the core, and lacks flavor. I pick it early enough.

HANCE, of New Jersey.—I think very favorably of it.

Dr. SYLVESTER, of New York.—Succeeds well in Western New York. I have seen two half bushels, forty pears to one and forty-three to the other.

Dr. HAMILTON, of Nova Scotia.—Doing very well in Nova Scotia.

WILLIAMS, of Delaware.—A very vigorous tree and good bearer, very hardy, large.

Columbia.—FOOTE, of Massachusetts.—I cannot say "Hail Columbia" to that.

LOVELAND, of Connecticut.—Rather unprofitable.

Dana's Hovey.—HANCE, of New Jersey.—Does well in New Jersey.

CARPENTER, of New York.—Fine with me.

FOOTE, of Massachusetts.—Tree beautiful and fruit first quality.

MANCHESTER, of Rhode Island.—The best pear of the season in Rhode Island.

LOVELAND, of Connecticut.—With me, it has always proved good.

BERCKMANS, of Georgia.—Worthless in Georgia.

Dr. SYLVESTER, of New York.—In Western New York, it grows larger than it does here.

Dearborn's Seedling.—HANCE, of New Jersey.—Worthless with us in New Jersey. Sheds its leaves badly.

Dr. SWASEY, of Louisiana.—Worthless at the South.

QUINN, of New Jersey.—Good on clay soil in New Jersey.

STARR, of Nova Scotia.—Very small in Nova Scotia.

CARPENTER, of New York.—Fine with us in Eastern New York.

Dix.—CARPENTER, of New York.—Not worth growing in our section.

FOOTE, of Massachusetts.—Nor in Western Massachusetts.

LOVELAND, of Connecticut.—Same in Connecticut.

SAUL, of District of Columbia.—Same in District of Columbia.

Doyenne Boussock.—QUINN, of New Jersey.—Very excellent in New Jersey, both in leaf and productiveness.

CARPENTER, of New York.—No one will be disappointed, I think, in planting the *Boussock* in Eastern New York.

LOVELAND, of Connecticut.—Always fine in Connecticut.

FOOTE, of Massachusetts.—Good in every respect.

CORNELL, of New York.—Far inferior to the *Bartlett*. Ripens at the same time.

Dr. SWASEY, of Louisiana.—Ripens a little before the *Bartlett* with us, and equally successful.

Doyenne d'Alençon.—CARPENTER, of New York.—Although that has been highly recommended as a winter pear, it fails in our section.

————, of Connecticut.—Fails with me. Is not worth cultivating with us.

HOVEY, of Massachusetts.—Agree with Mr. Barry; a useful, very late pear.

QUINN, of New Jersey.—Very inferior with me.

BARRY, of New York.—A fine pear, in places where it succeeds. It wants first-rate soil and high cultivation, and the fruit, to be good, must be brought to the highest perfection, like the *Easter Beurre*. Then it is of the highest quality.

SWASEY, of Louisiana.—Rather a failure in the Gulf States.

Doyenne du Comice.—LOVELAND, of Connecticut.—Very promising with me in Connecticut.

————, of Massachusetts.—Fine in Central Massachusetts.

CARPENTER, of New York.—A shy bearer in Eastern New York.

COIT, of Connecticut.—The wood becomes feeble, spurs are formed which die, and it is wanting in vigorous wood. The pear is delicious, and grows as large as the *Beurre d'Anjou*, and as it grew with me the first three or four years, I thought it was almost equal to the old *Virgalieu*.

Doyenne d'Ete.—Dr. SWASEY, of Louisiana.—Best early pear in the Gulf States.

————, of Connecticut.—That is our experience in Connecticut.

CORNELL, of New York.—Best in Eastern New York.

COPP, of New Hampshire.—Best I know in New Hampshire.

FOOTE, of Massachusetts.—Best in Western Massachusetts, in tree and fruit.

TRANSOU, of Tennessee.—Best in Tennessee.

Dr. SYLVESTER, of New York.—Best in New York, bearing very abundantly, and is our best early pear.

QUINN, of New Jersey.—Very good.

EARLE, of Illinois.—Cracks badly in Southern Illinois, and is scarcely worth growing. The tree sheds its leaves much before the fruit is ripe.

Duchesse d'Angouleme.—QUINN, of New Jersey.—One of the most profitable pears I have ever grown; bears well and sells well.

Gov. FURNAS, of Nebraska.—Fine with us.

FOOTE, of Massachusetts.—On moist clay it is not worth a hill of potatoes.

Dr. SWASEY, of Louisiana.—It succeeds better in the South than anywhere else.

LOVELAND, of Connecticut.—I have had it bearing on dwarf trees twelve years in succession.

CARPENTER, of New York.—On pear stock, it has disappointed the growers. It does not come up to the mark.

BARRY, of New York.—The *Duchesse*, on pear stock, wants to be twenty years old, before it attains its highest qualities.

SAUL, of District of Columbia.—I can corroborate what has been said of the *Duchesse*. The finest I have ever seen have been borne on the pear stock.

CORNELL, of New York.—Equally good on the pear as on the quince, when old. I have seen the fruit grown on the pear, well cultivated, equal to any thing I ever saw on the quince.

LEIGHTON, of Virginia.—It has been injured by

blight in Virginia, on the pear stock. I saw no blight on the quince stock.

Dr. SWASEY, of Louisiana.—I have always had the largest and best fruit on the standard.

Duchesse de Bordeaux.—QUINN, of New Jersey.—I am disappointed with that. I grafted considerably with it when it came out; have had it three years, and each year it has grown worse.

BARRY, of New York.—It is only a cooking pear in our climate.

POWELL, of New York.—With us at Syracuse, it is the best bearing winter pear we have—best quality of any winter pear I ever tasted—will keep longer than any winter pear we grow. As far as I have tested it, I have a favorable impression of it; bears better on the standard than the dwarf; also larger in size, and better quality.

BARRY, of New York.—Does it get to be melting?

POWELL.—We have had it two or three seasons when it got very melting. In some seasons, it does not ripen, but I have seen it as melting as any pear I ever tasted.

BARRY, of New York.—As the tree gets older, it may improve.

Easter Beurre.—QUINN, of New Jersey.—Worthless with me.

SAUL, of District of Columbia.—Succeeds in District of Columbia.

Dr. SWASEY, of Louisiana.—Not reliable in the South.

CARPENTER, of New York.—Very poor. Not adapted to our section at all.

CORNELL, of New York.—Same in Eastern New York, on the Hudson River.

LOVELAND, of Connecticut.—Not profitable in Connecticut.

BARRY, of New York.—Not profitable anywhere, but a pear of the highest quality when well grown, requires high cultivation, and thinning of the fruit. Nearly three-quarters want to be taken off. When well grown, it is one of the finest pears I know.

————, of Connecticut.—Good for nothing in Connecticut.

HASKELL, of Massachusetts.—Was fine thirty years ago, but not worth growing now. Most all the trees have been worked over.

EARLE, of Illinois.—Ripens well in Southern Illinois. Altogether the best pear we have; keeps until March, and sometimes later; but I don't think there is much money in it.

FOOTE, of Massachusetts.—It keeps with me as well as a stone.

FULLER, of New York.—I have buried that pear in the ground, the same as I would potatoes, and it came out in the spring delicious. That is the only way I ever did see it fine.

QUINN, of New Jersey.—When I bury mine, I never look after them. I let them stay there.

EARLE, of Illinois.—I don't think that pear ought to be given up so easily, for its excellence is so great when you get it in good condition, that it is worth trying longer than any pear on the list. Its quality is unsurpassed by any pear on the list, when you get it ripe—a good family fruit, but not profitable to grow.

BARRY, of New York.—When you get an *Easter Beurre* weighing about a pound, with a red cheek, there is nothing like it.

————, of Connecticut.—We can't get such an one in Connecticut, without importing it.

HASKELL, of Massachusetts.—Twelve years ago, they sold for $1.50 a tree in March and April, but the trees have all been worked over with other kinds. There has not been a peck of fair *Easter Beurres* grown in our vicinity for the last ten years upon trees which, if they had been suffered to remain, would have borne hundreds of barrels. It has not been hastily rejected, but has been thoroughly tried and abandoned.

Emile d' Heyst.—HANCE, of New Jersey.—Worthless with us.

FOOTE, of Massachusetts.—I would give it a "hoist" in Western Massachusetts. Think well of it.

QUINN, of New Jersey.—I second the motion.

BARRY, of New York.—Good early winter pear.

————, of Ohio.—I have seen them grown this year in Toledo, larger than I have ever seen them, and extremely fine quality.

BERCKMANS.—Have seen it in Georgia, very large, and delicious quality.

Flemish Beauty.—QUINN of New Jersey.—It has been growing worse every year. It sheds its leaves early in July, and the fruit rusts and cracks, so that it is entirely unreliable.

HANCE, of New Jersey.—That is my experience.

Gov. FURNAS, of Nebraska.—Does well in Nebraska.

STARR, of Nova Scotia.—In Nova Scotia, the old trees are mostly dead. The new trees are doing remarkably well.

COPP, of New Hampshire.—It does well in Southern and Central New Hampshire. Further North, it occasionally cracks, but that is the exception, not the rule. I have seen them weighing seventeen ounces.

CARPENTER, of New York.—About the most worthless pear we have.

FOOTE, of Massachusetts.—It has cracked for the last two or three years. The present season, it is perfectly fair. I consider it the best orchard pear I can grow in my rough locality.

Fulton.—LOVELAND, of Connecticut.—I regard it as a poor fruit.

————, of Connecticut.—Very good with me in Connecticut, as far as grown.

Golden Beurre of Bilboa.—LOVELAND, of Connecticut.—My experience proves it to be of good quality.

COIT, of Connecticut.—I grew it some years ago and gave it up.

Glout Morceau.—QUINN, of New Jersey.—I have grafted over more than two hundred trees. It grows very promisingly, but we very seldom get any perfect fruit. It is considered in our vicinity entirely worthless.

SAUL, of District of Columbia.—Worthless in the District of Columbia.

TRANSOU, of Tennessee.—Out of twenty varieties, it is our very best, and grows very fine.

DR. SWASEY, of Louisiana.—It is one of our best early winter pears.

CARPENTER, of New York.—Blights badly in Eastern New York.

DR. HOWSLEY, of Kansas.—It is worthless in Kansas, in consequence of its liability to blight.

FOOTE, of Massachusetts.—It blights in Western Massachusetts, and there is only one specimen in twenty we can ripen.

————, of Connecticut.—Poor in Northern Connecticut.

QUINN, of New Jersey.—I have seen very handsome and very abundant crops, but utterly worthless.

LEAVENS, of New Hampshire.—It succeeds well in New Hampshire, and ripens well.

CORNELL, of New York.—In Eastern New York it is worthless with me.

HASKELL, of Massachusetts.—Entirely worthless in our part of the State. Tree hardy, but fruit poor.

Gray Doyenne.—DR. SWASEY, of Louisiana.—One of the best pears in the Gulf States.

FOOTE, of Massachusetts.—One of the best pears anywhere, where it can be grown to perfection, but I have never seen that locality.

QUINN, of New Jersey.—Transplant it to a new world.

BERCKMANS, of Georgia.—Succeeds well in Middle Georgia.

COIT, of Connecticut.—Cracks badly with us in Connecticut.

Henkel.—HANCE, of New Jersey.—With us, it does not amount to anything. It does not come up to our expectations. The tree is a beautiful grower, but the fruit is tasteless.

QUINN, of New Jersey.—I have grafted over all my *Henkels* with other varieties.

PIERCE, of Rhode Island.—It is a very good bearer in Rhode Island, and one of the handsomest trees we grow.

Hosenschenck.—HYDE, of Massachusetts.—I do not want any more trees. Worthless.

CARPENTER, of New York.—Worthless with me.

Howell.—TOON, of Georgia.—For Georgia I think it deserves two stars. It succeeds admirably in our locality.

BERCKMANS, of Georgia.—I corroborate that statement.

DR. SWASEY, of Louisiana.—A perfect success in the whole South.

GOV. FURNAS, of Nebraska.—Does well in Nebraska.

FOOTE, of Massachusetts.—A fine pear in Western Massachusetts.

WILLIAMS, of Delaware.—It is unusually fine in Delaware.

QUINN, of New Jersey.—Does very well with me in New Jersey.

CARPENTER, of New York.—I think we shall fail to get a very delicious pear in the *Howell*. It is a good bearer, but only second or third rate in quality.

BARRY, of New York.—It is not quite so good as some others, but so fair and beautiful, and very productive, that I think it is one of the most valuable American pears.

EARLE, of Illinois.—I think so. It is one of the most delicious pears grown in Southern Illinois. Among acid pears, one of the best I know. As a market pear, it ranks only second to the *Bartlett* in its season. Indeed, there is no other that is really profitable to grow for market, when we can get trees of that sort.

LEAVENS, of New Hampshire.—It ought to be marked with two stars for our State. It succeeds well there, and is one of the most delicious pears.

DR. SYLVESTER, of New York.—Very productive and hardy. Although you may not call it first quality, the man who cannot eat a well-ripened *Howell* had better report to the doctor.

SAUL, of District of Columbia.—A good grower and a beautiful pear, but only second quality.

QUINN, of New Jersey.—That is the drawback it has with me—only second quality.

Dr. SWASEY, of Louisiana.—Three-quarters of our pear eaters would prefer it to the *Bartlett*.

Jalousie de Fontenay Vendee.—FOOTE, of Massachusetts.—Good grower; smooth and beautiful pear; fair quality.

KELLAM, of Connecticut.—Does finely with me in New Haven.

Josephine de Malines.—QUINN, of New Jersey.—Very inferior quality with me.

FOOTE, of Massachusetts.—So with me.

Julienne.—Dr. SWASEY, of Louisiana.—A good pear for the summer season.

Kirtland.—HYDE, of Massachusetts.—Rots at the core in Massachusetts. It ought to be picked quite early.

SAUL, of District of Columbia.—Gathered in good season, it is an excellent pear, and one of the best early market fruits we have.

TRANSOU, of Tennessee.—Succeeds well in Tennessee and the Southern States.

Lawrence.—QUINN, of New Jersey.—Very excellent as a market pear, good grower, good bearer, and holds its foliage remarkably well.

CARPENTER, of New York.—Perfect in tree and fruit in Eastern New York.

CORNELL, of New York.—Nothing better for a late fall pear in the State of New York.

STARR, of Nova Scotia.—Slow in coming into bearing in Nova Scotia.

SWASEY, of Louisiana.—It is one of our best late pears.

COPP, of New Hampshire.—Should be starred in New Hampshire.

Louise Bonne of Jersey.—FOOTE, of Massachusetts.—The trees blight in Western Massachusetts, and as an orchard pear, it is too delicate.

SAUL, of District of Columbia.—Sheds its leaves badly.

TOON, of Georgia.—Sheds its foliage early, and does not succeed very well.

HANCE, of New Jersey.—I have grafted it over.

CARPENTER, of New York.—Tree blights badly, and drops its leaves and fruit.

Gov. FURNAS, of Nebraska.—One of our best pears.

Dr. SYLVESTER, of New York.—In Western New York, the *Louise Bonne* succeeds very perfectly. In a warm climate it does not succeed as well as in a cold climate. At the Washington Market in New York, my *Louise Bonnes* brought a dollar and a half a barrel more than the *Duchesse*, grown in the same orchard. It is the most profitable market pear that I have in the open orchard.

BRYANT, of Illinois.—If any grower finds difficulty in the tree casting its leaves, put the ground into clover or grass. I have done so, and the tree retains its leaves very well, and matures a crop of excellent quality.

QUINN, of New Jersey.—I hardly think what the Doctor says will apply generally, because at my place, in a heavy clay soil near Newark, it very often sheds its leaves, and the fruit becomes astringent. I think the best I ever saw, were grown in Delaware; and on the Eastern shore of Maryland, still farther south, I have seen the tree growing vigorously, and the fruit large and every way desirable.

CORNELL, of New York.—The pear grows knotty and frequently cracks, but about one year out of five I get a fair crop of handsome pears, and then they bring the best price.

Madeleine.—(Starred in no State.)—A DELEGATE.—Let it go at that.

FOOTE, of Massachusetts.—It will do for an evening party, when well matured, but it won't keep until morning.

Manning's Elizabeth.————.—A good pear in Maine.

HANCE, of New Jersey.—None better in New Jersey.

CARPENTER.—First rate in Eastern New York.

PIERCE, of Rhode Island.—Excellent in Rhode Island.

COPP, of New Hampshire.—Nearly equal to the *Doyenne d'Ete* in New Hampshire.

SAUL, of District of Columbia.—In the District it is a good bearer, and excellent fruit, but rather small.

Marie Louise.—QUINN, of New Jersey.—Middling to good with me.

————, of Massachusetts.—A good bearer in Central Massachusetts, of the highest quality, but needs a great deal of thinning.

KELLAM, of Connecticut.—Very fine with me in New Haven.

STARR, of Nova Scotia.—An old standard pear in Nova Scotia, but requires careful cultivation.

FOOTE, of Massachusetts.—Very fine in Western Massachusetts.

Dr. HOWSLEY, of Kansas.—Worthless with us.

SAUL, of District of Columbia.—Worthless in the District.

Merriam.—HYDE, of Massachusetts.—One of the most valuable market pears in Massachusetts. All the grafting I have done for two years I have done

with the *Merriam*. It is not first quality—about as good as the *Howell*. It must be picked early, or it becomes mealy.

CARPENTER, of New York.—I have tried it for some time, but it will not sell.

COIT, of Connecticut.—Very good in Connecticut. Must be thinned if you want good fruit; perhaps two out of three taken off.

Mount Vernon.—WILLIAMS, of Delaware.—I have seen it growing in Virginia and Delaware. It is a fine grower and highly to be recommended. As vigorous as the *Vicar*.

HYDE, of Massachusetts.—Excellent grower, and a hardy tree. The fruit should be thinned, or there will be some specimens that will fail to come up in quality. It has a peculiar flavor, which is unlike that of any pear on the list, and should be cultivated by amateurs for that reason. It originated in Samuel Walker's garden, Boston Highlands. The old tree is standing now.

Napoleon.—QUINN, of New Jersey.—Worthless with me.

STARR, of Nova Scotia.—Condemned with us in Nova Scotia.

SYLVESTER, of New York.—No pear bears better than the *Napoleon*. It is not first quality, but it is a very good market pear, if you understand how to use it. Two or three years ago, about the time of the Franco-Prussian war, I sent several half barrels to New York, and my consignee marked them "Napoleon," kept them on the stand several days, and they did not go. One morning he came down and scratched out "Napoleon," and put on "Bismarck." He sold some of them to a dealer, and the next day he came back and got the rest, and my man said they were coming every few days for some more of those "Bismarcks."

FULLER, of New Jersey.—The rose was sweeter by another name.

Nouveau Poiteau.—QUINN, of New Jersey.—"No go with me."

HANCE, of New Jersey.—Worthless with us.

Onondaga (Swan's Orange).—CORNELL, of New York. Fair in Eastern New York.

CARPENTER, of New York.—One of our most promising American seedlings, undoubtedly. The tree and fruit are about perfect, making a valuable market pear.

HANCE, of New Jersey.—Sheds its leaves badly.

STARR, of Nova Scotia.—Does well in Nova Scotia.

SAUL, of District of Columbia.—For a time, I thought a great deal of it, but it blights and sheds its leaves early.

QUINN, of New Jersey.—Does well in New Jersey.

LEAVENS, of New Hampshire.—Should be double starred for New Hampshire.

CARPENTER, of New York.—I have a specimen tree twenty years old, which is perfect in leaves.

HASKELL, of Massachusetts.—It does very well in Essex County in this State. One of the most valuable pears.

WILLIAMS.—One of the finest in Delaware, for holding its leaves. An admirable variety—its only fault is that it rots at the core.

Ott.—FOOTE, of Massachusetts.—A very delicious little pear, ripening with *Dearborn's Seedling*, or a little later. Very productive, and worthy of cultivation for family use.

KELLAM, of Connecticut.—Very indifferent with me in New Haven.

COIT, of Connecticut.—It is a very small pear, a seedling, I think, of the *Seckel*. It is very sweet, and as an early pear, it is worth having. It is not a market pear.

QUINN, of New Jersey.—Grows and bears very well with me. A very good amateur variety.

CARPENTER, of New York.—I think every collection should have one tree of that pear.

Paradise d' Automne.—STARR, of Nova Scotia.—Succeeds very well with us down in Nova Scotia, and is a valuable pear.

Passe Colmar.—QUINN, of New Jersey.—Poor with me.

TURNER, of Connecticut.—In Hartford, that is one of the very best pears, if it is picked quite early, and ripened in the dark, in a bureau. I learned how to manage it from J. Milton Earle, who recommended it as one of the very best pears, and I have found it so in my experience.

FULLER, of New Jersey.—I never get any fruit unless I thin out three-quarters, and that costs more than the crop is worth, and I have had to give it up.

Pinneo, or Boston.—HYDE, of Massachusetts.—I think well of it.

Pound (Belle Angevine, Winter Bell, Uvedale's St. Germain).—Dr. SWASEY, of Louisiana.—Succeeds well in the South.

Rostiezer.—QUINN, of New Jersey.—Does very well with me as a family pear.

LOVELAND, of Connecticut.—One of the best early pears.

STARR, of Nova Scotia.—Bears well in Nova Scotia, but not a market pear.

FOOTE, of Massachusetts.—Somewhat variable, but a most delicious and very productive pear.

Toon, of Georgia.—Does well in Middle Georgia.

Williams.—Capital in Delaware.

Rutter.—Fuller, of New Jersey.—In Pennsylvania, near its old home, it is very well recommended.

Carpenter, of New York.—I am a little disappointed in the *Rutter*, fruiting it this season for the first time. Fine size, perhaps, but lacks character.

St. Michel Archange.—Dr. Swasey, of Louisiana. —One of the finest pears in the Southern States.

Toon, of Georgia. — Does splendidly with us in Middle Georgia.

Coit, of Connecticut.—Does well in Connecticut.

Foote, of Massachusetts.—Succeeds in Western Massachusetts.

Saul, of District of Columbia.—Succeeds in the District of Columbia; retains its foliage, and is one of the best of all pears.

Copp, of New Hampshire.—A very large and fine pear in New Hampshire.

Seckel. — Foote, of Massachusetts. — Has spotted and cracked badly in our locality for the last three or four years.

Fuller, of New Jersey.—Very bad for your locality, I am sorry to say.

Copp, of New Hampshire.—I would like to have New Hampshire endorse it.

Earle, of Illinois.—The people do not like it as well as they do the *Bartlett*. I saw yesterday morning, in Faneuil Hall Market, a gentleman who had *Seckels* and *Bartletts* for sale by the barrel, and the *Bartletts* were $13.00 a barrel, and the *Seckels* $8.00.

Quinn.—It is flood-tide with the *Bartlett* now, and the *Seckel* season is not really upon us. The *Seckels* bring the best price when they are fully ripe and ready, and it is hardly fair to bring them into that comparison. With me, the price of *Seckels* average higher in their season, than *Bartletts*, in the New York markets.

Dr. Sylvester, of New York.—I have cultivated it for twenty years, and I have found it the next most profitable pear to the *Louise Bonne* for market. But I find this difficulty sometimes; there will be little minute black spots on it, and it will not take on the golden color that it should.

Starr, of Nova Scotia.—We think it is a first-class pear in Nova Scotia, but requires high cultivation and careful pruning to keep it up.

Haskell, of Massachusetts.—In a very few localities, it is still healthy; in others, it has black blotches on it. In almost all the gardens in our town, the *Seckel* is worthless this season. It has been subject to large blotches of black for the last five years.

Williams, of Delaware.—The trees in Delaware are exceedingly vigorous, and the fruit as thick as blackberries. It ought certainly to be double-starred.

Turner, of Connecticut.—Very fine in Hartford. We find it best to let it be upon the tree until very nearly ripe, and then, when it falls in the grass, and lies there about three days, it is in perfection. It ripens much better there than in the house.

Maxwell, of New York.—The *Seckel* overbears, but that difficulty can be easily overcome by thinning.

Sheldon.—Quinn, of New Jersey.—It sheds its leaves and cracks very badly with me. Four or five years ago, I thought it was one of the most promising pears for the orchard, and I put out a good many trees, and grafted a great many. I am now regrafting every one of them. On our heavy soil, it cracks as badly as the *Beurre Diel.*

Coit, of Connecticut. — That was the trouble with me. Four or five years ago, it cracked so badly that I thought I should have to give it up. This year, the fruit is large, fair, and has no cracks. The soil is rich loam, and the trees are well taken care of.

Starr, of Nova Scotia.—So far as we have fruited it in Nova Scotia, we call it first-class.

Carpenter, of New York.—It is giving very good satisfaction with us. A little inclined to crack, but not much.

Loveland, of Connecticut.—It does well in Connecticut.

Dr. Sylvester, of New York.—The original tree stands in Wayne County. Year before last, I sent to market over $90 worth from one tree.

Field, of New Jersey.—I have some trees, eight or nine years old, that shed their leaves, while others, three years old, retain their foliage perfectly.

Saul, of District of Columbia.—In the District, the tree retains its foliage perfectly. I have never seen a cracked pear.

Stevens' Genesee.—Saul, of District of Columbia. —Entirely worthless with us.

Foote, of Massachusetts.—Entirely worthless on my clay soil, and good on my neighbor's gravel, within half a mile.

Quinn, of New Jersey.—Worthless with me.

Carpenter, of New York.—I have it right in gravel, and there it is not worth growing with me.

Loveland, of Connecticut.—Poor in Connecticut.

Supreme de Quimper.—Foote, of Massachusetts. —Ripens with the *Kirtland* and *Seckel*, and is not as good.

Urbaniste.—Hance, of New Jersey.—Should be in every family collection with us.

Vicar of Winkfield (*Le Curé*).—Dr. SWASEY, of Louisiana.—Perfectly worthless in the South.

FOOTE, of Massachusetts.—The most profitable market cooking pear that I know.

Dr. HOWSLEY, of Kansas.—Worthless along the Missouri Valley, from its extreme tendency to blight.

QUINN, of New Jersey.—The most profitable pear for cooking purposes that I know.

CORNELL, of New York.—Free from all disease, a good cooking pear, and when well grown and well ripened, a good eating pear.

FOOTE, of Massachusetts.—It should be severely thinned.

STARR, of Nova Scotia.—In Nova Scotia it grows very luxuriantly and bears well, but frequently it does not mature the fruit well.

WILLIAMS, of Delaware.—In Delaware, grown on high, dry soil, it is not apt to blight; in every other locality, it blights very badly.

BALDERSTON, of Maryland.—In Eastern Maryland, the fruit matures very finely.

QUINN, of New Jersey.—Succeeds well, and bears very well with us.

HASKELL, of Massachusetts.—The best pears I ever ate in February were some specimens of the *Vicar*, with red cheeks, grown on dry soil.

COIT, of Connecticut.—A valuable fruit unquestionably, but must be thinned out, three-quarters. It wants high cultivation. If you can get it up so that it will have a flush upon it, as some specimens will, it is a fair eating pear. For cooking, to keep until March, I do not know a pear superior to it. It wants a little sugar, to be sure.

EARLE, of Illinois.—It requires peculiar management. I think more highly of the *Vicar* than I formerly did. It is indispensable to thin it, otherwise you might as well not attempt to grow it. You will not get any good fruit unless you thin it. You ought to do with it as you do with the *Easter Beurre*. When you get well colored fruit, it is very good second quality.

Dr. SYLVESTER, of New York.—There is no pear that has suffered in character more than the *Vicar*, when it has tried to do so well. It bears so abundantly that it cannot mature the fruit perfectly, and for that it is condemned. If you will take off one-half to two-thirds of the pears, and let the rest remain until there is quite a frost, and then handle them properly, you will get a good eating pear.

FOOTE, of Massachusetts.—I wish that idea might be brought out with emphasis. The *Vicar of Winkfield* requires the vigor in it, and then it is a profitable, good pear.

———, of Connecticut.—I have grown *Vicars* in Connecticut very often, that weighed sixteen ounces.

COIT, of Connecticut.—Col. Wilder said, formerly, that if he could have but one pear, it should be the *Vicar of Winkfield*. I have heard that he changed his mind afterwards, and gave his preference to my favorite, the *Beurre d'Anjou*.

QUINN, of New Jersey.—I believe that an acre of the *Vicar of Winkfield*, properly cared for, can be grown with more profit, selling the fruit at $8.00 a barrel, than an acre of any of the popular varieties, which sell at double that price.

Dr. SYLVESTER, of New York.—I was in New York two or three winters ago in February, and saw a small sized *Vicar* in a window, with a little bit of red sealing wax sticking on the stem. I stepped in and asked how much it was. A dollar for one pear!

COIT, of Connecticut.—It is pretty sure of a ready sale in New York at $7.00 a barrel, for preserving purposes.

Dr. SWASEY, of Louisiana.—For twenty-five years, our most expert pomologists have tried to ripen and mature the *Vicar of Winkfield* in the Southern States, and they have failed, on all kinds of soil, and in all climates.

WILLIAMS, of Delaware.—In Delaware they will bring $7.00 or $7.50 a barrel for preserving purposes, as many as may be offered.

Washington.—CARPENTER, of New York.—A first-rate amateur pear in New York.

SAUL, of District of Columbia.—It sheds its leaves in the District.

SWASEY, of Louisiana.—A perfect success in the South.

LOVELAND, of Connecticut.—It sheds its leaves with me.

White Doyenne (*Virgalieu*).—CORNELL, of New York.—In some sections of Central New York, it retains its original excellence. I have seen it growing on large trees, bearing full crops, with scarcely a crack on the fruit.

FOOTE, of Massachusetts.—I have a single *White Doyenne* tree near my door, sheltered by my buildings, which has borne perfect fruit for thirty years. I was so much encouraged by the appearance of the fruit on that tree, that I set thirty trees on open ground, and not one of them has ever borne a pear worth carrying into the house.

QUINN, of New Jersey.—Entirely worthless.

FULLER, of New Jersey.—I saw it for sale at Salt Lake, as fine as in its palmiest days.

LOVELAND, of Connecticut.—It is bearing good crops in Northern Connecticut.

Winter Nelis.—QUINN, of New Jersey.—A very nice winter pear.

Dr. Swasey, of Louisiana.—Finest winter fruit in the South.

Copp, of New Hampshire.—Good with us.

Hyde, of Massachusetts.—Sheds its leaves and spots badly on light soil.

Earle, of Illinois.—The most worthless tree I have ever planted. I don't know what the fruit is, never grew any.

Windsor (Summer Bell).—Starr, of Nova Scotia.—More of the *Windsor* can be grown on the same land in Nova Scotia than any other pear, but it is not worth more than apples.

The President.—That completes the list. It will now be in order to introduce any new varieties.

NEW VARIETIES.

Souvenir du Congrès.—Barry, of New York.—I would mention the *Souvenir du Congrès,* as a foreign variety of great promise. It is large, very handsome, and ripens before the *Bartlett.* The tree is a fine grower, healthy and vigorous. In fact, it looks remarkably promising, every way. This is the third year I have fruited it. Can be recommended for trial.

Carpenter, of New York.—In regard to that pear, I will say that I introduced it two years ago into my orchard. The tree is remarkably fine, vigorous and promising.

Thomas, of New York.—I have fruited it for the first time this year. I endorse everything said by Mr. Barry in regard to its fine growth. It is a large, handsome pear, but I differ from him a little in regard to its quality. I think in ten years it will not stand very high in quality, but it may be an excellent market pear, for it is very large and showy. I think we had better try it longer before we recommend it.

Barry, of New York.—I only recommend it for trial. I would not recommend anybody to plant five hundred trees.

Dr. Swasey, of Louisiana.—Have you noticed any liability to rot at the core?

Barry.—No, sir.

Adams.—It is a pear of second or third quality on the pear, but on the quince it has failed entirely. I have had it in fruit two seasons.

Williams, of Delaware.—I have seen it in Virginia. It is certainly to be recommended, as far as growth is concerned.

Quinn, of New Jersey.—I have seen a number of very large specimens that had been exposed for a long time, and they were perfectly sound at the core. I have seen no indications of rotting at the core, by leaving it on the tree beyond its ripening time. The flavor I consider very good.

Barry, of New York.—It is only six years since it was exhibited in France, and named at a Congress of Fruit Growers like this. It is not possible that it should have been properly tested here, with the few specimens we have. We generally leave new varieties too long on the tree; we like to look at them.

Williams, of Delaware.—It attracts a great deal of attention at Norfolk, because it is supposed to ripen a week before the *Bartlett*; in which case it would be worth $15.00 a barrel, where the *Bartlett* would be worth but $7.00.

A Member.—Gentlemen who have observed this pear, will hardly give it the credit of being as handsome as the *Bartlett.* The form is eccentric, and the two specimens I have tasted would hardly rank better than third quality.

Seedling Pear.—Foote, of Massachusetts, exhibited a seedling, of which he said: It is a seedling from *Hacon's Incomparable,* an old English pear, crossed, I suppose, with the *Bartlett.* It has been in bearing four or five years, and grown very fair crops. The tree is a vigorous, spreading tree, and bears annually. It is a beautiful pear on its exterior, good size, and ripens with the *Bartlett.*

Barry.—I have fruited it two years, and think very well of it. It is a promising new pear.

Foote.—It has very much of the citron flavor.

Barry.—Yes, there is a peculiar flavor.

Beurre de l'Assomption.—A Delegate.—I would like to ask Mr. Barry about the *Beurre de l'Assomption.*

Barry.—I have not fruited it enough to speak of it. I have had a few specimens three years, but not enough to warrant me in expressing any opinion.

The Nabours.—Berckmans, of Georgia.—I have a pear that is not a new thing—the *Nabours.* It is a Southern variety, and one of the few varieties that retains its foliage until frost. Tree perfectly vigorous, never subject to blight, and an enormous bearer. Its origin is unknown, but we presume it came from Alabama, about twenty years ago. Large to very large; pyriform; skin dark and rough, much covered with russet and dark green spots; flesh very coarse, melting, very juicy and sweet; good quality to very good; ripens August 1st to 25th. It is one of the varieties which we esteem very highly.

Dr. Swasey, of Louisiana.—It is a very good pear with us; nothing special to recommend it. It does very well in the South-west.

Hance, of New Jersey.—How does it ripen—before or after the Bartlett?

Berckmans.—It just comes in when the Bartlett goes out.

A DELEGATE.—I have seen the pear alluded to by Mr. Berckmans, and I consider it a very promising variety indeed for our locality. It has been fruited a number of years in Middle Georgia, and is highly esteemed there.

The Goodale.—COPP, of New Hampshire.—I should like to ask if any gentleman has fruited the pear called the *Goodale?*

HYDE, of Massachusetts.—I have the *Goodale* in fruit. It resembles very much in appearance the *d'Anjou,* a little different in shape. It blows off badly. Hardly as good as the *Howell* for New England. It is ripe about one week after the *Bartlett.* It is a very fair, smooth, handsome pear, and would make a good market fruit.

THOMAS, of New York.—I have fruited the *Goodale* for several years past. The tree is a very fine grower, and the pear handsome, but not good enough in quality for general use.

COPP, of New Hampshire. — It is a very fine grower with me, and a more productive pear than any other I have. Bears every year. Quality not so good as the *Flemish Beauty.* It never rots at the core.

DICKERMAN, of Connecticut.—It blights and drops very badly. I consider it only about a third rate pear.

New varieties that promise well.—BARRY, of New York.—While the subject of new pears is before you, I would read, for the benefit of those who may feel an interest in experimenting with new pears, the names of a few varieties that give promise of excellence, so that they may go on the record.

The *Eugene Appert* is a medium sized, October pear. *Madame Treyve,* medium to large size, resembling somewhat the *Beurre Clairgeau;* a pear of great promise, I think. *Duchesse Precoce,* very large, handsome pear; second quality; early variety of the *Duchesse,* according to the name. *Therese Appert* is another very promising pear. *Andre Desportes,* medium to large size; ripens about the first of August. *Bonne de Puits Ansault,* a very long name, but I think one of the most delicious pears I have received from abroad in many years; full medium size; little roundish; about the color of *Gansel's Bergamot;* very high flavor, I think quite equal to the *Seckel.* Ripens about this time, through the month of September and into October.

Dorsoris.—CARPENTER, of New York.—I would like to speak of a seedling originating on Long Island, named *Dorsoris;* Synonym, *American Beauty;* I have fruited it some five years, and esteem it as a very promising market pear, of great beauty. It is of full medium size, about two-thirds bright scarlet. It is about as good as *Osband's Summer;* not first quality; but one of the handsomest pears I ever saw. The first of August is the time of ripening, before the *Bartlett,* two or three weeks.

Hybrids.—HASKELL, of Massachusetts.—I wish to state that I have placed upon the table in the other hall a plate of hybrid pears, from the *Easter Beurre* and *Bartlett,* which I wish to have the Committee on Fruit examine.

Seedling.—MCLAUGHLIN, of Maine.—I have a seedling of the *McLaughlin* pear, which Mr. Downing and Col. Wilder have spoken very highly of. It is a very handsome pear, ripening about the time of the *Bartlett.*

Eastern Belle.—SAWYER, of Maine.—This is a very handsome fruit, ripens with the *Bartlett.* It received a silver medal from the Massachusetts Horticultural Society.

Discussion on Plums.

Chickasaw.—BERCKMANS, of Georgia.—We have a race of plums in the South that are improvements upon the *Chickasaw,* from which we expect good results. I would like to have those names *seriatim.* We have the *Wild Goose,* of which the *Chickasaw* is a type, and which will often do to send to market. I have statements from Dr. Sawyer's neighborhood, where they were sent to Chicago and brought $9.00 a bushel. It is the wild plum of the Southern country, and it is the quality of those plums that is excellent material to improve upon. The following is a list of best sorts: *Wild Goose, Newman, Mountain Plum, Indian Chief, Temple, De Caradeuc,* a hybrid between *Chickasaw* and foreign.

FULLER, of New Jersey.—We can raise the wild plum of the Atlantic coast in my garden, when all the others are destroyed by the curculio.

QUINN, of New Jersey.—I respect the taste of the curculio.

FULLER.—It is like the *Crab* apple in certain places—that or nothing.

German Prune.—Dr. SWASEY, of Louisiana.—One of the best at the South.

Jefferson.—MASTERS, of Nebraska.—The *Jefferson,* as far as my observation goes, is the best plum we have in Nebraska. It will stand the attacks of the curculio, while nearly all the other varieties will go by the board. They are not wormy and do not drop off.

Lombard.—Dr. SWASEY, of Louisiana.—Does very well in the South. It is the best of the foreign varieties, but does not do so well as the *Chickasaw.*

Smith's Orleans.—STARR, of Nova Scotia.—Very good with us in Nova Scotia.

St. Martin's Quetsche.—Succeeds well in the South.

Washington.—STARR, of Nova Scotia.—Can any one tell me how to make that tree bear? I can grow the fruit to perfection, but cannot get half a crop.

Wild Goose Plum.—WILLIAMS, of Delaware.—The *Wild Goose* has been grown in Delaware and sent to market in strawberry baskets, and sold for thirty cents a quart. The market men did not know what they were, but came back and wanted some more of that handsome fruit, which they said would out-sell any fruit in the market. They are not destroyed by the curculio.

Dr. SWASEY, of Louisiana.—The *Indian Chief*, which very closely resembles the *Wild Goose*, and is by some (among them, myself) preferred to it, and the *Temple* plum, a large, egg-shaped plum, which ripens early, both succeed very well at the South. Some of our plums are destroyed by the curculio, even the *Chickasaw*, but not so generally as the foreign.

A DELEGATE.—They are destroyed just as badly as any plum on the list. There is no plum that is an exception to that rule.

TRANSOU, of Tennessee.—We have but two plums worth growing in Tennessee. *Wild Goose*, ripe middle July, *Rains* or *Kanawa*, 1st August to 1st September.

The Miner.—MASTERS, of Nebraska.—What is the experience of fruit growers with the *Miner* plum? I have had it growing for several years. It came to me recommended as being curculio proof. This year and last, my plums have nearly all fallen off. The worm that attacks them operates differently from any curculio. Instead of cutting a crescent mark on the plum, it strikes right into it. The mark looks like the prick of a pin, and the worm, instead of stopping outside, as the curculio does, goes right to the seed.

A DELEGATE.—It is the plum gouger.

The Richland.—HARRISON, of Pennsylvania.—In our locality, it is the only plum that will survive the curculio. I have seen crops where every plum was distinctly stung, but they outgrew the wound entirely. I won't say it is fire-proof yet, but it has withstood the curculio for several years.

HANCE, of New Jersey.—It has been a perfect success with us; about the only plum we can have.

Discussion on Quinces.

Angers.—BERCKMANS, of Georgia.—In the upper part of Georgia, in limestone soil, it is very productive, and a very good fruit, almost as large as the *Portugal*, but in the lower sections of the State, it is very unproductive.

FULLER, of New Jersey.—I can endorse those points for Northern New Jersey.

MAXWELL, of New York.—I have fruited the *Angers*, and cooked it. It is a very poor bearer with us, and as compared with the *Orange* quince, it is entirely worthless.

FULLER.—I will agree as to that. It is a small fruit, and I should not grow it for market at all.

Dr. SYLVESTER, of New York.—I have fruited it for several years. It is not as large as the *Orange*, and less tough. It has the aroma of the quince, but it is not as good a quince for culinary purposes as the *Orange.*

QUINN, of New Jersey.—With me it has been as with Mr. Maxwell. I would not think of cultivating it for the market when I could get the *Orange* quince. It is very poor and tough.

Rea's Seedling.—MAXWELL.—Why are the *Orange* and *Rea's Seedling* marked as "half tender," and the *Angers* marked "tender?" It is a great surprise to me.

BERCKMANS, of Georgia.—I have had the *Chinese* quince, which I got from Columbia, Ga. In the limestone belt they are very large, and considered to be a very excellent variety for preserving. Others say they cook hard and tough, but that depends upon the way they were picked. It is the most magnificent fruit we have.

MAXWELL.—Several specimens were sent me last fall, and I kept them all winter as curiosities.

BERCKMANS, of Georgia.—They use them for preserving, but I have eaten some that were very fine indeed. Some object to it that it cooks tough, but that is owing to its being kept too long. It is really worth cultivating in some sections for eating.

FULLER, of New Jersey.—I have always considered it worthless, in consequence of its unproductiveness.

SAUL, of District of Columbia.—It don't belong to the same species; it is a different species. I have known it for twenty years. It is a shy bearer. Magnificent large fruit, but perfectly worthless for market.

MAXWELL, of New York.—It is like a mass of wood; can't cook it or use it for any purpose.

BERCKMANS.—The difference of climate has an effect upon it, but at the South it is very fine.

Dr. SWASEY, of Louisiana.—Very popular on the

Gulf, because it matures very early, but does not succeed in the Middle Southern States.

WETHERELL, of Massachusetts.—I would like to inquire why so few quinces are grown, when the price is so high in Boston market?

FULLER, of New Jersey.—The reason why so few quinces are grown is, that insects have destroyed the quince trees all through the country. About the time they commence bearing, the apple-tree borer begins to work upon them, and finally destroys them.

HASKELL, of Massachusetts.—Another reason is, that I have seen quinces that came from New Jersey sold for a dollar and a quarter a barrel. They had been about two dollars a bushel formerly.

FULLER.—There was a fever which made them plant a great many trees in Jersey, but the borer has wiped out the fever.

MOODY, of New York.—In Western New York, the *Orange* quince succeeds splendidly.

Discussion on Grapes.

Agawam.—TOON, of Georgia.—Does very well in Middle Georgia.

Dr. SWASEY, of Louisiana.—Succeeds well in the Gulf States.

Alvey.—BERCKMANS, of Georgia.—Worthless in Georgia.

Clinton.—TOON, of Georgia.—Does well in Middle Georgia. Very promising indeed with us.

Concord.—QUINN, of New Jersey.—Best grape on the list.

MASTERS, of Nebraska.—The *Concord* is worth all the rest of the list in Nebraska.

TURNER, of Hartford.—I had six or eight kinds standing equally exposed, and the only one that escaped the frost was the *Concord.*

WILLIAMS, of Delaware.—Market men are finding some objections to the *Concord* on account of its tender skin.

Croton.—BERCKMANS, of Georgia.—Of no value in the South. Too much foreign blood in it.

Dr. SWASEY, of Louisiana.—Succeeds tolerably well in Mobile, Ala. I have grown it only long enough to fruit it this year.

BERCKMANS, of Georgia.—It did well the first year, and then, like all other foreign grapes, and grapes where there is a mixture of foreign blood, it has gone down every year.

FULLER, of New Jersey.—It is utterly worthless on account of its foreign origin, near New York city.

Dr. SWASEY, of Lousiana.—In July we had a grape show, and out of fifty or sixty varieties, the *Croton* was the best variety on exhibition.

Diana.—MASTERS, of Nebraska.—The *Diana* does well in Nebraska. It is only cultivated by a very few at present.

FULLER.—Then she has a good grape.

Goethe (Rogers' No. 1).—BERCKMANS, of Georgia.—One of the most promising of all the hybrids of Rogers in the South.

SAUL, of District of Columbia.—I consider it, in the District of Columbia, the best of Rogers' seedlings.

Dr. SWASEY, of Louisiana.—Up to this season, it has been considered one of the best of his hybrids in the South. This year, it has rotted with me.

Hartford Prolific.—QUINN, of New Jersey.—Good with me.

LOVELAND, of Connecticut.—Good with me. Makes as good wine as the *Clinton.*

WILLIAMS, of Delaware.—Drops too much from the bunch in Delaware.

TURNER, of Connecticut.—In Connecticut the old vines hold the fruit very well, and do not drop so much.

CARPENTER, of New York.—I have a vine twenty years old, and I cannot get a bunch down without half of them dropping.

FULLER, of New Jersey.—If properly pruned it will hold its berries very well. If it overbears, it is good for nothing.

Herbemont.—BERCKMANS, of Georgia.—Very unproductive in field culture, only profitable in gardens, near buildings. One of the best wine grapes we have, but out in the field almost worthless.

TROWBRIDGE.—How about grafting?

Iona.—CARPENTER.—Take off the star for Eastern New York.

KELLAM, of Connecticut.—Has any one tried the experiment of grafting the *Iona* on stronger vines? The Mayor of New Haven has two or three vines that are doing very finely indeed.

CORNELL, of New York.—On strong soil, with good cultivation, they do well with me in Eastern New York; and it is one of the most delicious grapes that grows out of doors.

LEAVENS, of New Hampshire.—It should be double starred for New Hampshire. One of the best varieties; ripens with the *Concord.*

Dr. SWASEY, of Louisiana.—Not worth cultivating in the Gulf States.

LOVELAND, of Connecticut.—This year, we get only half a crop. Sometimes we get a full crop.

MOODY, of New York.—Is not worth cultivating in the extreme Western part of New York. Our most experienced cultivators have thrown it out. It is too tender for us.

MASTERS, of Nebraska. — I suppose ninety-nine hundredths of all the vines set have failed.

FULLER, of New Jersey.—I have never seen a diseased *Iona* vine that was not covered with the grape louse, and if any of you gentlemen have got a diseased *Isabella, Iona* or *Delaware* vine, I hope you will take it up, and take a magnifying glass and look at it, and see if you have not got that grape louse. It is doing more harm than the climate.

MOODY, of New York.—In Western New York, they must all be lousy.

Dr. SYLVESTER, of New York. — Several years since, I was a member of the Committee on Grapes at our Western New York Fair, and we had eighteen specimens of the *Iona* grown by eighteen different individuals in Western New York, and they were as handsome and delicious grapes as you would wish to find. But notwithstanding this, we find that it is an unproductive vine with us. The complaint is that it has no roots. Now, if we can succeed in grafting this grape on to varieties which have roots, we may save a really delicious grape; but I would recommend no man to plant an *Iona* on its own root. The experiment is now being extensively tried in Western New York of grafting it on vines that have healthy roots, and I am looking forward with a great deal of hope for the result.

BUSH, of Missouri.—That has been my experience in Missouri. I am satisfied that Mr. Fuller has touched on a very vital point. I would like to hear from gentlemen who have had experience in grafting, whether it has any duration. For a couple of years, they will seem to have gained vigor, and to be perfectly healthy, but I would like to know whether this influence extends beyond three years.

BERCKMANS, of Georgia.—In 1865, I grafted about two hundred of the *Iona* upon the *Pauline*, which is a very vigorous grower; I also grafted a whole vineyard of *Catawba* with *Israella*, and had a large amount of fruit, but I never have had a perfect bunch of *Iona* yet. It makes them very prolific in wood. I have had them grow forty feet in one year; but the fruit will set and decay. The *Israella*, grafted on the *Catawba*, is very prolific, but makes very little wood.

MOODY, of New York.—I think I can answer Mr. Bush. One of our most experienced cultivators has done this grafting, and for a year or two the vines seem to thrive and succeed well, but they go back and fail. Undoubtedly it is from some other cause than that they do not of themselves have any roots. I have no confidence in a plant that does not have roots of its own; it will not be sustained long by the leaves. It may succeed for a year or two, but it will go back and become entirely worthless in three years.

Ives.—BERCKMANS, of Georgia.—In our part of the South, it is much superior to the *Hartford Prolific* as a market grape and wine grape. We have had remarkably handsome crops of it this year. I was astonished, in taking a trip in the upper part of the State during the month of August, to find the markets of Atlanta flooded with that grape, and every bunch perfect. Of course, it is not the best by any means in quality, but it is sufficiently good to make it worthy of great attention in our country. I think it is one of the most desirable varieties we have for market purposes.

Dr. SYLVESTER, of New York.—It has not received the attention it deserves, by a great deal. As Mr. Berckmans observes, it is not a first-class grape, but it is good and sells well. I sent it to New York last year by the side of the *Concord*, and it brought as good a price as the *Concord*. It is earlier than the *Concord*, and, what is more, it will keep a great deal longer.

WILLIAMS, of Delaware.—It is exceedingly popular with the market men of New York, if anything, more popular than the *Concord*. Shippers will buy it rather than the *Concord*, for it bears transportation better.

TRANSOU, of Tennessee.—I would like to endorse what Mr. Berckmans has said about the *Ives*. In Tennessee, it has taken the place, as a market grape, of all others.

Col. WILDER, of Massachusetts.—I find it in our markets in perfect condition. It seems to travel better than most other kinds. Although at first we were not quite satisfied with it, I find that at the hotels they think it is going to be popular.

A DELEGATE. — I sell them at sixteen cents a pound in New York.

BUSH, of Missouri.—I pity the purchasers.

(Lindley Rogers' No. 9).—BUSH, of Missouri.—Give it one star in Missouri. It deserves it as well as any that have been tried there.

Col. WILDER.—Nine gentlemen out of eleven selected the No. 9, on one occasion, in preference to the *Delaware*. One of the best.

BERCKMANS, of Georgia.—It is one of the five varieties out of the whole lot that I have left.

Massasoit (Rogers' No. 3).—BUSH, of Missouri.—Much liked in Missouri, but rotted very badly there this year. It is one of the earliest varieties.

Martha.—BUSH, of Missouri.—It has gained new laurels, especially near Lawrence. It stood the terrible winter even better than the *Concord.*

Dr. SYLVESTER, of New York.—It is increasing in favor very much; very hardy, and reasonably productive.

BERCKMANS, of Georgia.—I can not say that its quality is any better than it used to be; very insipid. Very prolific, fine bunch; but no taste; flat.

ELLWANGER, of New York.—The same in Western New York. Very insipid.

FULLER, of New Jersey.—It never was good for anything. It is all for looks.

BUSH, of Missouri.—I didn't say it was.

Dr. SWASEY, of Louisiana.—It succeeds very well in the Southern States.

WILLIAMS, of Delaware.—Is being planted extensively in Delaware. It brings twenty-five cents a pound; is more musky than any grape I ever tasted.

Maxatawney.—SAUL, of District of Columbia.—In the District of Columbia it is, without exception, the finest of all light grapes, equal even to the *Frontignac.*

TRANSOU, of Tennessee.—We endorse what you say about it in Tennessee.

BERCKMANS, of Georgia.—It is not very productive.

SAUL, of District of Columbia.—I have seen it very productive. I have seen a vine on the side of a house, which reached the third or fourth story, and it was loaded with fruit.

Norton's Virginia.—BUSH.—Is richest in *tannin* of any variety we have. *Cynthiana* has very little.

————, of Georgia.—Does very well in Northern Georgia. I know of an instance where six gallons of wine were made from a vine four years old.

MASTERS, of Nebraska.—We consider it the best grape to make red wine in Nebraska; otherwise, it is considered of no value.

Rebecca.—A DELEGATE.—Take it off the list.

WILLIAMS, of Delaware.—Seems to grow in Delaware. I have known of cases where vines brought five dollars' worth of fruit. Is good on clay soil—not so on light land.

Scuppernong.—BERCKMANS, of Georgia.—With us, indispensable. Most valuable as a wine grape. It is one of the things we can not do without. It can not be grown as far north as Norfolk.

QUINN, of New Jersey.—You can't expect us to eat the *Scuppernong.*

BERCKMANS.—If you could have the ripe fruit from the vine, you would know what it is. I could not say too much in praise of the *Scuppernong* as a wine grape. It is one of those things that never fail. Of course, I do not compare it with the Delaware or other fine flavored grapes, but the question is, where shall we find a grape that will give us a profit?—and we have it in the *Scuppernong.*

TRANSOU, of Tennessee.—It is the most profitable wine grape in Tennessee.

Union Village (Ontario.)—FULLER, of New Jersey.—I would recommend that it be stricken from the list.

WILLIAMS.—I second that.

SAUL, of District of Columbia.—Ditto.

Walter.—QUINN, of New Jersey.—I would like to hear about the *Walter.*

Dr. SWASEY, of Louisiana.—I have fruited it for two years in Alabama and Louisiana, and it succeeds very well, but I would not give it too high a recommendation. It is a very good grape; there is no special objection to it.

FULLER, of New Jersey.—Can't do anything with it.

BERCKMANS, of Georgia.—No fruit, although I have had it for six years.

Pres. WILDER.—None with me.

Dr. SYLVESTER, of New York.—Did well for a year or two, and then the leaves dropped.

Wilder (Rogers' No. 4.)—BALDERSTON, of Maryland.—Very fine in Eastern Maryland, bunches very well developed.

BARRY, of New York.—A fine grape for market.

BERCKMANS, of Georgia.—Very good for Middle Georgia.

CARPENTER, of New York.—One of our best hardy grapes.

HARRISON, of Pennsylvania.—It is bringing double the price of any native grape among those old connoisseurs on Chestnut street in Philadelphia.

LOVELAND, of Connecticut.—Scarcely able to stand the winter. Scarcely equal to the Concord.

Dr. SWASEY, of Louisiana.—Succeeds well in the South, and is really a good grape.

NEW VARIETIES.

Cynthiana.—BUSH, of Missouri.—I recommend to the Committee to add the *Cynthiana*, and perhaps take into consideration the *Cunningham.* I will state, in regard to that, that of the vines I had the pleasure of sending to France for testing, my reports are that the *Cunningham* does the best of any. Besides that, in Missouri, it does better than the *Herbemont*, which sometimes rots, when the *Cunningham* does not.

Pres. WILDER.—Does any one know anything about the *Champion?* I forget where I had it from. I find that it ripens earlier than any other, and there is little pulp to it.

BUSH, of Missouri.—I saw it in a price list, and it occurred to me that it might be a mistake in the name, and that it was the *Challenge.*

Pres. WILDER.—I wish to add one name to the list. I was instrumental in inducing Mr. Rogers to bring before the public his hybrids. After all the experience I have had, I wish to say, that *No.* 43 is always quite fine; but *No.* 39, which gentlemen probably do not possess to any great extent, ripens early, and makes a better bunch than *Rogers'* grapes generally. I have no doubt that it is going to be a valuable grape.

The Champion.—Dr. SWASEY, of Louisiana.—We have a grape called the *Early Champion,* which is earlier by ten or fifteen days than the *Hartford Prolific,* and one of the best grapes in cultivation. It originated in New Orleans, and has been sent out by some of our nurserymen this year for the first time.

Pres. WILDER.—I have failed all my life in grafting vines. I could always hybridize, and raise anything I wanted to manipulate, but I never could succeed in grafting grapes. A short time ago, an advertisement came out in a New York paper in relation to a grafting machine by which whole vineyards could be grafted without any loss, or very little. I wrote the gentleman, Mr. Wagner, that I was not prepared to pay fifteen dollars for the machine, but a good many of my vines had got hurt by the frost, and if he would let me try the machine, I would send it back to him. He sent me a machine, and said he should be very happy to let me and my friends try it. I grafted fourteen vines, several of which I thought about dead, and every one of the grafts took. The scions were very small and poor, many of them coming to me by mail, others were large, and I had to adjust the machine, and not being much of a mechanic myself, I did not expect any very good result, but, as I have said, every one of them took finely. I believe that with that machine you may graft a thousand vines without losing ten. I have reason to believe so.

Dr. SYLVESTER, of New York.—Mr. Wagner's machine is used considerably in grafting, with very good success. Any person can learn to graft, from the description he sends with the machine.

FULLER, of New Jersey.—I know mine that were grafted are doing well. Certain kinds are successful.

Discussion on the Phylloxera.

BERCKMANS, of Georgia. — I desire to offer the following resolution, which will be appreciated in this important time:

"*Whereas,* American vine-growers, are accused in the South of France of having introduced there, the *Phylloxera vastatrix or Gall Louse,* which is now causing the destruction of thousands of acres of vineyards, it is due to them that this assertion be removed. It is therefore

"*Resolved,* That a committee be appointed, to fully investigate its origin, whether American or imported, the amount of destruction caused here, its area of dissemination, etc.

"The committee to report the results of their labors, in the Proceedings of the present session."

Motion adopted, and following committee were appointed by the President.

Andrew S. Fuller, of New Jersey; P. J. Berckmans, of Georgia; H. W. Ravenel, of South Carolina; Dr. Thos. Taylor, of Washington, D. C.

A letter was then read from Hon. W. C. Flagg the Secretary elect, regretting non-attendance in consequence of sickness, and wishing cordial success and prosperity to the deliberations of the Society.

Upon motion, the Society adjourned.

AFTERNOON SESSION.

UPON convening in the afternoon, the Discussion on Fruits was dispensed with, and Reports of Committees were received and read, first in order.

The President announced several changes in the appointments for Vice-Presidents, viz., H. T. Williams for the State of Delaware, and L. A. Gould for the State of California.

The essay of Prof. Asa Gray, "Were the Fruits made for Man, or did Man make the Fruits?" was received, and referred to the Committee on Publication.

Reports of Committees.

REPORT ON APPLES.

This was next presented by M. B. Bateham:

The Committee on Apples report that the display of this fruit is remarkably large and fine, embracing nearly two thousand plates and dishes, and mostly large, and fair specimens.

First among the collections from States, are those from Nebraska and Kansas, remarkable for the size and beauty of the specimens, and the large number of varieties; that from Nebraska embracing one hundred and ninety sorts, besides several good seedlings, and that from Kansas one hundred and seventy-five. These two assortments were much alike in character and extent, and both highly commendable.

Next in extent, quality and variety, is the very large collection from the Province of Ontario, embracing one hundred and sixty varieties, besides a number of promising seedlings.

The Polk County, Iowa, Agricultural and Horticultural Society make a very creditable display of one hundred and fifty varieties.

The South Haven, Michigan, Pomological Society exhibited one hundred varieties.

From the State of Vermont we find about one hundred and twenty varieties.

From the State of Ohio one hundred and ten varieties; from Indiana ——— varieties; from Connecticut one hundred varieties, with smaller lots from individuals in Massachusetts, Rhode Island and several other States.

Award of Premiums.—The Committee award the first premium, the Wilder Silver Medal and $50, for State collection, to the State of *Nebraska;* and the second, the Bronze Medal and $25, to the State of *Kansas.*

The first premium for collection grown by one person is awarded to J. W. Ross, of Perrysburg, Ohio, the Wilder Silver Medal and $50, for a collection of one hundred varieties; for the second premium, no competition.

M. B. Bateham,
Lemuel Clapp,
J. W. Manning,
Committee.

Gov. Furnas.—Nebraska donates her awarded premium of $50 to the Treasury of the American Pomological Society. We are not here for the purpose of carrying away the money of the Society, but we would like the Medal. [Applause.]

President Wilder.—The Governor is following the good example which he set at Richmond, where $100 was awarded, which he donated, very kindly in the same gracious manner, to the Society.

AWARDING COMMITTEE ON PEARS.

To the President and Members of the American Pomological Society:

Your Committee on Pears beg leave to report the following awards and ask your concurrence therein.

1st. For the largest and best collection of pears, correctly named from any State or Society. First premium, the Wilder Silver Medal and $50, to the Cambridge, Mass., Horticultural Society, for one hundred and thirty-three varieties.

2d. For second best collection, the Wilder Bronze Medal and $25, to the Connecticut State Board of Agriculture, for one hundred and twenty-two varieties.

3d. For the largest and best collection of pears grown by one individual. First premium, the Wilder Silver Medal and $50, to Ellwanger & Barry, of Rochester, N. Y., for three hundred and seventeen varieties.

4th. For the second best collection of pears, the Wilder Bronze Medal and $25, to Hovey & Co., of Cambridge, Mass., for three hundred and twenty-five varieties.

5th. F. & L. Clapp, of Dorchester, Mass., for collection of eighty-six varieties seedling pears, the Wilder Silver Medal.

We have also awarded the Wilder Silver Medal as Special Premiums:

1st. To the Fruit Growers' Association, of Ontario, Canada, for collection.

2d. Messrs. Smith & Powell, of Syracuse, N. Y., seventy-three varieties of great excellence, including some plates of remarkable beauty.

3d. E. Moody & Sons, of Lockport, N. Y., one hundred and twelve varieties, of which the plates of Bartlett and Beurre d'Anjou are exceptionally fine.

4th. Joshua Cooledge, of Watertown, Mass., fifteen varieties, uniformly large and well grown.

1st. The Wilder Bronze Medal to the Central Delaware Fruit Growers' Society, for a few varieties of remarkable size. The Committee would remark that, although the collection was exhibited by a State Fruit Growers' Society, several well known varieties were incorrectly named.

2d. G. F. B. Leighton, of Norfolk, Va., for fourteen varieties, including best Duchesse, Seckel, Louise Bonne of Jersey, and Lawrence.

3d. John Saul, of Washington, D. C., fifty-one varieties.

4th. W. D. Breckenridge, of Govanstown, Md., forty-seven varieties.

5th. Charles W. Reed, of Sacramento, Cal., thirty-nine varieties.

6th. Charles Dickerman, of New Haven, Conn., eighty-six varieties.

7th. Alexander Dickinson, of Cambridgeport, Mass., forty-seven varieties.

8th. Farmers' Club, Sacramento, Cal., thirteen plates, including best *Beurre Clairgeau* and *Easter Beurre*, and very good *Onondaga*.

9th. Nebraska State Agricultural and Horticultural Society, forty-three varieties.

10th. Rev. Dr. Burnett, of Province of Ontario, fifty-seven varieties.

11th. Parker Earle, of Cobden, Ill., five varieties.

12th. Lewis Slack, of Brookline, Mass., seven varieties.

13th. R. Cushman, of Pawtucket, R. I., thirty-eight varieties.

14th. E. Daniels, of Accotink, Va., four varieties.

15th. J. J. Toon, of Atlanta, Ga., seven varieties.

16th. W. B. Weeks, of Norfolk, Va., five varieties, including best Howell.

The Committee in closing their report, take especial pleasure in calling the attention of the Society to the magnificent collection of pears exhibited outside of competition by our honored President, which in addition to its general excellence, surpasses in point of numbers any other on exhibition.

P. J. Berckmans, Georgia.
Parker Earle, Illinois.
A. W. Harrison, Pennsylvania.
P. T. Quinn, New Jersey.
Robert Manning, Massachusetts.

The President.—Mr. Barry, to whose firm was awarded the Silver Medal and $50 for the best collection of pears from any one individual, desires me to say that he did not compete for money, but he would be very happy to receive the Medal. [Applause.]

Mr. Gold.—The money premium to the Connecticut State Board of Agriculture is donated to the Society. [Applause.]

REPORT ON SEEDLING FRUITS.

This being presented next in order was read by M. B. Bateham.

Horticultural Hall, Boston, Sept. 12, 1873.

To the President and Members of the American Pomological Society:

The Committee on New Fruits respectfully report that they have examined the fruits on exhibition, and find a large collection of *Seedling* pears from Messrs. F. & L. Clapp. They are generally good, but none of them superior to similar varieties of the same season, so far as the committee can judge from the specimens before them, only a few being ripe. No. 12 is the best, and worthy of further trial.

Dr. Howe, of Connecticut, has a collection of pears, —Nos. 20 and 12, are the best—both small, but well flavored.

By George Haskell, of Massachusetts, a seedling peach, small, well colored, sprightly, but not high flavored.

By A. Foote, of Williamstown, Mass., seedling pears from *Seckel* and *Flemish Beauty*, and a seedling apple, *Climax*, said to be from *Nonesuch*,—a pretty apple.

By Col. O. H. Irish, *Annabel*, a seedling apple from Nebraska; unripe but promising.

Nebraska presented a collection of seedling peaches and pears, consisting of a dozen pears and a few peaches. The latter were of moderate merit, the pears were of great excellence, embracing at least three or four which would be regarded as "best" in the pomological scale. This collection of seedling pears is one of the finest we have met with. There were also several seedling apples, which, being yet hard, we could not decide upon the quality.

By Dr. Sylvester, an apple of pleasant flavor.

SEEDLING GRAPES.

N. B. White, of Dedham, Mass.: *August Giant*, a hybrid between the Labrusca and foreign, unripe; also *Muscat of Norfolk*, a white, and *Amber Queen*, the two promising well.

By J. B. Moore, of Concord, Mass.: A collection of seedling grapes, apparently of pure American descent, mostly not ripe enough to decide on their merits, but Nos. 1, 8, 16 and 20 well worthy of further trial. The collection embraces fifty kinds.

By E. W. Bull, of Concord, Mass.: A good collection of seedlings. The committee select the following as promising varieties: Nos. 43, 23, 41, 75, 27, 57, 13.

By G. W. Campbell, of Delaware, O.: *White Delaware*, small and seedy but good flavor; also *The Lady*, a showy, white grape, but astringent.

By Mr. Arnold, of Paris, Canada: Eighteen seedlings, but not ripe enough to pass judgment on them. The same may be said of a seedling by Mr. James Dougall, and another by Miss Cooke.

A seedling by Stephen Hoyt, of New Canaan, Connecticut: Large berry, handsome bunch, flavor good; if the growing qualities be equally superior it will make a good addition to our list of fruits.

By H. E. Hooker, of Rochester, N. Y.: The *Brighton*, berry large, of a *Catawba* color, bunch beautifully formed, flavor superior. If the quality of the vine be good, this one is also valuable.

By J. H. Ricketts, of Newburgh, N. Y.: A large collection. The following names and numbers we

regard as the most promising: *Don Juan*, much like its parent *Iona*; No. 1 will compare with *Hartford Prolific*; *Advance*, like *Creveling*, with an *Iona* flavor; *Medora*; *Quassaick*; No. 48, seedling from Delaware; Nos. 157, 87, 32, 21, 12, 3, 71, 72, 170. The whole collection generally good.

THOMAS MEEHAN,
Secretary to the Committee.

REPORT ON FIGS AND ORANGES.

This was next read by the Secretary:

The committee appointed on figs, oranges, lemons, etc., respectfully report that they find eight varieties of oranges, from the Gulf Coast, by D. Redmond, of Pass Christian, Miss.; also two varieties of oranges, one variety of lemons, one of shaddocks, and one of pomegranates from L. J. Rose, California. Also five varieties of figs by George R. Wilson from Norfolk, Va.

Respectfully submitted,
G. F. B. LEIGHTON,
H. A. SWASEY, M. D.

For best collection of oranges on exhibition, and as to one eminently worthy of it, we recommend the Wilder Silver Medal be awarded to D. Redmond, of Pass Christian, Miss.

Mr. Taylor, of Washington.—The Department of Agriculture has had a series of letters from the growers of oranges in Florida and elsewhere, of late, in reference to a very serious disease which is affecting, at the present time, the orange trees. As the case is under my consideration at Washington, I would say here, that I would feel very much obliged to orange growers if they would forward to me any peculiar specimens, especially any that seem to have the appearance of fungoid growth upon them. I have observed that there is a fungus on the tree, in some quarters, which affects the oranges very materially.

REPORT ON OBJECTS OF SPECIAL MERIT.

This was next read by Mr. Meehan.

HORTICULTURAL HALL, Boston, Sept. 13, 1873.

To the President and Members of the American Pomological Society:

The Committee to whom was referred the examination of fruits on exhibition not coming within the awards of the regular committees, beg respectfully to report that in consequence of not knowing at the time of their examination, with certainty, in all cases, of the action of the Awarding Committees, they can only make the following recommendations, subject to the condition that the articles referred to have not received the regular premiums:

A collection of fruit from the State of Vermont, forwarded by B. Bryant, Wilder Silver Medal.

State Board of Agriculture of Connecticut: A collection worthy of honorable mention.

California, Farmers' Club of California: Fruit of very superior size, and all worthy of special commendation; also worthy of notice, from the same State, is a collection of pears from Charles W. Reed.

F. & L. Clapp, Dorchester, Mass.: A large collection of seedling pears. Commending the effort to improve our fruits, as this collection exhibits, we recommend a Silver Medal.

For the same reason, a Silver Medal is recommended to J. H. Ricketts, of Newburgh, N. Y., for his fine collection of seedling grapes.

To the Deseret Agricultural and Manufacturing Society: For a collection of fruit from Salt Lake Valley, a Bronze Medal.

L. J. Rose, of Los Angelos, Cal., deserves honorable mention for a fine collection of oranges and lemons.

A collection of grapes from J. B. Moore, of Concord, Mass., receive the special commendation of the committee.

Mr. D. Redmond, of Mississippi, exhibits oranges grown in that State.

Polk County Agricultural and Horticultural Society, of Iowa: Silver Medal.

Wisconsin: A collection of fruit deserves high commendation.

South Haven Pomological Society, of Michigan: Collection of fruit—the peaches especially excellent—a Silver Medal.

Hoag & Clark, Lockport, N. Y.: Collection of grapes—honorable mention.

Georgia furnishes a small but good collection from J. J. Toon.

A remarkably fine dish of Porter apples is contributed by George Hill, of Arlington, Mass.

Fruit Growers' Society, of Ontario: Extensive and excellent collection of fruit—Silver Medal.

And also a Silver Medal to George B. Durfee, of Fall River, Mass., for a superior collection of foreign grapes.

Messrs. F. & L. Clapp: Clapp's Favorite pears, remarkably fine—Silver Medal.

THOMAS MEEHAN,
Secretary to the Committee.

Earle, of Illinois.—I move one amendment to this report, and that is, that a Silver Medal be awarded to L. J. Rose, of Los Angelos, for those magnificent oranges. I think it must have been an oversight on the part of the committee.

Meehan.—The committee report "honorable mention."

The President.—That will carry a Medal with it, I think.

REPORT ON PLUMS.

The Report on Plums was next read by the Secretary.

To the Secretary of the American Pomological Society:

Your Committee appointed to examine the plums on exhibition, beg leave to report that they find a collection of forty-six varieties from the Fruit Growers' Association of Ontario worthy of the first premium, and therefore award the same the Wilder Medal and $50.

A collection of fifteen varieties from the Deseret Agricultural and Manufacturing Society of Utah, very much decayed, but fine specimens. Award, the Bronze Medal.

Twelve varieties from C. H. Greenman, of Milton, Wis. We recommend award of Bronze Medal.

Also eight varieties from G. P. Peffer, of Pewaukee, Wis. We recommend award of Bronze Medal.

WM. M. HOWSLEY, Kansas.
F. M. HEXAMER, New York.
E. WILLIAMS, New Jersey.

REPORT ON PEAR BLIGHT, ITS CAUSE, REMEDY OR PREVENTIVE.

The report of Committee on Pear Blight being presented, was read by the Secretary and listened to with close attention.

Hon. Marshall P. Wilder, President American Pomological Society:

DEAR SIR:—The Committee appointed at the last biennial meeting of this Society to investigate the cause of pear blight, and if possible recommend a remedy or preventive therefor, beg leave to submit as follows:

The task allotted to your committee is connected with unusual difficulties, as the subject is one that has for more than a quarter of a century remained an unsolved problem. We therefore enter upon the performance of our duties with the conviction that our efforts must fall short of doing justice to the object in view.

Pear blight assumes different forms, and has consequently different causes for its origin. One form attacks trees *gradually*, its approach is slow and may be detected for months, and often during the preceding season of growth before the tree is fully affected. This form, which may be termed gradual blight, is seen at all seasons during the period of active vegetation, from early spring until September. The progress is usually arrested by a liberal top-dressing of liquid manure, so far as the roots extend, and a severe cutting back of the branches. This must be done whenever the tree assumes an unhealthy appearance. The cause, then, may be safely attributed to exhaustion, and the remedy consists in replenishing the exhausted supply of plant food. This form of blight is often noticed in orchards left unworked, and where the annual or biennial top-dressing with fertilizing agents has been withheld.

Another, and this is the most fatal form, attacks a tree or a portion of it suddenly, causing the affected part to blacken in a few hours after the tree is struck. This is commonly termed *fire blight*. This form is periodical in its attacks and migratory, as it seldom remains permanent in a locality, but leaves an interval of from ten to fifteen years between its occurrences. The greatest intensity is on its first appearance, which occurs usually when the fruit has attained half of its size; it decreases as the season of vegetation advances, but re-appears again the following summer, with less of its previous intensity. After decimating a section of country during two consecutive seasons, there will be an interval of a series of years, during which blight in its other forms may occur, but there will not be a wholesale destruction, as during the prevalence of epidemic blight. Every observation tends to the conclusion that fire blight is caused by Zymotic fungus, whose presence is not detected until life is destroyed in the affected parts. This form offers a wide field for the investigations of microscopists, and from their future labors we hope to arrive, one day, at the origin of this fungoid growth. We are unable to arrive at a satisfactory conclusion, as to what peculiarities of soil and temperature induce the favorable conditions for the development of this fungoid vegetation. In the experimental gardens of the Department of Agriculture at Washington, the following mixture is prepared. Place a half bushel of lime and six pounds of sulphur in a close vessel, pour over it about six gallons of boiling water, adding enough cold water to keep it in a semi-fluid state until cold. It is used as a wash, and applied to the trees and branches as high as can be reached. It should be applied two or three times during the summer. Since this preparation was used, no trees thus treated have been lost, although small limbs, not coated with the mixture, were attacked and destroyed. Carbolic acid has also been used, without any perceptible difference in the result, from the lime and sulphur mixture.

Boiled linseed oil, applied to the trunk and limbs, has been tried near Norfolk, Va., with marvelous cures, as reported. We mention this instance of the use of an extraordinary ingredient, resulting in good effects, as contrary to what is usually the result when using this application upon the body of trees, its effects being to seriously injure the tree, if it does not destroy it.

Still another form of blight is doubtless caused by mechanical actions, by the rupture of tissues consequent to a sudden superabundant flow of sap. This attacks only our most thrifty growing trees, either in early spring, when vegetation first becomes active, or after a period of drought and partial stagnation of vegetation, when abundant rains suddenly force out a luxuriant growth; moderately vigorous trees are never attacked. It is often noticed, in very vigorous trees, that the bark of the trunk is split longitudinally. Whenever this is apparent, such trees are always free from this form of blight, as the pressure upon the cellular and vascular tissues has been relieved. From a series of experiments commenced in 1857, it is demonstrated that trees whose bark had been longitudinally incised and divided, never showed any signs of this form of blight.

Peculiar methods of culture undoubtedly influence the causes of blight; but upon this there exists a wide range of opinion. Clean culture and repeated stirring of the soil, while it may in many instances be conducive to most beneficial results, will often cause a total destruction of a pear orchard. In seasons of Zymotic fungoid, or fire blight, highly cultivated trees fall early victims to the scourge, while those cultivated in grass, with an annual top-dressing of manure, usually escape the contagion.

The third form of blight caused by mechanical action, is seldom found in orchards where the soil is left undisturbed, but is so common in gardens, or where the trees are thoroughly worked, that it has become only a question of time, for the entire destruction of one's orchard.

In the Southern States, this form of blight is the most destructive, as it has become epidemic to all highly cultivated soils. Wherever the land is allowed to become coated with grass or weeds, but kept cut down every few weeks and an annual top-dressing of manure is applied, the result has been most satisfactory, in an abundant crop of fruit and an almost entire freedom from blight.

P. J. Berckmans,
Josiah Hoopes,
Committee.

Discussion on Pear Blight.

The reading of the report introduced an animated discussion from the members.

Dr. Taylor, of Washington—The attention of microscopists has been called to the pear blight, and if a committee of microscopists could be appointed to investigate that matter, and report two years hence, important information might be obtained.

Bryant, of Illinois—I wish to state one fact which conflicts with the opinion expressed in that paper; that is, that trees are more apt to blight in well cultivated soil than in that which is kept in grass. I have planted many pear trees in soil never disturbed by the plow, in prairie soil, and they blighted there as badly as anywhere else.

Barry—That is my view also.

Earle, of Illinois—I rise merely to move the appointment of a committee, to consist of Dr. Thos. Taylor, microscopist of the Department of Agriculture at Washington, to investigate this matter, and report at the next meeting. [Carried.]

The Secretary stated that there was still another letter on this subject, written by Dr. Geo. W. Briggs, of California, entitled "*Notes on the Pear Blight*," submitted for publication. At the request of the Society this was next read.

Notes on Blight of the Pear.

In regard to the vexed question of the cause of blight, your correspondent has faithfully tried for some years to analyze the fungoid theory as a true cause of the disease; and while rust in cotton, smut and rust in small grain may, by the aid of the microscope, very clearly be traced to parasites attacking the structure of the plant or grain under, for them, favorable circumstances as to climate and soil, in no instance have we been able, even with the microscope examining the sap of blighting pear trees, to detect the spores of the fungi; and even if they do exist in the sap of a diseased tree, it is possible for their presence to be, not the cause of the disease itself, but the consequence, as animalcuke in stagnant water. Undrained or badly drained soil, with its accompanying results in (unhealthy) luxuriant growth on rich lands, stagnant moisture, without any undue luxuriance of growth or severe winters, with c ld sufficiently intense in our climate (which does not occur) to induce what is termed frozen sap blight, and a variety of circumstances connected with the condition of the soil, the tree, and the period of the year when blight in the pear orchard is most frequently observed, have led me to think that the true physiology of pear blight forms a striking analogy to gangrene in the human family, and is essentially a disease of the circulation induced by causes predisposing and exciting, coöperating on both the roots of the tree in the soil and the air the tree breathes, with the external agencies of cold and heat. While unripened wood and frozen sap may be a prolific source of blight in the Northern States, stagnant moisture around the roots on lands not well drained, or from their heavy nature as stiff clays, very retentive of water, must be recog-

nized by every observer as the most common source of blight in Virginia. During rainy seasons, with alternating hot weather, as the present year, (when blight is prevalent,) the trees, stimulated to growth by the heat and unable to feed through their roots as rapidly as their nature requires, diseased sap, watery, thin and improper for nutrition, and blighted branches are the consequence, and in general the more rapid has been the growth of the trees, the more soft and tender the wood, the more extensive the disease. It is not surprising that the sap from blighted trees should show cells broken up, in amorphous matter, and even become putrid in obeying the laws of nature in disorganization, like human blood, or that it should contain fungi, the *consequence*, not the *cause* of its loss of *vis vitæ*. The disorganization of the sap by freezing unripened wood and its circulation in the tree, for which it possesses no longer the power of nourishing by the consolidation of its cells, now ruptured, may possibly act as poison, like those introduced into the human circulation. The predisposing as well as the true and direct causes of blight clearly point, as in gangrene, to some mal-influence on the healthy composition of the fluid sap and the entire concurrence of all observers in the fact that stagnant moisture at the root is the most prolific source, causes predisposing and directly, often producing the disease when the physical conditions of the air as previously stated, prevail; the inference we think clear and positive, that no pear orchard is safe from blight in a series of years, on any kind of soil, *without abundant provision for drainage*. In my orchard of twelve hundred trees, a number of cases have occurred to convince me that frozen sap has not been a cause of blight here. For instance, here are buds inserted in July, on the top of six years old trees, the stock above the bud removed, and the tender shoot grows up to frost four feet high, escapes a severe winter with us unhurt, and just below this tree stands another on the edge of a stiff clay hill, where drainage is imperfect, and it, with one adjoining, similar in position, are the only trees in the whole orchard which have lost limbs the present season where blight is very prevalent. The soil of this pear orchard is sandy loam with yellowish clay subsoil, and can be worked very soon after the heaviest rains; a ditch four feet deep, blinded with bricks, runs across the orchard at the slope of the hill on which it is situated, and its outlet shows a continued stream of water, except during long continued drought. Sundry times young trees growing vigorously have, in the spring, apparently blighted and died outright in a few days; the tops were cut promptly, and subsequently removing the stumps we have found the cause to have been ground mice—short tailed rats,—which had cut and barked effectually the roots of the trees. During the past three years more young trees have been destroyed by these rats than by the blight. The noted Weir Orchard of dwarf pears, all dwarfs, near Norfolk, is one of the most convincing proofs of drainage and its influence on blight that could be desired. A similar case is near Portsmouth. Clay hills and heavy clay soils, unless thoroughly drained, are, in Virginia, the worst of all locations for pear orchards. Without discussing more at length theories of blight or gangrene, which may have both internal causes—the soil, and external—temperature of the air, the remedy, as in frost bite, gangrene from cold, gangrene from diseased arteries, or certain kinds of food, as ergot of rye—to avoid the cause for which there is no *cure*.

In my experience, standard pears are more subject to blight than dwarf. *Doyenne Boussock* on the quince—four trees—all blighted and died in two years. *Duchesse d'Angouleme* on quince, rarely blights on proper soil. *Bartlett* on quince should never be planted for an orchard; thirty per cent. fail to do well. Dwarfs, to be healthy, must be hoe-worked and treated like a cabbage-patch for three years after seeding and fruit thinned off yearly. Standard, after two years' clean culture, do well with surface manuring in spring with ashes and bones or old compost, and after one plowing in spring, mowing three times the grass and weeds, mulching trees with the product of mowing before August. Turn over the soil to the trees (after frost for winter surface drainage) in beds, trees on the center. Fifty dwarfs in fruit garden, seeded fifth year after planting in white clover, bone with muck applied to surface around trees every spring, ground mowed by hand three times up to this date, August 1st, and cut down and grass left on ground around the trees. No blight in fruit garden this year. Leaf blight on *Beurre Diel* showing slightly. Some blight on ends of limbs in *Bartlett* standard this year, no tree injured. *Dana's Hovey*, wonderful grower, don't like the fruit as well as *Seckel*. Six trees have been changed by budding to *Moore's Pound*.

Miscellaneous Reports.

The remaining Reports were then presented to be read in order by the Secretary:

REPORT OF COMMITTEE ON PEACHES.

The Committee on Peaches beg leave respectfully to report that we find the following collections:

Howland's Seedling.—From E. Daniels, of Iona, Va., large peach resembling *Crawford's Late*; too much decayed to judge of its merits.

Heath Flower.—From George Pervis, of Nelson County, Va., fair size, resembling *Heath Cling.*

California Seedling and other peaches too far decayed to judge of their merits.

Seedling from *Serrate Early York*, inferior in size, and no better than the parent unless the tree may be more hardy. By George Haskell, of Ipswich, Mass.

Utah collection, too far decayed to judge of the merits of the peaches.

Late Admirable and *Stump the World*, grown by I. F. M. Farquhar, of Providence, R. I.

Central Delaware Fruit Growers' Association.—Twelve varieties, fine specimens, from Milford, Del.; first premium, the Wilder Silver Medal and $50.

Seventeen varieties, private collection from David S. Myers, of Bridgeville, Del.; first premium, the Wilder Silver Medal and $50.

Good specimens of *Crawford's Early*, in large quantity; also fine specimens of ——— *Melocoton* and *Old Mixon Free*, not labeled, from South Haven, Mich., Pleasant View Fruit Farm, three varieties.

Fifteen varieties, named, from Fruit Growers' Association, of Ontario, Canada, a very creditable collection; second premium, Bronze Medal and $25.

Collection of seven varieties of seedling peaches from Nebraska State Horticultural Society, small in size, two kinds of excellent flavor.

Collection of eighteen varieties from Fall River, Mass., exhibited by N. Durfee, private collection. The committee were of opinion that the collection of Mr. Durfee, most of which appeared to have been grown under glass, could not properly compete.

The committee find no seedling peach upon exhibition which they regard of sufficient merit to entitle it to a premium.

GEO. W. CAMPBELL, *Chairman.*
J. S. PRETTYMAN,
WILLIAM SCHLEY,
E. WARE SYLVESTER,
WILLIAM ADAIR.

COMMITTEE ON NATIVE FRUITS.

New fruits of 1872, 1873:

APPLES.

Lanier.—Large, round, regularly shaped; skin yellow, thickly streaked with carmine and with a pale purplish-carmine cheek, a few green blotches near the base; calyx small, open in a shallow regular basin; stalk short, slender, set in a deep cavity; flesh crisp, brittle, sugary quality, good to very good; maturity end of October; a very handsome fruit; origin, Thos. P. Shaw, Edgefield County, S. C.

Etowah.—Medium, conical, very regularly shaped; skin deep carmine-red, with numerous small white dots; calyx closed in a shallow, corrugated basin; stalk slender, set in a deep, narrow cavity; flesh crisp, brittle, sweet, quality good; maturity January to March. Doubtless a seedling of Shockley, but superior to it. Origin, Mark A. Cooper, Etowah Iron Works, Ga.

Cooper's Yellow.—Large, flat and very regular; skin yellow, with a faint red cheek; calyx closed in a shallow, corrugated basin; flesh crisp, brittle, sweet or slightly sub-acid; quality very good; maturity October to January; origin same as *Etowah.* These two varieties were accidental seedlings and grew near one another. They are doubtless both seedlings of Shockley.

Seedling Pomme d'Api.—Medium, quite flat, five-angled denoting its origin to be from *Api Etoile* or star-shaped Lady apple; skin yellow, with a pale red cheek; stalk slender, in a deep cavity; calyx open, in a deep basin; flesh yellowish-white, sugary and well-flavored; quality very good to best; maturity January to May. Origin, Hanover County, Virginia; growth said to be similar to *Pomme d'Api.* Specimens sent April 29, 1873, in perfect condition, by Jno. M. Allan, Esq., Richmond, Va.

Seedling of M. Hamilton.—Large, oblate, sometimes quite flat; skin yellow, with a faint blush, a few greenish blotches and black specks; calyx open, set in a shallow basin; stalk short, in a shallow cavity; flesh brittle, juicy, sub-acid and high flavor; quality very good; maturity January, and has been kept until March. Origin, M. Hamilton, near Columbia S. C.

Wythe or Illinois Pippin.—Originated on the farm of Rodolphus Chandler, of Wythe, Ill., who says the tree is hardy, very vigorous, forming a round head; a late bloomer, a great bearer, and the most profitable variety in his orchard. Fruit medium, oblate, regular; skin whitish, shaded, striped and splashed over two-thirds its surface with bright red; flesh whitish, fine, tender, crisp, juicy, sprightly sub-acid, slightly aromatic; very good; January, March.

McKinney.—A new variety originating on the farm of Luther McKinney, Crawford, N. Y.; tree vigorous, spreading, an early bearer and very productive alternate years, and a light crop the intervening years. Mr. McKinney says, fruit fair, uniform in size and a promising late-keeping market sort.

Fruit medium or above, oblate; skin deep yellow, with a shade of pale brownish-red; flesh whitish-yel-

low, half fine; rather firm, moderately juicy, mild sub-acid, good to very good; March, April.

Milden or Milding.—From John Copp, of Milton Mills, who writes that it originated in Alton, N. H., and that the tree is a very strong, vigorous, upright grower, and very productive alternate years; much valued in its locality for family use and market.

Fruit large, oblate; skin smooth, yellow, shaded, mottled, striped and splashed with bright rich red; flesh whitish-yellow, rather coarse, brittle, juicy, sprightly sub-acid, slightly aromatic; good to very good; October, February.

Zachary Pippin.—Joseph Taylor, of Belgrade, Me., who sends the fruit, says that it was a chance seedling on the land of John Burbank of that town, and came into notice the year Zachary Taylor was inaugurated; tree vigorous, forming a large spreading top, not an early bearer, but producing good crops when established; esteemed for its large size and good flavor.

Fruit large to very large, oblate; skin yellow or greenish-yellow, shaded, striped and splashed with light and dark red; flesh whitish, a little coarse, tender, moderately juicy, sub-acid, rather rich, good to very good; November, December.

Smith's Favorite.—Specimens received from Alfred Smith, Winthrop, Me., who states that it originated on the farm of Isaac Smith of that place and that the tree is vigorous, upright at first, but spreading with age and bearing; an annual bearer, but more productive alternate years; esteemed valuable, especially for market, in the neighborhood of its origin.

Fruit medium, roundish, inclining to oblong; skin pale yellow, striped and splashed over half its surface with light red; flesh pale yellow, half fine, tender, moderately juicy, sub-acid, slightly aromatic; good to very good; October, November.

Haven.—Origin unknown, but disseminated from the garden of George W. Haven, of Portsmouth, N. H., and was supposed to have been imported by his father early in this century; tree vigorous and bears good crops annually of uniformly fair fruit of excellent quality.

Fruit medium, oblate, conic; skin whitish-yellow, often with a shade of pale red on the sunny side; flesh whitish-yellow, fine, tender, juicy, rich, lively, pleasant sub-acid; very good; December, April.

Fall Brown or Brown Fall.—An old and excellent amateur variety of unknown origin, but supposed to be the southern part of New Jersey; tree vigorous, with a round, rather spreading head, very productive alternate years.

Fruit rather below medium, oblate; skin whitish, nearly covered with dull red, and obscure stripes and splashes of a lighter hue; flesh whitish, fine, tender, juicy, mild, rich, pleasant sub-acid; very good; September, November.

Sarah.—Received from Lorin Adams, of East Wilton, Me., who writes that it originated on the farm of John Tufts of that place, and that the tree is hardy, very vigorous, spreading, an early and abundant bearer, but more so alternate years, and a handsome and valuable apple of its season in that locality.

Fruit large to very large-oblate-conic; skin yellow, shaded, striped and splashed with light and dark red over most of the surface, sometimes almost purplish in the sun; flesh whitish, coarse, juicy, tender, brisk sub-acid; good to very good; October, November.

Dean, or Nine Ounce.—Origin unknown, supposed to be Androscoggin County, Me.; the tree is said to be vigorous, spreading, a good bearer alternate years, and is much valued in that locality.

Fruit medium, roundish-oblate-conic; skin whitish, striped and splashed with light red; flesh quite white, juicy, tender, sprightly sub-acid; very good; September, October.

Mathews.—Specimens received from Dollins Brother, Greenwood Depot, Va., who say it is a chance seedling on the farm of Hugh Foster, of Alton, Nelson County, Va., where it is esteemed as a choice family fruit. Tree a stout, upright grower, bears annually, but most abundantly alternate years; fruit medium, roundish; skin smooth, whitish, pale dull red in the sun; flesh white, fine, tender, juicy, mild, pleasant sub-acid; very good; ripe October, February.

Transparent Zoar.—A handsome fall apple which originated with the Zoar Society at Zoar, O., who state that the tree is a vigorous grower, an early and abundant bearer nearly every year.

Fruit large, oblate; skin a beautiful waxen white, shaded with light pink where exposed to the sun; flesh quite white, fine, tender, juicy, mild sub-acid, slightly vinous; very good; September, October.

Race's Red.—Received from E. G. Studley, of Claverack, N. Y., who writes that it is a chance seedling on the farm of Stephen Race, and a valuable variety of its season for market and culinary uses; tree a strong, upright grower, very productive alternate years.

Fruit medium, nearly globular; skin smooth, nearly covered with light scarlet-red, on a yellow ground; flesh white, fine, tender, juicy, pleasant sub-acid, good to very good; August, September.

PEARS.

Nabours.—Synonyms, *Nabors, Neighbors, Green Cluster.*—Large to very large; acute pyriform; skin dark green, much covered with russet and darker green spots, rough; stalk long; calyx open, set in a regular narrow basin; flesh rather coarse, melting, very juicy and sweet with the aroma of the *Beurre Amande* or *Angleterre;* quality very good; maturity August 1st to August 25th. Tree a compact and most vigorous grower; foliage deep green and luxuriant, which is retained until winter; immensely productive. This variety has been disseminated some twenty years, but is still very little known. Its supposed origin is Alabama. A good market fruit.

ADDITIONS TO REPORT OF STANDING COMMITTEE ON NATIVE FRUITS.

Seedling Pear from Christopher Weigel, of Cleveland, O.—Size medium to large; form oblate obovate, acuminate, a rim at the base of stem; stem very stout, one and one-eighth to one and one-half inches long, curved; calyx half closed, with erect segments; basin sharp, abrupt, corrugated; core small; seeds imperfect; flesh yellowish, buttery, melting, juicy, sweet, aromatic; quality very good; maturity, middle of September.

PEACHES.

Tuskena.—Large, oblong, coming to a sharp protuberance, suture distinct; skin yellow, nearly covered with deep orange-red; flesh firm, vinous, sprightly sub-acid; quality very good; cling; ripe in middle Georgia, end of June; a beautiful, very early clingstone; tree vigorous and productive; origin, Mississippi.

Connor's White.—Medium, slightly oblong with a small acute apex and slightly depressed on one side; skin white, nearly covered with crimson and finely pencilled with deeper carmine near the base. Flesh white to the stone, juicy, vinous, sub-acid and well flavored; clingstone; maturity June 25th; the earliest clingstone known so far; origin, Mississippi.

Chick's Early Cling.—Medium; skin white, nearly covered with red; flesh white, vinous and highly flavored; ripens with *Early Tillotson*, and is claimed to be still earlier than *Connor's White;* origin, I. W. & R. S. Chick, Newberry, S. C.

Darby.—Large, round, suture well marked and often with a deep furrow on opposite side; skin creamy white, with a faint blush wash on one side; flesh pure white to the stone, finely-grained, juicy, sweet and rich aroma; clingstone; quality very good; maturity end of October; belongs to the *Heath* type, and so far the latest good variety of the type known; origin, I. W. & R. S. Chick, of Newberry, S. C.

Muscogee.—Very large, round or a little one-sided; suture shallow; skin dingy, pale yellow, nearly covered with brown-red and a very dark brown-crimson cheek, spotted and striped like the *Columbia*, very downy; flesh white with a few red veins near the stone, melting, juicy, buttery and rich, pit small and round; quality very good; maturity August 10 to 20; a white-fleshed *Columbia;* origin, J. C. Cook, Esq., of Columbus, Ga. Reproduces with much regularity from the stone.

Thurber.—Very large, affecting some irregularity in shape, usually globular, at other times somewhat oblong and measuring frequently ten to eleven inches in circumference; skin creamy-white, washed and beautifully pencilled with carmine and deeper carmine marbling; flesh white of peculiar fine texture, dissolving, very juicy, sweet and highly flavored; freestone; quality best; maturity end of July; tree a compact and thrifty grower, and does not affect the straggling habit of its parent, the *Chinese Cling.* This variety has all the merits of the *Chinese Cling*, with the addition of being a freestone; origin, L. E. Berckmans, of Rome, Ga.

Governor.—Very large, often attaining eleven inches in circumference, globular and always regular in shape; skin white, nearly covered with red and a purple-crimson cheek; flesh white, melting, vinous and highly perfumed; freestone; quality best; maturity middle of August. Seedling of *President* which it surpasses in size and quality. Origin, L. E. Berckmans, of Rome, Ga.

Improved Pyramidal.—Medium to large; skin white, nearly covered with delicate carmine and a deep red cheek; flesh white, juicy, melting, vinous and highly flavored; freestone; quality best; maturity August 1st; origin, L. E. Berckmans, of Rome, Ga. The habit of the tree is similar to a Lombardy poplar; it attains a height of thirty feet. The original variety was discovered many years ago by Mr. W. P. Robinson, now of Atlanta, in a nursery row in Kentucky. Its fruit is small, flesh white, dry and very inferior. The improved seedling assumes the habit of the parent with the additional merit of producing an excellent fruit.

Alexander's Early Peach.—Received from J. Capps & Son, who write that it originated on the farm of O. A. Alexander, near Mount Pulaski, Ill., and that the tree is healthy and vigorous, and ripens two weeks earlier than *Hale's Early.*

Fruit medium, roundish, inclining to oblate, or

slightly depressed, regular and smooth, suture slightly sunk; nipple very small, eye rather deeply sunk; skin greenish-white nearly covered with deep rich red, almost purplish in the sun; flesh whitish, stained next the skin, white at the stone, which is small and free, juicy, sweet, vinous, very good.

GRAPES.

Pedee.—A seedling of the *Scuppernong*, which it resembles in size and flavor, but differs from it in season of maturity, which is fully one month later, or middle of October; origin, Dr. H. Williamson, of Darlington, S. C.

BLACKBERRIES.

Snyder Blackberry.—This was found by Mr. —— Snyder on his farm near La Porte, Ind., and was exhibited before the La Porte Horticultural Society, and named *Snyder*. It is said to be hardy, very productive, fine flavor, no core, and one-eighth less in size than *Kittatinny* or *Lawton*.

P. J. Berckmans, *Chairman.*
Charles Downing,
Robert Manning,
Thomas Meehan,
W. C. Flagg,
P. T. Quinn,
John M. Allen.

REPORT OF THE COMMITTEE ON GRAPES.

The Committee on Native Grapes other than seedlings, would submit the following report:

For the largest and best collection of named native Grapes, from any State or Society,

First premium, Ontario Fruit Growers' Association, Wilder Silver Medal and $50.

Second premium, South Haven, Mich., Pomological Society, the Bronze Medal and $25.

For the best collection grown by one individual: First premium, J. H. Ricketts, Newburgh, N. Y., the Wilder Silver Medal and $50.

Second premium, Hoag & Clark, Lockport, N. Y., the Bronze Medal and $25.

For the largest and best collection of named Grapes grown west of the Rocky Mountains: Premium, James Rutter, Florin, Cal., the Wilder Silver Medal and $50.

For the largest and best collection of Grapes grown under glass, George B. Durfee, Fall River, Mass., the Wilder Silver Medal and $50.

H. H. Farley, New York.
C. C. Shaw, New Hampshire.
Samuel Hape, Georgia.
C. C. Hamilton, Nova Scotia.
George Thurber, New York.

REPORT OF THE COMMITTEE ON FOREIGN FRUITS, FALL OF 1873.

In submitting the report on Foreign Fruits, the committee would respectfully say, that but few new valuable varieties have been fruited during the past two years.

PEARS.

St. Therese.—Medium to large; pyriform, oblong; skin bronze-red, sprinkled with dark dots; fruit melting, sweet, very good to best; October.

Duhamel du Monceau.—Fruit large, long, pyriform; skin rather rough, nearly covered with brownish-russet; melting and juicy, with flavor of *Winter Nelis*, delicious; last of November and December.

Beurre Samoyeau.—Medium size; skin yellow, with a red cheek; flesh buttery, juicy and good; November.

Madame H. Desportes.—Medium size; skin yellow, with reddish dots; flesh, melting and juicy; last of September and first of October.

Abbe de Beaumont.—Medium size; skin greenish-yellow, marbled with russet; flesh melting, juicy and very good; August and September.

Eugene Appert.—Medium size, roundish; skin rough, brownish-yellow; flesh melting, sweet, perfumed, delicious; October.

Summer Beurre d'Aremberg.—Medium to small; pyriform; skin yellow, with blotches of russet, like old *Beurre d'Aremberg*; flesh fine, melting, juicy, vinous, delicious, quite equal to the old; last of September.

Among the varieties of pears that were reported upon at the last meeting, the following have proved of more than ordinary merit: *Therese Appert, Madame Treyre, Souvenir du Congres, Duchesse Precoce, Bonne de Puits Ansault.*

The following are valuable additions to the list of Apricots and Peaches.

APRICOTS.

Early Moorpark.—Medium size; very early and excellent; last of July.

Alberge de Montgamet.—Large, early, juicy and good; last of July.

Raisha.—Medium size; fine quality; early; last of July.

PEACHES, (RIVERS.)

Early Victoria.—Small size, like Early York; fine flavor; first of September.

Princess of Wales.—Medium to large; roundish oval; skin marbled and washed with pale red; delicious flavor; adheres somewhat to the stone; first of September.

Early Silver.—Small to medium; pale yellow and red, with a silvery down; fine quality, juicy and delicious; second week in September.

PLUMS.

Reine Claude Rouge.—Small, round, purple; size of *Green Gage;* flesh, green, juicy, very fine, with a *Green Gage* flavor; September.

Jodoigne Green Gage.—Beautifully marbled with purple; fine quality; size and form of a good *Green Gage;* September.

GEO. ELLWANGER,
Chairman of Committee.

Resolutions.

Mr. S. H. Colton, proposed the following Resolutions, which were passed with hearty appreciation.

Resolved, That the cordial thanks of this Society, be extended to William Gray, Jr. and H. H. Hunnewell, Esq., and their wives, for the elegant and generous entertainments, which they gave to the members of this Society at their splendid residences yesterday. The recollection of the very agreeable and enjoyable time we spent there, while walking over the beautiful grounds, and partaking of the sumptuous fare of the generous hosts, will ever be cherished by us as one of the pleasantest occasions of this interesting gathering.

Resolved, That the Secretary be requested to forward a copy of the above resolutions, to the abovenamed gentlemen, signed by himself and also by the President.

Mr. Barry, of New York. In connection with that, I have a duty to perform of a similar nature. It is well known to all the members that since we came here to attend this meeting, we have received a great many courtesies from the President and members of the Massachusetts Horticultural Society, from the Mayor of the City, and the citizens generally, and it is but right that we should acknowledge them. I will therefore offer this resolution:

Resolved, That the thanks of this Society be and are hereby tendered to the Massachusetts Horticultural Society for the liberal and excellent manner in which they have provided for this meeting, and for the many courtesies extended to our members, especially in throwing open to them one of the finest exhibitions of rare exotic plants and flowers ever seen in this country, and inviting them to the banquet at Music Hall this evening. Also.

Resolved, That our thanks are due to His Honor the Mayor of Boston, Hon. H. L. Pierce, for his kind reception of our members in Faneuil Hall.

The resolutions were unanimously adopted.

Mr. Earle, of Illinois, introduced a resolution favoring the project of extending the session of the Society, from three to six days. After discussion by Dr. Howsley, Bush, Taylor, Adams, Hoopes, and others, it was finally laid on the table.

Dr. Sylvester, of New York, offered the following resolution:

Resolved, That a committee of three be appointed to confer with the railroads, freight agents and common carriers, to have fruits transported on the same terms as other agricultural products.

The President appointed the committee as follows: Dr. Sylvester of New York, and Messrs. Moody of Lockport, and Barry of Rochester.

National Centennial Horticultural Society.

Mr. Harrison of Philadelphia.—We wish to invite you to contribute to the Horticultural Department of the Centennial Exhibition. The Park Commissioners have offered thirty-nine acres of ground to be laid out in an ornamental manner, three hundred acres being devoted to the purpose of the entire Exposition. It is suggested that we should grow all kinds of outdoor fruits and plants, and to arrange the horticultural building so as to exhibit plants in different temperatures, illustrating the different classes, hardy, half-hardy, tropical and semi-tropical.

Mr. Barry of New York.—There is one thing we might do in reference to the centennial. They have invited all the Horticultural and Pomological Societies to send delegates to Philadelphia, to confer with them in reference to that exhibition, on the 17th of this month. I would move that the President be appointed a delegate to go to Philadelphia at that time, to represent this Society, with power to appoint a substitute if he is unable to attend. [Carried.]

On motion of Mr. Bush of Missouri, the thanks of the Society were tendered to Mr. H. T. Williams, Secretary *pro tem* for his kind services.

Mr. Anger of Connecticut, moved a vote of thanks to the several railroads and steamboats, who gave the delegates free return tickets, which was passed.

A vote of thanks was then passed to Col. Wilder for his courtesy and urbanity in presiding over the sessions of the Society. The Society then adjourned *sine die*.

BANQUET AT MUSIC HALL, FRIDAY EVENING.

The doors of Music Hall were thrown open at five o'clock and shortly after the members of the Horticultural and Pomological Societies, with their friends and ladies, began to assemble to participate in the pleasures of the social banquet provided for them. This had been arranged as a parting compliment to the members of the Pomological Society from abroad by the members of the Massachusetts Horticultural Society. Music Hall was transformed into a scene of festivity, and horticultural splendor. This was the wedding feast of the Silver Anniversary of the Society, celebrated as its crowning glory, under auspices of the most sumptuous hospitality. The beauty of the arrangements were referred to by the *Boston Journal* thus: "The fragrant offerings of the goddess Flora and the luscious gifts of Pomona, the bright colors of the northern conservatory and the dark, feather-like foliage of tropical growth; the brilliancy of flashing silver, relieved by delicate twining vines; the elegant costumes, bright faces and sparkling eyes; the deep tones of the great organ and the sweet strains of the orchestra combined to please the eye and the ear and gratify that finer taste in which cultured men and women find the highest delight.

"The place of honor on the platform was a circular table which was almost covered with an immense bouquet of light blossoms, and this was flanked on either side by smaller tables graced with smaller bouquets, at which the distinguished guests of the occasion were seated. On either side of the great organ rose immense towering pyramids of brilliancy and fragrance, and the platform was bordered with rare potted plants, while the extreme edge was starred thickly with spikes of many-hued gladiolus from which drooped graceful fringes of smilax.

"The main attraction of the hall was a large table which ran lengthwise of the floor from the center of the platform, and was covered with the most elaborate silver ware as an appropriate offering to the Silver Anniversary of the Society, in whose honor the banquet was given. Tall flower-stands of solid silver, wrought into the most perfect semblance of the ferns and floral ornaments they upheld; brilliant candelabras of silver and all of the necessary accessories of the table, made of the same precious metal, were festooned and linked together in the most beautiful designs with graceful wreaths of smilax hanging from the nicely arranged pyramids of flowers placed at regular intervals. Tall ferns and palms waved their delicate green foliage above the heads of the passing throng, and the sides of the hall were bordered with a variety of variegated plants and flowers.

"Small social round tables were placed in a double row entirely around the hall, at which the guests who were favored with reserved tickets were seated. The first balcony was bordered with a fine array of exotic foliage. While the guests were gathering, the great organ was played for a half hour, and the scene from the balcony, while the elegant costumes of the ladies in the general promenade mingled with the flowers and the ferns, was brilliant in the extreme. The gathering was especially notable for the presence of men of prominence in all the walks and callings of life, not only from all sections of Massachusetts, but from the North, the South, the East and the West."

President Strong of the Massachusetts Horticultural Society, and the venerable President Wilder of the Pomological Society, Governor Washburn, Mayor Pierce, Dr. George B. Loring, and Mr. Patrick Barry, of Rochester, N. Y., with several ladies, were seated at the central table on the platform, while prominent delegates, and other distinguished invited guests with their ladies, occupied the smaller tables on the right and left. The assemblage on the floor, was one of mark. Collector Russell and daughter, Revs. Dr. Webb and Miner, ex-Governor Washburn, Hon. Alexander H. Rice, Hon. George S. Hillard, Hon. Rufus S. Frost, Hon. Josiah Quincy and a host of distinguished faces were among the throng.

After the organ concert, the orchestral music of the Germania Band, which was stationed in the balcony, filled the fragrance-laden air with sweet harmonies,

both while the platform guests came in and were seated and while the sumptuous banquet was served. Grace was said by the Rev. James H. Means, of Dorchester.

After the banquet, chairs were brought in, and when the company were comfortably seated, President Strong, of the Massachusetts Society, called the assemblage to order, and made the following speech of welcome:

Address of President Strong.

Members of the American Pomological Society: Ladies and Gentlemen.—It is with special pleasure that I welcome you to the festivities of this hour. We fully appreciate the legitimate work of the Convention. It is supreme authority in determining the nomenclature of the fruits of this widely extended Republic, and the Dominion of Canada. It settles, so far as is possible, the relative value of the various fruits and their adaptation to the different sections of our country. It diffuses valuable information which could not otherwise be obtained. It awakens an interest and stimulates the enterprise of our cultivators. More than this, and shall I say most important of all, it creates a bond of good fellowship, which is a happy augury for the future of our country.

In the early history of the Republic, it was feared that the material interests of the thirteen States were so diverse, and the distances were so great, that the Union would fall asunder of its own weight.

What shall be said now that our bounds stretch across the continent? Yet we are never to forget that an equally vast change in diminishing distances has been wrought by the power of steam and the telegraph. Practically, we are nearer together than were the old thirteen States. And in my judgment it is of utmost importance that we cultivate that nearness, not merely by the free interchange of the products and the rapid transmission of news, but more especially by a thorough acquaintance and intermingling of the people of the different sections and the formation of friendships which shall be stronger than political ties. It is in this aspect that I welcome you to these hospitalities and this free interchange of social amenities. We have been weaving cords the past week which unite hearts in enduring bonds of friendship. Let us do all that is in our power to strengthen those bonds.

It is but natural that I turn to one who has been most active in every such good work and give you, as the first sentiment of the evening—

"Hon. Marshall Pinckney Wilder—Pomology and Horticulture alike claim him as one of their most devoted and self-sacrificing patrons, and vie with each other in doing him honor."

The sentiment was received with loud applause and was followed with "Auld Lang Syne" by the orchestra. Col. Wilder, as he arose to speak, was greeted with loud and prolonged applause. He responded as follows:

President Wilder's Address.

Mr. President: I am deeply sensible of the honor conferred by the sentiment which you have just announced. It is a singular felicity, sir, that we, as citizens of the same city, should be called on to exchange these courtesies of official duty. But I beg to assure you, in behalf of the American Pomological Society, that nothing could be more grateful to us than to be thus kindly remembered by you.

The present occasion will be memorable in the annals of American pomology, not only as marking an important epoch in the history of our Society, but for the large assemblage of the best cultivators of our land, and the remarkable collection of fruits which has graced the exhibition of the week. But the thought which engrosses my mind at the present moment, is the wonderful progress of fruit culture during the present century.

True, our Puritan fathers in planting the seeds of empire did not forget to plant some fruit trees. Governor Endicott at Salem, Governor Stuyvesant at New York, and Peregrine White at Plymouth planted their pear and apple trees. But during the first century and a half very little attention was given to the cultivation of fruits. It was not until after the establishment of the London and Paris Horticultural Societies, the former in 1808, and the latter in 1827, that any considerable progress had been made in the improvement of fruits. In fact, there were very few Horticultural or Agricultural Societies extant until the beginning of the present century. The first Agricultural Society established on this continent was the Philadelphia Society for the Promotion of Agriculture in 1785, of which our own Timothy Pickering was the first secretary. It is but just to state that a similar society had been started in South Carolina a month previous, but I believe does not now survive. The second Agricultural Society in America was the Massachusetts Society for Promoting Agriculture, formed in 1792, whose delegates honor us with their presence this evening. But to confine myself to Horticultural Societies. The first, still existing, in America was the Pennsylvania Horticultural Society, established in 1827; the second was the Massachusetts Horticul-

tural Society, formed in 1829. The first National Pomological organization, of which we have any knowledge, was the American Pomological Society, whose Quarter Centennial we this day celebrate. Now there are more than one thousand agricultural, horticultural and kindred associations registered on the books of the Department at Washington.

You have been pleased to allude to me in connection with Horticulture as well as Pomology. Well, sir, let me say that, from my earliest years, I cannot remember the time when I did not love the cultivation of the soil, and the more I am brought into communion with nature, the more am I filled with gratitude to the Giver of all good that he gave me a love for fruits and flowers, and cast my lot where I might enjoy them and have sweet intercourse with these lovely objects of creation. And who does not look with wonder and admiration on the infinitude, beauty and perfection of these works of the Hand Divine—the enamelled blossom bespangling the orchard with starry spray scarcely less numerous than the glittering host above, dancing in rainbow hues and flinging on the breeze a fragrance richer than Ceylon's isles, —sweet harbinger of bountiful harvest! The luscious fruits, God's best gift to man, save woman—the velvet peach, mantled with beauty's softest blush, and vying with the oriency of the morning; the delicious plum, veiled with silvery bloom over robes of purple or cloth of vegetable gold; the royal grape, the brilliant cherry, the melting pear and the burnished apple, tempting human taste from the mother of our race to her last fair daughter. But what pencil can sketch the changing hues, the magnificence and glory when Pomona pours from her ever flowing lap the varied treasures of the ripening year. Here are creations originally pronounced "very good." Here are beauties which fade only to re-appear again.

From the beginning there seems to have been an intimate connection between trees and man. Trees are spoken of as though man could not live without them, as though Divine Beneficence had given them to us as companions for life, and as emblems of all that is beautiful in imagery, excellent in character, or hopeful in destiny. Our trees—from the opening bud to the golden harvest—from the laying off of their autumnal livery, and during their rest in winter's shroud, waiting a resurrection to a new and superior life—are all eloquent preachers, proclaiming to our inmost soul, "The hand that made us is Divine." God gave us trees adorned with inimitable beauty, pleasant to the sight and good for food. He gave us, also, a natural and instinctive love for them. Witness the love of Abraham desiring to have all the trees that were in the field, and in the border round about—of Rosseau longing to be laid under his own sequestered trees—of Temple directing that his heart should be buried beneath the tree of his own planting—of Washington returning to the cherished groves of Mount Vernon—of Webster reclining in life, and sleeping in death under the umbrageous elms of Marshfield—of our own Downing, whose genius lives in trees which adorn many a lovely landscape, many a beautiful garden, and many a fruitful orchard in our land. But, Mr. President, I must not prolong this train of thought. Permit me, sir, again to thank you, for the numerous courtesies and hospitalities which have been received at your hands and those of our fellow-citizens, and especially for the pleasures of this occasion, and the brilliant assemblage with which you have surrounded us.

The remarks of Col. Wilder were frequently interrupted with applause.

After a selection from "Fra Diavolo" by the orchestra, Mr. Strong stated that at his request Col. Wilder had kindly consented to preside for the remainder of the evening.

Col. Wilder then announced the first regular sentiment, as follows:

"Massachusetts—The strong mother who rears her children by a rugged discipline, the generous mother who endows them with bountiful gifts; she has raised a Governor whose excellence as a magistrate is only equalled by his worth as a man." [Applause.]

Governor Washburn was greeted with loud applause and responded as follows:

Response of Governor Washburn.

Ladies and Gentlemen:—I thank you for this kind greeting. I am most happy to be present on so interesting an occasion. The atmosphere which we are permitted to breathe this evening is most delightful to many of us, and I have felt, when called upon to say a word, that the occasion is more eloquent than any words which I can utter. To any one who has been permitted to examine the exhibition in these halls it must have seemed that almost every State and every Territory in the Union was speaking in a manner that no mere words could impress upon a person. We are called abroad a nation of boasters. How apt we are to proclaim to the world what we can do, and we proclaim it so often, that we are becoming almost tired of these professions, and are ready to say, "Give us an example, and not a profession." So I feel in regard to this exhibition which we have been permitted to witness, and to these friends of ours, who have come forward with their exhibition to show to us what they have been enables to accomplish

and not with empty professions of what they can do. [Applause.] I am most happy to say to our friends from the States and the Territories, that they are most welcome to our good State on so interesting an occasion as this, and however much they may have been disappointed, some of them, as they came upon our soil, at its barrenness as compared with the richness of their own, still we say to them, there is no better State in this broad Union of ours in which to make the exhibition presented on this occasion. [Loud applause.] If we have not so rich a soil, yet we say that we here produce men and women who are enabled to do a work equal to any which can be accomplished in any State in the land. And we welcome you on this occasion, and are interested to know by the productions, that our distant Western States and Territories are little behind the older States in that prosperity and success which has attended their efforts in the exhibition which has been presented to us.

But I know that this occasion belongs to others instead of me, and I have only a word or two more. I recollect full well, when a mere child, passing by the home of your honored President, and how I looked upon the efforts he was making in behalf of this Commonwealth, and I might say of the country at large, in developing the interest in which he was engaged. I felt then that he had accomplished what few men could live to accomplish. He seemed to have risen to the same position which he now occupies; but, how much he has since accomplished! As I looked upon the table, spread from one end to the other by his own labor, I thought, would to God there had been some way provided by which these efforts and powers might be perpetuated from generation to generation, in order that he still might go on increasing and benefiting the country at large by his efforts in this direction. [Applause.]

But, my friends, I recollected that although he might pass away, his works would live after him, and the monument he had been able to rear and perpetuate would stand when the mere monuments of granite and marble should be forgotten; this monument which will speak in language too eloquent ever to be forgotten over this broad land of ours. [Loud applause.]

After more music, Col. Wilder announced the next sentiment as follows:

"The Pennsylvania Horticultural Society—The first Horticultural Society established on this continent; fruitful in its labors and broad in its influence, it is her mission to lead; let her fulfill it." [Applause.]

Mr. Schaffer, President of the Pennsylvania Horticultural Society, was introduced and was greeted with applause. He responded as follows:

Response of President Schaffer, of Pennsylvania.

Mr. President:—I rise to thank you on behalf of the Pennsylvania Horticultural Society, for the flattering sentiment you have just read, and when I return home I shall tell our people they must look well to their honors, or they will be carried off by their first-born. We have other favors to thank you for, Mr. President. We thank the Massachusetts Horticultural Society for this bountiful and beautiful entertainment; we thank Mr. Gray and Mr. Hunnewell for their hospitable entertainment, as well as for the opportunity afforded us to visit their truly beautiful places, and we thank especially His Honor, your Mayor, for the very kind reception accorded us on Wednesday morning in Faneuil Hall.

Mr. President, I have often stood in Independence Hall, but even there I never was stirred as I was on that morning as I looked on the portraits of Hancock, Adams and Quincy. I thought of the great events which occurred in that hall just one hundred years ago, when, in August, 1773, your people, led by these and other patriots, assembled there to appoint a committee to call on the consignees of the tea to be shipped to your port by the East India Company, requesting them to resign; of all the other anxious and earnest proceedings had there, until that final meeting on the 15th of December, after the arrival of the Dartmouth with the teas, culminating in what is known as the great Boston Tea Party. This event, Mr. President, is worthy a centennial celebration.

Perhaps it may be called the initiative of the bloody war in which the sons of South Carolina, North Carolina and Virginia stood shoulder to shoulder with those of Massachusetts, New York and Pennsylvania, resulting in our becoming an independent nation. Mars then ruled the hour. Happily his temple is now closed—may it remain closed in this land forever. How different the circumstances of our present meeting! The gentle Pomona looks down with approval on our efforts, and waves us on in the peaceful path we are now pursuing. We have here to-night Mr. President, not only delegates from the old thirteen, but we have delegates from a far greater number of new States and Territories, striving for and carrying off the palm of victory.

Before I sit down, Mr. President, I desire to say that we of Pennsylvania take a deep interest in the success of the approaching Centennial Celebration, and I doubt not you all have the same feeling.

The Pennsylvania Horticultural Society has been requested, by the Executive Committee of the Centennial Commission, to organize a National Association

on Horticulture, with whose assistance they hope to make this department of the exhibition a great success. For this purpose a meeting of delegates has been called in Philadelphia on Wednesday next, the 18th inst., at 12 o'clock, in Horticultural Hall, at which time I hope all delegates here present will be able to attend.

Mr. Schaffer's remarks were applauded, and after "Hail Columbia" by the band, Col. Wilder announced the next regular sentiment as follows:

"The City of Boston—Renowned alike for her hospitality, philanthropy and patriotism; in her Mayor we recognize a native seedling, giving great promise of becoming a popular fruit." [Applause and laughter.]

Mayor Pierce, of Boston, was introduced and greeted with loud applause, after which he responded as follows:

Response of Mayor Pierce.

Mr. President, Ladies and Gentlemen:—In rising amid this scene of beauty which surrounds me, to respond to the sentiment which has been offered, my first impulse is to return my grateful thanks for the invitation which has brought me here to-night. I did not come here, my friends, to make an address, but rather to escape for a brief hour from the cares and anxieties of public duty. We may well congratulate ourselves, that the American Pomological Society selected our State in which to hold this anniversary. The exhibition of flowers and of fruits which has been spread before our citizens, during the past week, cannot fail to exert upon them a most refining and elevating influence. No one can behold these beautiful flowers and this delicious fruit, which have been spread before our eyes, without calling out from within him all that is noble and best in his nature; and for this reason I return you my own thanks, and the thanks of all our citizens, that this Society has honored us with its presence at this time. [Applause.]

The Chairman then announced the next regular sentiment as follows

"The Great Valley of the West—The orchard of Uncle Sam's farm, which furnishes supplies to all the world, and leaves an ample store at home."

I will call upon His Excellency Gov. Furnas, of Nebraska, to respond. [Loud applause.]

Response of Governor Furnas.

I thank you, Mr. President, for the honor of being called before this assembly. It is said that "there is a time and place for all things." I was struck by the remark made by His Excellency, your Governor, that the surroundings here speak louder than man could speak. We hail from the youngest State in the Union—a State to which you were pleased to give the name, two years ago, of "the infant State of the Union," and it is not our purpose, and would not become us, under these circumstances, to come here and talk before you, old men, upon the subject of pomology. We have brought you our fruits, and placed them before you. They, like your hospitality, speak for themselves, and we content ourselves by sitting at your feet and learning wisdom in this matter.

I trust that you will excuse me, now, from making any further remarks than simply to put in an appearance, as we are here for the purpose, Mr. President, of learning, not of teaching. I thank you again for the honor you confer upon me. [Applause.]

And I also feel gratified that we are here thus to honor the distinguished President of the Society, who has spoken to you so beautifully to-night. And I also thank you, ladies and gentlemen, for your kind attention to what I have said, and I beg you will excuse me from further occupying your time. [Loud applause.]

The next regular toast was then announced as follows:

"The Massachusetts Society for Promoting Agriculture—The uniform friend of agriculture and rural economy; the annals of husbandry attest the value of her labors."

Mr. Wilder called upon Hon. Leverett Saltonstall, Vice-President of the Society, to respond. Mr. Saltonstall was on the floor of the hall and rose to speak there, but was called to the platform amid applause. He responded substantially as follows:

Response of Hon. Leverett Saltonstall.

Mr. Saltonstall said that he came there to listen, and little expected to be called upon to speak. It was a rare privilege for him, however, to be present as the representative of the time-honored Society for Promoting Agriculture. It was not expected that he should make a review of the history of the Society, which was familiar to the agriculturists and horticulturists of the land. In 1792, upon this old barren soil, and rocks and ice, a few noble-hearted men, the very best of her sons, gathered together—Samuel Adams and John Adams and James Bowdoin, Thomas L. Winthrop and Christopher Gore—men who felt that upon agriculture depended the whole future of this young country—such men as these assembled and formed this Society. The records of the Society give a singular instance of what was then thought the future of the country, where appear the

words of John Lowell, that he hoped to see the time when every farmer would be able to put into his barn, for winter use, at least five barrels of apples, [laughter] a state of things that the farmers of New England, in their wildest dreams, never conceived would come to pass. Look upon the country at that time, and then come down to the present time and look upon this broad land, and try and picture what those noble men would think, could they have gazed upon what we have this week witnessed.

Mr. Saltonstall drew a vivid contrast of the country at the time the Society for Promoting Agriculture was formed, and its condition now, and asked if they might not well be startled at its marvellous growth. In conclusion, he expressed the hope that by this friendly rivalry in the production of fruits and flowers and provisions of all kinds, the States of the whole Union might be brought into closer and more harmonious relationship. [Loud applause.]

The Ode.

Mr. Nelson Varley then sang, in a very fine manner, the following beautiful ode, written by Miss Hannah F. Gould for the anniversary dinner of the Massachusetts Horticultural Society, in Boston, October 3, 1832. The music was written for the occasion, and dedicated to Col. Wilder, by Mr. F. H. Torrington:

From him who was lord of the fruits and the flowers
  That in Paradise grew, ere he lost its possession—
Who breathed in the balm and reposed in the bowers
  Of our garden ancestral, we claim our profession;
    While fruits sweet and bright
    Bless our taste and our sight,
As e'er gave our father, in Eden, delight.
And fountains as pure in their crystal still gush
By the Vine in her verdure, the Rose in her blush.

While others in clouds sit to murmur and grieve
  That Earth has her wormwood, her pitfalls and brambles,
We, smiling, go on, her rich gifts to receive,
  Where the boughs drop their purple and gold on our rambles.
    Untiring and free,
    While we work like the bee,
We bear off a sweet from each plant, shrub and tree.
Where some will find thorns but to torture the flesh,
We pluck the ripe clusters our souls to refresh.

Yet not for ourselves would we draw from the soil
  The beauty that Heaven in its vitals has hidden;
For, thus to lock up the fair fruit of our toil
  Were bliss half-possessed and a sin all-forbidden.
    Like morning's first ray,
    When it spreads into day,
Our hearts must flow out, until self fades away;
Our joys in the bosoms around us, when sown,
Like seeds, will spring up, and bloom out for our own.

And this makes the world but a garden to us,
  Where He, who has walled it, his glory is shedding.
His smile lays the tints; and, beholding it thus,
  We gratefully feast while his bounty is spreading.
    Our spirits grow bright
    As they bathe in the light
That pours round the board where in joy we unite;
While the sparks that we take to enkindle our mirth
Are the gems which the skies sprinkle down o'er the earth.

And, now, that we meet, and the chain is of *flowers*,
  Which bind us together, may sadness ne'er blight them,
Till those who *must* break from a compact like ours,
  Ascend, and the ties of the blest reunite them!
    May each who is here
    At the banquet appear,
Where Life fills the wine-cup, and Love makes it clear.
Then Gilead's balm in its freshness will flow
O'er the wounds which the *pruning-knife* gave us below.

The next sentiment was "Virginia, the home of great men. She has taken many first prizes. We give a hearty welcome to her delegation."

Hon. Mr. Daniels, of Richmond, was called upon to respond, which he did as follows:

Response of Hon. Mr. Daniels.

Mr. President, Ladies and Gentlemen:—The sentiment which has just been read, upon an occasion like this, and in this city of Boston, cannot fail to awaken a responsive thrill in the heart of every Virginian.

Why, sir, every time that I go by the building where the bold House of Burgesses acted in Revolutionary days, I can almost hear the voice of Patrick Henry as he said, "Give me liberty, or give me death." I remember, as every Virginian ought to remember, that these words ran along the electric line of common consent, until they were echoed back in old Faneuil Hall by Samuel Adams and James Otis in the city of Boston. And in the dark days of the Revolution, when Cornwallis and Carleton unfurled their banners, the men of Massachusetts marched side by side with the sons of Virginia, and from Bunker Hill to Yorktown, they stood shoulder to shoulder, until the new nation was bound together in the great sisterhood, as were Massachusetts and Virginia, in a union that shall last while America exists.

Yes, gentlemen, whatever days of gloom, whatever transient disruptions, whatever temporary clouds may have passed over the pleasant relations between this and the other sister States, those days are now past.

Mr. Daniels proceeded to say that there are men on every mountain side and in every valley in Virginia, coming again to renew with the people of New England the affection and patriotic love for our country and our flag, which in early days bound them together. The most glorious results in the United

States, are these which sprang from such efforts as that which called together this Convention and the audience assembled upon the occasion. They were efforts which related to the material development of the resources of our country, and which tended to bettering the physical condition, and thereby its intellectual and spiritual condition.

The mission, he said, of this Pomological Society, is to turn men away from the dusty pathways of politics and of trade, into these divine and beautiful pursuits that organize rude matter into forms of beauty; that give a reminiscence of that Paradise which we have lost, and an anticipation of the fair Heaven toward which our happiest aspirations point. He said, when you come to Virginia, bringing such a pomology as that which you, sir, and your coadjutors have carried to so high a degree of perfection here, you have brought to us the highest gift—a gift which no frost can blight, no change of temperature, no change of relations, no political changes can destroy—which will take a hold upon the hearts of men, civilizing, humanizing, elevating, refining. As it refines the crude matter which is organized into the beautiful forms of the fruits and flowers, so they produce a retroactive effect upon us. We ask you from your abundance, to send us men to come and help us in this great pomology. The soil, he said, affords most splendid opportunities. We ask you, as in the days of the Revolution, "Send down an army." He closed by asking that men shall be sent to Virginia from Massachusetts, which, he said, is not big enough to raise all the giants she can rear, even though she can raise men. They should be transplanted to Virginia, for the benefit of that State and for the benefit of Pomology. [Applause.]

The next regular toast was:

"Our own New England—A plant which sprang from the seed of the Mayflower. It still endures. Long may it live and flourish, a noble instance of the triumph of culture on a poor soil."

Speech of Dr. George B. Loring,

PRESIDENT OF THE NEW ENGLAND AGRICULTURAL SOCIETY.

He expressed his thanks at being called upon to address so useful an association; said it was a remarkable feature of the times, that agriculture, which is so noble a pursuit, should, more than any other industry, require defence. The modern farmer seems to have fallen somehow under a cloud; his home, we are told, is somewhat gloomy, his physical condition somewhat worn, his mind somewhat dull and barren, and his general instincts not up to the usual standard which makes an American and a New Englander worthy to live on the face of the earth. He found himself continually called upon to defend this great industry.

He said: I find myself compelled, continually, to defend the Agricultural College in the State of Massachusetts, so famous as she is for her institutions of learning. I am continually called upon to prove that farming is profitable; that the happy, satisfied population which pours out continually from the farm-house of New England must have a good living inside those farm-houses. Farming is the industry which makes your wharves worth owning; which not only feeds 40,000,000 people, but produces that which makes commerce worth pursuing.

Something else he had endeavored to teach, and that was to teach the farmer how, in some way or another, he can obtain a perfect horse [laughter], and he said he was supported on either hand in this endeavor by the two most distinguished theologians in the United States. I have endeavored to do my duty well. "The perfect horse; how to get him, how to feed him, how to shoe him, how to drive him, and how to get rid of him honestly when he is not worth anything." I think we have done it well. [Laughter.]

He congratulated the President and himself that, in defence of agriculture, he could lean upon pomologists and horticulturists, for to them is due the attractiveness of the old farm-houses standing by the wayside. All are under the heaviest obligations to pomologists and horticulturists. He urged a large attendance at the Centennial Celebration, and said there is a great work to be performed to prepare for it. He had been, he said, appointed by President Grant as Centennial Commissioner for Massachusetts, and trusted he should be able to discharge that duty well. He said he was free to confess that his heart sank within him when he heard that patriotic and manly resolution at the Convention held Wednesday, that declared that office-holders ought to have nothing to do with the politics of Massachusetts. He hoped that every farmer and horticulturist and pomologist would excuse him if, while holding his office in the old Commonwealth, he should try to do his duty in the other capacity meantime.

He closed by saying he was sure there was not a man interested in the prosperity of this land who will not be interested in that enterprise. He proposed the sentiment:

"Agriculture, Horticulture, Pomology — United they stand, divided they fall." [Applause.]

The President then announced the next toast as follows:

"The British Colonies in North America—Bound

closely to us in rural pursuits, and held fast by the golden links of commerce, may they ever be united with us in the bonds of friendship and fraternal regard." [Loud applause.]

He then called upon the Rev. Dr. Burnet, of Canada, one of our Vice-Presidents.

Response of Rev. Dr. Burnet.

Mr. President:—A few short weeks ago, sir, as I was walking up the streets of the city where it is my lot to dwell, I met one of my pomological friends, who, I saw by his face, had something in his mind in reference to the pursuit which is the object of his affection and his love. I said to him, "This is the season of pears and of boasting, and I have some 'Flemish Beauties' that I would like to have you see." He said, "If you will go home with me, I will show you that it is the season of pears, and take the boasting out of you." I went home with him, and saw that his pears were better than mine. If you, Mr. President, have ever had a similar experience (I don't suppose you ever had), you will appreciate my feelings. I came to Boston thinking that I might boast a little of my pears, but I had another view, and that was to take you by the hand, whose name is familiar in Canada—in the "New Dominion," as we call it—where I trust it will long remain a familiar and household word. [Applause.]

I know no man on the continent who has done more for pomology than you have done. I am quite sure, sir, that your name will never be forgotten, and that when I and all of us who are here on this platform are forgotten, the labors of your head and hands will cause you to be remembered. [Applause.]

I was desirous, as President of the Fruit Growers' Association of Ontario, to appear among you and show you what we could do, with the assistance we have received from the United States of America. Much of our pomology and much of our knowledge has come from this side of the water. A very narrow line divides us, so far as the local boundary is concerned, but I go hence to boast of the kind way in which you and your coadjutors have received the delegation from Canada on this pleasant occasion. It will be remembered by us, I trust, for many, many years to come, should we be spared. I think of your own address, in which you rose from the contemplation of nature's works to nature's God. No one who has been present at the meetings of the Pomological Society, on this occasion, can have failed to notice the beautiful allusions which have been constantly made to the power which has bestowed these wonderful gifts and works of His hand upon us, both for our pleasure and for our food; and on my return I shall acquaint our Association, and the people with whom I am connected in this great work, of the marvellous civilization that characterizes the city of Boston and its inhabitants. We shall ever cherish a grateful remembrance of the hospitality, kindness and courtesy that we have received from your hands and the hands of your fellow-citizens. We have learned something of the marvellous progress which the different States of the Union have made in the direction of pomology, and I hope and trust that the advances you have made will be but an inducement to us to go and do likewise. [Applause.]

I have nothing further to say, but I have much to remember; and I trust, in the contemplation of these works which have brought us together, as we realize that it requires abundant labor, great effort and much skill to secure good fruit, we may look forward to that time when we ourselves shall be accepted for the fruits that we have borne. [Applause.]

The next sentiment was then given by Col. Wilder as follows:

"The South—She has furnished us with a guest renowned at the bar, in the forum and in the field. We greet him with a hearty welcome."

I will call upon Judge Schley, Vice-President for Georgia.

Response of Hon. William Schley.

I thank you kindly, Mr. President, for the sentiment just read. We of the South have come up here to attend the Quarter Centennial Celebration of this Society, which has done so much, as has been so well said by those who have preceded me, in developing those resources which make your country grand and glorious. We have come from our Southern homes, and traversed the many hundreds of miles, as pilgrims, to meet you here—the Downings, the Wilders, the Barrys, and other shining lights of pomology. There are more resources in our land than the grand products on which we have heretofore depended—rice, cotton, and sugar; and since the revolution that has occurred and changed our whole social status, we are now impressed with the importance of developing these and other grand resources that still belong to us; and finding that the necessity is forced upon us to develop these resources, we have come to drink at this fountain, and get those principles with which we can make our now desert South, blossom like the rose. [Applause.] I have been so impressed during my visit here, that I find words inadequate to express the feelings excited. When I see your rough, cold hills, and your barren soil now whitened with palaces and

clothed with gardens that are beyond all that it has ever been my lot to see, not only on this continent, but on the other; when I see men who are able to extract from this barren soil these evidences of intellect and energy, I say we may well desire to emulate that spirit and that intelligence. We of the South can offer many and vast resources, but we now need intelligence. We have now got to make brain do what, formerly, muscle did—develop those resources so as to bring back that wealth and prosperity that our own varied soil, climate and resources would abundantly secure.

Judge Schley concluded with a complimentary allusion to Boston and with a grateful acknowledgment of the kindness and hospitality with which the members of the Society had been received.

Pres. Wilder then said that, having called upon the North and the South, he would call upon the West, and gave as a sentiment:

"The State of Kansas—A plant of ripe growth, her fruit, and her men attest the value of good cultivation."

Dr. Howsley of Kansas was called upon to respond.

Response of Dr. Howsley.

Mr. President:—I am called upon to respond to the sentiment just uttered in honor of Kansas.

I must say, sir, that I am truly sorry this duty has not fallen into abler hands than mine, and yet, on the other hand, I am happy that I have the opportunity, at this distant city, of speaking a good word for my adopted State.

As we have met here for the purpose of deliberating upon the best means of collecting facts for the best interests of American Pomology, it will, perhaps, be in place for me to give some account of the climate, the soil, and topography of Kansas in reference to fruit-growing.

Our State, as you are aware, lies between the parallels of 37° and 40° north latitude, extending from east to west from the Missouri River two-thirds of the way to the Rocky Mountains. Denver, at or near the foot of the mountains, is between five and six thousand feet above the level of the sea. The portion of Kansas, where it skirts the Missouri River, is seven hundred and fifty feet higher than St. Louis on the Mississippi River. Hence Kansas presents an inclined plane from the mountains to the Missouri River, giving an inclination, in four hundred miles, of more than three thousand feet. It is this inclination that gives, we think, such peculiarity to Kansas climate.

Our rain gauge is regulated by the amount of snow which falls upon the lower mountains. When the quantity of snow upon the mountains is great, we predict, with considerable certainty, a wet spring and summer. If, however, the snowfall on the mountains is light, we are pretty certain to look for the summer, at least, to be reasonably dry. Having, as we generally do, an abundance of rain in spring and summer, our fruits get a good start to grow at the right time to give them large size. The rains from the mountain snows being pretty well over by August or September, we have the benefit of a dry, warm fall to ripen our fruits sweetly and color them highly. Added to the dry fall, we have this greatly inclined plane, before spoken of, to reflect the sun's heat into the tree-tops, which develops the saccharine matter and deepens the color so as to make them both delicious and beautiful.

Allow me to say for my State, that we think the foregoing facts warrant the statement, that Kansas is, at least, as *well* adapted to fruit-growing, all things considered, as any other State in the Union.

There are, however, two, and only two, drawbacks upon our complete success to fruit-growing, and these are, first, the sudden and severe atmospheric changes to which all prairie countries are liable, and second, the very deep and rich condition of our soil, causing our trees to make unusual growth during summer.

The atmospheric changes, we feel quite sure, we can, to a very considerable degree, if not entirely, overcome by forest-tree planting, and a judicious cultivation of the soil.

Now, sir, in conclusion, allow me to express the hope that, when you and I shall have finished our work on earth (which will not be long), and these hoary locks of ours are consigned to the tomb, the friends of American Pomology, from the Atlantic to the Pacific, may clasp hands in brotherly kindness over our final resting-place.

Col. Wilder then announced the next sentiment as follows:

"The Clergy—May the seed they sow spring up without tares, and when the summer is ended and the harvest past, may they be garnered with the fruits of righteousness."

He introduced Rev. Dr. Parker, of London, England, who was warmly greeted and responded as follows:

Response of Rev. Dr. Parker.

Mr. President, Ladies and Gentlemen:—I have been in the city only since six o'clock this evening. I had no idea then that a banquet of this kind was proceeding within the limits of the city, and still less idea had I, that I should be called upon to say one word to you. I have partaken of your fruits. More ex-

cellent fruits I have never tasted, even in England itself. I have looked upon your flowers, and they appear quite as beautiful as any flowers which the old country can produce. Having said this much, I have said all that occurs to me further than this, that I do not feel that I am from the old country and stand in this city to-night. I no sooner came within its borders than I seemed to be breathing my native air. I do not feel any distinction between Boston and London. It seems to me as if we were all Englishmen together, some of elder, some of younger stock. [Applause.] The sentiment which has been read by your venerable President, is a text and a sermon itself. I wish I had had a few hours' notice that I should be called upon to preach upon such a theme. I think that then I might have been able to have said something pertinent to the occasion. I have been preaching a little upon this text: "The Jews were forbidden in going to war to lift their swords against fruit-bearing trees." Other trees they might touch, but the tree that bore fruit for the life of man was not to be touched by the sword of the soldier. I remember also another expression, still more beautiful: "Consider the lilies, how they grow." I find that the Bible is full of references to horticulture, and even to pomology in all its branches, and no minister of the Gospel can be faithful to his work, in all its scope and bearing, who does not very frequently avail himself of the wondrous illustrations with which the field of nature is filled. I feel for one that, if I were not a minister of the Gospel, I would like to be a cultivator of the soil. I know of no occupation so noble, so refining; that is to say, so capable of refinement in its possibilities, as the occupation of an intelligent, simple-minded cultivator of the soil. [Applause.] I am glad so many of you are devoting your attention to this pursuit, and, as an Englishman, I wish to bid you God speed in your peaceful and useful labors. [Loud applause.]

Mr. Thomas Meehan, editor of the *Gardener's Monthly*, was called on to respond to a toast complimentary to "*The Horticultural Press.*"

Response of Mr. Thomas Meehan.

He said that Dr. Burnet, in his remarks, had told how the conceit had all been taken out of him by having challenged another to show Flemish Beauty pears against him, and yet had been beaten for all; but what was it to be beaten on one little incident like this, to having the conceit of a whole life suddenly knocked from under one. Coming to the meeting, he had argued with a Boston gentleman, who contended that the world was all wrong and going to ruin, that things were pretty nearly right, and that all that was needed was a little grease inside the *hub* to make the wheels of progress smoothly run along, but these life-long convictions were gone now. The world was certainly going wrong, and there was no more certain proof of this than the fact that he—a member of the Horticultural Press—an institution supposed to know all about horticulture—should come here to find so much new to learn.

Yes, he would respond for the Horticultural Press, for since he had come to Boston, he had found a new volume of its literature, most beautifully bound in green and gold, and wonderfully illustrated. He had placed it in his inmost heart, and should spend many a pleasant hour poring over its pages. It told him about the grand azaleas Sargent grew, and the like of which the world had seldom seen; it related the wonderful story of the Rhododendrons on Boston Common; the grand specimens of flower embroidery of Wm. Gray, and the landscape gardening of Hunnewell; the science of Agassiz and Gray; and the world-wide reputation of Wilder; these were some of the chapters in which the new volume delighted, but not half the story, for the generous hospitality and brotherly kindness they had everywhere met with, made a Horticultural Press of matter very difficult to tell.

But he supposed the Horticultural Press, for which he was called on more especially to speak, was that older volume he had studied before he came here. It was not a very large department of literature, as compared with other countries. There were but three purely Horticultural journals in this country,—*The Horticulturist* of New York, the *Gardener's Monthly* of Philadelphia, and the *California Horticulturist* of San Francisco, but he believed they gave as much pleasure to thousands as some species of literature which had serial representatives by the score. For his part, he felt proud to be a member of the Horticultural Press, and proud that, as one of its younger representatives, he had had the pleasure and the honor to participate in this grand Quarter Centennial; and he returned thanks for the honor offered to the press by their sentiment.

A sentiment in honor of the State of New York was given by the Chair, to which P. Barry, Esq., was expected to respond, but the state of his voice would not permit of his addressing the assembly.

Mr. E. P. Roe, of New York, responded briefly for that State, and spoke gratefully of the pleasant associations which had been thrown around the present session of the Society. He spoke hopefully of the time

when the products of the whole earth should be exhibited under one roof, accompanied by representatives from every land.

Speech of Mr. F. R. Elliott, of Ohio.

Mr. President and Members of the American Pomological Society, Gentlemen:—I regret that in order to reach my home by Sunday morning, I must leave you at the very commencement of your glorious feast of reason and material festivity.

As a humble follower of, and student in, pomology, I desire to say to my old associates, that here in this Quarter Centennial gathering of the American Pomological Society, Massachusetts has shown herself as the parent of intelligent fruit and floral progress.

The children from the far West, from the sunny South, and the cold North, have again acknowledged their parentage, and in their gathered allegiance are disposed to contribute knowledge of their expansive and erratic lives, toward the grand interest which this Society inculcates. I trust they will return home with a feeling that their parent has given them a welcome, and that it is their duty to rear children, and so instruct them that, twenty-five years hence, they will make a report of this present gathering, and once again crown the good old New England mother, and give to the world a record of value and instruction four-fold increased of that which the American Pomological Society now presents.

Many other distinguished gentlemen, whose eloquence would have entertained the audience, were present from various parts of the country, but the lateness of the hour prevented their being called upon to address the assembly.

Closing Speech by President Wilder.

Ladies and Gentlemen:—With a heart full of gratitude that I have lived to see this grand celebration—this great exhibition which has surpassed that of any other nation of the earth—that we have been permitted this evening to receive your kind congratulations and wishes for our prosperity, and that we have been honored with the presence of so many distinguished gentlemen from the various portions of this great country, I now propose, as an appropriate close, that the music shall strike up "Home, Sweet Home."

The orchestra did as requested, and the guests departed from the hall, closing what was one of the pleasantest gatherings which has ever taken place within its walls.

REPORTS OF STATE FRUIT COMMITTEES.

Report of the General Fruit Committee.

The undersigned, on behalf of the General Fruit Committee, respectfully reports that, on several occasions during the past season, circular letters were addressed to the chairman of the several State Committees, requesting them to procure the preparation of full reports from their States, to be presented at this meeting.

In response to these circulars the following reports have been received. In preparing them for publication, such matter as seemed superfluous—descriptions of old, well-known varieties, etc.,—has been stricken out, and other parts necessarily condensed.

The Catalogue of Fruits has been revised in accordance with these reports, except in a few instances, where fruits recommended were known to be of inferior quality.

Respectfully submitted,

SEPTEMBER, 1873. P. BARRY, *Chairman.*

Report from Nova Scotia.

YARMOUTH, N. S., Sept 6, 1873.

Having become a member of the American Pomological Society, I consider it a duty, as well as a pleasure, to honor the request of President Wilder, through Mr. James, Treasurer, that I should send a collection of apples, however small, from this country.

The collection will have at least a negative value, in showing that certain kinds are worthless in cool regions and in uncongenial soils; it will certainly surpass all others at your exhibition, in being diminutive in size, deficient in color, and inferior in quality; if so, give us the jack-knife—as to the ugliest man in the class.

May I submit, however, these palliatives of our abject condition as fruit growers: Firstly.—Your date is from four to six weeks too early for us; our apples are but half grown, and in few cases have begun to assume any color; we have no frosts of any consequence before the middle of October. During this interval there would be a great improvement in size, color and quality.

Secondly.—This county is less adapted to fruit-growing than any other in the Province. Its soil, a cold slate clay or gravel, mostly undrained; its climate moist and cool, and of low average summer temperature, a thick fog sometimes prevailing for weeks during the growing season.

Thirdly.—Eight years ago so little was known of varieties, that there was not probably a single person in the county who could name at sight any but local seedlings, nor were any of the varieties then grown, that have been famous for centuries almost in fruit-growing countries, so that we are still in the novitiate, experimenting on varieties under the usual disadvantages; trees and scions wrongly named at the outset, poor cultivation, bad care of trees, lost names, etc., etc.

If, among the hundreds of varieties that prove useful elsewhere, a few may be found that will prove even moderately so here, we shall felicitate ourselves; and it will be of great service to us, if, in the sorry lot sent herewith, any may be deemed worthy of commendation, as compared with the same varieties grown elsewhere; and if *unknown kinds can be identified*, we have so few of value, that *one or two only* added annually to the list is an exceeding great gain.

We find a great difference in the same varieties grown in towns, near the sea coast, and ten or fifteen miles inland, beyond the reach of our shore fogs. This is indicated in Grimes' Golden Pippin, Red Astrachan, and others.

A variety we have got from your nurseries as Keswick Codlin, though our Cornwallis experts say it is Old English Codlin (after consulting Thomson and other authorities, I disagree with Cornwallis), is the most useful variety I have found as yet,—like the Wilson's Albany among strawberries, it is perfectly hardy, vigorous in growth, bears in two or three years from grafting, and bears annually afterwards, forming fruit buds upon the current year's wood. Wagner bears well and annually, and Duchess of Oldenburg, Red Astrachan, Early Harvest, and Early Sweet Bough, are tolerable perhaps. Summer or fall varieties will probably succeed best.

Having more than a hundred varieties on trial myself, I could name many that are worthless for us: Esopus Spitzenberg, Baldwin, Twenty Ounce, Swaar, Newtown Pippin, Golden Sweet, etc., etc.

I had hoped to be able to attend your session to form a personal acquaintance with your leading pomologists, by whose labors I have profited, whose works have been my study, and with some of whom I have corresponded, to learn also from the discussions and essays, the deductions of science and experience, and by observation, what may be gathered from the magnificent display upon your tables,—the gratification of these aspirations must be postponed to your next session.

Hoping that your gathering may be eminently prosperous, and that your Exhibition may be worthy of the "Hub," for which I have an abiding affection, I remain,

Very truly yours,

CHARLES E. BROWN.

In addition to preceding considerations, militating against our making even a tolerable show, we had a most destructive gale August 23 and 24, which ruined a large portion of our fruit crop, making especial havoc among the young trees, and, again, on the day I named for contributions to be sent in, a second heavy storm occurred, which stopped additions completely.

Partly to fill box, I send a brace of cucumbers, which I have grown this season for the first time, and think quite unequaled for quality and productiveness. If Peter Henderson, of New York, visits your exhibition he will be pleased at seeing them, having the seed from me on trial. If not consonant with your rules to place them on exhibition, try them yourself, or do what you please with them. If they do not reach you in good order throw them away. CHARLES E. BROWN.

Report from New Hampshire.

MR. P. BARRY :—Dear Sir: In the notes on fruits, I propose to make in this report, I shall confine my attention mainly to the apple and pear ; and to those varieties of these two fruits I consider best adapted to the central and northern part of New Hampshire, guided by my own observation and the experience of others.

For this part of the country, I consider the apple worth all other fruits put together, and for its successful cultivation, few varieties should be planted, and the trees, as far as possible, raised at home. Grow your own trees in abundance, and plant out in orchard continually.

APPLES.

Red Astrachan.—This is the earliest apple of value here. Tree very hardy, healthy, and handsome grower, and very productive. Fruit rather sour for eating, but fine for cooking.

Early Harvest.—I have occasionally known it to do well. Not reliable.

Early Sweet Bough.—Decidedly the finest sweet apple of its season. Does not bear well enough for market to be made profitable.

Williams.—No other early apple, for market, bears any comparison with this. The tree is perfectly hardy, a good bearer, and with good treatment, gives a fair crop when apples are generally scarce. The fruit is so large and splendid looking, in addition to its fine quality, that it always sells readily. I can sell in the manufacturing villages around me, ten bushels of Williams where I can one of any other variety. This apple is less attacked by the curculio There is a large proportion of fair fruit.

Primate.—Not much tested here. Tree a very vigorous grower, and great bearer. Promises well. Fruit very rich.

Benoni.—There is but one fault with this apple. Its small size injures it for market. The fruit is very rich and juicy. It should be in every collection.

Porter.—Too well known to need any comments.

Foundling.—This apple is but little known, does well wherever tried. It resists the cold winters apparently as well as the Siberian Crab. I think it will prove as hardy in cold latitudes, as the Duchess of Oldenburgh, and is a much larger, and better apple ; ripens about the same time as Porter, but will keep longer, often remaining on the tree into October.

Gravenstein.—One of the largest, and finest, of late fall apples. Is not generally productive.

Maiden's Blush.—Hardy tree, and very productive—one of the very best for cooking—is much more profitable than Gravenstein.

Fameuse. — Very fine and valuable for the North—rather small for market.

Mother.—This apple will keep with me into February. A large and very handsome apple—nothing richer or more delicious.

Hawthornden.—Famous for bearing on young trees, commencing when three years from the bud, and bearing every year. Fruit large and very handsome—rather sour for eating, but fine for cooking.

Hubbardston Nonsuch.—A well known and very popular variety. I find it liable to rot.

Minister.—Very productive, and a fine winter apple.

Jewett's Fine Red, or Nodhead.— Inclined to grow knotty. Valuable here, notwithstanding ; fruit exceedingly rich, tree very hardy, and enormously productive.

Ramsdell's Sweet.—This apple is but little known. I think it will prove very valuable. Keeps well through the first part of winter. Very productive.

Baldwin.—This is the great winter apple here. Unfortunately, the young trees are tender, and often fail : grafted into older trees, they do better.

King of Tompkins Co. — Comparatively new — very promising—does not keep quite as well as the Baldwin.

R. I. Greening and *Roxbury Russet* succeed in occasional favorable spots—not generally profitable.

Tolman's Sweet.—Probably the very best late winter sweet apple, hardy, productive, and keeps well.

Jonathan. — As yet but little known — will be highly prized as it is further tried.

There is an apple that originated in Alton, Belknap Co., this State, called the *Milding*, and has been cultivated in that neighborhood for sixty years. It is a very large apple, and more highly esteemed wherever known, than any other winter apple. It keeps very well, but not quite as well as the Baldwin. The tree bears well, and in its strong, rampant growth, surpasses by far, all other varieties with which I am acquainted.

PEARS.

A very intelligent cultivator of Pears in Strafford Co., has sent me a list for general cultivation, and some that promise well in the southern part of the State. In his practice, nothing is left undone that money and manure can do. On the subject of Dwarf Pears, he writes : "I trust you will not fail to deliver a sermon against selling

and planting Dwarf Pear trees in New Hampshire. The amount of time, money, and good temper, annually lost in consequence of planting them, is very great. The sale of them ought to be prohibited by law, as the sale of liquor is. An unmitigated nuisance, is a very mild and inadequate description of a Dwarf Pear tree in New Hampshire. The question is not, whether, under some conditions, in some places, they may be of value. The fact is, that under existing conditions practically unavoidable in New Hampshire, they are a universal, inevitable waste, loss, and most aggravating annoyance. If you can do anything to enlighten and warn the public on this subject, you will be a public benefactor."

I give a hearty accord to the above.

Pears for general cultivation in the southern part of the State:

Bloodgood, *Bartlett*, *Clapp's Favorite*, *Rostiezer*, *Belle Lucrative*, *Howell*, *Louise Bonne of Jersey*, *Swan's Orange*, *Paradise d'Automne*, *Seckel*, *Sheldon*, *Urbaniste*, *Lawrence*, *Winter Nelis*, *Merriam*.

Pears that promise well:

Brandywine, *Doyenne d'Ete*, *Tyson*, *Andrews*, *B' d'Anjou*, *Pratt*, *Abbott*, *Josephine de Malines*.

The *Flemish Beauty* is more popular here than any other pear. It is usually fair—cracks occasionally — as yet nothing serious. I have a number of trees, with fair fruit; have seen a good many in the neighborhood, loaded with splendid fruit, and hear good accounts from many other trees. If it only wouldn't crack or scab, it would be just *the pear* of all others.

Clapp's Favorite has fruited here; it promises well, the tree is very thrifty, and perfectly hardy.

Bartlett, that most popular of all pears, is too tender for this climate. For a very early pear, I should recommend *Doyenne d'Ete*. It bears well with me, fruit always fair and good. I have grown successful *Rostiezer*, *Paradise d'Automne*, *and Lawrence*.

Goodale.—Comparatively new. Originated at Saco, Me. A late pear, of excellent quality, never rots at the core. Tree hardy and thrifty; bears every year, and very abundantly.

CHERRIES, PEACHES AND PLUMS.

These have failed with me, and with others, as far as my observation extends.

GRAPES.

Concord, on the whole, is the best. *Delaware* does well, and is the finest for the table. *Hartford Prolific* is earlier. The *Iona* has been tried, but proves tender. I have raised the *Diana*, and like them.

STRAWBERRIES.

Wilson, *Russell's Prolific*, and *Black Defiance*.

JOHN COPP.

CARROLL CO., N. H.

Reports from Vermont.

P. BARRY, ESQ., *Chairman*, *General Fruit Committee*, *American Pomological Society.*—Dear Sir:—For twenty years I have been engaged in the nursery business near the Canada line, most of the time north of the line in Stanstead Plains, and for the past six years in Derby, Orleans County, Vt. During this time, I have tried several hundred kinds of apples, several kinds of pears, a few grapes and other small fruits.

I have found the climate so severe that my losses of young trees have been fearful, and many varieties deservedly popular further south, are so tender they will not succeed even when grafted into the tops of hardy, well-established trees. In my efforts to grow trees well adapted to this climate, I have found in a few instances, seedling trees of rare merit, that have stood the test of our seasons for fifty years or more; trees raised from seed by the first settlers. I aim, first, to get a hardy tree; second, a naturally productive tree; third a good apple: and when these three qualities are combined, I try to raise healthy trees. In the following list, all those kinds marked "New" are varieties thus introduced by me. I know they are hardy, and of the quality of the fruit I will try and give evidence at your Exhibition.

Some few varieties of pears, have done well in certain locations, in proper soil, and with good cultivation.

Grapes cannot be recommended for general cultivation, but near a building or high fence, a few varieties will, in favorable years, ripen their fruit.

CURRANTS.

The black varieties thrive and are free from insects. The red varieties are badly injured by currant worms that have appeared within a few years. *Strawberries*, *Raspberries*, *Gooseberries* and *Blackberries* are not cultivated to any extent, except to supply the home demand, as we are so far from any large city.

CRAB APPLES.

Siberian.—On account of the severity of our climate, I have given special attention to the cultivation of the *Siberian Crab Apples*, (so called) and have been very much pleased with their vigorous growth, great productiveness, and in the seventeen kinds I have described, their intrinsic merit entitles them to a high place in the regard of the fruit grower. All of these, with the exception of the *Montreal Beauty*, were first propagated by me. I can truthfully say, that if I could raise all other fruit abundantly, I should still cultivate the *Crab apples*. The perfect health of the tree, its beauty in flower and fruit, the beauty of the fruit, does not more commend it than the flavor of some of these when fully ripened. The fruit of these varieties, has not yet become plenty in the market, but judging from several barrels sent to Boston by me, the fruit is highly valued from its own merits. In high latitudes and exposed situations, I place the *Siberian apples* before all others, as likely to live and reward the labor of the planter.

I transmit with this, my report, a local report from B. Macomber of Grand Isle County, in Lake Champlain, whose list shows the modifying effects of water upon climate, in the many varieties that thrive there. Also, the report of C. G. Pringle, Secretary Champlain Valley Horticultural Society, that speaks for the western side of the State in the vicinity of the lake. Also, J. H. Putnam's report from the Connecticut Valley in Southern

Vermont. We shall endeavor to show, in September, by specimens of fruit, that Vermonters need not go without if they will give proper care to its cultivation.

BARTLETT BRYANT.

REPORT FROM DERBY CENTER, ORLEANS COUNTY, VT.

APPLES.—SUMMER VARIETIES.

White Astrachan.—A *Russian* Apple. An upright, strong, handsome growing tree. Invaluable for the North on account of its hardiness.

Summer Harvey, Red Astrachan, Peach Apple, Tetofsky, Early Strawberry, Williams' Favorite.

AUTUMN AND EARLY WINTER.

Alexander, St. Lawrence, Fameuse or Snow Apple.

Derby Seeknofurther, (new.)—A hardy, strong, thrifty growing tree, desirable for the North on account of its hardiness. Originated in the town of Derby, on the farm known as the Captain Wright farm. Fruit rather above medium size, oblate, yellowish, shaded with red and striped with dark red in the sun. Flesh crispy, pleasant sub-acid, flavor good. Tree bears young and abundantly.

SWEET APPLES.

Bailey's Sweet, Tolman Sweet.

St. Johnsbury Sweet, (new.)—Originated in St Johnsbury, Vt. Tree a very strong grower, hardy and productive, fruit of good size and excellent quality. Round, oblate, color, yellow ground covered mostly with dark red or carmine. Flesh yellowish, solid, crisp and juicy. Pleasant sweet. Ripe December to April.

Hampshire Sweet.—Upright, handsome growing tree hardy and productive. Apples very large. Color when ripe, yellow, flesh solid and crispy. Late keeper.

Munson Sweet.

Brunswicker.—Is said to have originated with Mr. Sharpe, of Woodstock, New Brunswick, from the seed of the *Duchess of Oldenburgh*. Very strong, thrifty growing tree with an open head. Remarkably hardy and does well at the North. Annual and prolific bearer. Fruit of medium size, roundish, skin smooth, washed and streaked with red on yellow ground. Flesh sprightly, juicy, sub-acid. Ripe in September. Should be in all collections for the North.

WINTER VARIETIES.

Bethel.—A handsome, vigorous, strong growing tree, hardy and productive. Apples of large size, round, oblate, color, greenish-yellow-russet, shaded with red on the sunny side. Flesh solid, juicy, pleasant acid. Ripe from November to May.

Nodhead.—Tree of moderate growth and enormous bearer. Fruit of medium size or a little under. Flesh tender, juicy, very pleasant, almost sweet. Very good. Color, greenish-white, striped, splashed and shaded with crimson having a dull grayish bloom.

Shaker Greening.—Tree vigorous, upright, spreading, very productive. Fruit medium, oblate, conic, greenish-yellow. Flesh yellowish, tender, crisp, juicy, brisk sub-acid. Good. Ripe March to November.

Hopkins Porter, (new.)—A very hardy, upright growing tree, forming a fine spreading head. Originated in the town of Salem, Vt., on a homestead of David Hopkins. This tree has stood the rigid winters of the high latitude of Northern Vermont, for sixty years and is healthy and strong at the present time, and full of fruit. It is an annual and good bearer and bears young. Fruit good size, roundish, oblong, slightly ribbed. Color, lightish yellow shaded with red in the sun. Flesh solid, a little sub-acid, very good. Ripe from December to April. Desirable for the North.

Blue Pearmain.

Canada Baldwin, (new.)—A native of Canada. Local, but needs, on account of its many excellent qualities, to be more extensively propagated. Tree a very thrifty, strong grower. Very hardy and a great bearer. Fruit medium size, roundish, regularly formed. Color, dark purplish-red over a dull ground, and appearing blush from the white bloom. Flesh lightish, streaked with red, juicy, rich, aromatic flavor. One of the best. Ripe from November to April.

Winter Canville, (new.)—Hardy, strong growing tree and productive. Apples large, roundish, oblong. Color, greenish-yellow. Flesh lightish green and juicy. Ripe from November to April. Pleasant acid. Very desirable.

Northern Spy, Bourassa, King of Tompkins County, Jonathan, English Russet.

Tinmouth.—Tree strong, upright grower, forms a round head. Handsome tree. Enormous bearer and a profitable sort. Fruit considerably above medium size, oblate. Color, whitish-yellow shaded with carmine and sprinkled with a few brown dots. Flesh whitish, tender, juicy, and a mild sub-acid flavor, with a peculiar melon-like aroma. Ripe November to March.

Ben Davis, Baldwin, R. I. Greening, Yellow Belleflower, Smith's Cider, Granite Beauty, Hubbardston Nonsuch, Pomme Gris, Wine Sap, Wine Apple, Canada Reinette.

CHOICE CRAB APPLES.

Ladies' Favorite.—A thrifty growing tree, very productive. One of the handsomest of all Crab apples, thin, smooth skin. Straw color, with a beautiful red cheek, transparent, juicy, flesh fine, crispy, mild acid. Autumn.

Rose of Stanstead.—A very hardy, thrifty growing tree, grows to a very large size when old. Fruit very large and handsome. Color, dark red. Flesh streaked with red, juicy. Good for all culinary purposes. It makes the finest of jelly on account of its being so red.

Captain Reins.—A fine, handsome growing tree and productive. Fruit medium size. Color, greenish-yellow, a pleasant acid. Ripe August.

Clark's Beauty.—A fine, rapid growing tree and hardy. A good bearer, fruit fair size, color, yellow with red cheek. A pleasant acid. Ripe August.

Montreal Beauty.—A thrifty, hardy, upright, handsome growing tree and productive. Fruit good size. Color, yellowish ground and striped with red. Ripe Autumn. A very popular apple in Montreal. A little acid.

Pyramid.—A very handsome and ornamental growing tree, hardy and productive. Fruit a little under size.

Color, yellow, skin very thin. Flesh crispy and juicy and of excellent quality. Ripe September.

Spafford. — A fine, strong growing tree. Hardy. A great bearer. Fruit good size and of excellent quality. Color, dark, rich red. Ripe September.

Compton Greening.—A thrifty, hardy growing tree and very productive. Color of fruit, greenish-yellow, good size, juicy. Good for all culinary purposes. Ripe October to February.

Scotchman's Choice.—A hardy, thrifty growing tree, grows to a very large size. Great bearer, fruit large. Color, greenish-yellow intermixed with dark red and russet, fruit pleasant acid. Ripe Autumn.

Cleveland Yellow.—Tree upright, handsome grower and remarkably hardy. Great bearer, fruit very large. Straw color. Acid. Good for all culinary purposes. Ripe Autumn.

Valley.—Tree hardy and productive and of excellent quality, large size. Yellowish-russet and intermixed with dark red. A little acid. Ripe Autumn.

Sweet.—Tree fast grower, and hardy, profuse bearer. Medium size. Color, dark reddish-brown. Ripe August.

Victory.— A thrifty growing tree and very prolific. Fruit handsome color, yellow ground striped with bright red. Ripe Autumn.

Montreal Pink.—A fast growing tree and very prolific. Fruit good size. Color, red. Acid. Ripe August.

Ball's Winter.—A thrifty growing tree, spreading head, annual bearer. Fruit large. Flesh crisp, spicy, of rich flavor. Color, yellowish-russet and splashed with dark red. Late keeper.

Gold Drop.—Tree moderately hardy, requires age before coming into bearing. Apples very large. Flesh sound, crisp, rich and juicy. Of excellent quality. Color, yellow. Keeps well into Winter.

Dudley — Tree slow grower and good bearer. Fruit medium size. Color, ground yellow and covered with dark red. Flesh crisp and juicy. Late keeper.

PEARS.

This most delicious and desirable fruit is not hardy enough for our severe climate, although in more favorable locations in the vicinity of Lake Champlain, equally as far North as we are, some of the hardiest varieties will succeed tolerably well when planted on proper soil and with good cultivation. The varieties best adapted to Vermont are *Flemish Beauty, Seckel, Duchesse d'Angouleme.*

Louise Bonne of Jersey.—Does finely on the quince as a dwarf, better than on the pear stalk.

Glout Morceau, Goodale, Clapp's Favorite.

PLUMS.

On account of the tenderness of the many choice varieties of plums we are obliged to discard them all. We can only raise the common *Canada plum* and the common *Blue plum.*

CHERRIES.

I regret to say that the finest varieties of this desirable fruit will not stand our winters here. The only variety that proves to be hardy is the *Early Richmond.*

CURRANTS.

The currant usually succeeds well here, with a few exceptions. The greatest drawback to the cultivation of currants is the currant worm that has appeared within the last few years. Currants are only planted for home use and not for market. The most popular varieties are,

Cherry. — Healthy and tolerably productive. Large and handsome. Valuable market currant.

Red Dutch.—Old variety. Desirable.

La Versaillaise.—Quite popular.

White Grape, White Dutch, Black Naples.

GRAPES.

I regret very much to report that on account of our high latitude and short summers, and occasionally early frosts in autumn, it is almost impossible to grow full sized and well ripened grapes of any kind in Northern Vermont, except they be protected from the winds and cold by a fence, or upon the south side of buildings, or under glass. The varieties that have generally been planted are, *Clinton, Concord, Hartford Prolific, Adirondac, Delaware.*

GOOSEBERRIES.

Are only planted for home use. Generally succeed well. Require to be thoroughly pruned to have fair or good fruit or free from mildew. Kinds that succeed best are, *Houghton Seedling, Crown Bob, Roaring Lion, Mountain Seedling, American Seedling*

RASPBERRIES.

Are but little planted, as wild varieties grow spontaneous in our fields.

American Improved Blackcaps.

Brinckle's Orange.—A little tender.

Doolittle.—Hardy and productive.

STRAWBERRIES.

Are quite at home in this section of Vermont, although not much planted for market. But I am of the opinion that, well selected varieties planted on proper soil, with good cultivation, might be raised profitably for our city markets.

Wilson's Albany. — All things considered, it stands about the head.

Agriculturist, Triomphe de Gand, Russell's Prolific.

BLACKBERRIES.

Not much planted. Plenty of wild.

Kittatinny, Dorchester, New Rochelle or *Lawton.*

Respectfully submitted by

B. BRYANT.

REPORTS FROM CHITTENDEN AND ADDISON COUNTIES, VT.

Chittenden and Addison Counties, Vt., extending from the waters of Lake Champlain on the West, to the highest peaks of the Green Mountains on the East, possess a wide range of climate. Among the mountains, only a few very hardy varieties of apples can exist ; pears, plums, and most other fruits are seldom found there. But the shores of the lake and its vicinity, to whose fruit

this report will be chiefly devoted, offer conditions of soil and climate which admit of a high degree of success in fruit culture.

Though in a high latitude, the valley of Lake Champlain lies low and warm, secluded in a great measure by its mountain walls from the cold, dry winds of the interior, as well as from the cold storms prevailing in the earlier months on the north-eastern coast, and is open on the south through the valley of the Hudson, of which it is a continuation, to the genial influences of the sea and its warm south winds. As a consequence, the growing season, though a little shorter than the summer of more noted fruit regions, is hardly less propitious in other respects.

The chief obstacle to perfect success in growing all our hardy fruits, here experienced, is the severe cold of our winters. Unfortunately, the waters of Lake Champlain are shallow, and by mid-winter are ordinarily frozen over. After this occurs, our orchards are left without protection from the frosts of our latitude, except such as our low situation affords. Yet, in a belt several miles in width along the borders of the lake, most varieties of apples and pears endure perfectly; plums and cherries suffer considerably, however, in our most severe winters; peaches and quinces give but little satisfaction, and grapes, to ensure their wintering safely, must nearly all be covered.

APPLES.

Owing to our distance from any large market, and the competition of larger fruit regions, where such fruits can, undoubtedly, be produced at somewhat less cost, summer and fall apples are only grown in extent sufficient to supply the limited local demand, and for use in the family of the grower. Of the large number of good winter varieties which succeed here, the most common of which are given in the following list, only a very few are found to be pre-eminently profitable for market purposes; such are chiefly the *Rhode Island Greening, Baldwin, Golden Russet* and *Northern Spy*, which are named in the order of more general preference. Particular attention is given to the growing of fruit which may be retained until the spring months, when the pressure upon the markets, caused by the frequently abundant crops of New York, Ohio and Michigan, shall be removed. Our climate appears to favor such a course, our cool autumns, not hastening on our fruit too far toward maturity, give it a character, in some measure, peculiar to itself and of high value.

Alexander.—Planted to some extent in the more unfavorable situations on account of its hardiness and attractiveness.

American Summer Pearmain.—Growth of tree not satisfactory; not to be recommended.

Bailey's Sweet.—Much esteemed.

Baldwin.—On strong, well-drained soils, near the lake, this is, from its great productiveness and from the nearly uniform good appearance of the fruit, the most profitable sort for market that can be grown. But in less favorable situations it does not long survive.

Belmont.—An excellent sort for amateur planting. Very vigorous and productive; but the fruit is not uniform in size, and mildews and cracks to some extent.

Bellefleur, Yellow.—Very hardy, usually reliable, succeeds well in poor soil, a favorite fruit in this section.

Benoni.—Perfect in every respect.

Blue Pearmain.—From its hardiness much grown in cold situations. Hardly worthy of cultivation elsewhere.

Black Gilliflower.—Satisfies some peculiar tastes.

Bourassa.—Serves for a hardy variety.

Burlington Pippin.—A winter *Fameuse.* Hardy, bears moderate annual crops of showy, good fruit.

Canada Reinette.

Champlain.—Probably a local fruit. One of the most productive, profitable and popular autumn apples grown here.

Curtis Sweet.—Hardy, vigorous and productive; widely grown for a summer sweet apple.

Danvers' Winter Sweet.—Hardy and productive.

Domine.—Succeeds well.

Duchess of Oldenburgh.—Indispensable in our colder sections.

Dutch Mignonne.

Dyer or *Pomme Royal.*

Early Harvest.—Succeeds well, and is much prized, though it sometimes mildews and cracks.

Early Joe.—A slow grower, but one of our choicest family fruits.

Early Red Margaret.—Hardy and productive.

Early Strawberry.—Deficient in hardiness.

Fall Pippin.—Keeps till February here; not sufficiently productive for market purposes.

Fameuse.—Our most popular fall apple; fruit frequently disfigured by mildew.

Garretson's Early.

Golden Sweet.—Hardy, valuable, a free grower and a good bearer.

Gravenstein.—Lacks sufficient hardiness; productive and esteemed where it succeeds.

Hubbardston Nonsuch.—Not hardy enough for general cultivation.

Jersey Sweeting.—Hardly a valuable fruit.

Jonathan.—Planted for its hardiness and productiveness.

Keswick Codlin.—A great bearer.

King of Tompkins County.—Has been considerably planted; somewhat injured by the cold of last winter; undoubtedly more caution should be exercised in the use of this variety than with the Baldwin.

Ladies' Sweeting.—Hardy, very good.

Large Yellow Bough.—So tender as to fail early, but bears regularly while it survives; should be top-worked; a favorite fruit.

Late Strawberry.—Hardy, vigorous, productive.

Lowell.—Hardy, very valuable.

Lyman's Pumpkin Sweet.—Very thrifty and fruitful tree; very useful family fruit.

Maiden's Blush.—Does well.

Melon, Munson Sweet.

Northern Spy.—Very hardy and a good grower; requires good culture, else its fruit will be uneven in size

and inferior in quality. Many neglect to plant it because so tardy in coming into bearing.

Northern Sweet.—Not highly recommended.

Peck's Pleasant.—Hardy, good.

Pomme Grise.—Recommended for the region of the mountains; not very valuable elsewhere.

Porter.—Hardy, a heavy bearer in alternate years; valuable.

Primate.—Lacking in hardiness and vigor; a very fine fruit for amateurs.

Rambo.—Tree thrives well and bears freely; fruit keeps through winter with us; will yield to other sorts here.

Red Astrachan.—Very hardy, a vigorous grower and productive; valuable, though not a first-class fruit.

Red Canada.

Rhode Island Greening.—Hardier than the *Baldwin*; this is more extensively planted than any other variety, probably as much so as all other sorts combined.

Russet, American Golden.—This delicious little fruit is nearly ruined here by mildew.

Russet, Golden.—This tree is quite hardy in this valley, and its health, vigor and productiveness, with its fair and uniform fruit, render it a profitable sort to plant for market and for keeping.

Spitzenburg, Esopus.—Seldom succeeds well unless top-worked; worth that pains.

Spitzenburg, Flushing.—Very fruitful.

St. Lawrence.—Grown in exposed situations; a handsome, good, and productive fruit.

Summer Pippin.—Thrives well and bears heavily in alternate years.

Summer Rose.—Hardy, good grower and productive, but somewhat liable to mildew.

Swaar.—Not particularly hardy, and inferior in fertility, but considered indispensable in a collection for home use.

Tolman Sweet.—One of our most hardy trees, and a good bearer of fair fruit; popular.

Tetofsky.—Invaluable for our mountains, but in the valley cannot compete with better kinds.

Tinmouth.—Held in good esteem in the vicinity of its origin as a fine dessert fruit; not adapted to market purposes; bears a heavy crop once in three years.

Twenty Ounce, Vandevere.

Wagener.—Growing in favor, especially in our colder sections, on account of its hardiness, early and abundant bearing, and fine, fair fruit.

Williams' Favorite.—Hardy, always fair, bears nearly every year; one of the very best summer apples for market.

PEARS.

Until recently the culture of this fruit has been for the most part confined to limited fruit gardens. The success there usually realized has encouraged the planting of pears somewhat freely, and in a more extensive manner. Very many varieties, new and old, are under trial; many of them, it is regretted, are not yet sufficiently proven to admit of their being reported upon. Blight is of rare occurrence here.

Ananas d'Ete.—A feeble grower, good bearer.

Bartlett.—Only succeeds on warm soils at no great distance from the lake.

Belle Lucrative.—Fruits very well; fruit often gritty.

Beurre d'Anjou.—Its hardiness would seem to be unsurpassed; somewhat slow in growth and tardy in coming into bearing, but the first trees planted in this valley give full crops every other year. The health and hardiness of the tree and the size, quality and season of its fruit have commended it to our orchardists, and it is now receiving more attention, perhaps, than any other sort.

Beurre Bosc.—On the lake shore this pear is one of the most successful; remote from the water it does not appear hardy.

Beurre Clairgeau.—Promises well.

Beurre d'Amanlis.—Very hardy and a good bearer.

Beurre Superfin.—Hardy and a good grower.

Bloodgood.

Buffum.—Hardy and a strong grower.

Clapp's Favorite.—Gives promise of surpassing even the *Flemish Beauty* in health and hardiness.

Dearborn's Seedling, Dogenne d'Ete.

Dogenne, White.—Under good culture this pear is still fair with us, though instances of its cracking are not uncommon; hardy and productive.

Easter Beurre.—Did this pear always attain full development with us, (which it does not do in our season, especially on young trees,) it would be one of our most valuable sorts.

Edmonds.—A fine grower.

Flemish Beauty.—No pear has better repaid the care of the fruit-grower in this section than this one, and none has been so commonly planted. Its fruit has been abundant and fair, but of late cases of its spotting, and even cracking, seem to multiply.

Glout Morceau.

Goodale.—This variety, from the hardiness and vigor of the tree, as well as from its handsome growth, and the size, beauty and good quality of its fruit, gives the highest promise here.

Howell.—A good grower.

Josephine de Malines.—Indicates hardiness.

Kingsessing.—Hardy.

Louise Bonne of Jersey.—Our best sort for growing on quince; endures well and is productive.

Madeleine.—A good grower; productive.

Osband's Summer.

Oswego Beurre.—Very hardy.

Onondaga.—Hardy, thrifty, and a regular bearer.

Seckel.—Succeeds quite well in most places.

Tyson.—Slow in coming into bearing, but a success.

Winter Nelis.—Endures well.

PLUMS.

Coe's Golden Drop.—Very hardy, but so late as not always to ripen well; will ripen in the house, however; moderately productive.

Damson.—Valuable:

Duane's Purple.

Corse's Nota Bene.—Hardy.

Corse's Admiral.—Hardy.
Cruger's Scarlet.—Hardy.
Columbia, Fellemberg.
Green Gage.—Quite hardy; much esteemed.
Imperial Gage, Imperial Ottoman.
Jefferson.—Comparatively hardy; valuable.
Lawrence's Favorite.—Rather tender.
McLaughlin.—Hardy and productive.
Red Diaper, Reine Claude de Bavay.
Rivers' Early Favorite.—Rather tender.
Royale Hative.—Very much prized.
Schenectady Catharine —Quite hardy.
Washington.—Popular.
Lombard. — A heavy bearer; seldom fails to pass the winter safely unless debilitated by excessive crops; more generally grown than any other.

With a little attention paid to insects, plums can be grown here in heavy crops nearly every year, despite the damage the trees suffer from our winters.

CHERRIES.

On warm and dry, sandy or rocky soil, the *Duke* and *Morello* cherries give in this valley very good results, and most of the *Hearts* and *Bigarreaus* endure and bear occasional crops for a number of years. In such situations, particularly if near the water, the following sorts are worthy of cultivation:

Baumann's May —In its class found to be next to *Elton* in point of hardiness.
Black Tartarian.
Buttner's Yellow.—Comparatively hardy.
Black Heart, Downer's Late, Early Purple Guigne.
Elton.—Proves one of the hardiest of its class.
English Morello.—Very valuable.
Early Richmond. — Perfectly hardy; worthy of being widely planted.
Governor Wood.
Late Duke.—As hardy as the next, and more productive than *May Duke.*
Late Kentish or *Pie Cherry.* — Can be raised with the utmost ease, and is everywhere found through the valley.
May Duke.—Succeeds well.
Yellow Spanish.
Napoleon Bigarreau.—Comparatively hardy.
Belle de Choisy.—Hardy.
Belle Magnifique.—Hardy.
Reine Hortense.—Hardy.

GRAPES.

Scarcely any good varieties of grapes are able to pass our winters uninjured, unless they are laid down and covered. The labor which this operation involves precludes the growing of vineyards on the shores and islands of the lake, which, but for this circumstance, are well adapted to this culture. In our choice of varieties we are restricted to the earlier sorts. Grape mildew causes but very little annoyance here, and the rotting of the fruit and the too early shedding of the foliage are almost unknown.

Adirondac. — A good grape, lacks constitution, but often succeeds very well.

Clinton.—Hardy if entirely exposed; valuable for covering arbors, walls, etc., as well as for its fruit; by far the best of its class.

Concord.—Does not always ripen except in favorable exposures. We want nothing later than this; occasionally it is lacking in fruitfulness.

Creveling. — A strong grower and a good fruit. Its only fault is a looseness of the bunch, owing to imperfect fertilization and consequent loss of a large part of the young berries.

Delaware. — A good grower. Its productiveness, the certainty of its ripening, and the delicious quality of its fruit renders this our most popular grape.

Hartford Prolific.—Strong, healthy, and productive; valuable.

Iona.—So late it is not to be recommended for ordinary or general planting; but it is so good it may well share with the *Isabella* the southern exposure we give that sort.

Isabella. — The immense productiveness of this old grape induces the cultivator to retain it still on his list, and to give it every advantage of sunny wall, etc., yet even then, it often fails to ripen its fruit before frost.

Israella.—Early, good, productive.

Rebecca.—A very fine grape, but a feeble grower; requires too much petting.

Salem.—A noble fruit, a strong grower, very desirable, ripens well here.

Most of the others of Mr. Rogers' hybrids are too late for our use, and *Salem*, the last, seems equal to the whole. The newer grapes have not yet found their true place with us.

CURRANTS.

Cherry, Fertile de Palaun, Red Dutch, Versaillaise, Victoria, White Dutch, White Grape.

GOOSEBERRIES.

American Seedling, Downing's and *Houghton's.*

BLACKBERRIES.

The necessity of covering these in winter (for even the *Kittatinny* is tender,) precludes the general cultivation of this fruit.

RASPBERRIES.

Brinckle's Orange, Davidson Thornless, Doolittle, Clarke and *Philadelphia* all pass the winter in comparative safety, even if not covered, and merit more general attention.

STRAWBERRIES.

If covered with litter, the additional protection of deep snow which they enjoy, enables all the most approved sorts in general cultivation to succeed here, much as elsewhere, though here, as everywhere else, the *Wilson* is planted more than any other.

Respectfully submitted by

C. G. PRINGLE.

CHARLOTTE, VT.

REPORT FROM GRAFTON, WINDHAM COUNTY, VT.

List of Apples adapted to South-eastern Vermont, giving a succession from August till June :

Red Astrachan.

Early Harvest.—Desirable.

Williams' Favorite, Large Yellow Bough, Golden Sweet.

Bemis Sweet.—This is a local variety originating in the town of Westminster; very popular, and much raised in some towns ; fruit large, flat, white ; a very good sweet apple ; productive ; tree vigorous.

Garden Royal.

Porter.—This is our best market apple of its season.

Fameuse, Twenty Ounce, Jewett's Red, Hubardston Nonsuch, Baldwin, Rhode Island Greening, King of Tompkins County, Peck's Pleasant, Mother.

Morrison's Red.—A fruit but little known here ; introduced into this town from Massachusetts several years ago. In form and color resembles the *Mother*. Season from December to April.

Yellow Bellefleur.—This apple does finely near the Connecticut River.

Northern Spy, Tolman Sweet.

Varieties which have been extensively cultivated, but which should be discarded on account of inferiority of quality or unproductiveness :

Sops of Wine, Roxbury Russet, Esopus Spitzenberg, Westfield Seeknofurther, Gilliflower, Blue Pearmain.

There are doubtless some varieties which have not been introduced here, which would do well if cultivated. But as long as we have good varieties which succeed well, it is not advisable to run after new things very much until they have been well tested.

PEARS.

Bartlett.—Only objection, tree a little tender.

Clapp's Favorite.—Hardy.

Belle Lucrative, Beurre Clairgeau, Beurre d'Anjou, Buffum.

Flemish Beauty.—This is, without doubt, the pear best adapted to this region.

Onondaga, Seckel, Sheldon, Urbaniste, Lawrence.

As regards pears, I cannot speak with the same degree of confidence as with relation to apples, as this fruit is but little raised in this vicinity. The cultivation of the pear is increasing I think, year by year, and the above list is the one which I follow in selecting. I know of no reason why, by a judicious selection of the most hardy varieties and proper cultivation, pear culture cannot be made a success.

PLUMS.

Plum culture has in a great measure been abandoned on account of black knot, and the curculio, but with close attention there is good reason to believe that it may be successful.

Imperial Gage, Lombard, McLaughlin, Smith Orleans, Lawrence's Favorite, Yellow Egg, Peach Plum, Yellow Gage.

GRAPES.

We need the earliest varieties in order to succeed, and must sacrifice quality of fruit for earliness of ripening.

Delaware.—This it seems to me, is the indispensable variety for this region. Hardy, productive and pretty sure to ripen.

Concord.—Not quite early enough for these hill towns, the season being usually about two weeks too short. On the Connecticut River it succeeds better.

Hartford Prolific.

Adirondac.—Not desirable ; vine tender.

Rogers' Hybrids.—Some of the earliest ripening of these succeed.

I am writing in regard to the hill towns of Windham County. Some varieties of grapes which will not ripen here, will do well on the Connecticut River, the season being more favorable.

CHERRIES.

The black knot is just at present master of the situation, and people feel but little encouragement. For varieties would recommend the *May Duke* and *Early Richmond.*

CURRANTS.

Cherry, Red Dutch, White Grape, White Dutch.

RASPBERRIES.

Doolittle's Blackcap, Mammoth Cluster Blackcap, and *Clarke*, though this last variety seems to be a little tender, but we have had some hard winters recently.

STRAWBERRIES.

Wilson's Albany.—Of course.

Respectfully submitted,

J. H. PUTNAM.

REPORT FROM GRAND ISLE, GRAND ISLE COUNTY, VT.

In making out a list of fruit from the little experience I have had, I would select in

APPLES

Summer, *Early Harvest, Summer Rose, Williams' Favorite, Benoni.* Autumn, *Champlain, Porter, Fameuse, Fall Pippin.* Winter, *Belmont, Dutch Mignonne, R. I. Greening, Yellow Bellefleur, Talman Sweeting, Roxbury Russet ;* this last tree is rather tender, but we can not well do without it.

PEARS.

Summer, *Supreme de Quimper, Osband's Summer, Tyson, Dearborn's Seedling.* Autumn, *St. Ghislain, Flemish Beauty, Louise Bonne of Jersey, Onondaga.* Winter, *Beurre d'Anjou, Winter Nelis, Glout Morceau, Easter Beurre ;* this last not quite so hardy, but the only pear I have that keeps through winter. Have other pears on trial, but this is as far as I can go now.

GRAPES.

Hartford Prolific, Delaware, Concord, Eumelan, promises well.

CHERRIES.

Early Purple Guigne, Black Eagle, Elton, Buttner's Yellow, May Duke, Late Duke.

PLUMS.

Yellow Gage, Lawrence's Favorite, Green Gage, Imperial Gage, Lombard, Schenectady Catharine, McLaughlin, Jefferson.

The foregoing is a select list from many varieties that I have tested.

BENJ. MACOMBER.

Mr. Macomber is one of our best fruit growers, so I can freely indorse the above.

H. L. HURLBUT.

Report from Massachusetts.

In behalf of the Fruit Committee, the undersigned reports that the two seasons which have elapsed since the publication of the last Proceedings of the Society, have been particularly favorable in this State; the former to the apple, and the latter to the cherry and pear. The month of November, 1871, was extremely cold, but it was believed that the wood of our fruit trees was so well ripened, that no injury need be feared; and though during the winter, the cold was often severe, accompanied with high winds, and unusual dryness, this anticipation of exemption from injury proved correct; even the peach buds escaping, while many hardy forest trees were wholly destroyed, or much injured. The succeeding summer, (1872) was remarkable for the succession of abundant showers, with extreme heat, reminding us of the accounts of tropical climates. This was very favorable to the crop of strawberries, which, unlike the fruit trees, had been much injured by the winter ; such plants as were not destroyed, producing abundantly. The most noticeable characteristic of the present season, (1873) was the extreme drought from the middle of May to the last of July. This was however, favorable to the soundness of the abundant crop of cherries, and to the fairness of the pears, and being followed by a succession of rains, the latter fruit has been more abundant, and of finer quality, than since the extraordinary season of 1862. The show of pears at the annual exhibition of the Massachusetts Horticultural Society, was the largest and best ever made of that fruit, the whole upper hall having been filled with pears and grapes; and much regret was expressed that more of the delegates to the Pomological Society, whom we had had the pleasure of welcoming the week before, could not have remained to witness it, as we believe the same surprise and gratification, would have been felt by all, as was expressed by the few who remained to see it.

The crops of apples, for some years prior to 1872, had been inferior, both in quantity and quality, to those of previous years, but the abundant and excellent crop of that year, seemed to decide the question which has been so much discussed, of the deterioration of this most valuable of our fruits, at least, so far as that this deterioration is not permanent.

In regard to varieties, we may say that the standard for admission to the lists for general cultivation, is now so high, that few new ones have been added. Commencing with the

STRAWBERRY,

The *Wilson*, *Triomphe de Gand* and *Jucunda*, are the favorites for cultivation, on a large scale for market. The *President Wilder* surpasses all others for beauty of form and color, and is unexcelled in quality. The *Col. Cheney*, under a limited trial, has found favor, and *Nicanor*, with some cultivators, has proved exceedingly productive, and also of good quality, as an early variety. *Charles Downing*, is hardy and productive, but only of medium quality, and not bright enough in color. Much enterprise has been shown, in the production of new seedlings, of which Mr. John B. Moore, in particular, has shown a large number, some of which, give promise of much value.

CHERRIES.

The Cherry crop, for some years, has been rather uncertain, but the *Downer* has seldom failed. Besides this the *Black Tartarian* and *Black Eagle* are most prized. Of Dr. Kirtland's sorts, the *Black Hawk*, *Red Jacket*, and *Rockport Bigarreau* are hardy and productive. Some new seedlings have been shown, but none sufficiently distinct for notice, being mostly in the way of *Downer*.

CURRANTS.

The *Versaillaise* has no competitor as a market variety, though the *Red Dutch* is superior in quality for family use. *Dana's Transparent* surpasses any other white variety. Hellebore, when timely applied, has proved the cheapest and most effectual destroyer of the currant worm.

GOOSEBERRIES.

The *Downing*, *Smith's Seedling* and *Houghton's Seedling*, are most valuable, in the order named.

RASPBERRIES.

The *Franconia* and *Knevett's Giant*, are preferred for market to the *Philadelphia* and *Black Caps*, even at higher cost. The *Hornet* is coming into favor from its size. *Brinckle's Orange*, from its fine flavor, is prized for family use.

BLACKBERRIES.

The *Dorchester* is the favorite, from its fine quality. *Wilson* has been shown of large size, though but little larger than the best specimens of *Dorchester*. *Kittatinny* proves of good size and quality, and hardy.

PEACHES

Are so unreliable in this State, as not to be of much importance, but in favorable seasons and locations, the fruit is as fine as can be produced anywhere. *Hale's Early* is of the best quality, but, as everywhere else, liable to rot. In orchard houses, however, it is free from this defect, and is largely cultivated, and esteemed the best variety for that purpose. *Crawford's Early* is probably more generally cultivated than any other kind, being large, handsome, and of good quality, and seedlings are often shown varying but slightly from it. *George the Fourth* and *Old Mixon Free* are among the most desirable kinds.

PLUMS

Have almost gone out of cultivation, but where trees remained, a fine crop was produced in 1872. *Green Gage*,

Imperial Gage, *Lawrence*, *Columbia*, *General Hand*, *Washington*, *Reine Claude de Bavay*, and *Coe's Golden Drop*, are among the best varieties. The lime remedy for the curculio has been successfully used by some cultivators.

APPLES.

We have before mentioned that the crop of 1872, was unexampled in quantity, and excellent in quality, but as might have been expected, that of the present year, has been much less. We do not now think of a single new variety that has been added to the list. As summer varieties, the *Red Astrachan*, *Williams*, and *Large Yellow Bough* have superseded all others; and the same may be said of *Porter* and *Gravenstein*, in autumn. *Washington* is one of the newer autumn kinds, and has several times taken the Massachusetts Horticultural Society's prize for the best single dish. Of winter kinds the *Hubardston*, *Rhode Island Greening*, *Baldwin*, *Ladies' Sweet*, *Talman's Sweet* and *Cogswell*, which have long been standard kinds, are still unsurpassed. *Hunt Russet* grows in favor, with every successive season. *King of Tompkins' County* has not been extensively cultivated, but, where it has been, has proved excellent. *Northern Spy* is of the highest quality if one has patience for it to come into bearing. *Tetofsky*, *Garden Royal* and *Fameuse* are desirable for amateur cultivation.

PEARS.

We may add to what we have before said of the extraordinary crop of this fruit the present season, that it is a fruit which seldom fails here; indeed, taking one year with another, we believe it to be a more certain fruit in Massachusetts, than the apple. The late A. J. Downing, alluded to the mania for pear culture around Boston, and it is still the favorite fruit here, and has this year richly rewarded its lovers. Go where you would, around the larger towns and cities, during the past summer and autumn, and you would see the branches of heavily laden pear trees hanging into the street.

Commencing with *Doyenne d'Ete*, and following with *Beurre Giffard* and *Clapp's Favorite*, we have three summer pears, against which no others can possibly take a prize at our exhibitions, at their respective seasons. The last named is becoming more and more popular as the best large early pear. *Rostiezer*, *Manning's Elizabeth*, *Tyson*, and *Brandywine* are superior to it in quality, but inferior in size. *Bloodgood*, *Dearborn's Seedling* and *Supreme de Quimper*, retain their previous good character, the last, which is newer than the other two growing in favor. The *Bartlett*, which is too well known to need anything more said of it, immediately succeeds these. *Doyenne Boussock* ripens with the *Bartlett*, and is becoming known in our markets, as one of the few pears whose size and beauty enable it to compete with that variety.

Of autumn pears, the varieties are numerous. Among those which have continued to be deservedly popular, may be named *Beurre Bosc*, *Beurre Hardy*, *Beurre Superfin*, *Duchesse d' Angouleme*, *Doyenne du Comice*, *Howell*, *Louise Bonne of Jersey*, *Marie Louise*, *Merriam*, *Paradise d' Automne*, *Seckel*, *Sheldon*, *Onondaga*, *Urbaniste*, *Belle Lucrative*, *St. Michael Archange*. *Baronne de Mello*, *Emile d' Heyst* and *Mount Vernon* are newer kinds which promise to be of the finest quality as late autumn varieties. *Beurre Clairgeau* is valuable for market, for its size and beauty, but its inferior quality, has caused it to fall in estimation for private gardens.

As a winter pear, the *Beurre d' Anjou* takes the lead. Among the collections of pears offered for premium, hardly one can be found, which does not comprise this variety. While the popularity of other kinds has ebbed and flowed, the *Beurre d' Anjou* has gone on steadily increasing in favor, until it is almost universally acknowledged to be the most valuable of all pears. *Lawrence* and *Winter Nelis* are at least fully equal to it in quality, and maintain their reputation as standard winter kinds. *Dana's Hovey* is one of the richest of all pears, its only fault being its small size. As very late kinds, *Doyenne d' Alencon* and *Josephine de Malines* do tolerably well, but fail in size and beauty. *Easter Beurre* has gone by. *Vicar of Winkfield*, when well grown and ripened, is fine for the table, and always productive, and valuable for cooking.

Among new pears, the *Souvenir de Congres* is of the largest size, brilliant color, and of excellent quality, and promises to be a great acquisition among our early pears. *Maurice Desportes* is a large pear, of *Beurre Bosc* form, ripening in October, and also promises to be a fine acquisition. *Dr. Lindley* is a very handsome, high-colored, and productive pear, ripening the first of November. *Souvenir Madame Treyve* is a fine, rich, October pear. *Docteur Koch* is very handsome, and very sprightly, with a rich aroma. It ripens about November 1st. We might increase this list of new pears much farther, but will only add, that among the many promising seedlings raised by the Messrs. Clapp, their No. 22, after a trial of three years, has uniformly ranked as *best*. Full medium size, of a beautiful clear yellow color, exceedingly juicy and spirited, resembling the *Beurre Superfin*, but thought to be even superior to that fine variety.

GRAPES.

The *Concord* is here, as everywhere, the grape for the million; the only one which can be recommended for vineyard cultivation in this State. *Delaware*, is hardy and excellent for gardens. The *Iona* seldom ripens. Of Rogers' Hybrids, the *Massasoit*, *Wilder*, *Lindley* and *Barry*, are among the best. Mr. E. W. Bull, the originator of the *Concord*, and Mr. J. B. Moore, both have several seedlings, among which some white varieties particularly give promise of value.

These remarks might be extended to much greater length, but we believe what has been said is sufficient to indicate the most important points in the pomology of this State.

ROBERT MANNING,
For the Committee.

Report from Rhode Island.

WOONSOCKET, September 1, 1873.

MR. P. BARRY—Dear Sir :—Enclosed I send report of Committee selected from different sections of Rhode Island, without remark, as we have recommended none but well tested varieties. I regret to be so late in forwarding

the report, but have been unable to get the Committee, selected by myself, together until to-day.

The drought has seriously affected our fruit in Rhode Island this season, and our State Fair is held on same days of the Pomological Society, consequently I fear we shall make a poor show of fruit.

Yours truly,

J. P. CHILDS.

Report of the Rhode Island Committee on fruits for general cultivation in Rhode Island.

APPLES.

Bough Sweeting, Baldwin, Benoni, Gravenstein, Green Sweet, Hurlbut, Peck's Pleasant, Primate, Rhode Island Greening, Talman's Sweet, Red Sapson, Early Harvest, English Russet, Fall Pippin, Golden Sweet, Hubardston Nonsuch, Jersey Sweeting, Porter, Red Astrachan, Roxbury Russet, William's Favorite, Fenner Sweet.

Apricots.—Not worthy of cultivation.

BLACKBERRIES.

Dorchester, Lawton, Kittatinny, Wilson's Early.

CHERRIES.

Black Eagle, Black Heart, Black Tartarian, Governor Wood, Elton, Coe's Transparent, Downer's Late Red, Early Richmond, May Duke, Rockport, Bigarreau.

CURRANTS.

Black Naples, White Grape, La Versaillaise, White Dutch.

NATIVE GRAPES.

Concord, Croton, Delaware, Diana, Eumelan, Agawam, Hartford Prolific, Wilder, Salem.

GOOSEBERRIES.

Houghton Seedling.

NECTARINES.

Not grown.

PEACHES.

Cooledge's Favorite, Crawford's Early, Crawford's Late, Grosse Mignonne, Red Rareripe, Stump the World, Early Tillotson, Early York, George the Fourth, Hale's Early, Old Mixon, Troth's Early.

PEARS.

Beurre Bosc, Beurre Clairgeau, Beurre d'Anjou, Beurre Diel, Beurre Giffard, Beurre Hardy, Beurre Langelier, Beurre Superfin, Howell, Kingsessing, Lawrence, Onondaga, Bartlett, Belle Lucrative, Brandywine, Buffum, Clapp's Favorite, Dana's Hovey, Dearborn's Seedling, Doyenne Boussock, Doyenne d'Ete, Duchess d'Angoulême, Louise Bonne of Jersey, Manning's Elizabeth, Pratt, Rostiezer, Seckel, Sheldon, Tyson, Washington, Abbott, Nouveau Poiteau, Osband's Summer, Paradise d'Automne, Urbaniste, Vicar of Winkfield, Winter Nelis.

PLUMS.

Coe's Golden Drop, Imperial Gage, Lombard, Prince's Yellow Gage, Smith's Orleans, General Hand, Jefferson.

RASPBERRIES.

Clarke, Philadelphia, Doolittle's Black Cap, Mammoth Cluster.

STRAWBERRIES.

Agriculturist, Fillmore, Triomphe de Gand, Wilson's Albany, Charles Downing, Downer's Prolific, Hovey's Seedling.

J. P. CHILDS,
SILAS MOORE,
E. B. WHITEMARSH.

Report from Connecticut.

P. BARRY, ESQ., Dear Sir:—The accompanying lists of fruit were prepared after a half day's discussion of the different varieties.

Yours respectfully,

T. S. GOLD.

WEST CORNWALL, CONN., July 8, 1873.

APPLES.

For general culture in the order of ripening. *Red Astrachan, Early Harvest, Sweet Bough, Golden Sweet, Gravenstein, Porter, Fameuse, Golden Pippin, Hubardston Nonsuch, Hurlbut, Ladies' Sweeting, Baldwin, English Russet.* Only Fall and Winter sorts, to be planted for market. Local or partially tested, of high promise for special localities or purposes.

Chenango Strawberry, Primate, Cogswell Pearmain, Baker, Progress, Excel, Peaked Sweeting, Yellow Bellefleur, Peck's Pleasant, Burnham Sweet, Green Sweet, American Golden Russet.

PEARS.

Doyenne d'Ete, Osband's Summer, Rostiezer, Dearborn's Seedling, Bartlett, Clapp's Favorite, Belle Lucrative, Seckel, Beurre Bosc, Sheldon, Beurre d'Anjou, Winter Nelis, Lawrence, Vicar of Winkfield. Only Autumn and Winter sorts to be planted for market.

T. S. GOLD,
WM. CLIFT,
P. M. AUGUR,
EDWIN HOYT,
WM. H. YEOMANS,
Committee.

Report From Ontario.

August 29, 1873.

P. BARRY, ESQ.,—My Dear Sir:—Some kind friend to whom I have loaned my copy of last Report of the American Pomological Society, has failed to return it. I therefore go back to the Report of 1869, and send you a list of stars that may be added to those starred therein.

Yours truly,

D. W. BEADLE.

APPLES.

Bailey Sweet, Chenango Strawberry, Dutch Mignonne, Dyer, or Pomme Royale, Early Strawberry, King of Tompkins Co., Late Strawberry, Melon, Mother, Porter, Primate,

Summer Rose, Tetofsky, Twenty Ounce Apple, Wagener, Double Star, Duchess of Oldenburgh, Ribston Pippin, St. Lawrence

PEARS.

Ananas d'Eté, Beurre Bosc, Beurre Clairgeau, Beurre d' Amaulis, Beurre Hardy, Brandywine, Clapp's Favorite, Doyenne d'Eté, Doyenne Gris, Fulton, Jalousie de Fontenay Vendée, Lawrence, Marie Louise, Osband's Summer, Sheldon, Washington, Double Star, Flemish Beauty, Louise Bonne.

CHERRIES.

Bigarreau, Black Eagle, Black Tartarian, Coe's Transparent, Elton, Gov. Wood, Napoleon Bigarreau, Elkhorn, Double Star, Kentish.

PEACHES.

Crawford's Early and Late, Early York, George the Fourth, Grosse Mignonne, Old Mixon Free, Royal George, Red Cheek Melocoton.

PLUMS.

McLaughlin.

QUINCES.

Orange.

GRAPES.

Adirondac, Agawam, Barry, Crevelling, Essex, Israella, Lindley, Massasoit, Merrimack, Salem, Wilder.

GOOSEBERRIES.

Downing, Houghton.

RASPBERRIES.

American Black, Franconia, Mammoth Cluster, Orange, Philadelphia.

BLACKBERRIES.

Kittatinny.

STRAWBERRIES.

Triomphe de Gand.

Report from Michigan.

P. BARRY, ESQ., *Chairman State Fruit Committees.*—Sir:—The past season has been one long to be remembered by the fruit growers of Michigan, as of unusual severity of winter and extreme drought the following June. The thermometer reached 40 degrees below zero in many inland places, while upon the eastern shore of Lake Michigan the mercury showed as low as 22 to 30 degrees below zero, to have been reached according to locality. Generally, the points lying in a north-easterly direction from the deeper waters of the lake, proved the most exempt from low temperature, probably owing to the prevailing south-westerly winds becoming somewhat more tempered by the deep than shallow water.

An innovation seems to have been made upon the commonly accepted ideas of previous years, as to the degree of coldness the fruit bud of the peach would undergo without injury.

I may as well state the facts, as from them the idea can be clearly seen.

At South Haven there are many peach trees that are ripening fruit at the present time, small in size, it is true, yet perfect fruit upon the branches, of which trees there is, in some cases, positively *not a single leaf*, nor has there been this season. In many other cases the leaves are small, sickly in appearance, and the tree virtually winter-killed, yet it blossomed freely, set its fruit, and will ripen it *in its season*, not prematurely, as is the case with the "yellows." Many trees that went into the winter with the soil drawn away from the crown or large roots (for the purpose of hardening against the attacks of the borer), and in such cases the exposed roots and crown was found upon the opening of spring entirely killed, the bark and wood being black and soft, yet those trees blossomed freely and set their fruit. In the Grand Traverse region where the snow lies five feet deep on the level, and the ground never freezes, I saw last week large, well ripened *Hale's Early* grown upon trees, the wood of which was plainly so badly frozen above the snow line that it would never push a leaf the coming spring.

The idea has been commonly accepted here that the main reason why peaches could not be grown in the interior, was that the protection of the lake was needed to guard against extreme cold, in fact, that the 10 to 16 degrees below zero, often attained by the mercury in the interior, was the only reason why peaches could not be grown as successfully in the one section as the other, yet the trees in the interior have seldom been injured in the wood by the freezing, and yet the fruit buds have been killed very, very many times.

Query. Was it the extreme drought last summer that caused extreme ripeness of the fruit bud that made it proof against 30 degrees below zero?

If so, then it is possible for a degree of ripeness to be attained by the peach tree which will enable the fruit bud to withstand without injury more cold than the wood or leaf bud can and live.

If this be so, how is this ripeness to be secured with certainty?

As regards apples, the *Golden Russet* tree has withstood the winter second to none, unless it be the *Red Astrachan*, of which sort I do not know of a single instance of winter-killing. The *Baldwin* was hurt, perhaps, the most, yet where it has come through is heavily loaded. I do not think it safe to plant the *Baldwin* where peaches cannot be grown.

The *Primate, Red Astrachan Saint Lawrence, Wagener*, and *Ohio Nonpareil* are to be recommended.

BLACKBERRIES.

The *Wilson Early.*

CHERRIES.

Early Richmond, Governor Wood.

GRAPES.

Agawam, Catawba, Clinton, Delaware, Iona, Wilder.

PEARS.

Onondaga.

QUINCES.

Apple or *Orange.*

PEACHES.

The *Yellow Alberge* or *Barnard* here, *Hill's Chili* known here also as *Stanley's Late*, *Jenny Lind*, etc.

RASPBERRIES.

McCormick. (Mammoth Cluster.)

STRAWBERRIES.

Charles Downing, *Wilson's Albany.*

Very respectfully submitted,

A. S. LINDERMAN.

Reports from Wisconsin.

P. BARRY, ESQ.:—In answer to your request, upon the pomological prospects of Wisconsin, I can only say that the outlook for the future is not altogether pleasant. Many and sore have been the trials of the fruit grower for the last eighteen months; just as we were flattering ourselves of a firm foundation, with a list of iron-clad varieties, our hopes are shattered, for those sorts which in many cases had withstood the test for years, are now dead and dying. Then again we had learned and were teaching, thorough culture, but here again our experience proves nothing, for I find that the best cultivated orchards have suffered far the most. In many instances, some (always heretofore considered) tender varieties, such as *Early Harvest*, *Keswick Codlin*, *Maiden's Blush* and some others have wintered perfectly, and are fruiting reasonably well. The mercury sank from 30° to 40° below zero in different parts of the State, during the winter of 1872 and 1873. Yet this alone would not have killed so many trees and varieties, but the extreme drought of 1872 continuing until the cold of winter set in, was where the cause commenced. To confirm this idea, I note the fact that many, I think in a majority of cases, the injury is first found in the root, often seen in the hardiest varieties of apple and crabs. The last winter, 1872–73, are substantially a repetition of 1856–57, also 1861–65.

In answer to questions concerning the conditions of orchards, D. Huntley, of Appleton, writes: Majority of trees are root killed. Have been affected alike upon all soils, but those standing in grass, or that were mulched, least injured. All the half hardy sorts are hurt; of the extra hardy, so called, (*Ben Davis*, *Talman's Sweet*, *Sops of Wine* and *Seek-no further*) all badly hurt.

J. M. Smith, of Green Bay, under date of September 2, 1873, writes as follows: I scarcely know what to say to your invitation to give you some information in regard to the condition of the fruit in this portion of our State. Last winter was a remarkable one, and it will probably cause a number of the varieties of apples heretofore considered hardy to be set aside as at least unsafe, if not useless, to cultivate in this portion of the State. *Red Astrachan*, *Duchess of Oldenburgh*, *Fameuse*, *Seek-no-further* and *Golden Russet* seem to have wintered well.

St. Lawrence, and *Talman's Sweet* have generally come through all right.

Northern Spy wintered badly, also *Ben Davis*, *Walbridge* and *Pewaukee* have been but very little tried about here. In short we had better abandon the doubtful varieties and keep only such as have endured the past winter and then add to the list only those that are of a good quality and will endure winters like the last one; harder ones they will probably never be called upon to endure in this State.

Pears have wintered at least as well, and I think better than apples, and if we can find something that will prevent blight or check it in its ravages, I should be much encouraged in regard to them. The different varieties of Crabs in cultivation about here, have done well. *Transcendent* stands the highest, though it is possible it is because it is the best known of any of the larger varieties. Grapes that were covered, have done well, and promise fine crops.

Concord, *Delaware*, *Hartford Prolific*, *Crevelling*, *Aguawam* and *Rogers* No. 15, stand about the highest.

The *Delaware* is steadily gaining ground, and I shall not be surprised to see it stand at the head of the list in a very few years.

Strawberries were badly injured where they were not covered, even the *Wilson* in some cases froze to death.

The *Wilson* is the only variety that I have ever been able to make profitable as a market berry, and it seems to be the generally accepted market berry of the West. Raspberries have generally wintered well without covering, and have borne large crops this season. *Doolittle*, *Miami*, *Mammoth Cluster*, *Philadelphia* and *Golden Cap* all doing well. The *Clarke* killed badly.

Currants of all kinds as far as I have seen did well.

One thing has impressed itself strongly upon my mind during my observations this season, and the more so, from the fact that it is in contradiction to all of my preconceived theories, and belief. It is this. I have noticed that wherever either apple or pear trees have been thoroughly cultivated, and the ground highly manured, the trees have been injured much worse than when they stood in grass. I cannot call to mind a single exception to this rule, even where they have stood in a meadow for a number of years. I think the best looking orchard that I have seen, all things considered, is one that has been cultivated, but has *never* been manured. Now is it not possible that we have manured some of our orchards too heavily, and in this way stimulated too great a growth of wood for a series of years, and when such a winter as the last one comes upon them, they are not hardy enough to endure it and must suffer, or die, or both?

But upon this subject I am not wise enough to teach, and will not attempt it.

A. L. Hatch, of Richland County, writes: In valleys would set Crabs and *Russian* apples only, with *Haas* as follows: *Transcendent*, *Sylvan Sweet*, *Hyslop*, *Montreal Beauty*, *Glover's Early*, *Spitzenberg Crab*, *Duchess*, *Haas*, *Tetofsky*, *Marengo.*

On ridge land (elevated 300 to 400 feet above valleys) would recommend *Duchess*, *Tetofsky*, *Haas*, *Rawle's Genet*, *Ben Davis*, *Walbridge*, *Fameuse*, *Sweet Pear*, *Utter's*, *Talman's Sweet;* along the Lake shore, in the eastern portion

of the State the exposures and soils are different. Atmosphere somewhat affected by the Lake influences, perhaps, and I find less injury.

H. M. Thompson, near Milwaukee, writes: For a commercial list, I set *Sour Bough*, *Alexander*, *Baldwin*, *Golden*, *English* and *Perry Russet*, *Northern Spy*, *Fameuse*, *Rawle's Genet*, *Red Romanite*, *Red Winter Pearmain*, *Westfield Seek-no-further*, and top worked on *Oldenburgh* or *Transcendent*, *Rhode Island Greening* and *Esopus Spitzenberg*, and for general planting would add, *Carolina-Red June*, *Tetofsky*, *Red Astrachan*, *Oldenburgh*, *Fall Orange*, *Talman's Sweet*.

Baldwin is only recommended for sandy soils within fifteen miles of the Lake (Michigan,) and must not be forced into rapid growth until it comes into bearing, then it bears stimulating. Thus treated in an orchard near me, fifteen *Baldwin* trees in an orchard of about 200 trees, (over thirty years planted,) yields more annual profit than balance of orchard. *Perry Russet*, also succeeds but indifferently, except on *sandy soil*, when it proves an annual bearer. *Northern Spy* does well on all soils, the only objection to this prince of market apples is that it is late in coming into bearing. As the tree is an upright grower, it is necessary to keep inside of top well pruned; this will cause the tree to bear five to six years sooner than would otherwise occur as generally pruned.

East of the Mississippi River, and within influence of Lake winds, would protect on south, west and north for following reasons: Strongest prevailing summer winds from south-west which knock off and destroy much fruit, unless so protected. In winter the severest cold is accompanied by north-west winds. The timber belt on the west and north, not only breaks the force of this extremely dry cold wind, but causes less loss by evaporation of sap, than would otherwise occur if unprotected.

Sour Bough, *St. Lawrence*, *Alexander*, *Baldwin*, *Golden*, *English*, *Perry Russets*, *Northern Spy*, *Fameuse*, *Rawle's Genet*, *Small Romanite*, *Red Winter Pearmain*, *Westfield Seek-no-further*, (and *Rhode Island Greening*, and *Esopus Spitzenberg*, top worked on *Duchess*, or *Transcendent*.)

G. P. Pepper, of Pewaukee, says: Fifteen per cent root killed, on moist soils more killed, but tender sorts injured in the top. Hardy seedlings and hybrids of Siberian Crabs for stock are the only ones that are good on my own grounds of last year's setting. Recommends *Red Astrachan*, *Duchess of Oldenburgh*, *St. Lawrence*, *Utter*, *Fameuse*, *Plumb's Cider*, *Seek-no-further*, *Talman's Sweet Golden Russet*, *Willow Twig*, *Ben Davis*.

G. J. Kellogg, of Janesville, writes: In the apple orchard I see no cause of discouragement; not a tree of the best twenty-five varieties is materially injured. My soil is prairie, high, dry, black loam in hollows, and the knolls are sandy and gravelly, all underlaid with clean building sand to the depth of seventy-five feet. The surface soil is from six inches to three feet. Beneath the loam is a gritty, putty coat.

Protection on the west by evergreens, buildings and hedge, and large quantities of evergreens, four to six feet high all through the orchard.

The apple trees are thoroughly mulched with manure annually, and to this I owe more my escape from root killing than any other cause—believing that the dry fall is the great source of the evil of root killing.

My orchard, set in 1854, contains 1,184 trees. In all 122 varieties have been planted and many more top grafted. It would be tedious to give the list of failures; I will give a partial list of best kinds.

Red Astrachan, *Duchess*, *Fameuse*, *Talman's Sweet*, *Golden Russet*, *Ben Davis*, *Willow Twig*, *Red Romanite*, *Haas*, *Saxton* (also known as *Fall Stripe*,) *St. Lawrence*, *Sweet Pear*, *Bailey Sweet*, *Sweet June*, *Kirkbridge White*, *Alexander*, *Colvert*, *Winter Pennock*, *Northern Spy*, *Pomme Gris*, *Barrett Russet*, *Fall Wine Sap*, *Westfield Seek-no-further*, *Lowell*, *Sops of Wine*, *Rawle's Genet*, *Keswick Codlin*, *Utter's Early Red*, *Early Yellow Harvest*, and *Holland Pippin*.

These have all done well, and except an occasional *Keswick*, *Fall Wine* and *Barrett Russet*, are uninjured. The first twelve and *Utter*, *Westfield Seek-no-further*, and *Sops of Wine*, are the best in this list. Yet some of these, if only a few years planted, would have killed root and branch the last winter, while such tender varieties as *Yellow Harvest* and *Holland Pippin*, after securing a thick bark, become proof against any changes like the past winter, when the thermometer, December 24, at 7½ A. M., stood—35° and only reached—7° at 7 P. M., and went no lower during the night following. The lowest mean temperature for the week ending December 25, 1872, at sunrise, was—20 5-7. My thermometer is "spirit gauge," and in extreme weather runs a little lower and a little higher than mercury.

I would have a thanksgiving if other trees and vines came through as well as my apple orchard. Of fifty-seven *Early Richmond* cherry, grafted on *Morello*, ten are dead, seventeen injured, and thirty all right, save the killing of fruit buds, all in each cluster except the center bud, not giving half enough fruit for the saucy robin.

Pear trees have suffered but little in the orchard, and *Flemish Beauty* and *Early Bergamot* promise a few pears at a cost of $5.00 each specimen. The past winter has not injured pear trees in the orchard as badly as the winters of '56-'57 and '63-64. *Bartletts*, top grafted on *Flemish Beauty*, have come through all right. Thermometer in '56-'57, 33° below zero, in '63-'64, 35° below, and in '72-'73, 35° below.

My pear trees are scattered through my apple orchard, which is interspersed with evergreens, and both aid in protecting. I commenced planting dwarfs in 1854, and planted ninety-one which, as they have died out, have been replaced by standards, and replanted without count, as I have endeavored to keep the places full. I have planted either as standards or dwarfs, and many kinds both on quince and pear, also on Mountain Ash, American and European, and on Apple and White Thorn, the following varieties: *Flemish Beauty*, *Louise Bonne of Jersey*, *Duchesse d'Angouleme*, *Vicar of Winkfield*, *Tyson*, *Howell*, *Belle Lucrative*, *Bartlett*, *Beurre d'Amaulis*, *Beurre Hardy*, *Glout Morceau*, *Swan's Orange*, *Easter Beurre*, *Seckel*, *Bloodgood*, *White Doyenne*, *Vermont Seedling*, *Lawrence*, *Sheldon*, *Rostiezer*, *Beurre Clairgeau*, *Doyenne Boussock*

and *Urbaniste*; also top worked on *Flemish Beauty*, *Winter Nelis*, *Summer Bon Chretien*, *Early Bergamot*, *Clapp's Favorite*, *President*, *Mt. Vernon*, and several seedlings and choice varieties which could not be identified.

Of the ninety-one places set to pears eleven are bearing, fifteen are in good condition, twenty-five sick, forty vacancies; nine of the sick were injured by the past winter; only five of the forty were killed by the past winter. Of the thirty known varieties only one tree of them ever paid the cost of planting in fruit, and that was a dwarf *Louise Bonne of Jersey*. Of the eleven in bearing this year, one is *Early Bergamot* top worked on *Flemish Beauty*, and this is one of the injured ones of last winter, injured in the top. I have several varieties top worked on *Flemish Beauty* that came through the past winter uninjured—among them *Bartlett*.

There is nothing hardy enough for our winters except *Flemish Beauty*, and the blight is death on that. I have given all kinds of treatment in the past twenty years, from high culture to starvation. A medium course with the pear is the safest, and the blight is our greatest enemy.

In the nursery pear trees have fared worse than in the orchard the past winter.

Flemish Beauty, one year old, twenty-five per cent. dead, twenty per cent. injured.

Flemish Beauty, four years old, ten per cent. dead, ten per cent. injured.

Sheldon, four years old, twenty per cent. dead.

Urbaniste, four years old, forty per cent. dead, twenty per cent. injured.

Beurre Clairgeau, four years old, twenty per cent. dead, forty per cent. injured.

The above nursery trees are all standard on pear.

The following are on Mountain Ash, two to three years:

Flemish Beauty, twenty per cent. injured.

Bartlett, fifty per cent. injured, fifty per cent. dead.

Duchesse d'Angouleme, nearly all dead.

Early Bergamot, thirty per cent. injured.

Mt. Vernon, twenty per cent. dead, sixty per cent. injured.

Summer Bon Chretien, all dead or injured.

Winter Nelis, *Lawrence*, *White Doyenne*, *President*, *Urbaniste*, *Beurre Clairgeau*, *Clapp's Favorite*, *Sheldon*, all injured.

Of twenty-two varieties, top worked on Mountain Ash, two and three years, twelve are growing, one of which, *Early Bergamot*, is bearing.

In the apple nursery, all varieties, one year, are killed or badly injured; two years old badly injured. *Haas* is the only variety that seemed to escape. *Ben Davis* suffered less than many of the most hardy varieties; three years old, a few injured, sometimes very singularly. On the west side of a little ravine, *Plumb's Cider* all killed, while on the east side the same variety is all right; while *Duchess*, in next row, is all right both sides. Of this age, three years, I have many kinds on crab seedlings and on apple, and the injury is so slight I can see no difference in favor of crab stocks. If my one year had been part on crab, I could have drawn conclusions as to the value of crab seedlings. I saw a few deaths among *Soulard* three year, but none in *Hyslop* and *Transcendent* from winter.

Vineyard losses heavy on newly planted vines and on light soil. A portion of my vineyard is on gravel knolls, and for eight years I have been fighting against winters and losing all the time. I have tried setting shallow and deep, in good loam and clay drawn from stone quarry: all alike seem to fail when the surrounding soil is largely gravel, and had I kept these sandy, gravelly knolls to white beans and strawberries I should have been more than one thousand dollars ahead.

The poorer the variety, the better it succeeds on poor soil. Good corn land is none too good for grapes, and steep side hills, no matter how expensively terraced, are, in the long run, worthless, as are light soils, for the vine.

I might give you a long chapter on success and failure of the grape, but this communication is far too long, and not as clear as I should like to make it, and like the student after knowledge, the more I learn, the less I seem to know.

Pears have been almost a failure, a few exceptional cultivators, but no reliable data or list. *Flemish Beauty* and *Early Bergamot* are at the head, and may add in a few cases *White Doyenne*, *Lawrence* and *Winter Nelis*. The winter is not so much in the way of pear culture as the blight.

Plums are cultivated but little. *Monroe* and *Lombard* are the principal varieties. Curculio is our worst enemy. *Early Richmond* and *English Morello* cherries are the only varieties grown.

Protection to orchards is looked upon with much more favor than formerly. If spruce and pines are used, planted upon all sides, but more particularly the southwest and west.

In this broken manner I have attempted to give you an outline of our fruit prospects, gathered from observation and correspondence. Our situation now is not flattering; what the wind and weather has not done, canker worms and codling moths are completing in many cases.

The demand for crab trees is on the increase, many planting with a view to top work with choice sorts.

Very cordially yours,

O. S. Willey.

Madison, Wis., September, 1873.

Report From Wyoming.

Cheyenne, August 27, 1873.

P. Barry, Esq.,—My Dear Sir:—I have the honor to acknowledge the receipt of your letter notifying me of my appointment as a member of the General Fruit Committee of the American Pomological Society, and of circulars in reference to my duties as such member, and advising me of the meeting of the Society in Boston. Permit me through you, to return my thanks to the Society for the honor conferred upon me. I regret that my report in reference to this Territory will add nothing to the general stock of information in regard to fruits in the posses-

sion of the Society, but I am compelled to report that there is not, to my knowledge, a single fruit tree of any kind in Wyoming. I think that in some of our valleys, certain kinds of fruit trees might be cultivated with advantage, and it might be a subject not unworthy the deliberations of your Society to inquire into, and report upon the kind of fruit trees best adapted for cultivation on the vast plains, and in the fertile valleys of the Great West.

Trusting that your meeting in Boston may be in every way successful, and fruitful of good, I have the honor to be,

Very respectfully, your obedient servant,

J. A. CAMPBELL.

Report From Oregon.

Gentlemen of the American Pomological Society:—I thank you for the trust reposed in me. As it will be impossible for me to be present at your September meeting, I expect to meet with you at Philadelphia, at the Great Centennial Fair; as I see there is a proposition to hold a meeting of the Society at that time; which we think it would be wise to do, during the latter part of the Fair, to allow of the ripening of a great part of our fruits. I will endeavor to be present at that time with some specimens from Oregon. I will here send you a list of fruits that we have fairly tested, naming them in the order of their ripening.

APPLES.

Early Harvest, Sweet June, Red Astrachan, Golden Sweet, Williams' Favorite, Gravenstein, Fall Pippin, Warren, Yellow Bellflower, Baldwin, Blue Pearmain, Cayuga Red Streak, White Winter Pearmain, Newtown Pippin, Virginia Greening.

PEARS.

Madelaine, Summer Beauty, Bartlett, Fall Butter, Duchesse d'Angoulême, Stevens' Genesee, Seckel, Onondaga, Lawrence, Winter Nelis, Beurre Easter, Pound.

PEACHES.

Early Crawford, Cons' Cling, (local seedling.)

PRUNES.

German Prune.

GRAPES.

Black July, Delaware, Concord, Royal Muscatine, Isabella, Diana.

RASPBERRIES.

Doolittle's Black Cap, Red Antwerp, Native Black Cap.

GOOSEBERRIES.

Big English, Houghton's Seedling.

STRAWBERRIES.

Wilson's Albany, Jucunda, Peabody.

BLACKBERRIES.

Kittatinny, Lawton, Native Dewberry.

CURRANTS.

Early May from France, *Red Dutch, White Dutch, Cherry Currant.*

PLUMS.

Drap d'Orr, Peach Plum, Red Damask, Helm's Seedling, (local,) *Jefferson, Imperial Gage, Washington, Yellow Egg, Coe's Golden Drop, Late Damask,* (local,) *Late Red.*

CHERRIES.

Knight's Early Black, Belle de Choisy, May Duke, Carnation, Early Richmond, Royal Ann, (Napoleon Bigarreau,) *Black Tartarian, Black Republican,* (local seedling,) *Late Duke.*

The soil on which we grow the above named fruits to perfection, is a clay loam, underlaid with a porous red clay subsoil of varying form, three to ten feet in thickness, which does not need underdraining; the best natural drained soil I ever saw. The soil contains a large per cent of fine particles of iron ore; is what we term black sand. The land is rolling, grapes doing best facing the south-west. My location is open prairie land. The Cherry succeeds alone on the Mazzard. *Mahaleb* is worthless. Pears all on pear root. Budding seems preferable to grafting for the apple. The borer makes sad work with our apple orchards, killing them in the top limbs first.

Fruit trees bear young. My young orchard, three and four years old, from the bud, nearly all bore fruit this season, one Peach Plum bearing near four bushels of fine fruit, but they have never been what is called scientifically pruned, and in fact not pruned at all. I confine my pruning to pinching back a very little during summer; more than this, no man should scientifically prune a young orchard of mine. The Pear is perfectly at home with us; in fact, there is no drawback to fruit raising here, except the borer in the apple tree.

I would call attention of your Society to the *Helm's Seedling* plum and *Black Republican* cherry; both originated here: they are certainly worthy of a trial on the Atlantic side.

Hoping to be present at the meeting of your Society (which you will doubtless have) at the Great Centennial Fair at Philadelphia,

I remain your humble servant,

G. W. HUNT.

SUBLIMITY, MARION CO., OREGON, Aug. 1, 1873.

Report from Delaware.

Unexpectedly, and without time for the collection of a proper supply of specimens of Delaware Fruits, the "Central Delaware Fruit Growers' Association" has put on exhibition here a collection hastily gathered from the fields in the vicinity of Milford, which the Committee assure you is not half so creditable to our State and the Delaware Peninsula as it might be made. The fruit season is almost over with us. All our best peaches have gone to market, and we have now only the later varieties to exhibit. Of pears the same is true to a large extent. The specimens here exhibited are all field grown, under ordinary field culture, and are only average selections from such as are daily sent to market. If we had concluded at an earlier day to be represented here, we could have given you a collection much more satisfactory to

ourselves and creditable to our constituents. Our display is much more meager in variety and defective in quality than it should be. We do not consider our locality able to compete with New England and New York in the production of apples, though nearly all varieties do well in our soil and climate. All Northern varieties, however, mature much earlier with us, and the late ones so much so that they are almost worthless for keeping during the winter. For this reason we cultivate for market only the earliest of Northern fruit, which we are able to get to market several weeks in advance of the supply from New England. These we find profitable. They have this season brought from $1.00 to $6.00 per barrel. The autumn fruit ripens in summer, and the winter varieties in autumn.

We have some native varieties that keep well, but we do not find it profitable to go to market with them in competition with Northern grown fruit.

In the peach business, we consider the Peninsula of Delaware without a competitor. The present season our crop is less than a third of a full one, and yet we shall have put into market about one and a half millions of baskets. On a full crop we can market five millions of baskets. We can make money on them when they net us forty cents per basket, but to do this they must sell in New York at twice that amount. There are, at present, no indications that the trees are growing unhealthy, and no probability that the business will decline. Under an improved system of culture, the trees are now more healthy and thrifty than ever before. Much of this fruit has been grown heretofore almost without cultivation, and in poor soil; but a great improvement is taking place in this respect, and a better culture and higher fertilization is now applied by the best growers.

The advantages we have in this business are congeniality of soil and climate and accessibility to market. The perishable nature of this fruit makes the latter indispensable to the success of the business. From the center of the Peninsula we have Baltimore and Philadelphia within eighty miles, and New York one hundred and eighty. These are our chief markets, though, under special care, some of our fruit reaches Boston, and even Montreal. Notwithstanding our market conveniences, we are canning, drying, and distilling large quantities. By this means we are able to widen our market to the extent of the whole country. The peach is at present the great fruit product of the Peninsula, though our soil and climate are well adapted to pears, grapes, apricots, and all small fruits. All these are grown for market at present, and the tendency now is to diversify the business by giving increased attention to these and less to peaches.

Many varieties of pears grow, also, to the greatest perfection. Those most generally cultivated are the *Madelaine*, *Bartlett*, *Duchesse*, *Vicar* and *Lawrence*. Many other kinds do well, though some drop their leaves prematurely. The cultivation of this fruit is rapidly enlarging.

The small fruits are grown already to a considerable extent; but they may be produced in almost illimitable quantities.

Like our brethren of the West, we suffer from the extortions of transporters and middle men, and our success in the fruit business is more jeopardized by these, than any other impediments. Give us swift transportation, and one-half the money paid by consumers for our fruits, and we ask no odds of anybody in any business. Farming—Fruit Farming—*will pay*, and pay handsomely on these terms.

We are strongly inclined to believe that the remedy, the radical remedy, and the only effective one for these extortions is, National control of Railroads, run in the interest of the people, just as the mails are now carried. We believe in the people of this country, and in their ability to make National Administrations that shall manage the railways in an honest and economical manner. When this is done, the costs of transportation and travel may be reduced ten per cent per annum for six years; at about which point the minimum rate will be reached, at which the work can be done and all costs paid.

Much of our land has been exhausted, and many of our farmers have failed under the old system of grain production in competition with the virgin West. This is rapidly changing, and the old system is giving way to a diversified fruit culture, under which the community has promise of much greater prosperity.

Unimproved lands, which once sold for four or five dollars the acre, are now worth fifteen to twenty; and, improved with fruit trees and good buildings, from fifty to one hundred dollars.

Many of our best fruit growers are immigrants from the North, chiefly from New York, and we have room for many more, all of whom will be cordially welcomed.

J. S. Prettyman,
Stephen Wood,
Committee.

Report from Virginia.

Richmond, Va., September 1, 1873.

An increasing interest in the cultivation of fruits is manifest throughout the State, not only for home consumption, but large orchards are annually planted for market purposes, and as the capacity of the soil and climate for the production of fruits of the finest quality becomes better known, much more extensive planting will be done. In a latitude where *Wilson's Albany* strawberry ripens by the 10th of May, *Early Harvest* apples last of June, and *Bartlett* pears may be shipped the last of July, with quick and cheap water transportation to the northern cities, and long before there is any competition from the vicinity of these markets, it is very evident that we possess unusually good advantages for marketing these and other products of our soil at highly remunerative figures.

APPLES.

This, the staple fruit crop, is grown successfully over the whole extent of the State. Early kinds for shipping North, receive the most attention in the eastern division, and late varieties are most grown in the Piedmont and western portion. No uncertain experiments are required to ascertain whether or not it will *pay*. Years of suc-

cessful production have shown this beyond doubt. The finest *Newtown Pippins* (known here as *Albemarle Pippin*) and *Lady Apples* are grown along the whole extent of the eastern slope of the Blue Ridge, and for twenty-five to thirty miles east of its base. The former is frequently sold to speculators for five dollars per barrel at the orchard, taken to New York and there shipped to Liverpool and London, where it commands the highest price of any apple sent to those markets, and the latter we have known to bring twenty dollars per barrel in one of our own cities. *York Imperial* is fast growing into favor west of the Blue Ridge, where its productiveness, long keeping, and other good qualities commend it; five trees of this sort, the ninth year from planting, yielded nearly one hundred bushels of fruit.

The *Winesap* here, growing nearly as large as the *Baldwin* does North, is indispensable. It does well throughout the whole State, and more trees are planted of this than any other variety; in the upper part of the State it keeps through winter into spring, but in Tide-water it is a late fall, and early winter fruit. Many others not named, do well in the Piedmont country and west of it. The most of the summer and fall varieties succeed in the low country, but, as yet, there is a deficiency of good keeping sorts for that district, the warm soil and long hot summers causing those that are good keepers in the higher and cooler country to speck and drop prematurely. Some of our new southern kinds, however, we hope will supply this want.

With an area of country so extensive as Virginia, embracing such a variety of soil and climate, and running from the coast back three hundred miles, embracing an elevated country over four thousand (4000) feet above Tide-water, making a difference of fully one month in the time of ripening of early fruits, we may see the futility of an effort to give a list of apples for general cultivation. We submit two lists, one for the Tide-water, and the other for the Piedmont and country west of the Blue Ridge; yet we are aware that there should be another division, bisecting from east to west—say, taking the James River as the line, for there is a very great difference between the climate of the northern and southern portion of the State, affecting very perceptibly the ripening of apples. The one is well suited to the production of cotton and peanuts, and figs flourish finely on the eastern part of this division, while the upper part of the northern division produces the cereals and grasses to a great degree of perfection.

We have omitted some varieties that are well worthy a place in the orchard, but the list embraces a sufficient number to give a succession, and for various uses throughout the season, with the exception of late keepers for the Tide-water district, for which, as we said above, there is a deficiency of sorts.

SUMMER APPLES.

American Summer Pearmain, *Early Harvest*, *Early Ripe*, Tide-water and Piedmont; *Benoni*, Piedmont; *Duchess of Oldenburgh*, Tide-water and Piedmont; *Red Astrachan*, Piedmont; *Large Yellow Bough*, *Summer Rose*, *Summer Hagloe*, Tide-water and Piedmont; *Summer Rambo*, Piedmont.

AUTUMN VARIETIES.

Buckingham, *Baltzley*, Tide-water and Piedmont; *Fall Pippin*, Piedmont; *Gravenstein*, Tide-water and Piedmont; *Horse*, Tide-water; *Jersey Sweet*, Tide-water and Piedmont; *Maiden's Blush*, Piedmont; *Mangum* or *Carter*, Tide-water; *Mother*, Piedmont; *Porter*, Tide-water and Piedmont; *Smokehouse*, Piedmont.

WINTER VARIETIES.

American Golden Russet, Tide-water and Piedmont; *Abram* or *Crutchfield Greening*, Tide-water; *Ben Davis*, Piedmont; *Bonum*, *Cullasaga*, *Cannon Pearmain*, Tide-water and Piedmont; *Domine*, *Fallawater*, *Grimes' Golden*, Piedmont; *Gulley*, *Hall*, Tide-water; *Hix's White*, Piedmont; *Howes' Virginia Crab* for cider, Tide-water and Piedmont; *Hays'* or *Wine*, Piedmont; *Limber Twig*, Tide-water; *Loudoun Pippin*, Piedmont; *Large Vine*, Tide-water; *Lady Apple*, Tide-water and Piedmont; *Mason's Stranger*, Tide-water; *Michael Henry Pippin*, Tide-water and Piedmont; *Mattamuskeet*, Tide-water; *Newtown Pippin Yellow*, Piedmont; *Nickajack*, *Ortley Pippin*, Tide-water and Piedmont; *Paradise Winter Sweet*, *Pilot*, Piedmont; *Carthouse* or *Romanite*, *Rawle's Genet*, *Smith's Cider*, Tide-water and Piedmont; *Shockley*, Tide-water; *Winesap*, Tide-water and Piedmont; *York Imperial*, Piedmont.

PEARS.

Those who visited the Exhibition of this Society at Richmond, Va., in September, 1871, will remember the fine pears shown by the growers from the vicinity of Norfolk, excelling those exhibited from that justly famous pear-growing State—California. The success of a number of persons who have been in the business for a number of years, has induced a spirit for planting this fruit that is extending along the Elizabeth, Nansemond, James, York Rivers, and other accessible points for shipping. The *Bartlett*, and *Duchesse d'Angouleme*, comprise three-fourths of the planting; the former as a standard, and the latter as dwarf. The *Bartlett* is marketed from the 20th of July to 10th of August, and the *Duchesse* about three weeks later. In unfavorable locations the blight is sometimes very destructive, but in a well-drained soil, and one of moderate fertility and sufficient cultivation in the spring and summer, it seldom does serious mischief. The crop is the most certain of the large fruits. We know of one acre of standard *Bartlett* trees, planted in 1862, (trees twenty feet apart,) that netted its owner over five hundred dollars in 1871, six hundred in 1872, and the present year it will net not less than one thousand dollars. This orchard has hardly received *good* care, neither in the cultivation of the trees, nor in handling the fruit; but the soil seems eminently suited to the pear, and to this fact we credit the success of the orchard. It is a very sandy loam, or almost a bed of sand, of very fine texture, ranging in depth from five to fifteen feet, resting on a bed of shell marl of several feet thickness. The drainage is all that could be desired; no matter how heavy the rain-fall, in a few hours, at most, it all disappears. We may here say that,

from our own observation, as well as that of others with whom we have corresponded on the subject, we are convinced that, on a *thoroughly drained* soil, and one of moderate fertility, where the trees receive good cultivation, they are much less liable to blight than on a soil of opposite nature; indeed we have not often seen them seriously injured on such a location. Lime and potash are essential to the health of the tree, and if they are deficient in the soil, a moderate dressing should be applied. Dwarf trees suffer less than standards. *Clapp's Favorite* has fruited here the last two years, and while it is a very handsome fruit, and better suited to our palate than *Bartlett*, yet we are not satisfied that it is many days earlier, or will supersede that popular variety as a market sort. The tree is a fine grower, but has blighted some on quince. Standards have not suffered much in that way; one of your Committee, however, has shown his faith by planting an orchard of six hundred of them the past spring.

Doyenne d'Ete is a very nice little pear for eating; too small for market; ripe 15th to 25th of June.

Boyken's June is believed to have originated on the banks of the lower James River, and it is thought will be a profitable market sort, on account of its earliness, and keeping qualities. It may be shipped about 1st of July; in shape much like *Rostiezer*, but larger and beautifully colored; it is, however, rather deficient in flavor.

Hosenschenck, known as *Moore's White Pound* in South-Eastern Virginia, is becoming very popular in that part of the State. It is a nice smooth fruit, quite as large as the *Bartlett*, and ripening a week earlier.

Howell, a thrifty grower, bears early; fruit smooth and handsome; comes in with *Bartlett;* blights considerably.

Belle Lucrative is one of our best pears, but blights badly.

Flemish Beauty is very fine when it holds its leaves, but it frequently drops them before the fruit is ripe.

Beurre Clairgeau suffers in the same way as the last named, but when it holds its foliage it is a very desirable sort.

Lawrence, tree very healthy, and one of the best bearers. We might add words of praise to many other sorts, but will close by saying that the *Bartlett* and *Duchesse d'Angouleme* are *the* pears for Virginia for profitable marketing.

Experience proves that trees in this climate should be trained with *low heads*, and, after cutting for two years, to get the tree in shape, very little more pruning will be necessary than to cut out water sprouts, and occasionally to shorten in a straggling shoot. We believe there is more injury done by the injudicious use of the knife, than would result from discarding its use altogether, and we may add, that these remarks apply with nearly equal force to the training of apple trees. Peaches are benefited by a severe shortening in of the branches whenever the trees fail to make a good supply of bearing wood. The pear crop this year is somewhat above an average one. The following named sorts are recommended to be grown, either as standards or dwarf, as indicated below.

Bartlett, standard; *Bloodgood*, *Beurre Giffard*, *Belle Lucrative*, *Beurre d'Anjou*, standard and dwarf; *Beurre Bosc*, standard; *Beurre Langelier*, *Buffum*, standard and dwarf; *Clapp's Favorite*, standard; *Dearborn's Seedling*, standard and dwarf; *Doyenne d'Ete*, standard; *Doyenne Boussock*, standard and dwarf; *Duchesse d'Angouleme*, dwarf; *Easter Beurre*, standard and dwarf; *Flemish Beauty*, standard; *Hosenschenck*, standard, variable; *Howell*, *Kingsessing*, standard and dwarf; *Louise Bonne of Jersey*, dwarf; *Lawrence*, standard and dwarf; *Madelaine*, standard; *Manning's Elizabeth*, *Osband's Summer*, standard and dwarf; *Rostiezer*, standard; *Seckel*, standard and dwarf; *Sheldon*, standard; *Tyson*, standard and dwarf; *Winter Nelis*, standard; *Vicar of Winkfield*, dwarf.

PEACHES.

This fruit succeeds over most of the State, and is deservedly receiving increased attention. The crop the present year is light in some sections, but abundant in other places; upon the whole it may be put down as an average one in the State. In the Tide-water section, the rot frequently destroys a considerable portion of the crop; in some favorable places they escape. On Hog Island, in James River, about thirty miles from its mouth, there is an orchard of several thousand trees that were planted about fifteen years ago. These trees have borne well, and the fruit is comparatively free from rot, while a very few miles distant, on the main land, the crop year after year has been almost totally destroyed by it. *Hale's Early* is so liable to suffer in that way that it cannot be relied on for profit. What causes this malady is a mystery not yet satisfactorily solved. It prevails to a greater extent in wet than in dry seasons, and trees growing luxuriantly in rich land, suffer more than those growing on a poor soil, making a moderate growth. It commences before the fruit is half grown and continues its destruction until the time of ripening, when sometimes a sound specimen will not be left on the tree. Very often the ends of the branches and spurs along the twigs will die while the rot is destroying the fruit. The trees present the appearance of a pear tree suffering twig blight.

Leaving the Tide-water country, less of this disease will be seen until we approach near the mountains, when it ceases almost entirely, with the exception of *Hale's Early*, and that frequently escapes injury, and then it is our best very early peach. On our *Talcose Slate or Schist*, warm soils, as well as on the *Triassic or Red Sandstone* formation, the peach attains the highest perfection, unsurpassed in size and flavor by that grown in any other part of the country. The "yellows" is not known here. The borer (Ægeria exitiosa) commits his depredations, but a little attention at the proper time will put a stop to his career.

We commend the following list of peaches as embracing the best selection from early to late.

Amelia, *Crawford's Late Melocoton*, *Crawford's Early Melocoton*, *Chinese Cling*, *Early Tillotson*, *George the Fourth*, *Grosse Mignonne*, *Grand Admirable Cling*, *Heath Freestone*, *Heath Clingstone*, *Harker's Seedling*, *La Grange*, *Large Early York*, *Lemon Cling Morris' White Rareripe*, *Old Mixon Free*, *Old Mixon Cling*, *President*, *Picquett's Late*, *Smock Free*, *Stump the World*, *Susquehanna*, *Troth's Early*, *Ward's Late Free*.

The apricot, plum, and nectarine are uncertain to ripen their fruit, except in favored places. The apricot is very often killed by late spring frosts. In cities and towns, where from local causes it is protected from the frost, it produces well. The curculio is so destructive to the plum and nectarine that but little attention is given to their culture.

Cherries succeed admirably throughout the greater portion of the State, and deserve more attention as a commercial crop. We especially commend the *Dukes* and *Morellos* for the Tide-water district. The *Hearts* and *Bigarreaus* succeed best in the more elevated portion of the State. The following sorts will supply the wants of most admirers of this fruit :

Black Tartarian, *Bigarreau* or *Graffion*, *Belle d'Orleans*, *Belle d'Choisy*, *Belle Magnifique*, *Carnation*, *Coe's Transparent*, *Early Purple Guigne*, *Early Richmond*, *Elton*, *Governor Wood*, *Knight's Early Black*, *May Duke*, *Napoleon Bigarreau*, *Reine Hortense*, *Rockport Bigarreau*, *Tradescant's Black Heart*.

GRAPES.

Allow us to say that Virginia claims pre-eminence in her natural advantages for grape growing, and, so far as experience has gone, her claims have been sustained in this branch of industry. We quote the remarks of an intelligent cultivator, after speaking of his success in hybridizing : "These facts," says he, "should encourage us to give increased attention to vine culture. Virginia for this purpose furnishes, equal to any place I have explored, all the requirements of the vine, which appear to be a deep sandy soil, rich in potash, with a full sunny exposure. Such situations are found everywhere, from Tide-water to the summit of the Blue Ridge. Our summer varieties are so little subject to blighting diseases, and are found to vary the quantity of their fruits with the season in so slight a degree, that the cultivator may rely with certainty upon the fruition of his hopes. Late spring frosts never do any injury to the vine, and our seasons are long enough to permit the thorough ripening of fruit and wood." We need not stop on the summit of the Blue Ridge, but go on westward over a splendid grape country to the western terminus of the State. The finest Catawbas that we have ever seen were grown in the great valley, and the *Concord*, although succeeding everywhere, attains an excellence here not known to it in the colder States of the North.

The *Delaware*, *Iona*, and many other choice kinds do well. *Goethe*, *Lindley* and *Merrimack*, as well as some others of *Rogers'*, promise well. *Senasqua* has fruited here this year and shows well; bunches large and compact.

Norton's Virginia, long and favorably known here, is growing in favor more and more with each succeeding year. Vine hardy, vigorous and very productive.

Scuppernong is very popular in Tide-water, south of James River.

The grape crop was slightly injured by the excessive wet in June, but with more favorable weather succeeding, we are gathering a full average crop.

CURRANTS

Do well in the up country, but do not produce so well or stand our hot summers in the Tide-water region.

GOOSEBERRIES.

The American varieties succeed very well all over the State, but the English sorts mildew so much as to render their cultivation unprofitable.

RASPBERRIES

Are not cultivated much, except for home consumption. The *Black Caps* do well throughout the State ; the other kinds often fail to produce well in the eastern part ; the canes are often killed by our hot, dry summers; the *Philadelphia* gives better satisfaction than any yet tried. It is believed that *Brandywine* will do well, but it has not yet been cultivated to any great extent.

STRAWBERRIES.

Hundreds, yes, we may say thousands of acres, in the vicinity of Norfolk, are devoted to the production of this crop The fruit is shipped to Baltimore, Philadelphia, New York and Boston, and, in the height of the season, nearly a quarter of a million of baskets (of one quart each) have been gathered and shipped in one day from this point. *Wilson's Albany* constitutes three-fourths of the crop, and the *Stuart*, an earlier sort, makes up the greater part of the other fourth. It is not half so productive as the *Wilson*, its earliness being its chief recommendation.

Triomphe de Gand is one of the best for family use.

Lennig's White is a desirable white berry.

Russell's Prolific, *Agriculturist*, *Fillmore* and *Trollope's Victoria* all do well.

The first shipments from Norfolk are usually made from the 6th to the 10th of May, and continue for about three weeks.

Very respectfully,

FRANKLIN DAVIS,
Chairman State Fruit Committee.

Report from Ohio.

M. B. Bateham, Esq., Secretary of the Ohio Horticultural Society, sends a report prepared by a Committee of that Society. The report consists of a revision of the Catalogue for Ohio. A few changes are made in the starring, three or four varieties of apples are stricken out, and three added, viz., *Fink*, *Stark*, and *Evening Party*. The Catalogue has been revised accordingly.

Report from Indiana.

P. BARRY, *Chairman of Committee on Fruits*:— Last year the fruit crop with us was unusually large. Especially was this so of apples, pears, peaches and grapes. This heavy fruitage, of course, militated against a full crop this year. This, taken in connection with the past severe winter, gives us but a light crop of apples, while pears are doing better, in most instances there being a

full crop, while of peaches the crop is very light in the southern part of the State, with very few specimens in the central division, and none in the northern part.

The intense cold of last winter afforded a fine opportunity for studying the hardihood of the different varieties of grapes this season.

The writer of this has tried, on his grounds in Hendricks County, some forty varieties, but could scarcely show one-fourth of that number at this time, and certainly not that number of varieties that are profitable for market purposes.

Of cherries, we have but one variety that is entirely reliable, that is the *Early Richmond* or *Early May*, between which, most of our fruit growers make no distinction. Occasionally *May Duke* is found to succeed very well, for a time. *Governor Wood*, *Yellow Spanish*, *Black Tartarian* and many other of the *Heart* varieties, have been introduced from time to time, but only to dwindle and die, before yielding fruit enough to teach us what their qualities are.

Small fruits, such as strawberries and raspberries, succeed well and are remunerative; while the blackberry crop in the northern part of the State is very uncertain; in the southern part, among the hills, it generally succeeds well.

Currants and gooseberries have heretofore been of exceedingly easy cultivation. But the currant worm is, with us, now rendering the cultivation of these fruits more troublesome.

Quince bushes were very generally killed down to the ground last winter, and are not very reliable at any time.

Apricots, nectarines and plums are almost unknown in Central and Northern Indiana, except where the curculio is caught and destroyed.

Insects prejudicial to the fruit interest seem to be alarmingly on the increase. Of those most to be dreaded, perhaps the curculio should be mentioned first. If he would confine his operations exclusively to the plum, we might assign him that fruit and let him go, but he meddles with our apples, doing incalculable mischief to that fruit. The white grub is fairly entitled to a share of the anathemas, not only of the fruit grower, but the farmer also; for, while it seems to have a good appetite for fresh set strawberry plants, it can eat almost anything in the garden or nursery; or if these are not convenient, it will eat our Timothy meadows, blue grass sod, or young growing corn, and last year it ate my Early Rose potatoes so badly as to render them unsalable.

For the first time with us, this season we have a little caterpillar that is doing more mischief than anything else: it is from half to three-fourths of an inch long, and though it has been here six weeks, it is still rapidly on the increase at this writing, August 25, 1873.

Pear blight occasionally seizes a victim here and there, not, however, often doing any serious damage. Apple-tree-twig blight is more prevalent than formerly, and would appear to be on the increase. With all these drawbacks, we still think our State well fitted for the production of the apple and pear, the peach in the southern part, the *Early Richmond* cherry every where, and a few of the leading grapes, such as *Concord*, *Clinton*, *Ives*, *Hartford Prolific* and *Delaware* on all elevated situations.

I will close by furnishing the list of apples and pears approved by our State Horticultural Society.*

Our State is divided into three equal divisions by imaginary lines running east and west, and each variety is starred, dotted or dashed, according to its merits or demerits—a star signifying that a variety is approved, two stars that it is much approved, a dash and star that it does well in some localities, and three dots that it is unknown.

One word as to the future of Indiana. Recent discoveries demonstrate the mineral wealth of our State to be much greater than was anticipated twenty-five years ago. This is constantly bringing capital to the coal regions, and with this capital comes a population of consumers; these must be fed, and as we have the soil to grow the fruits, grains and vegetables to supply this demand, it is wisdom in us to do so.

All of which is respectfully submitted,

A. FURNAS.

DANVILLE, IND.

Report from Tennessee.

HUMBOLDT, TENN., September 17, 1873.

MR. P. BARRY.—Dear Sir:—I was appointed by President Wilder to make out a list of fruits specially adapted to our State. I herewith submit to you as chairman, the enclosed list of varieties, most of which have been tested here for twenty years and found profitable; a complete succession through the season, from earliest to latest, in the fewest number of varieties possible, and which I should give two stars.

I left Boston Friday evening, before the close of the session, for the purpose of reaching home to meet with the West Tennessee Fruit Growers' Association, (of which I have the honor of being President,) which met in Gadsden, Tenn., to-day. I deferred making out the list until I could confer with our Society, and be better prepared to accomplish the object desired. Hope we shall not be too late to be represented in the transactions of the American Pomological Society.

Very truly your obedient servant,

B. F. TRANSOU.

The following are the fruits best adapted to Tennessee:

APPLES.

Ben Davis, *Bonum*, *Buckingham*, *Carolina Red June*, *Early Harvest*, *Fall Pippin*, large, *Greening*, *Hall Seedling*, *Howes' Virginia Crab*, *Horse*, *Kentucky Streak*, *Bradford's Best*, *Large Yellow Bough*, *Maiden's Blush*, *May*, *Large Yellow*, *Nickajack*, *Pryor's Red*, *Red Astrachan*, *Rome Beauty*, *Shockley*, *Stevenson's Winter*, *Summer Queen*, *Summer Rose*, *Winesap*, *Yellow June*.

PEACHES.

Amelia, *Allen's October*, *Chinese Cling*, *Crawford's Early*, *Crawford's Late*, *Druid Hill*, *Early Newington Free*, *Early Tillotson*, *Early York*, small; *Eaton's Golden*, *George the Fourth*, *Hale's Early*, rots badly, June 20; *Heath Cling*,

* The Catalogue has been revised by this list.

August 21; *Indian Blood Freestone, Indian Cling, Large Early York, Honest John, Lemon Cling Old Mixon Free, Old Mixon Cling, Susquehanna, Shockley's Early, Troth's Early, Mammoth Free, White Cling Sentirs, Hoover's Late Heath*, September 30.

PEARS.

Bartlett, Belle Lucrative, Bourre Bosc, Beurre Clairgeau, Beurre d'Anjou, Beurre d'Amanlis, Buffum, Dearborn's Seedling, Doyenne d'Ete, Duchesse d'Angouleme, Easter Beurre, Flemish Beauty, Howell, Lawrence, Louise Bonne of Jersey, Madelaine, John Williams, Best Winter, Osband's Summer, Seckel, Sheldon, Vicar of Winkfield, White Doyenne, Winter Nelis.

PLUMS.

Chickasaw, Peach Plum, Wild Goose, Kanawa, Yellow Egg.

QUINCES.

Angers, Orange.

RASPBERRIES.

Orange, Everbearing, Philadelphia, Purple Cane, Black Cap (common native).

STRAWBERRIES.

Agriculturist, Green Prolific, Kentucky, Triomphe de Gand, Wilson's Albany.

BLACKBERRIES.

Our native superior to any other; *Crystal White*, fine.

APRICOTS.

Large Early, Peach.

CHERRIES.

Bigarreau, Black Heart, Downer's Late, Early Richmond, May Duke, Early May, Morello.

CURRANTS.

Cherry, Red Dutch, White Grape.

GRAPES.

Catawba, Concord, Delaware, Diana, Hartford Prolific, Israella, Isabella, Ives, Maxatawney, Scuppernong, Muscadine, native.

GOOSEBERRIES.

Houghton, Mountain.

NECTARINES.

Early Newington.

Report from Iowa.

P. BARRY, Esq., *Chairman General Fruit Committee, American Pomological Society:*—The winter of 1872–73 will ever be memorable in the annals of Iowa horticulture. Its results develop a remarkable and inexplicable variation from those of the winter of 1855–56. Varieties of the apple that came through the latter with little or no injury, suffered most the past winter, and *vice versa*. Varieties we were then admonished to plant sparingly, or to discard, the experience of last winter encourages us to retain as among the most reliable; among which stand prominent, *Maiden's Blush, Rambo, Cracking* and *Wagener*. No varieties are more generally reported sound and fruitful this season; so generally that in no case can exemption from injury be attributable to either soil or locality.

Of the old and well established varieties, the weight of testimony unerringly points to the following sorts. I am safe in saying that eight-tenths of the entire apple crop of the State are of these varieties.

Jonathan, Rawle's Genet, Willow Twig, Famouse, Winesap, White Winter Pearmain, Red June, Early Pennock, Lowell, Dyer, Maiden's Blush, Benoni, Talman's Sweet, Sweet June, Kirkbridge White, Duchesse of Oldenburgh and *Rambo.*

Those of more recent introduction, and which give promise of equal if not greater popularity, are *Ben Davis, Wagener, Williams' Favorite, Grimes' Golden, Cole's Quince, Cracking, Domine, Chenango Strawberry, Sops of Wine, Haas, Jefferson County.*

I may also say, the following sorts are grown more or less throughout the State with varied results. *Porter, Jersey Sweet, Winter Sweet Paradise, Haskell Sweet, Early Joe, Red Astrachan, Yellow Bellflower, Golden Sweet, Keswick Codlin, Early Harvest, Minister, Mother, Sweet Romanite, Fall Orange, Fall Wine, Esopus Spitzenberg, Westfield Seek-no-further, Roman Stem, Late Strawberry, London Sweet, Bailey Sweet, Pryor's Red, Northern Spy, Rome Beauty, Colvert, (Little Romanite of the West.) Aromatic, Carolina* and many more.

Of the two leading lists, with two exceptions, not a single sort has any serious fault in Central Iowa, or perhaps I may say throughout the State, unless it may be want of hardiness in the extreme north. The exceptions are *Red June* and *White Winter Pearmain*. For a few years past, the fruit in many localities has scabbed to a degree that rendered the crop almost worthless. I am pleased to say, however, that general report, this season, indicates a more healthy condition—much less scab than in former years. It is to be hoped that these two most valuable sorts of the past, will soon regain their former prestige.

PEARS.

The pear crop is exceedingly light. Blight is every where upon dwarfs, and of a more virulent type than hitherto experienced. While standards are not wholly exempt, I am inclined to regard standards as worthy of continued trial, especially on a strong, clayey subsoil. In support of this conclusion, I will cite an orchard of sixty-five trees near by, upon ground having a strong, tenacious subsoil of cream colored clay.

Madelaine, Bloodgood, Dearborn's Seedling, Clapp's Favorite (perfectly magnificent), *Tyson, Flemish Beauty, Bartlett, Beurre d'Anjou, Belle Lucrative, Beurre Superfin, Golden Beurre, Duchesse d'Angouleme, Sheldon, Beurre Clairgeau, Lawrence, Buffum, Seckel, White Doyenne, Osband's Summer, Napoleon, Beurre Bosc, Onondaya*, and *Stevens' Genesee.*

Trees from six to ten years planted—all in bearing and models of fruitfulness, vigor, growth and symmetry. Upon similar soil elsewhere in my travels, and without regard to exposure, I find corresponding results. No indication of injury by the severity of the past winter. Several of

the earlier sorts have ripened up a good crop of fruit, and to-day, August 24, specimens of *Clapp's Favorite* were handed to me from the trees, fit for the gods. I am advised of a standard *Catharine* in another county, thirty years planted, that bears enormous crops annually. *Bartlett* and *Flemish Beauty* are a success upon the white thorn, thirteen years from the bud.

PLUMS.

Coe's Golden Drop, *Reine Claude de Baray*, *Bleeker's Gage*, *Bradshaw*, *Columbia*, *Long Scarlet*, *Smith's Orleans*, *Jefferson*, *Lombard*. Most of these have fruited upon my grounds and are also favorably reported from other parts of the State. In a few localities, the *Lombard* rots on the trees to some extent. In the northern part of the State, *Lombard* and *Smith's Orleans* are reported as seriously injured by the last winter. *Reine Claude de Baray* is a remarkably fruitful variety.

Miner is being generally planted, on account of the reputation it has gained for hardiness, early bearing and fruitfulness, though some misgivings are felt upon these points by those less enthusiastic.

The *Wild Goose* is of more recent introduction. Originating several degrees south, its adaptability to the climate was for some time a question of doubt; but the trying ordeal through which it passed last winter, has removed all apprehension upon that point. The trees experienced little or no injury. Fruit ripe about the 20th July and season running into August. So far, I regard it a desirable and valuable acquisition. Its earliness of season will make it most profitable for market, whatever its quality may be.

QUINCES.

The culture of the quince, so far, may be regarded a failure. Flattering experiments are now being made in working it upon the white thorn.

CHERRIES.

In Central Iowa a good crop, and trees all right. North, trees of *Early Richmond*, the only sort grown worthy of note, are reported badly damaged, and in many localities killed outright. The *Early Richmond* has been more generally planted than all other sorts, but with a better knowledge of the *English Morello* it is fast superseding the former. Tree sure for a crop, fruit larger, more attractive, and commands a higher price in the market. Those who know it here give it the preference—especially for culinary purposes.

Belle Magnifique worked at the ground is a dead failure; top worked on the *Morello* stock, a perfect success; its own stock too tender, but top perfectly hardy. Comes into bearing quite as early as *Early Richmond;* never fails to give a most bountiful crop of a much finer quality of fruit.

Governor Wood and *Reine Hortense* propagated in the same way, and planted upon rather poor soil, prove quite satisfactory.

Late Kentish and *Plumstone Morello* are doing well. In the southern part of the State some varieties of the sweet cherries have been raised, but none are reliable for an annual crop.

PEACHES.

In Southern Iowa very fine crops have been raised in favorable seasons. At an early day the crop was quite reliable. The trees endured for many years, but within the last decade the trees have been killed out, more or less, and its culture has declined.

GRAPES.

Concord is *the* grape all over, followed by the little exquisite *Delaware*. The less hardy *Catawba* and *Isabella* are raised to some extent, and in favorable seasons to great perfection in Central and Southern Iowa, when properly cared for in the line of winter protection.

Delaware stands pre-eminent for quality, nearly as hardy as *Concord*, and seldom fails to make a good crop. The best crops are obtained upon heavy soils.

Hartford Prolific has but one fault—the fruit drops prematurely to some extent: notwithstanding this fault it is desirable, and we can scarcely dispense with it.

Clinton is a sure crop, and with the most indifferent treatment.

Many other varieties have been tried, in fact almost everything heard of, but with indifferent success, most being found wanting in some essential. No one sort appears to have attained any special popularity.

CURRANTS.

No fruit is more reliable all over the State. Of sorts, *Red Dutch* has the preference, followed by the *Cherry* and *Versaillaise*. *White Grape* largely planted. *White Dutch* to some extent. *Black Naples*, the best of the black varieties.

STRAWBERRIES.

The number of varieties tried, as with the grape, is legion, but with few exceptions all have gone to the shades. *Wilson's Albany* still maintains its former prestige—is at home on all soils and situations.

Downer's and *Green Prolific* have the preference with many. For family use, either are preferable to *Wilson*, so far as quality goes.

Ida promising till last winter; killed badly.

BLACKBERRIES.

Have thus far made a poor record. *Lawton*, *Dorchester* and *Wilson's Early* have been fairly tried and generally discarded.

Kittatinny promises better, though thus far not very satisfactory. Have seen very fair crops grown among large orchard trees on the "let alone system." No culture, no pruning, in fact, no attention whatever—left to ramble at will.

RASPBERRIES.

Doolittle, *Miller's Daily*, *Philadelphia* and *Mammoth Cluster*, all hardy and immensely productive, and in season in the order named.

Purple Cane is of finer quality, but too small and soft for market.

Davison's Thornless and *Clark* rather tender.

Lum's Everbearing quite satisfactory.

GOOSEBERRIES.

Houghton grown to almost the entire exclusion of all other sorts. Seldom fails to produce a most bountiful crop of fair-sized fruit. Plants healthy.

The English varieties, without special attention, mildew to a degree that renders the fruit worthless. I have seen good crops made with proper thinning of the plants and the use of soap-suds and ashes.

In conclusion I have to say, upon a careful survey of the situation, I feel the strongest assurance that the injury sustained by fruit trees and vines from the severity of last winter, in this State, has been grossly exaggerated. I have just made a trip of at least seven hundred miles through the north-western and more northern portions of the State. Have examined many of the oldest orchards, and conversed with their owners, men who were among the earliest settlers. In all this I have neither seen nor learned aught at all disheartening to the intelligent horticulturist in Iowa.

MARK MILLER.

Report from Nebraska.

The Fruit Committee for Nebraska would report the following catalogue of fruits for our State :

EARLY APPLES.

Red June, Buffington's Early, Early Harvest, Red Astrachan, Duchess of Oldenburgh, Early Joe, Sweet June, Williams' Favorite, Keswick Codlin, American Summer Pearmain, Cooper's Early White, Early Pennock.

FALL APPLES.

Maiden's Blush, Drap d'Or, Fall Pippin, Fall Wine, Fameuse, Gabriel, Autumnal Swaar, Hubardston Nonsuch, Rome Beauty, Milam, Mother, Ortley, Late Strawberry.

WINTER APPLES.

Jonathan, Ben Davis, Wine Sap, Domine, Rawle's Genet, Red Canada, Talman's Sweet, White Winter Pearmain, Northern Spy, Detroit Red, English Golden Russet, Perry Russet, King of Tompkins Co., Gilpin, Swaar, Wagener, Willow Twig, Roman Stem, Otoe Red Streak, Sweet Romanite.

CHERRIES.

Early Richmond, May Duke, Belle Magnifique, Reine Hortense.

PEARS.

Bartlett, Duchesse d'Angouleme, Louise Bonne of Jersey, Beurre Giffard, Osband's Summer, Doyenne d'Ete, Vicar of Winkfield, Flemish Beauty, White Doyenne, Beurre d'Anjou, Glout Morceau.

PLUMS.

Jefferson, Lombard, Kirkes, Washington, Peach.

GRAPES.

Concord, Delaware, Hartford Prolific.

Budded peaches are a failure in Nebraska; seedlings bear well about once in five or six years, and some nearly every year.

Blight has been making sad work with our pear trees for the last two years; is not quite so bad this summer as last.

In the list I send you, there are some of the varieties that are starred higher than I should have put them—three stars is our maximum. Fruit is very good this summer, the yield will be about an average crop.

I expect to be in Boston in September, with our collection of fruit. Yours truly,

J. H. MASTERS.

NEBRASKA CITY, NEB., August 5, 1873.

Report from Kansas.

P. BARRY, ESQ., *Chairman American Pomological Committee*,—Dear Sir :—I have deferred making my report for this State till now, because that those called to my aid in this matter have failed to report to me. I am compelled, therefore, to rely upon such facts and circumstances as have fallen under my own observation.

The fruit crop in this State, although reported by the Agricultural Bureau as about three-fourths of an average, is really not more than one-tenth. It may be said, in common with the balance of the West and North-west, to be nearer a total failure than has been known since the settlement of the country. In many localities, some varieties may have a few trees with a few good specimens on them, while the remainder are almost entirely worthless. In other localities, those that partially succeed here are worthless there.

On the 22d of December last, the mercury ran down to an average of 16° below zero, killing most of the peaches in the bud. Some varieties, however, such as *Hale's Early, Serrate Early York*, and a few others, together with the *Breda* apricot, had a tolerable crop left.

On the 29th of January the mercury reached a degree below zero, ranging in Kansas at different points from 20° to 36°. This degree of cold, unknown in this country up to that day, finally destroyed all the peach and apricot buds, and killed outright very many peach trees. Apple trees, pear trees, plum trees, cherry trees and quince trees were so severely shocked that many of them have already shown so much disease that a very large number of them will die also. Such devastations of blight in the pear, the apple and the quince trees have never been before known in the West.

Now is a good time for experts in vegetable physiology and morbid anatomy to arrive at, in some degree at least, a satisfactory conclusion as to the cause of *blight*, and also to explain, if it can be done, the difference between winter-killing and blight, for both these forms of destruction are now quite prevalent in the North-west.

We hold that these results are produced by the same cause, differing only in degree and the nature and condition of the tree thus assailed. Please pardon this digression.

Many pear orchards will be wholly destroyed this season, while many others will be badly injured in consequence of the intense and long-continued coldness of the

last winter. Our winter commenced on the 11th of November, and continued until the last of March. Here we have had a winter of more than four and a half months of extremely cold weather, the mercury during this time being no less than seventeen times below zero. Here, also, we find an unparalleled long and cold winter, followed by an unparalleled amount of disease and death among fruit trees.

To sum up all in few words, we have scarcely any fruit of any kind, save berries. Orchards and nurseries badly injured.

Yours truly,

WM. M. HOWSLEY,
Committee for Kansas.

LEAVENWORTH, August 18, 1873.

Report from Utah.

CLIMATE.

The climate of Utah varies from that of continual frost, to a climate so mild that there is seldom any snow in the year, and frost scarcely hardening the soil in winter, the place from which I write being considered the warmest portion of the Territory. Here exotic grapes grow in perfection in the open air, and almonds, figs, pomegranates and cotton seem at home and perfect themselves, as well as most of the ordinary fruits, nuts and berries. This Territory is about five hundred miles, from north to south, and in all the various settlements, apples, pears and some other fruits appear to stand the climate, and rigor of winters; grow, flourish and bear fruit satisfactorily, without any artificial protection.

Our formation in the South, is volcanic—red sandstone, granite boulders, lime and melted rock. Soil more or less impregnated with alkali and other substances, and all the water more or less in same condition—which is also partially the case throughout the Territory—in many instances so much so, as to destroy its usefulness for producing vegetation. Crops are raised, generally, only by irrigation, though of late years there are, in exceptional cases where rain falls, nearly or quite perfect crops.

APPLES.

In the South, the *Maiden's Blush*, *Red Astrachan*, *Golden Sweet* and *Northern Spy* are not prolific, yet they do very well North. Excepting these, nearly all the list of old apples and new, that have been fruited, flourish and produce well throughout the Territory; here especially, the *Rhode Island Greening*, *Esopus Spitzenberg*, *Roxbury Russet* and *Gravenstein* are fine and fruitful.

There are some interesting seedlings originated here and quite generally propagated, but with no characteristics that place them above old varieties.

PEARS.

There is no fruit which seems more at home here than the pear, and, so far as we have been able to learn, the pear flourishes finely throughout all our settlements. Here, in the South, they bear early, load well every year, and are of deliciously rich flavor, equaled by none we have ever seen elsewhere.

Nearly every variety we have grown seems to come to its utmost perfection here—the trees making remarkable growth, and often producing fine large fruit at from four to five years old from seed—among the most profuse bearers we may name the *Bartlett* and *Bergamot*.

PEACHES.

This delicate fruit puts on its very best behavior here and produces fruit of very large size and highest flavor, seldom failing of its regular annual crop. This fruit is produced abundantly in nearly every county, and is generally of better flavor than that grown East under similar circumstances.

Hale's Early, *Troth's Early Red*, *Tillotson*, *Ward's*, the *Crawfords*, *Strawberry* and others make as fine coloring as we ever saw. We have also some very fine seedling peaches, which are equally propagated with imported varieties. Dried peaches from Utah have a promising celebrity in the Eastern markets.

PLUMS.

These have been introduced in great variety. The tree is vigorous, free from insect injury, fruit fine and perfect, large, and trees prolific, every variety tried doing well.

APRICOTS.

This fruit is also at home here, and, when its early bloom is not injured by the late frosts, always produces heavy crops. The present year's crop was injured by a heavy frost in May, (as was also that of nectarines, almonds, figs, etc.)

A new seedling, called the "*Gates*," is larger than any other apricot and of equally good flavor.

NECTARINES

Are a little tender for late frosts, but otherwise the trees grow well, and bear equally well with the peach. They are not, however, as extensively cultivated.

CHERRIES.

North, this fruit produces well and is generally cultivated, but we doubt whether the ordinary varieties will do as well in this warm climate. We have, however, a new hybrid cherry, (a cross between the wild plum and Utah Sand cherry,) which annually produces heavy crops, though ripening later than our usual varieties. Tree dwarfish, buds on peach; fruit about usual size of the cherry. Flavor considered by some inferior, but I consider it well worthy a place in every garden. This fruit originated here.

QUINCES

Thus far have succeeded poorly, but few specimens having been produced, and pears on quince stocks have proved unprofitable.

POMEGRANATES.

This shrub is hardy here, grows well and produces good crops; the fruit, however, is not esteemed by some as valuable as many other varieties of fruit.

FIGS.

This tree is a little tender here, and is not cultivated in the North, the severe winters killing it. When a cool frosty spring occurs here, trees are often injured. Several varieties of black and white have been introduced, which bear abundantly of very delicious fruit. Two and sometimes three crops are realized in a season.

ALMONDS.

When uninjured by frost late in spring, the almond bears a good crop. We have some choice, soft-shelled seedlings raised by W. E. Dodge of this place, which are much superior in quality, and produce better than any variety introduced; a child easily breaks the shell in its hand, and the flavor is rich and excellent.

MULBERRIES.

Besides the *English Black* and *Downing's Everbearing*, we have a multitude of seedlings, both for silk and fruit, all of which grow finely, some producing large and excellent berries. The English has not yet fruited.

GOOSEBERRIES AND CURRANTS.

Neither of these do well here, South, except the natives. North, all varieties seem to be at home and fruit abundantly. Here the air is too dry and hot for these plants, which seldom yield a satisfactory crop.

BLACKBERRIES AND RASPBERRIES.

Similar objections may be urged against these fruits. They produce moderately, but if not picked as soon as ripe the fruit dries up on the stems and is worthless. North, they produce abundantly of good fruit.

STRAWBERRIES.

This berry generally does well throughout this country, but better North, where the air is more cool and humid, and where rains are more frequent. They seem to require water here oftener than any other fruit crop. The succulent fibrous roots are quickly affected by drought.

GRAPES.

There is no fruit or plant that seems more truly at home here in the South than the grape, and this is as equally true of most portions of the Territory as it is of this locality, when climate is considered. The plant grows as naturally as a weed when it gets a footing in the soil and has any chance. All varieties of exotic grapes, as well as natives that have been tried, grow luxuriantly here, and fruit abundantly in the open air. North, the hardier sorts do well, but of course producing fruit of flavor inferior to that grown here. The fruit grows here large, abundant, and most delicious,—competent fruit growers pronouncing it equal in flavor and saccharine to any fruit of the kind ever coming under their notice.

Of white grapes for raisins, we have the various varieties of *Muscats*, that when properly cured make a raisin which in size and delicacy of taste is unexcelled by any imported samples, and wines from our black grapes are unequaled in weight and color, but time and experience is required to enable the manufacturer to give that flavor desired by cultivated tastes. We have introduced some two hundred varieties of grapes, from which we select for more extensive propagation the most valuable and useful. In our own grounds we have already fruited over one hundred varieties, of which we consider the *Bowood Muscat*, *Muscat Hamburg*, *Black Tokay*, *White Muscat of Alexandria*, *White Muscatel*, *Black Hamburg* and *Chasselas Musque*, grapes of great excellence and unexcelled in flavor, while for beauty and size the *Queen of Nice*, *Red Lombardy*, *Verdel*, *Rio Virgen*, *Lady Downes*, *Gros Colman*, and some of *Rogers'* hybrids unexceptionable. The *Sultana*, though small, attracts much attention.

SEEDLINGS.

There are now considerably cultivated several seedling grapes which have originated here and are worthy of the attention of fruit growers. The *Rio Virgen* is a white foreign grape, clusters large and thick, amber-like and of unusual beauty, berries long, oval and of large size, seeds small, skin thick, good flavor, keeps well and makes a good raisin.

The *Jarvis*, a white grape of about equal size to last—nearer round—similar in other respects to last named vine, a powerful grower and very prolific. These two originated here with George Jarvis.

The *Spring Lake*, an American grape, early, black, prolific, but clusters are rather long and loose, ripens here same time of *White Chasselas*—last of July; flavor excellent.

Red Prolific resembles the *Catawba* in many respects, the pulp less tough, fruit sweeter and ripens three weeks earlier, and is more prolific.

The *Dixie Queen*, foreign origin, a cross between black *Frontignan* and *White Romain*, clusters moderate, berries large size, nearly black with light bloom, oval, skin thin and tender, seeds small and soft, flavor excellent and fruit very handsome. The three last named varieties were originated by the writer.

There has, as yet, appeared little trouble with fruit diseases or insects. There has sometimes appeared signs of mildew on some varieties, and occasionally instances of spittle bug. Last year there was some complaint of injury to the grape by a small, white fly. Southern Utah is but newly settled, and our capacity in Pomology, as yet, undeveloped, but Utah may safely be set down as one of the finest fruit-growing Territories.

Very respectfully,

J. E. JOHNSON.

Report from Nevada.

RENO, NEV., April 3, 1873.

P. BARRY, ESQ.,—Dear Sir:—In regard to a Fruit Committee for the State of Nevada, I scarcely think the fruit interest will, at present, justify taking any measures concerning getting up any report worth mentioning, as the cultivation of fruit is only in its infancy. I do not know of any one party that has planted out as many fruit trees as myself, which is about twelve hun-

dred, the principal part of which were one-year-olds purchased from Messrs. Ellwanger & Barry of the Mount Hope Nurseries, near Rochester, N. Y., two years ago, and consequently have not come into bearing yet, however: the trees, such as escaped the borer (which is very bad here) have done nicely, doing much better than some California trees which were much larger and thriftier looking at the same age, and are planted side by side. The Rochester trees have out-grown them decidedly, and look even more healthy. I had last year a few apples from some five-year-old California trees, and am looking forward for a larger number this year.

Yours respectfully,

JOHN LARCOMBE.

Report from California.

Twenty years only have elapsed since the culture of fruit in California has been earnestly engaged in. The liberal recompense realized by the pioneers, stimulated others in their efforts to excel. Money and toil were lavishly spent to obtain the best and rarest seeds, and the choice of Eastern nurseries, transplanted here, found a congenial soil and a climate most favorable for their development. Consequently, our best orchards and vineyards are overcrowded with varieties, and the owners are forced by the demands of their markets to discard even good ones if not embraced within popular favor.

As one of the most important labors of the Society is to perfect a list of the best varieties adapted to the greatest extent of country, and most profitable culture, your Committee will be governed by the same action and restrict itself to that consideration as regards California.

Conditions predicated upon mean temperature, rainfall, component constituents of the soil, aspect, altitude, an atmosphere more or less infused with moisture, and other meteorological conditions, exercise the same influence here, and are so favorably arranged for fruit culture that upon any given spot in California a greater variety of fruits can be well grown than under corresponding latitude on the Eastern side of the Continent; thus all the semi-tropical fruits can be raised in conjunction with those of a Northern clime. Our *Astrachans*, *Baldwins* and *Pippins* will be recognized as such wherever shown; but if disguised it is only by their Sunday clothing, more gorgeous with the tints of the unclouded solar rays, and, fed upon the doubly distilled moisture derived mainly by condensation, they are sweeter and richer; besides, judicious irrigation can easily modify any deficiency of juiciness, and protract the season of their ripening. By the time another decade of national life is absorbed, the wastage of water will be economized and retained for the sustenance of plant life during the season of drouth; human knowledge can hardly predict the modifications and the perfection fruit culture will ultimately attain by those efforts; but in California will be the throne of Pomona's most exalted realm,—the hills clothed with the vine, every nook covered with fruit-bearing trees, mulberry groves skirting the plain, oranges, date palms, olives and figs along the grand irrigating ditches of the San Joaquin, will proclaim her dominion.

A fortune would reward the originator of a first-class early apple; the *Harvest*, now heading the list, is only of second quality, and the gorgeously arrayed *Astrachan* still lower in our estimation. The *Early Strawberry* is in every way excellent, but ripening late. For cooking during the months of June and July, the *Dutch Codlin* holds its sway. *Fall Pippin*, *Holland Pippin*, *Gravenstein*, *Lyscom*, *Maiden's Blush*, *Roxbury Russet* do well until late in autumn. *Rhode Island Greening*, *Baldwin*, *Swaar*, *Newtown Pippin*, *Spitzenberg* and *White Winter Pearmain* will fill the list for winter. Apples keep well all winter, piled under the trees and sheltered from rain and sun.

A choice selection of pears would be covered by *Bloodgood*, *Bartlett*, *Washington*, *Seckel*, *Winter Nelis*. *Flemish Beauty*, *Duchesse* and *Easter Beurre* attain great size, but are not favorites with the public. *Belle Lucrative*, *Louise Bonne of Jersey*, *Beurre d'Anjou*, *Stevens' Genesee*, *Doyenne* are a drug in the market. *Glout Morceau* and *Vicar* are worthless.

Experiments in progress with seedling pears are full of interest, and sustain the hope that some of our best varieties can be revivified as seedlings, thus producing a new generation to propagate from. By selecting a variety with large, full seeds, and hybridizing artificially or by chance, the seedlings thus raised will at once equal, and possibly may excel in some desirable qualities, the parental stock on either side; this will hold good with all other varieties of fruit.

The peach is the most hardy tree grown here; will survive the worst ill usage and repay it without diminution of fruits; all it requires is close pruning, shortening in, and chopping down of the worn-out branches, to sprout from the ground with renewed vigor and bear another series of superior crops. In wet years the curl prevails, and recently a white fungus attacks the fruit in blotches and the ends of the shoots.

A few nectarines are raised, the fruit being inferior in flavor to the peach.

Apricots, the *Large Early* and the *Peach* are favorites and bear profusely, but are often cut short by spring frosts. Peach stock preferred.

Plums bear abundantly, and so far no curculio has appeared; all varieties do best on peach stocks.

Quinces produce regular crops; the largest fruit is grown on the Portugal, attaining the weight of over two pounds; the tree is subject to the black knot.

Cherry trees are very tender, the least bruise of the stem starts the exuding sap and decay follows. To shade the stem any way most convenient or practicable will be found beneficial; a cement of clay and ashes plastered over the stem and thicker branches appears to answer well. Black varieties are preferred here. There are two varieties brought out under the name of *Royal Ann*; one is a black, superior to the *Black Tartarian*, the other a white.

The fig fairly luxuriates under our bright skies; furnished with sufficient moisture it produces enormous crops.

Pomegranates thrive well.

The olive is, as yet, little appreciated; grown easily from cuttings, requiring hardly any pruning, attaining the age of several centuries and bearing regular crops of olives as highly prized in the green state as for oil. It will be by the next generation more extensively utilized.

Almonds, walnuts, pecans and chestnuts, the most valuable of nut bearing trees, come into bearing at an early age, the *Japan* chestnut fruiting the second year from graft.

Oranges and limes, with more or less protection, grow luxuriantly along and near our line of coast for five hundred miles.

The Agave Americana or Century Plant is utilized as a hedge plant.

Currants, blackberries, gooseberries, raspberries and strawberries bear abundantly.

The lordly banana begins to spread its mammoth foliage in many a garden spot.

Thus, under the influence of skilled industry and the vivifying flow of waters to be utilized, all the semi-tropical fruits will find here a congenial home. But the glory of California will be her vineyards; innumerable little nooks and valleys, rich with the attributes of surrounding mountains, and under most favorable climatic conditions are waiting for patient labor to clothe them with the clustering grape. All the finest varieties succeed admirably, and the product either to be utilized for wine or raisins is all that could be desired.

It is not to be inferred, nor is it claimed, that the horticulturist in California needs only to plant a tree or a vine to realize in a few years several hundred pounds of apples per tree, or even a thousand pounds of grapes to the vine. He has to contend with many evils, as in other climes or avocations; constant vigilance and sound judgment are required to supply the most favorable conditions for the development of his nurslings, and destroy in the beginning their enemies. Different varieties of fungoid growths and injurious insects begin to multiply. All experienced vine culturists pronounce this the most favorite land of the grape, still oidium is known; the borer, and especially the thrip, do considerable injury. Thus every laborer in Pomona's realm is interested in the experience of his co-laborers. A new comer opens a most willing ear to an often repeated tale, but full of novelty to him; so to compare experiences, I take the liberty to make these deductions

That clean culture is indispensable for orchard and vineyard.

That the raising of other crops between trees when abundant manures are not obtainable, is a killing of the goose laying golden eggs.

Alkaline or earthy washes of the stem and larger branches are conducive to the health of trees.

By repeatedly scraping off the earth around the trees and vines, early in the spring, many insects, their eggs and larvæ are destroyed.

That careful pruning and shortening in of the shoots is indispensable to the production of fine and large fruits. All the pruning should be carefully husbanded and returned to the soil. To light bonfires for the destruction of insects, to raise smoke to avoid injury from spring frosts are probably the most available and serviceable means for destroying fungoid and insect growths on foliage and fruit—by fumigation of the whole orchard and vineyard, making numerous smoldering fires with the addition of coal tar or asphaltum and sulphur.

Respectfully submitted,

J. STRENTZEL.

ALHAMBRA, CONTRA COSTA CO., CAL.

Report from South Carolina.

CHARLESTON, S. C., August 3, 1873.

P. BARRY, ESQ., *Chairman*,—Dear Sir:—I will not excuse myself from reporting to you, though I am sorry to say, I have but little information to give. Pomology is in a very depressed condition in this State at present. The close of the war found nearly all our orchards, vineyards and fruit gardens ruined, either by the direct ravages of the armies, or by the neglect which necessarily resulted from the absence of their owners in the field. Immediately after the war, a few persons in the neighborhood of our towns and cities commenced planting the various fruits most likely to give them a profit, either in their home market or by shipping; but generally they lacked the necessary knowledge and skill for the business, and met with but poor success. The mass of our people have been too much devoted to cotton, as the most direct means of recuperating their fortunes, to think much of horticulture—for which, however, many of them have a taste.

Within the last three or four years, there has been a good deal of interest manifested in the subject of fruit-growing, and constantly inquiries come to me, as an editor of a magazine which devotes some space to horticulture, for information in regard to the best varieties for the different parts of the country, and I think a few years hence we shall be able to show a decided progress.

According to instructions, I associated with myself four other gentlemen, in different parts of the State, as a committee for South Carolina, but only three of them have reported to me and they but briefly, and simply in regard to the varieties best suited to their particular region of country. I add my own limited experience and give you the results in brief, hoping that our State will be represented at the Boston meeting by persons better fitted to represent it than myself.

South Carolina is naturally divided into three distinct zones or regions of country, each with decided peculiarities of climate and soil—the Low Country or Coast Region, the Middle Country and the Upper Country. The Low Country is level and mainly sandy; the Middle Country has somewhat more diversity of soil as well as of surface, but sandy is still the prevailing characteristic of the uplands. In the Upper Country strong clayey soils abound, with some gravelly and rocky land, and the surface is hilly. We are obliged to take these conditions into account in planting and in the selection of varieties.

I will now note the results of our imperfect experience in regard to varieties. I shall name only such as we deem valuable for us, and it may be understood that those varieties which are not mentioned are either not desirable for general cultivation, or have not been tested or their character observed by us.

In the following list, those varieties not otherwise noted are recommended for the State generally. The initials (l. c., m. c. and u. c.) stand for Low Country, Middle Country and Upper Country.

APPLES.

SUMMER.—*Early Harvest*, *Red Astrachan*.—Very popular for market.

May.

Red June.—Very good everywhere.

Summer Pearmain.

Early Red Margaret (Syn. Striped June).

Summer Rose.

Horse.—For cooking and drying.

Maiden's Blush, *Strawberry*, *Williams' Favorite.*

Sweet Bough.—The best early sweet variety.

AUTUMN.—*Bonum* (u. c.), *Disharoon.*

Equinetely (Syns. Bachelor, Buckingham, &c., &c.).

Golden Russet (u. c.), *Hoover* (m. c. and u. c.).

Taunton (u. c.).—For market.

Smoke House.

Eutaw (u. c.).

WINTER.—*Shockley* (m. c. and u. c.).—The best keeper; quality second rate.

Buncombe (m. c.).—Excellent.

Carolina Greening (Syn. Green Cheese, &c.).

Lady Apple, *Vandevere*, *Buff* (u. c.).

Limber Twig, *Faust's Winter* (m. c.), *Hall* (u. c.), *Clark's Pearmain*, *Stevenson's Winter* (m. c. and u. c.), *Hockett's Sweet.*

REMARKS.—The apple succeeds best here on strong, clayey and rather moist soil. The borer is very troublesome, destroying many trees, even with the best attention that can be given them.

PEARS.

Bartlett (m.), *Duchesse d'Angouleme* (m.), *Seckel*, *Kirtland* (m.), *Lawrence* (m.), *Glout Morceau* (u. c.), *Dearborn's Seedling* (m. c. and u. c.), *Beurre Superfin* (m.), *Beurre d'Anjou* (m.), *Madelaine* (u. c. and m. c.), *Manning* (u. c.), *Gray Doyenne* (u. c.), *Elizabeth* (u. c.), *Beurre Clairgeau*, *Winter Nelis* (m. c.), *Brandywine* (u. c.), *Doyenne d'Ete*, *Dr. Backman* (a South Carolina seedling), (u. c.), *Upper Crust* (u. c.), *St. Ghislain* (m. c. and u. c.), *Liberale* (u. c.)

REMARKS.—The blight is very destructive to the pear in the Middle and Upper Country; but the varieties named are less liable to it than others. The pear, unlike the apple, is healthiest and most productive in the Coast region. Those marked m. are most profitable to grow here for market.

PEACHES.

Amelia, Freestone.—Large and excellent, but too soft for market.

Grosse Mignonne.

Hale's Early (l. c.).—Does not rot here.

Large Early York.

Early Tillotson.—Very popular and good here.

George the Fourth, *Yellow Rareripe* (m. c. and u. c.), *Tippecanoe*, *President*, *Eaton's Golden* (u. c.), *Heath Cling*, *Honey*, *Crawford's Late*, *Late Admirable*, *Scott's October* (u. c. and m. c.).

Noblesse.—Too little known.

Royal Kensington.

Lemon Cling (u. c.).—A favorite here.

Indian Blood, Freestone (u. c.), *Indian Blood*, Cling (u. c. and m. c.).

Peach trees are generally healthy throughout the State, but subject everywhere to the borer, and in some parts of the country the crop is utterly destroyed by the curculio. Comparatively few are now grown for shipping.

APRICOTS AND NECTARINES.

Fine apricots and nectarines are occasionally seen, but generally they are all destroyed by the curculio.

PLUMS.

No plums can be grown with profit, except perhaps in a few isolated cases, on account of the curculio. I may except also the *Wild Goose*, and one or two other varieties of the *Chickasaw* species, which are but little injured by the curculio.

CHERRIES.

Cherries do not generally succeed and are seldom planted. In the Upper Country, the common *Morello* sometimes does well, however.

FIGS.

These are everywhere abundant and delicious, but especially in the Coast region. They have no disease, and at least one good crop is certain each year, and on some trees two other small crops.

Celestial (Syn. Sugar).—Best of all.

Brown Turkey, *White Marseilles* (l. c.), *Brunswick*, *Black Genoa*, *Lemon*, *White Genoa*, *Allicante* (l. c.).

GRAPES.

The *Scuppernong*, is universally cultivated for home use and for wine, and several other varieties of the *Muscadine* or *Bullace* species, are being introduced. These grapes, though overrated by some of our people, are not by any means so bad as is generally supposed at the North, where good specimens, from the nature of the case, can never be seen or tasted.

Concord.—For market.

Clinton.—For wine.

Hartford Prolific.—Market.

Delaware, *Iona.*

Maxatawney.—Healthy, strong grower, excellent.

Israella.

Walter (l. c.).—Better than *Delaware*, and very prolific on strong soil; very promising, at least for the Lower Country.

Perkins.

Johnson.—A South Carolina seedling, and the most reliable grape in the Upper Country.

But the best grape I have on my grounds is the *Peter Wylie*, one of Dr. Wylie's hybrids: perfectly healthy.

RASPBERRIES.

Large Miami (Syn. Mammoth Cluster).—The sweetest and most abundant bearer here.

Philadelphia, *Clarke*.

STRAWBERRIES.

Wilson's.

Newman's Prolific (l. c.).—A Charleston seedling; the best market berry for this immediate vicinity; quality not very good.

Triomphe de Gand.—Home use and market.

Longworth's Prolific.—Market.

Seth Boyden.—Excellent every way.

Green Prolific (u. c.).

Respectfully submitted,

D. H. JACQUES, *Chairman*.
B. C. PRESSLEY,
R. J. GAGE,
H. W. RAVENEL,
W. C. JOHNSON.

Report from Georgia.

AUGUSTA, GA., August 25, 1873.

P. BARRY, ESQ., *Chairman*,—Dear Sir:—Since my last report to the American Pomological Society in August, 1871, fruit culture has made rapid progress in our State, not only in a vast increase in the average number of fruit trees planted annually, but also in the selection of fruits best adapted to the different regions of the State. Immediately after the termination of the war, the Southern States were overrun by an army of tree peddlers who, by bringing with them fruits unsuited to the climate, or trees incorrectly named, have materially retarded fruit culture, confused our fruit nomenclature and earned for themselves an unenviable reputation. The farming community is beginning to discriminate between the products of well-established nurseries and those of irresponsible itinerant dealers, and as a result begin to reap some benefit from their purchases of good fruit trees. In several localities the idea still prevails that pears are unfit to eat, from the fact that some years ago an immense number of trees of the *Vicar of Winkfield* were introduced and sold by tree peddlers under various names, and as this variety is almost everywhere worthless in the South, the impression left was that no variety of pear was worth cultivating.

Innumerable quantities of Northern winter apples have also been planted in every section, the result being that the fruit decaying and dropping before maturity, discouraged our farmers from further attempts in fruit culture. By the misrepresentations of men who had no reputation to lose, but who cared only for the immediate profits which they derived from the sale of inferior and unsuited fruit trees, much money has been taken from the spare means of a farming community impoverished by a long civil war; and fruit-growing received a serious check. The Georgia State Agricultural Society, which was reorganized in 1869, has worked faithfully in developing the producing resources of the State, and has given fruit culture a prominent part in its semi-annual conventions and annual fairs. Agricultural clubs have also been organized in almost every county in the State; through their influence pomological knowledge is disseminated, and we are now upon a progressive course.

PEARS.

The past two seasons have been unusually favorable to this fruit. Crops of large and fine fruit have everywhere remunerated the growers for whatever extra culture they may have given their trees.

The *Duchesse d'Angouleme*, which happily has been extensively planted within the past four years, has given a great impetus to pear culture, and has given large profits to those who had planted this variety to some extent. For the first time in the annals of Georgia, there was held an exhibition in Atlanta, on the 20th and 21st inst., where fruits were the only materials.

Nearly one hundred varieties of pears were exhibited, and with few exceptions bore evidence of good culture. This exhibition compared favorably, in point of numbers and variety, with those held under the auspices of the American Pomological Society up to 1860.

We have a well tested succession of varieties, which give an uninterrupted supply of fruit from the beginning of June, when the *Doyenne d'Ete* opens the season until its close in February by the *Beurre Easter* and *Winter Nelis*. Of the varieties which succeed best, we would name *Doyenne d'Ete*, *Madelaine*, *Beurre Giffard*, *Bloodgood*, *Bartlett*, *Buffum*, *Flemish Beauty*, *Rostiezer*, *Seckel*, *St. Michel Archonge*, *Belle Lucrative*, *Beurre d'Anjou*, *Beurre Clairgeau*, *Beurre Diel*, *Beurre Easter*, *Beurre Superfin*, *Duchesse d'Angouleme*, *Lawrence*, *Howell*, *Beurre Bosc*, *Tyson*, *Onondaga*, *Winter Nelis*, etc.

Several native seedlings of good quality are cultivated with profit. Among the best are *Abercrombie* and *Jefferson*, both natives of Alabama and early summer fruits; the *Nabours*, a good August pear, and the *Pope* or *Bonners*, a fine September fruit. These two last are of Georgia origin.

We have had very little pear blight since 1870–71. The absence of this scourge has encouraged many persons to embark in pear culture, and an evidence of progress is the presence of good Southern grown pears upon our markets, a feature almost unknown a year or two ago.

APPLES.

The present crop is of good average in the middle sections of the State and increases in the lime-stone belt. In some sections of the upper portion of the State, the apple crop is very large. Winter apples are increasing in number of varieties, and much attention is paid to this class. With ordinary care we can keep several varieties until the opening of the strawberry season. Our best keepers are *Shockley*, *Stevenson's*, *Yates*, *Moultries*, *Lever*, *Maverick Sweet*, *Abram*, *Hockett's Sweet*, *Etowah*, etc.

Of the new varieties we mention :

Lanier.—A very large October apple, keeping until December. Handsome appearance and of good quality.

Etowah.—A seedling of *Shockley*, which it resembles in shape and size; color deep carmine; of very good quality, and a very late keeper. Tree productive and compact grower.

Cooper's Yellow.— A flat apple of large size; yellow with a pale red cheek; quality very good; early winter, or late fall.

Hames.—Large, showy, early fruit; sub-acid and very promising.

PEACHES.

On April 26th, last, a severe frost destroyed our prospects for an abundant crop. The damage was general throughout middle Georgia; few varieties except seedlings escaped. The only variety which seemed uninjured was the *Hale's Early*, which in many sections produced a large crop when every variety planted near it failed. *Hale's* were sold in our markets from $1 to $6 per bushel, and, contrary to past experience, its season of maturity lasted from June 1st to the beginning of July; about one-half of the fruit decayed upon the trees before maturity.

Early Beatrice fruited sparingly in one or two localities, and matured from six to eight days before *Hale's*. Its size was rather small, but quality very good.

Picquet's Late has sustained its well earned reputation as a superior August market fruit. The Standing Fruit Committee of the Georgia State Horticultural Society, compared it with the *Smock* and *Salway*, well grown specimens of these varieties being exhibited on August 20th. *Smock* was rejected from the list as below the standard for admission. *Salway* was claimed as good but too small, flesh melting and sweet. *Picquet's* claimed as best, and was of very large size and fine appearance.

Among the remarkable new varieties lately introduced we would name :

Thurber.—A seedling of the *Chinese Cling*, which it resembles in shape and appearance, but with the additional merit of being a freestone, and the tree a compact grower. Quality exquisite; maturity middle to end of July.

Governor.— A magnificent seedling of the *President*, with increased flavor and of very large size.

Muscogee.—A sub-variety of the *Columbia*, with white flesh, of large size; fine flavor.

Tuskena.—A large, yellow clingstone of first quality and fine appearance, ripening immediately after *Early Tillotson*, or before that variety is quite passed. This opens a new phase in our peach list, as our earliest clingstone heretofore worth cultivating was the *Chinese Cling*. The *Tuskena* ripens fully three weeks before the former.

Many excellent new varieties have been brought to notice, but, with the already innumerable list of very good fruits in cultivation, the difficulty now consists in admitting for cultivation only such kinds as possess transcendent qualities of size, quality or peculiar maturity of season.

PLUMS.

In former years it was customary to allow hogs to range in plum and peach orchards; thus all the wormy part was destroyed, and the depredations of the curculio very slight. Hog raising has now almost been abandoned in many sections of the State, and the curculio is gradually on the increase; in some localities this insect is becoming so troublesome as to almost prevent growing peaches and apples. The finer classes of plums, such as *Gages*, etc., cannot be grown except in poultry yards and then only if the trees are carefully watched during the period when they set fruit, and until the latter has attained at least half its size. Our improved varieties of *Chickasaw* type are less liable to the attack of the curculio, and from this type we reap full crops every year. Many new varieties have lately been introduced, and we are confident that before long we shall possess a race of plums that will compare favorably in quality with the *Gages;* but with the additional merit of being better growers, and less liable to the attack of curculio. The season of maturity ranges now from the end of May until the beginning of September.

APRICOTS

Are only desirable for culture in city gardens. Spring frosts destroy the crops regularly, when planted in the open field.

ALMONDS

Are unproductive, except in a few favorable localities in the immediate proximity of the sea.

FIGS

Suffered greatly from the unusual cold weather during the past winter. There was no first crop, except in sheltered places in cities. The second crop, especially the *Brown Turkey* and *Celestial*, is very abundant.

JUJUBE, POMEGRANATES, ETC.,

Have not been injured by the unusual cold weather, and are giving a large yield of fruit.

ORANGES.

On the sea coast and in the counties bordering Florida, the orange crop is of good average. The trees are liable to be injured by frost, and for that cause the orange culture in South Georgia is rather uncertain.

STRAWBERRIES.

Frost of April 26th, preceded by a month's drought, caused a failure in this crop. No market variety is comparable to *Wilson's Albany*, and this is principally grown for shipping.

The *Newman* is a large and showy berry, but inferior as to quality, and worthless if grown in Middle Georgia. Near Charleston, S. C., it is grown largely for the Northern markets, and commands a high price. Although the supply of strawberries is rapidly increasing and doubles in quantity yearly, still the demand is equal to the supply, and prices remain remunerative to the growers.

GRAPES

Have been comparatively free from decay, and a new impetus has been given to their culture. In Middle Georgia very large crops have been made this year.

Concord.—Unusually good.

Ives.—Gaining in favor as a market grape, as well as for wine.

Delaware still stands first as a table grape; productive and free from decay.

Senasqua promises well; its quality is best, and vigor of the vine very fair.

Martha.—Prolific and a good grower, but fruit lacks flavor.

Eumelan.—Sets badly; its quality otherwise is best.

Croton.—Does not promise well.

Walter.—Has given but indifferent results.

Norton's Virginia.—A most prolific bearer, free from decay, and an excellent wine grape; not desirable for table use.

Our *Warren* and *Black July* have given better results this year than during the four years previous.

Pauline.—Has become totally unproductive.

Taylor or Bullet.—Generally worthless. Unusually large and well-formed bunches were produced in Atlanta on vines planted promiscuously with others; the quality, however, being hardly good. Our best white grape is *Maxatawney.*

Of Rogers' Hybrids, *Goethe*, *Wilder* and *Salem* are the most desirable.

The *Scuppernong*, however, is conceded to be the grape for the South, and its culture is increasing fast. We look to this variety, and its improved offspring, for the future success of wine growing in this section. Some large wine-making establishments are in operation, and their products have attained a marked degree of superiority over what was formerly found in the trade.

SMALL FRUITS.

Currants and gooseberries are worthless except in the high mountain regions.

Blackberries are but little cultivated, as the wild varieties are of large size and excellent quality.

Raspberries of the *Black Cap* and *Purple Cane* types do well. Foreign varieties give no results except in sheltered localities of the mountain region.

Respectfully submitted,

P. J. BERCKMANS,
Chairman State Fruit Committee.

Report from Arkansas.

MAY 10, 1873.

P. BARRY, ESQ.—Dear Sir:—Your favor of March 24th has been on hand some time, informing me that I am one of the members of the General Fruit Committee of the American Pomological Society. I had been blundering along here and neglected to get the proceedings of the last Convention, and did not know there was any thing required of me by the Society.

I will take pleasure in forwarding any information in my power. I have been tinkering along for ten or fifteen years with apples and peaches, in the real old slip-shod style, setting out all kinds of trees but the right sort, till about four or five years ago, and not in the right way then, though I think I am improving since I began to read the Fruit Book and agricultural papers, so my own knowledge will be limited, as my trees are not in bearing. I have addressed letters to the best pomologists of my section of country, and expect to be able to make my report in time for use. We are a slow-going people down here, so far as improvements are concerned, but I think the midnight darkness is breaking away and daylight dawning. Railroads are in progress: agricultural and horticultural books and papers are scattered broadcast, one in a hill, over the country, and Yankee immigration talked of. When the wheel of time brings all these good things around, (in the language of the Western orator,) "Who is afraid?"

I am truly your friend,

CHARLES A. STRAWN.

ROCKY COMFORT, LITTLE RIVER CO., ARK.

Report of the Louisiana and Mississippi Delegations.

The delegates from the "Louisiana Fruit Growers' Association" take pleasure in assuring their brethren of the American Pomological Society, that the culture of fine fruits is making rapid and gratifying progress throughout the far South and South-west, and that the very great and peculiar *climatic advantages* of that favored region are at length beginning to be properly appreciated.

For some years past, the attention of commercial fruit-growers has been especially directed to those portions of Mississippi and Louisiana contiguous to the "New Orleans, Jackson and Great Northern Railroad," which road forms the most direct and expeditious line of communication with the markets of the West and North-west. Many enterprising and intelligent fruit-growers have settled along this road; and their productions are already finding their way to distant cities of the West, and yielding very gratifying and remunerative returns.

When it is considered that cheap and healthy locations may readily be procured at nearly all points on this road—that all the best market fruits, such as peaches, pears, grapes, apples, &c., flourish there in great perfection—that these fruits ripen and are ready for market from four to eight weeks *earlier* than similar varieties mature in the more Northern States; and that the through lines of railroad from New Orleans to the North-west furnish every facility for the rapid and cheap shipment of fruit, it will be no matter of surprise that the business is greatly on the increase, and that it bids fair, ere long, to assume a vast magnitude and importance.

It affords us great satisfaction to be able to make this

report to the National Society, and to assure its members that the cause in which we all feel so much interest, is not languishing in our sunny clime. The successful production, among us, of all the finer varieties of fruit, is no longer a matter of doubtful experiment, but an accomplished fact. At an almost *impromptu* exhibition of fruits, held in the city of New Orleans, last July, (under the auspices of our Louisiana Association,) there were shown apples, pears, peaches, plums, grapes, figs, pomegranates, oranges, and other fruits, in great abundance and perfection; and we venture to say that no portion of our continent can surpass the Gulf coasts of Florida, Alabama, Mississippi, Louisiana and Texas, in the production—upon the same ground and side by side—of the apple, the pear, the peach, the grape, the orange, the fig, the pomegranate, the "mespilus," and other fruits of the temperate and semi-tropical regions.

Large tracts of land, perfectly suited to the growth of all these varied fruits, are now waiting for the skilled labor and the capital which will transform them into smiling and productive orchards, gardens and vineyards: but we feel sure that, in the natural progress of events, the most accessible and eligible portions of our Southern country will soon be occupied by an intelligent and industrious population, and that the great and beneficent business of growing and disseminating the fine fruits peculiar to our mild and almost tropical climate, will receive the attention it so well deserves.

With the view, therefore, of adding in a slight degree to the valuable lists already published in our Transactions, and of aiding new settlers and beginners in making a proper selection of fruits, we respectfully present, for the consideration of the Society, the following list for the South-west, and for all that portion of the Gulf Coast between Mobile Bay and Eastern Texas:

APPLES.

Early Harvest, Red Astrachan, Carolina Red June, Primate, Garretson's Early, Yellow June, Early Strawberry, Bevan, Golden Sweet, American Summer Pearmain, Rhodes' Orange, Bruce's Summer, Yellow Horse, Cane Creek Sweet, Batchelor, Taunton, Hoover, Carter.

PEARS.

Doyenne d'Ete, Julienne, Osband's Summer, Beurre Goubault, Doyenne Boussock, Bartlett, Beurre Superfin, Howell, Seckel, St. Michel Archange, Duchesse d'Angouleme, Gray Doyenne, Beurre d'Anjou, Lawrence, Winter Nelis.

PEACHES.

Early Tillotson, Yellow St. John, Tuskena (cling), *Yellow Rareripe, Amelia, Mountain Rose, Chinese Cling, Early Crawford, Stump the World, Susquehanna, Old Mixon Free* and *Old Mixon Cling, Columbia, Raymond Cling, Picquet's Late, Lady Parham.*

PLUMS.

Temple, Lombard, German Prune, Wild Goose, Indian Chief, Brill.

GRAPES.

Hartford, Ives, Concord, Clinton, Maxatawney, Scuppernong.

FIGS.

Celestial, Green Ischia, Brown Turkey, White Genoa, Angelique, Black Genoa, Brunswick.

ORANGES.

Louisiana Creole, Mandarin, Brazilian.

LEMONS.

Florida and *Sicily.*

STRAWBERRIES.

Longworth's Prolific, Mary Stuart, Wilson's Albany, President Wilder, Charles Downing, Kentucky.

RASPBERRIES.

Davison's Thornless, Mammoth Cluster, Golden Thornless, Clarke, Herstine.

BLACKBERRIES.

Early Wilson, Lawton.

All which is most respectfully submitted,

D. Redmond,
H. A. Swasey, M. D.,
M. B. Hillyard.

Boston, September 10, 1873.

POMOLOGICAL SOCIETY ESSAYS.

Essay.

By Professor Asa Gray, M. D.

Were the Fruits made for Man, or did Man make the Fruits?—These need not be taken as mutually exclusive propositions; for as "God helps those who help themselves," and man's work in this respect is mainly, if not wholly, in directing the course or tendency of nature, so there is a just sense in which we may say "the art itself is nature," by which the greatest triumphs of horticultural skill have been accomplished. Moreover, I am not one of those naturalists who would have you believe that nothing which comes by degrees, and in the course of nature, is to be attributed to Divine power.

The answer I should give to the question, as we thus put it, is:

1. Some fruits were given to man as they are, and he has only gathered and consumed them. But these are all minor fruits, and such as have only lately come within the reach of civilized man, or are not thought worth his trouble. Huckleberries and cranberries, persimmons and papaws are examples, taken from this country. Whether even such fruits have or have not been under a course of improvement, irrespective of man, is another question.

2. Others have come to man full flavored, and nearly all that he has done has been to increase their size and abundance, or extend their season. Currants and gooseberries, raspberries and blackberries, chestnuts, and above all, strawberries, are of this class.

3. But most of the esteemed and important fruits, as well as the grains, have not so much been given to man as made by him. The gift outright was mainly plastic, raw material, time and opportunity. As to the cereal grains, it is only of the oat that we probably know the wild original; of wheat there has been an ingenious conjecture, partly, but insufficiently, confirmed by experiment; of the rest, no wild stock is known which is not most likely itself an escape from cultivation. Of some of them, such especially as maize, not only can no wild original be indicated, but in all probability none exists.

So of the staple fruits; of some, the wild originals can be pretty well made out; of more, they are merely conjectural; of some, they are quite unknown and perhaps long ago extinct.

To cite examples in confirmation or illustration of these points—to note how very ancient some of our varieties of common fruits are, and how very recent certain others—to consider how they have originated, with or without man's conscious agency, and how they have been perfected, diversified and preserved, mainly under man's direct care—would be to expand this note into an essay, and yet to say nothing with which pomologists are not familiar.

It would be curious to speculate as to what our pomology would have been if the civilization from which it, and we ourselves, have sprung, had had its birthplace along the southern shores of our great lakes, the northern of the Gulf of Mexico, and the intervening Mississippi, instead of the Levant, Mesopotamia and the Nile, and our old world had been open to us as a new world, less than four hundred years ago.

Seemingly, we should not have as great a variety of choice fruits as we have now, and they would mostly have been different, but probably neither scanty nor poor. In grapes, at least, we should have been gainers. Our five or six available species, of which we are now just beginning to know the capabilities, would have given us at least as many choice sorts and as wide a diversity as we now have of pears; while pears would be a recent acquisition, somewhat as our American grapes now are. Our apples would have been developed from *Pyrus Coronaria*, and might have equalled anything we actually possess from *Pyrus Malus* in flavor, though perhaps not in variety, if it be true, as Karl Koch supposes, that the apples of the orchards are from three or four species. At least one of our wild hawthorns, *Crataegus Tomentosa*, in some varieties, bears a large and delicately flavored fruit, evidently capable of increase in size; it might have been in the front rank of pomaceous fruits. In a smaller way our service-berry would have been turned to good account; our plums would have been the progeny of the *Chicasa*, the beach plum, and our wild red and yellow *Prunus Americana*, which have already shown great capacity for improvement; our cherries might have been as well flavored, but probably not as large as they now are. But instead of peaches and figs, we should be discussing manifold and most luscious varieties of persimmon and papaw, the former probably equal to the *kaki* just acquired from the far East. As to strawberries, gooseberries and currants, we should have lost nothing and

gained something, as we possess several species besides the European types themselves; as to blackberries and raspberries we should have been better off than now, by the earlier development and diversification of our indigenous species. And we might have had all our finest strawberries a thousand or more years ago, these having come from our American types, *Fragaria Virginiana* with its varieties (which, as well as the Old World *F. Vesca*, occurs all across the continent), and *F. Chilensis*, which ascends the Pacific coast to Oregon.

Then we should consider how much earlier our race, with an American birthplace, would have been in possession of tomatoes, of the pine-apple, of the cherimoyer and the other custard apples, of the star-apples and other sapotaceous fruits, of chocolate, of Lima beans in all their varieties, of peanuts; not to speak of potatoes, sweet potatoes, and "Jerusalem" (that is, girasola or sunflower) artichokes: the last supplemented by our ground-nut (*Apios tuberosa*) would have been the first developed esculent tubers, and would probably have held their place in the first rank along with potatoes and sweet potatoes of later acquisition.

Among the causes and circumstances which have given to the fruits of temperate climates of the old world their pre-eminence, *opportunity* is one. How many potential fruits of value lie undeveloped in this country we know not, and shall never know. They have lost their opportunity. Necessity, which is the mother of pomology as well as of other inventions, has been fully supplied out of other accessible, and in some cases no doubt, originally, better materials.

There are some, however, for which evidently "a good time is coming." Of these, our wild grapes are foremost. They have such a start already, and seedlings, whether from crosses or otherwise, can be produced and selected and reproduced in so short a space of time, that they will probably have achieved their position when the American Pomological Society holds its centennial celebration.

Blackberries, from *Rubus Villosus*, are in similar case; and if due attention be paid to the low blackberry or dewberry, and to the sand blackberry of New Jersey and farther south, the foundation for a greater diversity of excellent sorts will be laid.

As to cranberries, already an important staple, increase of size and abundance of production are all that are to be expected. It is easier to bring about improvements in the direction of sweetness than in that of acidity. Huckleberries, also, have probably nearly reached their perfection unassisted.

A few wild fruits may be mentioned which manifestly have great capabilities, that may or may not be developed in the future. The leading instances in my mind are the persimmon and the papaw, — not the true papaw, of course, which we have in Florida, but the *Asimina* or Western papaw, so called. Both persimmons and papaws are freely offering, from spontaneous seedlings, incipient choicer varieties to be selected from; both fruit when only a few years old, thereby accelerating the fixation of selected varieties into races; and both give fruits of types wholly distinct from any others we possess of temperate climates. He that has not tasted a *kaki* has no conception of the capabilities of the *Diospyros* genus. The custard apples of the West Indies give some idea of what might be made of our papaw, when ameliorated by cultivation and close selection from several generations. I have understood that one of the veteran pomologists of the country, Dr. Kirtland, of Ohio, a good while ago initiated a course of experiments upon the papaw in this regard; it would be well to know with what success, and whether the breeding and selection have been continued through successive generations.

Our American plums, already mentioned, have for many years been in some sort of cultivation, and have improved upon the wild forms; but I suppose they have not been systematically attended to. Their extreme liability to black-knot and other attacks renders them, for the present, unpromising.

Finally, if pomology includes nuts, there is a promising field uncultivated. Our wild chestnuts are sweeter than those of the Old World; it would be well to try whether races might not be developed with the nuts as large as *marrons* or Spanish chestnuts, and without diminution of flavor. If we were not too easily satisfied with a mere choice among spontaneous hickory nuts, we might have much better and thinner shelled ones. Varying as they do excessively in the thickness of the shell and in the size and flavor of the kernel, they are inviting your attention, and promising to reward your care. The pecan is waiting to have the bitter matter between the shell and the kernel bred out; the butternuts and black walnuts to have their excess of oil turned into farinaceous and sugary matter, and their shells thinned and smoothed by continued good breeding; when they will much surpass the European walnut.

All this requires time, almost unlimited time; but it is not for those who are enjoying the fruits which it has taken thousands of years to perfect, to refrain from the good work which is to increase the enjoyments of far future generations.

Exhaustion of Fruit Trees and the Causes.

By P. T. Quinn.

The failure of certain varieties of fruit to bear maximum crops of well developed specimens every year, or even every alternate season, under what would be acknowledged as high culture, does not always prove that such a variety is worthless and should be placed among the rejected fruits, for with similar treatment this same variety, grown upon a different quality of soil in another locality, would yield abundantly of full-sized fruit, recommending itself by its natural thrift and productiveness. Failures arising from uncongeniality of soil and climate, are strikingly numerous in every district where fruit growing has been attempted in this country. At this time, among the more intelligent cultivators, it is very generally accepted, both in practice and theory, that there are comparatively

few varieties of our multiplicity of kinds that can, with any prospect of ultimate success, be recommended for orchard planting beyond the boundaries of single States, nor is it rare to find instances where different sections of the same State, call for entirely different lists of fruits, owing solely to the causes named. I mention these facts here, and lay particular stress upon them, in this brief paper, for I am well aware of the fact, that there is nothing more conducive to neglect and ill usage, in the management of a fruit orchard, than to begin with a lot of varieties unsuited to the locality. Therefore, while tracing the causes of "exhaustion of fruit trees," it may be well to warn beginners from taking a wrong step in the start, and one so prolific of bad results that is so likely to mar the path of the inexperienced fruit culturist. Choose the list of varieties then after full deliberation and thorough canvassing of the subject, and let this care and caution govern every step taken, not only in selecting lists of kinds, but also, from whom such trees should be purchased, for at this critical period there are two *more* important considerations that will need earnest attention. The first, is to be sure and get strong and well-grown trees, and secondly, that such are true to name. To start with poorly grown stock, is courting disease and disappointment on the threshold of the undertaking, and to have fruit trees turn out untrue to name, is one of the most discouraging events that the beginner has in store for him, for it will prove as expensive as distasteful, bringing pangs of regret, too late, however, to remedy. Both of these may easily be avoided, and at no extra cost, by ordering the trees from some responsible nurseryman who has his reputation at stake, for such are always quite as anxious to send out good stock and that true to name, as the experienced purchaser is to be sure of these two points on the start. It is a safe and wise rule to follow, "never buy from a tree peddler," unless you are sure he is the representative of some responsible nursery firm, for whom he solicits orders. There may be some honest and well-meaning men among them, but the bulk of them should be shunned by farmers as venomous serpents, for they are now, and have been, one of the mainsprings to disaster and disappointment in fruit culture. Thousands of neglected and exhausted orchards, the cause of which can be traced to those unprincipled fellows who have, time and again, duped farmers by their exaggerated and gaudily colored plates of monstrosities in fruit which only exist on paper, to deceive and defraud the verdant, these unscrupulous "venders" are, up to this time, doing a thriving business throughout the country. It would be to the interest of all, both nurserymen and farmers, to suppress this branch of tree selling.

In treating the subject of "exhaustion of fruit trees," from a practical stand-point, the old and familiar adage comes in play, that an "ounce of prevention is better than a pound of cure," for trifling mistakes made on the start very often lead to disastrous results. Before planting corn, potatoes or onions, successful farmers are sure to make a careful survey of the condition and quality of soil, adding what it may lack before depositing the seed, for to the wise it is self-evident unless these are up to the standard, the profits will be small. And so it is with the market gardener, who raises two and sometimes three crops, from the same ground the same year, and this year in and year out, for a lifetime, without exhaustion of the soil, but on the contrary improving it each year.

But the gardener knows full well, without being told, that if he raises two crops from the same ground in a year, he has to manure for two, for if not, it is time and money thrown away, and better by far to only attempt one instead of two. If persons in starting a young orchard would always follow the market gardener's rule, the end would justify the means, and instead of a meagre supply of fertilizing material for one crop, there should be a liberal allowance given for two; in due time the trees would reimburse threefold for the outlay. But how very seldom we find this carried out in orchard practice. With a young orchard of apples or pears, no returns in the way of fruit are expected for six or seven years, and in the mean time the ground is cropped as usual, to pay expenses, using just enough of manure to bring the cultivated crop to maturity, forgetting or overlooking the fact that there are two crops on the same ground, each having needs, while only enough of manure is applied for one. By this short-sighted economy the trees are pinched, their growth and vigor impaired, and in thousands of instances the orchard permanently injured, leaving what fruit such trees produce at the mercy of the insects that now-a-days infests our orchards. Even when the ground is in good condition and fertile at the time of planting, following a plan similar to the one described, the results cannot be otherwise than fatal to the health and productiveness of such trees. Although the bad effect of such treatment may not show itself in so short a time, as when orchards of apples or pears are sown in cereals or grass, still it tells against the trees in the long run.

In pear culture, exhaustion and premature death of certain varieties is hastened by neglect in furnishing the soil with fertilizing material and allowing young trees to overbear. This latter practice has, in my belief, permanently injured more pear trees than all the other causes combined, and cannot be too strongly condemned or denounced, for whenever encouraged it is sure to prove fatal. In my planting of the pear in the future, I will not allow a pear to grow on a tree, no matter how vigorous it may be, until the tree is at least five or six years in place. Under good treatment, by this time the trees will be sizable, the roots well established, and the tops strong and capable of carrying a crop without running any risk of injuring the trees. I know from experience that this is by far the best plan to follow.

Another and very productive source of exhaustion, is in planting fruit trees too far apart. When apple trees, for instance, are set forty feet apart each way, and pear trees twenty-five feet, there are wide intervening spaces between the trees, that under the most favorable auspices of high culture it will take, at least, a quarter of a century for the trees to shade, and occupy the whole of the ground. Five or six years from the time of planting such an orchard, the old custom was, and by the way, it is very common even now, to sow the orchard down to grass, and

keep this part of the farm in permanent meadow. In open ground, meadow is seldom left longer than four or five years without breaking up the sod, cropping for two or three more and again re-seeding. But owing to the inconvenience of plowing among trees, and the uncertainty of getting hoed crops to grow in the shade of such, the sod, in the orchard, is left unbroken five, ten, and twenty years. In these long terms, the more nutritious and better quality of grasses are gradually run out, and replaced by the more vigorous and inferior native sorts, much more formidable rivals in the contest for food, than the former occupants—a fact that tells its own story from year to year, in the starved appearance and unfruitfulness of such trees. However, the crop of hay is cut annually and hauled to the barn, and the apples gathered and taken away, while there is nothing returned in the shape of manure to make up, in whole or in part, for this annual drain upon the soil. Within my own compass, I know of dozens of apple orchards that have been kept constantly in grass from twelve to twenty years, the grass cut and apples gathered, (when there were any to gather,) and to my knowledge there has not, within any five years, been enough manure applied to raise one crop of potatoes, nor, during that time, as much labor given to the trees as would be in raising a single crop of corn. Yet these very men, who are excellent grain farmers, will stand and wonder why it is that apples don't grow and bear as they formerly did when they were boys, and that there is no use in trying any more. Grass is bad enough, under the best treatment, in an orchard where manure is applied to the surface in liberal doses at regular intervals; but when this part is neglected, or overlooked for a term of years, it will need no prophetic vision to foresee the final result. Meager crops of very indifferent fruit will be the sum total of such treatment.

That there are certain old favorite sorts of fruit that grew vigorously and bore abundantly, in the first half of the present century in many localities, but of late years, owing to climatic causes, have hopelessly failed under the best culture, none can dispute. But in the meantime, others, and equally valuable kinds, have taken their places, kinds that respond freely to high culture and are fully up to the standard in quality. These cases of failure are confined to a limited number of kinds, and do not, as many suppose, affect the whole list of sorts.

To make fruit culture pay the highest profit, I am thoroughly convinced of the importance of close planting, and low heading, so that when they reach the bearing age, the ground will be exclusively given up to the trees. Manure should be applied regularly, and the surface kept under the plow, running this implement, among bearing trees, not deeper than two or three inches.

Essay on Pear Culture.

By Charles M. Hovey, Cambridge, Mass.

The subject of Pear Culture, upon which you have invited me to make a few remarks, I had supposed was pretty much exhausted; at least so it was intimated more than twenty years ago. What Van Mons, for so many years, intently studied; to which Knight devoted part of a long and useful life; what Bouvier, Esperen, Gregoire, Bivort, Rivers and a host of other eminent cultivators abroad, to say nothing of the labors of Cox, Prince, Lowell, Parmentier, Manning, Dearborn and others of our countrymen—I say what all these men, for a period covering nearly a century, studied, and only began to fathom, to the American cultivators of twenty years ago was practically exhausted. Yet perhaps we ought not to wonder at this. Everything in our country advances with rapid pace; the stage-coach is gone, the railroad is slow, and the telegraph already a tardy movement. Our pear culture follows in the same channel. To-day we import a plant, a new pear, and almost the next we condemn it as unworthy of culture. So glorious is our climate, so scientific our treatment, and correct our judgment, that we can arrive at results in a year or two, which in earlier years could only be attained through the labor, careful observation, and experience of a tolerably long life.

The members of our Association can hardly expect any thing very new from me on this subject. For more than thirty years, through the pages of the Magazine of Horticulture, not only the accumulated knowledge of all our best pomologists was disseminated, but the results of my own experience on pear culture, and those who have the desire, will there find in detail all that I can now say only in a very general way. I think we have yet a great deal to learn, at least I find that to me every year brings an additional amount of valuable information.

And this leads me to consider briefly, the one subject which has led to the division of your catalogues into the various localities, and to inquire how far in this direction we should go. Can we have a better demonstration of the variation of fruits, than the great collection placed upon our tables for exhibition? Examine them and observe how great the difference, even within the locality of a few miles; say from Cambridge and Dorchester, or Roxbury and Revere; one smooth, fair and beautiful, the other uneven, rough and homely; one bright and rosy, the other green and black; with these samples in so limited a locality, I have even doubted sometimes the necessity of making the distinctions you have established in your extensive catalogue. Yet how many more we should have to make, if the slight remove should be so great as we know now to exist. When we have overcome this variation, we may then begin to think that the subject of pear culture shows signs of exhaustion—not before.

It would occupy too much of the valuable time of our Society, and perhaps not lead to any grand results, to give you in detail my views as to the causes of variation. How far the theory is true, that a fruit is only really valuable in the vicinity of its origin, we are at present not able to decide. That some plants and shrubs, as well as fruits, are fastidious in their requirements, any cultivator of experience well knows. Nature everywhere guides us to a certain extent; we do not attempt to rear the cranberry on a pine plain, neither do we often endeavor to grow the peach tree in a swampy ground. The pear, the apple, the grape, and other fruits, are probably no less sensible

to the bad effects of position than those fruits, and when we plant in soils or localities not naturally favorable to their growth, failure to a certain extent will surely be the result.

Years of labor and careful observation will sooner or later solve the problem, but as one lifetime has so far failed in most instances to do so, we must not expect too much in the future. We but just begin to come to a full knowledge of the subject when death relieves us from further experiment, and, unfortunately, that knowledge which has been treasured up, and would be of so much value, is forever lost, and our successors begin again, and go over the same ground, and end at the same spot. Such, at least, has been the course of pomological study until very recently. The organization of Horticultural Societies, and the aid of reliable Horticultural Journals, has done much to preserve the accumulated information, and it should be the duty, as it is the object undoubtedly, of the American Pomological Society, in the publication of its proceedings, to supply the want which has so long been felt. The extent of territory now devoted to fruit culture is immense, as compared with that at the time of the organization of our Association. If we have kept our knowledge up to this standard of increase, we have accomplished a good work; if we have exceeded it, so much the greater is our claim upon the labors of every intelligent pomologist to extend and perfect a science which adds so much to our enjoyment and health.

Essay on Grapes.

By G. W. Campbell, Delaware, Ohio.

Grape-growing, in most parts of our country, is at present in a state of extreme depression and neglect; and the time is probably not distant, if it does not already exist, when there will be a scarcity of grapes in the land.

The causes which have led to this state of affairs, are not difficult to determine; and may be regarded as only a natural result of the undue and unreasonable exaltation of this important interest a few years ago. What has been, not inaptly, termed the "grape-fever" prevailed most extensively; and among nearly all classes of landholders the high road to fortune was thought to lead directly through the vineyard. Consequently, large areas were planted with grape-vines—in many cases, in soils and situations wholly unsuited to their culture; in others, with varieties not adapted to their several localities; and in others still, where, although the natural conditions may have been favorable, the requisite knowledge and skill were wanting to insure success.

Advantage was also taken of the popular enthusiasm by interested parties, to recommend and extol new and untried varieties as suited to universal culture, which proved to be either valueless, or extremely limited in their adaptation. The consequences of this indiscriminate and inconsiderate course were inevitable. Failure, and consequent disgust cooled the ardor, and extinguished the brilliant anticipations of thousands, who learned, by sad experience, that intelligent and skillful industry were as necessary to success in grape-growing, as in other pursuits.

It is perhaps unnecessary to pursue this branch of the subject further; but I wish here to express the confident belief that, notwithstanding past discouragements, and present depression, there *is* a future for grape-growing in America as grand as was ever dreamed of by the most excited enthusiast, when success shall be as distinguished as our failures have been ignominious—and when every man may not only sit under the shadow of his own vine, but may rejoice in the enjoyment of its refreshing fruit and generous juice, which we are assured were given to make his heart glad.

I believe this, because I believe in the unlimited capabilities of my country, and in the indomitable and irrepressible energies of the American people. With every variety of soil and climate, her mountains and hill-sides, her rich valleys, her fertile and almost boundless prairies, the genial banks of her lakes and rivers, all that is wanting is the judicious selection of varieties suited to the various localities, followed by intelligent and persistent industry, to make America the vineyard of the world! And if we have not now the proper varieties for every clime where the vine will flourish, between the sunny South and the frozen North, we will produce them. Then will the labors of Rogers, Arnold, Underhill, Ricketts, Wylie, and others, both North and South, in the production of new varieties by hybridizing, be recognized and appreciated by every cultivator and lover of delicious grapes.

It is doubtless idle to expect that any *one* variety of remarkable excellence will ever be found, which will be suited to all localities in our wide-spread and varied country. Perhaps the nearest approach to this, yet discovered, exists in that hardy child of Massachusetts, the Concord. From her descendants, produced by a judicious crossing with the finer foreign varieties, we may confidently expect the most valuable and important results. Next, although inferior in quality, may be named the scarcely less rugged Hartford Prolific, from Connecticut. In the same class may be found the Ives, from Ohio; Martha and Telegraph, from Pennsylvania; and Belvidere, from Illinois. In the way of improvement in this class of hardy natives, I will mention a new variety from Zanesville, named Lady, specimens of which are, for the first time, on the tables of the Society. It is a pure Concord seedling; and in habit of growth and foliage, scarcely distinguishable from its parent. From three years' observation, I should say is its equal in vigor, health and hardiness. Color light green—would be called white—bunch rather less than Concord; size of berries fully equal In quality rich and delicate, without hard pulp, and scarcely a trace of foxiness. Ripens very early—ten days or more before Concord. It is apparently a most promising, perfectly hardy and healthy white grape; and I think it will hereafter hold a prominent position among the most popular, hardy native grapes.

With a passing notice of the favorite little Delaware, I will leave the discussion of particular varieties: The discovery and introduction of this grape marked an era in American grape-culture; and it has perhaps done more to educate and elevate the public taste, as to the quality and excellence attainable in our native grapes, than any other circumstance. And to its influence may be attributed, in a large degree, the mania for grape-culture, which pervaded the country a few years since. And although it must be confessed that the Delaware has disappointed many of its admirers, by reason of apparent caprice and coquettishness, others who have studied its wants and requirements, and learned that it will endure neither estrangement nor neglect, find it still all that can be desired—always charming, fruitful and reliable. The greatest fault of the Delaware, and indeed almost its only one, is a delicacy or tenderness of foliage which renders it unable to resist the attacks of *oidium*, or mildew of the foliage, in seasons and localities where that malady prevails.

The attention of hybridizers and grape-growers has been for years directed to the production of varieties having the excellencies of the Delaware combined with stronger foliage, capable of resisting the attacks of disease. That complete success in this direction will be ultimately reached, if indeed it has not already been attained, I have no reasonable doubt. And an experience of near twenty years, in experimenting upon the capabilities and possibilities of improvement of the American grape, by hybridizing, forms the ground of this confidence.

The one point which I consider as important, above all others, in this pursuit, is the fact, which I regard as fully established, that a hybrid or cross between a hardy native and a tender exotic grape may have the hardiness of constitution and vigorous, healthy foliage of the native, while the fruit may possess the delicacy and excellence of the foreign parent. I have seen grapes of this character, both from Mr. Ricketts, of Newburgh, and Mr. Underhill, of Croton Point; and I have myself grown hybridized seedlings from Concord, and other hardy native grapes, which retain all the vigor of growth, and very nearly the hardiness and health of foliage of the Concord, and produced grapes very difficult to distinguish from Golden Chasselas, Muscat Hamburgh, and Chasselas Musque, either in appearance or flavor; and all raised in open garden, wholly unprotected, and with only ordinary care. If these facts do not point to a glorious future for American grape-growing, I confess myself unable to comprehend their significance.

A few remarks upon hybridizing may be of interest. Hundreds of vines are doubtless grown which are supposed to be hybrids, but which are only simple seedlings. To be certain of success in this pursuit, great care and very delicate manipulation are necessary. The bud must be opened prematurely, and all the anthers removed from the grape blossoms before the pollen-cells have burst. The incipient cluster, thus prepared, should be enveloped in an oil-silk covering, to prevent the embryo grape from being impregnated, either by the agency of insects, or by pollen floating in the air. Pollen, from whatever variety it is desired to impregnate the parent grape, should then be carefully applied to the prepared bunch, and the silken envelope retained until the growing berries indicate that the process is complete. Seeds saved from these grapes will produce plants, some of which will resemble the foreign, and some the native parent. Those only, whose habit of growth and foliage resemble the native parent, should be saved—as my experience has shown that the more nearly these seedlings follow the foreign kinds in foliage, the more they are subject to mildew and rot; and are consequently of little value for general use. Many of the hybrid seedlings will be found with thick, strong foliage, in texture and character like our natives, and it is among these we must look for grapes of the greatest value, hardy, healthy and bearing fruit of improved quality.

In this connection, I wish to make public a discovery, which I believe to be entirely new, and which I think will be of great value to all experimenters in growing hybrid and seedling grapes. It is a method by which the future character of the fruit of a grape-seedling can be determined in the first year of its growth—years before it can be brought into bearing. To illustrate this: I had three vines selected from a lot of seedlings grown from Delaware, crossed with Grizzly Frontignan. Three years before they came into bearing, I announced that No. 1 would bear a black grape, having the Frontignan or Muscat flavor; that No. 2 would bear a red or white grape, without the Muscat flavor; and that No. 3 would also bear a red, or white grape, with the Muscat flavor. This prognostication was the more remarkable, because I had never, up to that time, raised a grape seedling having this peculiar flavor, found only among foreign varieties and their hybrids. When these grapes came into bearing, my predictions were found entirely correct. Nos. 1 and 3 had the Muscat flavor; No. 2 was flavored like the Delaware, with no trace of the Muscat; No. 1 was black; Nos. 2 and 3 red. A year or two later, of seven seedlings from Concord, crossed with Chasselas Musque, I selected two as promising to have the Muscat flavor, and five without. Six of the seven have now borne, and the two selected have the flavor of the Muscat as distinctly as the Muscat Hamburgh and Chasselas Musque, which they severally resemble, while the other four are as free from it as Chasselas Fontainebleau. One more incident will probably give as full an idea as may be necessary of the extent and capabilities of this discovery. A chance seedling, selected by my gardener for its fine habit of growth, handsome wood and healthy foliage, had all the appearance, especially in its prominent buds and elegantly lobed leaves, of a most promising hybrid. The wood, the form of the buds and foliage, very strongly resembled the foreign varieties. The application of my test, however, indicated that the fruit would be of the character of our wild forest grapes. I need hardly say I waited its bearing with some anxiety—for every appearance of the vine was adverse to my prediction. But, as in every other case, the correctness of my discovery was triumphantly established. It bore a very small, black grape, nearly all skins and seeds, and of a sour and acrid character, wholly uneatable.

Repeated and unvarying tests of a similar character have so far convinced me of its entire correctness, I do not hesitate to announce that *in the* TASTE, *or* FLAVOR *of the green tendrils of the vine may be found a true index of the character of its fruit.* Although this is something that cannot be exactly defined, or accurately described, it may be acquired by any one with a nice, discriminating taste. Go into a greenhouse where foreign grapes are growing, and taste the tendrils of the Muscat flavored varieties, and of the Black Hamburgh and Chasselas, and you will soon learn to distinguish the difference, which is as distinct as the flavor of the grapes themselves. Again, taste and compare the flavor of the tendrils of Concord and Hartford Prolific with those of Delaware, Allen's Hybrid and Iona. You will find, in each, distinctive differences suggestive of the character of the grapes. Then test and compare the native wild grapes, the Fox and Frost grapes of the woods, with the tendrils of our cultivated varieties, and you will soon learn easily to distinguish the wild from the cultivated.

The limits of this paper will not permit me to enlarge upon the subject of vine-culture. I will, however, venture to express my disapproval of cramped space and close pruning of the vine, especially during its summer growth. The American vine and the American people are not unlike in this respect. They require room to spread themselves, and do not thrive under restraint. Give the vine plenty of ground-room, that its roots may have ample space in which to obtain the sustenance requisite to the production and maturity of its burden of fruit, and it will require a corresponding space above ground upon stakes or trellis for the accommodation of its luxurious growth and abundant fruit and foliage. A certain natural equilibrium exists between the roots and upper-growth of the vine, which cannot be disturbed to any considerable extent, especially during the growing season, without serious injury. To illustrate this: I have planted a young and healthy vine, with smooth and perfect roots, in early spring. When it had made a growth of two or three feet, I have cut it back to a single bud and leaf at its base. After this, the plant remains apparently dormant for ten days or longer, when the bud slowly swells and breaks; and if it is a hardy and vigorous variety, is soon making a new growth, but with less than its former strength. When it has again attained a similar growth, I have again shortened it to one bud and leaf above the former cut. A longer period of rest now ensues, followed usually by a weak and spindling growth of a few inches, with scarce vigor to ripen a bud or two at its base before the autumn frosts have destroyed its foliage. Now, if we take up this vine, we shall find that all the new roots, which had formed previous to the successive cuttings of the top, are dead and rotten. Only the old roots, which the vine had when planted, remain, and these rough, knobby and diseased—the vine in no respect as good as when it was planted in the spring. The vine will bear, without apparent injury, any reasonable amount of pruning during its dormant state, in fall or early spring; but I think the above experiment proves that any severe cutting during summer is an unmitigated evil. All the summer pruning I would recommend, would be the early rubbing out of superfluous shoots, upon their first appearance; leaving only what is required for next year's bearing wood. This, with the pinching or stopping the ends of such shoots or canes as were disposed to be too rampant in growth, would be all I would ever consider necessary. Some of the most successful grape-growers within my knowledge, carefully prune their vines in fall or early spring, and then leave them entirely without summer pruning. Much more might be said upon this and kindred subjects, but I fear I have already exceeded the limits proper for a paper on an occasion like the present.

Essay on the Cultivation of the Fig in the United States.

By Dr. J. Strentzel, Alhambra, near Martinez, California.

"And they sewed fig leaves together, and made themselves aprons."

"And when he saw a fig tree in the way, he came to it and found nothing thereon, but leaves only, and said unto it, Let no fruit grow on thee henceforward forever."

The tree of the garden of Eden, producing one of the most luscious of fruits, should be more largely cultivated in our country, for it thrives with little protection through the Middle States, and luxuriates in the climate of our Southern and South-western States, from the Atlantic to the Pacific. No fruit tree is easier propagated, longer lived, or more thrifty under ordinary care, and none a more prolific and abundant bearer; hence the curse upon one found barren. It is a type of the Temperate Zone and its advanced civilization—of peace, of security and contentment—hence the greatest happiness is typified by sitting under the shadow of our own fig tree.

It thrives best in a rich mellow soil, well drained if necessary, but kept moist by irrigation if the rain-fall is deficient during the growth of the fruit, and thus, in judiciously selected and sunny locations, will perfect its fruit; also, through the extent of our Eastern States, although it will require shelter during the winter months. It is propagated from cuttings of the previous year's growth, or from sprouts from stool-plants, or around the butt of a tree; these are partially rooted already, and will make a fine growth during the first season, and begin to bear the year following. To avoid the extension of naked, unproductive branches, the tree will require at once considerable shortening in of the shoots, to produce close-jointed wood with abundance of leafy spurs. This very facility of the propagation appears to be a barrier to its further improvement, and the production of new and choice varieties from seed, but the hope in progression in this interesting science is full of vitality, and considering the great difference in the quality of the fruit, and even in the growth of trees of the same variety, when raised under a Southern sun and favorable conditions, we are justified in anticipating the production of superior seedlings.

The fruit forms in the axillae of the leaves; the first

crop ripening during the months of June and July is on the previous year's growth, the so-called second crop is developed with the new growth of wood during the season, and is checked only by want of moisture in the soil, or the autumnal frosts. The fruit buds requiring from eight to twelve weeks to ripen, furnishes a criterion, according to the climatic peculiarities of the different sections of the country, when this late fruit, subject to be winter killed, should be removed to produce in its place a more abundant and early ripening crop the next season. The ancient practice of applying a drop of olive oil to the eye of the fruit, I consider more serviceable in repelling insects from entering by the eye, than to the ripening of the fruit, or to its growth.

It is superfluous to enumerate the long list of varieties cultivated here and in Europe, as they vary in quality with the location, but it can be accepted as a rule, that the smaller varieties of the fig are more hardy, and succeed better in the Middle and the Eastern States, and can be easier preserved for winter use. For drying, it improves the quality of the dried fruit to have it, when nearly dry, dipped in weak lye, then quickly dried—flattened and packed in boxes or tight sacks, thus furnishing one of the most nutritious and wholesome articles of diet, which even an Alexander regretted having been once unacquainted with.

Essay on the Influence of the Stock on the Scion, and Vice Versa.

By Josiah Hoopes, Pennsylvania.

Both theory and practice teach us that the relationship existing between the root and the top of a tree, cannot be impaired, to any great extent, by any artificial intervention of man. The very moment that an inserted bud or graft commences to granulate and then unite, that moment the two parts of the embryo tree struggle, as it were, for the mastery. That is, certain idiosynerasies inherent either in the branches of the one, or the roots of the other, will form a leading feature in the mature plant. Abundant proof of this is afforded by examining the roots of nursery-grown apple trees; whether budded or grafted. Take, for instance, some well-known variety as the Bellefleur, and the roots will be found uniformly long, slender, and very fibrous; other kinds will prove exactly the opposite. If we place a graft of some well-marked variety upon any ordinary stock, say five or six feet high, in a few years, certain peculiarities of the bark will be found extending down from the branches to the body of the tree; as is instanced in the *Newtown Pippin* apple, and *Van Mons Leon le Clerc* pear. Another curious feature respecting the influence of the scion upon the stock, is noticeable in some of the so called "sports," or variegated-leaved plants.

During the past season, a mountain ash, upon which was budded a variety with variegated leaves, commenced to push forth young shoots from the main body of the tree, below the point where the bud was inserted. In every case these had variegated leaves. Now in view of the fact that these *adventitious* buds were there in advance of the original variegated bud, the presumption is, that they were created green, and their normal condition yielding to the controlling influence of the new branches, caused the change to occur by the flow of sap from above.

A still more remarkable case than the one above cited, was related some time since by a correspondent of the *London Garden*. He states that he procured scions of a diseased Horse Chestnut with yellow leaves, and worked them upon strong, healthy, young trees. Some time thereafter, upon examining the stocks where the scions had failed, young shoots were found down the body bearing the identical yellow-hued foliage; and yet, where the buds originally inserted had "taken," they produced perfectly healthy, green leaves.

This disease, for I hold that all variegation is in some manner unhealthy, had evidently been communicated from the bud or scion to the stock before the death of the former, and for a short time, during its vain struggle for existence, contaminated the parts below.

The Scientific Committee of the Royal Horticultural Society of England, also records a like case with a yellow-leaved Laburnum. After the inserted bud had died, variegated shoots were noticed issuing from the stock, both below and above the inserted point. And Dr. Masters, the English botanist, has stated that an Abutilon had thrown out variegated shoots after grafting with a variegated variety, but ceased to do so after the inserted graft died.

But, in some instances, the stock exerts a marked influence upon the scion, thus showing the co-operative system in use between them. The *Gardeners' Chronicle* mentions an instance of a couple of Muscat vines, worked on the Black Hamburgh, in the same house with a Muscat on its own roots. Those worked on the Hamburgh, start fully five or six days in advance of the one on its own roots, although they are nearly a fortnight behind the Hamburghs they are worked on. It is a curious fact that there has never been seen any difference in the ripening season, nor any effect on the fruit.

As we stated in the commencement, certain marked peculiarities will, sooner or later, always make themselves known; sometimes it will be one thing, and again another and a totally different feature assumes the superiority. The governing cause, involved in mystery as it is, to a certain extent, affords us a clue by means of which we may study a very useful lesson in plant life.

We know that all vegetable growth arises from a cell, and what is termed young shoots, leaves, blossoms, etc., are in fact but an accumulation of cells, which in time develop woody fiber, and other organs. The propagator of new varieties, knows that a single bud, or a section of a young branch may be inserted in a different tree, and these will unite, and produce fruits and flowers similar to the kind from which said bud or graft was taken. Now let us inquire into the changes that occur during this growing process, or as horticulturists term it,—"taking." Between the wood and bark is where active growth takes place, and the layer of young cells found

here is known as the *Cambium layer*. All growth, of whatever nature, is by cells, the origin of which is however at present unknown. But this cell-growth is accomplished by small protuberances making their appearance on the walls of the older cells, and these rapidly increase, and again in turn assist in the formation of others; and this is carried on, so long as growth takes place. Without going into a long dissertation upon the subject of cell-growth, which would form a long essay in itself, I will merely state, that the question has been asked, in relation to a budded tree, Can the cells at the point of union, be partly of one variety and a part belong to another? My theory is, that a cell, singly, is entirely a component part of the variety from which it originates, either from the scion or stock, and is invested with all the powers and principles inherent in that part. A single cell cannot be of two varieties, but a collection of cells, as for instance the *cellular tissue*, may be formed partly of both. The *vascular* or *fibrous tissue* is governed by the same laws, each separate, but the little bundles of woody tissue, uniting by their outside covering or walls, thus forms a compact mass of wood, and the bud or graft has taken, which ultimately forms the future tree.

A bud is, in fact, an embryo tree. It contains within its protective covering, all the elements of tree growth, with all the organs of vegetation and reproduction intact. Therefore when a bud is inserted beneath the bark of another plant, the cellular growth at once takes place on both sides; these unite by their outside walls, and the so-called sap commences to circulate in the inter-cellular passages from one to the other. It is therefore no wonder that certain peculiarities, embraced in the root, may be found developing in the scion or top, and *vice versa*. That the scion is enabled to reproduce its kind, is due to the fact that its young growth is merely an increase of cells already formed, and the variations alluded to at the commencement of this paper, are the result of constant currents of sap flowing between the two remote portions of the tree, and at the same time imbuing the one with certain marked characters, contained previously in the other.

Thus, in a somewhat hurried, and I fear very imperfect manner, I have alluded to the influence of the stock upon the scion, and *vice versa*.

This interesting subject is by no means all theory, as many suppose, but is the result, for the most part, of close examination by means of the powerful lens. Future investigation will, undoubtedly, reveal many novel features, which we now know not of, and to accomplish this fully, the patient student of horticulture is asked to join the botanist in the pleasant task.

But there is another and more popular aspect to this subject—the relative advantages of certain stocks for particular species of plants. Under this heading we may take, for example, the plum worked on the peach. Prejudice and distrust on the part of many cultivators have done this operation great injustice. To the owner of a heavy soil where the plum root thrives luxuriantly, peaches should be planted with caution, but on the other hand, in the great peach districts, with a light mellow soil, the peach root will succeed far better than the plum. Peaches always make a large number of strong, fibrous roots, and return to the top a vast amount of nutrition. The junction in certain varieties of plum on peach roots is perfect, and the tree is longlived and healthy.

The testimony of some of our most noted pomologists go to show that the practice is correct, and a careful examination plainly indicates that the theory is faultless as well.

The subject of dwarfing fruit trees is not properly understood. The pear worked on quince roots certainly dwarfs the tree to a certain extent for a few years, but is the process caused by some inherent property contained in the quince? We think not. Once allow the pear to throw out a few roots above the point of junction, and the tree becomes a standard. The abundance of sap, or nourishment gathered up by the roots and forwarded to the top, causes in most cases a larger and finer growth of fruit, thus showing that the quince is adapted to these kinds; but take an uncongenial variety, and mark the result. The fruit is often in such cases worthless. Years ago we were told that budding cherries on the Mahaleb stock would cause the trees to become dwarf. Little did these propagators know that when they annually pruned their trees, this was what dwarfed them, and not the root.

The junction in this case is always perfect, and it is a well-known scientific fact, that excessive pruning causes debility in a plant, and that when vitality is checked the tree becomes dwarfed as a matter of course. Excessive growth and productiveness, seem to be generally antagonistic. A dwarf tree, after the first vigorous growth is over, will, if healthy, produce good crops and mature a reasonable amount of new wood. Some certain varieties of pears, as for instance the Bartlett, never unite properly on the quince stock,—the cellular tissue of each never seems to make a perfect union. Very many trees that we have examined under a strong lens reveal a marked line between the cell-growth of the two, and not, as is the case with other kinds, a lengthening of both cell-growths, one up, and the other down, so that it is very difficult to determine where the exact point of insertion really is. There are causes, over which we have no control, that debar us from dwarfing some varieties, but science has not yet solved the mystery.

Catalogue of Fruits.

PLAN OF THE CATALOGUE.

THE arrangement of the names of varieties in the Catalogue is alphabetical and according to the nomenclature adopted by the Society. Synonyms are given in a few instances where it seemed necessary, and these are placed under the adopted names in italics.

The columns are arranged thus: In the first, the names of varieties, in the next seven columns the description, and in the remaining columns the States or Districts.

The State or District columns are not placed in alphabetical order, as in the octavo editions, but are grouped in *Divisions* somewhat similar in climate, and other characters affecting fruit culture. Thus: 1.—Northern Division—between 42° and 49°. 2.—Central Division—between 35° and 42°. 3.—Southern Division—between 28° and 35°.

The State or District in which a fruit is recommended for cultivation is designated by a star (*), and if the variety is of great superiority and value, two stars (**), if new or recently introduced and promising, by a dagger (†).

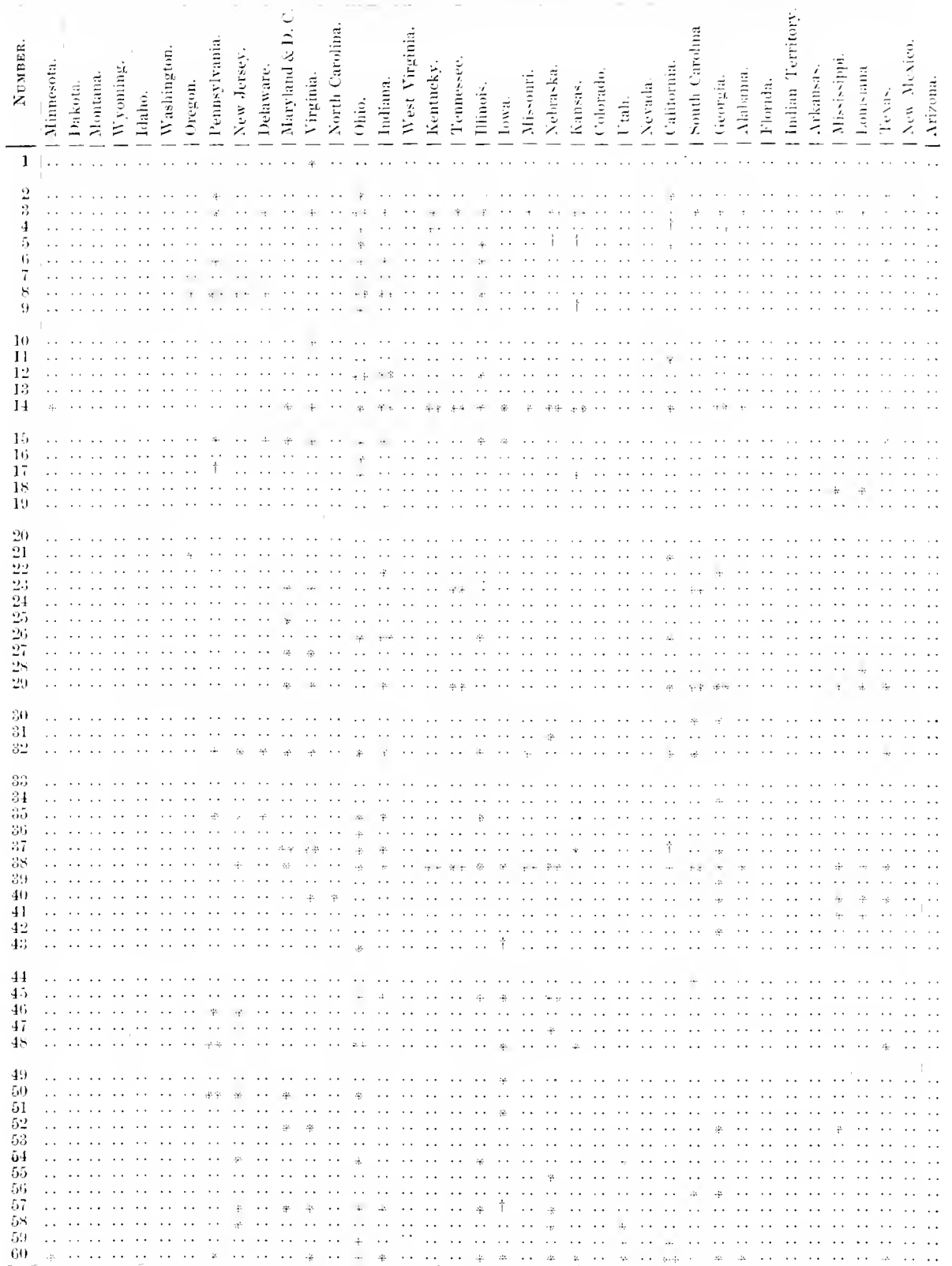
It was found that the columns were too close, in the last edition, for convenient reference, and therefore in this, the entire width of the right hand page has been given up to them, and the remarks are placed at the bottom.

I.—APPLES.

EXPLANATION OF ABBREVIATIONS.—The SIZE is understood by l. for large; m. for medium, and s. for small. The FORM—r. c. for roundish conical; ob. for oblong; r ob. for roundish oblate; fl. for flat or oblate; r. for roundish. The COLOR—y. r. for yellow and red; r s for red striped; g. y. for greenish yellow; rus for russetted; y. rus. for yellow and russet. The QUALITY—g. for good; v. g. for very good; b. for best. The USE—F. fruit valuable for all family purposes; K. M. valuable for kitchen or market purposes; F. M. family and market. The SEASON—S. for summer; E. A. for early autumn; L. A. for late autumn, and W. for winter. All these characters of course only designate leading positive features, and vary in their distinctness according to soil and climate in which they are grown. The ORIGIN is shown by Rus. for Russian; En. for English; Am. for American; Ger. for German; F. for foreign.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—Between 42°										
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Abram	..	..	..	..	..	W.	..	..	..	..	..	..	..	..	..	..	..	..	..
	Crutchfield Greening.																			
2	Alexander	l.	r. c.	r. s.	g.	K. M.	E. A.	Rus.	..	..	..	..	*	*	..	..	*	*	..	*
3	American Summer Pearmain	m.	ob.	y. r.	b.	F.	S.	Am.	..	..	..	..	*	*	..	*	*	..	*	..
4	Autumn Bough	m.	r. c.	g. y.	v. g.	F.	E. A.	Am.	..	..	..	..	..	..	*	*	*	..	..	..
5	Autumnal Swaar	m.	r.ob	g. y.	v. g.	F.	L. A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
6	Bailey Sweet	l.	r. c.	r. s.	v. g.	F. M.	L. A.	Am.	..	..	..	..	*	..	..	..	*	*	*	..
7	Baker	l.	r.ob.	y. r.	v. g.	K. M.	W.	Am.	..	..	..	..	..	..	..	*	..	..	..	..
8	Baldwin	l.	r. c.	r. g.	v. g.	F. M.	W.	Am.	..	..	..	*	**	**	**	**	**	*	*	*
9	Baltimore	m.	r. c.	r. y.	v. g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	*	..
	Cable's Gilliflower.																			
10	Baltzley	l.	r.ob.	y.	g.	F. M.	A	Am.	..	..	..	..	..	..	..	..	..	..	..	..
11	Beauty of Kent	l.	r. c.	r. s.	g.	K. M.	L. A.	En.	..	..	..	..	..	*	*	..	*	*	..	..
12	Belmont	l.	r. c.	y. r.	b.	F. M.	W.	Am.	..	..	..	..	*	..	..	*	*	..	*	..
13	Bemis Sweet	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..
14	Ben. Davis	l.	r. c.	y. r.	g.	K M	W.	Am.	..	..	..	..	..	..	..	..	*	..	*	*
	New York Pippin.																			
15	Benoni	m.	r.ob.	y. r.	v. g.	F. M.	S.	Am	..	..	..	*	*	*	*	..	*	*	*	..
16	Bentley's Sweet	m.	r.ob.	g. y.	v g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	†	..	†	..
17	Bethlehemite	l.	r.ob.	y. r.	b.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	†	..	..	..
18	Bevan's Favorite	m.	fl. c.	y. r.	g.	F.	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
19	Black Apple	m.	fl.	d. r.	g.	F.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
	Jersey Black.																			
20	Black Oxford	s.	r.ob.	r.	g.	M.	W.	Am.	..	..	*	..	..	..	..	..	..	..	..	..
21	Blue Pearmain	l.	r. c.	r.	g.	M.	W.	....	..	..	..	..	**	*	*	*	..	..	..	*
22	Bohannan	l.	r.ob.	g. y.	g.	M.	L. A.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
23	Bonum	l.	r.ob.	y. r.	v. g.	M.	L. A.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
24	Bourassa	m.	r. c.	y. r.	g.	M.	L. A.	Ger.	..	..	..	..	*	..	..	..	..	*	..	..
25	Bowling's Sweet	m.	r.	y. r.	g.	M.	L. A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
26	Broadwell	m.	r. c.	g. y.	v. g.	F. M.	L. A.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
27	Brooke's Pippin	l.	r.ob.	g. y.	v. g.	F. M.	W.	....	..	..	..	..	..	..	..	..	..	..	..	..
28	Bruce's Summer	l.	....	....	....	....	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
29	Buckingham	l.	r.ob.	y. r.	v. g.	F. M.	E. W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
	Fall Queen of Kentucky, Bachelor, Equinetely.																			
30	Buff	l.	r.ob.	y. r.	g.	F.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
31	Buffington's Early	m.	fl.	y.	g.	F.	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
32	Bullock's Pippin	s.	r. c.	y. rus	b.	F. M.	W.	Am.	..	..	..	..	..	*	..	†	..	..	*	*
	American Golden Russet.																			
33	Burlington Pippin	m.	fl. c	y. r.	v. g.	F. M.	W.	Am.	..	..	..	..	*	..	..	..	..	..	..	..
34	Camak Sweet	m.	r.ob.	y.	g.	.....	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
35	Campfield	m.	r.ob.	g. r.	g.	M. K	W.	Am.	..	..	..	..	..	*	*	*	*	..	*	..
36	Canada Reinette	l.	r. c.	g. y.	v. g.	F. M.	W.	....	..	..	..	..	*	..	..	..	*	*	..	..
37	Cannon Pearmain	m.	r. c.	r. s.	v. g.	F.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	†
38	Carolina Red June	m.	r. c.	r. s.	v. g.	F. M.	S.	Am.	..	..	..	..	..	*	..	*	*	..	*	..
39	Carolina Watson	m.	fl. c.	g. y. r.	g.	M.	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
40	Carter's Blue	l.	r.ob.	g. r.	v. g.	F. M.	E. A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
41	Cane Creek Sweet	m.	r.	y.	g.	F.	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
42	Chattahoochee	m.	fl.	y.	g.	M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
43	Chenango Strawberry	m	ob.c.	g. r.	v. g.	F. M.	E. A.	Am.	..	..	..	..	..	..	..	†	*	*	..	..
	Sherwood's Favorite.																			
44	Clark's Pearmain	m.	r.ob.	y.	v. g.	M.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
45	Cooper	l.	r.ob.	g. y.	g.	M.	L. A.	.....	..	..	..	..	..	..	..	..	..	..	*	..
46	Cooper's Market	m.	r. c.	y. r.	g.	M.	W.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
47	Cooper's Early White	m.	r.	y.	g.	M.	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
48	Cogswell	m.	r ob.	y. r.	b.	F. M.	W.	Am.	..	..	..	..	..	**	..	†	*	..	..	*
	Walbridge, Mahaska.																			
49	Cole's Quince	l.	r.ob.	g. y.	v g.	F. M.	W.	Am.	..	..	..	..	..	*	*	..	..	..	..	*
50	Cornell's Fancy	m.	ob.	y. r.	g.	.....	L A	Am	..	..	..	..	..	..	..	..	*	..	..	..
51	Cracking	l.	r.ob.	y.	g.	K.	L. A	Am.	..	..	..	..	..	..	..	..	..	..	..	..
52	Cullasaga	m.	r. c.	y s.	g.	M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
53	Curtis Sweet	l.	r. c.	y. r.	g.	K.	L. A.	Am.	..	..	..	..	*	..	..	..	..	..	..	..
54	Danvers' Winter Sweet	m.	r.ob.	g. y.	v. g.	F. M	W.	Am.	..	..	*	..	*	*	*	*	..	..	..	..
55	Detroit Red	l.	r. c.	d. r.	g.	K. M.	E. W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
56	Disharoon	m.	r. c.	g.	g.	F. M.	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
57	Dominie	m.	r.ob.	g. r.	v. g.	F. M.	W.	.....	..	..	..	..	..	..	..	..	*	..	*	*
58	Drap d'Or	l.	r.ob.	y.	v. g.	F.	S.	Ger.	..	..	..	..	..	..	*	..	..	..	..	..
59	Dutch Mignonne	m.	r ob.	r. s.	g.	M.	W.	Ger.	..	..	..	..	*	..	..	*	*	*	..	..
60	Duchess of Oldenburgh	m.	r.ob	y. r.	g.	M.	S.	Rus.	*	..	..	..	..	*	*	..	*	**	*	*

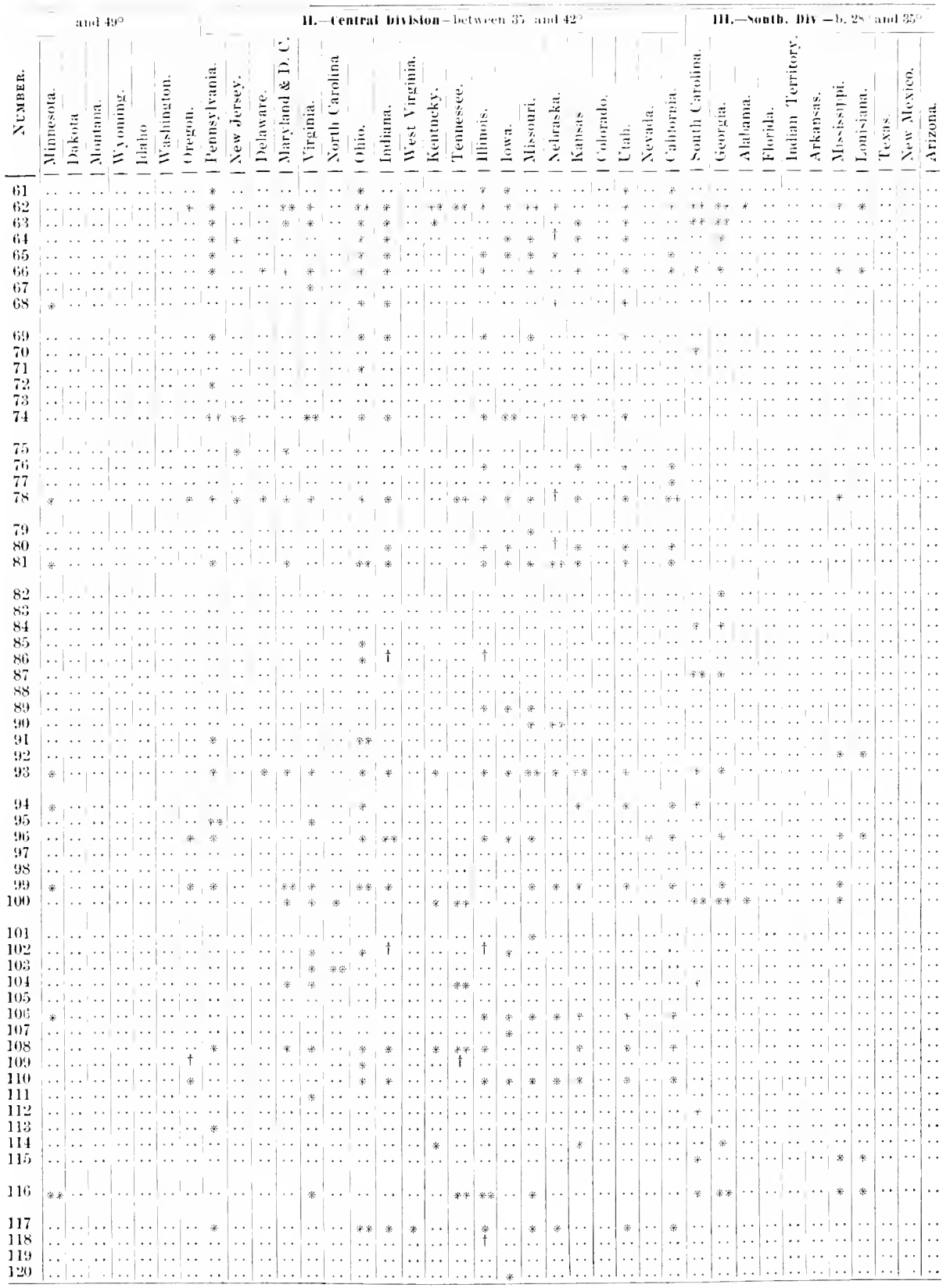
2 Moderate bearer; showy.
3 Slender grower; but healthy.
5 A fine table sort; not showy.
6 Showy and fine.
8 Unprofitable South and South-west.
9 A hardy tree; very productive.
11 A coarse, showy fruit.
12 Fine for table; too tender for shipping.
14 Valuable shipping sort.
16 Fine Winter variety.
17 Resembles Newtown Spitzenburg.
20 Mostly grown in Maine.
21 Liable to drop, at the West.
25 Valued South.



26 Fine for table.
27 This may be identical with Newtown Pippin. [west.
29 Has many synonyms; popular in the South and South-
32 A valuable variety wherever known.
35 Valued for stock and cider.
37 A hardy tree.
38 Esteemed South and West.
40 Valued at the South.
48 A hardy tree; valued wherever grown.
54 Valued mainly for Stock feeding.
57 Productive and hardy.
60 One of the most hardy varieties.

Number.	NAMES.	DESCRIPTION. Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	I.—Northern Division—between 42° Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan	Wisconsin.
61	Dyer or Pomme Royal	m.	r.	g. y.	v. g.	F.	E. A.	F.	..	..	..	..	**	*	..	..	*	*	*	..
62	Early Harvest	m.	r ob.	g y.	v. g.	F. M	S.	Am	*	..	..	..	*	*	*	**	**	*	*	*
63	Early Red Margaret	m.	r.	r. s.	v. g.	F. M	S.	Ger	..	..	..	..	*	..	..	..	..	..	..	†
64	Early Joe	s.	fl.	y. r.	b.	F.	S.	Am.	..	..	..	..	*	*	..	..	*	*	..	*
65	Early Pennock	l.	r. c	y. r	g.	M.	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
66	Early Strawberry	s.	r.	r. s.	v. g.	F.	S.	Am	..	..	..	..	*	*	*	*	*	*	*	*
67	Early Ripe	..	..	..	..	..	S.	..	..	..	..	..	..	..	..	..	..	..	..	..
68	English Russet *Poughkeepsie Russet.*	m.	r. c	y. rus	v. g.	F. M.	W.	En.	..	..	..	..	*	..	*	**	*	*	*	*
69	Esopus Spitzenberg	l.	ob	y. r.	b.	F. M.	W.	Am	..	..	..	..	*	..	..	*	**	*	..	..
70	Eutaw	..	..	..	..	..	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
71	Evening Party	m.	fl.	r.	v. g	F M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
72	Ewalt	l.	r.	y. r	g.	M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
73	Excel	l.	ob c.	y. r.	v. g.	F M.	W.	Am	..	..	..	..	..	..	..	*	..	..	..	..
74	Fallawater *Fornwalder, Tulpehocken.*	l.	r. c.	g. y.	g.	M.	W.	Am	..	..	..	..	..	..	..	..	..	..	**	..
75	Fall Harvey	l.	r ob	g y.	g.	M.	L. A.	Am.	..	..	..	..	..	*	..	..	..	..	..	..
76	Fall Jennetting	l.	fl.	g. y.	g.	M.	E. A	Am.	..	..	..	..	..	..	..	..	*	..	..	..
77	Fall Orange	l.	r.	y. r.	g.	K. M	L. A	Am.	..	..	..	..	*	..	..	..	*	..	..	*
78	Fall Pippin *Holland Pippin, erroneously.*	l.	r.ob.	g. y.	v. g.	F M	L. A	Am	..	..	..	..	*	*	**	*	**	*	..	..
79	Fall Queen, or Haas	m	ob.c.	y. r.	g.	F. M	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
80	Fall Wine	m.	r.ob.	r. y.	b.	F.	L. A.	Am.	..	..	..	..	..	..	..	..	..	..	*	*
81	Fameuse *Pomme de Neige, Snow Apple.*	m.	r.ob	r. s.	v. g.	F. M.	W.	F.	..	..	..	*	**	*	..	*	**	*	*	*
82	Family	m.	fl. c.	y. r.	v. g	M.	S.	.....	..	..	..	..	..	..	..	..	..	..	..	..
83	Fenner Sweet	..	..	..	..	..	.....	Am.	..	..	..	..	..	..	*	..	..	..	..	..
84	Ferdinand	l.	fl.	o y.	g.	.....	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
85	Fink	m	fl	y. r.	g.	M.	L. A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
86	Fourth of July	m	r.ob.	r. s.	g.	M.	S.	Ger.	..	..	..	..	..	..	..	..	†	..	†	†
87	Foust's Winter	..	..	..	..	..	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
88	Foundling	m	r.ob.	y. r	g.	F.	A.	Am	..	..	..	*	..	*	..	..	..	..	..	..
89	Fulton	m	fl	g y.	g.	M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
90	Gabriel	m	r ob.	r y.	g.	M.	L. A	.....	..	..	..	..	..	..	..	..	..	..	..	..
91	Garden Royal	m	r ob	y. r	b.	F.	S.	Am.	..	..	*	..	..	*	..	..	*	..	*	†
92	Garretson's Early	m	r c.	y.	g	K.	A.	Am.	..	..	..	..	*	..	..	..	..	..	..	..
93	Gilpin *Carthouse, Little Romanite.*	s	r. c.	y. r.	g.	M.	W.	Am.	..	..	..	*	..	..	..	..	..	..	..	*
94	Golden Russet, of Western New York	m.	r.ob.	y. rus	v g	F. M	W.	En.	..	..	..	..	**	..	..	..	**	*	*	*
95	Golden Russet, of Massachusetts	m	r ob	y. rus	v. g.	F. M	W.	Am.	..	..	..	..	..	*	..	*	*	..	*	..
96	Golden Sweet	l.	r.	g. y.	v. g.	F. M	S.	Am.	..	..	..	..	*	*	*	*	**	*	*	..
97	Goodale	..	..	..	..	..	.....	Am	..	..	..	*	..	..	..	..	..	..	..	..
98	Granite Beauty	l.	r ob	y. r.	g.	F. M	W.	Am.	..	..	..	..	*	..	..	..	..	..	..	..
99	Gravenstein	l.	r ob.	y. r.	v. g.	F. M	L. A.	Ger.	..	..	..	*	*	*	*	*	**	*	*	*
100	Green Cheese *Carolina Greening.*	m.	fl.	g. y.	v. g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
101	Green Sweet	m	r.ob	g. y.	g.	K M	W.	Am.	..	..	..	..	..	*	*	†	*	..	..	..
102	Grimes' Golden Pippin	m.	r ob.	g. y.	v. g	F.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
103	Gully	m.	fl.	g. y.	v. g.	F.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
104	Hall	s.	fl.	y. r.	v. g.	F.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
105	Haskell Sweet	m	fl.	g. y.	v. g.	F.	E. A	Am.	..	..	..	..	..	*	..	..	*	..	..	..
106	Hawthornden	m	r.ob.	g. y.	g.	K. M	E. A.	F.	..	..	..	*	..	..	*	..	*	*	*	*
107	Hartford Sweet	l.	r ob.	r. s.	g.	M.	W.	Am.	..	..	..	..	..	..	..	*	*	..	..	..
108	Hewes' Virginia Crab	s.	r.	y. r.	g.	Cider	L. A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
109	Highby Sweet	m	r. c.	y. r.	v. g.	F.	L. A.	Am.	..	..	..	..	..	†	..	..	†	..	..	..
110	Hightop Sweet	s.	r.	g. y.	v. g.	F. M.	S.	Am.	..	..	..	..	*	*	..	*	..	..	..	*
111	Hix's White	..	..	..	..	..	W.	.....	..	..	..	..	..	..	..	..	..	..	..	..
112	Hocket's Sweet	m	r.ob.	y. r.	g.	K.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
113	Holland Pippin	l.	r	g. y.	g.	K M	L. A.	F.	..	..	..	..	*	..	..	..	*	..	..	..
114	Holly	m.	r ob.	y r.	g.	K.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
115	Hoover *Black Coal.*	m.	r	y. r.	v. g.	F. M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
116	Horse *Haas.*	l.	r.	y. r.	g.	K. M	S.	Am	..	..	..	..	..	..	..	..	..	..	..	..
117	Hubardston Nonsuch	l.	r. c.	y. r.	v. g.	F. M.	W.	Am.	..	..	..	*	**	**	**	**	*	*	**	*
118	Hunt's Russet	m.	r.ob.	y. rus	v. g.	F.	W.	Am.	..	..	..	..	..	*	*	*	*	..	..	..
119	Hurlbut	m.	r ob	y. r.	g.	F. M	L. A	Am.	..	..	..	..	..	*	*	*	*	..	..	..
120	Jefferson County	m.	r ob	y. r.	g	F. M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..

61 Valued for dessert.
62 Succeeds best on strong soils.
64 A delicious table sort; tree of small growth.
65 Popular market sort.
66 Continues a long time ripening; often called Red Juneating.
81 A hardy tree one; of the best for the North and West.
86 Resembles Tetofsky.



94 Of a delicious pear flavor.
96 Valued for stock feeding.
99 Ripens early and keeps late.

100 One of the best South.
103 One of the most profitable of market sorts.
108 Valued only for cider.

109 A delicious dessert apple.
118 A hardy tree and fine fruit.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°									
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
121	Jefferis	m	r.ob.	y. r.	v. g.	F. M.	E. A	Am.	..	..	..	..	..	..	..	..	*	..	..	..
122	Jersey Sweet	m.	r.	y. r.	v. g.	F. M.	E A	Am.	..	..	..	..	*	..	*	..	*	..	*	*
123	Jewett's Fine Red	m.	r.ob.	r.	g.	F. M.	W.	Am	..	..	..	*	*	..	..	..	..	..	..	..
124	Jonathan	m.	r. c.	y. r.	g.	F. M.	W.	Am.	..	..	..	..	*	*	..	*	..	..	**	*
125	Julian	m	fl. c.	w. r.	g.	K.	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
126	Junaluskee	m	r.ob.	g.	v. g.	F. M.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
127	Kentucky	l.	r. c.	y. r	g.	M.	L. A.	....	..	..	..	..	..	..	..	..	..	..	..	..
128	Kentucky Red Streak *Bradford's Best.*	m.	r. c.	g y.d.r	g.	.....	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
129	Keswick Codlin	r.	r. c.	g. y.	g.	K M	E. A.	En.	..	..	..	..	+	..	**	..	*	*	*	*
130	Kinney's Winter	.....	.....	.....	.....	.....	W.	.....	..	..	..	..	..	..	..	..	..	..	..	..
131	King of Tompkins County	l.	r.	y. r	v. g	F. M.	W.	Am.	..	..	..	*	†	*	*	*	**	*	..	*
132	Kirkbridge White	m	ob.	g. y.	g.	K. M	E. A	.....	..	..	..	..	..	..	..	..	..	..	..	..
133	Klaproth	m.	fl.	y. r.	g.	K. M.	E. A	Am.	..	..	..	..	..	..	..	..	..	..	..	..
134	Lady Apple	s	fl.	y. r.	v. g.	F. M.	W.	F.	..	..	..	..	..	*	..	*	*	..	*	..
135	Lady's Sweet	l.	r.	y. r.	v. g.	F M.	W.	Am	..	..	..	..	*	*	..	*	*	..	..	..
136	Large Yellow Bough *Summer Sweet Bough.*	l.	ob.	g. y.	v. g.	F. M.	S.	Am.	*	..	*	*	*	**	*	**	**	*	*	..
137	Late Strawberry *Autumn Strawberry.*	m.	r.	y. r.	v. g.	F. M.	L. A.	Am.	..	..	..	..	*	..	..	..	*	*	*	*
138	Lawver	l.	r.ob.	y. r.	v. g.	F. M.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
139	Limber Twig *James River.*	m.	r.ob.	y. r.	g.	M.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
140	Loudon Pippin	l.	fl.	y. r.	g.	M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
141	Lowell *Orange, Tallow Pippin, Queen Anne, Michigan Golden Pippin.*	l.	r. c.	g. y.	v. g.	F. M.	E. A.	Am.	..	..	..	..	**	..	..	*	*	..	*	..
142	Lyscom	l.	r.	g. y.	g.	F. M	E A	Am.	..	..	..	..	..	*	*	..	..	..	..	..
143	Maiden's Blush	m.	r.	g. y.	g.	K. M.	E. A	Am	..	..	..	*	*	*	*	*	..	*	*	*
144	Mangum	m.	r.ob	y. r.	v. g.	F. M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
145	Manomet	m.	r.ob.	y. r.	v. g	F. M	E. A.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
146	Mason's Stranger	.....	.....	.....	.....	.....	.....	.....	..	..	..	..	..	..	..	..	..	..	..	..
147	Mattamusket	s.	fl.	y. r.	g.	F. M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
148	Maverick Sweet	m.	r.ob.	y. r.	v. g.	M.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
149	May Large Yellow	.....	.....	.....	.....	.....	.....	Am.	..	..	..	..	..	..	..	..	..	..	..	..
150	McAfee's Nonesuch *Large Striped Pearmain.*	l.	r.ob.	y. r.	v g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	*	..
151	McLellan	m.	r.ob.	y. r.	v. g.	F. M	W.	Am	..	..	..	..	..	..	*	*	..	..	..	..
152	Melon	m.	r.ob.	y. r.	b.	F. M	W.	Am.	..	..	..	..	..	*	..	*	*	*	..	*
153	Michael Henry Pippin	m.	r.	g y.	g.	K. M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
154	Milam	m.	r.	r. s.	g.	K M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
155	Milden, or Milding	l.	fl.	y. r.	v. g	F. M	A W.	Am.	..	..	..	*	*	..	..	..	..	..	..	..
156	Minister	l.	ob.	r. s.	g	K. M	L. A	Am	..	..	..	*	..	*	..	*	*	..	*	..
157	Monmouth Pippin *Red Cheek Pippin.*	l.	fl.	y. r.	v. g.	F. M.	W.	Am.	..	..	..	..	..	..	..	*	*	..	..	..
158	Moore's Sweet	m.	r.ob.	r.	g.	K.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
159	Mother	m.	r. c.	y. r.	b.	F. M.	W.	Am.	..	..	..	*	*	..	..	..	*	*	..	..
160	Munson Sweet	m.	fl	y.	g.	K M	L. A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
161	Newtown Pippin *Albemarle Pippin.*	l.	r.ob.	g y.	v. g	F. M.	W.	.....	..	..	..	..	..	..	..	..	..	..	*	..
162	Newtown Spitzenberg *Vanderere, of New York.*	m.	r.ob.	y. r.	b.	F. M.	W.	Am.	..	..	..	..	..	..	..	*	*	..	**	*
163	Nickajack	l.	r.ob.	r. s.	g.	F. M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
164	Northern Spy	l.	r. c.	y. r.	b.	F. M	W.	Am.	..	..	..	..	*	*	..	*	**	..	*	*
165	Northern Sweet	m.	r.ob.	g. y.	v. g.	F.	E. A.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
166	Oconee Greening	m.	ob.	y.	g.	.....	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
167	Ohio Nonpareil	l.	r.ob.	y. r.	v. g.	F. M	L A	Am	..	..	..	..	..	..	..	..	*	..	†	†
168	Orange Pippin	m.	ob.	y.	v. g.	F. M.	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
169	Ortley *White Bellflower, Woolman's Long.*	m.	ob.	g. y.	v. g.	F. M	W.	Am.	..	..	..	..	..	..	..	..	..	..	*	..
170	Otoe Red Streak	.....	.....	.....	.....	.....	.....	Am	..	..	..	..	..	..	..	..	..	..	..	..
171	Peach Pond Sweet	m.	fl.	r. s.	v. g.	F.	A.	Am.	..	..	..	..	*	..	..	..	*	..	*	..
172	Peaked Sweeting	.....	.....	.....	.....	.....	.....	Am	..	..	..	..	..	..	..	*	..	..	..	..
173	Peck's Pleasant	m.	r.	g. y.	v. g	F M.	W.	Am.	..	..	..	..	**	*	**	*	**	*	*	..
174	Perry Russet	m	r. c.	rus.	g.	F M.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	*
175	Pickard's Reserve	m.	r.ob.	r. y.	g.	F.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
176	Pilot	l.	r.ob.	g. y. r.	v. g.	F M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
177	Pittsburgh Pippin	l.	fl.	g. y.	v. g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	†	..	..	..

122 Very valuable for market or stock.
139 Hardy and productive South-west.

143 A profitable market sort.
145 A valued sweet apple.

159 Esteemed where known.

	and 49°							II.—Central Division—between 35° and 42°																		III.—South. Div.—b. 28° & 15°										
NUMBER.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana	Texas.	New Mexico.	Arizona.
121	..	..	..	..	..	..	..	*	..	..	..	..	..	**	*	..	..	..	†	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
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124	..	..	..	..	..	..	..	..	..	..	*	..	..	*	**	*	..	..	**	*	*	**	*	..	*	..	*	..	..	..	..	..	..	..	..	..	..	..
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126	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..	*	**	..	..	..	..	..	..	..	..
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176	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
177	..	..	..	..	..	..	..	†	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

163 This apple is known South and West by over forty different names.

165 Valued for dessert; not productive.
167 Esteemed where known.

169 An old variety; extensively planted at the West, twenty or more years since.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°									
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick	Maine	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan	Wisconsin.
178	Plumb's Cider	m.	r. e.	g y.r	g.	.....	A.	Am	..	..	..	..	..	..	..	..	..	..	..	*
179	Pomme Grise	s.	r ob.	y. rus	b.	F.	W.	F.	..	..	..	..	*	..	..	..	*	..	*	..
180	Porter	l.	ob.	g. y.	b.	F. M	W.	Am	..	..	*	*	**	*	*	*	*	*	*	..
181	Primate	m	r. c.	g y.	b.	F.	E. A.	Am.	..	..	*	*	..	**	*	†	*	*	*	..
182	Progress	m.	r.ob.	y.	g.	F. M	W.	Am.	..	..	..	..	..	..	..	*	..	..	..	..
183	Pryor's Red	l	r ob	y. r.	v. g.	F. M.	W.	.....	..	..	..	..	..	..	..	..	..	..	..	..
184	Ramsdell's Sweet	m.	ob	y. r	g.	K. M	L. A.	.....	..	..	*	*	..	..	*	*	*	..	..	..
185	Rambo	m.	fl.	y. r.	v. g.	F. M.	L. A	Am	..	..	..	*	..	..	..	*	*	*	*	*
186	Rawle's Genet	l.	r. e	y. r	v. g.	F M	W.	.....	..	..	..	..	..	..	..	..	..	..	*	*
187	Red Astrachan	l.	r.	y. r.	g.	K. M	S.	F.	*	..	*	*	**	**	*	*	**	**	**	*
188	Red Canada *Old Nonesuch, Richfield Nonesuch, Steel's Red Winter* of some.	m.	r.ob	y. r.	b.	F. M.	W.	.....	..	..	..	..	..	..	..	..	..	..	**	*
189	Red Cathead	l.	r. e	y. r.	g.	F M	L. A	Am	..	..	..	..	..	..	..	..	..	..	..	..
190	Red Winter Pearmain *Buncombe.*	m.	r.ob.	y. r.	g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
191	Red Stripe	m.	ob e.	y. r.	g.	K M	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
192	Rhode Island Greening	l.	r.ob	g. y.	v. g.	F. M.	W.	Am.	..	*	..	..	**	**	**	**	**	*	**	..
193	Rhodes' Orange	m.	r.ob.	y. r.	g.	F.	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
194	Ribston Pippin	m.	r.	y. r.	v. g	F M	W.	En	**	..	*	..	*	..	..	..	*	**	..	..
195	Ridge Pippin	l.	r. e.	y. rus	g.	M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
196	Robertson's White	m.	r.ob.	g y.	g.	F. M	L. A	Am.	..	..	..	..	..	..	..	..	..	..	..	..
197	Romanite, of the South	s.	r. e.	y. r.	v. g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	*
198	Roman Stem	m	r.	y. rus	v. g.	F. M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
199	Rome Beauty	l.	r.	y. r.	g.	M	L. A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
200	Roxbury Russet	m	r.ob.	y. rus	v. g.	F M	W.	Am.	..	..	..	..	*	**	**	**	**	*	**	..
201	Saint Lawrence	l.	fl.	y. r.	v. g	M.	A.	.....	..	..	..	..	**	*	*	..	**	*	**	*
202	Sauta	...	.....	.....	.....	.....	W.	.....	..	..	..	..	..	..	..	..	..	..	..	..
203	Saxton *Fall Stripe.*	...	.....	.....	.....	.....	.....	.....	..	..	..	..	..	..	..	..	..	..	..	*
204	Sheppard's Sweet	m.	r. e.	r. s.	g.	F.	L. A	Am.	..	..	..	..	..	..	*	..	..	..	..	..
205	Shockley	s	r. e.	y r.	g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
206	Smith's Cider	l.	r.ob.	y. r.	g.	F. M.	W.	Am.	..	..	..	..	..	*	..	*	*	..	..	..
207	Smokehouse	l.	r.ob.	y. r.	g.	K. M	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
208	Sops of Wine *Homing.*	m.	r.	y. r.	g.	K. M.	E. A.	En.	..	..	..	..	..	*	*	..	*	..	..	..
209	Soulard	m.	r.ob.	y. r.	g.	M.	L. A.	.....	..	..	..	..	..	..	..	..	..	..	..	..
210	Stansill	...	.....	.....	.....	.....	W.	.....	..	..	..	..	..	..	..	..	..	..	..	..
211	Stark	l.	r. e.	y. r.	g.	F.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
212	Stevenson's Winter	m.	r ob.	y.	g.	F.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
213	Summer Hagloe	l.	r.ob.	r. s.	v. g	K M.	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
214	Summer Queen	l.	r. e.	y. r.	g.	K. M.	S.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
215	Summer Pound Royal	l.	r. e.	y. rus	g.	M.	E. A	.....	..	..	..	..	..	..	..	..	*	..	*	..
216	Summer Pippin *Champlain.*	m.	ob.e.	y. r.	g.	K. M.	L. S.	Am.	..	..	..	..	*	..	..	..	..	..	..	..
217	Summer Rambo	m.	fl.	y. r.	g.	M.	E. A.	Fr.	..	..	..	..	..	..	..	..	..	..	..	..
218	Summer Rose	s.	r.	y. r.	b.	F.	S.	Am.	..	..	..	..	*	*	..	*	*	*	*	..
219	Summer Sweet Paradise	l.	r.	g. y	v. g.	F.	E. A.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
220	Susan's Spice	m.	fl.	y. r.	g.	F.	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
221	Swaar	l.	r.ob.	g. y.	b.	F. M	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
222	Sweet Pear	m	r. e.	y.	v. g.	F	A.	Am.	..	..	..	..	..	..	*	*	..	..	*	..
223	Sweet Winesap	m.	fl.	r. s.	v. g.	M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	*
224	Taunton	l.	r. e	y. r.	g.	F. M.	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	*
225	Tetofsky	m	fl. e.	y. r.	g.	K.	S.	Rus.	..	..	..	..	..	..	..	..	..	*	..	..
226	Tewksbury Winter Blush	s.	fl.	y. r.	v. g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
227	Tinmouth	m	fl.	y. r.	v. g.	F.	W.	Am.	..	..	..	..	*	..	..	..	*	..	..	..
228	Talman's Sweet	m.	r	g. y.	v. g.	K. M.	W.	Am.	..	..	..	*	**	*	*	*	**	*	*	**
229	Townsend *Hocking.*	m.	r ob.	r. s.	g.	M.	S.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
230	Trenton Early	m.	r.	y.	g.	F.	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
231	Twenty Ounce Apple *Cayuga Red Streak.*	l.	r.	r. s.	v. g.	F. M	L. A.	Am	..	..	..	..	..	*	*	*	**	*	*	..
232	Utter	m.	r ob.	y. r	g.	F. K.	A.	Am.	..	..	..	..	..	..	..	..	..	..	..	*
233	Vandevere	m.	fl.	y. r.	g.	M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
234	Victuals and Drink	l.	ob.	y. rus.	g.	F.	W.	.....	..	..	..	..	..	..	..	..	..	..	..	..
235	Virginia Greening	l.	fl.	g. y.	g.	M.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
236	Wagener	m	r.ob.	y. r.	b.	F.	W.	Am.	*	..	..	..	*	*	..	..	*	*	*	..
237	Walbridge	l.	r.ob	y. r.	v. g.	F.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	*

179 A tree of small growth; succeeds well at the North.

190 Extensively grown South and West.

195 A long keeper.

and 49° II.—Central Division—between 35° and 42° III.—South. Div.—b. 28° & 35°

Number.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
178	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
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197 Entirely distinct from Gilpin or Shockley. 228 Valued for stock feeding.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°										
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
238	Washington	l.	r. c.	y. r.	v. g.	F. M.	E. A.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
	Washington Strawberry.																			
239	Washington Royal	m.	r.ob.	g. y.	g.	M.	W.	Am.	..	..	..	..	..	..	..	..	†	..	..	..
240	Waugh's Crab	s.	r. c.	r. s.	g.	Cider	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
241	Wealthy	m.	r ob.	r. s.	v. g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	†
242	Webb's Winter	..	..	..	..	..	W.	..	..	..	..	..	..	..	..	..	..	..	..	..
243	Wellford's Yellow	s.	r.ob.	g. y.	g.	M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
244	Westfield Seek-no further	l.	r. c.	y. r.	b.	F. M.	W.	Am.	..	..	..	..	..	*	..	*	*	..	*	*
245	White Doctor	l.	r ob.	g. y.	g.	K. M.	E. A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
246	White Juneating	s.	r.	g. y.	g.	F. M	S.	F.	..	..	..	..	..	..	..	*	..	..	*	..
247	White Pippin	l.	r.ob.	g. y.	v. g	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
248	White Winter Pearmain	m.	r. c.	y. r.	v. g.	F. M.	W.	Am	..	..	..	..	..	..	..	..	..	..	..	..
249	White Rambo	m.	r.ob.	g. y.	g.	M	L. A.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
250	Williams' Favorite	m.	r. c.	y.	g.	M.	S.	Am.	..	..	..	*	**	**	**	*	*	..	..	..
251	Willis Sweet	l	r.	y. r.	v. g.	K. M.	S.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
252	Willow Twig	m.	r. c.	y. r.	g.	K M.	W.	Am.	..	..	..	..	..	..	*	*	..	..	..	..
253	Wine	l.	r.	y. r.	v. g.	F. M.	W.	Am.	..	..	..	..	..	..	..	*	..	..	*	*
	Hay's Wine, Pennsylvania Red Streak.																			
254	Winesap	m.	r.	y. r.	v. g.	F. M.	W.	Am.	..	..	..	..	..	*	..	*	*	..	..	*
255	Winter Sweet Paradise	l.	r.ob.	g. y.	v. g.	F.	W.	Am.	..	..	..	..	..	..	..	..	*	..	..	*
256	Yates	s.	fl.	y. r.	g.	M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
257	Yellow Bellefleur	l.	ob.	g. y.	v. g.	F. M.	W.	Am.	..	..	..	..	*	*	..	†	*	..	*	..
258	Yellow June	m.	r ob.	y.	g.	F	S.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
259	York Imperial	m.	fl.	y. r.	g.	F. M.	W.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
260	Yopp's Favorite	..	..	..	..	..	S.	..	..	..	..	..	..	..	..	..	..	..	..	..

252 Valuable for late keeping.

II.—APPLES—CRABS.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°										
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Geneva	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	*	..	..	..
2	Glover's Early	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	..	..	..	*
3	Haas	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	..	..	..	*
4	Hyslop	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	..	..	..	*
5	Lady Elgin	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	*	..	..	..
6	Marengo	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	..	..	..	*
7	Montreal Beauty	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	*	..	..	*
8	Spitzenberg	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	..	..	..	*
9	Sylvan Sweet	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	..	..	..	*
10	Transcendent	..	..	..	..	..	..	Am.	..	..	..	..	..	..	..	..	*	..	..	*

II.—APPLES—CRABS.

III.—APRICOTS.

The columns explain as follows: Size—l., large; m., medium; s., small. Form—r., roundish; r. f., roundish flattened; r. o., roundish oval; ob. c., oblong compressed. Color—y. o., yellow, shaded to deep orange in sun; o. r, orange, with a red cheek; o., orange. Quality—g., good; v. g., very good; b., best. Use—All Apricots being valued for the dessert, the letter F will signify that it is extra for the dessert, and F. M. that it is valued for dessert, and at same time profitable for market. Season—E., early; M., medium; L., late in season of ripening. Origin—F., foreign; Am., American.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°									
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Breda	m.	r.	o.	v. g.	F. M.	E.	F.	..	..	..	..	..	..	..	..	*	..	..	..
2	Early Golden	s.	r. o.	o.	v. g.	F. M	E.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
3	Hemskirke	l.	r. f.	o. r.	b.	F. M.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
4	Large Early	m.	ob. c.	o. r.	b.	F.	E.	F.	..	..	..	..	..	..	..	..	*	..	..	..
5	Large Red	l.	r. o.	o. r.	b.	F.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
6	Moorpark	l.	r.	y. o.	b.	F. M.	L.	F.	..	..	..	..	..	..	..	..	*	..	..	..
7	Peach	l.	r. f.	y. o	b.	F. M.	L.	F.	..	..	..	..	..	..	..	..	*	..	..	..
8	Red Masculine	s.	r.	y. o.	v. g.	F. M.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
9	St. Ambroise	l.	r. f.	y. o.	b.	F.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
0	Turkey	m.	r.	y. o.	v. g.	F. M.	L	F.	..	..	..	..	..	..	..	..	*	..	..	..

IV.—BLACKBERRIES.

The columns explain as follows: Size—l., large; m., medium; s., small. Form—ob. c., oblong conic; r. c., roundish conical or oval; ob. ov., oblong oval. Color—b, black. Quality—g., good; v. g, very good; b., best. Use—F. M., family and market; M., market. Season—M., medium; E., early; L, late. Origin—Am., American; F., foreign.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°									
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Dorchester	m.	ob.c	b.	b.	F.	M.	Am.	..	..	*	..	*	*	*	*	*	..	*	..
2	Kittatinny	l.	r. c.	b.	b.	F. M	M.	Am.	..	..	*	..	*	**	*	*	**	*	*	..
3	New Rochelle or Lawton	l.	ov.	b.	g.	M.	L.	Am.	..	..	*	..	*	*	*	*	*	..	*	..
4	Wilson's Early	l.	ob ov.	b.	v. g.	M.	E.	Am.	..	..	*	..	..	*	*	..	*	..	**	..

1 Of fine flavor.

4 Mainly valued for market.

III.—APRICOTS.

The columns explain as follows: Size—l., large; m., medium; s., small. Form—r., roundish; r. f, roundish flattened; r. o., roundish oval; ob. c., oblong compressed. Color—y. o, yellow, shaded to deep orange in sun; o. r., orange, with a red cheek; o., orange. Quality—g., good; v. g., very good; b., best. Use—All Apricots being valued for the dessert, the letter F will signify that it is extra for the dessert, and F. M. that it is valued for dessert, and at same time profitable for market. Season—E., early; M., medium; L., late in season of ripening. Origin—F., foreign; Am., American.

	and 49°							II.—Central Division—between 35° and 42°														III.—South. Div.—b. 28° & 35°									
Number.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
1	..	..	..	..	..	..	..	*	*	..	..	..	..	*	*	..	..	..	*	..	..	*	*	..	*	..	*	..	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	*	*	..	..	..	..	*	..	..	..	..	*	..	*	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	..	..	..	..	..	..	..	*	..	..	*	..	..	*	..	..	..	..	*	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	*	..	..	*	..	..	**	..	..	..	**	*	..	*	*	*	..	*	..	*	..	..	..	..	..	..	..	..	..	..	..
5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	*	..	*	*	..	..	..	*	..	..	..	*	..	..	*	*	..	*	..	**	..	..	..	..	..	..	..	..	..	..	..
7	..	..	..	..	..	..	..	..	..	..	*	..	..	..	*	..	..	*	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..
9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

IV.—BLACKBERRIES.

The columns explain as follows: Size—l., large; m., medium; s., small. Form—ob. c., oblong conic; r. c., roundish conical or oval; ob. ov., oblong oval. Color—b., black. Quality—g., good; v. g., very good; b., best. Use—F. M., family and market; M., market. Season—M., medium; E., early; L., late. Origin—Am., American; F., foreign.

	and 49°							II.—Central Division—between 35° and 42°														III.—South. Div.—b. 28° and 35°									
Number.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
1	..	..	..	..	..	..	..	*	*	*	*	..	..	*	..	..	..	*	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	**	**	**	*	*	..	**	*	..	..	*	..	..	..	..	..	..	*	..	**	..	..	..	..	..	..	..	..	..	..	..
3	..	..	..	..	..	..	*	*	*	..	*	*	..	**	..	..	..	*	..	..	..	*	*	..	*	..	*	..	*	..	..	..	..	*	*	..	..	..
4	..	..	..	..	..	..	*	*	*	**	*	*	..	*	*	..	..	*	*	*	*	*	*	..	*	..	**	..	*	..	..	..	..	*	*	..	..	..

V.—CHERRIES.

The columns explain as follows: Size—l., large; m., medium; s., small. Form—ob. h., obtuse heart shape; r. ob. h., roundish obtuse heart shape; r. h., roundish heart shape; r., roundish or round. Color—l. r., lively bright red; d. r., dark red, almost black; a. m., amber mottled with red; y. r., yellow ground shaded and marbled with red. Class—H., Hearts, or tender fleshed sweet cherries; B., Bigarreau, or firm fleshed cherries; D., Dukes, having a character in tree and fruit midway between the Hearts and Morellos; M., Morellos, having acid fruit, and the tree of small, slender growth. Use—F., family, for dessert; F. M., family or market; K. M., for cooking or market; M., market. Season—E., early; M., medium; L., late. Origin—F., Foreign; Am., American.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°											
		Size.	Form.	Color.	Class.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Arch Duke	l.	ob.h.	d. r.	D.	K. M.	L.	F	..	..	..	..	*	*	*	*	*	*	*	..
2	Belle Magnifique	l.	r h.	l. r.	D.	K. M.	L.	F.	..	..	*	..	*	..	..	..	*	..	..	..
3	Belle de Choisy	m.	r.	a. m.	D.	F.	M.	F.	..	..	*	..	*	..	..	..	*	..	*	..
4	Belle d'Orleans	m.	r.h.	y. r.	H.	F. M.	E.	F.	..	..	..	..	..	*	..	*	*	..	..	..
5	Bigarreau	l.	ob.h.	y. r.	B.	F. M.	M.	F.	..	..	..	..	*	*	..	*	*	*	*	..
	Graffion, Yellow Spanish.																			
6	Bigarreau of Mezel	l.	ob.h.	d. r.	B.	F. M.	M.	F.	..	..	..	..	..	*	..	..	*	..	..	..
	Monstreuse de Mezel, Bigarreau Gaubalis.																			
7	Black Eagle	l.	ob.h.	d. r.	B.	F. M.	M.	F.	..	..	..	..	*	**	*	*	*	*	..	..
8	Black Heart	l	r.h.	d. r.	H.	F. M.	M.	F.	..	..	..	..	*	*	*	..	..	..	..	..
9	Black Republican	l.	r.h.	b.	G.	F. M.	.....	Am.	..	..	..	..	..	..	..	..	..	..	..	..
10	Black Tartarian	l.	r.h.	d. r.	H.	F. M.	M.	F.	..	..	..	..	*	*	*	*	*	*	..	..
11	Buttner's Yellow	m.	r.	y.	G.	F. M.	L.	F.	..	..	..	..	*	..	..	..	..	..	..	..
12	Carnation	m.	r.	a. m.	D.	K. M.	L.	F.	..	..	*	..	..	..	..	..	..	..	*	..
13	Coe's Transparent	m.	r.	a. m.	H.	F.	M.	Am.	..	..	..	..	..	*	*	*	**	*	..	..
14	Donna Maria	m.	r.	d. r.	M.	K. M.	L.	F.	..	..	*	..	..	**	*	*	*	..	..	..
15	Downer's Late	m.	r.h.	y. r.	H.	F. M.	L.	Am.	..	..	..	..	*	**	*	*	*	..	..	..
16	Early Purple Guigne	m.	r.h.	d. r.	H.	F. M.	E.	F.	..	..	..	..	*	*	*	..	*	..	..	..
17	Early Richmond	s.	r.	l. r.	M.	K. M.	E.	F.	..	..	*	..	**	*	*	*	*	**	**	*
18	Elton	l.	r.h.	y. r.	B.	F. M.	M.	F.	..	..	..	..	*	*	*	*	*	*	..	..
19	Governor Wood	l.	r.h.	y. r.	H.	F. M.	M.	Am.	..	..	..	..	*	*	*	*	*	*	**	..
20	Gridley	m.	r.	d. r.	B.	M.	M.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
21	Hovey	l.	r.h.	y. r.	B.	F. M.	M.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
22	Knight's Early Black	l.	ob.h.	d. r.	H	F. M.	E.	F.	..	..	..	..	..	*	..	*	*	..	..	..
23	Late Duke	l.	ob.h.	d. r.	D.	K. M	L.	.....	..	..	*	..	**	*	..	..	*	..	..	..
24	Late Kentish	m.	r.	r.	G.	K.	M	F.	..	..	..	..	*	..	..	..	..	..	..	..
25	Louis Philippe	l.	r.	d. r.	D.	K. M.	L.	F.	..	..	*	..	..	..	..	..	..	..	*	..
26	May Duke	l.	ro.b.h	d. r.	D.	K. M	E.	F.	..	..	*	..	**	*	*	*	*	*	*	..
27	Morello	l.	r.h.	d. r.	M.	K. M.	L.	F.	..	..	*	..	**	..	..	..	*	*	*	*
	English Morello, Large Morello.																			
28	Napoleon	l.	r.ob.h	y. r.	B.	F. M.	M.	F.	..	..	..	..	*	..	*	*	*	*	..	..
	Royal Ann																			
29	Osceola	l.	r.h.	d. r.	H.	F. M.	M.	Am.	..	..	..	..	..	†	..	..	*	..	†	..
30	Ohio Beauty	l	ob.h.	y. r.	H.	F. M.	M.	Am.	..	..	..	..	..	†	..	..	†	..	..	..
31	Plumstone Morello	l.	r.	d. r.	M.	K. M.	L.	F.	..	..	*	..	..	..	..	..	*	..	..	..
32	Pontiac	l.	ob.h.	d. r.	H.	F. M.	M.	Am.	..	..	..	..	..	†	..	..	†	..	..	..
33	Red Jacket	l.	ob.h.	y. r.	H.	F. M.	L.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
34	Reine Hortense	l.	r.	l. r.	D.	F. M.	L	F.	..	..	*	..	*	*	..	..	*	*	*	..
35	Rockport	l.	r.ob.h	a. m.	B.	F. M.	E.	Am.	..	..	..	..	..	*	*	..	*	..	..	..
36	Royal Duke	l.	r.	d. r.	D.	K. M.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
37	Tecumseh	m.	ob.h.	d. r.	H.	M.	L.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
38	Tradescant's Black Heart	l.	r.h.	d. r.	B.	M.	L.	F.	..	..	..	..	..	..	..	..	*	**	..	..
	Elkhorn, Large Black Bigarreau.																			

8 A fine old variety, but by many supposed superseded. 14 Very hardy and productive. 29 An old variety, very firm flesh; carries well to market.

V.—CHERRIES.

The columns explain as follows: SIZE—l., large; m., medium; s., small. FORM—ob. h., obtuse heart shape; r. ob. h., roundish obtuse heart shape; r. h., roundish heart shape; r., roundish or round. COLOR—l. r., lively bright red; d. r., dark red, almost black; a. m., amber mottled with red; y. r., yellow ground shaded and marbled with red. CLASS—H., Hearts, or tender fleshed sweet cherries; B., Bigarreau, or firm fleshed cherries; D., Dukes, having a character in tree and fruit midway between the Hearts and Morellos; M., Morellos, having acid fruit, and the tree of small, slender growth. USE—F., family, for dessert; F. M., family or market; K. M., for cooking or market; M., market. SEASON—E., early; M., medium; L., late. ORIGIN—F., Foreign; Am., American.

	and 49°								II.—Central Division—between 35° and 42°																	III.—South. Div.—b. 28° & 35°								
NUMBER.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
1	..	..	..	..	..	..	..	*	..	..	*	..	..	*	*	..	*	..	*	..	..	*	*	..	*	..	*	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	*	..	..	*	*	..	†	*	..	..	..	*	*	*	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	..	..	..	..	..	..	*	*	*	..	*	*	..	*	*	..	..	..	*	*	..	*	*	..	*	..	*	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	*	*	..	*	*	..	*	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..
5	..	..	..	..	..	..	..	*	*	..	*	..	..	*	*	..	..	*	..	..	*	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..
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10	..	..	..	..	..	..	*	*	..	..	*	*	..	**	..	..	..	..	*	..	*	*	*	..	*	..	**	..	..	..	..	..	..	..	..	..	..
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24	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
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25 An old excellent sort; little known.

33 The latest ripening large sweet cherry.

VI.—CURRANTS.

The columns explain: Size—l., large; m., medium; s, small. Form—with reference to form of buneh—l, long; v. l., very long; s., short; m., medium. Color—r., red; b., black; w., white. Quality—a., acid; m. a., moderately acid; v. a., very acid. Use—K. M., kitchen and market; F. M., family and market; M., market. Season—E, early; M, medium; L., late. Origin—F., foreign.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°										
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Black Naples	l.	s.	b.	m. a.	K. M.	M.	F.	..	..	..	..	*	..	*	..	*	*	*	*
2	Cherry	l	s.	r.	v. a.	M.	M.	F.	..	..	..	..	*	*	..	*	*	*	*	*
3	Common Black *Black English.*	s.	s.	b.	m. a.	K. M.	M.	F.	..	..	..	..	..	..	..	..	..	..	..	*
4	Fertile de Palluau	l.	l.	r.	a.	F. M.	M.	F.	..	..	*	..	*	..	..	*	*	..	..	*
5	Fertile d'Angers	l.	l.	r.	m. a.	F. M.	M.	F.	..	..	..	..	*	..	*	..	*	..	..	*
6	Knight's Large Red	l.	m.	r.	m. a.	F.	M.	F.	..	..	*	..	*	..	..	..	*	..	..	*
7	La Versaillaise	l.	s.	r.	a.	M.	M.	F.	..	..	*	..	*	*	*	*	*	..	*	*
8	Prince Albert	l.	l.	r.	m. a.	M.	L.	F.	..	..	..	..	..	..	..	..	*	..	..	*
9	Red Dutch	m.	m.	r.	m. a.	F. M.	E.	F.	..	..	..	..	*	*	*	*	*	*	*	*
10	Red Grape	m.	m.	r.	m. a.	F. M.	E.	F.	..	..	..	..	..	..	..	..	*	..	..	*
11	White Dutch	m.	m.	w.	m. a.	F. M.	E.	F.	..	..	*	..	*	*	*	*	*	*	*	*
12	White Grape	m.	m.	w.	m. a.	F. M.	E.	F.	..	..	*	..	*	..	*	*	*	*	*	*
13	Victoria *Raby Castle.*	l.	v. l.	r.	a.	F. M.	L.	F.	..	..	*	..	*	..	*	*	*	*	*	*

VII.—GOOSEBERRIES.

The columns explain: Size—l., large; m., medium; s., small. Form—r., round; o., oval; r. o., roundish oval. Color—r., reddish, when fully ripe; g., greenish yellow, when fully ripe. Quality—g., good; v. g., very good; b., best. Use—K., kitchen; M., market. Season—E., early; M., medium; M. L., medium late. Origin—Am., American; F., foreign.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°										
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Crown Bob	l.	ob.	r.	v. g.	K. M	M.	F.	..	..	..	..	*	..	..	..	..	..	..	..
2	Downing	m.	r. o.	g.	v. g.	K.	M. L.	Am.	..	..	..	..	*	..	..	*	*	*	*	..
3	Houghton	s.	r o.	r.	g.	K. M.	E.	Am.	..	..	*	..	*	..	*	*	..	*	*	..
4	Mountain	l.	o.	r.	g.	M.	M.	Am.	..	..	..	..	*	..	..	..	*	..	*	..
5	Pale Red	m.	r. o.	r.	v. g.	K. M	E.	F.	..	..	..	..	..	..	..	..	*	..	..	..
6	Roaring Lion	l.	ob.	r.	v. g.	K. M.	M.	F.	..	..	..	..	*	..	..	..	..	..	..	..
7	Smith's Improved	l.	o.	g.	v. g.	K. M.	M.	Am.	..	..	..	..	*	†	..	..	†	..	†	..
8	Woodward's Whitesmith	l.	o.	g.	v. g.	K. M	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..

2 A little liable to sunburn or blister.
4 A strong growing bush—berry with a very thick skin.
5 An old sort, entirely free from mildew—more upright than Houghton.

VI.—CURRANTS.

The columns explain: Size—l., large; m., medium; s., small. Form—with reference to the form of bunch—l, long; v l, very long; s, short; m., medium. Color—r., red; b., black; w., white. Quality—a., acid; m. a., moderately acid; v. a., very acid. Season—E., early; M., medium; L., late. Use—K. M, kitchen and market; F. M., family and market; M., market. Origin—F., foreign.

	and 49°								II.—Central Division—between 35° and 42°																	III.—South. Div.—b. 28° & 35°								
Number.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
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VII.—GOOSEBERRIES.

The columns explain: Size—l., large; m., medium; s., small. Form—r., round; o., oval; r. o., roundish oval. Color—r., reddish when fully ripe; g., greenish yellow, when fully ripe. Quality—g., good; v. g., very good; b., best. Use—K., kitchen; M., market. Season—E., early; M., medium; M. L., medium late. Origin—Am., American; F., foreign.

	and 49°								II.—Central Division—between 35° and 42°																	III.—South. Div.—b. 28° & 35°								
Number.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
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7 New and promising.

8 The best of all the foreign large sorts in its immunity from mildew.

VIII.—GRAPES—NATIVE.

The columns explain as follows: Size—with reference to the berry, l., large; m., medium; s., small. Form—with reference to bunch and berry, s. r., short bunch, round berry; l. r., large and round; m. r. o., medium bunch, roundish oval berry; m. r., medium bunch, round berry. Color—b., black or nearly so when fully ripe; r., reddish or coppery-brownish red; g., greenish white or yellowish. Quality—g., good; v. g. very good; b., best. Use—T., table; M., market; W., wine. Season—E., early; M., medium; L., late. Origin—Am., American.

Number.	Names.	Description.							I.—Northern Division—between 42°										
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Adirondac	m.	m. r.	b.	v. g.	T.	E.	Am.	..	..	..	..	*	*	..	..	*	*	..	..
2	Agawam	l.	s. r. o.	r.	g.	.....	M.	Am.	..	..	..	..	..	..	*	..	*	*	*	*
	Rogers' No. 15.																			
3	Alvey	s.	m. r.	b.	v. g.	T.	E.	Am.	..	..	..	..	..	..	..	..	*	*	..	..
4	Barry	l.	r.	b.	g.	T. M.	M.	Am.	..	..	..	..	..	..	..	..	..	*	..	..
	Rogers' No. 43.																			
5	Catawba	l.	m. r. o.	r.	b.	T. M. W	L.	Am.	..	..	..	..	..	..	..	..	*	..	*	..
6	Clinton	s.	m. r.	b.	g.	T. W.	L.	Am	..	..	*	..	*	..	..	..	*	*	*	*
7	Concord	l.	l. r.	b.	v. g.	T. M. W	M.	Am.	..	..	*	*	*	**	*	**	*	*	..	*
8	Creveling	m.	m. r. o	b.	v. g.	T.	E.	Am.	..	..	..	..	*	*	..	..	*	*	..	*
9	Croton	s.	l. r. o.	g.	b.	T.	E.	Am.	..	..	..	..	..	†	*	..	†	..	†	†
10	Delaware	s.	s. r.	r.	b.	T. M. W	M.	Am.	..	..	*	*	**	†*	**	*	*	*	**	*
11	Diana	m.	s. r. o.	r.	v. g.	T. M.	L.	Am.	..	..	*	..	*	*	*	*	*	..	*	..
12	Elsinburgh	s.	m. r.	b.	v. g.	T.	E.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
13	Essex	l.	r.	b.	g.	T. M.	M.	Am.	..	..	..	..	..	..	..	..	..	*	..	..
	Rogers' No. 41.																			
14	Eumelan	m.	r.	b.	v. g.	T.	M.	Am.	..	.	..	..	*	..	*	..	..	..	..	..
15	Goethe	l.	l. r. o.	g.	v. g.	T. W.	L.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
	Rogers' No. I																			
16	Hartford Prolific	l.	m. r. o	b.	g.	M.	E.	Am.	..	..	*	**	**	*	*	*	*	*	*	*
17	Herbemont	s.	m. r.	b.	v. g.	T. W.	L	Am.	..	..	..	..	..	..	..	..	..	..	..	..
18	Iona	m.	m. r. o	r.	b.	T. M. W	L.	Am.	..	..	..	..	..	..	..	..	*	..	*	..
19	Israella	m.	s. r. o.	b.	v. g.	T.	M.	Am.	..	..	..	..	*	..	*	..	*	*	..	..
20	Isabella	l.	m. r. o	b.	g.	T. M.	L.	Am.	..	..	..	..	*	..	..	*	*	..	*	..
21	Ives	m.	m. r. o	b.	g.	M. W.	M.	Am.	..	..	..	..	..	..	..	..	*	..	*	*
22	Johnson								..	..	..	..	..	..	..	..	..	..	..	..
	S. C. Seedling.																			
23	Lindley	m.	m. r. o	r.	g.	.....	M.	Am	..	..	..	..	..	*	..	..	*	*	..	..
	Rogers' No. 9.																			
24	Massasoit	l.	m. r.	r.	g.	.....	M.	Am.	..	..	..	..	..	*	..	..	..	*	..	..
	Rogers' No. 3.																			
25	Martha	l.	s. r.	g.	g.	M. W.	M.	Am.	..	..	..	..	..	†	..	..	†	..	..	..
26	Maxatawney	m.	m. r. o	g.	v. g.	T.	M.	Am.	..	..	..	..	..	†	..	..	†	..	..	..
27	Merrimack	l.	s. r.	b.	g.	M.	M.	Am.	..	..	..	..	..	*	..	*	*	*	..	..
	Rogers' No 19.																			
28	Miles	s.	m. r.	b.	g.	T.	E.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
29	Norton's Virginia	s.	m. r.	b.	g.	W.	L.	Am.	..	..	..	..	..	†	..	..	†	..	*	..
30	Perkins	l.	r.	r.	g.	T. M.	E.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
31	Peter Wylie	m.	r.	w.	v. g.	T.	.....		..	..	..	..	..	..	..	..	..	..	..	..
	Doctor Wylie.																			
32	Rebecca	m.	s. r.	g.	v. g.	T.	M	Am.	..	..	*	..	..	*	..	*	*	..	*	..
33	Salem	l.	r.	p.	g.	M.	M.	Am.	..	..	..	..	*	..	*	..	..	*	..	..
	Rogers' No. 22.																			
34	Scuppernong	l.	r.	r.	g.	W.	M.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
35	Telegraph	l.	m. r. o	b.	v. g.	T. M.	E.	Am.	..	..	..	..	..	..	..	..	*	..	†	†
	Christine.																			
36	Union Village	l.	s. r. o.	b.	g.	M.	M.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
	Ontario.																			
37	Walter	m.	s. r.	r.	b.	T. M. W	M.	Am.	..	..	†	..	..	†	†	†	†	..	†	†
38	Wilder	l.	l. r.	b.	v. g.	T. M.	M.	Am	..	..	..	..	..	*	*	*	*	*	*	..
	Rogers' No. 4.																			

1 Unreliable.
3 Too small.
5 Suited only to clayey loams and certain localities.
6 Hardy everywhere.
7 Succeeds everywhere.
8 Bunches imperfect.
9 The most promising white variety.
10 Wants rich soil and high culture.
16 Liable to drop from the bunch.

VIII.—GRAPES—NATIVE.

The columns explain as follows: Size—with reference to the berry, l, large; m, medium; s, small. Form—with reference to bunch and berry, s. r., short bunch, round berry; l. r., large and round; m. r. o., medium bunch, roundish oval berry; m. r., medium bunch, round berry. Color.—b., black, or nearly so when fully ripe; r., reddish or coppery-brownish red; g, greenish white or yellowish. Quality—g., good; v. g., very good; b., best. Use—T., table; M., market; W., wine. Season—E., early; M., medium; L., late. Origin—Am., American.

	and 49°							II.—Central Division—between 35° and 42°																	III.—South. Div.—b. 28° & 35°									
Number.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana	Texas.	New Mexico.	Arizona.
1	..	..	..	..	..	..	..	..	*	..	..	*	..	..	..	..	..	..	..	*	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
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17 Makes the finest of white wine.
18 Unreliable except in a few locations.
20 Valueless at the West.
21 Valued for a dark wine.
26 Vines require age to give perfect fruit.
28 Very early—too small for market.
35 The more known the better liked.

IX.—GRAPES—FOREIGN.

As the Foreign Grapes are for cultivation under glass, they are not subject to those variations induced by climate or soil, and therefore they may be regarded as equally adapted to all localities. Very few of the local committees have made any report in reference to these Grapes. The list below contains such as have been already adopted by the Society, with a few others very generally esteemed. In California, and sections of the Southern States, they require no artificial protection or heat; it has, therefore, been thought unnecessary to tabulate the States and Territories relative to them; but, taking the old catalogue, and simply adding to it a column relative to variety as adapted to a *cold house*, or its want of fire heat, in our Northern States, the old form is continued.

The columns explain: 1st—The COLOR of the fruit; 2d—FLAVOR; 3d—Season of maturity; 4th—COLD, for a variety that does well without fire heat—HOT, for a variety wanting fire heat. In flavor, the only distinction is between those that are simply sweet, as the Chasselas or Hamburgs, and those having a distinct musky aroma, as the Muscats.

No.	NAME.	COLOR.	FLAVOR.	SEASON.	VINERY.
1	Barbarossa	Black.	Sweet.	Very Late.	Hot.
	Prince Albert, Brizzola.				
2	Black Champion	Black.	Sweet.	Early.	Cold.
3	Black Damascus	Black.	Sweet.	Late.	Cold.
4	Black Frontignan	Black.	Muscat.	Late.	Cold.
5	Black Hamburg	Black.	Sweet.	Medium.	Cold.
6	Black Prince	Black.	Sweet.	Medium.	Cold.
7	Black July	Black.			
8	Bowood Muscat	White.	Muscat.	Medium.	Hot.
9	Buckland Sweetwater	White.	Sweet.	Medium.	Cold.
10	Calabrian Raisin	White.	Sweet.	Late.	Hot.
	Raisin de Calabre.				
11	Cannon Hall Muscat	White.	Muscat.	Late.	Hot.
12	Chasselas Musque, or Joslin's St. Albans	White.	Muscat.	Early.	Hot.
	Muscat blanc Hative (?)				
13	Due de Magenta	Black.	Sweet.	Early.	Hot.
14	Early Silver Frontignan	White	Muscat.	Early.	Hot.
15	Golden Hamburg	White.	Sweet.	Late.	Hot.
	Stockwood G. Hamburg.				
16	Golden Champion	Amber.	Sweet.	Medium.	Hot.
17	Grizzly Frontignan	Red & Yellow.	Muscat.	Medium.	Hot.
	Red Frontignan, Red Constantia.				
18	Gros Colman	Purple.			
19	Lady Downes' Seedling	Black.	Sweet.	Very Late.	Hot.
20	Muscat of Alexandria	White.	Muscat.	Late.	Hot.
21	Muscat Hamburg	Black.	Muscat.	Medium.	Hot.
22	Mrs. Pince's Black Muscat	Black.	Muscat.	Late.	Hot.
23	Queen of Nice	White.			
24	Red Chasselas	Red.	Sweet.	Medium.	Hot.
	Rose Chasselas.				
25	Red Lombardy	Red.			
26	Rio Virgin				
27	Royal Muscadine	White.			
28	White Nice	White.	Sweet.	Late.	Hot.
29	West St. Peter's	Black.	Sweet.	Very Late.	Hot.
30	Wilmot's Black Hamburg	Black.	Sweet.	Medium.	Hot.
	Dutch Hamburg.				
31	White Sweetwater	White.	Sweet.	Early.	Cold.
	Dutch Sweetwater, &c.				
32	White Frontignan	White.	Muscat.	Medium.	Hot.
	White Constantia, Muscat blanc.				
33	Zinfindal	Black.	Sweet.	Medium.	Hot.

XI.—NECTARINES.

Explanations same as for Apricots.

NUMBER.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°									
		SIZE.	FORM.	COLOR.	QUALITY.	USE.	SEASON.	ORIGIN.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Boston	l.	r. o.	o. r.	v. g.	F.	M.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
2	Downton	l.	r. o.	o. r.	v. g.	F.	E.	F.	..	..	..	..	..	..	..	..	*	..	..	..
3	Early Newington	l.	r. o.	o. r.	v. g.	F.	E.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
4	Early Violet	l.	r.	o. r.	b.	F.	E.	F.	..	..	..	..	..	..	..	..	*	..	..	..
5	Elruge	m.	r. o.	o r.	v. g.	F.	L.	F.	..	..	..	..	..	..	..	..	*	..	..	..
6	Stanwick	l.	r. o.	o. r.	g.	F.	L.	F.	..	..	..	..	..	..	..	..	*	..	..	..

X.—MULBERRIES—FIGS—POMEGRANATES.

The following list of mulberries, figs and pomegranates was prepared by Mr. P. J. Berckmans, of Georgia. In California and many sections of the Southern States, the fig and pomegranate are grown as readily as the apple in the Middle States, while the mulberry is a success wherever the cherry succeeds.

No.	Name.	Season.	Color.	Quality.	Size.
	MULBERRIES.				
1	Hicks' Everbearing	Early.	Black.	Second.	Bears 3 months.
2	Downing	Early.	Black.	First.	Best.
3	Persian Black	Late.	Black.	First.	Very Tart.
4	Persian White	Medium.	Lilac.	Third.	.....
5	Johnson	Medium.	Black.	First.	.....
	FIGS.				
1	Alicante	Medium.			Medium.
2	Angelique'	Early.	Yellow.	Second.	Small.
3	Brunswick *Madonna, Constantinople.*	Early.	Violet.	First.	Very Large.
4	Black Genoa	Early.	Blue.	First.	Medium.
5	Black Ischia	Medium.	Blue.	First.	Medium.
6	Brown Smyrna	Medium.	Brown.		Medium.
7	Celestial	Medium.	Pale Violet.	First.	Small.
8	Green Ischia *White Ischia, Green Italian.*	Early.	Green.	First.	Medium.
9	Jaune Hative	Early.	Yellow.	Second.	Medium.
10	Lemon	Early.	Yellow.	First.	Medium.
11	Violet, long	Medium.	Violet.	First.	Large.
12	Violet, round	Medium.	Violet.	Second.	Medium.
13	Nerii	Late.	White.	First.	Small.
14	Pergussata	Medium.	Purple.	First.	Small.
15	White Marseilles	Medium.	White.	First.	Medium.
16	White Genoa	Medium.	White.	Good.	Large.
17	Superfin de la Saussaye	Late.	Brown.	First.	Medium.
18	Turkey *Brown Turkey.*	Early to Late.	Brown.	First.	Large.
	POMEGRANATES.				
1	Sweet	Early.	Reddish.	First.	Large.
2	Acid	Early.	Reddish.	Third.	Very Large.
3	Violet	Late.	Violet.	First.	Very Large.
4	Dwaf	Late.	Red.	Second.	Small.

XI.—NECTARINES.

Explanations same as for Apricots.

Number.	I.—Northern Division—between 42° and 49°							II.—Central Division—between 35° and 42°																		III.—South. Div.—b. 28° & 35°								
	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
1	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
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XII.—ORANGES AND LEMONS.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°									
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Brazilian																			
2	Louisiana Creole																			
3	Mandarin																			
4	Florida Lemon																			
5	Sicily Lemon																			

XIII.—PEACHES.

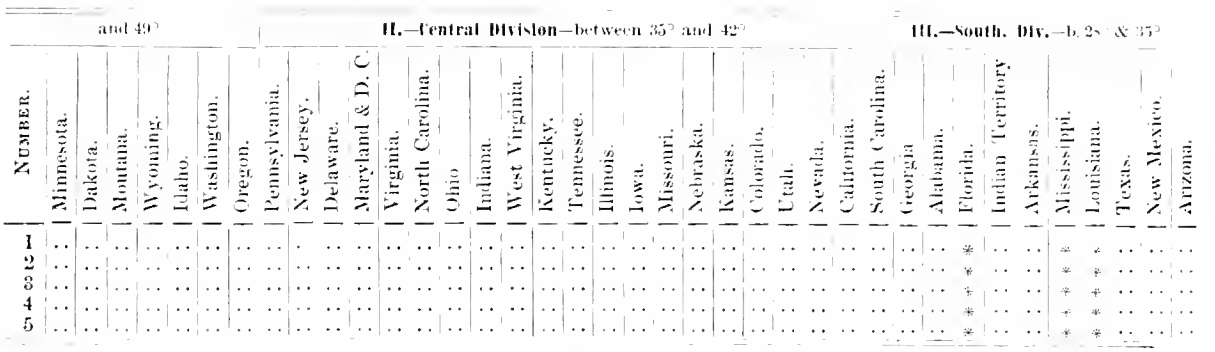
The columns explain: Size—l., large; m., medium; s., small. Class—F., freestone; C., clingstone. Color—relative to the flesh, w., white or pale colored; y., yellow or yellowish; g., greenish white, red at stone. Quality—j. v., juicy, vinous; m. j. r., melting, juicy, rich; s. j., sweet and juicy; s. j. h., sweet, juicy and high flavored. Glands—s., serrated, without glands; g., glands globose; r., glands reniform. Season—the Season of maturity, as Early, Medium or Late; those designated as Early, ripen in lat. 43 deg. previous to or about Sept. 1st; Medium, those ripening from 1st to 15th of Sept., and Late those after that period; a few of the Very Early and Very Late are so designated—E., early; M., medium; L., late; V. E., very early; V. L., very late. Origin—Am., American; F., Foreign.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°									
		Size.	Class.	Color.	Quality.	Glands.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan. [7]	Wisconsin.
1	Allen's October						L.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
2	Amelia [2]	l.	F.	w.	m.j r.	r.	E.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
3	Baldwin's Late	l.	F.	w.	j m.	r.	L.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
4	Barnard	m	F.	y.	j v.	g.	E.	....	..	..	..	..	..	..	..	..	..	..	*	..
5	Bellegarde	l.	F.	g.	s. j.	g.	M.	F.	..	..	..	..	..	..	*	..	..	..	..	..
6	Bergen's Yellow	m.	F.	y.	j. v.	r.	M.	Am.	..	..	..	..	..	*	..	..	..	..	..	..
7	Chinese Cling	l.	C.	g.	j. v.	r.	M.	....	..	..	..	..	..	..	..	..	*	..	..	..
8	Cole's Early Red	m	F.	w.	m.j.r.	g.	V. E	Am.	..	..	..	..	..	..	..	..	*	..	*	..
9	Columbia	l.	F.	y.	j v.	r.	M.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
10	Coolidge's Favorite	l.	F.	w.	s j.h.	g.	M.	Am.	..	..	..	..	..	**	*	..	*	..	*	..
11	Con's Cling								..	..	..	..	..	..	..	..	..	..	..	..
12	Crawford's Early	l	F.	y.	j. v.	g.	M.	Am.	..	..	..	..	..	**	**	..	*	*	**	..
13	Crawford's Late	l.	F.	y.	j v	g.	L	Am.	..	..	..	..	..	*	*	..	*	*	**	..
14	Druid Hill	l.	F.	g.	m j.r.	g.	V. L	Am.	..	..	..	..	..	..	..	..	*	..	..	..
15	Early Newington Free	l.	F.	g.	j. v.	g.	E.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
16	Early Tillotson	m.	F.	g.	m.j.r	s.	V. E.	Am.	..	..	..	..	..	..	*	..	..	..	..	..

2 This originated in South Carolina, and differs from the Missouri Amelia.

7 Berckmans thinks it is same as Shanghae.

XII.—ORANGES AND LEMONS.



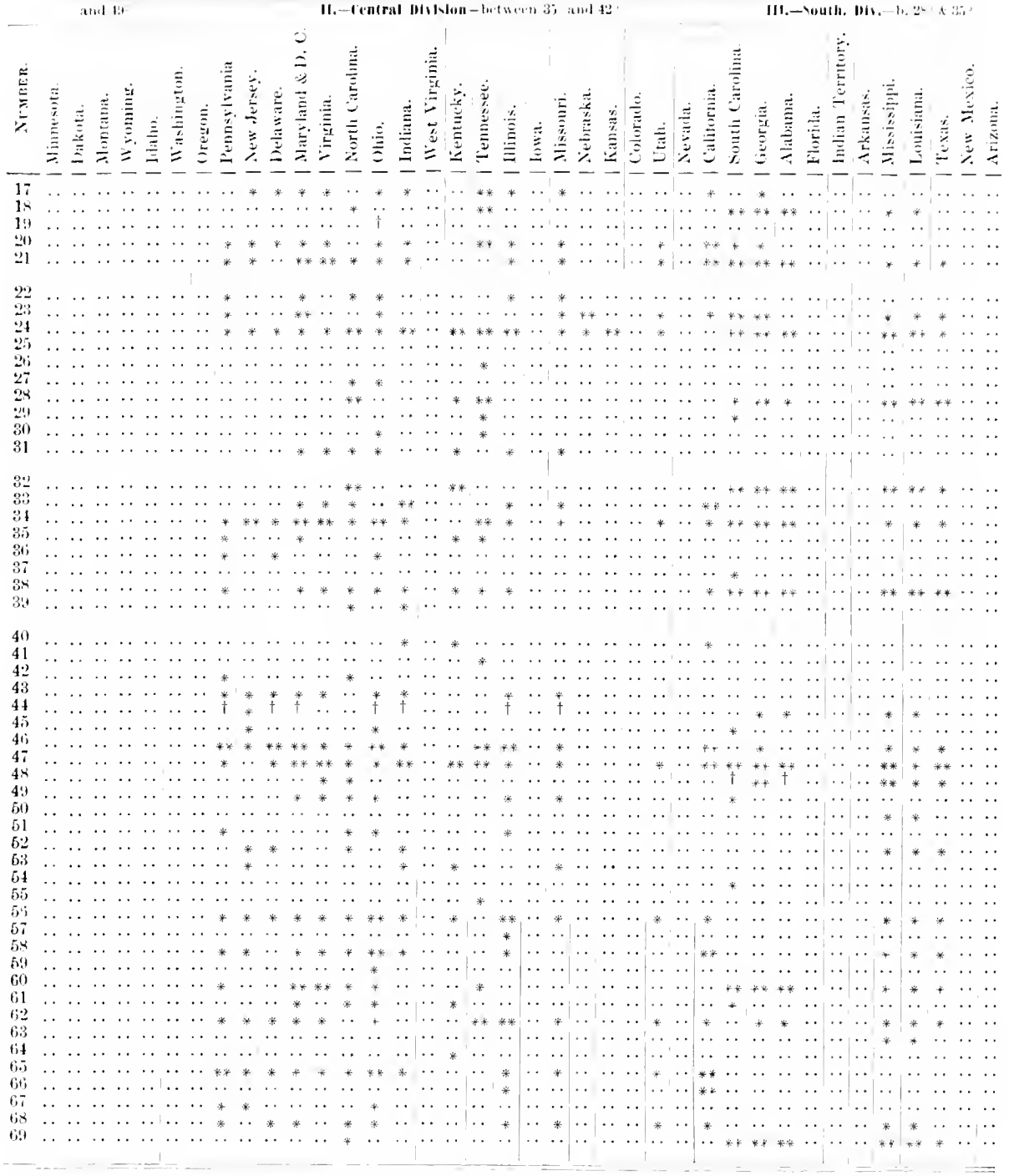
	and 49°							II.—Central Division—between 35° and 42°																III.—South. Div.—b. 28° & 35°						
Number.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..
5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	*	*	..	..	..

XIII.—PEACHES.

The columns explain: Size—l, large; m., medium; s, small. Class—F., freestone; C., clingstone. Color—relative to the flesh, w., white or pale colored; y., yellow or yellowish; g, greenish white, red at stone. Quality—j. v., juicy, vinous; m. j. r., melting, juicy, rich; s. j., sweet and juicy; s. j. h., sweet, juicy and high flavored. Glands—s., serrated, without glands; g., glands globose; r., glands reniform. Season—the Season of maturity, as Early, Medium or Late; those designated as Early, ripen in lat. 43 deg. previous to or about Sept. 1st.; Medium, those ripening from 1st to 15th of Sept., and Late, those after that period; a few of the Very Early and Very Late are so designated—E., early; m., medium; L., late; V. E., very early; V. L., very late. Origin—Am., American; F., Foreign.

	and 49°							II.—Central Division—between 35° and 42°																III.—South. Div.—b. 28° & 35°						
Number.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	..	..	..	..	*	*	..	..	..	**	..	..	..	..	..	..	..	..	..	**	**	**	..	..	..	*	*	..	..	..
3	..	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	**	**	..	..	..	*	*	*	..	..
4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	..	..	..	..	..	..	..	*	*	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*	*	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7	..	..	..	..	..	..	..	..	..	..	*	*	*	**	..	..	**	**	..	..	..	+	*	..	+	..	..	**	**	**	..	..	..	*	*	**	..	..
8	..	..	..	..	..	..	..	..	*	..	*	..	*	..	..	..	..	..	*	..	..	..	..	..	..	..	+	..	..	..	..	..	..	*	*	*	..	..
9	..	..	..	..	..	..	..	..	..	..	..	..	**	..	*	..	*	..	*	..	*	*	**	..	*	..	..	**	**	**	..	..	..	**	**	*	..	..
10	..	..	..	..	..	..	..	*	*	..	*	..	..	*	*	..	..	..	*	..	..	..	..	..	*	..	*	..	..	..	..	..	..	..	..	..	..	..
11	..	..	..	..	..	..	+	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	+	**	**	**	**	**	*	**	..	..	*	**	*	..	+	..	*	..	*	..	..	++	**	**	..	..	..	*	*	*	..	..
13	..	..	..	..	..	..	..	**	*	**	**	*	*	**	..	..	*	**	*	..	..	..	..	..	*	..	..	*	*	*	..	..	..	*	*	*	..	..
14	..	..	..	..	..	..	..	*	*	..	*	..	*	*	*	..	*	**	*	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..	*	..	..
15	..	..	..	..	..	..	..	..	..	..	..	..	+	..	..	..	..	*	..	..	*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	..	..	..	..	..	..	..	*	..	..	*	*	..	*	*	..	*	**	*	..	*	..	++	..	*	..	..	..	**	**	..	..	..	*	*	*	..	..

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°									
		Size.	Class.	Color.	Quality.	Glands.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
17	Early York	m.	F.	w.	m j r	s.	V. E	Am.	..	..	..	..	..	*	*	..	*	*	*	..
18	Eaton's Golden	m.	C.	y.	s j.	r.	L.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
19	Foster	l.	F.	y.	j v.	g.	L	Am.	..	..	..	..	..	†	..	..	†	..	..	..
20	George the Fourth	m.	F.	y.	m j r	g.	M.	Am.	..	..	..	..	..	*	*	..	*	*	..	..
21	Grosse Mignonne	l.	F.	w.	s j h.	g.	M.	F.	..	..	..	..	..	*	*	..	*	*	*	..
	Royal Kensington.																			
22	Haine's Early Red	m.	F.	g.	s. j.	g.	V. E	Am.	..	..	..	..	..	..	..	..	*	..	..	..
23	Hale's Early	m.	F.	w.	m j r.	g.	V. E	Am.	..	..	..	..	..	*	*	..	*	..	**	..
24	Heath Cling	l.	C.	g.	s j h.	r.	V. L	Am	..	..	..	..	..	..	..	..	*	..	..	..
25	Hill's Chili	m.	F.					Am.	..	..	..	..	..	..	..	..	..	..	*	..
26	Hoover's Late Heath								..	..	..	..	..	..	..	..	..	..	..	..
27	Hyslop Cling	l.	C.	w.	m j r	r.	V. L.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
28	Indian Blood Cling	l.	C.	y.	j. v.	r.	L.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
29	Indian Blood Freestone	l.	F.					Am.	..	..	..	..	..	..	..	..	..	..	..	..
30	Jacques	l.	F.	y.	j. v.	r.	M.	Am.	..	..	..	..	..	*	..	..	*	..	*	..
31	Kenrick's Heath	l.	F.	g.	j. v.	r.	L.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
	Heath Freestone.																			
32	Lady Parham	m.	F.	g.	j. v.	r.	V. L	Am.	..	..	..	..	..	..	..	..	..	..	..	..
33	LaGrange	l.	F.	w.	s. j. h.	r.	V. L	Am.	..	..	..	..	..	..	..	..	*	..	..	..
34	Large Early York	m.	F.	w.	s j. h.	g.	V. E.	Am.	..	..	..	..	..	..	..	..	*	..	*	..
35	Large White Cling	l.	C.	w.	s. j.	g.	L.	Am.	..	..	..	..	..	..	..	..	*	..	*	..
36	Late Red Rareripe	l	F.	w.	s j. h	g.	M	Am	..	..	..	..	..	..	*	..	*	..	..	..
37	Late Admirable	v.l	F.	y. g.	m. h.	g.	M.	F.	..	..	..	..	..	..	..	..	..	..	..	..
38	Lemon Cling	l.	C.	y.	j v.	r.	L.	Am.	..	..	..	..	..	..	..	..	*	..	*	..
39	Leopold I.	l.	F.	y.	j. v.	r.	M.	F.	..	..	..	..	..	..	..	..	..	..	..	..
	Leopold Freestone.																			
40	Malta	l.	F.	g.	m j.r.	s.	M.	F.	..	..	..	..	..	..	..	..	..	..	..	..
41	Mammoth Freestone	v.l	F.						..	..	..	..	..	..	..	..	..	..	..	..
42	Molden's White	l.	F.	w.	s. j.	r.	L.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
43	Morris' White	m.	F.	w.	m j r.	r.	M.	Am.	..	..	..	..	..	..	..	..	*	..	*	..
44	Mountain Rose	m.	F.	w.	s. j.	g.	M.	Am.	..	..	..	..	..	—	..	..	†	..	†	..
45	Noblesse	l.	F.	w.	s. j.	s.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
46	Old Mixon Free	l.	F.	g.	s. j h.	g.	M.	Am.	..	..	..	..	..	**	*	..	**	*	**	..
47	Old Mixon Cling	l.	C.	w.	m j.r.	g.	M.	Am.	..	..	..	..	..	=	..	..	*	..	*	..
48	Picquett's Late	l.	F.	y.	s. j.	r.	M.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
49	President	l.	F.	w.	m j r	g.	M.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
50	Raymond Cling	l.	C.						..	..	..	..	..	..	..	..	..	..	..	..
51	Red Cheek Melocoton	l.	F.	y.	j. v.	g.	M.	Am.	..	..	..	..	..	*	..	..	*	*	..	..
52	Rodman's Cling	l	C.	w.	j. v.	r.	L.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
53	Royal George	m.	F.	w.	m j.r.	s.	E.	F.	..	..	..	..	..	..	†	..	*	*	..	..
54	Scott's Octoler								..	..	..	..	..	..	..	..	..	..	..	..
55	Shockley's Early								..	..	..	..	..	..	..	..	..	..	..	..
56	Smock	l.	F.	y.	j. v.	r.	L.	Am.	..	..	..	..	..	..	..	..	..	..	**	..
57	Snow	m.	F.	w.	s. j.	r.	M.	Am.	..	..	..	..	..	..	..	..	*	..	*	..
58	Stump the World	l.	F.	w.	s j h.	g.	L.	Am.	..	..	..	..	..	..	*	..	..	..	*	..
59	Sturtevant	m.	F.	y.	s j h	g.	M	Am.	..	..	..	..	..	..	..	..	..	..	..	..
60	Susquehanna	l.	F.	y.	s. j. v.	g.	M.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
61	Tippecanoe	l.	C.	y.	j. v.	r.	L.	Am.	..	..	..	..	..	..	..	..	..	..	*	..
62	Troth's Early	m.	F.	w.	s. j.	g.	E.	Am.	..	..	..	..	..	..	*	..	*	..	..	..
63	Tuskena Cling								..	..	..	..	..	..	..	..	..	..	..	..
64	Van Zandt's Superb	m.	F.	w.	m.j.r.	g.	M.	Am.	..	..	..	..	..	..	*	..	*	..	*	..
65	Ward's Late Free	l.	F.	w.	r. j. s.	r.	L.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
66	White Imperial	m	F.	w.	m j r.	g.	E.	Am.	..	..	..	..	..	..	..	..	..	..	*	..
67	Yellow Alberge	m.	F.	y.	s. j.	g.	E.	F.	..	..	..	..	..	*	..	..	..	..	*	..
68	Yellow Rareripe	l.	F.	y.	j. v.	g.	E.	Am.	..	..	..	..	..	*	..	..	*	..	*	..
69	Yellow St John	l.	F.	y.	s. j.	g.	V. E	Am.	..	..	..	..	..	..	..	..	..	..	..	..
	Flita's, Flatt's St. John.																			


and 49°
II.—Central Division—between 35° and 42°
III.—South. Div.—b. 28° & 35°
Number.
Minnesota.
Dakota.
Montana.
Wyoming.
Idaho.
Washington.
Oregon.
Pennsylvania
New Jersey.
Delaware.
Maryland & D. C.
Virginia.
North Carolina.
Ohio.
Indiana.
West Virginia.
Kentucky.
Tennessee.
Illinois.
Iowa.
Missouri.
Nebraska.
Kansas.
Colorado.
Utah.
Nevada.
California.
South Carolina
Georgia.
Alabama.
Florida.
Indian Territory.
Arkansas.
Mississippi.
Louisiana.
Texas.
New Mexico.
Arizona.

XIV.—PEARS.

The columns explain as follows: Size—s., small; l., large; m., medium. Form—p., pyriform; r. o. p., roundish obtuse pyriform; r. a. p., roundish acute pyriform; ob. p., obtuse pyriform; ob. o. p., oblong obtuse pyriform; r., roundish; r. ob., roundish obtuse. Color—y g., yellow or yellowish green with a red or russet-red cheek; y. r., yellow and russet; y., when mostly yellow or yellowish. Quality—g., good; v. g., very good; b., best. Use—F., valuable family dessert; K M., kitchen and market; F. M., family and market. Season—S., summer; L. S., late summer; A., autumn; E. A., early autumn; L. A., late autumn; W., winter. Origin—En., English; Am., American; F., French; Fl., Flemish; B., Belgium; H., Holland.

Number.	Names.	Description.							I.—Northern Division—between 42°									
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Abbott	m.	ob. p.	y. r.	v. g.	F.	E. A	Am.	..	..	..	†	..	**	*	..	*	..	..	..
2	Ananas d'Ete	l.	p.	y. g.	v. g.	F. M.	E. A.	H	..	..	..	..	*	..	*	..	*	*	*	..
3	Andrews	l.	p.	y. g.	v. g.	F.	E. A.	Am	..	..	..	†	..	*	..	..	..	..	..	..
4	Bartlett	l.	ob. o. p.	y.	v. g.	F. M	L. S.	En	..	..	*	*	*	*	**	**	**	*	**	*
5	Baronne de Mello	m.	r. a	p.	y. r.	v. g	F. M.	E. A.	B.	..	..	..	..	*	..	..	*	..	..	..
6	Belle Lucrative *Fondante d'Automne.*	m.	r. o. p.	y. g.	b.	F.	E. A.	Fl.	..	..	..	*	*	*	**	**	**	*	*	..
7	Belle Epine Dumas *Duc de Bordeaux.*	m.	r. o. p	y.	v. g.	F.	L A	.....	..	..	..	..	..	*	..	*	*	..	†	..
8	Beurre Bose	l.	p.	y. r.	b.	F. M	L. A	B.	..	..	..	..	*	**	*	**	**	*	*	..
9	Beurre Clairgeau	l.	p.	y r.	g.	M.	L. A	F.	..	..	..	..	*	*	**	*	*	*	*	..
10	Beurre d'Anjou	l.	ob. p.	y. g	v. g.	M F	L. A.	F.	..	..	..	*	†	**	**	*	**	*	**	*
11	Beurre d'Amanlis	l.	r. o. p.	y. g.	g.	M.	E. A.	B.	..	..	..	*	..	*	*	*	*	..	..	..
12	Beurre de Brignais *Des Nonnes.*	m.	r. ob.	y.	v. g.	F	E. A	.....	..	..	..	..	..	*	..	..	*	..	..	..
13	Beurre Diel	l.	r. ob.	p.	y. r.	v. g	F. M.	L. A	B.	..	..	*	..	*	..	*	*	*	*	..
14	Beurre Giffard	m.	p.		y. g.	v. g.	F. M.	S.	F.	..	..	*	..	*	*	*	*	*	*	*
15	Beurre Goubault	m.	ob	r.	g. y.	g.	F.	L. S.	F.	..	..	..	..	..	..	..	..	..	..	..
16	Beurre Hardy	l.	ob.	p.	y. g	v. g.	F. M	E. A	.....	..	..	..	..	..	*	*	*	*	..	..
17	Beurre Langelier	m.	ob	p.	y. r.	v. g	F. M	W.	F.	..	..	..	..	..	*	*	*	*	..	..
18	Beurre Superfin	m	r.	p.	y. r.	v. g.	F.	A.	F.	..	..	*	..	*	**	*	*	*	..	*
19	Bloodgood	m.	r.		y. r.	v. g	F.	S.	Am.	..	..	*	*	*	*	*	*	*	*	*
20	Brandywine	m	r.	op	y. g	v. g.	F. M	S.	Am	..	..	..	†	..	**	*	*	*	*	..
21	Brialmont	..	l	ob.	p	y. r.	v. g	F. M	A.	B	..	..	..	..	..	*	..	..	*	..	..
22	Buffum	m	r. o.	p.	y g.	g	M.	E A	Am.	..	..	*	..	*	*	*	*	*	*	*
23	Caen du France	m.	ob.	p	y. r.	v. g.	F. M.	W.	F.	..	..	..	..	..	*	..	..	*	..	..
24	Catillac	l.	r. a.	p	y.	g.	K M	W.	F.	..	..	..	..	..	*	..	..	+	..	..
25	Clapp's Favorite	l.	ob.	o p	y. g	v. g.	F. M	S.	Am	..	..	..	*	*	**	*	*	*	*	..
26	Columbia	l.	r. o.	p	y.	g.	M. K	W.	Am	..	..	..	..	..	*	*	..	*	*	..
27	Dallas	l.	ob.	p.	y. g	v. g.	F. M	L. A.	Am.	..	..	..	..	..	*	..	..	*	..	..
28	Dana's Hovey	s.	r. ob.	p.	y. g	b.	F.	W.	Am	..	..	..	..	..	*	*	*	*	..	..
29	Dearborn's Seedling	s.	r.	p	y.	v. g.	F.	S.	Am.	..	..	..	..	*	*	*	*	*	*	*
30	Dix	l.	ob.	p.	y.	b	F. M.	L. A.	Am.	..	..	..	..	..	..	..	..	*	..	..
31	Dr Bachman, (local)	.....						Am.	..	..	..	..	..	..	..	..	..	..	..	..
32	Doctor Reeder	s.	r. o.	p	y. r.	b.	F.	L. A	Am.	..	..	..	..	†	..	..	†	..	†	..
33	Doyenne Boussock	l.	r. o.	p.	y. r.	v. g.	F. M.	E. A.	B.	..	..	..	..	**	*	*	**	..	..	..
34	Doyenne d'Alencon	m.	r.	p.	y. r.	v. g.	F. M.	W.	.....	..	..	..	..	*	..	*	*	..	..	..
35	Doyenne du Comice	l.	r. o.	p	y g	b	F. M.	L. A.	F.	..	..	..	..	**	..	..	*	..	..	..
36	Doyenne d'Ete	s.	r. o.	p	y. g.	v g.	F.	S.	B.	..	..	..	†	*	*	*	+	..	*	*
37	Duchesse d'Angouleme	l.	ob	o p.	y.	v. g.	F. M.	A	F.	..	..	..	..	**	**	*	+	*	*	..
38	Duchesse de Berri d'Ete	s.	r.	ob.	y. r.	v. g.	F.	S.	F.	..	..	..	..	..	..	..	*	..	..	..
39	Duchesse de Bordeaux	m.	r.		y. r.	g.	M.	W.	F.	..	..	..	..	†	..	..	†	..	..	..
40	Easter Beurre	l.	r	ob p	y. r.	v. g.	F.	W.	B.	..	..	..	..	..	..	..	..	*	..	..
41	Emile d' Heyst	l.	ob.	p.	y. r.	b.	F	L. A.	B.	..	..	..	..	*	..	..	+	..	*	..
42	Flemish Beauty	l	r	ob p	v g	v g.	F. M	E. A.	B.	*	..	*	..	**	..	..	..	..	**	**
43	Fulton	s.	r.	ob.	y. r.	v g	F.	A	Am.	..	..	*	..	..	..	..	*	*	..	..
44	Golden Beurre of Bilboa	m	p.		y.	v. g.	F.	E. A.	.....	..	..	..	..	..	..	..	*	..	..	..
45	Glout Morceau	l	ob.	p.	y.	g.	.....	L. A.	.....	..	..	..	..	*	*	*	*	+	*	..
46	Gray Doyenne	m	r.		y. r.	b.	F. M	L. A	F.	..	..	..	..	..	..	..	..	..	..	..
47	Henkel	l.	r.	ob p	y. r.	v. g.	F.	E. A	B.	..	..	..	..	*	..	..	*	..	..	..
48	Hosenschenck *Moore's Pound.*	m.	r	ob.	y.	g.	M.	S.	Am.	..	..	..	..	*	..	*	*	..	..	..

3 Like all pears, should be gathered ere fully ripe, or liable to decay at core.
6 Not profitable for market.
11 Quality inferior.
18 Trees very healthy.
26 Liable to drop ere ripe.
32 Delicious, but too small to meet the present market wants.

XIV.—PEARS.

The columns explain as follows: Size—s., small; l., large; m., medium. Form—p., pyriform; r. o. p., roundish obtuse pyriform; r. a. p., roundish acute pyriform; ob. p., obtuse pyriform; ob. o. p., oblong obtuse pyriform; r., roundish; r. ob., roundish obtuse. Color—y. g., yellow or yellowish green with a red or russet-red cheek; y. r. yellow and russet; y., when mostly yellow or yellowish. Quality—g., good; v. g., very good; b., best. Use—F., valuable family dessert; K. M., kitchen and market; F. M., family and market. Season—S., summer; L. S., late summer: A., autumn; E. A., early autumn; L. A., late autumn; W., winter. Origin—En., English; Am., American; F., French; Fl., Flemish; B., Belgium; H., Holland.

	and 49°							II.—Central Division—between 35° and 42°																	III.—South. Div.—b. 28° & 35°									
Number.	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
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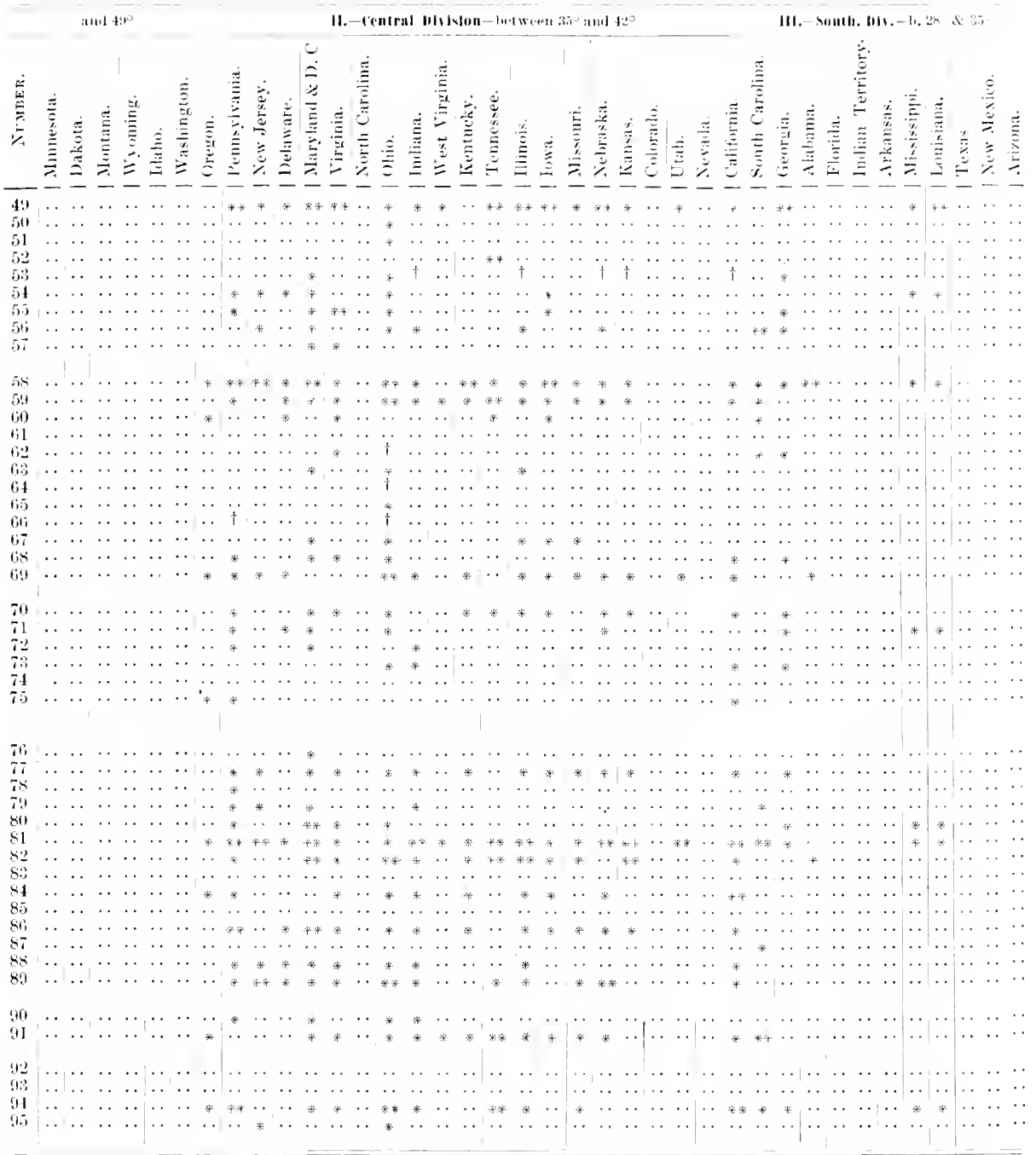
42 Begins to fail East.
43 A hardy, productive tree.
45 Unreliable at the North.
46 Fails in Eastern States.
47 Fine for the table.
48 A profitable market sort.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°										
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
49	Howell	l.	r. p.	y. g.	v. g.	F. M	E A.	Am.	..	..	..	**	..	**	*	..	**	..	*	*
50	Jalousie de Fontenay Vendee	m.	r. a. p	y. r.	v. g.	F. M	A.	F.	..	..	..	..	..	..	*	*	*	*	..	..
51	Jaminette	m.	r. ob.	y. r.	v. g	F. M.	W.	.....	..	..	..	..	..	..	..	..	*	..	..	..
52	John Williams	.....	.....	.....	.....	.....	.....	.....	..	..	..	..	..	..	..	..	..	..	..	..
53	Josephine de Malines	m.	r. ob p.	y. r.	v. g	F. M.	W.	F.	..	..	..	†	..	*	..	..	**	..	..	..
54	Julienne	s.	r. ob.	y.	g.	F. M	S.	.....	..	..	..	..	..	*	*	..	*	..	..	..
55	Kingsessing	l	nb p.	y.	g.	F. M	E. A.	Am.	..	..	..	..	..	*	*	..	*	..	..	..
56	Kirtland	m.	r. ob.	y. r.	v. g.	F. M	E. A.	Am.	..	..	..	..	..	..	..	..	*	*	*	..
57	Knight's *Knight's Seedling.*	m.	r. ob.	y.	g.	M.	A.	Am.	..	..	..	..	..	*	..	..	..	..	..	..
58	Lawrence	m.	r. o. p.	y. r.	v. g.	F. M.	W.	Am.	..	..	..	*	..	**	**	**	**	*	*	*
59	Louise Bonne de Jersey	l.	ob. p.	y. g	v. g.	F. M.	E. A.	F.	..	..	*	*	**	*	*	*	*	**	*	..
60	Madeleine	m.	p.	y. g.	v. g	F M.	S.	F.	..	..	..	..	*	..	..	..	..	..	..	..
61	Madame Eliza	l.	r. a p.	y. r.	v. g.	F. M.	A.	B.	..	..	..	..	..	*	..	..	..	..	..	..
62	Manning's Elizabeth	s.	ob. p.	y. r.	v. g.	F.	S.	.....	..	..	..	..	..	*	*	..	*	..	..	..
63	Marie Louise	l.	p.	y. r	v. g	F.	A.	B.	..	..	..	..	..	**	*	*	..	*	..	..
64	McLaughlin	l.	ob. p.	y. g.	v. g	F. M.	W.	Am.	..	..	*	..	..	**	*	..	*	..	..	..
65	Merriam	m.	r. ob.	y. r.	g.	F. M.	A.	Am.	..	..	..	*	..	**	*	..	*	..	..	..
66	Mount Vernon	m.	r. o. p.	y. r.	v. g.	F. M.	L. A.	Am.	..	..	..	..	..	†	..	..	†	..	..	..
67	Napoleon	l.	ob. p.	y.	g.	M.	A.	B.	..	..	..	..	..	..	*	*	..	..	*	..
68	Nouveau Poiteau	l.	p.	y.	g.	M.	L A.	B.	..	..	..	..	..	*	*	*	*	..	..	..
69	Onondaga *Swan's Orange.*	l.	ob. p.	y. g.	v. g.	F. M	L. A.	Am.	*	..	..	*	*	**	*	*	*	*	**	..
70	Osband's Summer	s.	r. p.	y. g.	v. g.	F.	S.	Am.	..	..	..	..	*	*	*	*	*	*	..	..
71	Ott	s.	r.	y. g.	g.	F.	S.	Am.	..	..	..	..	..	..	*	*	*	..	..	..
72	Paradis d'Automne	l.	r. a. p.	y. r.	v. g.	F.	E. A.	B.	..	..	..	*	..	**	*	..	*	..	..	..
73	Passe Colmar	l.	r. o. p.	y.	g.	M.	W.	B.	..	..	..	..	..	*	..	..	..	..	..	..
74	Pinneo or Boston	s.	r. ob.	y. g.	g.	.....	S.	Am.	..	..	..	..	..	*	..	..	..	..	..	..
75	Pound *Belle Angevine, Winter Bell, Uvedale's St. Germain.*	l.	p.	y.	g.	K. M.	W.	.....	..	..	..	..	..	*	..	*	*	..	..	..
76	Pratt	m.	ob. p.	y. r.	g.	M.	E. A.	Am.	..	..	..	†	..	*	*	..	*	..	..	..
77	Rostiezer	s.	p.	y. g.	b.	F.	S.	.....	..	..	..	*	*	**	*	*	..	..	*	..
78	Rutter	m.	r. ob.	y. g.	v. g.	F. M.	A.	Am.	..	..	..	..	..	..	..	..	†	..	..	..
79	St. Ghislain	m.	p.	y.	g.	F. M.	E. A	B.	..	..	..	..	*	*	*	..	..	..	..	..
80	St. Michael Archangel	l.	r. p.	y. g.	g.	F. M.	A.	F.	..	..	..	*	..	**	..	*	*	..	..	..
81	Seckel	s.	r.	y. g.	b.	F. M	A.	Am	..	..	*	*	*	**	*	*	**	*	*	*
82	Sheldon	m.	r.	y. g.	v. g.	F. M	A.	Am.	..	..	..	*	*	**	**	*	**	*	..	..
83	Sterling	m.	r.	y. g	v. g.	F. M.	E. A.	Am.	..	..	..	..	..	*	..	..	*	..	*	..
84	Stevens' Genesee	l.	r.	y.	v. g.	F. M	E. A.	Am.	..	..	..	..	..	..	..	..	*	*	*	..
85	Supreme de Quimper	m.	r. p.	y. g.	v. g.	F.	S.	B.	..	..	..	..	*	*	..	..	..	..	..	..
86	Tyson	m.	r. a. p.	y. g.	b.	F.	S.	Am.	..	..	..	†	*	*	*	*	*	*	*	..
87	Upper Crust, (local)	m.	r.	g.rus	poor	.....	S.	Am	..	..	..	..	..	..	..	..	..	..	..	..
88	Urbaniste	m.	p.	y. g.	v. g.	F. M.	A.	B.	..	..	*	*	*	*	*	*	**	..	..	..
89	Vicar of Winkfield *Le Cure.*	l.	p.	y.	g.	K. M.	W.	F.	..	..	*	..	*	**	*	*	*	*	*	..
90	Washington	m.	ob o p.	y.	v. g	F. M.	E. A	Am.	..	..	..	..	..	*	*	..	*	*	..	..
91	White Doyenne *Virgalieu.*	m.	ob. p.	y. g.	b.	F. M.	A.	F.	..	..	..	..	*	..	..	..	..	*	*	*
92	Wilbur	s.	r.	y. r.	g.	.....	E. A.	Am.	..	..	..	..	..	*	*	..	..	..	..	..
93	Willermoz	l.	ob. p.	y. r	g.	M.	L. A.	B.	..	..	..	..	..	*	..	..	..	..	..	..
94	Winter Nelis	m.	ob. p.	y. r.	b	F. M.	W.	B.	..	..	..	*	*	*	*	*	**	*	*	*
95	Windsor *Summer Bell.*	l.	p.	g.	g.	M.	S.	.....	..	..	..	..	..	*	..	..	..	*	..	..

51 An old variety; very healthy and productive.
53 A pear of great promise in its season.
58 A hardy tree.
59 Very productive and profitable.
60 Some say liable to blight.
63 A capital pear, but unreliable.
64 Hardy and promising.
65 Valuable for market.
69 The more known the more esteemed.



72 Ranks with Beurre Bosc.
77 Of superior quality.
80 But yet little known; promising.
86 A hardy tree.
89 One of the most profitable for market.
94 Of rare excellence; requires age ere profitable.
95 Of poor quality, but profitable for market.

XV.—PLUMS.

The columns explain: Size—l., large; m., medium; s., small. Form—r., roundish; o, oval; r. o., roundish oval; o. ob, oval obovate. Color—p., purplish or very dark; r., reddish or copper color; y., yellow; g. y., greenish yellow; y. r, yellowish with shades or spots of red. Quality—g., good; v. g., very good; b, best. Use—F., family; M, market. Season—E., early; M., medium; L., late. Origin—Am. American; F. Foreign.

Number.	Names.	Description.							I.—Northern Division—between 42°										
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Admiral								..	..	..	..	*	..	..	..	..	..	..	..
2	Bavay's Green Gage *Reine Claude de Bavay.*	l.	r.	g. y.	b.	F.	L.	F.	..	..	*	*	*	..	*	*	**	..	*	..
3	Bleeker's Gage	m	r. o.	y.	v. g.	F. M.	M.	Am.	..	..	..	..	..	..	..	..	*	..	*	..
4	Bradshaw	l.	o. ob.	r. p.	g.	M.	M.	Am.	..	..	..	..	..	*	..	..	*	*	..	..
5	Brill								..	..	..	..	..	..	..	..	..	..	..	..
6	Bryanstone Gage	m	o.	y. r.	v. g.	F.	L.	F.	..	..	..	..	..	†	..	..	†	..	..	..
7	Canawa								..	..	..	..	..	..	..	..	..	..	..	..
8	Chickasaw	s.	r.	y. r.	g.	M.	L.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
9	Coe's Late Red	m.	r.	p.	v. g.	F. M.	L.	F.	..	..	..	..	..	..	..	..	..	..	..	..
10	Coe's Golden Drop	l.	o.	y. r.	v. g.	F. M.	L.	F.	..	..	*	..	*	..	*	*	*	*	*	..
11	Columbia	l.	r.	p.	g.	M.	M.	Am.	..	..	..	..	*	..	..	..	*	..	..	..
12	Cruger's Scarlet	m.	r. o.	r.	g.	F.	M.	F.	..	..	..	..	*	..	..	..	..	..	..	..
13	Damson	s.	o.	p.	g.	M.	L.	Am.	..	..	..	..	*	..	..	..	*	*	..	..
14	Domine Dull	m.	o.	p.	g.	M.	M.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
15	Drap d'or	s.	r.	y.	g.	F.	E.	F.	..	..	..	..	..	..	..	..	..	..	..	..
16	Dnane's Purple	l.	o.	r. p.	g.	F. M.	E.	Am.	..	..	..	..	*	*	..	..	*	..	..	..
17	Early Favorite	m.	r o.	p.	g.	F.	E.	F.	..	..	..	..	*	..	..	..	*	..	..	..
18	German Prune	l	o	p.	g.	F. M.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
19	General Hand	l.	r. o.	g. y.	g.	F. M.	M.	Am.	..	..	..	..	..	..	*	..	*	..	..	..
20	Green Gage	s.	r.	g. y.	b.	F.	M.	F.	..	..	*	..	*	*	..	*	*	*	*	..
21	Helen's Seedling, (local)								..	..	..	..	..	..	..	..	..	..	..	..
22	Huling's Superb	l.	r. o	g. y.	g.	F. M	M.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
23	Imperial Gage	l.	o.	g. y.	b.	F M.	M.	Am.	..	..	*	..	*	*	*	*	**	*	..	..
24	Imperial Ottoman	m.	r.	y.	g.	F.	E.	F.	..	..	..	..	*	..	..	..	..	..	..	..
25	Indian Chief								..	..	..	..	..	..	..	..	..	..	..	..
26	Italian Prune *Fellenburg.*	m	o.	p.	g.	F. M.	M.	F.	..	..	..	..	*	..	..	..	*	..	..	..
27	Jefferson	l.	o.	y. r.	b.	F. M.	M.	Am.	..	..	..	..	*	*	*	*	**	*	..	..
28	July Green Gage	m	r.	y. r.	v. g.	F.	E.	F.	..	..	..	..	..	..	..	..	*	..	..	..
29	Kirke's	m.	r. o.	p.	g.	F.	M.	F.	..	..	..	..	..	..	..	..	..	..	*	..
30	Lawrence's Favorite	l.	r.	g. y.	b.	F. M	M.	Am.	..	..	..	..	*	..	..	*	**	*	..	..
31	Lombard	m.	r. o.	r. p.	g.	M.	M.	Am.	..	..	*	..	**	..	*	*	*	*	*	*
32	Long Scarlet *Scarlet Gage.*	m.	r. ob.	r.	g.	F.	M.	F.	..	..	..	*	..	..	..	..	..	..	..	..
33	McLaughlin	l.	r.	y. r.	b.	F. M.	M.	Am.	..	..	*	..	*	*	..	*	*	*	..	..
34	Monroe	m.	o.	g. y.	g.	M.	M.	Am.	..	..	..	..	..	..	..	..	*	..	..	*
35	Nota Bene, (Corse)	l.	r.	r. g.	g.	F.	M.	Am.	..	..	..	..	*	..	..	..	..	..	..	..
36	Orleans *Red Damask.*	m.	r.	r.	g.	F.	M.	F.	..	..	..	..	..	..	..	..	..	..	..	..
37	Peach	l.	r.	p.	g.	M.	E.	F.	..	..	..	..	*	*	..	..	*	..	..	..
38	Pond's Seedling *Foothill.*	l.	o	y. r.	g.	M.	M.	F.	..	..	..	..	†	..	..	..	†	..	..	..
39	Prince Engelbert	l.	o.	p.	v. g.	F. M.	M.	F.	..	..	..	..	..	†	..	..	†	..	..	..
40	Prince's Yellow Gage	m.	o.	y.	v. g.	F. M.	E.	Am	..	..	..	..	*	*	*	*	..	*	*	..
41	Prune d'Agen	m.	o.	p.	b.	F.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
42	Purple Gage	m.	r.	p.	v. g.	F M.	M.		..	..	..	..	..	..	*	*	*	..	..	..
43	Purple Favorite	m.	r. ob.	p.	b.	F. M.	E.	Am.	..	..	..	..	..	..	..	*	**	..	..	..
44	Quackenboss	l.	r.	p.	g.	M.	M.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
45	Royale Hative	m	r.	p.	v. g	F. M.	E.	F.	..	..	..	..	*	..	..	..	*	..	..	..
46	Royale de Tours	l.	r.	r.	g.	M.	E.	F.	..	..	..	..	..	..	..	..	*	..	..	..
47	Schenectady Catharine	m	r. o.	r.	g.	F.	M.	Am.	..	..	..	..	*	..	..	..	..	..	..	..
48	Smith's Orleans	l.	o.	r. p	v. g	F. M.	M.	Am.	..	..	..	..	*	..	*	*	*	*	..	..
49	St. Catharine	m.	ob.	g. y.	v. g.	M.	L.	F.	..	..	..	..	..	..	..	..	*	..	..	..
50	St. Martin's Quetsche	m.	o.	g. y.	g.	M.	L.	F.	..	..	..	..	*	..	..	..	..	..	..	..
51	Sharp's Emperor *Victoria.*	l.	r. o	y. r.	g.	M.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
52	Temple								..	..	..	..	..	..	..	..	..	..	..	..
53	Transparent Gage	m.	r. ob	g. y.	v. g.	F.	M.	F.	..	..	..	..	..	..	..	..	†	..	..	..
54	Wangenheim	m.	o.	p.	g	M	M.	F.	..	..	..	..	..	..	..	..	†	..	..	..
55	Washington	l.	r. o.	g. y.	v. g.	F. M	M.	Am.	..	..	*	*	*	*	*	*	*	*	*	..
56	Wild Goose	s.	r.	y. r.	g.	M.	M.	Am.	..	..	..	..	..	..	..	..	..	..	..	*
57	Yellow Egg *White Magnum Bonum.*	l.	o.	y.	g.	F. M	M.		..	..	..	..	*	..	..	..	*	*	*	..

XV.—PLUMS.

The columns explain: SIZE—l., large; m., medium; s., small. FORM—r., roundish; o., oval; r. o., roundish oval; o. ob., oval obovate. COLOR—p., purplish or very dark; r. reddish or copper color; y. yellow; g. y., greenish yellow; y. r., yellowish with shades or spots of red. QUALITY—g., good; v. g., very good; b., best. USE—F., family; M., market. SEASON—E., early; M., medium; L., late. ORIGIN—Am., American; F., Foreign.

			and 49°										II.—Central Division—between 35° and 42°																III.—South. Div.—b. 28° & 35°									
NUMBER.	Minnesota.	Dakota	Montana.	Wyoming.	Idaho.	Washington.	Oregon	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
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XVI.—QUINCES.

The columns explain: Size—l., large; m., medium; v. l., very large. Form—ob. p., oblate pyriform; r., roundish; r. ob. p., roundish obtuse pyriform. Color—y., yellowish or yellowish green. Quality—t, tender; h. t., half tender. Use—K., kitchen; M., market. Season—E., early; E. to L., early to late. Origin—Am., American; F. Foreign.

Number.	Names.	Description.							I.—Northern Division—between 42°									
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Angers	v.l	ob. p.	y.	t.	M. K.	E. to L.	F.	..	..	..	..	..	*	..	..	*	..	..	..
2	Apple or Orange	l.	r.	y.	h. t.	M. K.	E to L.	....	..	..	..	..	..	*	*	..	*	*	*	..
3	Portugal	v.l	ob. p.	y.	t.	M. K.	E.	F.	..	..	..	..	..	..	*	..	..	..	..	..
4	Rea's Seedling	l.	r.ob.p	y.	h. t.	M. K.	E.	Am.	..	..	..	..	..	..	..	..	*	..	..	..

XVII.—RASPBERRIES.

The columns explain: Size—l., large; m., medium; s, small. Form—r., roundish; r. c., roundish conical; c., conical; ob. c., obtuse conical. Color—b., black; r, reddish; p., purplish; y., yellow. Quality—g., good; v. g., very good; b., best. Use—M., most profitable for market; F. M., of value for family and market; F., mostly valued for the family dessert. Season—E., early; L, late; M., medium. Origin—Am. American; F., Foreign.

Number.	Names.	Description.							I.—Northern Division—between 42°									
		Size.	Form.	Color.	Quality.	Use.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	American Black	s.	r.	b.	g.	M.	M.	Am.	..	..	*	..	*	..	*	..	*	*	..	*
2	Belle de Palluau	l.	c.	r.	v.g.	F.	M.	F.	..	..	..	..	..	..	..	..	*	..	..	..
3	Belle de Fontenay	l.	c.	r.	g.	F.	L.	F.	..	..	..	..	..	..	*	*	*	..	..	..
4	Catawissa	m.	r.	p.	g.	F.	L.	Am.	..	..	*	..	..	..	..	*	*	..	..	..
5	Clarke	m.	r.	r.	g.	F. M.	E.	Am.	..	..	..	..	*	*	*	..	*	..	†	..
6	Davison's Thornless	m.	r.	b.	g.	F. M.	E.	Am.	..	..	..	..	*	..	..	..	..	..	..	..
7	Fastolff	l.	r c.	r.	v.g	F.	M.	F.	..	..	..	..	..	..	*	*	*	..	*	..
8	Franconia	l.	r.c.	p.	v.g.	F. M.	M.	F.	..	..	..	..	*	*	*	*	*	*	*	..
9	French	m.	r.	r.	v.g.	F.	M.	Am.	..	..	*	..	..	..	..	..	*	..	..	..
10	Golden Thornless	m.	r.	y.	g.	F.	M.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
11	Golden Cap	m.	r.	y.	g	F.	M.	Am	..	..	..	..	..	..	..	..	..	..	..	*
12	Herstine	l.	o.b.	r.	v g.	F. M	M.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
13	Hornet	l.	c.	r.	v.g.	F. M	M.	F.	..	..	..	..	..	*	..	..	*	..	..	..
14	Hudson River Antwerp	l.	c.	r.	b.	F. M.	M.	Am.	..	..	..	..	*	..	..	..	*	..	*	..
15	Knevett's Giant	l.	ob. c.	r.	b.	F.	M.	F.	..	..	..	..	*	*	*	*	..	..	..	..
16	Merveille de 4 Saisons *October Red.*	l.	r.c.	r.	v.g	F.	L.	F.	..	..	..	..	..	..	..	..	*	..	..	..
17	McCormick *Mammoth Cluster.*	m.	ob.c.	b.	v g.	F. M.	L.	Am.	..	..	*	..	*	*	*	*	*	*	*	*
18	Miami	m.	r.	b.	g.	F. M.	M.	Am.	..	..	..	..	..	..	..	..	..	..	..	*
19	Orange	l.	c.	y.	b.	F.	M.	Am.	..	..	*	..	*	*	*	*	*	*	**	*
20	Ohio Everbearing	m.	c.	b.	g.	F. M.	L.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
21	Philadelphia	m.	r.	p.	g.	M.	M.	Am.	..	..	*	..	..	..	*	..	*	*	..	*
22	Purple Cane	m.	r.	p.	g.	M.	M.	Am.	..	..	..	..	..	..	..	..	*	..	..	..

4 Deep, rich soil or not profitable.
16 Not profitable.
17 Profitable market sort.
19 Valued for family use.

XVI.—QUINCES.

The columns explain: Size—l., large; m., medium; v. l., very large. Form—ob. p., oblate pyriform; r., roundish; r. ob. p, roundish obtuse pyriform. Color—y., yellowish or yellowish green. Quality—t., tender; h. t, half tender. Use—K., kitchen; M., market. Season—E., early; E. to L., early to late. Origin—Am., American; F., Foreign.

Number.	I.—Northern Division—between 42° and 49°								II.—Central Division—between 35° and 42°																	III.—South, Div.—b. 28° & 35°							
	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
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XVII.—RASPBERRIES.

The columns explain: Size—l, large; m., medium; s., small. Form—r., roundish; r. c., roundish conical; c., conical; ob. c., obtuse conical. Color—b., black; r. reddish; p. purplish; y., yellow. Quality—g., good; v. g. very good; b., best. Use—M., most profitable for market; F. M., of value for family and market; F., mostly valued for the family dessert. Season—E., early; L., late; M., medium. Origin—Am., American; F., Foreign.

Number.	I.—Northern Division—between 42° and 49°								II.—Central Division—between 35° and 42°																	III.—South, Div.—b. 28° & 35°							
	Minnesota.	Dakota.	Montana.	Wyoming.	Idaho.	Washington.	Oregon.	Pennsylvania.	New Jersey.	Delaware.	Maryland & D. C.	Virginia.	North Carolina.	Ohio.	Indiana.	West Virginia.	Kentucky.	Tennessee.	Illinois.	Iowa.	Missouri.	Nebraska.	Kansas.	Colorado.	Utah.	Nevada.	California.	South Carolina.	Georgia.	Alabama.	Florida.	Indian Territory.	Arkansas.	Mississippi.	Louisiana.	Texas.	New Mexico.	Arizona.
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20 Not profitable.
21 Very productive.
22 An old variety, by many thought to be superseded.

XVIII.—STRAWBERRIES.

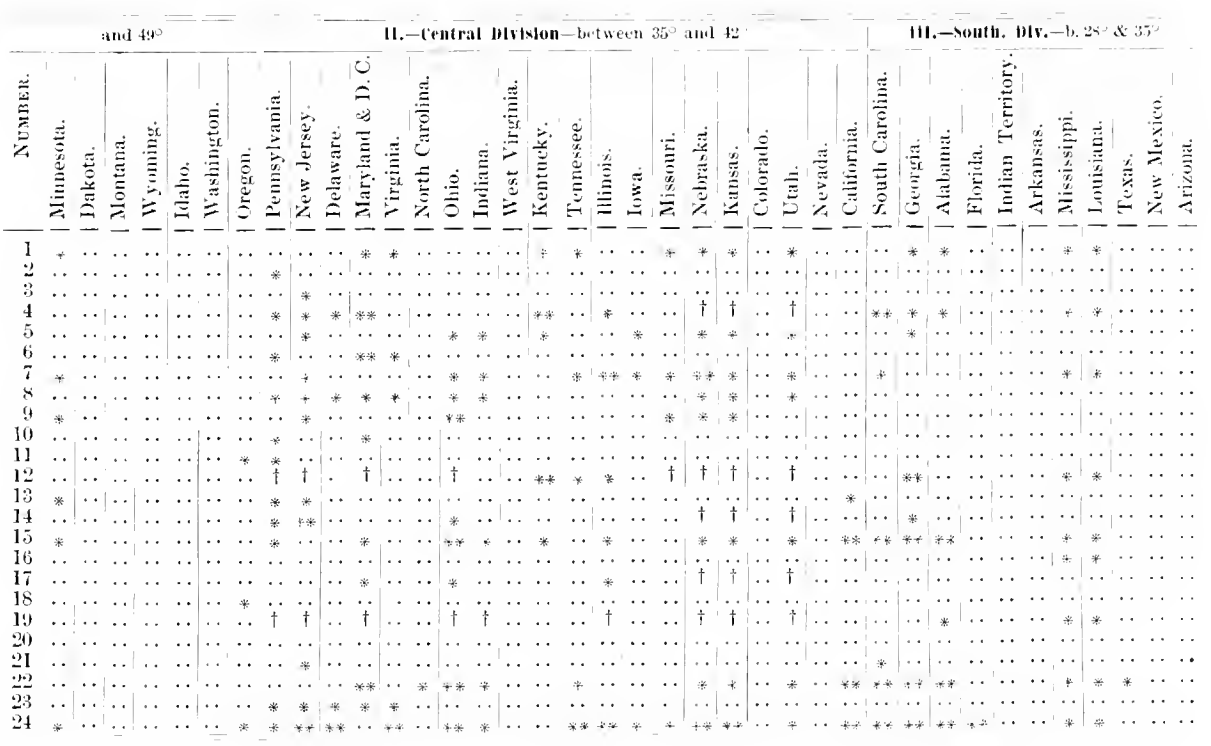
The columns explain: Size—l., large; s., small; m., medium. Sex—H., Hermaphrodite; P., Pistillate. Color—d. c., deep crimson; d. s., deep scarlet; b. s., bright scarlet; w. t., whitish tinted with red; l. c., light crimson. Form—r. c., roundish conical; o. c., obtuse conical or coxcomb form; c., conical; r., roundish; r. o. c., roundish obtuse conical. Flesh—s., soft; f., firm. Season—E., early; M., medium; L., late; E. L., early to late. Origin—Am., American; F., Foreign.

Number.	NAMES.	DESCRIPTION.							I.—Northern Division—between 42°											
		Size.	Sex.	Color.	Form.	Flesh.	Season.	Origin.	Nova Scotia.	New Brunswick.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Connecticut.	New York.	Ontario.	Michigan.	Wisconsin.
1	Agriculturist	l.	P.	d.c.	r.c.	f.	M.	Am.	..	..	..	..	*	..	*	..	*	..	..	..
2	Boston Pine	l.	H.	d.c.	r.c.	f.	M.	Am.	..	..	..	*	*	*	*	..	*	..	..	..
3	Black Defiance	l.	H.	d.r.	r.o.c.	f.	M.	Am.	..	..	..	*	..	..	..	..	*	..	..	..
4	Charles Downing	l.	H.	d.s.	c.	f.	M.	Am.	..	..	..	..	..	..	*	*	*	*	**	..
5	Downer's Prolific	m.	H.	b.s.	r.c.	s.	E.	Am.	..	..	..	..	..	..	*	*	*	..	..	..
6	Fillmore	m.	P.	d.s.	o.c.	f.	M.	Am.	..	..	..	..	..	..	*	..	..	..	..	..
7	Green Prolific	l.	P.	l.c.	r.o c.	s.	M.L.	Am	..	..	..	..	..	..	..	..	..	..	..	..
8	Hovey's Seedling	l.	P.	b.s.	r.	f.	M.	Am.	..	..	..	..	*	**	*	*	*	..	*	..
9	Ida	m.	H.	d.s.	r.c.	f.	E.L.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
10	Jenny Lind	m.	H.	d.c.	c.	f.	E.	Am.	..	..	..	..	*	**	*	*	*	*	..	..
11	Jucunda	l.	H.	b s.	o.c.	f.	L.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
12	Kentucky	l.	H.	b.s.	r.c.	f.	L.	Am.	..	..	..	..	..	†	..	..	†	..	†	..
13	Large Early Scarlet	s.	H.	l.s.	r.c.	s.	E.	Am.	..	..	*	..	*	*	*	..	*	..	*	..
14	Lennig's White	l.	H.	w.t.	r o.c.	s.	M.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
15	Longworth's Prolific	l.	H.	l.c.	r.	f.	L.M.	Am.	..	..	*	..	*	..	*	*	*	*	..	..
16	Mary Stewart								..	..	..	..	..	..	..	..	..	..	..	..
17	Nicanor	m.	H.	b.s.	r.o.c.	f.	E.L.	Am.	..	..	..	..	..	*	..	..	*	..	..	..
18	Peabody	l.	H.	r.	g	f.	M.	Am.	..	..	..	..	..	..	..	..	..	..	..	..
19	President Wilder	l.	H.	b.s.	r.o.c.	f.	M.	Am	..	..	..	..	..	*	..	..	†	..	†	..
20	Russell's Prolific	l.	P.	r.	g.	s.	M.	Am.	..	..	..	*	*	..	..	..	..	..	..	..
21	Seth Boyden	l.	H.	r.	o c.	f.	M.	Am.	..	..	..	..	..	..	..	..	*	..	..	..
22	Triomphe de Gand	l.	H.	l.c.	o c.	f.	M.	F.	..	..	*	..	*	*	*	*	*	..	*	..
23	Victoria	l.	H.	l c.	r.c.	f.	M.	F.	..	..	*	..	..	..	..	*	*	..	*	..
24	Wilson's Albany	l.	H.	d.c.	r.c.	f.	E L.	Am	..	..	*	*	**	*	**	*	*	**	**	*

8 An old highly valued sort.
9 Very productive.
14 Only valued for the amateur.
17 Extra for canning.
23 Esteemed as a family sort.
24 Poor quality; hardy and productive.

XVIII.—STRAWBERRIES.

The columns explain: Size—l., large; s, small; m., medium. Sex—H., Hermaphrodite; P., Pistillate. Color—d. c., deep crimson; d. s, deep scarlet; b. s., bright scarlet; w. t., whitish tinted with red; l. c., light crimson. Form—r. c, roundish conical; o. c., obtuse conical or coxcomb form; c., conical; r., roundish; r. o. c., roundish obtuse conical. Flesh—s., soft; f., firm. Season—E., early; M., medium; L., late; E. L., early to late. Origin—Am. American; F., Foreign.



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