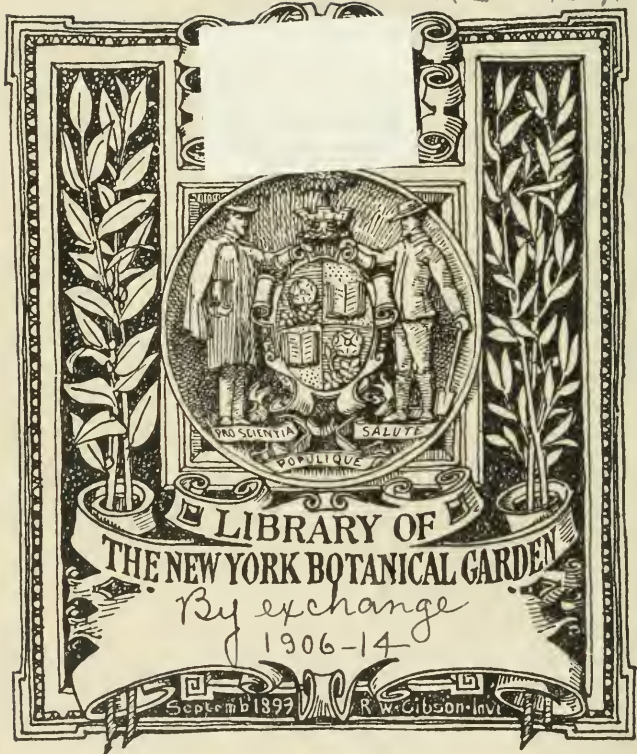


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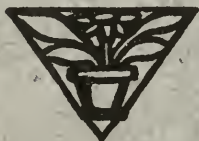
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JOURNAL OF THE Horticultural Society OF NEW YORK

VOL. I. No. I

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APRIL, 1906



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PUBLISHED BY THE SOCIETY

SECRETARY'S OFFICE: No. 1269 BROADWAY, NEW YORK CITY

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1906-14



JOURNAL

OF THE

HORTICULTURAL SOCIETY

OF NEW YORK

LIBRARY
NEW YORK
BOTANICAL
GARDEN

(INCORPORATED 1902)

Vol. I No. I

Issued
Quarterly

APRIL, 1906

Free to Members
By Subscription, \$1.00 a year



IN order to keep the members in closer touch with the work of the Society, and to put on record what it may accomplish from time to time, the Council has decided to establish a publication to be known as the "Journal" and which will be issued quarterly.

Future issues will be designed principally to report the transactions of the preceding three months and to carry announcements of the forthcoming meetings, or of any special action of the Council, or by the Society.

The "Journal" will be a regular publication, entirely distinct from the "Memoirs," which is issued at irregular intervals, and each volume of which latter will treat of some one special subject. There has been issued already Volume I of the "Memoirs," being the "Proceedings of the International Conference on Plant Breeding and Hybridization, 1902." Price \$2.00.

All members of the Society can assist in making the "Journal" of value to others who are interested in the progress of horticulture around New York, and they are invited to contribute any notes of observation which relate especially to gardening in the neighborhood of New York City.

THIRD ANNUAL REPORT OF THE COUNCIL

Presented at the Fourth Annual Meeting, May 12, 1903

The council reports a continued interest in the work of the Society. The membership has been slightly increased during the past year; two life members and one patron have been added to the rolls.

By far the most important work accomplished by the Society was in connection with the International Conference on Plant Breeding, held in the city on September 30th and October 1st and 2nd last. This Conference attracted visitors from all parts of the country and from England, the West Indies and Canada, while valuable papers were also contributed by others who were unable to attend. A special appeal for funds to help meet the expenses of the Conference was responded to cheerfully by the members, and very much good must result from the meeting. The proceedings of the Conference are now being printed for publication in book form, and will shortly be ready for distribution. Other meetings of the Society have been regularly held as follows:

JUNE 11, 1902.—Exhibition of summer flowers in connection with the New York Botanical Garden. Mr. James Wood delivered an address on "Horticultural Prospects."

NOVEMBER 12, 1902.—Co-operation with the American Institute in the regular fall exhibition.

DECEMBER 10, 1902.—No meeting.

JANUARY 14, 1903.—Lecture, "Possibilities in Plant Development," by Mr. C. L. Allen.

FEBRUARY 11, 1903.—Lecture, "How America's Largest Peach Orchards Are Managed," by Prof. W. G. Johnson.

MARCH 11, 1903.—Co-operation with the American Institute in the Rose Exhibition.

APRIL 8, 1903.—Outdoor Roses in New Jersey, by Mr. J. M. Chapman.

MAY 12, 1903.—Exhibition in co-operation with the New York Botanical Garden and lecture by Mr. J. K. M. L. Farquhar, on "The Fields, Flowers and Woods of Japan."

The financial condition of the Society continues to be satisfactory. There is now a sum of \$1,281.12 at interest, but the object being to accumulate a substantial reserve fund, this interest is not drawn for revenue. This sum includes interest up to January 1, 1903. There is a further sum of \$100 to be added.

Balance in hand to-day of \$918. 27.

LEONARD BARRON,
Secretary,

N. L. BRITTON,
Chairman of the Council

TREASURER'S STATEMENT

For the year ending May 11, 1903

<i>Receipts</i>	<i>Disbursements</i>
1902-3.	1902.
May 14, Balance in Bank.....\$ 958.27	May 20, Expense of Plant-Breeding Conference.....\$ 50.00
“ 19, From Secretary..... 350.00	May 20, P. M. Chapman (legal)..... 50.00
June 28, “ “ 45.00	June 19, Savings Bank Deposit. 650.00
July 7, “ “ 25.00	“ 24, June Show prizes..... 57.00
“ 19, “ “ 15.00	“ 26, May Show Prizes..... 90.00
“ 22, “ “ 55.00	“ 26, Printing 25.00
“ 23, “ “ 45.00	“ 26, Printing 25.00
“ 24, “ “ 45.00	“ 26, Conference Expenses.. 50.00
“ 28, “ “ 35.00	“ 26, Graphic Press..... 54.82
“ 30, “ “ 60.00	Sept. 10, Plant-Breeding Conference Expense..... 25.00
Aug. 1, “ “ 85.00	Oct. 1, 100.00
“ 12, “ “ 50.00	“ 16, Plant-Breeding Conference..... 30.00
Sept. 12, “ “ 125.00	“ 16, Plant-Breeding Conference..... 25.00
“ 18, “ “ 130.00	“ 16, Reed & Foreman..... 30.00
“ 22, “ “ 55.00	Nov. 10, Whiting Co. (prize cup)..... 25.00
“ 24, “ “ 50.00	“ 21, C. E. Allen, stenographic services at Conference.... 120.00
“ 29, “ “ 187.00	
Oct. 12, “ “ 70.00	1903.
“ 13, “ “ 160.00	April 25, Graphic Press..... 17.18
1903	“ 25, Graphic Press..... 27.00
May 12, “ “ 30.00	Jan. 27, Graphic Press..... 48.00
“ 13, “ “ 30.00	Secretary..... 187.50
	Bank Charges Country Checks. .50
	<u>\$1,687.00</u>
	Life Fund.....\$100.00
	General Fund..... 818.27
	Bal. as per Bank Book.. 918.27
	<u>\$2,605.27</u>
<u>\$2,605.27</u>	

PERMANENT FUND

DEPOSITED IN BROADWAY SAVINGS INSTITUTION.

Jan. 1, 1903, Deposits.....	\$1,250.00
Interest to Jan. 1.....	31.12
	<u>\$1,281.12</u>

FRED' C. R. NEWBOLD

Treasurer.

May, 1903.

FOURTH ANNUAL REPORT OF THE COUNCIL

Presented at the Fifth Annual Meeting, May 11, 1904.

During the past year the membership of the Society has been increased by eight annual members and one life, and it has lost by death four, and by resignation five, thus leaving the actual number of members as it was before, 201. It recommends for election to-day two nominees.

While the Council is gratified at the general support given to the Society by patrons of horticulture, it regrets that a larger share of support does not come from those who are more intimately connected with the industry.

The meetings of the Society have been held as follows:—

- JUNE, 1903—The exhibition arranged for this month was abandoned on the advice of the Exhibition Committee, the weather conditions not being considered favorable.
- OCTOBER 14, 1903.—At the American Institute, subject, "Pomological Developments of the Last Half Century," by Dr. F. M. Hexamer.
- NOVEMBER 10, 1903—The Society entered into co-operation with the great National Exhibition of the American Institute and the Chrysanthemum Society of America, at the Herald Square Exhibition Hall. This event was most successful and resulted in the finest fall exhibition ever held in New York City.
- DECEMBER 8, 1903.—The Society met in the rooms of the American Institute, when Mr. J. T. Scott discussed "The methods of Horticultural Training at the House of Refuge on Randall's Island."
- JANUARY 13, 1904—Meeting in the rooms of the American Institute, when "Our Native Trees in Landscape" was discussed by Mr. J. T. Withers.
- FEBRUARY 10, 1904.—An evening meeting was held in the American Institute rooms, and one of the most successful gatherings of the Society resulted. The subject of the meeting was, "Cultivated Orchids." Lantern slides from the collection of Mrs Van Brunt were exhibited and explained by Mr. G. V. Nash. Mr. G. Schneider discussed leaf mold as a compost, and a paper on "Cool Orchids" by Mr. E. O. Orpet was presented.
- MARCH 9, 1904.—Evening meeting on "Spring Work in our Gardens," contributed to by Messrs. G. T. Powell, C. L. Allen, and L. Barron.
- APRIL 13, 1904—Evening meeting, "Tree planting in our City Streets," introduced by Mr. H. A. Siebrecht.

MAY 11, 1904.—Annual meeting and Summer exhibition; lecture by Mr. J. Horace MacFarland on "Common Trees and their Uncommon Flowers" (illustrated).

The experiment of holding evening meetings has resulted in a better attendance of members.

The Council reports that arrangements are being made to continue the active interest of the Society during the Summer months, by a series of Saturday excursions to various centres of horticultural interest.

The Council has arranged for an exhibition of Strawberries, Roses, Peonies and Azaleas, to be held in the New York Botanical Garden, on June 8 and 9, and has invited the American Peony Society to co-operate in holding its first exhibition.

The proceedings of the Plant Breeding Conference have finally been put into form for publication, and will appear as Volume 1 of the "Memoirs" of the Society.

The financial statement of the treasurer (duly audited and submitted this day) shows receipts for the year \$810, expenditures \$602.41, leaving a balance in hand, General and Conference funds, \$925.86.

During the year a further sum of \$100 has been added to the permanent fund which, with interest up to January 1, 1904, now amounts to \$1,434.86.

LEONARD BARRON,
Secretary,

N. L. BRITTON,
Chairman of the Council

TREASURER'S STATEMENT

For the year ending May 10, 1904

<i>Receipts</i>		<i>Disbursements</i>	
1903-1904		1903-4	
May 12, Bal in Bank.....	\$ 818.27	June 1, Life Fund in Savings	
" 12, Bal. in Life Fund....	100.00	Bank.....	\$ 100.00
Oct. 5, From Secretary.....	385.00	1904	
" 5 " "	145.00	April 30, Secretary's Salary...	200.00
1904		" 30, Plant-Breeding Confer-	
April 30, " "	110.00	ence, Printing, etc.....	205.56
May 2, " "	70.00	April 30, Miscellaneous Printing	46.85
		" 30, Prizes at Exhibition..	150.00
			\$ 702.41
		May 11, Bal. in Astor Bank...	925.86
			\$1,628.27
	\$1,628.27		
PERMANENT FUND		FRED' C R. NEWBOLD	
DEPOSITED IN BROADWAY SAVINGS		<i>Treasurer.</i>	
INSTITUTION.			
1903.		Examined and found correct.	
May 12, As per book.....	\$1,281.12	N. L. BRITTON,	
June 1, Deposit	100.00	JAMES WOOD,	
1904		<i>Auditors.</i>	
Jan. 1, Interest	53.74		
	\$1,434.86		
		May 11, 1904	

FIFTH ANNUAL REPORT OF THE COUNCIL

Presented May 10, 1905.

The Council reports a year of progressive work. In order to place before the members of the Society the latest results and achievements in plant study, so far as they concerned the horticulturist, an attempt was made during the past season to have a series, of co-ordinated lectures on recent progress. With this object in view, arrangements were made for lectures by prominent investigators on subjects relating to the development of scientific cultivation and the making of new plants or varieties by sports and mutations. These lectures were of a highly instructive character. The Council considers that a greater general interest in the doings of the Society will be induced by the regular publication of an official organ, in which a summary of the lectures, and notes on the general progress of the Society will be put before the members. Arrangements are now being concluded for the publication of the "Proceedings of Horticultural Society of New York," which will be distributed free to all members, and may be subscribed for by others interested. It is planned to issue these "Proceedings" eight times a year.

During the past year the following meetings have been held:

- JUNE 8 AND 9, 1904.—Exhibition of Peonies in the Museum Building of the New York Botanical Garden. The American Peony Society accepted our invitation to hold its first annual meeting on that occasion, and a splendid and unique display of herbaceous peonies was made by several members of that organization. The formal meeting on June 8 was conducted by the officers of the visiting society.
- NOVEMBER 10-17, 1904.—The Society co-operated with the American Institute in the great Chrysanthemum Exhibition in Herald Square Hall. This was one of the largest displays of plants and flowers that the city has seen.
- DECEMBER 14, 1904.—Lecture by Dr. G. T. Moore, on "Recent Progress in Improving Fertility Through Soil Inoculation." (Illustrated by stereopticon).
- JANUARY 11, 1905.—Lecture by Dr. D. T. Macdougall on "Origin of Species by Sports and Mutations." (Illustrated by living specimens.)
- FEBRUARY 8, 1905.—The programme announced for this meeting was not called, in the absence of a quorum. The difficulties of travel in the city and the weather combined had this effect.

FEBRUARY 15, 16, 1905.—The Society joined with other organizations in the nearby districts of the Eastern New York section, New Jersey and Connecticut in a union meeting under the direction of Mr. F. E. Dawley, Director of Farmer's Institutes in New York

MARCH 8, 1905.—Papers on "Sports and Bud Variations From a Practical Standpoint," by Prof. L. C. Corbett and Mr. Patrick O'Mara, were not presented, there being no quorum. These papers are referred for publication in the "Proceedings."

APRIL 12, 1905.—Lecture by Dr. N. L. Britton, on "Recent Propositions Concerning the Classification of Cacti." (Illustrated by stereopticon.)

MAY 10, 1905—Annual meeting, with election of Council, officers, etc., and lecture by Prof. S. W. Fletcher on "Summer in the Fruit Garden." (Illustrated by stereopticon.)

The membership of the Society now stands: One Patron, twenty life members, and 168 annual members; total, 189. Death has lessened the roll of members by five: S. P. Avery, Emil Calman, Mrs. W. H. Osborn, W. H. Parsons and Mrs. W. T. Blodgett.

The Committee of the Council having in charge the matter of the die for a medal of the Society has finally reported, a design has been approved, and dies are now being cut.

The publication of Vol. I of the Memoirs of the Society—being the proceedings of the Plant Breeding Conference, was concluded early in the year and has been very favorably received by the public.

Receipts from all sources during the year amounted to \$844. 67. Balance in hand, \$710.10 The report of the Treasurer is referred to the Auditors.

LEONARD BARRON,
Secretary.

N. L. BRITTON,
Chairman of the Council

TREASURER'S STATEMENT

For the year ending May 9, 1095

<i>Receipts</i>		<i>Disbursements</i>	
1904-5		1904	
May 11, Bal. in Bank.....	\$ 925.86	Oct. 3, May Show Prizes—	
Dec. 13, Dues from Secretary..	250.00	Siebrecht & Son.....	\$ 50.00
" 14, " " " ..	80.00	F. Weinberg	30.00
" 17, " " " ..	85.00	W. Padrock	15.00
" 23, " " " ..	100.00	J. Green	10.00
1905		Oct. 3, June Show Prizes—	
Jan. 1, " " " ..	23.60	H. Nichols	16.00
" 18, " " " ..	130.00	F. R. Pierson Co.	25.00
Apr. 12, " " " ..	92.07	J. Wood	19.00
		C. Betcher	25.00
		F. Gould	10.00
Carried forward	\$1,686.53	Carried forward	200.00

HORTICULTURAL SOCIETY OF NEW YORK.

<table border="0" style="width: 100%;"> <tr> <td style="width: 80%;">Brought forward</td> <td style="text-align: right; border-bottom: 1px solid black;">\$1,686.53</td> </tr> <tr> <td colspan="2" style="border-top: 1px solid black; height: 200px;"> <div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border-left: 1px solid black; border-right: 1px solid black;"></div> </td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">\$1,686.53</td> </tr> </table> <p style="text-align: center; margin-top: 10px;"> PERMANENT FUND DEPOSITED IN BROADWAY SAVINGS INSTITUTION. </p> <table border="0" style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 80%;">Jan. 1, 1904 Balance in Bank..</td> <td style="text-align: right;">\$1,434.86</td> </tr> <tr> <td>Jan. 1, 1905 Interest</td> <td style="text-align: right;">57.94</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">\$1,492.80</td> </tr> </table>	Brought forward	\$1,686.53	<div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border-left: 1px solid black; border-right: 1px solid black;"></div>			\$1,686.53	Jan. 1, 1904 Balance in Bank..	\$1,434.86	Jan. 1, 1905 Interest	57.94		\$1,492.80	<table border="0" style="width: 100%;"> <tr> <td style="width: 80%;">Brought forward</td> <td style="text-align: right;">\$200.00</td> </tr> <tr> <td>Nov. 11, Publication of Memoirs, Vol. 1—</td> <td style="text-align: right;">.</td> </tr> <tr> <td style="padding-left: 20px;">Paper Stock</td> <td style="text-align: right;">61.33</td> </tr> <tr> <td style="padding-left: 20px;">The Cherouney Printing & Publishing Co.</td> <td style="text-align: right;">391.55</td> </tr> <tr> <td style="padding-left: 20px;">Graphic Press</td> <td style="text-align: right;">41.25</td> </tr> <tr> <td>Nov. 17, Postage</td> <td style="text-align: right;">15.00</td> </tr> <tr> <td>“ 20, G. T. Moore (lecture expense)</td> <td style="text-align: right;">18.85</td> </tr> <tr> <td>1905</td> <td></td> </tr> <tr> <td>Feb. 9, Landsberg Bros. Co. (stationery)</td> <td style="text-align: right;">4.10</td> </tr> <tr> <td>Feb. 9, Graphic Press</td> <td style="text-align: right;">13.15</td> </tr> <tr> <td>“ 9, Graphic Press</td> <td style="text-align: right;">30.70</td> </tr> <tr> <td>“ 9, Secretary's Salary....</td> <td style="text-align: right;">200.00</td> </tr> <tr> <td>Bank Charges on Country Checks</td> <td style="text-align: right;">.50</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">\$ 976.43</td> </tr> <tr> <td>Bal in Astor Bank.....</td> <td style="text-align: right;">710.10</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">\$1,686.53</td> </tr> </table> <p style="text-align: right; margin-top: 10px;"> FRED' C R. NEWBOLD <i>Treasurer.</i> </p> <p style="margin-top: 10px;"> May 8, 1905. </p> <p style="margin-top: 10px;"> Examined and found correct. J. H. TROY, JAMES WOOD. <i>Auditors,</i> </p> <p style="margin-top: 10px;"> May 10, 1905. </p>	Brought forward	\$200.00	Nov. 11, Publication of Memoirs, Vol. 1—	.	Paper Stock	61.33	The Cherouney Printing & Publishing Co.	391.55	Graphic Press	41.25	Nov. 17, Postage	15.00	“ 20, G. T. Moore (lecture expense)	18.85	1905		Feb. 9, Landsberg Bros. Co. (stationery)	4.10	Feb. 9, Graphic Press	13.15	“ 9, Graphic Press	30.70	“ 9, Secretary's Salary....	200.00	Bank Charges on Country Checks50		\$ 976.43	Bal in Astor Bank.....	710.10		\$1,686.53
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E X T R A C T S
F R O M L E C T U R E S
delivered before the Society

Extracts from Lectures

POMOLOGICAL PROGRESS IN AMERICA

BY F. M. HEXAMER, OCTOBER 14, 1903.

In no other branch of horticulture has there been as marked and rapid progress during the latter half of the last century as in fruit culture.

Not many decades ago apples were chiefly grown for cider; now they are an indispensable article of food. Not more than half a century since, the possibility of exporting American fruits to Europe was not even dreamed of, much less the finding of a market for them.

The first American fruits experimented with were Newtown Pipins, sent to England in bushel boxes, by Robert Pell, near Newburg on the Hudson; and they were so well liked that they brought from \$8 to \$10 per box. From this small beginning has gradually developed the immense export trade of the present day, and which is constantly increasing not only in the English markets, but also in Germany, France and other continental countries.

No more obvious evidence of the position of American fruits in the markets of the world could be presented than their record at the Paris world's fair in 1900, where the American exhibits of apples and citrus fruits were the largest ones there throughout the exposition. The United States section has had at all times during the display more than double the quantity of these fruits on exhibition than all other nations together, France included.

That the United States is destined to become, if it is not already, the leading fruit country of the world, can no longer be doubted.

Fruit growing for market has increased enormously in extent and has greatly advanced in its methods during the last 20 or 30 years. At the present time it employs vast sums of capital, furnishes a livelihood to armies of men and women, and yields on the whole, large profits. The fruit business in general in the United States has increased in much greater proportion than other agricultural industries; and while the production of fruit in the past 50 years has increased 2,000 per cent, the total population in the country during the same period increased only 270 per cent.

The importance of proper refrigeration during the entire process of marketing and transportation has only recently been fully realized and brought to practical and successful application. It has been learned that even our best fall and winter fruits need a cool temperature, if we expect them to reach the consumers in first-class condition. Quick transportation, proper handling and ceaseless watchfulness at every step from picking to the hands of the consumers are indispensable and are to be secured only by intelligent organization and co-operation.

Half a century ago the cultivation of small fruits, as a distinct feature in

fruit culture, had no existence. While strawberries, raspberries, currants and perhaps a few other berries were found in some gardens, the principal family supply of these fruits was drawn from the fields and woods. The regular marketing of strawberries in New York City had its beginning with a few wagon loads of little Scotch Runners from Hackensack, N. J., brought across the Hudson River in sailing sloops, as often as twice a week, wind and tide permitting. These were peddled through the streets in small, handled splint baskets, strung on long poles, carried by strong negroes, across their shoulders. Then were about 3 weeks the limit of the strawberry season, while now it begins with the Florida crop in January and closes with that of Canada at the end of July. Similar conditions prevailed in regard to other small fruits.

Not a few men and women now living remember the time when there were no Hovey or Wilson strawberries, nor any other kinds of improved small fruits nor grapes offered in our markets. Small fruit culture of a definitely organized and systematized business is of distinctively American origin; and in the development of small fruits no material progress was made until the improvement of the native species was begun. All these fruits went through an initial stage of depending upon foreign varieties. Following this, an area of improvement set in, during which, by careful breeding of the native species, and infusion into them of the improved European blood, by hybridization, strains better adapted to American conditions were obtained. This change from almost total reliance upon introduced varieties to a marked supremacy of sorts originated here has taken place almost wholly during the second half of the 19th century. The entire list of strawberries recommended in the American Pomological Society's first fruit catalog consisted of Large Early Scarlet, Hovey and Boston Pine; in Blackberries of New Rochelle; in grapes of Isabella and Catawba, with Diana for trial; Black Caps had no recognition among cultivated fruits. A glance at present catalog will readily demonstrate the pomological progress in this direction.

The radical changes in conditions during the last decades of the 19th century along agricultural and commercial lines have been followed by the general distribution of many insect pests of a serious character. In commercial transactions the dangers have been so great along certain lines that many state laws have been enacted to prohibit the distribution of such insects as the San Jose scale and others of a dangerous nature. Ability to successfully combat noxious insects is a problem of the most vital importance to farmers, fruit growers, nurserymen, gardeners, florists, millers, grain dealers, transportation companies, merchants, grocers, housekeepers and others. This is especially true of the fruit, nursery and grain industries. The use of hydrocyanic acid gas and carbon bisulphide, two very powerful insecticides, has largely solved these problems.

In no one of the appliances of science teaching to fruit growing has the American so clearly the advantage of the European as in the knowledge of insect and fungous pests and of the means of dispatching them. The superiority of the American fruit as a general market product is due in a considerable degree to fumigating and spraying.

CAN SPORTING OF PLANTS BE INDUCED?

BY L. C. CORBETT, MARCH 8, 1904.

The sporting of plants as we term the vegetative variations which occur during the life of the individual is only a special form of *variation*. Variation we know is the natural tendency of plants and animals. The direction and extent of such variation is frequently predetermined by external circumstances—environment—or by inherent tendencies of the individual or species.

In fact, fixity of type, either in nature or under cultivation, is a very difficult thing to attain, as all seedsmen and plantmen well know. The fixity which appears to exist in nature and which is responsible for the existence of so-called species is the result of certain limiting forces working in conjunction through countless generations. Break up this deadlock and the species almost invariably throws off varieties, a convenient term for indicating a departure from the parent type.

From what has been said it will be evident that I consider a sport simply a marked variety or variation, which may appear as a distinct individual or as a part of an individual during its period of existence, in which case for purposes of distinction we are pleased to call the latter a bud sport or variety.

Sporting, then, may be encouraged by extreme conditions. Either extreme feeding or extreme poverty may induce plants to sport. Severe changes in climate or soil conditions may result in decided changes in stature, habits of growth and faithfulness, which are as marked attributes of a sport as are changes in the color of foliage or fruit.

Burpee's dwarf lima bean is a good example of a sport where the habit of the plant was markedly changed. The white and fancy sports of the Lawson carnation are good illustrations of changes in color. Just here I wish to note that in a bed of Lawsons and upon a plant with otherwise normal flowers one shoot produced a blossom one-half of which was pure white, while the other half was of the normal pink of the Lawson. These sports in the Lawson are exceedingly interesting, for they clearly indicate that the Lawson is composed of two parts, pink and white, in which the pink is the predominant. Under favorable conditions, however, the white asserts itself, and we have the sports above spoken of. This frequent breaking out of a recessive character is all the more interesting in the case of the Lawson carnation on account of the fact that neither of its immediate parents were white. The Lawson being the result of a cross of Daybreak, *pink*, with Van Leewen, *cerise*. The facilities now at hand do not allow me to analyze the composition of either Daybreak or Van Leewen, but I suspect from the behavior of Lawson sports that one of these and perhaps both of them have a strong white strain of blood in them.

From what has been said it is evident that cross pollination is believed to be one of the most important means through which the sporting or variation of plants can be induced. The wonderful results obtained by Burbank in his work with fruits has been based almost entirely upon the practice of cross pollination. In connection with this work there seems to be two pretty well established theories. They may be stated somewhat as follows: When working

with species the more violent the cross that can be secured the more variable will be the hybrids in the second generation, and the more likelihood there is of securing distinct forms or monstrosities. Second, that when working with plants which are themselves of crossbred or hybrid origin, the peculiar attributes of the particular plants used for breeding purposes cannot be counted upon to appear in the mongrel offspring except, in so far as these characters form important dominant or recessive characters in the breeding of the parent plants.

The marvelous results achieved by some of our modern plant breeders seems to lie in their wonderful skill as manipulators of plants. Crosses have been successfully made by these men and fertile seeds obtained from plants which have been considered incompatible and so entirely distinct that it was considered heresy to seriously consider the question of making such a cross. I am free to confess that with ninety-nine persons out of every hundred engaging in such work I believe the results would be "nil." The success of the one proves his superior skill and ability to discern the conditions essential for success. The factors then which may be considered as contributing to the sporting of plants are; Extreme conditions in the environment, such as marked changes in latitude, altitude, soil conditions, as from alluvial to desert; Increased food supply, the results of an excessive use of plant foods or of cultivation; and Violent or continuous cross-breeding.

THE ORIGIN OF SPECIES BY SPORTS AND MUTATIONS

BY D. T. MACDOUGAL, JANUARY 11, 1905.

It was in 1590 that, in a garden at Heidelberg, a sport of the celandine occurred which had cut leaves and otherwise differed from the ordinary plant. This plant had never been known to appear again except as a seedling from the original one. It was something quite distinct and quite permanent, coming true from seed. That was the first record of the mutation of species. Darwin had his attention attracted to the interesting phenomena of the sporting of plants, and wondered whether in some way that was not connected with the production of new species. He was put off the track of this idea by the persuasions of his friends, especially by Wallace; and further investigation was abandoned along these lines. It was about 1865 that Mendel made public the results of his work on the peas. Then followed the pangensis theory of Darwin that each organ on the plant as it would finally develop was represented in the seed by a special cell, or rather a gemmule—each leaf, each twig, each separate part was the product of a certain special division of the seed. The speaker paid a high tribute to the methods and to the honest investigations of Darwin. So great was the interest of Darwin and his work that, from that time, until recently, people ceased to study the problems of organic evolution and discussed Darwinism itself. They wrote books about Darwin and later other books on the books about Darwin. It was in 1880 to 1890 that De Vries became interested in the problems that were before the world. He reasoned that the principle

of natural selection was too slow to account for the development of new species. His first step was to take 100 plants, native and cultivated, and watch to see what happened. Out of these it was observed that *Oenothera Lamarckiana* did not come true from seed. In 1887 he saw some plants of this in a potato field—thousands of them—some of which were unlike their parents. He gathered seed and sowed it so the next year he had 50,000 seedlings, out of which 334 did not agree with the parents and even differed among themselves. They belonged to ten or twelve types, however, and continuing the work he had some sixteen types after three or four years. By a reference to the plants which Dr. Macdougall had brought with him he illustrated the appearance of 14 distinct types in his own seedlings raised at the New York Botanical Garden. These were very distinct and varied in form of leaf, in size, and otherwise. Some of these had been identified as species.

There were no gradations among them. They did not show connecting links. Out of 100 seedlings, three to five were mutants. The essential points of mutation were these; That they come off without any connecting types; that they are, so to speak, side steps, and not progressive developments from the parent. The third point—and it was a puzzle to the botanists—were the mutants going to exterminate the parent? It was hardly likely, if we considered the small proportion of new forms. Ninety-five per cent. came true. Figure that the species goes on year by year. *O. Lamarckiana* would yield, say 200,000 seeds. Only 5 per cent. are of new forms, and they may not be adapted to the conditions. So it must take the new plant a very long time to get ahead. That species were developed by this sudden method was pretty clear if we thought of the age of the earth. It is not old enough to have allowed the development of all the species now found upon it by the slow method of natural selection. But natural selection accompanied the saltatory origin of species. New forms were developed, but only such as best fitted the situations survived. The others die off.

One must not think that *Oenothera* is the only plant showing mutations. Discontinuous variation appeared elsewhere as in monstrous flowers, also the doubling of florists' flowers and the singling of those that were double offered evidence of discontinuous variation. If it were wanted to see if a plant were mutating, get a pure species, get pure soil—he used steam sterilized soil—and grow the seedlings where they can remain undisturbed. Look carefully at the young plants and preserve every "unlike" form; weed out duplicates only, to avoid the charge of destroying the connecting links. This is, of course, the exact reverse of garden culture practices.

Dr. Macdougall exhibited also a mutant form of the native evening primrose (*O. biennis*); he had recognized one out of several thousand seedlings saved from the wild plants in the garden—but then, perhaps, he was not keen enough to recognize all the variations. The mutants vary in succeeding generations, but do not vary toward the parent, and the variation is greater in them than in the old species.

In reply to a question the lecturer stated most positively that no permanent alteration in a plant had ever been brought about by conditions of cultivation; that new developments under cultivation were mutant forms and must be so accorded.

THE CLASSIFICATION OF CACTACEÆ

BY N. L. BRITTON, APRIL 12, 1904.

The grouping of the species of cactuses into genera has been one of the most difficult problems of systematic botany, because this classification has necessarily been based largely on the plant body alone, inasmuch as the flowers and fruits of many of the species have either been unknown to botanists or imperfectly understood. It has been known that certain features of structure of the plant body are associated with characters of the flowers and fruits, and that if these were known in all the species, a truly scientific grouping could be established. As everyone who has grown cactuses knows, many plants will remain alive in collections for years without making any considerable growth and without flowering; herbarium species, prepared either from plants in their native haunts or from those in collections, are in many instances unsatisfactory for study, because they can, at the best, be but fragmentary. Herbarium specimens supplemented by flowers and fruit preserved in formalin, by photographs of the flowering plant and by colored drawings of the flowers, are satisfactory taken in connection with the living plant, and if such series of material of each species can be brought together, it will ultimately lead to a far better understanding of this very interesting family.

The preparation of manuscripts for the "North American Flora," now in course of publication by the New York Botanical Garden, through the aid of the David Lydig Fund, bequeathed by Judge Charles P. Daly, has made it very desirable that a more accurate knowledge of the cactuses of North America should be obtained within the next few years, and the bringing together of the material along the lines outlined has been undertaken in co-operation with Dr. J. N. Rose, of the U. S. National Museum, greenhouses at Washington and at New York have been set aside for the housing of the plants, and exploration of the cactus-yielding regions of North America, including the West Indies and the continent south to the Isthmus of Panama, is going forward and will be continued as rapidly as means for it become available.

The lecture was illustrated by lantern slides selected to bring out the principal features of the various groupes of cactaceæ, and numerous modifications of currently accepted generic limits were indicated.

NOTES OF INTEREST

The Secretary's office is now at Room 409, No. 1269 Broadway, where all correspondence should be directed.

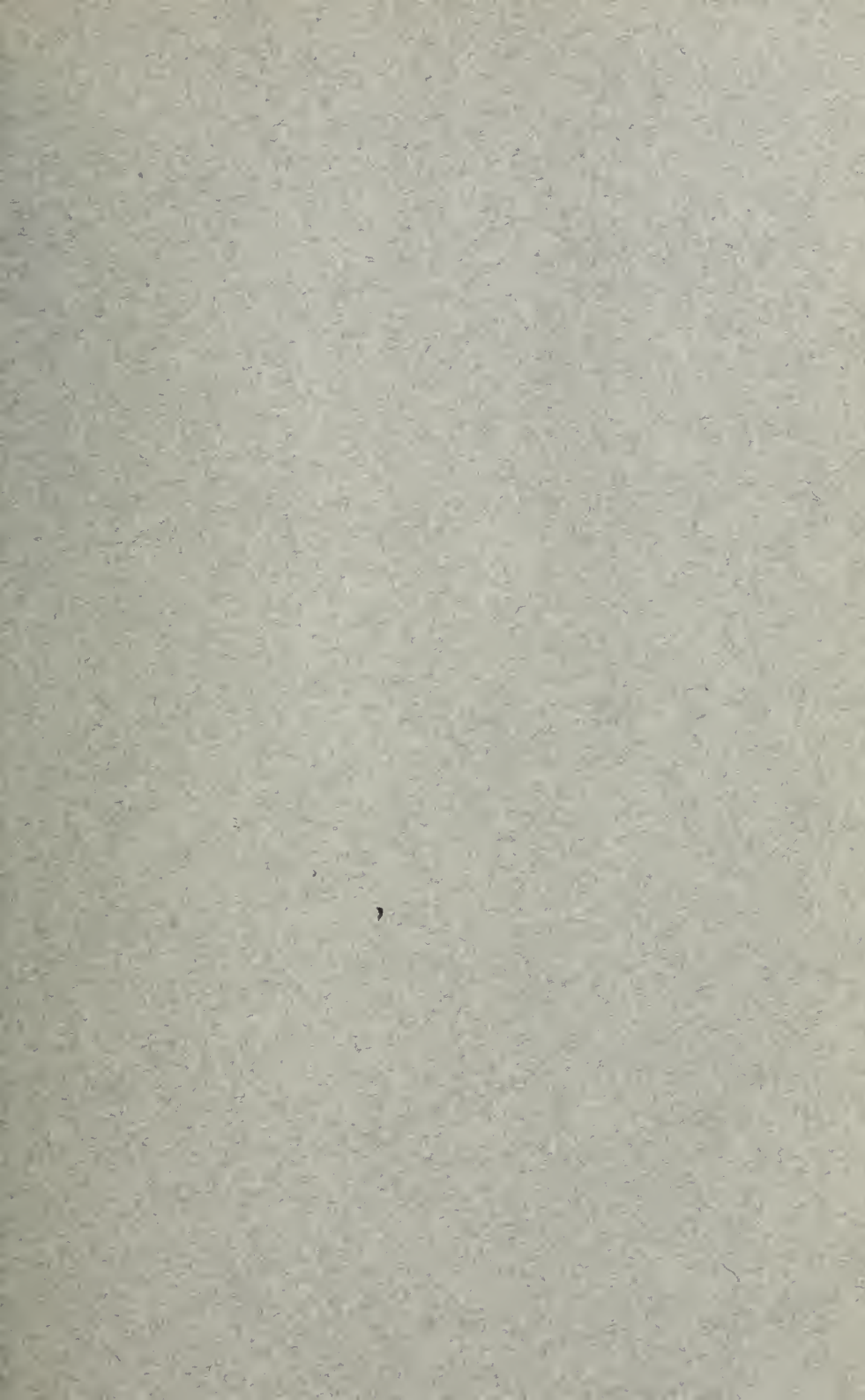
The corrected die for the Society's medal has been finally approved, after much delay, and the medals awarded have been struck.

A letter has been received from the Council of the Royal Horticultural Society of Great Britain inviting this Society to name two delegates to attend the Third International Conference on Plant Breeding and Hybridization, to be held in London, July 30th to August 3rd.

Possibly some members are acquainted with persons who are eligible for membership in the Society, and would gladly join if it were brought before them. A neat form of invitation, which also sets forth the purpose of the Society has been prepared. It is of a convenient size for mailing with other correspondence, and can be had from the Secretary.

Arrangements are made for a series of vegetable trials by members of the Society, during the present year. A number of members responded to the invitation of the Council, and the arrangements for the observations are in the hands of the Vegetable Committee. The object of these trials is to ascertain what varieties have the best table qualities near New York.

The Annual Meeting and Election of Officers for the session 1906-7 takes place on Wednesday, May 9th. Dr. N. L. Britton who has visited the West Indian Islands on several occasions will deliver an address on "The Horticultural Features of the West Indies." This will be illustrated by stereopticon, many entirely new photographs will be shown. Special announcement of time and place of meeting together with notice of any exhibition arrangements will be issued to members in due course.



The
Horticultural Society of New York

1905 - 6

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JOURNAL OF THE Horticultural Society OF NEW YORK

VOL. I. No. 2



JUNE, 1907

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JOURNAL
OF THE
HORTICULTURAL SOCIETY
OF NEW YORK

(INCORPORATED 1902)

LIBRARY
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GARDEN

Vol. 1,
No. 2.

Free to
Members

JUNE, 1907

By Subscription,
\$1.00 a year

Sixth Annual Report of the Council.

Presented May 9, 1906.

The Council has held regular meetings throughout the year on the same days as the regular meetings of the Society, and two special meetings before the opening of the public sessions in the Fall.

The regular meetings of the Society, when lectures have been delivered, have been held in the rooms of the American Institute, and the Council has recently been considering the desirability of again returning to afternoon meetings. Many members have expressed a desire for an earlier hour.

In connection with the November meeting, which was held in the New York Botanical Garden, an experiment was tried in holding an exhibition of Native and Tropical Fruits and Nuts. It resulted in a most interesting gathering, contributions being received from various nearby places from Georgia and also from the West Indies. A collection of tropical fruits representing all the kinds offered in the New York market at that date had been gathered by direction of the Council and resulted in a very instructive display. A particularly valuable feature in the exhibition was the collection of Native Nuts, embracing about one hundred samples exhibited by Dr. Robert T. Morris.

The Council announces that the first number of the Journal of the Horticultural Society of New York was published in April and this publication will take the form of a periodical. It is hoped that the membership will co-operate with the officers of the Society in making this publication a

valuable and reliable record of horticultural conditions in and around New York City.

A series of co-ordinated trials of vegetable varieties has been undertaken by several members of the Society with a view of ascertaining what varieties of table vegetables are best suited to New York City district, when measured solely by standards of high quality and suitability for cultivation by the amateur.

During the past year meetings have been held as follows: June 14 and 15, Summer Exhibition, at the New York Botanical Gardens; November 8 and 9, Exhibition of Edible Nuts and Fruits of Native Trees, and Outdoor Chrysanthemums, with lecture on November 8th, by Dr. N. L. Britton, entitled Fruits of Native Trees and Shrubs; December 13, Christmas Decorations, H. A. Siebrecht; January 10th, Botanical Features of Orchids with Exhibition of Seedling Plants, by Mr. Clement Moore, and lecture on Structure and Classification by Mr. G. V. Nash, illustrated by lantern slides; February 14th, Lecture, Carnations Past and Present, by Mr. Robert Craig, with exhibition of novelties; March 14th, Lecture on Economic Plants, illustrated by Mr. G. V. Nash; April 11th, Lecture on Ornamental Shrubs, illustrated, by H. A. Siebrecht; May 9th, Seventh Annual Meeting and Exhibition, with election of officers, and Lecture by Dr. N. L. Britton, on Horticulture in the West Indies.

The membership of the Society has decreased slightly since the last report there being on the rolls at this date 187 members.

The receipts from all sources during the year amounted to \$1,462.72; Expenditures, \$876.53; Balance in hand, \$586.19; Permanent Fund invested in the Broadway Savings Institution, \$1,553.08. The Treasurer's statement is submitted herewith.

Horticultural Society of New York, in account with Fred C. R. Newbold, Treasurer.

Balance from 1904-5.....	\$710.10	Prizes,	\$278.78
Sales Publications.....	27.62	Printing,	119.05
Dues, 145 memebtrs	725.	Petty cash, postage, etc.,..	55.80
		Lectures,	71.00
		Medals, die \$75; medals \$76	151.00
		Secretary's salary,	200.00
		Exchange on checks,90
			<hr/>
			\$876.53
		Balance in Astor Bank....	586.19
			<hr/>
	\$1,462.72		\$1,462.72
Balance forward to 1906-7, \$5,86.19.			
May 9th, 1906.			

FREDERICK R. NEWBOLD,

Treasurer.

Examined and found correct.

ALBERT L. WILLIS,

GEORGE V. NASH,

Auditing Committee.

May 9th, 1906.

Life Fund in Broadway Savings Bank.

In Broadway Savings Institution.

January 1st, 1905..... \$1,492.80

January 1st, 1906, interest.. 60.82

\$1,553.08

Examined and found correct,

ALBERT L. WILLIS,

GEORGE V. NASH.

May 9th, 1906.

The Seventh Annual Report of the Council.

Presented May 8, 1907.

The membership of the Society has suffered a slight decrease since the presentation of the last Annual Report, the number standing 1 Patron, 24 Life Members, and 147 Annual Members at this date, with three other members to be elected this day.

During the year, efforts have been made to increase the membership, but without any direct result, notwithstanding two energetic campaigns. The Council urges upon each member, the importance of bringing before the notice of those interested in horticultural work, what the Society is endeavoring to accomplish, and hopes that each member will exert his individual influence to increase the number during the coming season.

The meetings of the Society have been held regularly in the rooms of the American Institute, to which body the thanks of the Society is tendered for the use of its rooms and apparatus. All the meetings of this session with the exception of those connected with exhibitions in May, June and October have been held in the Institute Rooms.

This year, the experiment was tried of making the hour of meeting in the late afternoon instead of in the evening as was the case formerly, and it would seem that there was a slight increase in the attendance present at the several interesting lectures which have been delivered under the direction of the Society. The dates and subjects of the regular meetings have been as follows:-

June 13th, 1906. Exhibition of plants and flowers in the New York Botanical Garden. In consequence of the approach of the warm weather, the lecture by Mr. G. T. Powell on *The Value of Selection* was read by title. Prizes to the amount of \$201.00 from the funds of the Society and the New York Botanical Garden were awarded at this exhibition.

October 10th, 1906. Meeting and exhibition in the New York Botanical Garden. An exhibition of Dahlias and other fall flowers of remarkably good quality. The collection of Cactus Dahlias embracing an extremely rich selection of the most modern types. Prizes to the amount of \$50.00 were awarded.

November 14th, 1906. Meeting in the rooms of the American Institute, and illustrated lecture on *Lawn Making* by Leonard Barron. Exhibits of *Victory Carnation* by A. J. Guttman and a remarkably interesting lot of outdoor hybrid roses from Mrs. Aaron Ward.

December 12th, 1906. Lecture on *Sports* by Mr. P. O'Mara, paper being read by the secretary in the absence of the author, and resulted in an interesting discussion.

January 9th, 1907. Lecture by Dr. H. H. Rusby illustrated, Wild Grains and Nuts of the United States..

February 13th, 1907. Lecture on the Home Vegetable Garden, illustrated, by Mr. H. B. Fullerton. He emphasized particularly the possibility of raising fresh vegetables for the city markets on Long Island.

March 13th, 1907. Display of Lantern Slides entitled Snapshots in American Gardens, prepared by Herbert E. Angell, being glimpses into the most typical gardens in the eastern United States from Maine to Florida.

April 11th, 1907. Lecture by Mr. P. T. Barnes on Plants for Shaded Gardens. A very practical and instructive address.

May 8th and 9th, 1907. The Annual Exhibition of the Society held this day with lecture on Renovating the Old Orchard by Mr. George T. Powell.

The Council reports that acting on the instruction of the last Annual meeting of the Society, it entered into communication with kindred societies, institutions and individuals with a view to organizing of an International Conference on problems affecting Plant Hardiness and Acclimatization. A special committee was appointed to take charge of the arrangements to promote the conference and the response to the preliminary inquiries being found so encouraging, the Council has proceeded towards the organization, and has fixed the dates for the meeting to be September 30th and October 1st and 2nd. It is proposed that the first and last days be devoted to the presentation and discussion of papers, the second day being reserved for a visit to some place of interest in the neighborhood of the city. A preliminary program of some 24 titles has already been secured and is now shortly to be issued. The Council at this time urges the interest of the individual members in this important gathering which in many respects should parallel that of the International Conference on Plant Breeding and Hybridization held in 1902. It is proposed in this case as in the former case to publish the proceedings in book form.

The Society accepted the invitation of the Royal Horticultural Society and named Mr. J. H. Troy as a delegate to attend the Third International Conference on Plant Breeding in August. Mr. Troy presented a paper on "Florist Ideals in America."

Your Council has held regular meetings during the session on the same days as the stated meetings of the Society.

Financial statement for the year shows receipts from all sources	
total	\$ 900.18
Payments	1008.90
Leaving a cash balance of.....	477.47
The amount of the permanent fund has been increased, with	
interest to.....	1767.82

HORTICULTURAL SOCIETY OF NEW YORK.

The Treasurer's statement to April 24, 1907, has been examined and approved by the auditors, and is hereto attached.

Horticultural Society in account with Frederick R. Newbold, Treasurer.

May 9, 1906, Bal. Fow'd...\$ 586.19	Life Membership.....	150.00
3 Life Members	Secretary's Salary.....	200.00
Dues From Sec'y.....730.00	Secretary's Postage, etc.....	100.00
Sale Publications	Prizes May Show.....	103.00
	Prizes June Show.....	104.06
	Prizes October Show.....	50.00
	Thompson & Co., Printing.	212.80
	C. G. Braxmar, Medals....	20.00
	Riley Optical Co., Lantern.	15.00
	H. B. Fullerton, Lecture...	20.00
	Julius Hausman & Co.....	25.00
	A. H. Seaman.....	8.00
	Bank Charges on Country	
	Checks	1.10
		\$ 1008.90
1486.37	Balance in Bank	477.47
Balance fow'd to 1907-8 ac-		\$ 1486.37
count		
477.47		

Horticultural Society of New York, Life Fund in Broadway Savings Institution.

January, 1906.....	\$ 1553.08
3 Life Members.....	150.00
January, 1907. Interest....	64.74
	\$ 1767.82

FREDERICK R. NEWBOLD,

April 23, 1907.

Examined and found correct.

GEO. V. NASH,

JOHN E. LAGER,

May 8, 1907.

E X T R A C T S
F R O M L E C T U R E S
delivered before the Society

Structure and Classification of Orchids.

By G. V. Nash,—January 10, 1906.

What is an orchid? The general popular conception is that any plant with curious flowers, or which has its habitat upon trees, should be referred to this group of plants. The showy inflorescences, of many of the tail-flowers, *Anthurium*, are popularly, though erroneously, called orchids. The bromeliads, most of which occur on trees, are frequently regarded as orchids. Perhaps the most curious mistake is to refer the East Indian pitcher plant to this favorite lot of plants, and the error is often intensified by calling the pitchers the flowers.

It is rather difficult to give a popular description which will make it easy to determine an orchid. A study of the flower structure, however, upon which the botanist relies, will disclose the peculiarities which enable him to at once tell them. A brief description of the flower, therefore, and of some of the vegetative features of the plant, will not be out of place here. The floral envelope, or perianth, consists of six parts, the outer series consisting of three sepals, while the inner series embraces as many petals. The lateral sepals are sometimes united into one organ, as is the case in the genus *Cypripedium*, when there appear to be but two sepals. Of the petals, one is usually highly modified and is called the lip. This assumes many shapes from a small flat organ to a highly complicated one, such as is found in *Cypripedium* and its allies, in *Catasetum*, and in *Stanhopea*. The ovary, as in most of the monocotyledinous plants, to which the orchids belong, is usually 3-celled, or rarely 1-celled, and is inferior. The stamens and pistils are united into one organ called the column, and it is this feature which serves at once to distinguish this family from all its allies. The stamens differ in number. In one group, which includes *Cypridepium* and its allies, there are two fertile stamens, and one sterile one, the latter known as the shield or staminode. This group is known as the *Diandrae*. By far the greater number of orchids, however, have but a single stamen, and this group is hence known as the *Monandrae*. The anther in this latter group is sometimes attached to the column by a stout filament, it therefore remaining persistent. In this group the pollinia (the masses of pollen grains) are usually granular, and develop tails at the base. In the other group the filament is so fragile that it breaks at the slightest touch, the anther hence readily falling and usually carrying with it the pollinia, which, in this case, are waxy masses, often translucent, and develop tails, if these are present, at the apex. The stem is as highly modified as the flower. It is sometimes elongated, as in the well-known genus *Dendrobium*, or it is as frequently as much shortened and thickened, as in the genera *Oncidium*, *Odontoglossum*, and many of the

Epidendrums. In this case the thickened and shortened stem is referred to as a pseudo-bulb.

The inflorescence may be terminal or lateral, that is, it may arise from the base or from the apex of the stem or pseudo-bulb. The stem may be limited in growth, the case in most orchids, that is it may send out from the main stem branches which never elongate, as in many of the epidendrons, oncidiums and odontoglossums; or it may be of continuous growth, climbing frequently to a considerable height on trees, the apex of the stem or its branches continually advancing. To this latter group belong such genera as *Vanda*, *Angraecum*, *Vanilla*, etc.

The leaves in veneration are either conduplicate, that is folded, or they are convolute or rolled. In the first case there is usually a marked midrib, the rest of the leaf-frame being concealed in the fleshy tissue. In the second case there are usually several longitudinal nerves, and the tissue of the leaf is not so thick.

The above elements in the structure of flower and body of the orchid are used in their classification. It is not possible here, however, to go into the details of this.

The orchids are widely distributed, though mainly confined to tropical and warm temperate regions. There are probably between 6,000 and 7,000 species at present known to science. In the Old World they reach their maximum development in the East Indies and the Malayan region, while in the New World they are found in the greatest abundance in northern South America and in Central America. In the United States there are perhaps 150 species, representing about 44 genera.

The great mass of these plants is found in humid regions, although they sometimes inhabit excessively dry areas. This latter condition was impressed upon the speaker in a recent visit to the Inaguas, where he found growing in juxtaposition many plants of several species of the genus *Epidendron* and a species of *Agave*. The Inaguas are xerophytic and desert conditions prevail there. But the usual habitat is humid, either cold or hot, where these plants may be found in great numbers on the trunks and branches of trees, or sometimes clothing the faces of the rocks. Depending largely for their water supply upon the moisture available on the trees, a supply which must from the nature of things be more or less uncertain, these plants usually have thickened stems or leaves, and sometimes both. Whether you find them growing on trees in a humid forest or on the rocks or shrubs in the desert islands of the Inaguas, the water supply is precarious, and so in times of plenty the plants store up a water supply in the thickened leaves or stems. While epiphytes, or those growing upon trees, prevail in tropical and warm temperate regions, in cold areas, where frost and cold become factors, the orchids are terrestrial, having underground bulbs or fleshy roots which are protected by the surrounding soil. Adding

force to this is the fact that the epiphytic orchids of the United States are confined to the Gulf States. Terrestrial orchids, as a rule, have thin leaves, their habitat not making so precarious their water supply.

Orchids are local in distribution, extremely so in some cases. Few genera are common to both the Old World and the New, or if they are thus common they follow a zonal distribution. The genus *Cypripedium* may, perhaps, be cited as an exception to this, but it really may be taken as a good example of the point in view. This genus, as understood by botanists for many years, has now been separated into four genera by the best authorities of the present day. These four are: *Selenipedium*, *Cypripedium*, *Phragmipedium*, and *Paphiopedilum*. These segregates have been made on characters found in the ovary, in the veneration of the leaves, and in the relative position of the parts of the perianth. This may be summarized in the following key:

Vernation convolute; perianth withering, persistent in fruit.

Ovary 3-celled; seed subglobose, the seed-coat crusty.

Selenipedium.

Ovary 1-celled; seed elongated, the seed-coat thin.

Cypripedium.

Vernation conduplicate; perianth deciduous.

Ovary 3-celled; aestivation of sepals valvate; margin of sac of lip broadly involute or infolded.

Phragmipedium.

Ovary 1-celled; aestivation of sepals imbricated; margin of sac of lip upright, or but slightly incurved or recurved.

Paphiopedilum.

Thus by dividing, we not only get more natural genera but conform with what we know about the local distribution of orchids. Instead of a world-wide group of about 90 species, we have:

Selenipedium, with 3 species, known only from Central America to Brazil.

Cypripedium, in a restricted sense, with 28 species, zonal in distribution, from North America, Europe and Asia.

Phragmipedium, with 11 species, in tropical America only.

Paphiopedilum, with 46 species, from the Old World only, topical Asia, Malayan region, Philippines, etc.

The lecture was illustrated by a series of lantern slides, emphasizing the points made by the speaker. A large proportion of these were colored slides made by Mrs. Van Brunt, who kindly loaned them for the occasion. These colored slides were used especially to illustrate the genera peculiar to the Old World and the New, and such as were of zonal distribution.

Carnations, Past and Present.

By Robert Craig—February 14, 1906

This is "Carnation Night" at the Horticultural Society of New York, and I have been asked to say something to you on the subject of Carnations.

The Carnation, as grown to-day, is almost exclusively a florists' flower, and hybridizers have been breeding to improve this strain, but there is a wider field and important field for them,—the development of Garden Carnations hardy enough to live through the winter without protection, in the latitude of Philadelphia and New York, and with the quality of blooming through the summer. The discussion of this idea might form a lengthy paper in itself, so I will confine my remarks to varieties grown under glass for winter bloom.

It would not be wise for me, in view of the fact that, at the present time, the literature of the Carnation is so voluminous, to attempt to give you a comprehensive and detailed history of the wonderful flower, as we know it to-day, and as we see it here on the tables to-night.

There is more space in the gardening papers devoted to the Carnation than to any other plant or flower. The minutest details as to soils to be used, and methods of culture to be observed, as well as criticisms and descriptions of new varieties as they appear, with histories of the achievements of each in the competitive exhibitions throughout the country, with able discussions on the ancestry of each pedigreed variety; its vigor of constitution, or lack of it; its freedom of bloom or its failure to have this very desirable quality; its desirable habit of commencing to bloom early in the fall, or its undesirable tendency to defer blooming until a later period. Detailed and frequent information on every thing pertaining to Carnations, is so easily accessible that every one interested must have his desire for knowledge almost fully satisfied, as far as the printed page can give, and little further can be learned except by personal culture of the plant, which occupation I recommend to every amateur as one of the most charming that can engage his or her attention. So, I feel that if I am to interest you to-night, it may be by a brief expression of my thoughts as I review my experiences of the past forty years, with mention of the most famous varieties which have appeared from time to time, remaining with us until they were either overtaken with disease or were displaced by better varieties of similar color and character. Of the hundreds of sorts introduced in that period I will speak, in about the order of their introduction, and of each color separately, so as to bring clearly to your minds the wonderful improvement which, notwithstanding many failures, has gradually been made.

The frequent appearance of improved varieties is the principal factor

in maintaining the lively interest in the carnation; there is always something to be said about a distinguished new-comer and comparisons to be made with those that have preceded it; scarcely a year passes by without bringing us one or more real improvements; other kinds of plants and flowers, (with the possible exception of the Chrysanthemum) do not appear to be so susceptible of improvement.

Take the Rose, for instance; particularly the varieties which are forced for cut flowers; we see few changes for the better. Bride and Bridesmaid have remained for many years the leading Teas, and the peerless American Beauty has had no rival for a quarter of a century. It is true, that quite recently there have been introduced several good forcing roses, Liberty, Kilarney, and last the very valuable Richmond Rose. The latter is destined to be very largely grown; all honor to E. G. Hill for the Richmond. In his enthusiasm for novelties, he has sometimes given us sorts which did not "pan out," but his services in giving us this last new rose have atoned for all his previous shortcomings. He is busy raising rose seedlings, has thousands on the way, and with the experience of so many years to help him, is almost certain, soon again, to give us something we will all be proud of.

But we cannot hope to get good new roses as frequently as carnations, it is "not in the wood." Take again, another class of plants, the Palms, so deservedly popular as house plants. Nothing new appears at all equal to the old-time Kentias and Arcas. New palms, it is true, are introduced from time to time, but none equal to those which we have had so many years.

While the constant introduction of new carnations is very interesting and fascinating, it is alas, true, that where we get one real improvement, there are several introduced with exaggerated praises which are practically worthless. But it will be more difficult in the future to send out poor or mediocre sorts; the trade is becoming more and more critical and the National Carnation Society is doing all it can to prevent the introduction of inferior sorts. If there be a really good sort ready for market, this very critical inspection and wide publicity will only serve to advertise its merits and increase its sale.

The first valuable carnation to come under my notice was La Purité, which is generally spoken of, as of a deep pink color; it was rather a carmine with violet flame. The shade was very pleasing. It was imported from France in 1858; in 1862, my father bought one plant which cost \$2.50 and proved to be a good investment, as it was of easy propagation, and two years later we had a good stock which was in brisk demand at \$20.00 per 100. I once heard the late George Wilson of Malden, Mass., who was a very successful florist, say that the best investment he ever made in floriculture was the purchase of fifty plants of La Purite at \$5.00 per plant.

This was probably in 1861. This carnation was for fifteen years or more, the most largely cultivated of the time. It was very productive. I have seen a house of it at the late Wm. Bennett's, at Flatbush, which had on every plant from 75 to 100 buds at the one time. I never saw it grown in quantity quite so well as he grew it, but it came to pass, after he had grown it so well for a number of years, it was attacked by "stem-rot," and on calling at his place one day early in the winter, I found more than one half of the plants dead. It was so attacked, with more or less virulence, in all sections of the country, and I believe, the once grand old variety is now extinct. I last saw it at Karl Müller's place in West Philadelphia, about fifteen years ago. This fine old German gardener managed to grow it successfully five or six years after it had generally disappeared. The blooms of *La Purité* were about one-third the size of our now famous *Enchantress*, and the mental comparison between the two, is to me, very interesting. No carnation has had, as the theatrical men say, such a "long run on the stage" as *La Purité*. Its successors in the "deep pink" class were *Tidal Wave* and *Thos. Cartledge*, both useful, but *Tidal Wave* attained the greater popularity.

Of the "light pink" class there have been several notable ones; *Grace Wilder*, introduced by Mr. Tailby was a very useful variety, for many years the best of its color; later, we had the famous *William Scott*, and if Mr. Dornier had done nothing else, he deserves a monument for raising and introducing this. It came out at the same time as *Richmond* and *Albertina*, both of which excelled it on the exhibition table, but both fell so far behind it in productiveness that they were soon dropped, while *William Scott*, for many years had no successful rival, until Mrs. Francis Joost appeared. Later we had *Nelson* and *Genevieve Lord*. The famous *Lawson* then appeared. The introduction of this variety gave a greater impulse to carnation growing than any variety before or since. In many respects it was superior to anything preceding it; it was brilliantly advertised, and best of all, justified every claim made for it. It made Peter Fisher's name a household word in carnation circles, and when he introduced *Enchantress*, saying that it was "better than *Lawson*" there were many doubters, but Peter was right. We hope he may live to give us more as good or better. The parents of *Lawson* were *Tidal Wave* (locally known as *Van Leeuwen*) and *Daybreak*, which latter was a distinct and valuable "break." Out of *Lawson* have come several famous sorts, *Enchantress*, Mrs. M. A. Patton and Mr. Nelson Fisher, and Mr. Fisher has a brilliant red on the way. It is certainly a rich strain of blood.

And we are ready for another one of this color. *Helen Goddard* bids fair to be a winner, and when *Helen Gould* and *Winsor* are introduced next year, particularly *Winsor*, they will certainly prove valuable. I am in love with *Winsor*; it is just the shade of pink that is wanted, has a vigorous con-

stitution, a fine stiff stem, and is very productive. I have had no opportunity of seeing Candace, a western variety now being disseminated but I have heard it well spoken of by competent judges.

Another shade of color which has been very popular may be called "very light pink." The first one of these that I was familiar with was "Miss Joliffe" a light flesh, tinted with salmon. I knew it well thirty years ago as the best in its class. Later we had Daybreak. This was a very valuable variety with flowers larger than any which had preceded it, and with, for that date, wonderful long, stiff stems, and of a very lovely light flesh shade, and unusually productive; for many years the best of its class, it finally succumbed to disease and was displaced by Fair Maid and Enchantress both excellent varieties. In fact, I think Enchantress, the best carnation, all things considered, ever sent out in this country. It is still very popular, and as long as it continues to be as good as it is now, it will take a wonder, indeed, to displace it. It is a model in all that constitutes a good carnation, and raisers of new varieties should aim to get its qualities in their seedlings. What a boon a clear yellow Enchantress would be.

But I find my paper likely to take too much of your time, so in considering the important scarlet class, I will pass over them with brief mention. What a demand for this color at Christmas, it goes so well with the holly berries, the cheerful chimes and the general joy. Century was raised in 1878 by the late Charles T. Starr, and while more of a carmine than a scarlet, was very bright and was very useful until the advent of John Thorpe's Portia which was a brilliant scarlet and very largely grown for many years; its color has never been excelled; it was very productive; lack of size was its greatest drawback. Then we had in rapid succession Lady Emma, Allegatierre, Garfield (this is the variety that Donald McCallum called Robert Craig, thinking he had a "sport" but after being considerably grown as sections, G. H. Crane, for years a good one; then America, Adonis, and finally Cardinal; this has proved to be a good one in the western states, but has, so far, hardly come up to expectations in the east; in fact, it has been a great disappointment, producing a large percentage of worthless blooms.

Now, we will briefly consider the white class, so largely used for funerals, weddings and in general floral work. The oldest white one that I knew was President De Graw, imported from France about the same time as La Purité, and introduced to commerce by the late, lamented Charles Zeller, of Flatbush, the original carnation enthusiast of America, whose stock of more than fifty varieties I had the pleasure of inspecting some thirty-five years ago; carnation growing was in its infancy then. They were mostly grown in pots, although they were beginning to be planted by a few growers, mostly in solid beds, and a few on benches, which is now the most popular way of growing. President De Graw had a long run, many years of popularity. Then came Peerless or Edwards, followed by Kinzie's White;

Peter Henderson; Snowdon; Silver Spray, a good one; Lizzie McGowan, none better in its time; Flora Hill, for a long time famous and still grown to a considerable extent; Glacier, White Lawson, Queen Louise; The Queen; Lady Bountiful, is most beautiful; the greatest defect in this fine variety is the tendency to be a shy bloomer in the fall and early winter; and finally, Lieutenant Peary, which I think is the most valuable white to date; Vesper is another good one, and not as well known as it deserves to be; it is vigorous, early and continuous, very satisfactory with many growers; My Maryland, lacking in the essential qualities for a good commercial white; White Enchantress promises well; The Belle, is a very good white with many growers.

In crimsons, which is one of the least important, commercially, we have had Black Knight Louis Lenoir, Anna Webb, Crimson King, F. Mangold, Seawan, Gomez, Maceo, Daheim, Harlowarden and Harry Fenn; the latter two are the best in this class and are still cultivated.

The class known as white variegated has been represented by a number of varieties, enjoying a large measure of popularity; the best have been Hinsdale a good variety extensively grown fifteen or twenty years ago. I never saw it better than at John H. Taylor's, Bayside, L. I., for several years he grew it in large quantity; Chester Pride, Variegated La Purite, a sport from the great La Purité, Mrs. Bradt and Lilly Dean; Olympia; Prosperity; M. A. Patton and Variegated Lawson; the last two are the latest and best. Jessica which is being introduced this year, looks promising.

In yellow variegated, we have had Astoria, introduced by William Wilson, of Astoria, about thirty years ago, a fine variety in its day. Then came Charles T. Starr's Buttercup, introduced to the trade in 1884, and the best one we have ever had; followed by Andalusia and Sunrise and Eldorado, which are now probably both out of cultivation. We need a good new one in this class.

Now, I have named in all the classes, most of those that have been specially valuable in the past and those which are the best at the present time. I have also had the temerity to "pick the winners" of those being introduced this year. It is interesting to note that the early and free bloomers of the wide-awake English growers. Among the kinds that have done well over there may be mentioned Enchantress and America; Fair Maid, The Belle and Harlowarden have done particularly well. I recommend our English friends to try Helen Goddard, and, when they are introduced, Winsor and Beacon. Although there is a lack of sunlight in England, the free-blooming American varieties produce some flowers in the fall and winter, and in March, April, May and June bloom freely. As the London fashionable season runs into July, there is always a good demand for the blooms. The method of growing, heretofore, in England has been in pots, but the

American method of growing on benches has been introduced. Mr. Ditton, one grower near London has been quite successful.

One thing seems clear; the best of the American sorts are superior in productiveness to any on earth, and equal in form and color to the best anywhere. Although there have been many disappointments, the advances are surprising—almost bewildering—and it is to be hoped that those who have devoted so much time and thought to seedling raising, may continue with enthusiasm, in the good work, and that the number of those who are so engaged may be largely increased, for when success comes to any, it may be enjoyed by all, both professional and amateur, who are willing to participate. We owe much to those who are willing to grow hundreds of seedlings, and to test those of great expense for several years in the hope of occasionally getting one good enough to send out. The cool, calculating, "sure-thing" business man is not likely to spend much time raising seedlings, but the intelligent enthusiast in the carnation field, is always likely to become a benefactor to us all.

Useful or Economic Plants.

By G. V. Nash—March 14, 1906.

This subject is a broad one, and it would be impossible here to attempt to cover the whole subject. Only some of the useful and economic plants of tropical America were touched upon.

Among the fiber plants, of which there are many in all parts of the world, perhaps the most extensively cultivated in tropical America is *Agave rigida*, known as heniquen or sisal hemp. It belongs to the *amaryllis* family, and is said to be a native of Yucatan. It is extensively cultivated as sisal, particularly in Yucatan, West Indies, Turks Island, and Bahamas. It is especially useful for the manufacture of ship's cables, as it resists dampness better than hemp.

Among rubber plants may be mentioned *Castilloa elastica*, a native of Mexico and known as the Mexcian rubber tree. It is a member of the mulberry family, *Moraceae*. It is largely cultivated in Central America. The milky juice is obtained by incisions into the bark, and it is coagulated by adding alum or a decoction of *Calonyction speciosum*. An old tree, when first cut, is said to yield 8 gallons, each gallon making about 2 lbs., of rubber. On a large plantation on the north side of Haiti this tree is planted with the chocolate tree, *Theobroma Cacao*, eventually furnishing the shade needed by the latter tree, so that two crops may be growing on the same land. Another rubber tree is *Hevea brasiliensis*, said to furnish the best South American rubber. The seeds of this plant are said to be poisonous to man and quadrupeds, but are harmless to and readily eaten by birds.

Among the grasses, we have the common bamboo, *Bambusa vulgaris*, widely distributed in tropical America, but a native of Asia. Its uses to the natives are so many that they cannot all be mentioned here. Sections of the stem are made into flower pots and other utensils, water-pipes, troughs, etc. The stems are also extensively used in making the framework of houses. Another tree of great use is the calabash tree, *Crescentia Cujute*, a member of the *Bignoniaceae*. The fruit of this is manufactured into all sorts of vessels. It is hardly necessary to mention tobacco, which is largely grown, especially in Cuba.

Among the plants yielding beverages or drinks, the most important is *Coffea arabica*, from which the coffee of commerce is obtained. The coffee berries are red, about the size of small cherries, each berry containing two seeds, which are the coffee beans of commerce. Its use as a beverage is said to have originated in Abyssinia, and then to have passed into Arabia. It was first introduced into Europe about 1573. Another important beverage plant is *Theobroma Cacao*, from which is manufactured cocoa and choco-

late. It belongs to the Sterculiaceae, and is a native of tropical America, where it is widely cultivated. The flowers and fruits are borne on the trunk and bases of the older branches. The chocolate pods are 6-8 inches long, and contain five rows of seeds, each row with 10-15 seeds. These seeds are the chocolate beans of commerce. In the family Amaryllidaceae we have the genus *Agave*. From *Agave Americana*, and perhaps a few other species, is manufactured the pulque of Mexico. When a plant starts to bloom the bud with several of the upper leaves are cut out, leaving a large cavity in the center of the plant. In this cavity the sap of the plant collects; a large plant is said to yield two gallons per day for several months. This sap is fermented in rawhide bags, and is largely consumed by the Mexicans. *Aguardiente* or *mescal* is obtained from the pulque by distillation.

The fruits of tropical America are many, both native and introduced. Perhaps the most useful as an article of food is the plantain, *Musa paradisiaca*, largely taking the place there of the potato in the north. A close relative of this, *Musa sapientum*, in many horticultural forms, is widely cultivated as the banana. The greater part of the bananas which come to the United States are grown in Central America, northern South America and Jamaica. One of the most delightful of fruits, to those who once acquire the taste, is the mango, the fruit of *Mangifera indica*. It is hardly necessary to say that the natives do not have to acquire the taste, they are born with it. It furnishes a large part of the food for some months of the year, as it is very nourishing. It belongs to the Anacardiaceae, to which belongs our common sumac. In *Cocos nucifera*, the cocoanut, we have another valuable economic plant. This is a member of the palm family, *Palmaceae*, and its origin is veiled in obscurity, although supposed to have originated in America, where all its relatives are native. It is now extensively cultivated in all the tropical parts of the world. In an entirely different family, the *Bromeliaceae*, we find the pine apple, also extensively cultivated in tropical and warm temperate regions. In the southern part of Florida the pine apple industry is an extensive one.

In the *Moraceae*, or mulberry family, is the bread-fruit tree, *Artocarpus incisa*, which attains a height of 25-30 feet. It is a native of the Pacific Islands, and was introduced into the West Indies by the British Government about 1793. In *Carica Papaya*, the papaw, we have another economic fruit. This is a native of tropical America. Animal flesh when wrapped in its leaves becomes very tender; the same result is produced by boiling meat in its juice. In the laurel family, *Lauraceae*, to which our *sassafras* belongs, there is a tree which yields a fruit of great value as a food. This is the avocado pear, or alligator pear, *Persea Persea*, a native of the West Indies. The flesh of its fruit is very rich in fat, and is said to be highly nutritious. Among other native American fruits may be mentioned the sweet sop, *Anona squamosa*, highly prized by many, and the sour sop,

Anona muricata, which has a slight agreeable acid flavor. In the mammee apple, *Mammea Americana*, a member of the gamboge family, Clusiaceae, we have another tropical American fruit. The tree from which this fruit is derived grows 60-70 feet tall. The fruit is the size of a small melon or cocoanut.

The aroid family, Araceae, does not yield many edible fruits, but in *Monstera deliciosa* we have one. This fruit is known as ceriman and piña anona. It is a native of Mexico. The fruit is 6-8 inches long and not unlike a pine cone in shape. When ripe it tastes and smells very much like the pine apple. In *Manihot Manihot*, a member of the spurge family, Euphorbiaceae, we have another plant, from the roots of which is manufactured cassava. The juice is milky and exceedingly poisonous from the presence of hydrocyanic acid. This acid must first be extracted, and from the remaining tissue is eventually made tapioca.

There is another tree in tropical America of great importance, and while it does not yield a single economic product, it is the means by which many useful plants are enabled to thrive. It is the mangrove, *Rhizophora Mangle*, to which allusion is made. It lines the shores in many places, and by its action in extending the shore line many hundreds of acres of rich arable land have been added to the available soil in tropical America. A series of photographs illustrating how the mangrove does this were exhibited on the screen. Slides illustrating the other economic plants referred to were also shown.

The Value of Selection in the Propagation of Trees and Plants.

By G. T. Powell—June 13, 1906.

The limit or possibilities of production of a tree or plant, or of an acre of land, have never yet been reached or known. At the Columbian Exposition held in Chicago in 1893, New York State made an exhibit of potatoes that gave a yield of 1,000 bushels from an acre, but on French soil 1,353 bushels have been produced on an acre, while from small plots in England at the rate of 1,650 bushels have been produced per acre. Two factors have entered into the making of these great yields:—the enrichment of the soil and the selection of seed that had buds capable of making strong plants with power for very great production.

By a careful study of individual plants and the selection of seed from them, great advance has been made in the culture of the sugar beet. While the general average of beets grown from commercial seed is fifteen to seventeen per cent. of sugar content, one grower of seed on the Pacific Coast found from analysis of samples from 300 beets selected for seed a variation of twenty-one to twenty-four per cent., there being fifteen out of the number showing the higher percentage.

An increase of two per cent. in the saccharine matter of the beet would make an increase of 50,000 tons of sugar annually produced in the United States. The selection of the best seed becomes of the greatest importance to the grower, the factory, the refinery and to the consumers of sugar.

In no one field has there been greater advance in plant breeding and selection than with corn. Yields of 243 measured bushels in the crib per acre were produced in 1905, while the total yield for the United States reached 2,700,000,000 bushels, the value of which was \$1,216,000,000. But the work of highest value, through breeding and selection, has been that of increasing the protein element of corn. Protein has the highest value of any part of a food plant for it furnishes the most essential and important element of nutrition,—that which goes to make blood, bone and muscle, while the starch provides the sugar and fat which supplies the needed heat of the body.

Corn-breeding has been carried to a point in the increase in protein until it now equals that of wheat. The average of a large number of wheats will not exceed fourteen per cent. of protein, while through breeding and selection, the protein element of corn has been increased from ten to fifteen per cent. This is of immense value to over 80,000,000 of the population of our country, as also to many more millions in other countries who find in corn a cheap and most highly nutritive food. The value of increasing, through breeding, the most highly nutritive part of the grain to this extent can hardly be appreciated.

In fruit trees and plants there is an unlimited field for this most interesting and highly valuable work along the line of breeding and selection.

The strawberry, among small fruits, is perhaps the one most universally in demand and highly prized for its delicious flavor and excellent qualities. While the average yield of this most luscious fruit does not exceed 2,000 quarts to the acre,—which is nowhere near the quantity wanted by the consumers—it is possible to obtain yields of from 10,000 to 15,000 quarts. By studying the habit of the plants and selecting from a large number those individuals that show marked superiority in vigor, size of foliage, number of fruit bearing stalks produced, and the abundance of fruit on them, and propagating from such, very largely increased yields may be obtained.

By this method of selection accompanied by culture and an abundance of plant food, we have grown many plants on a commercial scale that have measured two feet across their diameters. This large development of individual plants has been obtained by keeping the runners cut closely and the plants grown in single hills. Runners represent one form of reproduction of the plant which is more or less exhaustive to the plant, and for every runner that is cut a bearing fruit stalk will be developed in the crown, and where there is an abundance of plant food always present in the soil the limitation of production is yet to be reached.

In the cultivation of the currant also on a large scale, we have practiced selection of plants for propagation until a very large increased yield has been obtained.

The principle of selection in the propagation of trees has a most important bearing on the results in the culture of fruit, as also on the growing of ornamental trees and plants. Many of our choicest varieties are not grown to a large extent for the reason that they have constitutional defects, lack of vigor or hardiness, defective foliage or susceptibility to disease, all of which make their culture uncertain and unprofitable. By a careful study of the individuality of different varieties and by the selection of buds or propagating material from the best, worked upon other and stronger stocks, they may be so improved as to make their culture more general.

By breeding and selection great improvement has been made in carnations, violets and roses and in many other plants, which in the productiveness of flowers have been increased in many instances more than one hundred per cent.

There is no flower that is so universally loved and desired as the rose. There is none that is more uncertain and disappointing in its culture. Through interminable crosses, to an extent that is bewildering, the weaknesses of many of those most beautiful and highly prized have been disseminated to an extent which gives rise to very much of the disappointing results in attempts to grow satisfactory roses. By careful selection of the strongest types, freest from the introduction of weaker varieties, it is yet

possible to produce roses of a sufficiently hardy type to make their culture more general and satisfactory, and this principle of selection may be carried out along very many lines of production of trees and plants.

From the old, single, modest petunia marvels of size in blossoms, and the widest variations in colors, have been produced by selection and cross-breeding of this very desirable flower, while the same and equally valuable results have been obtained in the culture of the carnation.

Sports.

By Patrick O'Mara—December 12, 1906.

About a year and a half ago I was invited to address this body on the subject of "Sports" in connection with a paper read here from Prof. L. C. Corbett. At that time the opportunity was not forthcoming to deliver the address which I had planned, and so the material which was accumulated was lost or mislaid and is not available now. My intention was to address this meeting without the aid of a written paper and thus possibly it would be more extended, but having been called away on a pressing matter, was compelled to hastily put something together so as not to disappoint the members and visitors.

It is with much misgiving as to my fitness for the task that I approach the subject, and willingly would I forego it entirely. It is to be hoped that at some future meeting some one competent to deal with it from its scientific aspect will be found who will address this body on the subject and treat it exhaustively, as I believe there are many of us who are intensely interested in it. The possibility that I may say something which will induce a further ventilation of the subject here is probably the motive which impels me to venture into it now. It is not my purpose to broadly consider the question of sports, but only to confine myself to a few of the leading varieties of cultivated plants which have originated in that manner, with possibly a passing reference to a few noted "seed sports" so popularly designated to distinguish them from those which have been produced by bud variation. A "sport" as popularly understood amongst florists and gardeners is that portion of a plant which assumes one or more characteristics essentially different from the rest of the plant, either in flower, foliage or habit. The vexed question amongst gardeners and florists is how this change takes place, to what prime cause can it be ascribed. I candidly confess to knowing little of what science has imparted on the subject, but that little leads me to believe that nothing definite has been enunciated. The preponderance of opinion as far as I have sounded it seems that "sporting" is due mainly to conditions of growth, or to put it in one word, environment. This cause is not accepted by the vast majority of growers as responsible for the phenomena of "sports," the general belief is that it lies in the blood, to use the vernacular, or to put it in one word, heredity.

In his paper presented to this society March 8th, 1904, Prof L. C. Corbett said: "Sporting, then, may be encouraged by extreme conditions. Either extreme feeding or extreme poverty may induce plants to sport. Severe changes in climate or soil conditions may result in decided changes in stature, habits of growth and faithfulness, which are as marked attributes of a sport as are changes in the color of foliage or fruit."

This is undoubtedly true in the abstract but it is when brought to bear on concrete cases that it fails to fully satisfy. If by extreme feeding is meant the culture given to roses for example by florists and gardeners when forced under glass for winter flowering, the question arises why more sports are not developed? When thousands of growers are forcing the same variety, it is not always the one who is feeding his crop the heaviest that finds it produces a sport. The fact, too, that a few varieties alone have displayed sportive tendencies to the extent of producing new sorts, strengthens the conviction that the cause lies in the blood.

The rose Catherine Mermet has been the most prolific in sports of the many which have been grown for cut flowers. Its greatest descendants as sports are The Bride and Bridesmaid, the latter displacing the parent entirely. If feeding was the prime cause, why did not many growers find a "Bride" and a Bridesmaid? Catherine Mermet also produced Waban and I think one or two other sports which have disappeared. Particolored sports have appeared occasionally in The Bride and now a grower has one beautifully striped white and pink, the latter being the Bridesmaid color and largely predominating.

Maman Cochet produced a white sport, and in this connection I would say that when a neutral shade like pink is produced, it seems that the combination which produced it carries with it the tendency at some time to produce a white sport. The rose we know as American Beauty has produced two pink sports, American Belle and Queen of Edgely and it is not too much to expect that these if largely grown would emerge a white sport.

From the rose Safrano came the yellow sport Isabelle Sprunt and from Perle des Jardins came Sunset, from the latter I believe came Lady Dorothea, from Golden Gate came Ivory, from Bon Silene came the striped rose American Banner, which in addition to the change in flower showed a marked change in foliage being decidedly rugose. The latter characteristic is slowly disappearing under propagation, in fact has almost vanished at the present time. Caprice, Striped La France and other striped roses coming from neutral tinted sorts, coupled with the fact that the other sports enumerated follow in the same line, are sufficient warrant for the belief that the combination which resulted in the parent sorts laid the foundation for the sports which resulted from them, and that the manner of growth had no part in it as a prime cause.

The sporting cycle in the Bouvardia is very interesting and in results it exactly parallels the examples set forth relating to the rose. From B. Hogarth a deep scarlet variety, issued B. Elegans a lighter colored form, and from that issued B. Davidsonii a pure white. It is interesting to note that two white sports originated at the same time, one in Greenville, now Jersey City, N. J., with Mr. Vreeland and offered as B. Vreelandii, the

other *B. Davidsonii*. They were identical and as the *Davidsonii* was first on the market the other name was dropped. The original stock of *B. elegans* in both cases was purchased from Peter Henderson and the conclusion arrived at then was that the elements of change were contained in the plants, and that it would occur under any circumstances. Subsequently a double white and a double pink variety were produced as sports, and later a dwarf variety, White Bouquet, sported from *B. Vreelandii* with William Bock of Cambridge, Mass., who retained the old nomenclature (*Vreelandii*.) having the same flowers as the parent, but a dwarf, bushy habit, about a foot high when in flower. The fact that these sports were progressive in color leads to the belief that the cause for their appearance was within the plant rather than that their coming was brought about by outside forces. As Bouvardias are largely propagated by root cuttings, it strengthens this belief.

An instance where at a bound a white sport issued from a scarlet variety is found in *Salvia splendens alba*. From *Salvia splendens*, at the base of the tube in the latter is always found a bleached white which extends less or more beyond the sheath, therefore, the white sport seems a natural progression, as the subsequent striped sport is.

The double *Abutilon*, a sport from *A. Thompsonii* and identical in its variegated foliage and color of flowers is the only case of sporting which I can recall in that plant, although widely grown.

The Carnation sports are numerous and here again they are progressive. I cannot recall, for instance, where a yellow issued from a red or white, or a white from a yellow or a crimson. It is when neutral shades are reached that sporting begins. The same is true of *Chrysanthemums* and to a lesser extent of *Dahlias*, both of which are very prolific in sports. It seems to be along well defined lines of color changes then that sporting follows, and the layman may well be pardoned when he arrives at the conclusion that it is in the blood and is not brought about by growing conditions. If the latter theory was correct, it seems to me there would be no limit to sports while the limitations seem to be arbitrarily fixed, which is not the case with seminal reproduction.

Another phase of sporting is when the habit of the plant is changed, some examples of which I have alluded to previously. Climbing roses issue frequently from dwarf sorts, particularly in the Monthly class. As far as I can recall, the flower in such cases is always identical with the parent. In the Hybrid Perpetual, and Hybrid Tea classes too, climbing sports are produced, but there is a difference very marked from the Monthly sports. The latter are easily fixed and never "run back," while the others to the best of my knowledge are never absolutely fixed, and thus are constant reversions, temporary and permanent, in individual plants.

The foliage sports are many, but I will only mention one, viz., the

Golden Bedder Coleus which resulted as a sport from Lady Burrill, a variety with harlequin markings of dark red and yellow. It has never reverted. While on the subject of Coleus, I cannot forbear from referring to a marked instance of the occurrence, wide apart, of a similar break in this plant. The golden leaved Coleus originated in England and was imported by Peter Henderson. Before the plants arrived, seedlings raised from seed saved on the place from the old dark leaved sorts developed some golden varieties.

In Prof. Corbett's paper, already quoted from, he says, "Burpee's dwarf lima bean is a good example of a sport where the habit of the plant was markedly changed." This brings us into the realm of seed sports, wider and more complex than the other and I do not mean to explore it to any extent.

Prof. Bailey is authority for the statement that: "Bud variation and seed variation are one in kind," and again: "I am ready to say that I believe bud variation to be one of the most significant and important phenomena of vegetable life, and that it is due to the same causes, operating in essentially the same way, which underlie all variations in the plant world." Again he observes: "I want to express my conviction that mere sports are rarely useful. Sports no doubt the result of very unusual or complex stimuli or of unwonted refrangibility of the energy of growth, and not having been induced by conditions which act uniformly over a course of time they are likely to be transient." Again: "The vexed questions associated with bud variation are not yet greatly elucidated." Again, "All these conclusions prove the unwisdom of endeavoring to account for the evolution of all the forms of life upon any single hypothesis; and they illustrate with greater emphasis the complexity of even the fundamental forces in the progression of organic nature." Again: "Now this matter of bud variation has been a most puzzling one to all writers upon evolution who have touched upon it. It long ago seemed to me to be inexplicable, but it is no more unintelligible than seminal variation of plants." These quotations from "The Survival of the Unlike" are introduced to show how contradictory even an eminent authority on the subject can be, at least so it appears to me, a layman. If I understand him at all, it is to the effect that all sports are the result mainly of the conditions under which the subjects are grown; that all variations are of sportive character; that the difference between well cultivated and poorly cultivated plants is a sportive one.

The average florist and gardener is hardly prepared to accept that view, perhaps the reasoning is too subtle for him to follow. He knows that no cultivation of which he is master can make a poor variety as good as a good one; he knows that sports, as he understands them, are sporadic and many believe that by a careful study of heredity on the part of scientists the law governing sports might be discovered. But to return to the lima

bean. Here again we find a cycle of change. Three sports appeared within a very short time, almost simultaneously, viz., Kummerle's, subsequently called Dreer's; Henderson's, which appeared with several growers at the same time; and Burpee's. Of the origin of the first two I have no specific knowledge, they merely happened; but as to the last, the raiser—I had almost said the creator—claimed that a horse trod on a plant while it was young, that it never grew to be a climber, and that the beans reproduced dwarf plants! This was generally known in the trade and more than one grower crippled vine plants in an effort to develop a dwarf, but without success.

The White Plume Celery is another notable example of a seed sport and once the break came others followed. I had almost forgotten to mention the latest and most interesting forms of sporting, viz: the ferns which have sported from the "Boston" variety. If I remember correctly, when that variety first made its appearance, there was considerable discussion as to what it really was, and it was finally classified as a sport from *Nephrolepis exaltata*. Darwin said: "Of all the causes which induce variability, excess of food, whether or not changed in nature, is probably the most powerful." Here again we have the food question. The florist and gardener believe that the amount of food which will bring his crop to the highest perfection is not excessive, possibly he is wrong. The excessive amount is that which will cause deterioration, and it is not under such conditions that sports have appeared with him. It might not serve any useful purpose, yet it seems to promise an interesting field of study for some of our scientists to thoroughly examine into sports obtained through bud variation under domestication in an effort to clear away the mists which now surround their origin.

American Florist's Ideals.

Paper Presented at the Third International Conference on Plant Breeding, London, Eng., July 30 to August 3, 1906, by J. H. Troy, Delegate from the Horticultural Society of New York.

Apart from the academic interest in plant breeding, the mere raising of new varieties and types for their own sake or for the sake of scientific study and determination of relationships between different groups of plants, there is an intensely practical side of the question. Upon our side of the Atlantic this aspect of plant breeding receives a far greater consideration than does the other. We may be even too practical in America. At all events our plant breeders set out with extremely high ideals. It is not an excuse for the introduction of a new form that it is merely different from other things; from our ultra-utilitarian standpoint we insist that it shall be better. It is for this reason that economic crops have received and are receiving such close attention from our Government Department of Agriculture. The entire force of that organization which embraces men of high scientific attainments is devoted to the production of plants which will meet and overcome conditions of practical horticulture and agriculture that may indeed be regarded as national problems. The whole energy of this expert staff is bent towards combining the better qualities of the different plants into one new type that shall be vastly superior to anything that has been had before. For instance, we see for disease resistant varieties which will put into the hands of the cultivator the means of livelihood that is at present barred.

This conference is being made familiar with the details of the department's work through another member who represents our national government; but the problem before so vast a territory as the United States embraces many plants and crops which are outside the scope of staple food-stuffs and agricultural field crops. There is the aesthetic phase of plant growing in which the work is being carried on slowly, silently, by isolated individuals, as purely business propositions, and without any subsidy from scientific institutions or national funds. The florists of America have not been behind their brethren in the Old World. We have already made great strides in the production of new and distinct ornamental plants. Some of the fruits of them are unknown to English horticulture. The American Carnation, developed by pure process of breeding from the European type of flower, has already recrossed the ocean and is receiving favourable attention at your hands. Its distinctive characteristics are familiar to you in such varieties as Enchantress, which you receive as a type of the American Carnation. In roses our florists and gardeners have made distinct advances along the lines quite different from those followed out by the Old World

raisers, and in your trade catalogues at this time a few of these are found but their source of origin is unannounced. When the crimson Rambler and Winchuriania rose reached our shores some dozen years ago, they were seized upon by many cultivators, were blended, and an entirely new race of what may be called Rambler hybrids was originated.

In these days of much closer relations and interchange of commerce between the two nations, it is not without interest to measure up the standards by which the one judges the production of the other. The American horticulturist is distinctly exacting: he looks for a combination of superlative qualities. The mere fact that a plant is new or a variety distinct from others that are already known does not give it one extra bit of value. The standards are ultra-utilitarian. We want all our flowers to measure up highly in all their attributes, and a test of commercial value is applied very severely in all cases. As a matter of fact it may be acknowledged that the American horticulturist, the American florist, is engaged in catering to an uncritical public. Now, don't misunderstand me. I don't wish you to infer that I am stating that the great American public does not exercise judicial qualities in its appreciation of plants and flowers. What I do mean to say is that a flower is measured for itself, for the purpose to which it is to be put, and not merely against its associates for distinctiveness. In other words, we are not breeding for connoisseurs. The keynote of appreciation is selection, not collection. Where the European florist will grow twenty, fifty, or a hundred varieties, his American prototype will find that he can supply all the needs of the public by growing not more than half a dozen. Why? Because there is room for only one red rose that is best from all points, one pink, and so on. Whereas, in agricultural plant breeding the idea in view is the raising of varieties that shall not succumb to disease that shall be hardy above the usual limit of that kind of plant, or that shall be particularly resistant to drought; so in the florists' fold we look for a plant or flower that shall be extraordinarily productive of flowers, the flowers themselves of perfect form, of pure color, that will mix with the majority of others without producing colour discords; and in decorative plants we look for pure effects, clear-cut colour schemes, and nothing of the intermediate lower grades. In ornamental plants, for instance, I may take as an example the highly decorative *Pandanus Veitchii*, which with its beautiful bands of colour may be regarded as an ideal in its type. The colour scheme of this plant is in harmony with the general contour of the whole and the arching of each individual leaf. On the other hand, the spotty effect of the variegation in a plant like *Dracena Godseffiana* is not pitched in the same artistic plane, and does not appeal with equal force.

Pure colour are much sought for. Variegated flowers are regarded with less favour each year, and, with the exception of Carnations, may be practically ignored as commercial possibilities, and even in that flower their

appreciation is on the wane. The European horticulturist who hopes to meet the wants of the American market should place this fact before him above all others, purity and brilliancy of colour; then having attained that he must put it on to a plant that is of itself beautiful. In all the popular flowers the foliage is regarded as of nearly equal value with the flowers itself.

To give you a concrete example, I will quote from a communication of one of our most prominent producers of foreign Chrysanthemums. "A novelty should first of all have a good habit, the foliage should be luxuriant and carried right up to the flower, and the stem should be stout enough to carry the flower erect on a stalk three feet in length, the flower itself large, of incurved form and of sufficient solidity to withstand shipping and handling. As individuals the flowers grown for European markets and shipped in bunches (having had but little disbudding) find no place with us. The ideal flower is one that answers the requirements when grown one flower to a stem."

In roses there are two distinct ideals; one by far the larger interest, that of growing under glass, the flowers being forced for Winter, is characterized by a long bud, bright colour, freedom of growth, so that a flower can be cut with a good length of stem, not less than two to three feet, and preferably one that lights up well under artificial light. The five best Roses in the New York cut flower market are the following in the order named: American Beauty, The Richmond, Bridesmaid, Madame Abel Chatenay, and the Bride. The other type of roses which has been developed very greatly in our country is for outdoor planting. We want a type of roses that will stand our hot Sun and cold Winters, and flower continually from June to November in quantity, self-brilliant colour preferred; the best type of a recently introduced rose which I can give you is Killarney. We want rose plants that will be decorative and ornamental, even when out of flower, as trellis plants. The newer ramblers are much valued, and where they are suitable for forcing in pots for flowering at Easter time for indoor decoration they are still more desirable.

Very few American amateurs are connoisseurs of the rose in the way that the European horticulturists are. We cannot conduct a Rose society along the lines that are so successful in European countries. The commercial standard is introduced, and no matter how beautiful a flower may be of itself, if it does not hold its colour properly, and if it does not fulfil its decorative requirements of rigid stem and healthy, abundant foliage, it cannot find favour with the American.

With these specific instances of ideals in the most popular flowers of the day I may leave the subject, reiterating that the American market stands wide open to any flower or plant which will meet these high ideals, but that it is no place for the curio raiser to send his productions, as there is no demand for a thing purely on the ground of intrinsic novelty.

International Conference on Plant Hardiness and Acclimation.

Arrangements are progressing for the holding of an International Conference on Plant Hardiness and Acclimatization, under the direction of this Society, on *September 30th, and October 1st and 2nd, 1907*, probably in the rooms of the American Institute and the Museum Building of the New York Botanical Garden. Delegates from nearly all the States of the Union and from Canada, Europe, Africa and elsewhere have promised to attend and a preliminary program of about twenty-four titles has been prepared.

It is intended to publish the full report of the proceedings in book form as Volume II of the *Memoirs* as a comparison to the Report on the Conference on Plant Breeding held 1902.

JAMES WOOD, N. L. BRITTON, H. A. SIEBRECHT, PATRICK O'MARA, LEONARD BARRON,	} Committee in Charge.
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1906 - 7

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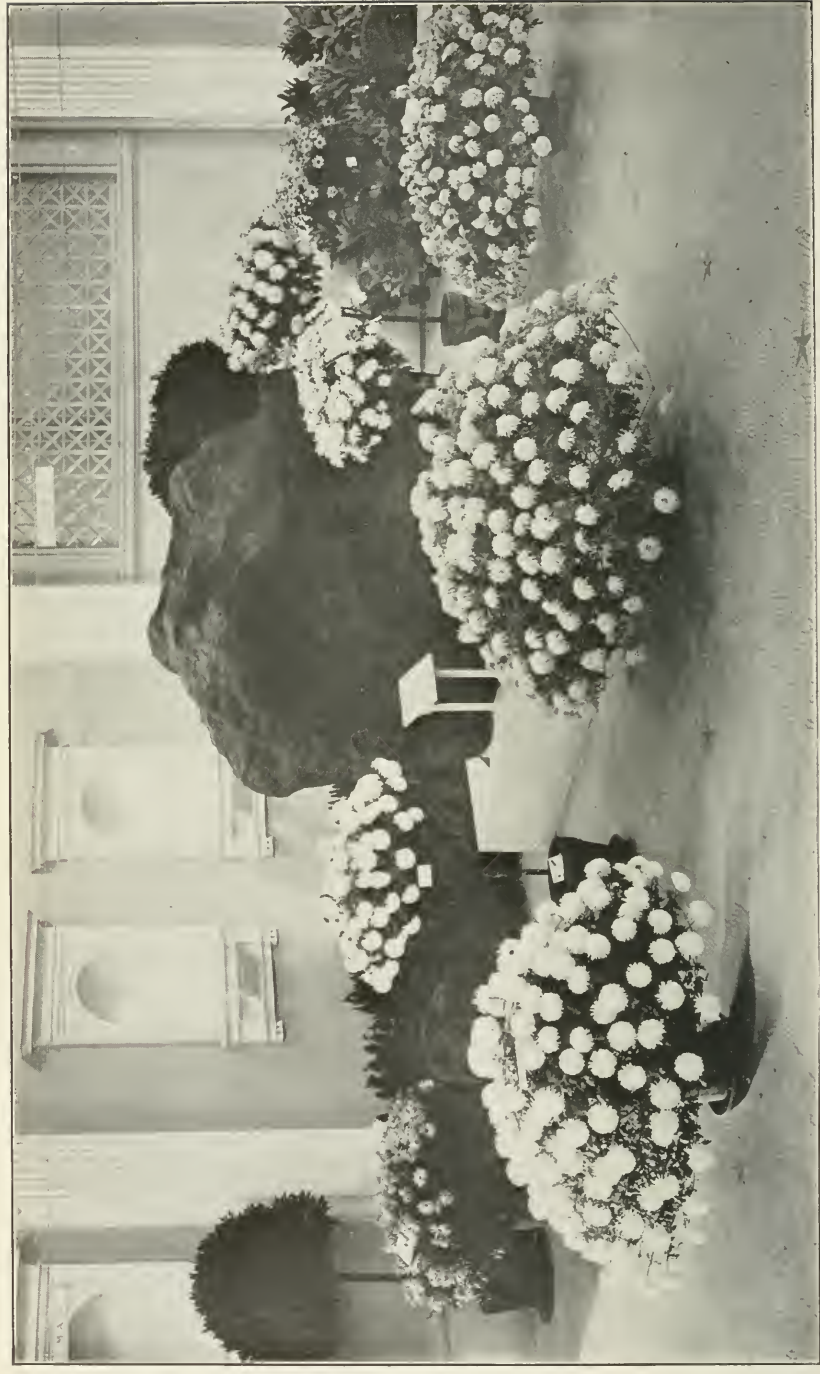
MARCH, 1910

EDITED BY THE SECRETARY

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Fall Exhibition of 1909. A view of a portion of the chrysanthemum exhibit in the foyer of the American Museum of Natural History.

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THE SPRING EXHIBITION

A joint exhibition of the American Rose Society and of this society will be held at the American Museum of Natural History from March sixteenth to eighteenth. It is intended to open the exhibition the evening of the first day at 7, closing at 10. On Thursday and Friday the exhibition will be open from 9 A. M. to 5 P. M. and from 7 to 10 P. M.

A large premium-list has been prepared by the American Rose Society, and it is expected that this will attract exhibitors from all parts of the country, as the society is national in its character, holding its annual sessions in different parts of the country. There is no more popular flower than the rose, and the promised exhibition should attract a large attendance. Classes have been provided for pot roses and for cut blooms, and all the popular roses should be well represented.

While it will be primarily an exhibition of roses, other exhibits have been provided for. The Horticultural Society of New York has prepared a schedule of prizes, covering classes of plants other than roses. To furnish an attractive setting for the display of roses, it has been decided to devote this premium-list largely to decorative foliage plants, such as bay trees, large palms, ferns and other stove and greenhouse plants. Flowering plants have not been neglected, however, as prizes are offered for orchids, azaleas, cinerarias, cyclamens, heaths, rhododendrons, and other similar plants, but for plants only. No prizes are provided for cut blooms, this field being left entirely to the rose, as it is primarily a rose exhibition.

At the last meeting of the Council it was decided to postpone the regular meeting of the society, which should occur on March 9th, to the 17th of that month, holding it in conjunction with the meetings of the American Rose Society. On that date the program provides for papers upon the rose in the morning, the afternoon being occupied with an address by the president of The Horticultural Society, Mr. James Wood, on "The Ideals of Horticulture," and with a lecture by the secretary of the same society, Mr. George V. Nash, on "The Rose and its History," illustrated with colored lantern slides. All are invited to attend the exhibition and meetings, which are entirely free, and to bring their friends.

THE EXHIBITION OF LAST FALL

The second annual fall exhibition of the society was held at the American Museum of Natural History, November 3 to 7, 1909, opening the evening of the first day from 7 to 10 with a private view to the members of the society, the Museum, and affiliated organizations. On Thursday, Friday and Saturday it was open from 9 to 5 during the day and from 7 to 10 in the evening; on Sunday from 1 to 5.

The private view opened promptly with all the exhibits staged and every evidence of preparation removed. All exhibits being in place and properly labeled, the judging began at 5 and was finished at 8, the awards being indicated on the exhibition cards during the process of judging. This promptness in making known the awards was a great improvement over the procedure of past years, and was made possible by the change in the rule governing the awarding of prizes, permitting the exhibition committee to make the awards without waiting for approval by the Council. This feature added much to the interest of those who visited the exhibition on the first evening and permitted of a prompt report on the awards to the horticultural press. Those who kindly consented to act as judges were: E. O. Orpet South Lancaster, Mass.; Thos. W. Head, Groton, Conn.; A. J. Loveless, Lenox, Mass.; C. H. Totty, Madison N. J.; I. L. Powell, Millbrook, N. Y.

The attendance was very encouraging, as evidenced by the

following figures: Wednesday, 2,085; Thursday, 3,384; Friday, 5,679; Saturday, 8,358; Sunday, 11,228; total, 30,734. The attendance in 1908 was 8,411, that of this year therefore being over three and a half times as great. The average daily attendance this year was 6,146, and the attendance on Sunday was at the rate of 2,807 per hour. Last year the exhibition was open three days and four evenings, and this year one day more. Making a deduction of this extra day, a Sunday, still leaves the attendance about two and a third times as great as the previous year.

In the schedule there were 142 classes. Of these 90 were represented, there being 156 entries, representing 33 exhibitors. There were in addition 16 special entries, not provided for in the schedule. The details of the schedule and entries appear in the following table:

Group	Classes in Schedule	Classes Represented	Number of Entries
Chrysanthemums	33	27	47
Roses	18	11	18
Carnations	17	10	12
Decorations and floral pieces....	9	1	1
Foliage and decorative plants....	30	20	35
Fruits and vegetables.....	6	3	7
New plants	1	1	2
Orchids	28	17	34
	142	90	156

It will be seen from the above that, in the groups devoted to flowers and plants, the greatest number of exhibitors in proportion to the entries made was in the orchids, with an average of two to each class represented. This was undoubtedly due to the great interest taken in the exhibition by the newly established orchid section of the society. In the estimation of many the display of orchids was the finest ever seen in New York City. It was undoubtedly one of the most admired of the exhibits and a crowd was always to be found about it. The success attained by the orchid section can easily be extended along other lines, and the society would like very much to have additional sections established, devoted to other features in the horticultural world. Why should not the rose, the carnation, the chrysanthemum, and other flowers and plants, follow the lead of the orchid lovers in the society? The orchid section holds an evening meeting on

the fourth Wednesday in the month at the American Museum of Natural History, where orchid lovers may congregate and hold helpful and instructive discussions.

The display of chrysanthemums was large, both in plants and cut flowers. There were many fine specimens of bush and standard plants shown, and a large display of cut blooms, from the small hardy pompon varieties to the large-flowered forms.

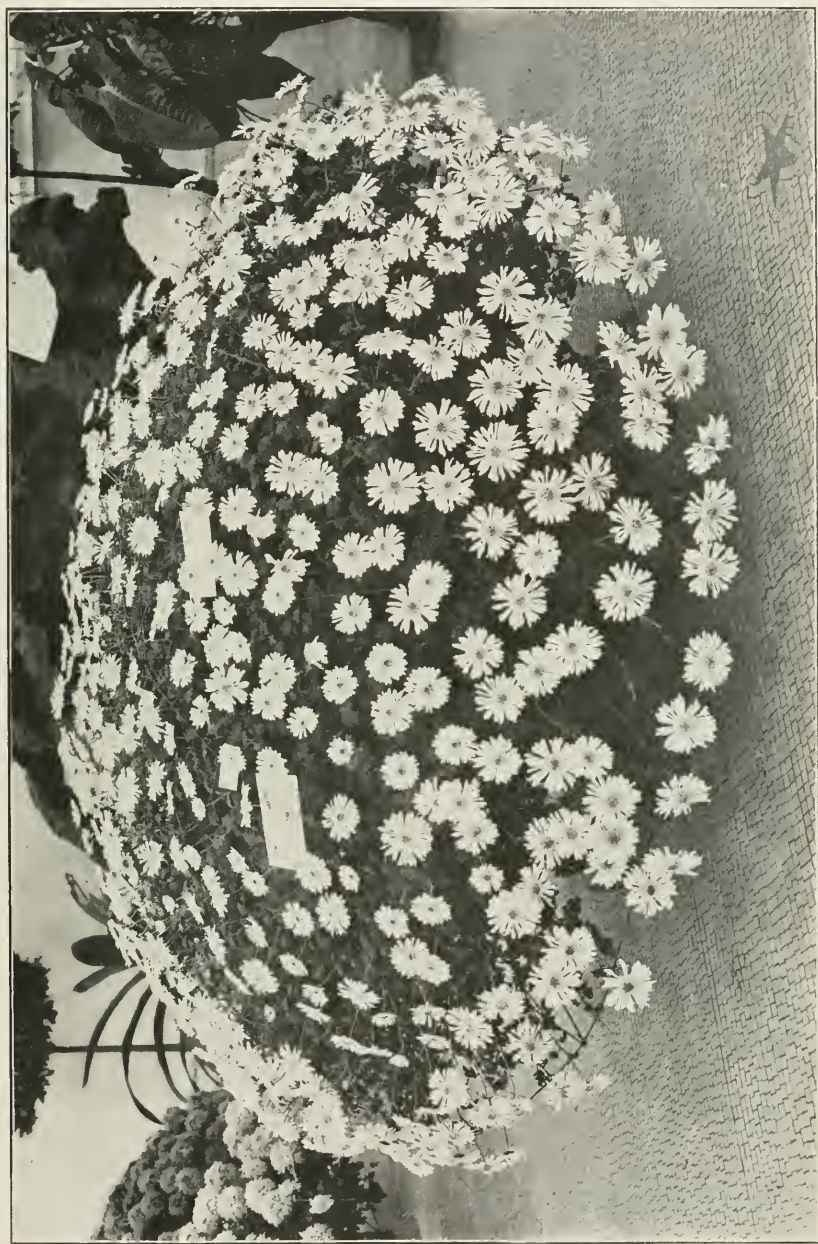
It was a little too early in the season to secure a large exhibit of roses, and the same was true of carnations. The other classes, as will be seen from the above table, were well represented, with the single exception of that devoted to decorations and floral pieces. Special attention should be given to this for next year.

The leading horticultural papers devoted much space to matter in reference to the exhibition, both before and after its occurrence. The daily press of the city brought the exhibition to the attention of their readers, the Herald and the Journal with illustrated articles, and the Sun, Tribune, Telegram, and Evening Post with reading notices, that of the last mentioned paper being especially comprehensive and instructive. The issue of Town and Country for November 13 devoted a page to a display of photographs of the exhibition, these being beautifully reproduced.

A photographer was employed for two days in making a series of pictures which will be preserved in the records of the society. These photographs were also of service in securing the illustrated articles referred to above, and in furnishing the illustrations accompanying this article.

The authorities of the Museum of Natural History placed at the disposal of the society every facility for conducting the exhibition, and a great part of its success is due to this. The arrangement of the foyer and radiating halls made an admirable combination for exhibition purposes, permitting of an elasticity in the placing of exhibits which can be appreciated by those who have been compelled to arrange an exhibition where this feature did not obtain. The society is certainly to be congratulated upon having this admirable place in which to hold its exhibitions.

To an appeal for a special fund to meet the expenses of this exhibition, the following members and friends of the society responded with contributions:



Fall Exhibition of 1909. The largest bush chrysanthemum shown, a specimen of *Garza*. Exhibited by Mr. Samuel Untermyer.

Mrs. C. B. Alexander	Mr. T. F. Jackson
Mr. B. G. Amend	Miss Lydia G. Lawrence
Mr. Jno. D. Archbold	Mr. Clement Moore
Mr. G. A. Archer	Mr. J. Pierpont Morgan
Mr. S. P. Avery	Mr. Henry H. Negley
Mr. August Belmont	Mr. F. R. Newbold
Mr. Arthur T. Boddington	Mr. Wm. Nilsson
Dr. N. L. Britton	Mr. G. W. Perkins
Mr. Jno. I. Bristol	Mr. S. T. Peters
Hon. Addison Brown	Mr. I. L. Powell
Mr. Louis Burk	Mr. Geraldyn Redmond
Mr. J. W. Cromwell	Mr. W. A. Smith
Mr. and Mrs. Gherardi Davis	Mr. F. L. Stetson
Mr. B. F. De Klyn	Miss E. J. Stone
Mr. J. Douglas	Messrs. J. M. Thorburn & Co.
Mrs. M. E. Dwight	Mr. Samuel Thorne
Mr. R. Eldridge	Mrs. B. B. Tuttle
Mr. A. F. Estabrook	Mr. Samuel Untermyer
Mr. J. J. Goodwin	Mrs. L. Valentine
Mr. T. A. Havemeyer	Dr. H. F. Walker
Messrs. Peter Henderson & Co.	Mr. C. W. Ward
Mrs. Esther Hermann	Mr. A. L. Willis
Mr. Anton G. Hodenpyl	Mr. James Wood

PROCEEDINGS OF THE SOCIETY

MAY 12, 1909

The annual meeting was held in the Academy Room, at the American Museum of Natural History, on Wednesday, May 12, 1909, at 4 P.M., Mr. James Wood in the chair. In the absence of the secretary, Mr. Nash served as secretary pro tem. The minutes of the previous meeting were read and approved. The annual report of the Council was presented and accepted, and it was moved and seconded that it be printed in the next issue of the Journal. The motion was carried.

Mr. Leonard Barron presented his resignation as secretary of the society. The resignation was accepted, and it was

RESOLVED: That a vote of thanks be extended to Mr. Barron for his long years of service to the society.

A letter was read from Dr. E. O. Hovey, recording secretary of the New York Academy of Sciences, in reference to the election of a delegate to the Council of the Academy. Mr. Wood nominated Dr. N. L. Britton as such delegate, and he was elected by the society.

The following persons, on the recommendation of the Council, were elected to membership in the society, subject to the payment of the annual dues: J. B. Foulke, Samuel Untermyer, and E. B. Southwick.

The following officers and members of the Council were elected, the secretary casting one ballot for the entire ticket on the instruction of the meeting: President, James Wood; Vice-presidents, Samuel Thorne, J. C. Brown, F. M. Hexamer, G. T. Powell, Spencer Trask; Treasurer, F. R. Newbold; Secretary, George V. Nash; Council, N. L. Britton, J. W. Cromwell, John E. Lager, Julius Roehrs, C. W. Ward, E. S. Miller, C. B. Weathered, C. L. Allen, C. F. Dietrich, Clement Moore, H. A. Siebrecht, A. L. Willis, F. R. Pierson, J. A. Manda, P. O'Mara, F. W. Bruggerhof, T. A. Havemeyer, W. Nilsson, J. H. Troy, F. L. Atkins, E. H. Roehrs, Samuel Untermyer.

It was moved and seconded that the secretary just elected enter immediately upon the duties of his office, and that the amount of salary heretofore paid be continued. The motion was carried.

On motion of Dr. Britton, seconded and carried, it was

RESOLVED: That the thanks of the society be extended to Mr. E. B. Southwick for his interesting exhibit of flowering shrubs and trees.

Dr. N. L. Britton offered, on behalf of the New York Botanical Garden, a sum not to exceed \$200, to be used in offering prizes at the summer meeting of the society to be held on June 5 and 6.

No other business being before the meeting, Mr. George V. Nash gave a lecture on "Flowering Shrubs and Trees." Colored lantern slides were used in illustrating some of the more desirable decorative shrubs and trees.

Meeting adjourned.

GEORGE V. NASH,
Secretary.

OCTOBER 13, 1909

A meeting of the society was held at the American Museum of Natural History on Wednesday, October 13, 1909, at 4:25. In the absence of the president, Mr. O'Mara acted as chairman. Owing to the late hour of the adjournment of the Council, the reading of the minutes of the May meeting was deferred.

The following parties, having been acted upon and approved by the Council, were elected to membership: Life member, Miss B. Potter; Annual members, Herman W. Merkel, Henry Du Pont, C. D. Blauvelt, William Solotaroff, Harry A. Bunyard, Arthur T. Boddington, W. C. Trageser, Jas. Stuart, W. H. Waite, A. J. Manda, C. W. Scott, J. S. Holbrook, F. A. Bolles. The following resignations were accepted with regret: L. W. C. Tuthill, George Schlegel, De Veaux Powel, M. J. Pope.

The chairman reported the deaths of Mr. C. L. Allen, Dr. F. M. Hexamer, and Mr. J. Crosby Brown, all formerly members of the Council, the two latter in ex-officio capacity as vice-presidents. Mr. O'Mara recalled the great service all these gentlemen had rendered to horticulture, not only as members of this society, but also in the field of horticulture at large, Mr. Allen and Dr. Hexamer in a professional way, and Mr. Brown as a noted amateur. He announced that the society was taking suitable action in the matter, through a committee appointed by the Council, in the preparation of a minute. The death of Miss Anna Phebe Thorne was also reported.

The secretary announced that the Council, through power conferred upon it by the amended constitution, had elected the following to fill vacancies: vice-presidents, Patrick O'Mara and T. A. Hevemeyer; members of the Council, Messrs. Leonard Barron, E. B. Southwick, and Henry Hicks.

A bronze medal, awarded at the June exhibition of the society, was presented to Mr. J. A. Manda for *Laclio-cattleya Dominiana splendens*. The business of the meeting being completed, the announced lecture for the day was presented: "Coniferous Evergreens: their use in the landscape," by Mr. George V. Nash. The following is an abstract of this lecture:

In explaining the title of his lecture, the speaker remarked that it was difficult to select a comprehensive term to describe the plants under consideration, but that he had selected that of coniferous evergreens as per-

haps expressing the meaning better than any other. All coniferous trees are not evergreens, as familiarly exemplified in the larch and the bald cypress, both of which bear cones but lose their leaves every fall; neither are all evergreens coniferous, for one of the finest evergreens, the yew, has a pulpy fruit and not a cone, so cannot be described as a cone-bearer. The term coniferous evergreens, however, covers all but a very few of the plants forming the subject of this lecture, which deals with the narrow-leaved evergreens, and excludes from consideration all of the broad-leaved evergreens, represented by the rhododendrons, box, hollies, and like plants.

The subject was divided into three parts: how to know the commoner genera; how to cultivate these plants; and their use in the landscape. Taking up the first part, the speaker described the structure of the leaves, flowers and fruits. The characteristics of the commoner genera were indicated, and the essential features separating closely related genera were pointed out.

In the matter of cultivation great stress was laid upon the necessity of selecting species and varieties which were suitable to a given locality. It is useless to choose those finding their best development in regions where there is an abundant rainfall, with no dry season, and expect them to do well and prove a delight in a section where opposite conditions prevail. Under such circumstances nothing but disappointment could result. Select species from a region, the climatic conditions of which somewhat approximate those of your own neighborhood, if you expect satisfactory results. In some cases a certain species may have a wide distribution, extending over many degrees of latitude and through a wide range of altitudes; in such cases secure plants derived from that locality, the climatic conditions of which most nearly resemble those of your own neighborhood.

The need of care in the selection of trees, if permanent results are expected, was emphasized. Secure transplanted stock, for the root-pruning attendant upon the transplanting creates a large mass of roots. Then insist upon having trees with but a single leader, and with even and symmetrical branches right down to the ground.

As to where to plant evergreens, the best advice can be secured by studying the habitats of the plants. Most coniferous evergreens grow in colonies, where they protect each other, or among deciduous trees. This is especially true of spruces, firs and hemlocks. Most pines prefer this treatment also, but they are better able to stand isolated planting.

Good drainage is a great necessity. Few evergreens can stand water at the roots. Unless the soil is exceptional, it pays to replace that removed in the process of hole-digging with a loose rich soil. This may take more time and be more expensive, but it pays in the end. One of the best top-dressings is nature's own—good leaf-mold and plenty of it. Allow it to remain about the roots of the young trees and do not disturb—if weeds appear, pull them out by hand.



Fall Exhibition of 1909. Collection of orchids, winner of the first prize. Exhibited by Messrs. Lager and Hurrell.

One of the greatest dangers to which these plants are subjected, comes in the late winter or early spring. When the ground is still frozen so that the roots are unable to take up water from the soil, a dry warm wind will do great damage, for transpiration through the leaves is induced with no chance for the roots to supply the loss. Plants which have gone through the winter without harm will succumb to the attacks of such a wind and turn in a few days from their bright green to the brown which indicates their end.

It is generally conceded that the best time to move conifers is in the late spring or early summer, for they are then in a vigorous growing condition and have time to establish ample root action before the cold calls upon their endurance. One of the dangers to be guarded against in this latitude is the period of drought which frequently visits us late in May or early in June. If this occurs immediately after transplanting, great harm may result unless you resort to watering, which will often pull the plants through this critical period.

Injuries resulting from fungi and insects are numerous, but keep the plants in a healthy growing condition and the battle is more than half won. Let a plant, however, become enfeebled or sickly and your troubles increase by leaps and bounds.

The third part of the subject, the uses of coniferous evergreens in the landscape, was profusely illustrated with lantern slides, as were the other parts of the lecture. Many slides were exhibited showing the use of these plants for hedges, borders, the reforestation of hillsides, the screening of roadways and outhouses, in avenues, as individual specimens, and for many other purposes. Especial attention was called to them for their beauty in the time of winter, when all else was grey and cold, adding a touch of cheerful green to the bleak landscape.

NOVEMBER 10, 1909

The regular monthly meeting of the society was held at the American Museum of Natural History on Wednesday, November 10, 1909, at 4 P.M. In the absence of the president, Mr. O'Mara was called upon to act as chairman, in which capacity he acted during the business portion of the meeting, Mr. Southwick filling the chair when Mr. O'Mara was obliged to leave on account of another engagement. The minutes of the meeting of May 12, 1909, were read and approved. The minutes of the meeting of October 13, 1909, were read and approved.

The following parties, approved by the Council, were elected annual members: James P. Dye, Max Richter, August Belmont, Louis B. McCagg, I. S. Hendrickson, Robert Simpson, Mrs. Morris K. Jesup. This makes a total of 21 new members since the opening meeting in October, which indicates encouraging

progress. At the conclusion of the business meeting, the following paper by Mr. W. H. Waite, one of the most successful growers of the chrysanthemum, was read:

A TALK ON THE CHRYSANTHEMUM

Mr. Chairman and Members of the Society: I wish your ardent secretary had asked some one else more capable than I to introduce the subject this afternoon, for what I can tell you is by no means new or original, and may thus prove uninteresting; furthermore, you will have to be very lenient with me, as I have been so busy with flower-shows and other matters since your secretary asked me to read the paper, that I have, indeed, had very little time to prepare anything, and consequently have brought together only a few rambling notes.

There is no need for me to praise the chrysanthemum, for during its six weeks of reign it certainly reigns supreme. Of all the flowers, which we as florists and gardeners have to cultivate, there is none showing so many variations in size of bloom, color, habit of growth, etc., as the chrysanthemum. These variations no doubt, together with the fact that its beautiful flowers appear during the waning months of the year, are the secret of the great popularity of this flower.

There are so many different kinds of chrysanthemums, that, in order to study them properly, a division of the genus into sections is necessary. I shall briefly describe these sections, showing examples of each in so far as I have been able to procure them.

SECTION 1. TRUE INCURVED

This class is not seen so much in this country, as the flowers are not quite large enough to suit the demands here, but is very prominent in all exhibitions in England. The flowers have strap-shaped petals, curving regularly inward, and forming, when mature, an even spherical outline. A very good example of this section is the old variety Major Bonaffon.

SECTION 2. JAPANESE VARIETIES

This is the section to which belong the large varieties having long loose petals, which sometimes are intertwined, as in the variety Nellie Pocket; and sometimes long and straight, as in F. S. Vallis. All the large varieties go into this section; in fact, the variations are so many that it has been found necessary to subdivide this section into two groups, known as the Japanese incurved and the Japanese reflexed. Good examples of the former are Col. D. Appleton and Marza, and of the Japanese reflexed, Mrs. Knox. Here the petals turn back horizontally and drop down toward the stem.

SECTION 3. REFLEXED

This section is entirely opposite to the incurved, in that the petals re-curve from the center of the flower to its base. Few of this section are grown in this country today.

SECTION 4. ANEMONE VARIETIES

The flowers in this section have broad strap-shaped ray petals, which stand out stiffly and horizontally, forming a regular collar to the numerous disc florets of the center. The variety *Garza* is the most common example of this, and makes a beautiful plant in any form; it is also a splendid cut flower.

SECTION 6. POMPON VARIETIES

Here belong the really hardy varieties of the gardens. The heads vary from flat to spherical, having very short erect or reflexed petals, which in some varieties are fringed and toothed. These are most desirable plants and really everybody's flower. There are some beautiful varieties and their names are legion. They are perfectly hardy, easy to cultivate, and should be in every garden.

SECTION 7. POMPON ANEMONES

As the name indicates, this section resembles the anemone section in having the disc florets quilled and the ray florets flat, which are short as in the pompons.

SECTION 8. SINGLE-FLOWERED VARIETIES

This section, in my opinion, contains some of the most beautiful flowers. It is only a few years since we have taken to them in this country, but they are becoming more popular every year. The characteristic of this section is the daisy-like flower, having a single row, or sometimes two or three rows, of ray flowers. No single should have more than three rows of such flowers. Commercial varieties should have more than one row, for in packing some of them are sure to be bruised or broken, and in the forms with a single row this damage makes the flowers worthless; if there are two rows, the flower is not so liable to damage, and if one or two of the rays flowers are damaged they can be removed without spoiling the flower. There are now so many beautiful varieties of singles in cultivation that they are really confusing. Perfection does not seem to be reached as yet, for the new ones are better every year.

There are great possibilities in the cultivation from seed of the flowers of this section, treating them as half-hardy annuals. A friend of mine procured a packet of seed last March, sowing the seed in the greenhouse at the time of starting his other half-hardy annuals. In due time they were transplanted, and when large enough transferred to the herbaceous border. They grew remarkably well, and from September up to quite recently they were the most beautiful plants in the garden. They were low and bushy, thus not requiring staking, and were a mass of blooms, every one a different color. When these early hardy singles become better known, I predict that they will be the most popular annual grown. They come into flower at the proper time of the year, just when the other annuals and herbaceous plants are on the wane. These single chrysanthemums also make beautiful objects when grown in pots, either as specimens

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or for cut flowers, and are especially suitable for decoration. I would advise all who are growing these to disbud some of each variety. Some varieties are better when grown in sprays, while others are more attractive when disbudded.

SECTION 9. SPIDERY AND FANTASTIC VARIETIES

The members of this section are merely curiosities. A comparison of the varieties Golden Shower and F. S. Vallis shows the variability and possibilities of the genus.

This, I think, is enough to open the subject. As I said at the beginning, I can tell you nothing new. I hope there will be ample discussion and that many points of interest may be brought out.

The paper was freely discussed and many interesting points brought out. Responding to questions, Mr. Waite described the method employed in creating the large bush plants which he had exhibited at the late flower show. Answering other inquiries, he went into detail describing soils necessary for growing the chrysanthemum, and other features of successful culture. The flowers used by Mr. Waite in illustrating the types of chrysanthemum flowers were passed around for examination, creating much interest. Upon motion of Mr. Pierson, a hearty vote of thanks was extended to Mr. Waite for his admirable paper. A vote of thanks was also extended to Mr. Southwick for the display of chrysanthemums made by him. The meeting was a most enjoyable one, and it is planned to repeat the experiment during the winter at other meetings, concentrating the afternoon upon some special flower.

The secretary exhibited a series of photographs of the exhibition just closed. These were of groups and individuals plants, all prize winners.

The meeting adjourned shortly before 5 o'clock.

GEORGE V. NASH,
Secretary.

DECEMBER 8, 1909

The regular monthly meeting of the society was held at the American Museum of Natural History on Wednesday, December 8, 1909, at 4 P.M. In the absence of the president, Mr. O'Mara acted as chairman, succeeded by Mr. Southwick. The minutes of the meeting of November 10, 1909, were read and approved.

The following parties, approved by the Council, were elected to annual membership: Chas. Mallory, Mortimer L. Schiff, George Giatras, John C. Haddock.

There being no other business to come before the meeting, the lecture announced for the day was delivered by Mr. Wm. Solotaroff, on "Shade Trees in Cities," illustrated with lantern slides. Mr. Solotaroff is connected with the Shade Tree Commission of East Orange, N. J., and gave an interesting and instructive talk on the subject. The following is an abstract of this lecture:

The speaker opened his remarks by saying that upon the arrival here of the early settlers in this country, the first idea had been to procure a shelter and obtain ground for the raising of crops. These being the main and essential things, the preservation of trees, in the laying out of their villages and towns, had not been considered of importance. This habit, thus engendered, had grown with the people, and it was only comparatively recently that the necessity of trees in cities has been appreciated. For the city is not only a place of commerce, but it is largely made up of homes, and anything which adds to its beauty, which trees certainly do, increases the value of its property. The tree therefore as an essential thing in the city is being recognized, and it is also becoming evident that the trees in a city must not be left to the care of the individual, but must be placed under the charge of the city itself. If left to the individual there will be many kinds of trees on the same street, a condition usually to be avoided; they will be planted in different ways and at unequal distances; the pruning will not be properly done, nor the trees systematically treated for insect and fungus pests. To insure uniformity in the planting of trees and their proper maintenance after planting, it is necessary to place the whole matter under official control. In cities where this has been done for many years, notably, for example, in Washington, D. C., the results are most satisfactory. To secure this uniform result the street must be treated as a unit, that is, only one species of tree must be employed, and the pruning must be done with a definite aim in view—to provide shade without obstructing the sidewalks or roadways, interfering with the view, or preventing the free circulation of the air.

New Jersey was the pioneer state of the Union in the successful application of vesting this power in a central body, and in 1893 that state enacted a law for the planting and care of shade trees. There are now 15 cities in New Jersey which have shade tree commissions. So successful have these commissions been that other states and cities have followed the example thus set them, the state of Pennsylvania enacting a similar law in 1907.

By an act of the year 1902 of the laws of the state of New York, the jurisdiction of the park board of Greater New York was extended to the

preservation and planting of trees on the streets of the several boroughs. Washington, Buffalo, St. Louis, Cleveland, Hartford, and Springfield, Mass., have city foresters. Other cities have committees of the members of the common councils to look after the street trees.

The best solution by far of the problem of the planting and care of shade trees is provided by a law of the state of New Jersey of 1893 and a law of the state of Pennsylvania of 1907. These acts provide for the establishment of commissions to take charge of the planting and care of shade trees on the highways of municipalities. When, by resolution of the city council, it be decided that the law shall become operative in a city, then from that time on all matters pertaining to shade trees are placed in the hands of the commission. All work is carried on in a systematic way and trees are planted, pruned, sprayed and removed under the direction of the commissioners. The commissioners serve as an organization without pay, and they employ a professional forester who has charge of the executive work. Wherein these commissions differ from other similar bodies is that they have the power of initiative in the matter of planting; they decide that a certain tree is to be planted and determine on the species of tree. After the work is done the commissioners meet and certify a list to the receiver of taxes, on which are given the names of the owners in front of whose property trees were set out, and the cost of the work. These assessments are entered on the annual tax bill and are paid the same as any other legal lien. The cost of pruning, spraying, removing dead trees and repairing old ones is provided for by a general appropriation.

Last winter he was called by a number of cities to help in the movement to organize departments for the planting and care of shade trees. As a result Chicago placed its trees under municipal control, and New Orleans appointed a parking commission to have exclusive control of the planting and care of street trees.

A review of the work done in New Jersey will show that no such good results could possibly have been accomplished by individual planting and care of trees. The commission in East Orange began active work in the spring of 1904. Up to and including 1908, 2,446 trees have been set out. The species used were the Norway maple, sugar maple, red maple, European linden, American linden, pin oak, red oak, oriental plane, ginkgo, ash and American elm. Only one species of tree was planted on a street. These were set at uniform distances apart, averaging about forty feet, and all trees were supplied with wire guards. The total assessments for the 2,446 trees set out in the five years aggregated \$8,494.40. The average assessment amounted therefore to \$3.47 per tree. This item included the furnishing of the tree, the necessary topsoil, the planting, the staking and placing a wire guard around it. Assuming that the average value at the present time of the trees as they now stand is \$10 per tree, which is a very conservative estimate, the asset to the city is now \$24,460, an increase of about 200 per cent. above the original cost. There are about 70 miles

of streets in East Orange. The trees on about 40 miles of those streets were pruned under the direction of the Shade Tree Commission since its organization. In this work the street was treated as a unit. All the trees were pruned to a uniform height, a height that would permit the unimpeded passage of vehicles and would allow all street lights to be seen at night.

The lecturer exhibited a series of lantern slides, showing streets in various cities, planted as they should and should not be. The illustrations were certainly convincing. A number of the views were taken in Washington, D. C., the speaker remarking that it was the abundance of fine shade trees and the care used in their selection and planting which made that such a beautiful city.

Mr. Solotaroff here remarked upon the importance of the choice of trees in street-planting. The desire was often for a rapidly growing tree, at the sacrifice of other more desirable qualities. The Carolina poplar was often selected on account of its rapid growth, but it was not recommended by the speaker, as its roots soon pervaded everything, filling drain pipes, lifting pavements, and becoming a nuisance generally. The soft maple was also condemned as being undesirable. The oaks were highly recommended, especially the red and pin oaks. The prejudice against the oaks was laid by the speaker to the fact that trees of this kind were often taken directly from the woods. This is a severe test for any tree, and especially for the oaks, as the feeding roots are a long way from the base of the stem, and are all left in the ground when the tree is dug up. In nursery-grown trees this difficulty is overcome, the constant plowing and root-pruning to which they are subjected resulting in a ball of roots close to the stem, insuring a mass of feeding roots when the tree is transplanted. A series of lantern slides illustrated this point admirably.

The subject of tree-pruning was discussed, the lecturer stating that the trees must be pruned to a uniform height, and in such a manner as to make a compact top, at the same time retaining in so far as possible the natural habit and growth of the species. The proper methods of pruning were illustrated with lantern slides, a number portraying the disastrous results which follow pruning improperly done.

The pests of shade trees formed a part of the discussion. These the speaker divided into three classes: Those which feed upon the foliage, such as the caterpillar of the tussock moth; the borers, represented by the caterpillar of the leopard moth; and third, the scale insects, including the cottony scale. Methods of spraying were described, and several forms of spraying machines were illustrated.

The lecture aroused much interest, and at its close was freely discussed by Mr. Troy, Mr. Southwick, and others.

GEORGE V. NASH,
Secretary.

EIGHTH ANNUAL REPORT OF THE COUNCIL

Presented May 13, 1908

The Council feels that it can report a year of very successful work on behalf of the society. In several respects distinctly progressive movements have been started, the full effects of which, however, it is too soon to realize. Much has been accomplished in bringing the work of the society into closer touch with those who are particularly connected with the horticultural and floricultural interests of the city. At the request of the New York Florists Club several conferences have been held by committees of the two organizations with a view to developing a better and closer relationship. No amalgamation was contemplated and the membership of the society has been slightly increased by representatives of the Florists Club joining as active members.

The International Conference on Acclimatization and Hardiness was held on September 30 and October 1 and 2, and the proceedings are in preparation for early publication as Vol. II of the Memoirs of the society.

The membership responded cordially to the request for the support of the conference, the sum of \$411.50 being subscribed, so that the regular funds of the society will not be drawn upon largely in the matter of publication.

At the April meeting of the Council a committee was appointed to organize an Orchid Section. This step was taken in response to a request made by a number of orchid amateurs and growers who contemplated the organization of a separate society, but felt that it would be better to affiliate with some already established organization. It is hoped that a permanent service to orchid culture in this country will have been rendered by this step. In order to foster the work of its sections the Council recommends that a portion of the income of the society be annually devoted to the work and development of the sections.

On the invitation of the society the American Rose Society will hold its first large summer exhibition in connection with our June meeting next month. During the past season three exhibitions have been held, in May, June, and November, no meeting being held in October on account of the meetings of the International Conference on Plant Hardiness, which took place in the early days of that month.

Arrangements are now progressing for the holding of a fall exhibition next November, the permission of the trustees of the American Museum of Natural History having been given for the meeting and exhibition to take place in the Museum.

During the past year regular meetings of the society have been held as follows: June 12, Exhibition of Summer Flowers, in the Museum of the New York Botanical Garden; November 13, lecture by Prof. U. P. Hedrick, on Apples for New York, accompanied by an exhibition of fruits and vegetables raised in the state; December 11, lecture on Summer

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School Gardens, illustrated by lantern slides, Miss Ella S. Carter; January 8, 1908, lecture, Can Old Trees be Doctored Successfully, illustrated by lantern slides, Mr. Leonard Barron; February 12, lecture, Suggestions concerning the Meaning of Bud Variation, with exhibition of photographs by Dr. E. M. East; March 11, lecture on Water Gardens, illustrated by lantern slides, by Mr. G. V. Nash; April 8, lecture, An Architect's Views on Tying the House to the Landscape, illustrated by lantern slides, by Mr. H. H. Saylor. There was also a display of Banksia rose by the president. May 13, Annual Exhibition and Lecture on Violet Growing, by Dr. B. T. Galloway, illustrated by lantern slides.

All the meetings of the society, with the exception of those held at the New York Botanical Garden in May, June and November, and one session of the Plant Hardiness Conference, have been held in the rooms of the American Institute, and the Council extends its thanks for the privileges accorded by both institutions.

During the year there have been seventeen new members elected, the enrolled number at the present time being 178, including 25 life members.

The permanent fund has been increased to \$1,888.20.

The financial statement is attached to this report.

A number of amendments to the constitution are submitted to the society today with the necessary recommendation from the Council.

LEONARD BARRON,
Secretary.

N. L. BRITTON,
Chairman of the Council.

TREASURER'S STATEMENT

FOR THE YEAR ENDING APRIL 30, 1908

<i>Receipts</i>	<i>Expenditures</i>
Annual subscriptions.....\$ 620.00	Exhibitions—Prizes\$ 216.00
Life subscription..... 50.00	—Medals 25.00
Special donation 5.00	Lecture expenses—
Sale of Memoirs..... 34.00	Carter10.00
709.00	Riley15.00 25.00
Balance from last year... 477.47	Printing 125.05
	Printing of Journal..... 65.21
	Postage 48.26
	Petty cash account..... 35.59
	Secretary's salary..... 200.00
	On deposit Broadway Sav-
	ings Institution..... 50.00
	Bank charges..... .30
	\$ 790.41
	Balance in bank...353.41
	Balance in hand... 42.65 396.06
\$1,186.47	\$1,186.47

FRED. R. NEWBOLD,
Treasurer.

THE HORTICULTURAL SOCIETY OF NEW YORK.

PERMANENT FUND

On deposit in Broadway Savings Institution

Balance 1907	\$1,767.82
Deposit	50.00
Interest Jan. 1, 1908.....	70.38
	\$1,888.20

Examined and compared with the vouchers and found correct.

JOHN E. LAGER,
GEO. V. NASH,
Auditors.

May 13, 1908.

PLANT HARDINESS CONFERENCE

SPECIAL FUND

Collected	\$411.50
Expended:	
Excursion to Poughkeepsie.....	\$47.10
Expenses of meeting.....	2.20
Report	89.10
Printing	45.70
	\$184.10
Balance in hand.....	227.40
	\$411.50

NINTH ANNUAL REPORT OF THE
COUNCIL

PRESENTED MAY 12, 1909

The ninth year of the society's work sees The Horticultural Society of New York launched on a new basis which augurs well for its future prosperity.

The most important event that has occurred during the history of the society is probably its affiliation with the New York Academy of Sciences which became effective on the fourth of February last. The coöperation of the membership of this society and those of all the other affiliated societies in New York makes a very large working body and keeps the movements of the society before a very large public. In connection with that affiliation it becomes incumbent upon the society to name a delegate who will have a seat on the Council of the Academy of Sciences; thus The Horticultural Society of New York will be actively represented in every scientific movement in the city.

Last November the Council organized a highly successful exhibition of plants and flowers which was held in the American Museum of Natural History and was visited by nearly 8,500 people in the three days and one evening that it was open. Arrangements are progressing for the holding

of a similar exhibition in November of this year and it is hoped that the fall exhibition of The Horticultural Society of New York will become a prominent annual feature in the horticultural world.

The society, now having a permanent meeting place in the American Museum of Natural History, feels itself in a better position to offer courtesies to visiting national organizations, and it has invited the American Rose Society to hold its annual exhibition in March, 1910, in New York. The invitation was unanimously accepted at the Buffalo meeting of the American Rose Society.

In consequence of the widespread general interest in fall exhibitions the Council has decided to concentrate the events of the society so far as exhibitions are concerned in the great fall feature, devoting the regular meetings to special subjects with illustrative exhibits so far as possible, each one having a special character of its own. The next meeting of the society will be devoted to late flowering tulips which will be accompanied by an exhibition of some five hundred or six hundred varieties.

In order to carry out the November exhibition, a special fund was collected which was sufficient to defray the prizes offered but considerable material and property had to be purchased, a great deal of which becomes available, however, for future purposes.

The membership of the society, notwithstanding the loss by death of several of the prominent original members, has been slightly increased during the year, there being at this time on the roll, 184 members.

The provision for associate membership has not been taken advantage of in a single instance.

The permanent fund of the society now amounts to over \$2,000, but the income of this is not yet available, as in accordance with a resolution adopted sometime ago, it is desired to increase this to a sum of \$10,000 before using the income.

Regular meetings of the society have been held in the New York Botanical Garden and since October in the American Museum of Natural History, the following subjects having been presented:

June 10, 1908: New York Botanical Garden: Meeting in coöperation with the summer meeting of the American Rose Society. An illustrated lecture on Types of Garden Roses by Leonard Barron.

October 14, 1908: American Museum of Natural History: Preservation of Old Trees, illustrated by lantern slides, by Mr. John T. Withers.

November 11, 1908: Meeting was called to order and adjourned for one week on account of the fall exhibition.

November 18, 1908: Adjourned meeting at which merely formal business was transacted, the fall exhibition being in progress.

December 9, 1908: American Museum of Natural History: Illustrated Lecture on Letchworth Park and the Falls of Genesee by Mr. G. V. Nash.

January 13, 1909: American Museum of Natural History: Real Color Photography as Applied to Flowers; lecture describing the Autochrome Process of Photography by Mr. H. H. Saylor.

THE HORTICULTURAL SOCIETY OF NEW YORK.

February 10, 1909: American Museum of Natural History: Exhibition of New Carnations with Description of Modern Carnations introduced by Mr. John Birnie, and on Carnation Culture by Mr. R. Bell.

March 10, 1909: American Museum of Natural History: The Orchid Family, illustrated by lantern slides, by Mr. G. V. Nash.

April 14, 1909: American Museum of Natural History: Illustrated Lecture by Miss Julia E. Rogers on How to Know the Common Trees, together with a display of the forms of the English Daisy by Mr. E. B. Southwick.

The financial statement is attached to this report.

N. L. BRITTON,

Chairman of the Council.

LEONARD BARRON,

Secretary.

TREASURER'S STATEMENT

FOR THE YEAR ENDING MAY 11, 1909

<i>Receipts</i>	<i>Expenditures</i>
Balance in bank.....\$ 353.41	Cash prizes
Balance in Secretary's hands 42.65	May show.....\$ 45.00
133 Annual dues..... 665.00	June show..... 50.00
1 Life Membership..... 50.00	Nov. show 392.00 \$ 487.00
Sale of Memoirs..... 10.00	Medals 102.50
Special donations to Nov.	Expenses Nov. show..... 186.53
show 472.00	Printing and stationery.... 188.25
	Advertising 10.00
	Postage 59.46
	Secretary's salary
	1907-8 May 50.00
	1908-9 200.00
	Petty cash, Secretary..... 17.14
	Life fund 50.00
	Bank charges40
	\$1,351.28
	Balance in bank..... 205.23
	Balance in Secretary's
	hands 36.55
\$1,593.06	\$1,593.06

THE HORTICULTURAL SOCIETY OF NEW YORK.

PERMANENT FUND, ON DEPOSIT IN BROADWAY SAVINGS INSTITUTION

Balance May, 1908	\$1,888.20
Deposit	50.00
Interest	75.76
	\$2,013.96

FRED. R. NEWBOLD,
Treasurer,

Examined and found correct.

F. R. PIERSON,
GEO. T. POWELL,
Auditors.

CONSTITUTION

AS AMENDED MAY 14, 1902, AND MAY 13, 1908

1. The name of this Society shall be THE HORTICULTURAL SOCIETY OF NEW YORK.

2. The object of this Society shall be to collect and diffuse information on all topics relating to the culture and care of plants, fruits, flowers and vegetables, and to promote a taste for the same.

3. The officers of the Society shall be a president, five vice-presidents, a treasurer, and a secretary; their duties shall be those usually appertaining to these offices. These officers shall be elected by ballot at each annual meeting; they shall assume office on the second Wednesday in June succeeding, and shall hold office for one year, or until the election of their successors. The treasurer shall give such bond as may be approved by the council.

4. The officers and twenty-two other members shall constitute the directors or council. This council shall have charge of all the business of the Society and shall submit a report of its proceedings at each annual meeting of the Society, and whenever instructed to do so by the Society. Five councilors shall constitute a quorum for the transaction of business, but a less number may adjourn. The council may form committees for the direction of the work of the Society, either from its own membership, or from the general membership of the Society, or both. The composition of all committees shall be reported to the Society at the next meeting subsequent to the formation of any committee.

The councilors in addition to the officers shall be elected by ballot at each annual meeting; they shall assume office on the second Wednesday in June succeeding, and shall hold office for one year, or until the election of their successors. The secretary of the Society shall also be the secretary of the council. The council shall annually elect a chairman. Any vacancies that may occur in the officers or directors from any cause whatever may be filled by the council at any regular or special meeting.

5. The committees of the council shall include: (1) A Botanical Committee; (2) a Floral Committee; (3) a Fruit Committee; (4) a Vegetable Committee; (5) a Forestry Committee; (6) a Membership Committee; (7) a Finance Committee.

6. The Society shall consist of members, associate members, corresponding members, and patrons. The members shall be such as are elected under that designation and conform to the regulations of the Society. Corresponding members may hold seats at the meetings of the Society and make suggestions for the promotion of its objects; they shall not be eligible to office nor entitled to vote. Honorary members may be chosen from horticulturists who have distinguished themselves by important original investigations, and shall be limited in number to ten. Any person contributing two hundred and fifty dollars or more at any one time to the funds of the Society shall be designated a patron.

7. Each member, upon his election, and annually thereafter, shall pay to the treasurer the sum of five dollars. Members may become life members by the payment of fifty dollars at any one time. Associate members shall be elected in the manner prescribed for members. They shall have all the rights and privileges of members except voting and holding office, and may become members at any time subsequent to their election by paying the annual dues prescribed for members. The annual dues for associate members shall be one dollar. .

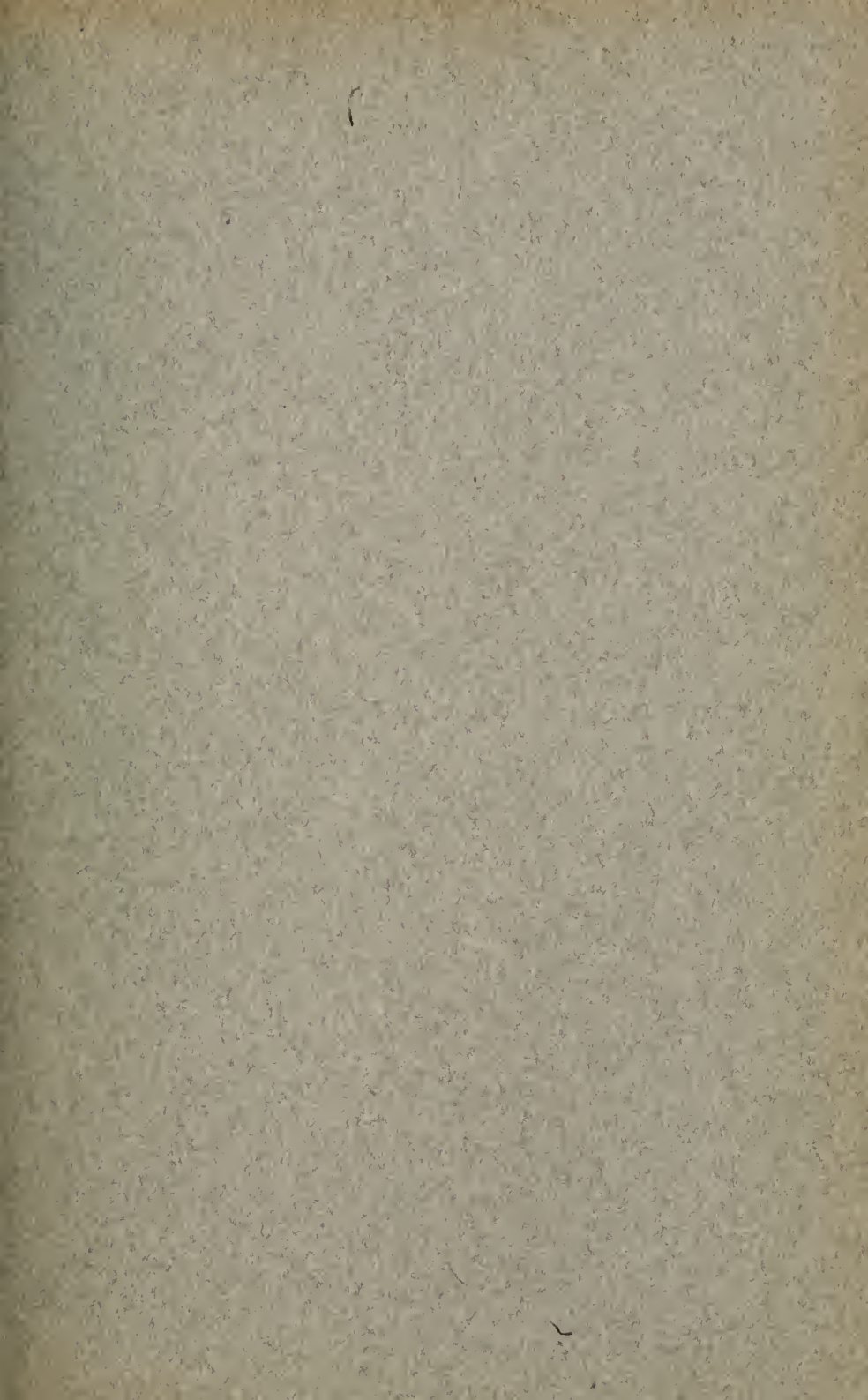
8. All fees received from patrons and life members shall constitute a permanent fund, only the interest of which may be expended; said fund to be held by trustees to be duly appointed in accordance with the laws of the State of New York.

9. Regular meetings of the Society, accompanied when practicable by exhibitions, shall be held at places determined upon by the council, on the second Wednesday of May, June, October.

November, December, January, February, March and April. Special meetings of the Society may be called at any time by order of the president or chairman of the council and must also be called at the written request of any ten members, notice of such proposed meeting being sent by mail to each member of the Society at least three days in advance of the meeting; such notice of special meeting shall specify generally the business which is the subject of that meeting and none other than that shall be transacted. The council shall meet on the same day in advance of the meeting of the Society and may adjourn to any such time as it may see fit. Special meetings of the council may be held at any time on the call of the chairman of the council.

10. The annual meeting shall be held on the second Wednesday in May. A quorum of the Society for the transaction of business shall consist of twenty-five members.

11. Amendments to the constitution may be made by a majority vote of the annual meeting of the Society on the recommendation of a two-thirds vote of the members of the council present at any stated meeting, fifteen days' notice thereof having been given.



THE HORTICULTURAL SOCIETY OF NEW YORK

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Vice-Presidents

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T. A. HAVEMEYER GEO. T. POWELL
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Secretary

GEORGE V. NASH, New York Botanical Garden,
Bronx Park, N. Y. City

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Ex-Officio Members

THE OFFICERS OF THE SOCIETY

Elected Members

JAMES WOOD, *Chairman*

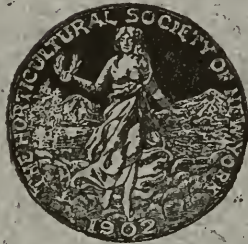
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Journal

of the

Horticultural Society of New York

Vol. I, No. 4



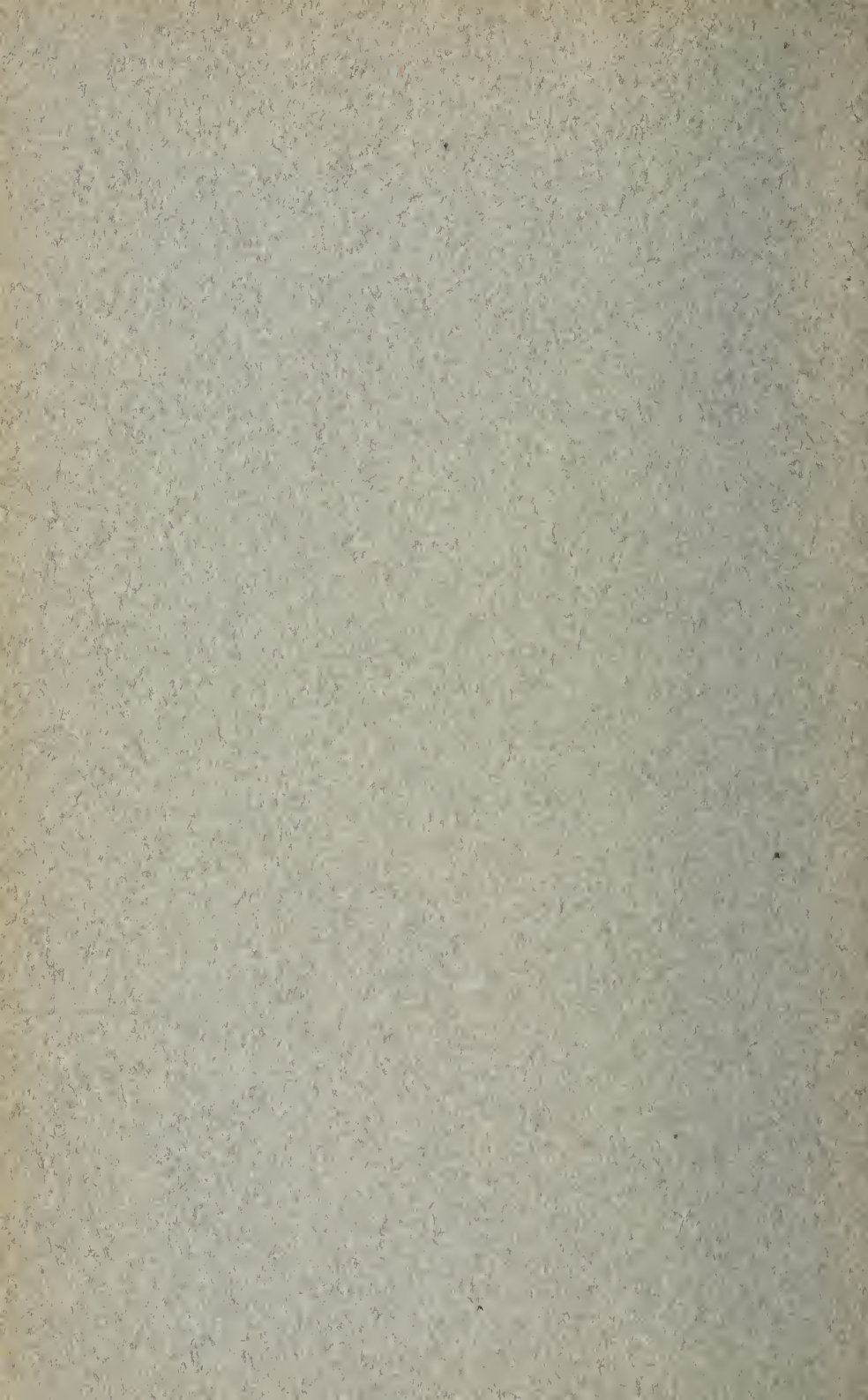
JULY, 1910

EDITED BY THE SECRETARY

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Spring Exhibition, March, 1910, in conjunction with the American Rose Society, in the American Museum of Natural History.
General view of rose exhibits.

Journal of the Horticultural Society of New York

INCORPORATED 1902

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THE SPRING EXHIBITION

According to the announcement in the March number of this JOURNAL, the spring exhibition of the Society and its March meeting were held in conjunction with the annual meeting and exhibition of the American Rose Society.

The exhibition was held at the American Museum of Natural History, in the spacious hall on the ground floor where the Peary exhibit was installed earlier in the year. It was an ideal place for the purpose, with ample light both day and night. Every facility for prompt and effective display was placed by the Museum authorities at the disposition of those who had the exhibition in charge. The affair opened promptly, with all exhibits in place, at seven o'clock on the evening of Wednesday, March 16. It continued open the two following days, from nine to five and from seven to ten. Much interest was manifested in the exhibition, both by the public and the press. The total attendance was 13,535.

The exhibition being primarily for roses, that flower of course predominated. While there was not an unusually large number of exhibitors in the rose classes, the quality of the flowers was of the first order, as some of the finest roses ever seen in New York City were on view here. Both potted plants and cut blooms were represented. Such favorites as My Maryland, Killarney, White Killarney, American Beauty, Meteor and others were attractively displayed. As shown in the accompanying illustration, the exhibits were arranged, for the most part, on

two lines of tables, arranged in a zigzag manner and extending the entire length of the hall. The potted plants and some of the larger vases of cut blooms were arranged in groups in the center and along the sides of the hall.

The part of the exhibition arranged for by the Horticultural Society comprised groups of ornamental greenhouse plants, including palms and other large foliage plants, bay trees, and orchids. One of the most attractive features was the display of twenty plants of Cyclamen, exhibited by Mrs. F. A. Constable, of Mamaroneck, N. Y., James Stuart, gardener, to whom was awarded a special prize of a silver cup, offered by Messrs. R. & J. Farquhar & Co., of Boston, Mass.

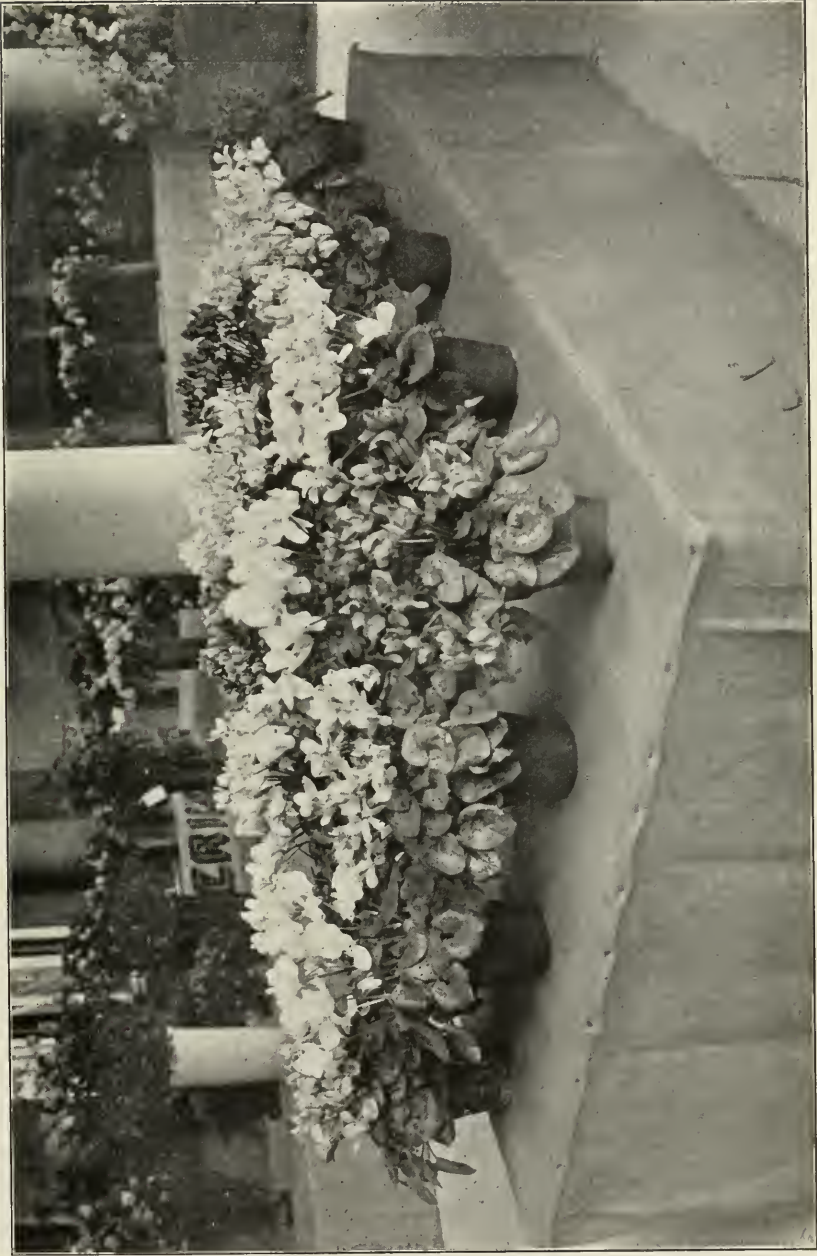
There was keen competition in the orchid classes. For the best display, covering fifty square feet, the first prize went to Messrs. Lager & Hurrell, the second to the Julius Roehrs Co. Both displays were excellent. A new carnation, Wodenethe, exhibited by Mr. Winthrop Sargent, Frank Witney, gardener, was awarded a certificate of merit. A like award was also made to another new carnation, exhibited by the F. R. Pierson Co. Mr. Samuel Untermeyer, W. H. Waite, gardener, took first prize for the six best rhododendron plants in bloom. The F. R. Pierson Co. exhibited a series of ferns, representing some of the beautiful horticultural forms derived from the old *Nephrolepis exaltata*; a number of these were awarded first prizes. To the Julius Roehrs Co. two silver medals were awarded, one for the best display of crotons and the other for the best display of stove and greenhouse plants.

The judges were: I. L. Powell, Millbrook, N. Y., A. J. Lovell, Lenox, Mass., and Wm. Scott, Elmsford, N. Y.

PROCEEDINGS OF THE SOCIETY

JANUARY 12, 1910

The regular monthly meeting of the society was held at the American Museum of Natural History on Wednesday, January 12, 1910, at 4:20 P.M., Mr. James Wood in the chair. The



Group of twenty Cyclamen plants exhibited by Mrs. F. A. Constable. Awarded the Silver Cup offered by Messrs. R. & J. Farquhar & Co.

minutes of the meeting of December 8, 1909, were read and approved.

The death of Mr. Spencer Trask, one of the vice-presidents of the Society was reported, and Mr. Wood announced that the matter had been referred to a committee which would take proper action.

Seven medals, four silver and three bronze, were ready for distribution, and in the absence of the recipients the secretary was instructed to forward the medals to those interested.

There being no other business before the meeting, the subject announced for the day, "Winter Decorative Shrubs," was presented by Mr. George V. Nash, who illustrated his remarks with lantern slides and specimens. The following is an abstract of this lecture.

WINTER DECORATIVE SHRUBS

People are inclined to think that when winter comes all is over in the line of decorative shrubs, but this is far from true. Each season has its shrubs—Forsythias and spiraeas in April and May—roses and rhododendrons in June, with others for July and August—and then the gorgeous tints of our autumn foliage. Winter too has its charming shrubs, and while not as numerous as for the rest of the year, they are perhaps even more attractive, for they come at a time when all is gray and bleak, and when every little that brings to memory the greenness and brightness of summer is welcome. These winter shrubs of course cannot attract by their flowers, but there are other features which make them a delight to the eye, and these must be sought in the color of the bark, the beauty of the evergreen foliage, or in the brightness of their persistent fruit.

As an example of the first group, in which the color of the bark is the attractive character, *Kerria japonica*, with its bright green twigs was referred to. *Cornus alba sibirica* and *Cornus stolonifera*, both with dark red bark, and the yellow-stemmed form of the latter, known as variety *flaviramea*, were also mentioned. This variety is of a bright yellow and seems to carry a bit of the sunshine into the snowbanks.

The plants with evergreen foliage comprise two groups, one group known as conifers and the other as broad-leaved evergreens. The dwarf forms of retinisporas, cedars, pines, and thujas are admirable subjects for winter decoration, being especially attractive when snow-laden. Rhododendrons, mahonias, *Leucothoë Catesbaci*, and especially *Ilex crenata*, with its thick dark-green leaves and graceful habit, were cited as examples of desirable broad-leaved evergreens.

Among the shrubs desirable on account of their persistent fruit were: *Aronia arbutifolia*, commonly known as *Pyrus arbutifolia*; *Rosa multiflora*, with its myriads of red fruits; *Ilex opaca*, attractive also for its foliage,

THE HORTICULTURAL SOCIETY OF NEW YORK.

in addition to its bright red berries; *Ilex verticillata*, and its Japanese relative, *Ilex serrata*, both with red fruit; *Symphoricarpos vulgaris*, the coral-berry, festooned with thousands of dark red berries which persist until nearly spring time; and last but not least the Japanese barberry, *Berberis Thunbergii*, which, if one were restricted to a single shrub, was perhaps best of all—possessing attractive features at all seasons of the year, yellow with its flowers in the early part of the season, clothed in an attractive green during the summer, decorative during the fall with its charming garb of color, and then its chief charm reserved for the winter months, when all is cold and gray, its bright red berries, born in great profusion and retaining their color and plumpness until late in the spring, adding a glow of warmth to the bleakness around.

The speaker then exhibited specimens of about two dozen decorative shrubs which he had gathered that morning in the grounds of the New York Botanical Garden, these impressing upon those present the beauties of many winter shrubs.

At the close of the lecture Mr. Wood entertained those present with an account of some of his own experiences with decorative shrubs for winter, and with descriptions of some of the interesting gardens he had visited in various parts of this country. He remarked especially upon the beauty of coloring of the foliage of *Mahonia*, and advocated growing it in large masses to get the best results. He also commended highly the Japanese barberry, prizing particularly its bright color which holds undiminished until late in the spring.

The meeting adjourned at five o'clock.

GEORGE V. NASH,
Secretary.

FEBRUARY 9, 1910

The regular meeting of the society took place at the American Museum of Natural History on Wednesday, February 9, 1910, at 4:20 P.M. The minutes of the meeting of January 12, 1910, were read and approved.

Owing to the proceedings attendant upon the unveiling of the statue of Mr. Jesup, there was a very small attendance at the meeting. It was therefore decided to postpone the address of Mr. Wood until a later date. The suggestion was made that Mr. Wood give this address, "The Ideals of Horticulture," during the joint meeting of the Horticultural Society and the

American Rose Society. The suggestion met with favor and it was so decided.

The resignation of Mr. J. C. Eno, an annual member, was accepted.

The meeting adjourned at 4:35.

GEORGE V. NASH,
Secretary.

MARCH 17, 1910

The regular meeting should have been held on the ninth, but by action of the Council it was decided to postpone the meeting until the seventeenth, that it might be held in conjunction with the meeting of the American Rose Society, scheduled for that date. The meeting of the society therefore took place on the afternoon of the seventeenth. There was no business transacted. An address and an illustrated lecture were delivered, the former by Mr. James Wood on "The Ideals of Horticulture," postponed from the meeting of February; the latter by Mr. George V. Nash on "The Rose and its History." These are given below.

THE IDEALS OF HORTICULTURE

BY JAMES WOOD

The true horticulturist takes delight in the study and cultivation of his plants, as well as in the admiration of the beauty of their forms and foliage, or of their flowers. He finds that contact with and study of this department of nature's wonders has a refining and elevating influence upon his character. If he is a true member of the brotherhood of man, he desires that this benefit and this pleasure may be shared by others and be extended as widely as possible; indeed, it may be said that the highest ideal of horticulture is to make, if possible, the earth more beautiful and mankind better and happier because of its benefits, an ideal closely related to the beautiful imagery of the Messianic prophets of old when, in glowing terms, they described how even the desert should be made to blossom as the rose. The true horticulturist pursues his vocation, not for his own pleasure and profit alone, but for the joy it gives him to have other lives brightened and benefited by his work.

Horticulture and agriculture alike have to do with the cultivation of plants. The former is the more closely confined to the work, agriculture having a wider range in its operation, including the animal kingdom as

well. The distinction between the two is, primarily, based upon the limitation of the area of horticultural operations as compared with that of agriculture. *Ager* applies to a field of larger extent and, perhaps, entirely unenclosed, while *hortus*, the garden, applies to an enclosure surrounded by a fence or wall. While the distinction between the two terms is based entirely upon this, the difference in their operations is indicated by the definition.

The practice of horticulture embraces both its science and its art. The art cannot be carried on to its best results without a considerable knowledge of its science. Next to the broad ideal to which reference has been made, the most important ideal of horticulture is the attainment of the highest degree of perfection in the results accomplished; and while the so-called "rule of the thumb" may answer for ordinary routine, it rarely results in any material advancement. Such advancement must necessarily result from the application of the laws of nature to the operations from which improvement may be expected. The requirements of the science of horticulture are very complex, and I desire to refer to it in connection with the attainment of ideals, partly because it is at the very foundation of the subject, and also to show that the highest practice of horticulture involves an acquaintance with many departments of science.

The beginning of all operations is necessarily with the soil and this involves a knowledge of the vast variety of soils, both in their composition and in their mechanical condition. Soils are heavy and close in their texture when they contain a large percentage of clay; they are light and loose when they have a large percentage of sand; and between these are a great variety of loams with their varied constituents. It is important to know something of the character of the soil of the native habitat of a plant, in order to understand the conditions under which it has been produced and maintained. But while this knowledge is useful, it is not of very great importance, because the native habitat may not present the best conditions for the particular plant. Various causes may have prevented its growth in locations that are better suited to its requirements. It may have been crowded out from this by other and stronger growing plants, or it may never have had an opportunity to grow in such a situation; but the knowledge of the soil upon which it has developed is important as indicating the root formation and root work of the plant itself. In open and loose soils roots are far reaching and grow to a great depth, while in heavy and retentive soils they grow nearer the surface; and plants with fine fibrous roots thrive best in a soil with a large percentage of decaying vegetable matter, furnishing a large amount of humus which greatly favors their growth and development. The necessity of soil being opened to the operations of the air is absolutely indispensable for the growth of plants of the higher orders. When the interstices between the particles of soil are occupied by water the air cannot penetrate the soil and growth cannot be maintained. Of course, this is not true with aquatic plants, but it is true of all plants of the higher order of development. This fact is

the governing principle of drainage. Drainage is necessary to remove water from the soil, so that the air can enter it and the chemical changes of nature's laboratory be carried on there. Beside this requirement of the proper amount of water and the mechanical condition of the soil, the plant food contained by the soil is the next important consideration. This plant food is both mineral and vegetable, and must be in a condition to be dissolved in water before being taken up for the use of the plant. Besides the soil, the other conditions, outside the plant itself, that the horticulturist must consider, are the exposure to moisture, heat and light. The proper requirement of moisture is of great importance, and the maintenance of a proper degree of heat is equally important, while the exposure to light is an absolute necessity for all green plants.

The amount of light to which a plant is exposed has a great deal to do with its best development, and it is an interesting fact that the light from the sun, in greenhouses, can be supplemented by artificial light to great advantage. In England, where the sunlight is much more limited than it is in America, electric light is used to advantage on dark days or for lengthening the light in the short days of winter. This is used both in the development of flowers and in ripening of fruits in fruit houses. This use of light is parallel with the use of artificial heat supplementing that of the sun.

Passing these external conditions of the plant we come to the plant itself, and we must understand the processes of its growth, development and reproduction. The plant may be reproduced from seed, or propagated from buds, cuttings or layers, but the cuttings and layers are but other forms of bud propagation. The production of the seed involves the infinite variety of flower formation and the operation of the sexual organs they contain. At the very basis of plant cultivation lies the knowledge of nature's method of reproduction by seed. Nowhere can we find more wonderful organs than those contained in flowers for this purpose, and nowhere can we find more interesting formations than those which regulate the fertilization of flowers by the agencies of wind or insects. In the first place, it is a remarkable fact that, in plants that are not self-fertilizing, there is a great difference in the showiness of the flowers of those that are fructified by the agency of wind or by insects. Those fructified by the wind are almost always inconspicuous, while the marvellous display of color and attractiveness of flowers is almost always among those where bees and insects are necessary for the conveyance of the pollen of one to another.

Not less wonderful is the provision that nature makes in some flowers to prevent self-pollenization and to provide for the bringing to the pistils of the flowers the pollen from the stamens of some others. The most striking of these are found in the orchid family. Among the most curious of this varied flower structure is that of plants where, in some flowers, the stamens and pistils of unequal length are so placed that only a bee bringing pollen from the long stamen of one flower can reach the

long pistil of another, or one bringing pollen from the short stamen of one flower can reach the short pistil of another; and then again there are some plants with perfect flowers where the stamen and pistil do not mature at the same time, so that when the pollen of the stamen is ready the pistil is not prepared to receive it, or when the pistil is ready to receive it the pollen of the stamen has either lost its vitality or is not yet matured. This makes it necessary that the pollen from some other plant maturing when the pistil is properly developed should be brought to it by the agency of wind or of insect.

All this information is of practical utility in obtaining ideal results in horticultural operations. The growth of vegetables under glass in winter where the wind cannot convey pollen from one flower to another and where there are few, if any, insects to do the work, makes hand pollenization necessary. This is particularly the case with cucumbers, where the flowers are unisexual—it is necessary to convey the pollen from the stamen of one flower to the pistil of another by hand, using a camel's-hair brush for the purpose. In tomatoes, where the flowers are bisexual, fertilization does not act with freedom because the stamens are stuck together by a gummy substance, which in the open air loses its tenacity and allows the stamens to separate so that their pollen can be loosened. When the sun is shining brightly, if the stamens of a tomato flower in a greenhouse are slightly opened with a pin point they will fly apart and scatter the pollen in every direction, but without such aid a very large proportion of them do not separate and consequently the pistil is not fertilized. An example of this same matter, in outdoor cultivation, is found in some varieties of grapes. The Brighton, a grape of excellent quality, does not develop its pollen at the same time that the pistils are matured, and consequently, if left to itself, a very imperfect fructification takes place. When the vine is grown near other grapes whose pollen matures at the proper time, the Brighton pistil is fructified by the pollen blown by the wind or carried by insects. In my own vineyard I have a row of Brighton vines to the east of rows of Delaware and Campbell's Early. The prevailing summer wind is from the southwest. When there are such winds during the days of Brighton blooming, good bunches of grapes are formed, but when for two or three days at that time there happens to be easterly wind, imperfect fructification takes place and very ragged clusters result. Similar facts are found in growing Muscat of Alexandria under glass, where it is necessary to disperse the pollen by gentle blows upon the vine or ragged clusters will be obtained.

This matter of cross-fertilization introduces the great subject of horticultural development by means of hybridization where crosses of different species are made. It makes possible an almost endless variety of production and is a most promising field of horticultural development. Those who attended the plant-breeding conference held by The Horticultural Society of New York a few years ago, and which was attended by prominent scientists of European countries and the West Indies, as well as of all

parts of our own country, will remember the most interesting papers and discussions upon this subject. Indeed, it may be said that there is no limit to the development that may be made by this means. The discovery of Mendel's law governing the results of hybridization furnishes a guide to these experiments which will greatly aid in the accomplishment of important results, and the achievement of our highest ideal.

The propagation from buds is the method by which plants are obtained from cuttings and layerings, while in some cases buds are formed upon the roots of plants, as in the *Pyrus Japonica*. Propagation from buds involves the interesting fact concerning bud variation, through which plants are produced of a distinct character from the parent plant. This also produces some striking changes which we call "sports." Familiar illustrations of this are found in the production of the pink Bridesmaid rose from the white Bride, and the white Killarney from the pink parent.

Bud propagation also involves an interesting variety in the case of those plants where rudimentary buds are formed on the margin of the leaves, or at the leaf axis, as is the case with members of the Begonia family.

After a plant is obtained by the germination of seed, or by propagation from buds, its growth and development next require our attention. This involves, not only proper conditions of soil, but the plant food which the soil contains.

The ultimate object of the production of the plant and of its growth and development is its reproduction. For this operation the flower of the plant it formed. And flowers, whether for their own sake or as the necessary precursors, are objects of the greatest concern to the gardener. As the reproduction process, of which the formation of the flower is the first stage, is an exhaustive one, it is necessary that the plant should be well established before it flowers. When the growth of a plant from any cause is too vigorous it is sometimes necessary to check the growth of the vegetative organs as the necessary preliminary to the development of the flower. This is sometimes done by root-pruning, but commonly, in greenhouses, by the use of pots. In some countries where the grapes do not form flower sufficiently for a good crop, the vines are partly lifted so as to check the operation of the roots. The flower itself is usually produced at the end of the shoot or a spur from the side of the branch. Sometimes the flower buds for next year are formed soon after the dropping of this year's flowers, as is the case with pears among fruits and Chinese magnolias among flowers. More frequently the flower is formed at the end of the new growth of the shoot and is a special development of the foliage. Indeed, a great portion of flowers perform the same function as leaves, while the highly colored petals do not have this function. Double flowers are formed by the development of stamens and pistils into petals so that, as a rule, double flowers have fewer seeds than do single flowers. Indeed, this development of stamens and pistils into petals sometimes goes so far as to leave none of the organs for the formation of seed.

I have already referred to the functions of the different organs of the flower in the seed formation. All these various and varied functions of the different parts of the plant belong to the science of horticulture, and, as I have already said, while the work of the art of horticulture may go on by established methods without a knowledge of these scientific facts, no probability of advancement can be had without the application of the knowledge I have described, so that the great ideal of horticulture in the attainment of the highest possible production demands a knowledge of all these departments of natural science. Indeed, in this brief notice nothing like all of the scientific principles have been stated.

We come now to the practice of the art of horticulture. A large portion of this is dependent upon experience. Experience is the resultant of the rule that "what has been may be," and since in practice it has been found that certain things result from certain procedure, we continue to practice established methods. Large improvements may sometimes be made by finding that some change in procedure results in a benefit and, conversely, other changes result in injury. In the application of scientific principles in the practice of horticulture the best results are obtained.

The divisions of horticulture are those embracing flowers, vegetables and fruits. In practice, these are distinct, though all three are often carried on in the same garden. I myself have a house in which all three are carried on together today. The three are not now carried on together in outdoor gardens so much as formerly, as it is found to be better to grow flowers, vegetables and fruits each by themselves. It is much more common to see them growing together in English gardens today than in this country.

There is one quite serious injury resulting from modern methods of seed distribution through the seed trade. Before this trade was so developed as it is at the present time, gardeners were much more dependent upon the production of their own seed. This stimulated a great interest in the selection of the very finest specimens for seed production, and not infrequently in important experiments in seed production by cross fertilization or hybridization. I can myself remember the great care practiced in gardens of my own home some sixty years ago, when all flowers grown from seed were carefully examined for the types most desired, and also specimens of vegetables that met the grower's ideal were carefully preserved for seed. Here was a practical ideal of horticulture for which there is now but little opportunity. It is very much easier to make up our list of seeds for our flowers or vegetables and send them to the great "omnium gatherum" of the modern seed store. Occasionally we find, even today, some true lover of the art of horticulture who still practices the home production of seed.

In considering the question of plants to be grown in any flower garden, the temptation is very great to confine ourselves to such as produce the most showy flowers, but it is often the case that plants of the very greatest interest produce inconspicuous flowers. Some plants, of course, such as

ferns, are grown for the beauty of their form and foliage alone, but it is often desirable to have a department of the garden devoted to plants of peculiar interest apart from their flowery display. I will illustrate this by reference to the marvellous carnivorous plants which have the most curious and complete arrangements for the capturing of flies and other insects, such as some of the *Drosera*, and *Dionæa*, the Venus fly-trap. It is wonderful, when it is considered that these plants secrete a digestive juice similar to the gastric juice in our own stomachs, by which the substance of these insects is rapidly decomposed and absorbed into the tissue of the plant. Another very interesting illustration of this portion of the garden is the so-called compass plants found upon our semi-arid plains of the West, where the natural light is too strong for the leaf organs, and instead of exposing their plain surface to the sunshine, as other plants do where the glare of the light is less intense, they turn their edges to the light so as to shield the broad surface of the leaves from the powerful rays of the sun. This function is so marked that travelers of the desert can ascertain the points of the compass from the position of the leaves of these plants. Such a department of the garden excites a great interest with visitors, and is a helpful stimulant to the children reared upon the place.

One of the ideals of horticulture is thus to stimulate an interest, which is quite as important as the mere gratification of the eye by beauty alone, and here the skillful gardner who is in charge of the garden and greenhouse of some wealthy proprietor can find an opportunity to overcome one of the most trying facts of his position. There are many wealthy owners who know, or care little for, the work of plant growth and flower production, and are willing to incur the expense involved simply that their houses may have the flowers which are considered necessary for their proper furnishing. These people look upon flowers as something that can be obtained from the florist at so much per dozen, and to them they mean little more.

"A Primrose by the river's brim,
A yellow Primrose was to him
And it was nothing more."

This relation to the proprietor is a very difficult one for the gardener, and if he can by tact and skill have something of interest, outside the ordinary, to which he can occasionally ask the attention of the members of the family, it gives him an opportunity for exciting an interest on their part which may grow into a higher and better appreciation of the work, as, indeed, this should be the aim of every gardener in charge of such a place. Fortunate indeed is the gardener where the members of the family take an interest in everything pertaining to his work, and where they love the flowers they have seen grow and take a pleasure in arranging them to display their beauty.

I have occasionally presented flowers to ladies who accepted them as

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they might a box of candy, and who usually hand them over to a servant to be arranged. The sensations in making such a gift are very different from those where the recipient takes the keenest delight in each flower, and loves to hold them in her own hand and arrange and rearrange them according to her fancy. Naturally, gifts to the latter are made with frequency, while the former rarely, if ever, receives flowers a second time.

One of the best examples of the high ideals of horticulture is found in the work of Dr. Wm. Saunders, the head of the Experimental Farms in Canada. Members of our Horticultural Society may remember Dr. Saunders at the conference of plant-breeders a few years ago, when he presented an admirable paper on his work. The development of the western portion of Canada has been made possible through Dr. Saunders' skill and persistence in finding and producing plants suited to the rigorous climate of that region. His greatest work belongs to the department of agriculture, where by hybridization and selection he has produced a variety of wheat that will ripen in ninety days from the sowing of the seed, which is rapidly revolutionizing the wheat supply of the world. Dr. Saunders desired that settlers in that bleak region should have comfortable and attractive homes with fruits and vegetables and flowers. Practically no fruits would grow there, and only a few flowers that were known to practical horticulture. By planting wind breaks of the native trees of the region he made it possible to have secondary borders of evergreens. Under the shelter of these, garden plots were laid out in which fruits, vegetables and flowers of many varieties and of the choicest quality are grown, and gradually the hearts of the lonely residents of those vast regions were gladdened, which added no little pleasure to the happiness of mankind.

The production of perfect flowers and fruit, while a pleasure in itself, gives an added pleasure when others are allowed to share in their enjoyment. We have had a beautiful example of this in the practice of our late lamented vice-president, Mr. Spencer Trask. At his beautiful place, "Yaddo," at Saratoga Springs, the public were invited to enjoy with him the splendid results of the high art of horticulture practiced there.

In every work in life it is well to have ideals. They set something for us to strive for, and it is only by effort that the best advancement is made. The standard of our ideals in horticulture will usually be the measure of our achievement.

THE ROSE AND ITS HISTORY

BY GEORGE V. NASH

When the secretary of the American Rose Society invited me to give a lecture before the society, it was with considerable hesitation that I consented to do so. I did not know what phase of the subject to take

up, what subject I could present to a body whose chief aim and theme has been the study of the rose and what pertained to it. I finally decided to take the title announced for today, as one which was sufficiently broad to enable me to touch upon points which, perhaps, were not commonly presented to you. With this idea in view, I decided to confine my remarks mainly to the botanical side of the subject, including the distribution of the genus *Rosa*, and the historic evolution of the various types of garden roses. The matters of culture I shall leave to those much better fitted than myself to speak upon such subjects.

First then as to the distribution of the rose. We must not forget that the rose flourished upon the earth many years ago—shall I surprise you by saying millions of years? For such is the truth, well-defined remains having been found in the Tertiary age, which, though geologically speaking, is very recent, from the point of view of everyday life must be considered very antiquated indeed. The rocks tell their tales, and the story of the rose and its history begins there.

It is a long step from those fossil remains to which we have just been alluding, but we must cross the chasm and take up its distribution as it is known at the present time, in the living world. We of the north temperate zone can claim this delightful flower for our own, for it is not known outside of that area. Confined between the twentieth and seventieth degrees of north latitude, it is our flower. But in this belt it is widely distributed the world around. Starting with Asia, where one half of the known species are native, it extends through Europe and northern Africa to the central and northern parts of North America. From Asia we have such well known species as: *Rosa moschata*, the musk rose, which is also found in northern Africa and Persia; *Rosa bracteata*, the Macartney rose, native of China, Formosa, and northern India; *Rosa multiflora*, found wild from China and Japan to Formosa and the Philippines; *Rosa rugosa*, the Ramanas rose; *Rosa macrophylla*; *Rosa lutca*, the parent of the Austrian Briers, extending from western Asia to Italy and Austria; *Rosa Wichuraiana*, from China and Japan; *Rosa Banksiac*, a native of China. In Europe there are such favorite forms as: *Rosa spinosissima*, the Burnet or single Scotch rose; *Rosa rubiginosa*, the sweet brier; *Rosa canina*, the dog rose; and *Rosa arvensis*. In North America, there are, among others: *Rosa carolina*, our charming swamp rose; *Rosa blanda*; and *Rosa setigera*, the prairie rose, the parent of some of our recent productions.

The genus *Rosa* is variously estimated as containing from 30 to 250 species, depending upon whether the botanist takes a conservative, a moderate, or a radical view of the species question. When one considers the ease and readiness with which the various species cross with each other, as demonstrated in the evolution of the garden rose, perhaps an explanation may be found for the larger number of species referred to. Perhaps about 125 species would be a fair estimate, with one half the

number in Asia, two fifths of the remainder in Europe and northern Africa, and the rest in North America.

Finding the rose as widely distributed as we do in all north temperate lands, we should expect references to it in the literature of all the countries in that zone. And such is the case, for the rose has been the subject of song and story from the days long before the Christian era down to the present time. In each language it has a word of its own, which arouses perhaps in the breast of each people the same tender recollections and happy memories that the word "rose" does in our own.

Let us now turn to the history of the rose. How old is the rose? It is of great antiquity. There is reason to believe that it flourished in the famous gardens of Babylon which existed about 1,200 years B.C. It was certainly cultivated by the Jews during the reign of Solomon, about 950 B.C. Homer, the great poet of ancient days who flourished about 850 B.C., paid homage to the rose in the *Iliad* and *Odyssey*. Herodotus, who lived about 400 B.C., says that in the gardens in Macedonia there was a rose which flourished without culture, which had sixty petals and which emitted a most delightful perfume.

In those olden times a mystical origin was ascribed to most things, and to this the rose was no exception. The creation of the rose was credited to the goddess Flora. The fable goes on to say that Flora, finding one day the dead body of one of her favorite nymphs, whose beauty was only equaled by her virtue, implored all the Olympian deities to aid her in transforming this nymph into a flower. The gods granted her request. Apollo is said to have given the vivifying power of his rays; Bacchus contributed the nectar; Vertumnus added the perfume; Pomona supplied the fruit; and Flora herself crowned all with a diadem of flowers. Thus, according to tradition, was the rose created. The poetic instinct was keenly alive in these olden days, and we find the people appreciative of the beautiful and blended colors of the rose, expressing this appreciation in the consecration of this flower to Aurora, the goddess of the Dawn. They also consecrated it to Harpocrates, the patron of silence, and so with them the rose was symbolic of silence. Thus arose the expression, "sub rosa," meaning under the rose, indicating that all should be kept secret or silent; and this expression persists to the present day.

The rose was greatly prized in the days of Rome, being used in enormous quantities for decorative purposes, and it was freely employed on all festive occasions. To the rich and great the term, "a bed of roses," was a reality, for their couches were frequently covered with a mantle of rose petals. It is also related that the tyrant Nero, in one of his feasts, expended about \$100,000 on roses alone. Even in these days of advanced rose culture with ample facilities for their production, the market would be put to the test to supply such a demand. I presume there are men, however, in the country who would like to take such a contract.

Ancient Rome too had its 400, and these insisted upon having roses out of season. The gardeners of those days complied with the demand and

furnished them. They too had their green-houses, it is said, warmed with pipes filled with hot water, by which means they succeeded in keeping the roses in bloom until the end of the year. So roses under glass, you see, are by no means a modern innovation.

Passing from these early days of the rose to the middle ages, we find Chaucer, who wrote in the early part of the thirteenth century, referring to the rose. In the beginning of the fifteenth century our flower is said to have been cultivated for commercial purposes. Roses in those days were apparently scarce and only for the rich, for small quantities of them were considered of sufficient value to offset rent of house and land. Would that we could pay our rent these days with a few roses.

In 1452, as you all know, the rose became emblematic of war and bloodshed, losing for the time its significance of peace. Perhaps it was the thorns and not the flowers that were the real emblems of the war. It was in this year that the rival factions of the white and the red roses sprang up in England, the former the emblem of the house of York, while the red rose stood for the house of Lancaster. You all know of the furious wars which followed, and how Henry VII, in 1486, reunited the two houses by marrying Elizabeth, the heiress of the house of York.

Shakespeare's appreciation of the rose was evident in his numerous references to it in his works.

It was not, however, until the early part of the nineteenth century that rose culture, as we now know it, existed. From that time on the rose has been preëminent. Certain wild forms were, of course, first introduced, and these, perhaps at first by accidental crossings, resulted in hybrids. Man soon took the cue thus accidentally given and began to experiment for himself, crossing first the natural species at his hand, then hybrids with species, and later hybrids with hybrids, and crossing again the progeny thus produced with species. You can well understand that soon all trace and resemblance to the original forms were lost. This crossing and recrossing have caused such confusion that it is all but impossible to classify garden roses. Take any book you will, look up the subject of classification, and you will find no two of them agreeing, forms which in one book are referred to one class, in another are placed in quite different groups. In what follows I shall call to your attention some of the more prominent types which have existed in the history of the development of the rose, not designing by any means to include all of them, taking up first the native or wild species, and later considering the commoner types of the garden roses.

The first of these we will consider is *Rosa arvensis*, a native of Europe. This is one of the parents of the Ayrshire strain and of the Dundee Rambler. It is one of the most common roses of Great Britain. Belonging to the same type is the musk rose, *Rosa moschata*, which is found wild in Northern Africa, Persia and Madeira. This is said to be one of the species from which the attar of roses is obtained. It is also

stated that the original Noisette was an accidental cross between this and *Rosa indica*.

Rosa multiflora, the blackberry rose, so called from the great resemblance of its clusters of flowers to those of the blackberry, is another of this type. It is a native of China, Japan, and Corea. It is one of the parents of several summer-flowering hybrids, such as Crimson Rambler. Crossed with *Rosa indica*, it has produced the class of perpetual flowering dwarf miniature roses known as *polyantha*. *Rosa sempervirens* is known as the evergreen rose, not because it is strictly evergreen, but because it holds its leaves longer than most roses do. It is a native of middle Europe, Greece and the Balearic Islands. It is not as hardy in this latitude as some of its relatives. *Rosa Wichuriana* is a native of China and Japan. It was introduced into cultivation about 1887. It is especially useful for covering masses of rocks and is perfectly hardy. One must not forget Jersey Beauty when thinking of this rose. *Rosa Banksiae*, a native of southern China, was named in honor of Lady Banks. Unfortunately this requires the protection of a greenhouse in northern latitudes. There is a yellow and a white form.

Passing to the *canina* group, we have *Rosa canina* itself, the dog rose, a native of Europe and temperate Asia. It is sometimes found growing as an introduction in the eastern part of the United States. *Rosa rubiginosa* is another species of this same group, a native of Europe. This is familiar to you all as the sweet-brier, receiving this name from the pleasant odor exhaled by the foliage, especially when crushed.

Among the cinnamon group we have *Rosa cinnamomea* itself, the cinnamon rose, found wild in Europe and Asia. *Rosa blanda*, at home in the eastern United States, is one of our charming little roses; and *Rosa humilis*, of the same region, is especially happy growing among rocks. *Rosa rugosa*, of Asia, is a sturdy representative and one perhaps destined to play an important part in the future in hybrid work.

The swamp rose, *Rosa carolina*, delights the eye when forming groups in its favorite haunts, the shores of lakes and streams or in swamps.

The Burnet or single Scotch rose, *Rosa spinosissima*, is a European resident. There are many forms of this, one known as the variety *altaica*.

Rosa lucia—a native of western Asia, Italy and Austria—is known as the Austrian brier, and has been in cultivation as far back as 1586.

Rosa bracteata, the Macartney rose, wild in southern China and Formosa, unfortunately is not hardy in the north, and from its range this is to be expected. It is just as unfortunate, however, as it is a lovely rose. It has become naturalized in Florida and Louisiana.

Rosa laevigata, the Cherokee rose, is a native of China, Formosa and Japan. This is practically the range of *Rosa bracteata*, so of course it is not hardy in the north. It is, however, extensively naturalized in the south, and I recall with delight the beauties of this charming rose as I saw it growing wild on the fences in Florida.

We usually think of the rose leaf as being made up of three or more

divisions or leaflets, but in far off Persia there is a rose with only one leaflet. This hardly seems like a rose at all. It is known as *Rosa berberidifolia*, the barberry-leaved rose. Some botanists keep it separate from the genus *Rosa*, calling it *Hulthemia berberidifolia*.

I have left for consideration until the last these two roses, *Rosa indica*, the China rose, and *Rosa gallica*, the French rose, for they are the progenitors of the great majority of the roses in cultivation. Is it not odd that, of all the forms which have been shown to you, only two have entered largely into the production of what is known as the garden rose? But such is the case. What wonders may await us, when combinations, which are possible with all the others, are tried, only time and experience can tell.

Rosa indica, the China rose, in which is usually included by botanists *Rosa sempreflorens*, is well known to you all. It is the autumn-blooming qualities of this rose which has given us our most valuable roses, and raised the rose from a mere summer visitor to a perpetual delight. The form known as the true *Rosa indica* is the old blush monthly, and was introduced into cultivation in 1718; the other form, known as the old crimson, was not introduced until 1789. As the history of the rose develops, the great importance of this rose will be evident.

Rosa gallica, the French rose, is a native of France, Switzerland, Italy and Austria. It is supposed to be the *Rosa milcsiana* of Pliny. *Rosa damascena*, *R. centifolia*, *R. muscosa* and *R. alba* are supposed to be derived from this.

We now come to a time in the history of the rose, the early part of the nineteenth century, when rose culture, as we now know it, really began. This was the day of the old Provence or cabbage rose, *Rosa centifolia*, or *Rosa provincialis*, as it was often called. This was the rose which delighted the hearts of our grandmothers, and which added the rose charm to their gardens. It was the queen of the rose world in those days, and something over 70 varieties are said to have been listed in the rose catalogues at that time. It is found commonly in the south of France, but its origin is lost in oblivion. It was the popular rose of ancient Rome, being a prominent feature there in feasts and decorations. It is probably the 100-leaved rose of Pliny. It is the blood of this rose which has mingled itself with others, infusing its strong habit of growth into the progeny.

The moss rose, *Rosa muscosa*, is considered a derivative of *Rosa centifolia*. Whatever its derivation, however, it is a lovely rose and holds a warm place in the hearts of most of us. There are several forms of it, the single, double and perpetual.

Rosa gallica, the French rose. I again allude to this, for it played so important a part in the production of the garden roses.

Rosa damascena—the Damask rose—the rose of Damascus—is a native of Syria. It is said to have been first known to Europeans at the time of the crusades. It was reported of Saladin that in 1187, when he recov-

ered Jerusalem from the crusaders, he used rose water with which to purify the Mosque of Omar after it had been defiled, in his estimation, by the Christians' use of it for a church. It is said that 500 camel loads of roses were brought from Damascus for this purpose.

The hybrid China roses made their appearance in the early part of the nineteenth century, while the Provence roses were at their prime and in the height of their glory. This hybrid was the result of crossing the China rose, *Rosa indica*, with varieties of the French and Provence roses. The autumn-flowering quality of the China rose, however, did not impress itself upon these hybrids. It required still another cross to accomplish this.

The hybrid Bourbon was also a product of the early part of this century. It resulted from the crossing of the French and Provence roses with an autumn-flowering variety found on the Isle of Bourbon. Then came the Bourbon perpetual, crosses of the hybrid Bourbon with hybrids of *Rosa indica*, the China rose. These came some ten years before the advent of the hybrid perpetual.

About this time another race of hybrids was introduced. This was obtained by crossing the musk rose, *Rosa moschata*, and the common blush China rose. This produced the famous Noisette rose, *Rosa Noisettiana*. The first of this race was raised by M. Philippe Noisette, in this country. He sent it to his brother Louis, in Paris, about 1817, by whom it was propagated. A number of varieties were produced. It was later crossed with the tea-scented rose, such forms as Marechal Niel resulting; these are very difficult to distinguish from the tea roses.

Still the rose remained, with few sporadic exceptions, a flower of the summer only. The instillation of the China blood into the old time roses did not produce progeny with a flowering period extending into the fall.

The great desire now was to procure roses which would flower in the autumn. The China rose, of course, did this, but it did not come up to the mark in other respects. What was needed was the late-flowering quality of the China and the form and scent of the other roses.

We now come to the day of the hybrid perpetual. This was produced by crossing the Damask rose, *Rosa damascena*, with the hybrid China. Here we have a mixture indeed: the elements of the hybrid China (varieties of the French and Provence roses crossed with the China rose) and the Damask rose. It took, therefore, two infusions of the China rose blood to overcome the more sturdy qualities of the other parents and produce a longer flowering period of the rose. The first fruits in this direction were not entirely successful, and before a really hybrid perpetual rose, such as we know it now, could be produced, it was necessary to cross these so-called perpetuals with the Bourbon and still again with the China roses. This was done by M. Laffey. The influence of this new race of roses was first felt about 1840, and this type reigned supreme from about 1860 to 1890.

To go back now a little in our history to the early part of the century.

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About 1810 a little rose from China made its appearance in England. It was known as the blush tea-scented. In 1824 another similar rose appeared in the same country, and this, on account of its color, was known as the yellow tea-scented. These two visitors did not seem to take kindly to the bleaker climate of old England, and it was not until they were transported to sunny France that they developed really what was in them. From these two has arisen the group of tea-scented roses. It was about 1830 that these deliciously scented roses came into notice. Gloire de Dijon owes its origin here, but probably with an admixture of the Bourbon rose or some other hardy sort, for this new-comer was unusual among the tea-scented roses in being hardy.

Next upon the scene was the hybrid tea, whose recognition as a distinct class was made about 1890. These were produced by crossing the hybrid perpetual and the tea-scented. They have been increasing rapidly and now number many among their ranks. The first hybrid tea is said to have been raised by Messrs. Paul & Son, of Cheshunt, in 1873, and sent out as Cheshunt Hybrid. At first the full meaning of these new hybrids was not realized; it was not until some years after their first appearance that it dawned upon the people that here was a new race of roses destined to work startling changes. La France, at one time one of the most popular roses, belongs here, although sent out first as a hybrid perpetual.

We have now brought the rose up to our own times, the history of which is known to you all. Perhaps it is better not to call these present times history, and so leave the chronicle of our present roses for others. We can see the marvels of recent production beautifully represented in the fine exhibits made at the exhibition now in progress. Here we have the best examples of the cultivator's art. With My Maryland, Killarney, White Killarney, Richmond, and many others it would seem that the possibilities along the line of hybrid teas must be exhausted, but we thought this ten years ago, and were mistaken. What will the next ten years bring to us?

There are many popular flowers, but what one, other than the rose, can awaken that keen delight, can recall those pleasant memories of childhood when we visited grandmother and reveled in her rose garden. The rose has its great hold upon us because it touches us nearly at so many points. We can have it indoors or out, summer or winter, and it is always just

“A rose for every home,
A bush for every garden.”

APRIL 13, 1910

The regular meeting of the society was held at the American Museum of Natural History on Wednesday, April 13, 1910, at 4 P.M., Mr. E. B. Southwick in the chair. The minutes of the meeting of February 9, 1910, were read and approved.

The following parties, their applications having been approved by the Council, were elected to membership, the secretary casting an affirmative ballot upon instructions by the Society: life member, Mrs. D. Willis James; annual members, Wm. Scott, J. J. Higginson.

There being no other business before the meeting, the program advertised for the day was carried out. This was a lecture by Mr. E. B. Southwick entitled, "Insects Injurious to Vegetation, and Remedies for their Destruction," illustrated with charts and specimens. Mr. Southwick gave a most interesting talk. The various injurious insects were described, from the egg stage to the mature organism. Their methods of attack were also illustrated and the best means of fighting them shown by apparatus especially designed for the purpose. Samples of many chemicals used in this work of destruction were also shown.

The meeting adjourned at five.

GEORGE V. NASH,
Secretary.

REPORT OF COMMITTEE

The Council appointed a committee to take suitable action upon the deaths of Dr. Frederick M. Hexamer, Mr. Charles Linnaeus Allen, and Mr. Spencer Trask. This committee, consisting of Mr. James Wood, chairman, Mr. F. R. Pierson, and Mr. E. S. Miller, has submitted the following, which has been spread upon the minutes of the Council and ordered printed in the *JOURNAL* of the society:

DR. FREDERICK M. HEXAMER

There have been few, if any, persons who, during the past twenty-five years, have occupied so prominent a place in the horticultural world in America as Dr. Hexamer. His broad intelligence and enthusiasm in the cause gave him the commanding position.

Dr. Hexamer was born in Germany and was educated at one of its noted universities. When still very young, he took an active part in the liberal movement in 1848, the failure of which sent a number of very able Germans to this country. Settling in New York, he became associated with Dr. Reissig, who was a physician with a very large practice among the German residents, and afterward Dr. Hexamer married the daughter of Dr. Reissig. His health being poor, he sought the advan-

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tages of country life, and purchased a farm near Mt. Kisco, in Westchester county, where, under the firm name of Reissig and Hexamer, an important nursery business was carried on. He established testing grounds for B. K. Bliss & Co., prominent New York seedsmen at that time. Dr. Hexamer gave especial attention to small fruits, and the new varieties of strawberries tested by him included practically everything introduced at that period.

Dr. Hexamer was a frequent contributor to the agricultural press and joined the editorial staff of the *American Agriculturist*. He soon after became editor-in-chief and sold his farm at Mt. Kisco. He was prominent in the work of the American Pomological Society and in many other organizations connected with agriculture and horticulture.

His health had been failing for some time and his death occurred during the past year. He has left a place difficult to fill in the sphere of his activities. He was one of the original organizers of The Horticultural Society of New York, and felt a very deep interest in its work.

CHARLES LINNAEUS ALLEN

Charles Linnaeus Allen was born in the central part of the state of New York of a family noted for its energy and its intelligence. He early showed great interest in scientific matters, and achieved quite a reputation in chemistry, geology and botany. Coming to New York, he settled upon Long Island and became actively identified with advanced horticulture and as an advocate of the highest practical cultivation of crops. He identified himself with the work of the American Institute, and was always active in the promotion and discussions of its agricultural meetings, and in the promotion of its exhibitions. He was a frequent contributor to the agricultural press. He kept up his activities to a good old age, and his death has brought regret to all who knew him. He was one of the original organizers of The Horticultural Society of New York.

SPENCER TRASK

The Horticultural Society of New York has sustained a severe loss in the death of one of its vice-presidents, Spencer Trask, which occurred in the lamentable accident on the Hudson River Railroad during the past winter.

Mr. Trask was born in New England and became prominent in banking circles in the city of Boston. He moved to New York and established the noted banking house of Spencer Trask & Co. He took a deep interest in horticulture and had a residence with extensive grounds in Saratoga Springs. His place, called "Yaddo," was developed with great horticultural skill, and with marked liberality and the desire to promote the enjoyment of the residents of and visitors to Saratoga had thrown open his grounds to the public. In this respect, as in many others, the example of Mr. Trask is well worthy of imitation by others who are in position to give pleasure to their fellowmen.

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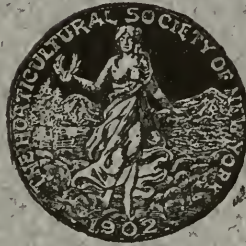
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PUBLISHED BY THE SOCIETY

THE NEW ERA PRINTING COMPANY

LANCASTER, PA.



Summer Exhibition, June, 1910, held in the Museum building, New York Botanical Garden.

Journal
of the
Horticultural Society of New York

INCORPORATED 1902

LIBRARY
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BOTANICAL
GARDEN

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Issued
Quarterly

OCTOBER, 1910

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THE COMING FALL EXHIBITION

An exhibition of plants and flowers will be held in the American Museum of Natural History, commencing on Wednesday, November 9, and continuing until Sunday, the thirteenth. The exhibit will open at 7 P.M. the first day, and the evening will be devoted to a private view for members of the society, of the American Museum of Natural History, and of affiliated organizations.

An extensive premium-list has been prepared. Many premiums have been provided for chrysanthemums, both plants and cut flowers. Among the former are prizes for specimen bushes and standards, and among the cut flowers provision has been made for the large forms and for hardy pompons, singles and anemones. Many premiums have been offered for roses and carnations and for foliage and decorative plants. It is hoped that the prizes for palms and large tree-ferns will prove attractive, as a great many of these are desirable, adding much to the general beauty of the exhibition. Suitable prizes have been allotted to the orchids, collections, individual plants, novelties and cut flowers receiving attention. Premiums are also offered for fruits and vegetables.

It is hoped that entries will be made in the class of decorations and floral pieces. A keen competition along this line would add much to the interest and attractiveness of the exhibition. The many alcoves opening from the main aisles of the exhibition halls

of the American Museum offer excellent opportunity for decorative features of this kind.

Greater opportunities are offered this fall for the non-commercial grower, this term being intended to cover both the private gardener and the amateur. The larger resources of the commercial growers are perhaps discouraging to the non-commercial element among horticulturists, and so in the schedule of this fall especial provision has been made for the non-commercial grower, by providing premiums for which the commercial growers cannot compete. This provision has been made in all classes where competition might be to the detriment of the non-commercial grower.

An added feature this fall is the offer by the Society of American Florists and Ornamental Horticulturists of its silver and bronze medals, to be awarded for new and meritorious plants and flowers of American origin.

The exhibition is entirely free and will be open to the public on Thursday, Friday and Saturday, November 10 to 12, from 9 A.M. to 5 P.M. and from 7 to 10 P.M., and on Sunday, the thirteenth, from 1 to 5 P.M. Last fall nearly 31,000 people visited the exhibition, which was a great educational factor, for many of the visitors were children who took the keenest delight in the display. The best examples of the cultivator's art are to be seen at exhibitions of this kind, and opportunity is thus provided for hundreds to see beautiful plants and flowers who might not otherwise enjoy this delight and privilege.

THE EXHIBITION OF THE PAST SUMMER

This was held in the Museum building of the New York Botanical Garden, opening on Saturday, June 4, at two in the afternoon. It was also open the following day from ten to five. The attendance on Saturday was large, much greater than last year. On Sunday, although the weather was threatening all day, ending in a downpour about closing time, the attendance was still larger than on Saturday. Had the day been pleasant a

crowd would have undoubtedly been present. This increased interest in the society, manifested by the growing attendance, is very encouraging.

The premiums were offered by the New York Botanical Garden, and were awarded by the Exhibition Committee of the Council of the Horticultural Society.

This exhibition was devoted almost entirely to hardy plants, the peony taking a prominent place among the herbaceous plants. It was a little too early for roses, so the number of these flowers exhibited was small. There were several collections of hardy flowering shrubs and trees, and of rhododendrons and azaleas. Herbaceous plants were also well represented, including several groups of irises.

The first prize for the largest and best collection of peonies went to Mr. Geo. H. Peterson, the F. R. Pierson Co. taking the second prize. For the best collection of hardy roses, the first prize went to Mrs. F. A. Constable, of Mamaroneck, N. Y., James Stuart, gardener; the second prize in this group was awarded to the F. R. Pierson Co. For the best collection of hardy flowering shrubs and trees, the first prize was awarded to Mr. E. H. Weatherbee, of Mamaroneck, N. Y., Francis Milne, gardener; the second prize went to Mr. T. A. Havemeyer, Albert Lahodny, gardener. Mr. T. A. Havemeyer also took the first prize for the best collection of hardy rhododendrons and azaleas. Messrs. Bobbink & Atkins took the first prize for the best collection of hardy herbaceous plants, the second going to Mr. E. H. Weatherbee. Among the irises, this firm also took the first prize, the second going to Mr. T. A. Havemeyer. Mr. Clement Moore, of Hackensack, N. J., James P. Dye, gardener, received first prize for the best six orchid plants in bloom. To Mr. J. A. Manda was awarded the first prize for the best collection of cut orchid blooms. Miss Blanche Potter, of Ossining, N. Y., Geo. Wittlinger, gardener, was awarded a special prize for a display of campanulas and sweet peas; and to Mrs. J. B. Trevor, of Yonkers, N. Y., Howard Nichols, gardener, a special prize for a collection of twelve vegetables.

PROCEEDINGS OF THE SOCIETY

MAY 11, 1910

The annual meeting of the society was held at the Museum Building, New York Botanical Garden, on Wednesday, May 11, 1910, at 4:15 P.M., with Dr. Britton in the chair. The minutes of the meeting of April 13, 1910, were read and approved.

The following persons, having been approved by the Council, were elected to membership in the society, the secretary casting an affirmative ballot to this effect upon instructions by the society: Life Member, Percy Chubb; Annual Members, A. J. C. Anderson, Charles Lyman Brinsmade, L. Duncan Bulkley, Benjamin T. Fairchild, Miss J. K. Fraser, James W. Greene, Mrs. William Preston Griffin, A. M. Guinzburg, Miss Elizabeth Stewart Hamilton, Mrs. Columbus O'D. Iselin, A. S. Post, Jefferson Seligman, John Boulton Simpson, Adelbert J. Smith, J. E. Spingarn, Edward H. Wales, F. S. Witherbee, William Wicke, Geo. Hunt, E. Fardel, Thos. Carr.

The annual report of the Council was submitted, approved, and ordered printed in the *JOURNAL*.

Mr. James Wood, who has been the president of this society since its inauguration, refused a renomination for the office. His reasons for this action were such that the society could but accept his decision in the matter.

The following officers and members of the Council were elected, the secretary being instructed to cast an affirmative ballot: President, Geo. T. Powell; Vice-Presidents, N. L. Britton, T. A. Havemeyer, Patrick O'Mara, James Wood, Samuel Thorne; Treasurer, F. R. Newbold; Secretary, George V. Nash; Members of Council, F. L. Atkins, J. W. Cromwell, Henry F. du Pont, Henry Hicks, John E. Lager, J. A. Manda, E. S. Miller, Clement Moore, W. Nilsson, F. R. Pierson, I. L. Powell, E. H. Roehrs, H. H. Rusby, H. A. Siebrecht, Robert Simpson, E. B. Southwick, James Stuart, J. H. Troy, W. H. Waite, C. W. Ward, C. W. Weathered, A. L. Willis.

Meeting adjourned at 5:10.

GEORGE V. NASH,
Secretary.

JUNE 4, 1910

A meeting of the society was held in the lecture hall of the Museum building, New York Botanical Garden, on Saturday, June 4, 1910, at 3.45 P.M., with Mr. Southwick in the chair.

The minutes of the meeting of May 11, 1910, were read and approved.

The following persons, having been duly approved by the Council and their names referred to the society for action, were elected:

Life Members

James B. Ford, Cornelius Rea Agnew, Mrs. James Roosevelt, Mrs. F. A. Constable, Miss Catherine A. Bliss, Wm. A. Read, E. S. Harkness.

Annual Members

George D. Barron, Mrs. D. C. Blair, Chester W. Chapin, R. J. Collier, Mrs. George S. Fraser, Paul Gottheil, Edwin O. Meyer, Dr. George N. Miller, Wm. Fellowes Morgan, Curt G. Pfeiffer, Mrs. Arch'd Rogers, Miss Marianne Schurz, Alonzo B. See, Alex. H. Stevens, Dr. Daniel M. Stimson, F. K. Sturgis, Mrs. J. B. Trevor, Mrs. Cynthia A. Wood, Wm. Shillaber.

The following resignations were accepted with regret: C. I. Hudson, H. de Coppet (to take effect May 12, 1911), Anton G. Hodenpyl, John S. Holbrook.

The secretary submitted letters from Mr. George T. Powell, H. F. du Pont, and I. L. Powell, accepting the offices to which they had been elected.

The meeting adjourned at 3:55 to attend a lecture by Dr. N. L. Britton on "Summer Flowers," illustrated with colored lantern slides.

An exhibition of plants and flowers was held, in connection with this meeting, in the Museum building of the New York Botanical Garden.

GEORGE V. NASH,
Secretary.

TENTH ANNUAL REPORT OF THE COUNCIL

PRESENTED MAY 11, 1910

The society has now completed its tenth year and the eighth of its existence as an incorporated body. The year just passed has been one of great activity, and it is hoped that it is the precursor of still more active years.

Realizing that it is largely through successful exhibitions that the society may hope to attain to the position it should occupy in the world of horticulture, the Council has endeavored to make the exhibitions as large and attractive as possible. Much has been done toward accomplishing this during the past year, and the success attained has been very gratifying, but the society desires to enlarge its field of action in this direction. Feeling a desire to reach as many people as possible with its exhibitions, the matter of holding the exhibitions open on Sunday was brought before the Council. It was thought that many people who could not visit them on week days might be able to do so on Sunday. The Council, therefore, at its meeting of May 12, 1909, took the following action.

Resolved: That the exhibitions of the society may be held open on Sunday where it is found practicable to do so.

This action was fully justified by future events.

Three exhibitions were given: one each in the summer and fall of 1909, and one in the spring of 1910. The summer exhibition of 1909 was held on June 5 and 6, at the Museum of the New York Botanical Garden. By the permission of the authorities there the experiment of holding an exhibition open on Sunday was first tried, with satisfactory results. Premiums were offered for peonies and other herbaceous plants, and for flowering shrubs and trees. Special entries were also made, especially of orchids, the newly organized orchid section making a fine exhibit of these plants. The cash premiums awarded at this exhibition were offered by the New York Botanical Garden. The Horticultural Society fully appreciates this action, and expresses its thanks, not only for this, but also for the use of the hall in which the exhibition was held. The hall was well filled with exhibits and the attendance very encouraging, especially on Sunday.

The fall exhibition was held at the American Museum of Natural History, with the permission of the trustees of that institution, November 3 to 7. The latter date, a Sunday, was included with the permission of the Museum authorities. A premium-list carrying over \$1,600 was arranged. It was impossible to provide an amount of this size from the ordinary funds of the society, and so the treasurer was authorized to approach the members and friends of the society with an appeal for con-

THE HORTICULTURAL SOCIETY OF NEW YORK

tributions toward a special fund. The amount thus realized, together with other funds of the society, made it possible to meet the expenses of the exhibition. The exhibition was open four evenings and three week days and on Sunday afternoon, being visited during that time by 30,734 people, 11,228 of these attending on Sunday afternoon, thus clearly demonstrating the advisability of the Sunday opening. A detailed description of this exhibition was given in the *JOURNAL* of the society for March, 1910.

The third exhibition was also given at the American Museum of Natural History. This was in conjunction with the American Rose Society which had been invited to hold their annual meeting with us. The exhibition was open from Wednesday, March 16, to Friday, March 18, and was attended by 13,535 people, three evenings and two days being devoted to the affair. While the exhibition was not very large, the quality of the material on exhibition was of the first order. This was especially true of the roses and orchids. A special fund was also contributed by the members of the society to help defray the expenses of this exhibition.

There have been eleven meetings of the Council, including two special meetings on September 24 and October 29, to consider matters in reference to the fall exhibition.

The society has held the usual monthly meetings from October to June, inclusive, as follows, all but that of June, which took place at the New York Botanical Garden, being held at the American Museum of Natural History:

May 12, 1909. Annual meeting, with election of officers, followed by an illustrated lecture by Mr. George V. Nash entitled, "Flowering Shrubs and Trees."

June 5, 1909. Summer exhibition, held at the Museum of the New York Botanical Garden. The exhibition continued through the following day, Sunday. On the afternoon of the fifth a public lecture was given by Dr. Wm. A. Merrill, entitled, "The Selection and Care of Shade Trees," illustrated with lantern slides.

October 13, 1909. Lecture, "Coniferous Evergreens: their use in the landscape," by George V. Nash, illustrated with lantern slides.

November 10, 1909. "A Talk on the Chrysanthemum," by Mr. W. H. Waite.

December 5, 1909. Lecture, "Shade Trees in Cities," by Mr. Wm. Solotaroff, illustrated with lantern slides.

January 12, 1910. Lecture, "Winter Decorative Shrubs," by Mr. George V. Nash, illustrated with lantern slides and specimens.

February 9, 1910. The lecture announced for this meeting, "The Ideals of Horticulture," by Mr. James Wood, was postponed on account of the ceremonies in connection with the unveiling of the statue of Mr. Jesup at the Museum.

March 17, 1910. The regular meeting of the society should have occurred on the ninth, but by action of the Council was postponed until the seventeenth, that it might be held in conjunction with that of the

THE HORTICULTURAL SOCIETY OF NEW YORK

American Rose Society, the invited guests of the Horticultural Society. At this meeting the address of Mr. James Wood, "The Ideals of Horticulture," postponed from the February meeting, was given, and also an illustrated lecture by Mr. George V. Nash on "The Rose and Its History."

April 13, 1910. Lecture, "Insects Injurious to Vegetation, and Remedies for their Destruction," illustrated with charts and specimens, by Dr. E. B. Southwick.

The Orchid Section has held monthly meetings, beginning with January. By arrangement with the authorities of the American Museum of Natural History, the evening of the fourth Wednesday in each month has been allotted to the section. The initial meeting in January was devoted to a discussion of the aims of the section. For the meetings of February and March the genus *Cattleya* was selected as a subject for discussion. On February 23, the discussion was opened by Mr. George V. Nash with a short illustrated talk on "Types of the Genus *Cattleya*." On March 30, postponed from the regular date of March 23 on account of its proximity to the spring exhibition, a lecture was given by Mr. John E. Lager on "Collecting Orchids in South America." On April 27 no set program was provided, the meeting being left open for general discussion on orchid topics.

Matters were finally arranged so that it was possible to issue another number of the JOURNAL. This was no. 3 of Vol. I, and contains 23 pages and 3 plates. It appeared in March, and will be issued quarterly in the future.

The membership of the society has increased considerably during the year. There have been sent out over 1,150 invitations to become members. Acceptances have been received in the ratio of about 2 to every 100 sent out. The total membership of the society is now 220, divided as follows: patrons, 1; life 27; annual 192. The total membership indicated on the official list at the time of the last annual meeting was 180, made up as follows: patrons, 1; life, 24; annual, 143. This shows a gross gain of 3 life members and 49 annual members. The society has lost 7 members by death and 5 by resignation, making a total loss of 12, leaving the net gain in membership 40. A list of the membership is appended to this report; as is also the report of the treasurer.

JAMES WOOD,
Chairman of the Council.

GEORGE V. NASH,
Secretary.

TREASURER'S STATEMENT

FOR THE YEAR ENDING MAY 11, 1910

RECEIPTS

Balance forwarded.....	\$205.23
Annual dues for 1908-9.....	5.00

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Annual dues for 1909-10.....	695.00
Annual dues for 1910-11.....	120.00
3 Life members.....	150.00
Special funds:	
November show, 1909.....	1,086.00
November show, special prizes.....	100.00
Rose show, March, 1910.....	393.00
Special prize November, 1910.....	15.00
Special fund, November, 1910.....	10.00
From American Rose Society, share of schedules.....	46.71
By sale Memoirs.....	10.20
	\$2,836.14

EXPENDITURES

To Secretary, for salary.....	\$200.00
To Secretary, postage notices of 2 shows.....	100.00
To Secretary, petty cash.....	150.00
Premiums:	
Balance November, 1908, show.....	160.00
November, 1909, show.....	1,043.75
Medals awarded.....	55.00
Photographs of Rose Show, 1910.....	20.30
Manager, November show, 1909.....	50.00
Assistant, November show, 1909.....	13.75
Manager Rose Show, 1910.....	50.00
Expenses of Judges, November, 1909, show.....	30.00
Printing and stationery for the year.....	370.67
Expenses at American Museum of Natural History.....	199.91
To Life fund.....	150.00
Bank charges on out of town checks.....	.80
Balance in bank, May 11, 1910.....	241.96
	\$2,836.14

PERMANENT FUND, ON DEPOSIT IN BROADWAY SAVINGS INSTITUTION

January 1, 1909.....	\$2,013.96
July 1, 1909. Interest.....	40.26
January 1, 1910. Interest.....	41.08
Deposits	150.00
	\$2,245.30

FRED' C R. NEWBOLD,
Treasurer.

MEMBERSHIP

MAY 11, 1910

PATRON

Archer M. Huntington

LIFE MEMBERS

Adams, Edward D.	McMillin, Emerson
Andrews, Constant A.	Mills, A. G.
Archbold, John D.	Morgan, J. Pierpont
Billings, Miss E.	Peabody, G. F.
Burk, Louis	Peters, S. T.
Campbell, Mrs. Ina	Pierson, F. R.
Chubb, Percy	Potter, Miss B.
Colgate, W.	Stickney, J.
Conyngham, W. S.	Stokes, Miss C. Phelps
Delafield, Mrs. John R.	Stokes, Miss O. E. P.
Estabrook, A. F.	Stone, Miss E. J.
Frothingham, H. P.	Thorne, Samuel
Hubbard, Thos. H.	Troy, J. H.
James, Mrs. D. Willis	

ANNUAL MEMBERS

Agnew, Mrs. C. R.	Blauvelt, C. D.
Aldrich, Mrs. J. Herman	Boddington, Arthur T.
Amend, B. G.	Bolles, F. A.
Anderson, A. J. C.	Bond, F. S.
Archer, George A.	Brinsmade, Charles Lyman
Atkins, F. L.	Bristol, John I. D.
Auchincloss, Hugh D.	Britton, Dr. N. L.
Avery, Samuel P.	Brown, Hon. Addison
Baldwin, G. E.	Bruggerhof, F. W.
Barnes, Parker Thayer	Bryce, Mrs. W.
Barron, Leonard	Bulkley, Edwin M.
Bartlett, F. A.	Bulkley, L. Duncan
Belmont, August	Bunyard, Harry A.
Bendheim, C. D.	Burnham, Wm. W.
Benedict, J. H.	Butterworth, John

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- | | |
|-------------------------|-------------------------------|
| Caesar, H. A. | Goodwin, J. J. |
| Cammann, H. H. | Greene, James W. |
| Carnegie, Thos. M. | Griffin, Mrs. William Preston |
| Carr, Thos. | Guinzburg, A. M. |
| Cathcart, Miss J: R. | Guttman, A. J. |
| Clausen, G. C. | Haddock, John C. |
| Coffin, C. A. | Hale, G. H. |
| Conklin, Roland R. | Hamilton, Miss Elizabeth |
| Connor, W. E. | Stewart |
| Crane, F. D. | Havemeyer, T. A. |
| Craw, Lyman B. | Heminway, Homer. |
| Cromwell, James W. | Henderson, Chas. |
| Davies, J. Clarence | Hendrickson, I. S. |
| DeCoppet, H. | Herrman, Mrs. Esther |
| DeKlyn, B. F. | Hicks, Henry |
| Dervan, John | Higginson, James J. |
| Dietrich, C. F. | Hodenpyl, Anton G. |
| Dike, Miss A. M. | Hoe, Mrs. R. |
| Dimock, Geo. E. | Holbrook, J. S. |
| Douglas, J. | Holden, E. R. |
| Duff, P. | Hudson, C. I. |
| DuPont, Henry F. | Hunt, Geo. |
| Dwight, Mrs. M. E. | Hunt, Thomas |
| Dye, James P. | Hurrell, Henry |
| Ehret, George | Iselin, Mrs. Columbus O'D. |
| Ewing, Mrs. Thos., Jr. | Iselin, Wm. E. |
| Fairchild, Benjamin T. | Jackson, T. F. |
| Fardel, E. | Jaenicke, J. |
| Ferguson, Mrs. Farquhar | Jesup, Mrs. Morris K. |
| Fischer, William H. | Kahn, O. H. |
| Forster, William | Kane, John Innes |
| Foulke, J. B. | Kean, Mrs. Hamilton Fish |
| Fraser, Miss J. K. | Kitchen, Dr. J. M. W. |
| Fullerton, H. B. | Kohlman, C. |
| Gay, J. E. | Lager, John E. |
| Geer, Mrs. Walter | Lawrence, Miss Lydia G. |
| Giatras, George | MacDougal, Dr. D. T. |
| Gibson, Robt. W. | Macy, V. Everit |

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- | | |
|---------------------|----------------------------|
| Mallory, Chas. | Scott, C. W. |
| Manda, A. J. | Scott, Wm. |
| Manda, J. A. | Seligman, Isaac M. |
| Manda, W. A. | Seligman, Jefferson |
| Marlor, H. S. | Shepard, E. M. |
| Marshall, W. E. | Siebrecht, H. A. |
| Marston, Edgar L. | Simpson, John Boulton |
| Marston, Edwin S. | Simpson, Robert. |
| Maynard, W. E. | Smith, Adelbert J. |
| McAlpin, Dr. D. H. | Smith, W. A. |
| McCagg, Louis B. | Solotaroff, William |
| McDougall, G. R. | Southwick, E. B. |
| Merkel, Herman W. | Spingarn, J. E. |
| Miller, E. S. | Stanton, J. R. |
| Miller, Wilhelm | Stetson, F. Lynde |
| Moore, Clement | Stewart, Wm. R. |
| Morris, John | Stuart, Jas. |
| Nash, George V. | Such, Mrs. A. R. |
| Negley, Henry H. | Tailer, E. N. |
| Newbold, F. R. | Tesla, N. |
| Nilsson, W. | Thalmann, Ernest |
| O'Mara, Patrick | Thomas, Edward |
| Opdyke, Wm. S. | Thorne, J. |
| Ordonez, Manuel | Tiffany, Louis C. |
| Perkins, G. W. | Traendly, F. H. |
| Post, A. S. | Trageser, W. C. |
| Powell, Geo. T. | Tuttle, Mrs. B. B. |
| Powell, I. L. | Untermeyer, Samuel |
| Pryer, Charles | Valentine, Mrs. Lawson |
| Richter, Max | Van Norden, Theodore Lang- |
| Riker, Samuel | don |
| Roberts, Miss M. M. | Van Norden, Warner |
| Robertson, J. L. | Von Herff, Baron |
| Roehrs, Edward H. | Von Hoffmann, T. |
| Roehrs, Julius | Waite, W. H. |
| Rogers, E. L. | Wales, Edward H. |
| Rusby, Dr. H. H. | Walker, H. F. |
| Schiff, Mortimer L. | Ward, C. W. |

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Weatherbee, Edwin H.	Witherbee, F. S.
Weathered, C. W.	Witherbee, Mrs. F. S.
Wicke, William	Wood, Mrs. C. B.
Willets, John T.	Wood, James
Willis, A. L.	Wright, Mrs. J. Hood
Willis, W. P.	Young, John

CHANGES SINCE MAY 11, 1910

BY ELECTION

LIFE MEMBERS

Agnew, Cornelius Rea	Ford, James B.
Astor, John Jacob	Harkness, E. S.
Bliss, Miss Catherine A.	Morgan, J. P., Jr.
Blumenthal, George	Read, Wm. A.
Bowdoin, George S.	Roosevelt, Mrs. James
Chapin, S. B.	Satterlee, Herbert L.
Constable, Mrs. F. A.	Wadsworth, W. A.

ANNUAL MEMBERS

Barron, George D.	Kinney, Morris
Benson, Miss Mary	Koehne, Robert
Blair, Mrs. D. C.	Livingston, Luther S.
Chapin, Chester W.	Loeb, Morris
Child, Wm., Jr.	Meyer, Edwin O.
Collier, R. J.	Miller, Dr. George N.
Crimmins, John D.	Morgan, Wm. Fellowes
Fraser, Mrs. George S.	Pfeiffer, Curt G.
Golly, Francis X.	Pulitzer, Mrs. Joseph
Gottheil, Paul	Richard, Mrs. A.
Greenhut, Benedict J.	Rogers, Mrs. Arch'd
Haven, Miss Frances A. L.	Schurz, Miss Marianne
Hermann, Ferdinand	See, Alonzo B.
Hoyt, Gerald L.	Shillaber, Wm.
Hoyt, Miss Gertrude L.	Stevens, Alex. H.
Iselin, Miss Georgine	Stimson, Dr. Daniel M.
Jacobus, Martin R.	Stobo, Robert

THE HORTICULTURAL SOCIETY OF NEW YORK

Sturgis, F. K.	Westcott, Mrs. Robert E.
Trevor, Mrs. J. B.	Wood, Mrs. Cynthia A.
Troescher, A. F.	Zvolanek, A. C.

BY RESIGNATION OR DEATH

Craw, Lyman B. (Deceased)	Hunt, George
Ewing, Mrs. Thos., Jr.	Negley, Henry H.
Hodenpyl, Anton G.	Van Norden, Theodore Lang-
Holbrook, J. S.	don
Hudson, C. I.	Van Norden, Warner

GROWTH OF THE SOCIETY.

The total membership of the society is now 265, divided as follows: Patrons, 1; Life, 41; Annual, 223.

A campaign for new members has been actively carried on during the past summer and fall. Invitations to membership were sent out to a list of selected names, with the result that 69 of those approached accepted the invitation extended by the Council, 15 of them becoming life and 54 annual members. At the time of the annual meeting in May, 1909, the entire membership was 180, thus showing a net gain since that time of 85 members, or over 47 per cent. This gain is very encouraging, but a much larger membership is needed to place the society in a financial position to accomplish the work it desires. Its exhibitions are entirely free, no charge being made for admission, so that all the funds of the society to carry on its work must be derived from its membership.

The constitution, which will be found on pages 69-71 of this JOURNAL, provides that all fees received from patrons and life members shall constitute a permanent fund, only the interest of which may be expended. To safeguard the interests of the society, on June 11, 1902, the following resolution was adopted:

RESOLVED: That the interest of the permanent fund be added to the principal until a sum of not less than \$10,000.00 has been obtained.

THE HORTICULTURAL SOCIETY OF NEW YORK

To secure the use of the interest from this fund, it is highly desirable to increase it to the required amount of \$10,000.00 as rapidly as possible by the addition of new patrons and life members.

A person becomes a Patron of the society by paying \$250.00 or more at any one time, and a Life Member by paying \$50.00 at any one time.

A Sustaining Member pays \$25.00 annually, and when ten such payments have been made he becomes a Patron.

An Annual Member pays \$5.00 yearly.

Under these conditions the society at present is dependent entirely upon the fees from its annual members for funds with which to carry on its operations, including the publication of a Journal and a series of Memoirs, another number of which is now in press.

The Council feels that one of the most desirable means for increasing the usefulness of the society is the holding of exhibitions of plants and flowers. To insure the success of these a large premium list is necessary, and this cannot be met at present from the available income, so that it is necessary to secure a special fund for the purpose. The exhibitions of the society have been of increasing interest, that of last fall attracting nearly 31,000 people. It is hoped that the coming exhibition, already referred to, which will be held from November 9th to 13th at the American Museum of Natural History, will be of still greater interest.

THE HORTICULTURAL SOCIETY OF NEW YORK

OFFICERS

President

GEORGE T. POWELL, New York City.

Vice-Presidents

N. L. BRITTON
T. A. HAVEMEYER

PATRICK O'MARA
SAMUEL THORNE
JAMES WOOD

Treasurer

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Journal

of the

Horticultural Society of New York

Vol. I, No. 6



JANUARY, 1911

EDITED BY THE SECRETARY

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Fall Exhibition of 1910. View in the foyer of the American Museum of Natural History, showing part of the exhibit of Mr. Samuel Untermyer.

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THE EXHIBITION OF LAST FALL

The annual fall exhibition of the society was held at the American Museum of Natural History November 9 to 13. The opening occurred on the evening of Wednesday with a private view for the members of the society, the museum, and affiliated organizations. The exhibition remained open to the public the rest of the week, both day and evening, and on the afternoon of Sunday. The attendance was large, especially on Sunday.

The foyer and the halls radiating therefrom were filled with flowers and plants. In the foyer were displayed the palms, ferns, groups of foliage and decorative plants, and the large bush and standard chrysanthemums. In the hall to the north were the orchids, occupying several tables, in the west hall the chrysanthemum blooms of all kinds, and in the east hall the roses and carnations.

The strike of the express drivers, then at its height, interfered greatly with the exhibition, as it was impossible for those living at a distance to secure transportation for large specimens. Those living in and near the city could transport their material by private conveyance, and many did so. All during the morning of the opening day exhibits arrived by automobile and private wagons, while many of the smaller exhibits were brought in by hand. The interest thus manifested in the success of the exhibition was very encouraging.

The chrysanthemum, of course, took a place of prominence.

both plants and cut blooms being largely represented. Among the bush specimens, Mr. Samuel Untermyer, A. Herrington, superintendent, secured first prize in the yellows with Mrs. R. Hooper-Pearson, while the first prize among the pinks was taken by Mr. Adolph Lewisohn, John Canning, gardener, with Annie Laurie, the same plant also capturing the sweepstakes for the best bush plant exhibited. For the best white the first prize was taken by Mr. E. H. Weatherbee, Francis Milne, gardener. For the largest specimen bush the first prize went to Mr. Untermyer for Clara Vernum, another plant of the same taking first prize for a specimen bush of any color but yellow, white or pink. Mr. F. V. Burton, Wilhelm Cordes, gardener, was given first prize for a specimen standard of Brutus, while the first prize for the best pink of the same class was awarded to Mr. Chas. Hathaway, Max Schneider, gardener. Garza won the first prize for Mr. Burton for the best specimen anemone.

Among the cut chrysanthemum blooms with long stems, Miss B. Potter, George Wittlinger, gardener, took first prize for twenty-five blooms of any color but white, pink or yellow. The special prize offered by Mr. Jerome Jones, for the best twelve blooms of Mrs. Jerome Jones, was won by Mr. M. F. Plant, T. W. Head, superintendent. The first prize for the best vase of fifty blooms, one or more varieties, arranged for effect, went to Traendly and Schenck. For the best collection of twenty-five distinct varieties, stems not over twelve inches long, first to Mrs. F. A. Constable, James Stuart, gardener, and second to Mr. M. F. Plant. First prize for the best display of hardy pompons, twenty-five varieties, was secured by Mr. Chas. Mallory, Wm. J. Sealey, gardener, while the second was taken by Mr. E. H. Weatherbee. For the best collection of singles or anemones, or either, twenty-five varieties, first to Mrs. F. A. Constable, and second to Mr. J. T. Pratt, J. W. Everits, gardener.

In the non-commercial class, Miss Georgine Iselin, Ewen Mackenzie, gardener, was awarded first for twelve blooms white, with Beatrice May, the second going to Miss M. T. Cockcroft, Adam Paterson, gardener. Miss Cockcroft also received first for twelve blooms yellow, and Miss Potter second, while Mr. E. H. Weatherbee took first prize for twelve blooms, any other color, with



Fall Exhibition of 1910. Specimen of *Begonia Gloire de Lorraine*, exhibited by Mr. Adolph Lewisohn, winner of the first prize.

Mrs. Carrington. For the best vase of twenty-five blooms, one or more varieties, arranged for effect, Mr. H. M. Tilford, Jos. Tansey, gardener, took first. For twelve distinct varieties, stems not over twelve inches long, the first was won by Miss Georgine Iselin, while the second went to Mr. Lewisohn. The best display of twelve hardy pompons brought the first prize to Mr. Mallory, the second going to Mr. Fred. Sturges, Thos. Bell, gardener. The first prize was awarded to Mr. J. T. Pratt for a collection of singles and anemones or either, twelve varieties, the second to the Osborn Estate, Wm. Inglis, gardener.

The exhibit of roses was not large. The F. R. Pierson Co. took first prize for one hundred American Beauty, and the same prize for one hundred White Killarney. In the non-commercial class Mr. Samuel Untermyer took first prize for twelve American Beauty, while Mr. H. M. Tilford secured the same prize for twenty-five My Maryland.

The carnations were much better represented than the roses. Traendly and Schenck took five first prizes, including the sweepstakes, a silver medal, for the best vase of one hundred blooms. The Cottage Gardens Co. took first prize, a silver medal, for the largest and best collection, and also the diploma for the best new variety, not in commerce, won with Howard Gould. In the non-commercial class Mr. Fred'k Potter and Mr. F. R. Newbold each took one first prize, Mr. John J. Riker two, and Mr. Frederick Sturges three.

In the class for foliage and decorative plants, Mr. Samuel Untermyer took first for a collection of stove and greenhouse plants; Mr. Adolph Lewisohn first for a superb specimen of *Begonia Gloire de Lorraine*; The F. R. Pierson Co., three first prizes for ferns; Mrs. J. Hood Wright, Chas. A. Webber, gardener, two first prizes, for palms; Mrs. Harold Irving Pratt, A. J. Manda, gardener, seven firsts for collections of crotons, marantas, and nepenthes, and for single specimens of *Davallia*, *Cycas circinalis*, staghorn-fern and *Livistona chinensis*; and Bobbink & Atkins four, for *Polypodium aureum*, a group of *Ficus pandurata*, and collections of conifers and bay trees.

In the class for fruits and vegetables, first prizes were awarded to Mr. Samuel Untermyer, for specimen of pineapple plant in

fruit; the F. R. Pierson Co., for lemon tree in fruit; Miss B. Potter, for collection of eighteen vegetables.

Mr. F. R. Newbold was awarded the certificate for a chrysanthemum not yet in commerce.

There was a fine display of orchids, under the direction of the Orchid Section. Lager & Hurrell took first prize for a collection of orchids, and also first for a novelty not before exhibited before the society, with *Cattleya maxima alba*. Mr. Clement Moore was awarded first prize for three hybrid orchids, the second going to Lager & Hurrell, who took first for one hybrid orchid. Mr. J. A. Manda received first prize for a collection of cut orchid blooms, and Lager & Hurrell first for a collection of cut cypripedium blooms. Lager & Hurrell also won six other first prizes, and Mr. J. A. Manda three. Mr. F. V. Burton won first prize for two orchid plants showing excellence of cultivation; for six orchid plants, six varieties, in bloom; for three plants of *Cattleya labiata*, in bloom; and sweepstakes, a silver medal, for the best plant exhibited. The spray of *Oncidium* exhibited by the William Ziegler Estate took first prize, and the Osborn Estate won the first prize for three orchid plants, three varieties, in bloom.

A number of special prizes were awarded. Among these were: a bronze medal to Mr. James Stuart for an exceptional vase of *Nerine Fothergilli major*; a silver medal to Mrs. Harold Irving Pratt, for a collection of crotons; a silver medal to the William Ziegler Estate, A. Bieschke, gardener, for a fine pair of *Phoenix Roebelinii*; and to Mr. W. P. Clyde, H. J. Osterhault, gardener, a certificate for a collection of seedling single chrysanthemums.

Three silver medals of the Society of American Florists and Ornamental Horticulturists were awarded, as follows: to Lager & Hurrell, for *Cypripedium insigne Hurrellianum*; to The F. R. Pierson Co., for *Nephrolepis viridissima*, and for a new form of *Nephrolepis superbissima*.

The judges were: I. L. Powell, Millbrook, N. Y.; William Reid, Orange, N. J.; Alex. Mackenzie, Glen Cove, N. Y.; Chas. H. Totty, Madison, N. J.; Robert Stobo, Great Neck, N. Y.; Robert Angus, Tarrytown, N. Y.

It was necessary to secure a special fund to meet the expenses of the exhibition, and to the appeal issued for this purpose the



Fall Exhibition of 1910. Best vase of fifty chrysanthemum blooms, arranged for effect.
Exhibited by Traendly & Schenk, winner of the first prize.

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following members and friends of the society responded with contributions :

Mrs. James Herman Aldrich	Mr. Thos. H. Hubbard
Dr. D. H. McAlpin	Mr. Columbus O'D. Iselin
Mr. Bernard G. Amend	Miss Georgine Iselin
Mr. A. J. C. Anderson	Mr. Theo. F. Jackson
Mr. Constant A. Andrews	Mr. M. R. Jacobus
Mr. George A. Archer	Mrs. Morris K. Jesup
Mr. Samuel P. Avery	Mr. Jerome Jones
Mrs. D. C. Blair	Messrs. Lager & Hurrell
Mr. C. D. Blauvelt	Mr. Morris Loeb
Miss Catherine A. Bliss	Mr. Geo. R. MacDougall
Messrs. Bobbink & Atkins	Mr. C. Mallory
Mr. George S. Bowdoin	Mr. Emerson McMillen
Dr. N. L. Britton	Mr. Clement Moore
Hon. A. Brown.	Mr. J. Pierpont Morgan
Mr. F. W. Bruggerhof	Mr. F. R. Newbold
Mr. Louis Burk	Mr. Wm. Nilsson
Mr. C. W. Chapin	Mr. Geo. W. Perkins
Mr. A. H. Coffin	Mr. Abram S. Post
Mrs. F. A. Constable	Miss Blanche Potter
Mr. John D. Crimmins	Mr. Geo. T. Powell
Mr. James W. Cromwell	Mr. W. A. Read
Mr. James Douglas	Mr. Geraldyn Redmond
Mr. H. F. du Pont	Mr. Saml. Riker
Mr. George Ehret	Mrs. Archibald Rogers
Mr. A. P. Estabrook	Mrs. James Roosevelt
Mr. James B. Ford	Mr. Mortimer L. Schiff
Mrs. Geo. S. Fraser	Mr. Isaac N. Seligman
Miss J. K. Fraser	Mr. Wm. Shillaber
Mr. George Giatras	Mr. Wm. Alexander Smith
Mr. James J. Goodwin	Mr. J. E. Spingarn
Mr. Paul Gottheil	Mr. Francis Lynde Stetson
Mr. James W. Greene	Mr. Robert Stobo
Mrs. William Preston Griffin	Miss Ellen J. Stone
Mr. E. S. Harkness	Mr. Jonathan Thorne
Mr. Theodore A. Havemeyer	Mr. Samuel Thorne
Mr. James I. Higginson	Mrs. J. B. Trevor

Mrs. B. B. Tuttle
Mrs. Lawson Valentine
Dr. H. F. Walker
Mrs. F. S. Witherbee

Mr. A. L. Willis
Mrs. Cynthia A. Wood
Mrs. Charles B. Wood
Mr. James Wood

MONTHLY EXHIBITIONS

At the meeting of the council of the society, held on December 14, 1910, it was decided to try the experiment of holding monthly exhibitions in conjunction with the meetings of the society. The first of these, to be held at the American Museum of Natural History on Wednesday, February 8, will be devoted to orchids and roses; it will be open from 1 to 5. The exhibitions of March and April will be held at the same place. It is planned to make the carnation the principal feature at the March exhibition, while the plants and flowers which are associated with Easter will be the important attraction at the exhibition in April.

These exhibitions are not expected to be as large as those held in the autumn. They are intended to offer more frequent opportunity for exhibition to those having choice flowers and plants, and to lovers of such things to see them. Arrangements have been made with the authorities of the American Museum to use the West Assembly Hall for these three exhibitions. A cordial invitation is extended to all to attend and to bring their friends.

An announcement will be made later of the exhibitions to be held in May and June at the New York Botanical Garden.

PROCEEDINGS OF THE SOCIETY

OCTOBER 12, 1910

A meeting of the society was held at the American Museum of Natural History on Wednesday, October 12, 1910, at 4.10 P.M. The President was unable to remain for the meeting, and the chair was taken by Mr. F. R. Pierson.

The minutes of the meeting of June 4, 1910, were read and approved.

The following persons, having accepted the invitation of the council to become members, were approved and referred to the society by the council for action.

Life Members

John Jacob Astor, George Blumenthal, George S. Bowdoin, S. B. Chapin, J. P. Morgan, Jr., Herbert L. Satterlee, W. A. Wadsworth.

Annual Members

Miss Mary Benson, Wm. Childs, Jr., John D. Crimmins, Benedict J. Greenhut, Miss Frances A. L. Haven, Ferdinand Hermann, Gerald L. Hoyt, Miss Gertrude L. Hoyt, Miss Georgine Iselin, Martin R. Jacobus, Morris Kinney, Luther S. Livingston, Morris Loeb, Mrs. Joseph Pulitzer, Mrs. A. Richard, A. F. Troescher, Mrs. Robert E. Westcott.

Upon motion and carried the secretary was instructed to cast an affirmative ballot for the election of the above persons. This was done and the parties declared elected.

Applications for membership from the following persons were approved by the council and referred to the society for action:

Annual Members

Francis X. Golly, Robert Koehne, Robert Stobo, A. C. Zvolanek.

Upon motion and carried the secretary was instructed to cast an affirmative ballot for their election, subject to the payment of the annual dues, in cases where these did not accompany the application for membership. The ballot was cast and the persons declared elected.

Resignations from the following persons were accepted with regret: Theodore Langdon Van Norden, Mrs. T. Ewing, Jr., Henry H. Negley, Warner Van Norden, H. S. Marlor (to take effect May 12, 1911), Thomas M. Carnegie (to take effect May 12, 1911), Geo. H. Hunt.

There being no further business before the meeting, the lecture announced for the day, "Transforming an Old Swamp," was delivered by Mr. George V. Nash, illustrated with many colored slides. The following is an abstract of this lecture:

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The speaker remarked upon the many unsightly old swamps which are to be seen most anywhere, illustrating with lantern slides a swamp of this kind in New Jersey. With a series of colored slides, made from photographs taken of this same swamp after its transformation, he showed what could be done in the way of beautifying such places by turning them into water gardens. The first step in this work is to build a dam, thus creating a lake. The tussocks must be removed by cutting off the vegetation as fast as it appears above the surface of the water, thus depriving the plants of air, without which they must die. This is much easier and decidedly less expensive than the old way of laboriously digging them out.

In a water garden two things must be borne in mind, the frame or surroundings, and the picture, made up of the true aquatic plants. With colored lantern slides many suitable trees, shrubs and herbs were illustrated which could be used for this purpose, including some of the best hybrid water lilies.

It is also possible to create a water garden in a waterless tract by making a cement pond. A series of slides was shown illustrating the effects which could be produced in a pond of this kind. By proper planting the artificial rim of the pond can be effectually concealed. In such a pond can be grown with great success, not only the hardy lilies, but also the tropical forms. The *Victoria*, the royal water lily of South America, can be successfully cultivated here. This, with its enormous leaves, sometimes over six feet across, with the wide upturned margins, is most attractive. Its flowers appear during the night and exhale a perfume much resembling that of the pine apple.

If one cannot afford the larger efforts at aquatic gardening, or if space will not permit, small cement tanks may be constructed at slight cost; or if even this is not possible, half barrels or hogsheads will give opportunity for cultivating some of the water lilies. An old whisky or oil barrel can be purchased for a dollar and this, when cut in two, will make two receptacles. These can be sunk in the ground and the margins tastefully decorated. With rich soil placed in the bottom and the necessary water, some of the daintiest of the water lilies may be successfully flowered.

GEORGE V. NASH,

Secretary.

NOVEMBER 11, 1910

A meeting of the society was held at the American Museum of Natural History on Friday, November 11, 1910, at 4.10 P.M., Dr. Britton presiding.

The minutes of the meeting of October 12, 1910, were read and approved.

The following persons, having accepted the invitation of the council to become members, were approved by the council and referred to the society for action.

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Patron

Mrs. Russell Sage

Life Members

Charles J. Harrah, Mrs. Sidney Webster, Theodore R. Hoyt, Adrian Iselin, Jr., Geo. W. Collord, Columbus O'D. Iselin, John J. Riker, John I. Waterbury, Dudley Olcott, Nelson Robinson, D. B. Van Emburgh, Geo. McKesson Brown, Edward V. Z. Lane.

Annual Members

Mrs. Benjamin Stern, J. R. Planten, Mrs. John Hobart Warren, Hugh J. Chisholm, Robert I. Brown, F. J. Lisman, Dr. S. T. Armstrong, Frank Moore Smith, Robt. E. Jennings, G. Langmann, M.D., Paul J. Sachs, Mrs. John H. Hall, Miss Theodora Wilbour, Franklin Simon, Hugo Blumenthal, Benson Bennett Sloan, Richard M. Hoe, William J. Cassard, W. A. White, James A. Scrymser, Warren Delano, Fred. T. Steinway, Rush Taggart, M. D. Howell, Mrs. Paul D. Cravath, C. W. Munson, Charles Zoller, Gen. Samuel C. Lawrence, Douglas Alexander, Mrs. Samuel Verplanck, George Notman, Wm. Hyatt Farrington, H. W. Guernsey.

It was moved and seconded that the secretary be authorized to cast an affirmative ballot for their election. This was done and the persons recommended by the council were declared elected.

Application for membership from the following persons were approved by the council and referred to the society for action.

Annual Members

A. L. Miller, J. H. Pepper, Geo. Middleton, M. E. Ebel, Jos. Dexter, James Campbell, Wm. Inglis, James Goodier, David Mackenzie, Michael Coghlan, George F. Struck, Thos. Knight, Ewen Mackenzie, John Canning.

Upon motion and carried the secretary was instructed to cast an affirmative ballot for their election, subject to the payment of the annual dues, in cases where these did not accompany the application for membership. The ballot was cast and the persons declared elected.

Mr. Samuel Untermyer, an annual member, made application for a life membership. The application having been approved by the society, the secretary was authorized to cast an affirmative ballot for his election. This was done and the applicant was declared elected a life member of the society.

The resignation of Mr. Wilhelm Miller was accepted with regret.

There being no further business before the meeting, the lecture announced for the day, "The Botany of some Autumn Flowers," was delivered by Dr. N. L. Britton, who illustrated his remarks with numerous colored lantern slides. The following is an abstract of this lecture:

The carnation or gilliflower, *Dianthus Caryophyllus*, was first illustrated. The speaker referred to it as a native of Europe and western Asia, and remarked that Theophrastus, about 300 B.C., had bestowed upon it the name "Dianthus," meaning "flames of love." It has been in cultivation for over 2,000 years, but it was not until the beginning of the sixteenth century that it was broken into many varieties. The original flesh-color was broken up, and the reds and whites resulted. These were the early attempts at carnation cultivation, and represent a type or race which is grown mainly in Europe, and but little in this country. The perpetual flowering type, the cultivated carnation of to-day, originated about 1840, and is represented by many examples in the exhibition now in progress. Its introduction into this country was about 1868. The first of this type, procured by M. Delmais, was called Atim, and was sent out about 1844; it was produced by the artificial crossing of Oeillet de Mahon, or St. Martin, with Oeillet Bihon. The stems of these early forms were weak, but finally M. Alphonse Alegatiere by careful crossings obtained varieties with stiff stems, and it is these which are the carnations of to-day.

Passing to the rose, the speaker opened this subject with an illustration of the China rose, *Rosa indica*, a native of China and eastern India, explaining that it was the blood of this rose which had given the perpetual blooming qualities to the roses of the present day, which are largely made up of the Hybrid Tea forms; these were illustrated with colored slides of Pink and White Killarney, Bridesmaid, My Maryland, Perle des Jardins, Bride, and Richmond. This Hybrid Tea rose is the result of crossing two other hybrid groups, the Hybrid Perpetual and the Tea-scented. The former group was the result of crossing the Damask rose, *Rosa damascena*, a native of Syria, with the Hybrid China rose, the first step being the production of the Damask Perpetual. This was not a really satisfactory perpetual, and the Hybrid Perpetual, as we know it to-day, was produced by the crossing of the Damask Perpetual with the Bourbon rose, a race originating in the Isle of Bourbon, said to be from

the accidental crossing of the China rose with the Four Seasons, both growing on that island. The Tea-scented roses are the result of crossing the Blush Tea-scented and the Yellow Tea-scented roses, both introduced from China. The Hybrid China rose is the offspring of varieties of the French rose, *Rosa gallica*, and the Provence or Cabbage rose, *Rosa centifolia*, said to be a native of the south of France, crossed with the China rose, *Rosa indica*. So we have in the Hybrid Tea roses a mixture of the China rose, a wild species, the Damask rose, a native of Syria, the Bourbon rose, a supposed hybrid, the Blush Tea-scented and the Yellow Tea-scented, the French rose, and the Provence or Cabbage rose.

Many other flowers were illustrated and their botany described. Among these were the nasturtiums, marsh mallows, gentians, both the closed and fringed, and the cardinal flower. The compound character of the so-called "flower" of the compositae was described, and many examples of it shown, including iron-weed, boneset, button snakeroot, golden-rods, asters, zinnias, and sunflowers. Dahlias, a Mexican type, and *Cosmos* were described.

The chrysanthemum is the flower of the fall. It was the "golden flower" of the Greeks. Herbarium specimens of *Chrysanthemum sinense* and *C. indicum* were exhibited. It was by the blending of these two that the chrysanthemums of to-day were produced. These are horticulturally classified on the shape of the individual flowers. Some of the principal ones are the following, which were illustrated with lantern slides: the anemone, with ray and disc flowers, both well developed; the pompon, the disc flowers absent or nearly so; the reflexed type, the flowers turned down; the ordinary incurved type, with the flowers turned in; and the ostrich-plume incurved type, the same as the previous one, but with the flowers hairy.

The speaker closed with some remarks upon the autumn-flowering of some shrubs and trees, noting *Kerria japonica*, *Forsythia Fortunei*, *Syringa vulgaris*, *Pyrus communis*, *Malus Malus*, *Prunus Cerasus*, and *Amygdalus persica*. These flower normally in the spring or early summer, but occasionally flower again in the autumn. The last picture shown was of the witch-hazel, *Hamamelis*, the normal flowering time of which is late fall.

The lecture aroused much interest and considerable discussion followed.

GEORGE V. NASH,
Secretary.

DECEMBER 14, 1910

A meeting of the society was held at the American Museum of Natural History on Wednesday, December 14, 1910, at 4.05 P.M., the President in the chair.

The minutes of the meeting of November 11, 1910, were read and approved.

The following persons, having accepted the invitation of the

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council to become members, were approved by the council and referred to the society for action.

Life Member

Hon. Levi P. Morton

Annual Members

Mrs. Geo. W. DuBois, Adolph Lewisohn, John B. Marcou, Michael Piel, Mrs. Jacob Ruppert, Edward Russell, Mrs. James Sullivan.

It was moved and seconded that the secretary be authorized to cast an affirmative ballot for their election. This was done and the persons recommended by the council were declared elected.

The following medals, certificates and diplomas, awarded at the exhibition of the society, held at the American Museum of Natural History, November 9 to 13, 1910, were presented.

Silver Medals

To Cottage Gardens Co., in competition, first prize for a collection of carnations.

To Traendly & Schenck, Samuel Redstone, grower, sweepstakes, for best vase of 100 carnation blooms.

To Wilhelm Cordes, in competition, first prize, for two orchid plants showing excellence of cultivation.

To Wilhelm Cordes, for the best orchid plant exhibited.

To Mrs. Harold Irving Pratt, for a collection of crotons.

To A. Bieschke, gardener to the William Ziegler Estate, for two plants of *Phoenix Roebelinii*.

Bronze Medals

To Traendly & Schenck, Samuel Redstone, grower, in competition, second prize, for a collection of carnations.

To Lager & Hurrell, in competition, second prize, for two orchid plants showing excellence of cultivation.

To James Stuart, for *Nerine Fothergilli major*.

Diplomas

To Cottage Gardens Co., in competition, for Howard Gould, best new variety of carnation, not in commerce.

To Lager & Hurrell, for collection of orchids.

Certificates

To F. R. Newbold, for a chrysanthemum, not yet in commerce.

To Samuel Untermyer, for *Cosmos Klondike*.

To H. J. Osterhautd, for collection of seedling single chrysanthemums.

No representatives being present from the Cottage Gardens Co., Mr. Untermyer or Mr. Osterhautd to receive their awards, the secretary was authorized to send them by mail.

There being no further business before the meeting, the president of the society, Mr. George T. Powell, delivered the lecture announced, "The Relation of the Soil to Plant Life." The lecture was as follows:

THE RELATION OF THE SOIL TO PLANT LIFE

In the development of a comparatively new country like ours, which has made a most remarkable history in the growth of population and in wealth in a short period of time—in this forging ahead in development, we have overlooked some vital things; and we are now beginning to realize, that in the making of phenomenal gains there is generally somewhere along the line some corresponding loss with which to be reckoned.

Our country represents an empire in territory with a soil which, while greatly variable in character, seems practically inexhaustible in its fertility. Yet in less than three centuries of production our population, of above 90,000,000 of people, is confronted unexpectedly at this time with an unusually high living-cost, and with rapidly increasing numbers of consumers, and a decrease of the producing population of our rural sections. Some most vital problems are now commanding our best consideration.

In the soil lies the basis of all life, vegetable and animal, and of the continued growth of our country; and for this reason, a general knowledge of its origin, its character, its possibilities to meet the demands of millions yet unborn, and of the necessity for a right understanding of the conservation of its plant food elements, becomes a problem of great importance.

From the earliest history of our country to the present time the general treatment of the soil has been that of the most unintelligent, inexcusably destructive and wasteful methods of abstracting its great wealth of food-producing elements, without due regard to their right conservation, restoration or improvement.

One of the direct results of this unintelligent and, I may say emphatically, wicked policy of soil-robbing, has been the dispossession of many of its decimators, who mistakenly believed they owned it, and turning them into our cities, there to make further demands for support upon the soil that had disowned them.

The soil has stored up in its every atom the life of the many ages that

have passed, and under right management and the proper conservation of this, which is to sustain all future life in food requirements, there is sufficient for many ages yet to come.

While up to the present time we have produced an abundance of cheap wheat that has not only sustained our own growing population, at a moderate cost, but, with a large surplus, the millions of other countries, there has been a steady decline in the surplus for export, and if the decline continues, it is only a question of time when we shall be an importer of bread-stuffs instead of an exporter of the same, which as a nation we have been for a long period.

Every plant, every flower and every tree during its existence, whether it be short or long, takes from the soil mainly the foods necessary for its development, of which a few of the most essential, in their different forms of combination, are nitrogen, phosphoric acid and potash. These are still abundant in the soil, and need not only to be conserved, but added to, which may be done through other sources.

There have been many forms of blights and diseases that persistently attack trees and plants, that for a long time were unknown. The potato blight, for illustration, hardly known a half century ago, is now universal, while celery, asparagus, tomatoes and many other kinds of plants suffer generally from different kinds of blights.

Trees also have similar troubles, some species of which are threatened with annihilation, as the chestnut and some varieties of apple trees, with collar rot and canker, while anthracnose is making the culture of the raspberry most difficult. Our chestnut trees are passing out and will be replaced only by those that may be left and immune from the attack.

Plants are so largely dependent upon the soil for their support and development, that its condition should be such as will most fully meet their requirements. These are plant foods that are not only sufficient but easily available, enough moisture to meet their needs at all times, and humus enough in the soil to insure this. Without a right condition of the plant-food of the soil, such as may be utilized by the plant to its fullest needs, its perfect development cannot be had, and it is then subject to the ills with which every plant grower has to contend. The tissues of the plant become weakened and impaired, when they easily succumb to the steady inroads of disease.

With the ruthless destruction of vast areas of forest land going on for more than two centuries, the land has not only become exposed to drying winds, but the water-holding capacity of the soil has become impaired to such an extent that streams and springs fail, and with large surface areas of water reduced, from which evaporation of moisture may take place, the atmosphere becomes dry, and periods of long-continued drouth are being more and more experienced. This is not alone lessening production along many lines, but lowering the vitality of all vegetable life. This is the one main cause of so much disease with which we are obliged to contend in the present times.

The improvement of the soil then becomes of first importance. This may be done by a more thorough system of tillage. Better mechanical condition and more refinement of the soil will make the plant-food it contains more readily available.

The incorporation of vegetable matter through manures and by the use of leguminous plants, grown and ploughed in, is one of the most essential needs for the resupplying of the humus, much of which has become worn out and exhausted by long years of production. The use of clover for this purpose is most valuable. Its long roots go down deep, penetrating the subsoil, opening it up to the more active operation of the oxygen of the air, admitting more of warmth and adding to its capacity to hold more, and over a longer period, the moisture necessary for the needs of plants. Clover has the added important function of being able to utilize the nitrogen of the air, and, in coöperation with certain soil bacteria, to build up abundantly in the soil this essential and most costly plant food. The application of lime at times will be beneficial to practically all soils for its corrective influence on the deleterious bacteria that are more or less present in them, and which frequently retard the best development of plant life.

The soil is usually looked upon as so much dead, inert matter, when the fact is it is full of life and activity. Its every atom is in constant motion, through friction caused by the powerful rays of the sun that are steadily beating upon the surface of the earth. It is constantly undergoing changes, by the building up as well as the breaking down processes that are going on through the agencies of air, water, heat, cold and plants.

The world owes much to an early investigator, thinker and discoverer, in Jethro Tull, an English agriculturist, born in 1674, who published "The New Horse Hoeing Husbandry" or "An Essay on the Principles of Tillage and Vegetation."

He may be termed the first preacher of the gospel of tillage. After actual experiments had been carried on in the field, and he had obtained positive results in the improvement of the soil and marked increase in yields through tillage alone, in his reasoning upon the effect of tillage he believed that the soil was the sole basis of support for plants and that plants took up small particles of it in their growth, and that the finer the particles were made through tillage the more readily plants could utilize them as food; hence the famous statement which he made and which has since been much discussed that "tillage was manure."

While Tull was mistaken in his belief that plants took up their food in small soil particles, nevertheless he did great good in starting lines of investigation and practices in the tillage of the soil out of which vast good has grown.

Soils differ largely in their composition and these differences need to be understood in their effect upon plants. A heavy soil, made up largely of fine particles, so fine as to be classified as a clay, is well suited to certain plants, those that require a large amount of moisture and a cooler degree of temperature. This type of soil is particularly adapted to

grasses; and also, where they may have a sufficient quantity of sand to make a clay loam that will provide for the prompt drainage of water, the best requirements of roses are met.

On the other hand, a soil made up of sand particles, with sufficient of the clay or fine particles to hold or bind them somewhat together, is most excellent for very early blooming plants, for strawberries, and for early vegetables.

These sandy soil types are found along the coastal plains, the Atlantic coast and the shores of lakes, and from these the early supplies of vegetable foods come to meet the requirements of our cities. The heavier or clay types, with their many variations, extend over wide areas and these are adapted to the great agricultural or cereal food productions. On these stronger soils will be found our largest and most beautiful trees, those reaching to magnificent dimensions, while on the sandy types trees are more diminutive in size, both plant food and moisture on such soils being less stable and regular in supplying the needs of the trees.

In the month of June, when the temperature of the atmosphere is high, an acre of grass growing on a lawn or in a meadow requires an immense quantity of water to meet its demands, and this has been computed, through the careful measurements that have been made of the transpiration of moisture through the many plants, as one hundred tons daily per acre, through the bright sunny days of June, and on all days with a prevailing north wind.

It has also been ascertained that a full grown elm tree, carrying a strong, unimpaired foliage, will take up on such days, and pass off into the atmosphere, six and one half tons of water.

To obtain one ton of dry matter in corn, oats and wheat, all important food-producing plants, the soil must yield up from two hundred and forty to five hundred and fifty tons of water for each ton of dry matter formed, and when this very important relationship that exists between the soil and plant life and the further relation they hold to human life are better understood, a greater knowledge of these principles and facts becomes paramount.

With an annual average rainfall of but about forty-four inches for New York and the New England States, the question naturally arises, from what source do plants obtain such enormous quantities of water, particularly when the distribution of the rainfall is so uneven, that practically for weeks in succession, and through the most active season of growth, no rain falls on the earth, and protracted droughts are experienced. It is from the great subterranean supplies of water that are stored in the earth, upon which plants may draw in times of need, that their existence and continued growth become possible through such periods. By the rapid evaporation that goes on through a high temperature over the surface, an active, upward movement of the subsoil water sets in to supply that lost by surface evaporation, and at the same time the roots of plants, not getting the ready supply they require, are forced to go down deeper

into the subsoil, where the moisture supply is more abundant. This leads then to a consideration of methods that shall in the most effective way conserve soil moisture. Over-planting should be avoided. This will apply particularly to parks. Many parks are suffering at the present time over a wide territory, from the effects of three successive years of protracted droughts. The trees are showing weakness of foliage and little growth, while many are failing and are in a decline from which they will not recover.

These trees have planted around them shrubs that are in an equally unsatisfactory condition and all are struggling for their daily water requirements which are not sufficient. Conservation of the water is the urgent need, and the only way to reach the case is to remove either the trees or the shrubs that cannot be sustained by a too limited water supply.

The soil should contain not less than forty per cent. of moisture and fifty would be better. By not planting so heavily as is generally done both in public parks and on private grounds, very much better trees may be had in their not being robbed of the water they require by the planting of other things so closely about them.

A second method of conserving moisture is by incorporating a larger amount of vegetable matter or humus in the soil. Where the character of plants is such that the soil may be tilled or stirred, the working in of green vegetation is excellent. For this purpose various plants may be used, but those of the leguminous family have the highest value. The clovers are especially good for this purpose. In their decomposition they leave the soil in the best physical condition, while at the same time they add one of the most costly of all plant foods, nitrogen, and at the least possible cost.

The seeds of crimson clover may be scattered about growing plants quite late in the summer and allowed to grow through the autumn and then turned in or left to protect the soil from the evaporation of its water as a covering through the winter. While not so rapid as during the hot weather, evaporation of soil moisture goes on during the winter, therefore it is desirable, so far as possible, to have the soil covered during the winter with a living plant. The adding of vegetable matter, even if only in a small quantity, will enable the soil to hold its water supply and distribute it over a much longer period of dry weather.

Another method of conserving soil moisture is through the frequent stirring of the surface of the soil.

With the constant pressure of the water upwards to supply the loss that takes place through evaporation, passages or channels are formed in the soil and through these the soil moisture more readily reaches the surface. The frequent stirring of the surface seals over these passages and the moisture is thereby held for the greater use of the roots of the plants.

Where field culture is carried on, any crops that may admit of fine cultivating implements being run over them may be successfully brought through. Plants that show a famished condition with their foliage drooping for the want of moisture, may be revived and kept in a flourishing

THE HORTICULTURAL SOCIETY OF NEW YORK

state by the frequent stirring of the surface soil. While artificial irrigation would seem to have every advantage in the growing of plants, by utilizing the methods that are at our command, we may be able to overcome to a large degree the losses that follow from a limited rainfall when it is much needed. The summer of 1910 was one that will long be remembered for the very wide area that was affected by a third season of drouth, yet in the culture of extensive apple orchards we could not detect any lack of moisture to make sufficient growth of wood or the most perfect development of fruit.

During a period of fifteen years we have been growing clover and ploughing it in, sowing the seed in early July, and ploughing in the crop in the late autumn or early spring. After each shower, however light, the soil has been harrowed to hold the water that had been added, and as a result from these methods of conservation of the moisture, both in the subsoil and from light showers, a large crop of apples of the finest quality was secured the past season, and one much superior to any produced from the free use of water by artificial irrigation.

The relationship of soil to plant life need be but little disturbed, if we but make timely provision to meet the one most essential requirement, that of maintaining a sufficient and uninterrupted supply of water.

Some interesting results have been obtained along the line of meeting the conditions caused by several successive seasons of drought. We have for a period of three years been testing the value of the ploughing-in of green crops, in comparison with land where no green crops were used, the tillage being the same. In this case crimson clover was used, and ten acres of land covered with apple trees given to the work. On one half eighteen pounds of crimson clover seed were sown per acre about July 10. This grew until November, and was left on the ground until spring and ploughed in.

The soil on both sections was harrowed once a week until July 10, when the same quantity of seed was again sown on the clover section and this continued for three years, when the soil of both sections was taken eight inches deep and analyzed. The following table of figures shows the results:

CRIMSON CLOVER AS A GREEN MANURE. ANALYSES OF SOILS

	3 Crops Clover Per Cent.	No Clover Per Cent.
Water	15.00	8.75
Nitrogen21	.12
Humus	2.94	1.91
Phosphoric acid available.....	.015	.008

Water	6.25 per cent. = 46,875 tons.
Nitrogen09 per cent. = 1,350 lbs.
Phosphoric acid007 per cent. = 105 lbs.

With the very dry seasons that seem to follow so persistently, the subject of irrigation for our eastern land is frequently brought up. It does not seem like a practical proposition for any very large territory, nor is it really

necessary in eastern farming and gardening with cultivated crops. The water supply is inadequate. It would be impossible to obtain water for general flooding of land. Thousands of people living in the suburbs of New York city suffered for weeks the past autumn for the want of water in their houses. By adding more of humus to the soil, every ton of which will absorb two tons of water, we can carry through successfully most crops in dry periods. This means more intensive tillage, but it will produce highly beneficial results.

Unless we adopt more advanced methods for the conservation of soil moisture, and thus provide more permanently for the needs of plants, we shall see an increase in plant diseases following interrupted development and a further decline in the condition of many trees.

The lecture, dealing with a matter of most vital importance, was received with great interest. It was freely discussed and brought out many questions which Mr. Powell answered in full.

GEORGE V. NASH,
Secretary.

CHANGES IN MEMBERSHIP SINCE OCTOBER 12, 1910

BY ELECTION

Patron

Sage, Mrs. Russell

Life Members

Brown, Geo. McKesson	Proctor, Frederick T.
Collord, Geo. W.	Riker, John J.
Harrah, Chas. J.	Robinson, Nelson
Hoyt, Theodore R.	Untermeyer, Samuel (formerly an Annual Member)
Iselin, Adrian, Jr.	Van Emburgh, D. B.
Iselin, Columbus O'D.	Waterbury, John I.
Lane, Edward V. Z.	Webster, Mrs. Sidney
Morton, Hon. Levi P.	
Olcott, Dudley	

Annual Members

Alexander, Douglas	Bauer, Anton
Armstrong, Dr. S. T.	Blumenthal, Hugo

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Brown, Robert I.	Marcou, John B.
Campbell, James	Middleton, Geo.
Canning, John	Miller, A. L.
Cassard, Wm. J.	Munson, C. W.
Chisholm, Hugh J.	Notman, George
Coghlan, Michael	Pepper, J. H.
Cravath, Mrs. Paul D.	Piel, Michael
Delano, Warren	Planten, J. R.
Dexter, Jos.	Ruppert, Mrs. Jacob
DuBois, Mrs. Geo. W.	Russ, Edward
Ebel, M. C.	Sachs, Paul J.
Farrington, Wm. Hyatt	Scrymser, James A.
Goodier, James	Simon, Franklin
Guernsey, H. W.	Sloan, Benson Bennett
Hall, Mrs. John H.	Smith, Frank Moore
Hoe, Richard M.	Stanton, Frank McM.
Howell, M. D.	Steinway, Fred. T.
Inglis, Wm.	Stern, Mrs. Benjamin
Jennings, Robt. E.	Struck, George F.
Knight, Thomas	Sullivan, Mrs. James
Langmann, G., M.D.	Taggart, Rush
Lawrence, Gen. Samuel C.	Verplanck, Mrs. Samuel
Lewisohn, Adolph	Warren, Mrs. John Hobart
Lisman, F. J.	White, W. A.
Mackenzie, David	Wilbour, Miss Theodora
Mackenzie, Ewen	Zoller, Charles

BY RESIGNATION

Miller, Wilhelm

The total membership of the society is now 336, divided as follows: Patrons, 2; life, 57; annual, 277. This represents a gain of 1 patron, 16 life, and 54 annual; total, 71.

THE HORTICULTURAL SOCIETY OF NEW YORK

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GEORGE T. POWELL, New York City.

Vice-Presidents

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F. R. NEWBOLD, Poughkeepsie, N. Y.

Secretary

GEORGE V. NASH, New York Botanical Garden,
Bronx Park, N. Y. City

Council

Ex-Officio Members

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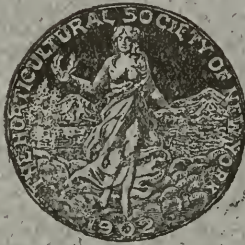
A. L. WILLIS

Journal

of the

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APRIL, 1911

EDITED BY THE SECRETARY

GEORGE V. NASH

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THE MONTHLY EXHIBITIONS

According to the announcement made in the last number of the JOURNAL, monthly exhibitions have been held in conjunction with the meetings of the society. These have been entirely successful, and as those interested in horticulture realize that an opportunity is now offered where they can come together once every month and be mutually helpful in discussion and suggestion, and at the same time be given the further opportunity of seeing in living plants and flowers what their fellow-horticulturists can do, the meetings and exhibitions will be even more popular. But three of these exhibitions have now been held, in February, March and April. The West Assembly Hall of the American Museum of Natural History has been used for the purpose, but if the exhibitions continue to grow these quarters will not be adequate for the purpose.

FEBRUARY EXHIBITION

This, the initial exhibition of the experiment of holding monthly exhibitions, was a success, and evidenced the interest of plant-lovers in the undertaking. It was devoted primarily to orchids and roses, although not entirely restricted to these flowers.

The following awards were made:

Mr. C. C. Moore, of Hackensack, N. J., John P. Mossman, gardener, took first prize for the best *Dendrobium* plant in bloom; he also secured first prizes for the best orchid plant, other than those mentioned in the schedule, for the best hybrid orchid, and

OPRAV
NEW YORK
BOTANICAL
GARDEN.

for the best collection of cut orchids. Miss M. T. Cockcroft, of Saugatuck, Ct., Adam Peterson, gardener, secured the first prize for the best *Cypripedium* plant exhibited.

The F. R. Pierson Co., of Tarrytown, N. Y., won the silver medal offered for the best new rose not yet in commerce, with an improved variety of Pink Killarney, with deeper color and more substance than the type. For the best three vases of roses, three kinds, twelve flowers of each, Mr. R. Delafield, of Tuxedo Park, N. Y., Wm. Brock, gardener, obtained first prize. The first prize for the best vase of Pink Killarney, twelve blooms, went to Mrs. F. A. Constable, of Mamaroneck, N. Y., James Stuart, gardener. The twelve White Killarney exhibited by Miss C. A. Bliss, of New Canaan, Ct., J. T. Burns, gardener, won the first prize, the second going to Mrs. F. A. Constable. Mrs. Constable also won the first prize for the best vase of twelve Richmond.

It is designed to make these monthly exhibitions especially attractive to the gardening fraternity, to make the gardeners feel that an opportunity is offered every month for them to see what can be done in cultivation. Special prizes, that is prizes for plants and flowers not provided for in the schedule, are awarded.

In this class of special prize-winners was Mr. Chas. Stuart Smith, Jr., of Stamford, Ct., Anthon Pederson, gardener, who received a special prize for ten blooms of American Beauty roses. To Lager & Hurrell was given a silver medal for an attractive collection of orchids. A bronze medal was awarded to the Julius Roehrs Co. for a collection of cut orchids.

Special prizes were also awarded as follows: to Mrs. F. A. Constable, for a vase of *Acacia longifolia*; to Miss C. A. Bliss, for a pot of lily-of-the-valley, two vases of carnations, and a dish of mushrooms.

The judges were Messrs. E. S. Miller, W. G. Hill, and J. A. Manda.

MARCH EXHIBITION

The second monthly exhibition was on March 8. This was devoted primarily to carnations and cyclamens. The competition in some of the carnation classes was very keen. The silver medal for the best vase of carnations was won by Mr. Winthrop Sargent, of Fishkill-on-Hudson, N. Y., E. Witney, gardener. Mrs.

Myron I. Borg, of Stamford, Ct., James Aitchison, gardener, obtained first prize for three vases of carnations, three kinds, twelve flowers of each, while the second prize went to Mr. J. J. Riker, of Port Chester, N. Y., Thos. W. Stobo, gardener. There were two other competitors in this class. The vase of twelve scarlet carnations exhibited by Mrs. Borg also took the first prize, Mr. Henry Goldman, of Deal Beach, N. J., Anton Bauer, gardener, taking the second. The first prize for the best vase of twelve Winsor shade carnations was won by Miss C. A. Bliss, of New Canaan, Ct., J. T. Burns, gardener, the second going to Mr. Goldman. There were four other competitors in this class. The first prize for vase of twelve Enchantress shade was awarded to Mrs. Borg, Mr. J. J. Riker receiving second. There were five other competitors in this class. In the crimson class, Mr. W. W. Heroy, of Stamford, Ct., A. Wynne, gardener, received first for twelve blooms, Miss Bliss winning the second. There were two other competitors in this class. Mr. Henry Siegel, of Mamaroneck, N. Y., Thos. Aitchison, gardener, won first for vase of twelve Lawson shade, Mr. Goldman taking second. In white carnations, twelve blooms, Mr. Adolph Lewisohn, of Ardsley, N. Y., John Canning, gardener, obtained first prize, and Mr. Riker second, against three other competitors. The vase of fifty blooms, arranged for effect, with other foliage permitted, secured the first prize for Mr. Henry Siegel.

The display of cyclamens at this exhibition was superb, some thirty plants being exhibited. It demonstrated very forcibly what can be done in the art of cultivation by careful attention to details. In the class of ten plants, the first prize went to Mrs. F. A. Constable. These plants were grown by her gardener, James Stuart, and were of unusual excellence. The second prize in the same class went to Mrs. H. B. Gilbert, of Great Neck, N. Y., Robert Stobo, gardener. In the class of five cyclamen plants, the first prize was received by Mr. Henry Siegel. The first prize for a single plant also went to Mr. Siegel, while the second was won by Mrs. Constable.

The three plants of *Cinckia* exhibited by Mr. Chas. Mallory, of Port Chester, N. Y., Wm. J. Sealey, gardener, secured the

first prize, in close competition with Mr. Adolph Lewisohn, who took the second prize.

The following special prizes were awarded: to Mr. F. V. Burton, of Newburgh, N. Y., Wm. Cordes, gardener, a silver medal for a fine group of orchid plants; to W. W. Heroy, for vases of sweet peas, stocks, and daffodils; to Mrs. F. B. Van Vorst, of Hackensack, N. J., A. Anderson, gardener, for a plant of *Dendrobium thysiflorum*; to Mr. R. Delafield, of Tuxedo Park, N. Y., Wm. Brock, gardener, for a vase of antirrhinums; to J. A. Manda, a silver medal for *Cypripedium Iris*; to Miss C. A. Bliss, for a dish of mushrooms; to A. J. Zvolanek, for seven vases of sweet peas, certificate of merit; to Lager & Hurrell, a silver medal for a fine variety of *Cattleya Schroederæ*; to Mrs. F. A. Constable, for vases of *Hippeastrum*, *Primula Kewensis* and carnation May Day; and to Scott Bros., for a vase of a new seedling carnation, Wm. Eccles, a certificate of merit.

The judges were Messrs. Geo. Wittlinger, Wm. Scott, and A. C. Zvolanek.

APRIL EXHIBITION

The third of the monthly exhibitions was held on Wednesday, April 12. The schedule of awards for this was prepared with reference to the flowers associated with Easter.

For three stems of lilies, Mrs. F. A. Constable, James Stuart, gardener, received the first prize; the first prize also going to Mrs. Constable for a single stem of lilies. The best three vases of tulips, three varieties, six blooms of each, were exhibited by Mrs. A. M. Booth, of Great Neck, N. Y., E. Fardel, gardener, and took first prize. The three vases of *Narcissus*, three varieties, six blooms of each, brought the first prize to Mr. H. Darlington, of Mamaroneck, N. Y., P. W. Popp, gardener. Mr. Adolph Lewisohn, of Ardsley, N. Y., John Canning, gardener, won first prize for three vases of *Schizanthus*, three different colors, the second going to Mr. H. Darlington. For a vase of *Antirrhinum*, six sprays, Mrs. Constable received first prize, Mrs. A. M. Booth the second. For three calceolarias, the first prize went to Mr. Lewisohn, the second to Mrs. Booth. The Wm. Ziegler Estate, A. Bieschke, gardener, exhibited a fine plant of *Hydrangea* which received the first prize.

Special prizes were awarded as follows: to Mr. C. G. Roebing, of Trenton, N. J., J. W. Goodier, gardener, certificates of merit for *Odontioda Bradshawiana* and *O. Charlesworthii*; to Mr. Adolph Lewisohn, a certificate of merit was awarded for a new hybrid *Impatiens*; to John Lewis Childs, a certificate of merit for eight pots of the yellow calla, *Calla Elliottiana*, the same to a pale yellow calla, *Calla sulfatere*, and honorable mention to pots of *Amaryllis formosissima* and *Lilium tenuifolium*; to Mr. H. Darlington, for an ever-blooming chrysanthemum, honorable mention; to Lager & Hurrell, a silver medal for a fine plant of the hybrid *Miltonia Bleuiana*; to Mr. Henry Goldman, a silver medal for a fine plant of *Cattleya Mossiac*; to Mr. C. G. Roebing, a silver medal and a cash prize for a large group of orchids; to Mrs. A. M. Booth, for vases of Enchantress carnation and Queen Alexandra stock; to Wm. Ziegler Estate, for a group of five Hydrangeas, superb plants; to Mrs. F. A. Constable, for two vases of *Swainsonia*, the red and white forms; and to Mr. Henry Siegel, for vases of *Schizanthus* and nasturtiums.

The judges were Messrs. Thos. Aitchison and A. Herrington.

THE SUMMER MONTHLY EXHIBITIONS

The exhibitions for the summer, beginning with that of May, will be held in the Museum building of the New York Botanical Garden, Bronx Park, New York City. In addition to the attractions of the exhibitions, there is also the added pleasure to be derived from an inspection of the large collections of the Garden. A day may be well spent in a visit here, the morning in an examination of some one of the collections, and the afternoon in a visit to the flower exhibition. The collections of living plants are large and varied; the specimens are plainly labeled.

There are several collections of these plants. The fruticetum, or collection of shrubs, is located at the north of the chain of lakes back of the Museum; the deciduous arboretum, on the easterly side of the Bronx River; the pinetum, lying in the neighborhood of the Museum and the large public conservatories, range 1; the herbaceous grounds, the morphological garden and economic garden in the valley to the eastward of the same conservatories; these will all repay a visit.

Then there are the large public conservatories, range 1 already referred to, in the southwest corner of the grounds, and range 2 on the easterly side of the Bronx River; these contain large collections of tender plants, many of them of great interest and rarity. And then in the Museum building, in the basement of which the flower exhibitions will be held, will be found large collections representing the evolution of the plant kingdom, including one of fossil plants, and others illustrating the local flora and the economic products of the vegetable kingdom.

The first of the exhibitions to be held here this year will occur on Wednesday and Thursday, May 10 and 11, being open from 2 to 6 P.M. on the first day and from 10 to 5 on the second day. The first day, at 3.30, is also the occasion of the annual meeting of the society, when the election of officers and the council for the ensuing year will take place, and when certain suggestions of the council will be laid before the society for action. It is hoped that a full attendance may be present.

PROCEEDINGS OF THE SOCIETY

JANUARY 11, 1911

A meeting of the society was held at the American Museum of Natural History on Wednesday, January 11, 1911, at 4:10 P.M., Vice-president Wood in the chair.

The minutes of the meeting of December 14, 1910, were read and approved.

The following persons, having accepted the invitation of the Council to become members, were approved by the Council and referred to the society for action: Life, Frederick T. Potter; Annual, Frank McM. Stanton.

The following applicant for annual membership was approved by the Council and referred to the society for action; Anton Bauer.

It was moved and seconded that the secretary be authorized to cast an affirmative ballot for their election. This was done and the three parties were declared elected.

An announcement was then made to the society of the monthly

exhibitions which the Council had decided upon. The exhibitions for February, March and April are to be held at the American Museum of Natural History, in the West Assembly Hall, while that for May and those of the summer months will take place at the New York Botanical Garden.

There being no other business before the meeting, a lecture was given by Mr. George V. Nash upon "Orchids, Wild and Cultivated," illustrated with colored lantern slides. This was delivered in place of the intended lecture by Dr. Murrill, who, on account of illness, was compelled to postpone until a future date his lecture upon "The Chestnut Canker, and Other Fungous Diseases of Trees."

Mr. Nash described the differences between the orchid flower and the flowers of related plants. He took the lily as typical of the endogens, the large class to which the orchids belong; in this the stamens and pistils are free. In the orchid flower these organs are united into a single body, known as the column, which is their distinctive feature. With a series of slides he showed the gradual development of the lip of the orchid from a small organ, through various stages, to the highly specialized form in which it occurs in the lady's slipper and related genera. Attention was called to the thickening of the stems. In some this occurred in the whole length of the stem, as in *Dendrobium*, while in others the stem was reduced to a small thickened portion, known as the pseudobulb, well represented in many of the genus *Epidendrum*. In either case this provision was for the storing of water to carry the plants through long periods of drought, to which their habitat on trees subjects many of them.

Orchids are mainly found in tropical and warm temperate regions. There are about 6,000 to 7,000 species known. In the United States there are about 150 species and 44 genera. These are mostly terrestrial, for they occur in the colder parts of the range, where they are subjected to freezing. The epiphytic forms are found only in Georgia and Florida, and along the Gulf States. A series of colored lantern slides illustrated some of the more common wild and cultivated orchids.

GEORGE V. NASH,
Secretary.

FEBRUARY 8, 1911

A meeting of the society was held at the American Museum of Natural History on Wednesday, February 8, 1911 at 3:30 P.M., the president in the chair.

The minutes of the meeting of January 11, 1911, were read and approved.

The following person, having accepted the invitation of the Council to become an annual member, was approved, and referred to the society for action: Paul Lichtenstein. It was moved and seconded that the secretary be authorized to cast an affirmative ballot for his election. This was done and the party declared elected an annual member.

Mr. John Innes Kane, hitherto an annual member, made application for life membership. He was duly elected a life member of the society.

An exhibition of orchids and roses was held in connection with the meeting. This was the first of the monthly exhibitions, and was a decided success. The exhibition was held in the West Assembly Hall from 1 to 5. An interesting exhibit of orchids and roses manifested the interest felt in the experiment.

There being no further business before the meeting, the lecture announced for the day, "Some Common Orchids and Roses," was delivered by Mr. George V. Nash. This was illustrated with colored lantern slides.

The more common forms of the flowers in cultivation were described. Among the orchids such genera as *Odontoglossum*, *Oncidium*, *Cattleya*, *Laelia*, *Lycaste*, *Dendrobium*, *Mitonia*, *Phalaenopsis*, *Coelogyne* and others were illustrated. A series of slides, showing the essential differences between the wild lady-slippers of our own woods and the greenhouse forms, gave a ready means of distinguishing between them. Our own wild plants have a leafy stem, the leaves being plaited; while in the greenhouse forms the leaves are at the bottom of the plant and are flat. The two kinds of greenhouse lady-slippers may be easily separated. These are the two genera *Paphiopedilum* and *Phragmipedium*; in the former, a native of the East Indies and Malay region, the mouth of the lip has a sharp edge; while in the other, found only in continental tropical America, the lip has the mouth with a broad infolded margin, sometimes almost completely closing it. Of especial interest among these plants is *Paphiopedilum Fairieanum*, the "long-lost orchid." Described first in 1857, it was lost until 1905, being re-discovered by Mr. G. L. Seagraves in the valley of the Torso or Amuchi River, in West Bhotan.

Slides representing the types of roses which had gone to make up our common greenhouse roses of today were shown, concluding with illustrations of some of the commoner forms of today, including Richmond, My Maryland, Pink and White Killarney.

The meeting adjourned at 4:05.

GEORGE V. NASH,
Secretary.

THE HORTICULTURAL SOCIETY OF NEW YORK

MARCH 8, 1911

A meeting of the society was held at the American Museum of Natural History on Wednesday, March 8, 1911, at 3:30 P.M., Vice-president Wood in the chair.

The minutes of the meeting of February 8, 1911, were read and approved.

The following resolution, moved by Mr. Newbold, was seconded and carried:

Resolved: That an invitation be extended to the American Rose Society to be our guests for the spring of 1912, and that the same invitation be extended to the Chrysanthemum Society of America for the autumn of 1912.

The secretary was instructed to transmit these invitations.

The exhibition, devoted mainly to carnations and cyclamens, was held in the West Assembly Hall in conjunction with this meeting.

There being no other matters to come before the meeting adjournment was taken at 3:40.

GEORGE V. NASH,
Secretary.

THE NATIONAL FLOWER SHOW

A great event in the history of horticulture in this country has come and gone. The Second National Flower Show, the largest exhibition of this kind ever given here, was held at Boston, in Mechanics Building, from March 25 to April 1. It was an inspiration to those who were fortunate enough to visit it, and must remain a source of regret to all who could not attend. Flower shows there have been in this country, and large ones, but none before to equal this, either in size or quality. Its success was instantaneous, from the impressive opening exercises of the first evening, to its close eight days later. It will be difficult for those who were not present to realize how great was this show, how broad its scope, or how representative its character. The horticulturists of Boston are certainly to be congratulated upon their showing and the spirit which made them all work to the common good of the undertaking. A high ideal has been set, and great

must be the effort in the future to equal, let alone surpass, this great show of 1911.

The arrangement of the exhibits was well conceived and carried out. The perplexing problem of the commercial and non-commercial elements was admirably handled. The former element was given ample space for their exhibits, but were required to pay for the privilege. This feature of the exhibition was so arranged as not to detract in the least from the harmony and beauty of the flower exhibits, and yet added much to the general interest. The whole basement floor was allotted to a trade exhibit. Here could be seen all the latest advances in green-house construction, methods of heating, devices for spraying, and the thousand and one other things of a mechanical nature which go to make a success of horticulture.

The main floor was given up exclusively to displays of plants and flowers, these being so arranged that vistas disclosed still other objects of beauty to lead one on. Rich groups of foliage plants, masses of bulbous plants, alive with color, rose gardens, and many other examples of the cultivator's art were on every side.

The exhibition was not only an artistic but a financial success as well, the people of Boston attesting their appreciation by turning out in crowds to its support. This evidences a real love for flowers. For many years an active organization, the Massachusetts Horticultural Society has kept horticulture constantly before the people, thus fostering a love and sentiment for flowers in that community. This was not the only element which contributed to success. Able business management and careful planning months ahead must not be forgotten. The Committee on the National Flower Show of the Society of American Florists and Ornamental Horticulturists have worked unceasingly. Of this committee Mr. F. R. Pierson was chairman, and much is due to his untiring efforts. Mr. Pierson is chairman of our own Council, so that the Horticultural Society of New York feels a near interest in the great success of the Second National Flower Show.

THE HORTICULTURAL SOCIETY OF NEW YORK

OFFICERS

President

GEORGE T. POWELL, New York City.

Vice-Presidents

N. L. BRITTON
T. A. HAVEMEYER

PATRICK O'MARA
SAMUEL THORNE

JAMES WOOD

Treasurer

F. R. NEWBOLD, Poughkeepsie, N. Y.

Secretary

GEORGE V. NASH, New York Botanical Garden,
Bronx Park, N. Y. City

Council

Ex-Officio Members

THE OFFICERS OF THE SOCIETY

Elected Members

F. R. PIERSON, *Chairman*

F. L. ATKINS
J. W. CROMWELL
HENRY F. DU PONT
HENRY HICKS
JOHN E. LAGER
J. A. MANDA
E. S. MILLER
CLEMENT MOORE
W. NILSSON
I. L. POWELL

E. H. ROEHR'S
H. H. RUSBY
H. A. SIEBRECHT
ROBERT SIMPSON
E. B. SOUTHWICK
JAMES STUART
J. H. TROY
W. H. WAITE
C. W. WARD
C. W. WEATHERED

A. L. WILLIS

Journal

of the

Horticultural Society of New York

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JULY, 1911

EDITED BY THE SECRETARY

GEORGE V. NASH

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THE SUMMER EXHIBITIONS

As announced in the last number of the JOURNAL, the summer monthly exhibitions of the society were inaugurated with the May meeting at the New York Botanical Garden. They have been held in the large hall devoted to fossil botany in the basement of the Museum building, and have been well attended.

MAY EXHIBITION

This was opened on Wednesday, the tenth, in conjunction with the annual meeting of the society. It was continued through the following day.

The first prize for a collection of herbaceous plants went to Mrs. Louis S. Chanler, E. Wilson, gardener. The F. R. Pierson Co. took the first prize for a collection of tulips, while Mrs. Chanler secured the second, and also the first for a collection of *Narcissus*. For six sprays of *Campanula*, the first prize was taken by Mrs. F. A. Constable, James Stuart, gardener, who also won the first prize for six and two pots of *Pelargonium*.

Mr. F. R. Newbold exhibited six vases of *Antirrhinum*, securing a special mention for the excellence of the flowers. Edw. Johnson, gardener for the Geo. W. Perkins Estate, was awarded a special prize and special mention for a group of plants, excellently grown, of *Hydrangea arborescens grandiflora*. A special

prize was also awarded to the same party for three plants of *Calceolaria hybrida*. Mr. H. Darlington, P. W. Popp, gardener, exhibited a yellow Marguerite for which he received a special prize. This same gentleman received a certificate of merit for the chrysanthemum to which a special mention was given at the April exhibition. This, a free-flowering yellow, has been given the name of "Seven Oaks." A bronze medal was awarded to the Julius Roehrs Co. for a collection of orchids. Special mention was given to John Lewis Childs for plants of *Eucomis punctata*, and to J. A. Manda for a hybrid between *Laelia purpurata* and *Cattleya Schroederæ*.

The judges were I. S. Hendrickson and James Stuart.

JUNE EXHIBITION

This exhibition, held on Saturday and Sunday, the tenth and eleventh, was devoted mainly to peonies and roses. The judges were I. S. Hendrickson and Robert Stobo.

Mr. T. A. Havemeyer, A. Lahodny, gardener, took first prizes for three each light pink, white, and rose peonies, six flowers of each, and also the same prize for a collection of single peonies. The first prize for a collection of peonies went to the Cottage Gardens Co., the second to Mrs. F. A. Constable, James Stuart, gardener. For a collection of hardy roses the first prize was secured by Gen. E. A. McAlpin, John Woodcock, gardener, a fine display; the second prize went to Mrs. F. A. Constable. Mr. H. Darlington, P. W. Popp, gardener, was awarded the first prize for a collection of flowering shrubs and trees. The first prize for a collection of hardy rhododendrons and azaleas went to Mr. T. A. Havemeyer. Among the irises the first prize for a collection was taken by Mr. Havemeyer, the second by Mr. John Lewis Childs. A fine plant of *Cattleya* brought the first prize for the best orchid plant to Mr. Clement Moore, J. P. Mossman, gardener.

Mr. John Lewis Childs exhibited a large-flowered semi-double *Philadelphus*, under the name of Virginal. It is said to be a hybrid. With its sweet-scented pure white flowers it looks very promising. A certificate of merit was awarded to it. Special

mention was awarded to Bobbink & Atkins for a collection of herbaceous plants, not entered for competition; to Mr. John Lewis Childs for a collection of gladioli; to the Julius Roehrs Co. for a collection of cut orchids; and to Mr. T. A. Havemeyer for a collection of hydrangeas.

JULY EXHIBITION

This exhibition, held on Saturday and Sunday, the first and second, was devoted mainly to Japanese irises, sweet peas, and flowers of herbs and shrubs and trees. The judges were David MacFarlane, James Donlan, and Wm. Tricker.

Scott Bros. took first prize for a collection of outdoor roses. In the class of 12 vases of Japanese irises, 12 varieties, the first went to Scott Bros., the second to Mrs. F. A. Constable, Jas. Stuart, gardener. For 6 vases of sweet peas, 6 varieties, 25 of each, the first prize was taken by Mr. H. Darlington, P. W. Popp, gardener, the second by Mrs. A. M. Booth, E. Fardel, gardener. The first prize for the best vase of 100 sweet peas went to Mr. H. Darlington, the second to Mrs. A. M. Booth. Mrs. F. A. Constable secured first for a collection of flowers of herbaceous plants, while Mr. T. A. Havemeyer, A. Lahodny, gardener, took second. Mr. Havemeyer took first for a collection of flowers of shrubs and trees, also first for 6 vases of Japanese irises, 6 varieties. First prize for 3 vases of sweet peas, 3 varieties, 25 of each, went to Mr. H. Darlington, the second to Mr. T. A. Havemeyer.

Special prizes were awarded as follows: T. A. Havemeyer, for a collection of sweet peas; Mrs. F. A. Constable, for a vase of *Lilium candidum*; Wm. Tricker, for *Nymphaea Helen Fowler*, certificate of merit; Wm. Tricker, for *Vinca minor aurea*, certificate of merit; L. S. Livingston, for *Romneya Coulteri*, special mention.

PROCEEDINGS OF THE SOCIETY

APRIL 12, 1911

A meeting of the society was held at the American Museum of Natural History on Wednesday, April 12, 1911, at 3:30 P.M., Vice-president Wood presiding.

The minutes of the meeting of March 8, 1911, were read and approved.

The following persons, having accepted the invitation of the Council, were approved by that body and referred to the society for action:

Life Members

Felix M. Warburg, Abram G. Nesbitt, Louis Marshall, Mrs. J. P. Morgan, Jr., Wm. H. Taylor, C. C. Stillman.

Annual Members

Myles Tierney, Mrs. Chas. B. Rowland, Adolph S. Ochs, M. Orme Wilson, Mrs. Danial Butterfield, Mrs. Katharine Paul, Henry Breunich, David Dows, Mrs. Wm. Combe, Mrs. Emilia K. Hess, C. F. Quincy, Charles E. Seitz, C. A. Tatum, D. D. Allerton.

The following applications for annual membership were approved by the council and referred to the society for action:

Charles Rapp, A. Bieschke, P. W. Popp.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected.

The resignation of Mr. P. Duff was accepted with regret.

In reply to a question from the chair in reference to the invitations to the American Rose Society and the Chrysanthemum Society of America, the secretary replied that the invitation to the former society had been conveyed through Mr. Pierson. Mr. Pierson reported that the Rose Society had decided to hold its meeting in 1912 in a western city. The secretary stated that the invitation to the Chrysanthemum Society had not yet been extended, as it had been necessary to first secure the permission of the authorities at the American Museum before so doing. This had now been obtained.

The following medals were presented:

Silver

To Lager & Hurrell, for a collection of orchids. February 8, 1911.

To J. A. Manda, for *Cypripedium Iris*. March 8, 1911.

To Lager & Hurrell, for a fine variety of *Cattleya Schroederæ*.
March 8, 1911.

To Wilhelm Cordes, for a group of orchids. March 8, 1911.

Bronze

To Julius Roehrs Co., for a collection of cut orchids. February
8, 1911.

No representatives being present to receive the medals for the Julius Roehrs Co. and for Wilhelm Cordes, the secretary was instructed to send them to them by mail.

There being no further business before the meeting, the lecture announced for the day, "Hyacinths: their History, Cultivation, and Present-day Types," was delivered by Mr. E. B. Southwick, illustrated with lantern slides.

Meeting adjourned at 4:30.

GEORGE V. NASH,
Secretary.

MAY 10, 1911

The annual meeting of the society was held on Wednesday, May 10, 1911, in the Museum building, New York Botanical Garden, at 3:30 P.M., Mr. Southwick presiding.

The minutes of the meeting of April 12, 1911, were read and approved.

The following persons, having accepted the invitation of the Council, were approved by that body and referred to the society for action:

Life

William Ziegler, Jr., James Marwick.

Sustaining

Mrs. Louis S. Chanler.

Annual

Miss Jennette Robertson, H. W. de Forest, Mrs. A. S. Hewitt, Mrs. S. Beach Jones, Mrs. R. B. Suckley, Miss E. Tuckerman, G. Warrington Curtis.

The secretary was authorized to cast an affirmative ballot for

their election. This was done and the parties declared elected.

The eleventh annual report of the council, including the report of the treasurer, was then read. This was approved and the report ordered printed in the JOURNAL.

The secretary then read the circular letter which had been addressed to all members of the society fifteen days before the annual meeting. This letter included the following resolutions which had been unanimously adopted by the Council and referred to the society for action, in accordance with the provisions of the constitution:

Resolved: That article 9 of the constitution be amended to read as follows: Regular meetings of the society, accompanied when practicable by exhibitions, shall be held at places and on dates determined upon by the Council, during each month in the year.

The remainder of article 9 to stand as it now is.

Resolved: That the Annual Meeting of the society be held on the second Saturday of May, instead of the second Wednesday.

The above resolutions were then offered to the society for action. The following resolution was moved, seconded, and unanimously carried:

Resolved: That these two resolutions, which have been approved by the Council and recommended by it to the society, be adopted and accepted as amendments to the constitution.

The following nominations were made for officers and members of the Council for 1911-1912:

President

George T. Powell

Vice-presidents

N. L. Britton,

Patrick O'Mara

T. A. Havemeyer

Samuel Thorne

James Wood

Treasurer

F. R. Newbold

Secretary

George V. Nash

Council

F. L. Atkins	F. R. Pierson
John Canning	E. H. Roehrs
Mrs. Louis S. Chanler	H. H. Rusby
J. W. Cromwell	H. A. Siebrecht
Henry F. du Pont	Robert Simpson
I. S. Hendrickson	E. B. Southwick
John E. Lager	Robert Stobo
J. A. Manda	James Stuart
E. S. Miller	J. H. Troy
Clement Moore	C. W. Ward
W. Nilsson	A. L. Willis

The secretary was instructed to cast a separate affirmative ballot for the president, vice-presidents, treasurer, and members of the Council, and the chairman such a ballot for the election of the secretary. These ballots were cast and the above named nominees were declared elected.

The matter of the salary of the secretary was brought before the meeting by Mr. Pierson, and the following resolution, after being duly seconded, was carried:

Resolved: That the sum of three hundred dollars be paid to the secretary for his services for the ensuing year, payment to be made in quarterly instalments.

Meeting adjourned at 4 P.M.

GEORGE V. NASH,
Secretary.

JUNE 10, 1911

A meeting of the society was held on Saturday, June 10, 1911, in the Museum building, New York Botanical Garden, at 3:30 P.M., Mr. Willis presiding.

The minutes of the meeting of May 10, 1911, were read and approved.

The following persons, having accepted the invitation of the council, were approved by that body and referred to the society for action:

Life

Miss Mary O. Stevens.

Annual

W. S. Montgomery.

The following persons applied for membership, were approved by the Council, and referred to the society for action:

Annual

Herman Komitsch, Robert T. Brown, Thos. Rolley.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected.

A letter from Mr. Chas. W. Johnson, secretary of the Chrysanthemum Society of America, dated June 5, 1911, was read. This was in reply to a letter of the secretary extending the invitation of this society to meet with us in the fall of 1912. Mr. Johnson said he would bring the matter before the society at its next meeting, to be held in St. Louis this fall.

The question of electing a delegate to represent the society on the Council of the Academy of Sciences was brought before the meeting. Dr. N. L. Britton was elected such delegate, to succeed himself.

There being no further business before the meeting, adjournment was taken at 3:45.

GEORGE V. NASH,
Secretary.

ELEVENTH ANNUAL REPORT OF
THE COUNCIL

PRESENTED MAY 10, 1911

The society has now completed its eleventh year, and the ninth of its corporate existence. The year just passed has been the most successful of any in the history of the society, not only in its own growth but in its usefulness, as the details given below will make evident.

It has always been the policy of the society to reach the public largely through its flower exhibitions. In the past there has rarely been more than three of these held during the course of a

year. At the meeting of the Council held on December 14, 1910, Dr. Britton suggested to the meeting that monthly exhibitions be given, explaining that he thought the society would in this way be kept more continuously before the public. He further suggested that six of these exhibitions, those of May to October, be held at the New York Botanical Garden. Upon motion, seconded and carried, it was

Resolved: That the exhibitions of the society be held monthly, and that those from May to October, inclusive, be held at the New York Botanical Garden.

It was decided to hold the first of these monthly meetings in February. The exhibitions resulting from this action will be referred to more in detail below.

On a number of occasions in the past it would have been desirable to hold a given exhibition on some other day than the second Wednesday, as provided for in the constitution. This condition exists especially when some certain flower is to be made the chief attraction. Roses and peonies come in this category, their development depending much upon the forwardness or lateness of the spring. It has been felt by the council that the date of meetings and exhibitions, with the exception of the annual meeting, should be optional with the council. To overcome this difficulty, Dr. Britton offered, at the meeting of the council held on December 14, 1910, the following resolution which was seconded and unanimously carried:

Resolved: That article 9 of the constitution be amended to read as follows: Regular meetings of the society, accompanied when practicable by exhibitions, shall be held at places and on dates determined upon by the council, during each month in the year.

The remainder of article 9 to stand as it now is.

At the following meeting of the council, held on January 11, 1911, the question of changing the day of the annual meeting from the second Wednesday to the second Saturday was discussed. Upon motion, seconded and unanimously carried, it was

Resolved: That the annual meeting of the society be held on the second Saturday, instead of the second Wednesday.

The two foregoing resolutions will be submitted to the society

today for action, in accordance with article 11 of the constitution, 15 days notice having been given by mailing to each member a printed notice, a copy of which is appended to this report, dated April 21, 1911.

Five exhibitions have been given: one each in the summer and fall of 1910, and three in the winter and spring of 1911.

The summer exhibition of 1910 was held on June 4 and 5 at the Museum building of the New York Botanical Garden. This was devoted almost entirely to hardy plants, the peony taking a prominent place. It was too early for roses, so these flowers were not well represented. A detailed account of this exhibition will be found in the *JOURNAL* for October, 1910. The cash premiums were offered by the New York Botanical Garden. This action is fully appreciated by the Horticultural Society, which takes this occasion to express its thanks, not only for this, but also for the use of the hall in which the exhibition was held. Holding the exhibition on Saturday again proved attractive, as evidenced by the large attendance. The exhibition also remained open on the following day, a fact fully appreciated by the public which, in spite of the inclemency of the weather in the afternoon, attended in large numbers.

The fall exhibition was held at the American Museum of Natural History with the permission of the trustees of that institution, November 9 to 13. The period of the exhibition came unfortunately at the time of the great express strike which tied up shipping in the vicinity of New York. It was therefore impossible for those at any distance to secure transportation for their exhibits. Even with this handicap, however, the exhibition was large. A detailed account of this will be found in the *JOURNAL* for January, 1911. It was necessary to obtain a special fund to meet the expenses of this exhibition, and a generous response was made by the members of the society to the appeal for funds. Eighty contributed as against forty-six the previous year, for a similar purpose, evidencing a wide interest in the success of the society.

The three remaining exhibitions were held at the American Museum of Natural History, the West Assembly Hall being used

for the purpose. Detailed accounts of these will be found in the *JOURNAL* for April.

The first of these, being the first of the monthly meetings already alluded to, was held on February 8. It was devoted primarily to orchids and roses.

The second was held on March 8, the carnation and cyclamen being the features of this exhibition. The competition in some of the carnation classes was very keen. The exhibit of cyclamen plants was superb.

The third exhibition occurred on April 12. This was planned for the flowers and plants associated with Easter. Coming as it did but a short time after the close of the National Flower Show at Boston, and at a time when spring outside work was commencing, the interest manifested was unusual.

These monthly exhibitions have been planned largely for the benefit of the gardeners, and so most of the premiums offered have been restricted to non-commercial growers. This is the first time that horticulturists in this vicinity have had an opportunity each month to exhibit, and they have not been slow in availing themselves of it. The interest has been keen, and the feeling of good-fellowship prevailing has been most pleasant and gratifying.

There have been nine meetings of the council. The meetings of the society have been held as follows, all but those of May and June, which took place at the New York Botanical Garden, being held in the American Museum of Natural History:

May 11, 1910. Annual meeting, with election of officers and members of council for the ensuing year.

June 4, 1910. An exhibition was held in conjunction with this meeting, and continued open on the following day, Sunday. Dr. N. L. Britton delivered a lecture on Saturday, in the large lecture hall, on "Summer Flowers," illustrated with lantern slides.

October 12, 1910. Lecture, "Transforming an Old Swamp," by Mr. George V. Nash, illustrated with lantern slides.

November 11, 1910. This occurred during the progress of the fall exhibition. A lecture was delivered by Dr. N. L. Britton on "The Botany of Some Autumn Flowers," illustrated with lantern slides.

December 14, 1910. Lecture, "Relation of the Soil to Plant Life," by Mr. George T. Powell.

January 11, 1911. The lecture announced for this day was on "The Chestnut Canker, and Other Fungous Diseases of Trees." Owing to the illness of the lecturer, Dr. W. A. Merrill, it was necessary to postpone this lecture until a future time. In place of this a lecture was given by Mr. George V. Nash on "Orchids, Wild and Cultivated," illustrated with lantern slides.

February 8, 1911. Lecture, "Some Common Orchids and Roses," by Mr. George V. Nash, illustrated with lantern slides. An exhibition was held in conjunction with this meeting, in which these flowers were especially prominent.

March 8, 1911. An exhibition was held in conjunction with this meeting.

April 12, 1911. Lecture, "Hyacinths: their History, Cultivation, and Present Day Types," by Mr. E. B. Southwick. An exhibition was held in conjunction with this meeting.

The Orchid Section has held three meetings during the year: in October and November, 1910, and in January, 1911. The meeting for December was omitted on account of its occurrence at the holiday season; that of February was also cancelled as it came on Washington's Birthday; it was thought wise to omit the March meeting, as all interested would be busy with the approaching National Flower Show.

The JOURNAL has been issued quarterly, as follows: no. 4, July, 1910, with 22 pages and 2 plates; no. 5, October, 1910, with 15 pages and 1 plate; no. 6, January, 1911, with 20 pages and 3 plates; no. 7, April, 1911, with 10 pages; a total of 67 pages and 6 plates. One subscriber has been received for the JOURNAL.

Volume II of the Memoirs was issued in December, 1910. This contains the Proceedings of the International Conference on Plant Hardiness and Acclimatization.

The membership of the society has been largely increased during the year. The total membership is now 368, divided as follows: Annual, 299; Sustaining, 1; Life, 66; Patrons, 2. This is a gain of 148, apportioned as follows: Annual, 107; Sustaining, 1; Life, 39; Patron, 1. This gain, with the exception of 22 of the annual members, was in response to the invitations sent out. About 7,000 invitations were mailed, costing about \$280, including postage. As a result the society has gained 99 annual mem-

THE HORTICULTURAL SOCIETY OF NEW YORK

bers, \$495; 1 sustaining member, \$25.00; 37 life members, \$1,850; 1 patron, \$250; total, \$2,620, or a net gain, without considering advantages for the future, of \$2,340. The society has lost 2 annual members by death and 10 by resignation, making a total of 12. Two of the annual members, Mr. Samuel Untermeyer and Mr. John Innes Kane, have become life members. In the last two years the society has more than doubled its membership, the number of members on May 12, 1909, being 180.

At a meeting of the council, held on November 11, 1910, the question of the re-investment of the permanent fund was raised. After some discussion it was moved, seconded and carried that the chairman appoint a committee of three to investigate this matter and report to the council. The chairman appointed Messrs. Britton, Newbold, and Willis as such committee. At the council meeting, held on December 14, 1910, this committee reported through its chairman, Dr. Britton, that they recommended that the permanent fund of the society be invested in shares of the preferred stock of the United States Steel Corporation. Upon motion, seconded and carried, it was

Resolved: That the chairman be and is hereby authorized and directed to invest the permanent fund of the society, now amounting to over \$4,000, by the purchase of 35 shares of the preferred stock of the United States Steel Corporation.

At the meeting of the council, held on April 12, 1911, the treasurer submitted a report showing that this investment had been made at a cost of \$4,143.13.

At the meeting of the council, held on May 11, 1910, the following action was taken:

Resolved: That persons paying \$25.00 annually shall be designated Sustaining Members, and that after such sustaining members shall have made ten annual payments they shall become patrons of the society.

Up to the present but one person has taken advantage of this provision.

A list of the membership is appended to this report; as is also the report of the treasurer.

GEORGE V. NASH,
Secretary.

F. R. PIERSON,
Chairman of the Council.

THE HORTICULTURAL SOCIETY OF NEW YORK

TREASURER'S STATEMENT

FOR THE YEAR ENDING MAY 10, 1911

RECEIPTS

Balance forward	\$ 241.96
Annual dues	1,345.00
Sale of Memoirs	8.20
Special Fund for November Show	1,133.00
Belonging to Permanent Fund:	
1 Patron	250.00
1 Sustaining	25.00
38 Life	1,900.00
	2,175.00
	\$4,903.16

EXPENDITURES

Printing, etc.	\$ 726.28
American Museum Account	130.35
Secretary's salary	200.00
Petty cash and postage	290.00
Prizes at shows	1,150.50
Manager and judges	55.50
Medals	70.00
Photographs of shows	25.50
	2,648.13
Transferred to Permanent Fund	2,175.00
Balance	80.03
	\$4,903.16

PERMANENT FUND

May 9, 1910. In Savings Bank	\$2,245.30
Jan. 1, 1911. Interest	98.66
Transferred from Astor Bank	2,175.00
	\$4,518.96
Purchased 35 Shares U. S. Steel Corp. Pfd. Stock	4,143.13
Balance in fund	375.83
	\$4,518.96

FREDERIC R. NEWBOLD,
Treasurer.

Examined and audited.
E. B. SOUTHWICK,
ALBERT L. WILLIS,
Auditing Committee.

May 10, 1911.

MEMBERSHIP

MAY 10, 1911

Patrons

Huntington, Archer M.

Sage, Mrs. Russell

Sustaining Member

Chanler, Mrs. Louis S.

Life Members

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Agnew, Cornelius Rea	Kane, John Innes
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Archbold, John D.	MacMillin, Emerson
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Iselin, Adrian, Jr.	Stokes, Miss O. E. P.
Iselin, Columbus O'D.	Stone, Miss E. J.

THE HORTICULTURAL SOCIETY OF NEW YORK

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GEORGE V. NASH, New York Botanical Garden,
Bronx Park, N. Y. City

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Journal

of the

Horticultural Society of New York

Vol. I, No. 9



OCTOBER, 1911

EDITED BY THE SECRETARY

GEORGE V. NASH

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Journal of the Horticultural Society of New York

INCORPORATED 1902

Vol. I, No. 9

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OCTOBER, 1911

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By subscription, \$1.00 per year

THE COMING FALL EXHIBITION

The Annual Fall Exhibition of plants and flowers will be held in the American Museum of Natural History, commencing on Friday, November 3, and continuing until Tuesday, the seventh. The exhibition will be open on the first day at 7 P. M., and the evening will be devoted to a private view for members of the Society, of the American Museum of Natural History, and of affiliated organizations.

A premium-list carrying nearly \$1,500.00 has been prepared, and a copy of this has already been sent to all members of the society. A little over a third of this amount has been allotted to the chrysanthemum, the most popular and attractive flower of that time of the year. Prizes have been offered for bush, standard and grafted plants, and for plants grown to a single stem. Many prizes are also offered for cut flowers of various kinds of chrysanthemums. Roses and carnations also occupy a conspicuous place in the premium-list.

It is regrettable that those who are occupied in decorative work do not realize the advantages of making elaborate displays at these exhibitions. Excellent facilities are afforded, and a feature of this kind would add much to the interest of the exhibition. Diplomas are offered for table and mantel decorations, and for bouquets, baskets, canopies, and cotillion favors. It is to be hoped that at least a few of our best decorators will avail themselves of this excellent opportunity to reach an appreciative audience.

Next to the chrysanthemum, the greatest amount of premiums is offered for foliage and decorative plants, including palms, ferns, bay-trees, crotons, begonias, and stove and greenhouse plants. More prizes have been allotted this year to fruits and vegetables, which include a banana plant in fruit, bunches of grapes, both black and white, melons, cucumbers, and a collection of eighteen different vegetables.

A large number of premiums are provided for orchids, including collections, novelties, hybrids, individual plants in bloom, and cut flowers. These delightful flowers are always one of the most attractive features of the exhibitions, owing to their great variety in color and form.

Prizes have been offered in nearly all cases for an open-to-all class and for non-commercial growers. This provides a fair chance for all.

The exhibition is entirely free, and will be open to the public on Saturday, Monday and Tuesday, the fourth, sixth and seventh, from 9 A. M. to 5 P. M. and from 7 to 10 P. M., and on Sunday, the fifth, from 1 to 5 P. M.

THE GLADIOLUS EXHIBITION

The August exhibition was held, in coöperation with the New York Botanical Garden, in the Museum building of the Garden, on Saturday and Sunday, the twenty-sixth and twenty-seventh. The premiums were offered by the Garden, and were for gladioluses and water-lilies. The exhibition was given in the fossil hall, the exhibits occupying two large tables fifty feet long and three supplementary tables. The table in the west end of the hall, fully one half of the table in the east end, and part of the supplementary tables were devoted to gladioluses, making it primarily an exhibition of these flowers, as was intended. It was a large and excellent display of this attractive flower, and one could hardly realize, without actually seeing them, that there were so many colors and shades. There were exhibits of other flowers, besides gladioluses. A collection of water-lilies, rich in color and fragrance, was an attraction. A plate of peaches, grown within

a short distance of the Garden, were exhibited by Mr. Wilbour S. Boyer, of Bedford Park. Mr. John Lewis Childs, in addition to his fine exhibit of gladioluses, had an attractive group, containing *Lycoris squamigera*, *Calla Elliottiana*, *Montbretia*, in three varieties, and *Tritoma Pfitzeri*, one of the "redhot pokers." A large vase of *Hydrangea paniculata grandiflora* was shown by Mr. C. H. Werner. The New York Botanical Garden made a display of flowers and fruits of herbaceous plants and of shrubs and trees; this collection attracted much attention.

The unfortunate weather conditions interfered much with the attendance. This is especially to be regretted in this case, for a finer display of gladioluses is rarely seen than was assembled at this exhibition.

The following awards were made for gladioluses in the open-to-all class. For the largest and best collection Mr. John Lewis Childs received the first prize. For the best twelve varieties, three spikes of each, the first prize went to Mr. T. A. Havemeyer, A. Labodny, gardener; the second to Mr. H. Darlington, P. W. Popp, gardener. The first prize for the best vase of a white variety was awarded to Jacob Thomann & Sons, the second to Mr. John Lewis Childs. For the best vase of a pink variety Mr. E. S. Miller received first, Mr. John Lewis Childs, second. Mr. H. Darlington was awarded the first prize for a centerpiece.

In the class for non-commercial growers the following prizes were awarded for gladioluses. For the largest and best collection of named varieties, the first to Mr. T. A. Havemeyer, who also took first for the best six varieties, two spikes of each, Mr. Darlington taking second. The first prize was awarded to Mr. Havemeyer for the best vase of a white variety, and also for the best vase of pink, the second going to Mr. Darlington in the pink class.

The first prize for a collection of water lilies, in the open-to-all class, went to Mr. Wm. Tricker. Special mention was given to a collection of seedling gladioluses, shown by Mr. E. S. Miller; to a collection of Chinese asters, exhibited by Mr. H. Darlington; and to a collection of hybrid tea outdoor roses, exhibited by Mr. Wm. Tricker.

A special prize was awarded to Mr. Arthur Cowee for a collection of named varieties of gladioluses.

The judges were James Stuart, Robert Stobo, and John Canning.

SEPTEMBER EXHIBITION

This exhibition was held in coöperation with the New York Botanical Garden, in the Museum building of the Garden, on Saturday and Sunday, the sixteenth and seventeenth. The unfavorable weather in the early part of the week interfered considerably with the exhibits, as dahlia and aster flowers, for which the greater part of the premiums was provided, were much damaged by the cold rainy weather, and did not properly develop. The following week was much more favorable to these flowers.

Mr. H. Darlington, of Mamaroneck, N. Y., P. W. Popp, gardener, took first prizes for a collection of dahlia blooms and for a vase of dahlia blooms, both in the open-to-all class. In the class for non-commercial growers he also took first prizes for a collection of dahlia blooms, and for vases of show, decorative, cactus, and peony-flowered dahlias. Mrs. F. A. Constable, of Mamaroneck, N. Y., James Stuart, gardener, was awarded first prizes, in the non-commercial class, for a vase of ten blooms of single dahlias, and for vases of white, light pink, dark pink, blue, and crimson late-branching asters, ten blooms of each.

An interesting feature of the exhibition was a large collection of flowers and fruits of herbaceous plants and of shrubs and trees exhibited by the New York Botanical Garden. This filled the long table in the east end of the exhibition hall, and attracted much attention and inspection from the large number of people who visited the exhibition on both days.

The judges were F. R. Pierson and E. B. Southwick.

THE FUNKIAS OR DAY-LILIES

Many years ago, past the middle of the eighteenth century, that indefatigable explorer and botanist, Thunberg, visited Japan.

During his travels in that country, then almost unknown, he found a pretty perennial plant, common both wild and under cultivation to which he gave the name *Alcetris japonica*. This is the plant we now know as *Niobe japonica* or *Funkia lancifolia*. Later, in 1784, Thunberg transferred it to the genus *Hemerocallis*, in which position it remained for many years. At length, in 1812, the name *Hosta* was proposed, a name invalidated in this case by its use, fifteen years earlier, for another genus in the Verbenaceae. In the same year, however, Salisbury proposed *Niobe*, the earliest available name and the one which should therefore be adopted. *Funkia*, not published until five years later, has been commonly used, as has *Hosta*, both of which, as explained above, must give way to *Niobe*, for unless priority of publication can rule, no stability in botanical nomenclature is possible. In systematic botany this rule is rigidly applied, and it must be as inflexible a procedure in horticultural botany if we want to avoid in the future the great confusion which has existed in the past in the application of names to cultivated plants. In the *Index Kewensis*, a work indispensable to the working systematic botanist, the name *Funkia* has been adopted, this arbitrary usage being in great part responsible for the continued employment of the name.

The genus divides itself into two rather well-marked groups which were considered genera by Salisbury, under the names of *Niobe* and *Bryocles*. The former was applied to the plant known here as *Niobe plantaginea*, in which the flowers are white and have the filaments adnate to the tube for part of their length, while the name of *Bryocles* was given to what is here called *Niobe coerulea*, a group including at the present time several other species, in which the flowers are smaller, colored, and have the filaments free. It is said that in *Niobe plantaginea* there is present a small bracteole at the base of the pedicel, but I find this frequently wanting, so attach little value to it as a generic character. In view of the above, I find it better to adopt the generally accepted view of the present day, and consider the two groups as parts of one genus, which may be briefly characterized as follows:

NIOBE Salisbury, Trans. Hort. Soc. 1: 335. 1812

Bryocles Salisbury, l. c.

Hosta Tratt. Arch. Gew. 1: 55. 1812. Not Jacq. 1797.

Funkia Spreng. Anl. Ed. 2, 2¹: 246. 1817.

Libertia Dum. Comm. 9. 1822.

Tufted perennial herbs, forming large masses, with petioled basal leaves, and a racemose inflorescence borne on a naked or leafy stem. Perianth varying from white to lavender and blue, tubular-trumpet-form, funnel-form, or campanulate-funnel-form: segments six, shorter or longer than the tube. Stamens six, declinate, from equaling to a little shorter than the perianth, the filaments filiform and free or nearly so, or adnate to the tube for a considerable part of their length: anthers oblong, versatile, introrse. Ovary sessile, oblong, 3-celled. Style filiform, a little thickened at the stigma. Ovules numerous. Capsule narrowly oblong or almost linear, loculicidally 3-valved. Seeds compressed, angled, or almost flat.

Species seven or eight, perhaps more, natives of Japan, China, and eastern Siberia.

The following key will help identify the six species in cultivation:

Perianth white, 3-4 in. long, tubular-trumpet-form; stamens adnate to the tube for a considerable portion of their length. 1. *N. plantaginca*.

Perianth colored, 1½-2½ in. long, stamens free.

Perianth funnel-form, the tube gradually passing into the limb, from white flushed with lavender to pale lavender.

Flowering stem with leaves or with leaf-like bracts, these gradually passing into the bracts of the inflorescence; leaf-blades green.

Leaf-blades lanceolate to ovate-lanceolate, usually equally narrowed at both ends, the nerves on each side of the midrib 3-5; perianth usually less than 2 in. long. 2. *N. japonica*.

Leaf-blades broadly ovate, the nerves on each side of the midrib 6-10; perianth usually 2 in. long or more.

3. *N. undulata*.

Flowering stem naked, or sometimes with a single bract at the middle; leaf-blades glaucous.

Scape not or but little exceeding the leaves; petioles usually much exceeding the blades. 4. *N. Sieboldiana*.

Scape much exceeding the leaves; petioles usually not exceeding the blades. 5. *N. Fortunei*.

Perianth campanulate-funnel-form, the tube abruptly passing into the limb, blue. 6. *N. coerulea*.

1. NIOBE PLANTAGINEA (Lam.) Nash. White Day-lily.
Plantain Lily

Hemerocallis plantaginea Lam. *Niobe cordifolia* Salisb. *Funkia subcordata* Spreng. *Funkia alba* Sweet. *Funkia grandiflora* Sieb. & Zucc.

A showy perennial, with large plantain-like leaves, and racemes of white odorous flowers. Leaves numerous, pale green; blades 6-9 in. long, 3-5 in. wide, broadly ovate, cordate at the base, acute at the apex, with 6-8 curved nerves on each side of the midrib; petiole usually exceeding the blade; scape 1-2 ft. tall, with 1 or 2 lanceolate bracts near the middle; inflorescence racemose, 4-8 in. long; flowers up to about 12, each in the axil of an ovate bract 1-1½ in. long, on pedicels less than 1 in. long; perianth 3-4 in. long, white, its lobes ovate or lanceolate, 1-1½ in. long, but little spreading; stamens shorter than the perianth; capsule about 10 lines long.

A native of Japan and China. Lamarck, who described this plant under the name of *Hemerocallis plantaginea* in 1789, thought that it had been growing for a few years in the garden of the king, to which it had been sent by M. de Guines from China. This is the first reference found to its cultivation outside of its native country, so its introduction to European gardens may be taken as occurring somewhere near that date. It is known in Japan as "tamano kandsaki." The variety *grandiflora* (*Funkia grandiflora* Sieb. & Zucc.) appears to differ only in the somewhat larger flowers, and in having the bracts of the raceme larger and more leaf-like.

2. NIOBE JAPONICA (Thunb.) Nash. Japanese or Lance-leaved Day-lily

Aletris japonica Thunb. *Funkia lancifolia* Spreng.

A showy perennial forming large dense masses, with elliptic to nearly ovate leaf-blades which are narrowed at the base, and racemes of lavender flowers. Leaves numerous, green; blades 4-6 in. long, sometimes up to 2½ in. wide, lanceolate or elliptic to ovate-lanceolate, usually equally narrowed at both ends, rarely more broadly so at the base, with 3-5, rarely more, curved nerves on each side of the midrib; scape 1-2 ft. tall, overtopping the leaves, the scattered and distant leaves gradually passing into the bracts of the inflorescence; inflorescence racemose; flowers sometimes up to 20, finally nodding, on pedicels 2-3 lines long;

perianth pale lavender, 1-2 in. long, the slender tube, less than one half the length of the perianth, narrowed into a broad limb, the segments 8-10 lines long and 4-5 lines wide, acute; capsule 1-1¼ in. long, pendulous and appressed to the scape.

A native of Japan. There is a variegated form in cultivation known as variety *albomarginata* (*Funkia albomarginata* Hook.), which has the leaves margined with a narrow band of white. There is another form which is quite distinct, the variety *tardiflora*, in which the pedicels are longer, the lower ones 5-6 lines long. It also flowers a little later, so that while the one is in ripe fruit, this variety is still in flower. It is also more resistant to frost.

3. NIOBE UNDULATA (Otto & Dietr.) Nash. Wavy-margined Day-lily

Funkia undulata Otto & Dietr.

A tall showy plant, with long-petioled broad leaves, and numerous pale lavender flowers in a long raceme. Stems up to 5 ft. tall, bearing 3-5 long-petioled leaves which gradually decrease in size, passing into the bracts of the inflorescence; basal leaves numerous; petioles often more than twice as long as the blades, deeply concave, thin-margined, up to 1½ ft. long; blades usually 6-8 in. long, up to 5 in. wide, undulate on the margins, broadly ovate, acute at the apex, abruptly narrowed into the margined petiole, with 6-10 nerves on each side, the nerves depressed above, very prominent beneath, the upper surface dull, the lower shining; raceme up to 20 in. long; flowers numerous, nodding, on recurved pedicels less than 5 lines; perianth 2-2¼ in. long, funnel-form, pale lavender, the narrowly ovate acute segments about one half as long as the tube, the stamens and style recurved at the apex, the former exerted.

A native of Japan. There is a plant, much lower than this, with smaller more strongly undulate leaf-blades, which are marked with large masses of white in the center, and a fewer-flowered raceme. I venture to consider this a variegated form under the name *Niobe undulata variegata*. It is perhaps the most commonly cultivated of all the day-lilies, and is frequently used as an edging for paths. Its flowers are identical with those of the above in color, form and size, and they appear at about the same time. The stem is also leafy as in that plant. This is sometimes considered a form of *Niobe japonica*, but that flowers con-

siderably later, and has differently shaped leaves with fewer nerves—characters which would seem to exclude this variegated form

4. NIOBE SIEBOLDIANA (Lodd.) Nash. Siebold's Day-lily

Funkia Sieboldiana Hook. *Funkia Sieboldii* Lindl. *Funkia sincensis* Sieb.

A showy perennial forming large masses, with large cordate glaucous leaves, and racemes of pale lilac flowers which protrude little if any above the leaves. Leaves numerous; petioles 8–12 in. long; blades 8–12 in. long and 6–8 in. wide, broadly ovate, cordate at the base, acute at the apex, glaucous on both surfaces, with 12 or 13 curved nerves on each side of the midrib; scape, including the raceme, 12–16 in. tall, barely equalling or little exceeding the leaves, the lower bracts 1½–3 in. long, finally spreading; inflorescence racemose; flowers 10–15, on pedicels 5–6 lines long, finally nodding; perianth pale lilac or white flushed with the same color, 2–2½ in. long, the segments about 8 lines long and 3–4 lines wide; capsule 1¼–1½ in. long.

Native of Japan. Introduced into cultivation at the Botanical Garden at Leyden, Holland, in 1830.

5. NIOBE FORTUNEI (Baker) Nash. Fortune's Day-lily

Funkia Fortunei Baker.

A showy perennial, forming masses, with pale green glaucous leaves, which are much overtopped by the racemes of pale purple flowers. Leaves numerous; petioles 2–3 in. long, shorter than the blades; blades 4–5 in. long and 3–3½ in. wide, pale green, glaucous, cordate at the base, cuspidate at the apex, with 10–12 nerves on each side of the midrib; scape, including the raceme, 16–20 in. long, much overtopping the leaves; racemes 4–6 in. long, the bracts lanceolate, the lower ones about 1 in. long; flowers on pedicels 3–4 lines long; perianth pale purple, about 1½ in. long, the segments lanceolate and about one half as long as the tube.

Native of Japan. Introduced into cultivation in 1876. This and *N. Sieboldiana* are frequently confused.

6. NIOBE COERULEA (Andr.) Nash. Blue Day-lily

Hemerocallis coerulea Andr. *Funkia ovata* Spreng. *Funkia coerulea* Sweet.

A showy perennial forming large masses, with large cordate or ovate leaves, and racemes of blue flowers. Leaves numerous,

green; blades 4-10 in. long, 3-5 in. wide, broadly ovate or sometimes cordate at the base, acute at the apex, the margin often wavy, with 6-9 curved nerves on each side of the midrib; petiole up to 1 ft. long; scape 1-2 ft. tall; inflorescence racemose, extending much above the leaves, the bracts 10 lines long or less; flowers up to 12, on pedicels $2\frac{1}{2}$ -5 lines long, finally nodding; perianth pale or deep blue, $1\frac{1}{2}$ -2 in. long, the tube, less than one half the length of the perianth, abruptly spreading into a broad ample limb, the segments of which are about 10 lines long and 4-5 lines wide, acute; capsule pendulous, $1-1\frac{1}{2}$ in. long.

Native of Japan, northern China, and eastern Siberia. It was first introduced some time prior to 1797 into England from Japan by Mr. G. Hibbert, of Clapham, in whose garden it flowered. It was first cultivated as a hothouse plant, but was later found to be hardy.

This is usually known under the name of *Funkia ovata* Spreng. There are forms of this also with variegated leaves. The variety *albomarginata* has the leaves margined with white.

A word now as to the uses of these plants in horticulture, to which they lend themselves readily and effectively. By selecting the species, flowers may be had continuously from June to the time of frost. The first to flower are *Niobe Sieboldiana* and *N. Fortunei*, closely related species, which are at their prime in June, with white flowers flushed with lavender. As these are waning the deeper lavender flowers of *Niobe undulata* and its variegated variety make their appearance, late in June or early in July, accompanied at almost the same time by the blue bell-shaped flowers of *Niobe coerulca*. Next to appear are the flowers of *Niobe japonica*, and its later-flowering form, the variety *tardiflora*, which carry the flowering period of this interesting genus up to the time of killing frosts. Accompanying these last, and perhaps the most stately of them all, is *Niobe plantaginea*, sometimes known as the plantain lily, from the resemblance of its leaves to those of that plant. This is quite in contrast with the other species, the flowers being much larger, of a different shape, and a pure white, with no trace of coloring. They appear usually early in September, and continue through the month.

Some of the day lilies are desirable foliage plants, in addition to the interest of their flowers. For those who like the rich variegated effect of white and green, perhaps no other plant is

more effective than *Niobe undulata variegata*, planted as an edging to paths or beds. Where a mass of deep green foliage is desired, *Niobe undulata* and *N. coerulea* are desirable; or if a gray green is wished, *Niobe Sieboldiana* or its close relative *N. Fortunei* should not be forgotten. The plants spread rapidly, and delight in a deep rich soil, free from soggy conditions, and are impartial to the bright sun or part shade. Masses of them planted in the corner of a garden or in recesses in a herbaceous border are very effective. They may be readily propagated by division of the old plants, the new ones soon developing into masses rivaling those from which they were taken. They may also be readily grown from seed, which some of them produce freely. It is desirable, however, that the seed be sown soon after collecting, as it does not keep well.

All of the species in cultivation are perfectly hardy in the latitude of New York, requiring no protection whatever, making them especially desirable for a herbaceous border, where permanency is a great desideratum.

PROCEEDINGS OF THE SOCIETY

JULY 1, 1911

A meeting of the society was held on Saturday, July 1, 1911, in the Museum building, New York Botanical Garden, at 3:40 P. M., Dr. Britton presiding.

The minutes of the meeting of June 10, 1911, were read and approved.

Professor H. Fairfield Osborn, having accepted the invitation of the Council, was approved for annual membership by that body, and his name referred to the society for action.

The following persons applied for annual membership, were approved by the Council, and their names referred to the society for action:

Chas. H. Plump, Wm. Tricker, John Lewis Childs.

The secretary was instructed to cast an affirmative ballot for the election of all of the above. This was done and the persons declared elected.

THE HORTICULTURAL SOCIETY OF NEW YORK

Resignations from the following persons were received and accepted with regret:

James W. Greene, Wm. Wallace Burnham, H. B. Fullerton.

The following committees, appointed by the Council for the ensuing year, were announced:

Exhibition Committee: Messrs. Pierson, Nash, Hendrickson, Lager, Wm. Scott, J. A. Manda, Stuart, and O'Mara.

Committee on Membership: Messrs. James Wood, Newbold, and Britton.

There being no further business before the meeting, adjournment was taken at 3:40 to attend the lecture by Dr. Britton on "Wild Flowers of Summer."

GEORGE V. NASH,
Secretary.

AUGUST 26, 1911

A meeting of the society was held on Saturday, August 26, 1911, in the Museum building, New York Botanical Garden, at 3:30 P. M., Mr. Manda presiding.

The minutes of the meeting of July 1, 1911, were read and approved.

The following persons, after approval by the Council for annual membership, were referred by that body to the society for action:

Geo. T. Wilson, H. Darlington.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected.

The following resignations were accepted, subject to the payment of such dues as might be in arrears:

Ewen Mackenzie, Wm. Forster, Mrs. D. C. Blair, Mrs. A. R. Such.

There being no other business before the meeting adjournment was taken at 3:35.

GEORGE V. NASH,
Secretary.

Journal
of the
Horticultural Society of New York

Vol. I, No. 10



JANUARY, 1912

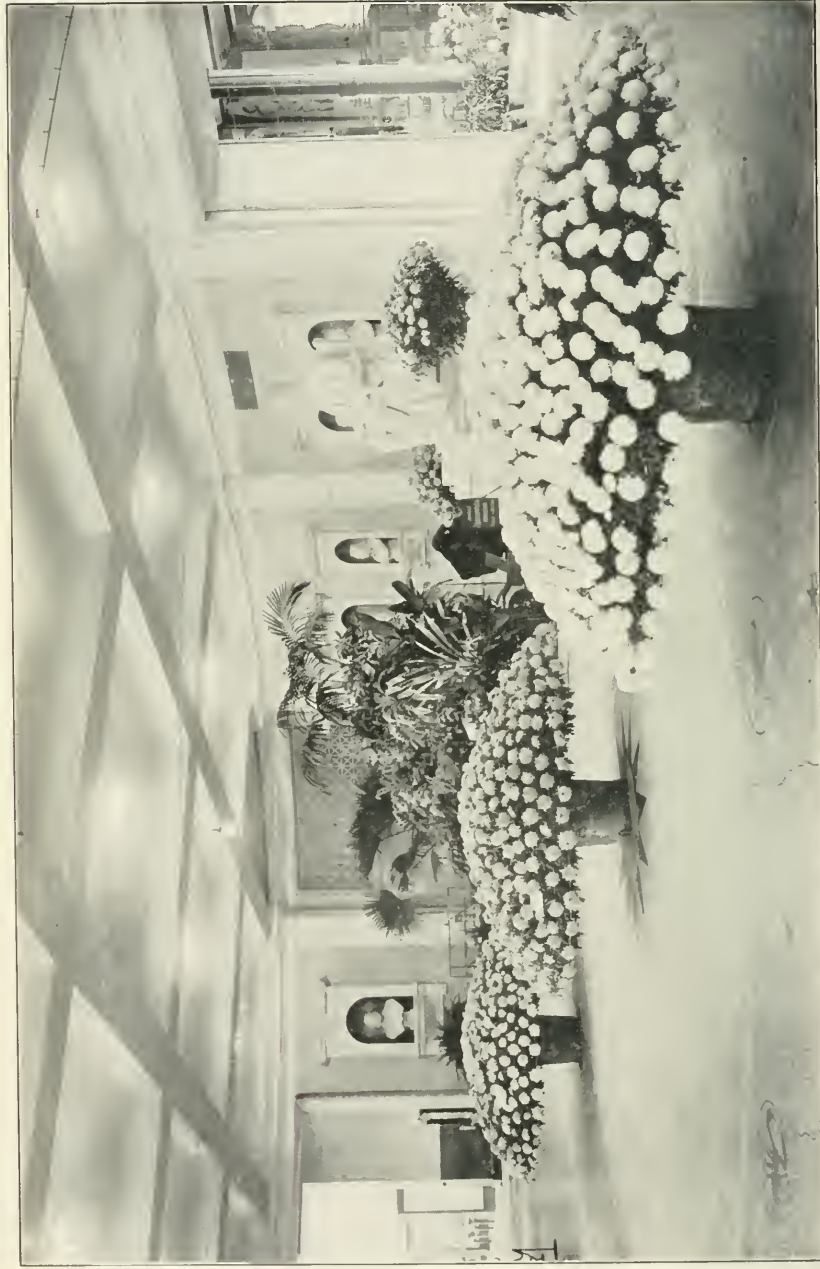
EDITED BY THE SECRETARY

GEORGE V. NASH

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Fall Exhibition of 1911. View in foyer of the American Museum of Natural History, showing the group of three bush chrysanthemums exhibited by Mr. Adolph Lewisoohn, Lady Lydia in foreground. Group of stove and greenhouse plants in background exhibited by Mr. Samuel Untermyer.

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THE EXHIBITION OF LAST FALL

The annual fall exhibition of the society was held at the American Museum of Natural History, November 3 to 7. The exhibition was opened with a private view, on Friday evening, for the members of the society, the museum, and affiliated organizations. From Saturday to Tuesday, including evenings and Sunday afternoon, it was open to the public, on week days from 9 A. M. to 5 P. M. and from 7 to 10 P. M., and on Sunday from 1 to 5 P. M. The attendance, the largest in the history of the society, was as follows: Friday evening, 722; Saturday, 8,759; Sunday, 25,852; Monday, 1,190; Tuesday, 8,369; total 44,892. The attendance on Sunday afternoon, when the museum was open only four hours, was extraordinary. The people came in at the rate of a little over 107 per minute, a continuous stream.

The exhibition was held in the foyer and the halls radiating therefrom. In the foyer and the hall to the north the palms, ferns, foliage and decorative plants, and the large bush and standard chrysanthemums were displayed. In the west hall were the roses and carnations, with four of the alcoves opening therefrom devoted to a magnificent display of orchids. The east hall was given up to the exhibition of cut chrysanthemum blooms. Although the exhibition was open for five days, including the day of preparation, the flowers kept wonderfully well, due in great part to the stone floors and the ability to keep the temperature down during the night.

The display of chrysanthemums, both of specimen plants and cut blooms, was superb. For specimen bush, yellow, the first prize was awarded to Mr. Adolph Lewisohn, John Canning, gardener, for an excellent plant of R. F. Felton, about twelve feet in diameter. Mr. Lewisohn also took the first prize for specimen bush, white, with Lady Lydia, a magnificent example of the horticulturist's art twelve feet in diameter, and said to contain in the neighborhood of twelve hundred flowers; this plant also took the sweepstakes prize, a silver medal, for the best bush plant exhibited. The fine plant of Annie Laurie, about ten feet in diameter, secured the first prize for Mr. Lewisohn for a specimen bush, pink. On account of the excellence of cultivation of these three plants, the Council awarded a special prize of a gold medal to the group. Mr. Samuel Untermyer, Harry Turner, superintendent, took second prizes in the classes for bush plants, yellow and pink, and first prize for a bush plant, any other color, with his new bronze seedling No. 1. Mr. Untermyer also took first prize for a specimen anemone, with a fine plant of Garza, the second going to Mr. F. V. Burton, Wm. Cordes, gardener, who also secured first prizes for specimen standard yellow, white, pink, and any other color, the second prize in the pink class going to Mr. Chas. Hathaway, Max Schneider, gardener. To Mr. Burton was also awarded a second prize for a specimen single. For six plants in variety, grown to a single stem, Mr. Burton secured the first prize, and Mr. Lewisohn the second.

The display of chrysanthemum blooms, both in number and quality, was excellent, and ranged from the tiny pompon to the large showy ones inches in diameter. In the open to all class, the flowers with stems not less than three feet long, the first prizes for twelve white, pink, and yellow, with Mrs. D. Syme, O. H. Bromhead, F. S. Vallis, respectively, went to Mr. Untermyer, as did also the first prize for twelve blooms, any other color, the second prize in the last going to Mr. J. T. Pratt, J. W. Everitt, gardener. Mrs. F. A. Constable, James Stuart, gardener, secured the first prize for twenty-five varieties, stems not over twelve inches long, Mr. Untermyer securing second. In the class for hardy pompons, twenty-five varieties, Mr. Chas. Mallory, Wm. J.

Sealey, gardener, took first prize, Mr. H. L. Pratt, Henry Gaut, gardener, second. For a collection of singles and anemones, or either, twenty-five varieties, Mrs. F. A. Constable took first, and John T. Pratt second.

Among the classes for non-commercial growers, Mrs. Constable was awarded first prize for six blooms, white, with stems not less than two feet long, for Mrs. D. Syme, the second being given to Mr. John T. Pratt. The first prize for six blooms, pink, was won with F. E. Nash by Mr. Wm. H. Fischer, R. Bottomley, gardener, who also took the second prize for six blooms, yellow, the first going to Mr. John T. Pratt for Mary Donellan. First prize for six blooms, any other color, went to Mrs. F. A. Constable for Rose Pockett. For the best vase of blooms, one or more varieties, arranged for effect, any other foliage permitted, Mr. Percy Chubb, Alex. Mackenzie, gardener, took first, Mrs. Constable the second. Mr. Chubb also took the first prize for twelve varieties, distinct, stems not over twelve inches long, the second being captured by Mr. Samuel Untermyer. In the hardy pompons, twelve varieties, Mr. Chas. Mallory was awarded first, H. L. Pratt second, who also, in the class of singles and anemones, or either, twelve varieties, secured first, the second going to Mr. Adolph Lewisohn. A large collection of singles, pompons, and anemones, not for competition, was exhibited by Mr. C. H. Totty. Fine displays were also made by Thos. Meehan & Sons, Scott Bros., R. Vincent, Jr., and Sons Co., Doubleday, Page & Co., and Mr. H. Darlington, P. W. Popp, gardener.

Roses were better represented than at the fall exhibition of the previous year. Mr. Louis A. Noe captured first with fifty American Beauties in the open to all class, the second going to the F. R. Pierson Co. Mr. Noe also took first prizes for fifty each of Bridesmaids and Brides. For fifty Killarney Mr. L. B. Coddington took first, Mr. Louis A. Noe second. Mr. Coddington took first for fifty Richmond. My Maryland, fifty fine blooms, brought the first prize to Mr. Noe, the second to the F. R. Pierson Co., while for fifty White Killarney the positions of these winners were reversed.

In the rose classes for non-commercial growers, Mr. C. A. Van Gaasbeck, John Dervan, gardener, took first prizes for

eighteen each of Bridesmaids, Brides, Killarney, Richmond, and Mad. Abel Chatenay. The A. N. Pierson Co. exhibited two new roses, both of them of great promise, "Double White Killarney" and "Killarney Queen." Each was awarded a silver medal. The charming new rose, "Sunburst," was exhibited by Mr. C. H. Totty. This attracted much attention for its delightful, unusual color and keeping qualities. It was awarded a silver medal.

The carnation classes were not as well represented as in 1910. In the open to all class, Mr. J. D. Cockcroft took first prize for fifty Lawson shade, with his seedling 310, which also brought to him the diploma for the best new variety not in commerce. In the classes for non-commercial growers, Mr. F. V. Burton took first prizes for eighteen each white and Winsor shade. For eighteen Enchantress shade Mr. Chas. Hathaway was awarded first, Mr. Burton second. Mr. Chas. Weber exhibited a new carnation, "Brooklyn," which was awarded a certificate of merit. Mr. C. H. Totty displayed a vase of "Wodenethe"; this carnation was awarded a certificate of merit at the spring exhibition of 1910.

Among the foliage and decorative plants, open to all classes, Mr. Samuel Untermyer captured first prize for a group of stove and greenhouse plants, occupying one hundred square feet. Mrs. J. Hood Wright, Chas. Webber, gardener, secured first prizes for collection of crotons, twelve varieties, specimens of *Chrysalidocarpus lutescens*, *Howea Forsteriana*, any other palm, and *Davallia Fijiensis*. The Julius Roehrs Co. secured first prize for specimen of *Begonia Gloire de Lorraine*, Sidney M. & Austen Colgate, Wm. Reid, gardener, taking the second. The Julius Roehrs Co. also took first prize for three plants of *Begonia Gloire de Lorraine*. A specimen of *Rhapis flabelliformis* brought the first prize to Mrs. J. Hood Wright, the second to Mr. F. V. Burton. Among the ferns, Mr. Samuel Untermyer obtained first prize for a specimen of *Cibotium Schiedei*, and also for a specimen of the Boston fern, the F. R. Pierson Co. receiving second for the latter, and first for a display of *Nephrolepis exaltata* and its varieties. In the classes for non-commercial growers, for a collection of stove and greenhouse plants, fifty square feet, the first prize was awarded to Mr. F. V. Burton,

who also took the first prize for a collection of crotons, six varieties, the second going to Mrs. J. Hood Wright. A special prize was awarded to a fine plant of *Anthurium*, exhibited by Mr. Samuel Untermyer. Special mention was made of a group of *Nephrolepis Giatrasii*, exhibited by Mr. George Giatras.

The display of orchids, both plants and cut blooms, was one of the finest ever seen in this city. The alcoves in the west hall were much better adapted to this purpose than the north hall which had been formerly used for the orchids. The alcoves are much better lighted, and so displayed the beautiful colors of the flowers to better advantage. In the open to all class, the first prize, a diploma and \$25.00, for a collection of orchids, not less than twenty-five species and varieties, to cover fifty square feet of table, was won by Messrs. Lager & Hurrell, with a group containing many beautiful and rare plants. They also secured the prize, for novelty not before exhibited before the society, with *Brasso-Cattleya Imperatrice de Russie*. There were three other entries for this prize. The first prize for three hybrid orchids was taken by Mr. Clement Moore, J. P. Mossman, gardener, with *Brasso-Cattleya Veitchii*, *Cattleya Portia*, and *Brasso-Cattleya Maroni*, the second being won by the Julius Roehrs Co. with *Cattleya Portia*, *C. Petersii*, and *C. Princess*. There were three other entries in this class. The Julius Roehrs Co. also won first prize for one hybrid orchid with *Brasso-Cattleya Heatonensis*, a magnificent plant and much admired, which also secured the sweepstakes prize, a silver medal, for the best plant exhibited; Mr. Clement Moore was awarded the second prize in this class for *Brasso-Cattleya Sedeni*. There were three other entries. A collection of cut blooms, beautifully arranged, won the first prize for Mr. J. A. Manda, the second going to Messrs. Siebrecht & Son, S. Zalinsky, gardener. Mr. J. A. Manda also captured the first prize for a collection of cut blooms of *Cypripedium*, not less than twelve varieties or hybrids. Messrs. Lager & Hurrell carried off the first prize for the best *Cattleya* plant, the second to Mr. F. V. Burton. The prize for the best *Oncidium* plant was awarded to Mr. J. A. Manda; there were two other entries. Mr. F. V. Burton secured the first prize for a plant of *Vanda coerulea*, Mr. Manda the second. To Mrs. Henry Graves, Edwin

Thomas, gardener, was awarded the prize for the best *Cypripedium* plant in bloom, for *Cypripedium insigne Sanderae*, a fine plant; there were three other entries. With two other entries in competition, Messrs. Lager & Hurrell secured the prize for the best *Dendrobium* plant. The prize, a silver medal, was won by Mr. F. V. Burton for two orchid plants showing highest excellence of cultivation. This prize was also won by Mr. Burton the previous year. In the sprays of orchid cut flowers, the following were prize winners: *Cattleya*, Mr. Clement Moore, against three other entries; *Oncidium* and *Vanda*, J. A. Manda; any other orchid, Mr. F. V. Burton.

In the classes for non-commercial growers, Mr. F. V. Burton took first, a gold medal, for a collection of orchids, not less than twelve species and varieties. He also took first prizes for six plants of *Cattleya* and *Laelia*, or either; six orchid plants, six varieties; and six plants of *Cypripedium*, six varieties. The first prize for three plants of *Cattleya labiata* was won by Mr. F. V. Burton also, the second by the Osborn Estate, Wm. Inglis, gardener. A special prize of a silver medal was awarded to the Julius Roehrs Co. for a collection of orchids, not for competition. To Messrs. Lager & Hurrell a silver medal was awarded for a fine plant of the rare *Vanda Sanderiana*.

The following members and friends of the society contributed to the special fund necessary to defray the prizes and other expenses connected with the exhibition:

Mrs. James Herman Aldrich	Mr. Louis Burk
Mr. A. J. C. Anderson	Mr. William J. Cassard
Mr. George A. Archer	Mr. Chester W. Chapin
Mr. Samuel P. Avery	Mr. Hugh J. Chisholm
Mr. Geo. D. Barron	Mr. C. H. Coffin
Miss Elizabeth Billings	Miss Ellen Collins
Mr. C. D. Blauvelt	Mrs. F. A. Constable
Miss Catherine A. Bliss	Mr. Jas. W. Cromwell
Mr. Geo. S. Bowdoin	Mr. H. Darlington
Mr. Jno. I. D. Bristol	Mr. Joseph Dexter
Dr. N. L. Britton	Mrs. George W. Du Bois
Hon. Addison Brown	Mr. B. F. De Klyn
Mr. F. W. Bruggerhof	Mr. James Douglas

THE HORTICULTURAL SOCIETY OF NEW YORK

Mr. David Dows	Mr. George Notman
Mrs. M. E. Dwight	Mr. D. Olcott
Mr. Arthur F. Estabrook	Mr. Geo. W. Perkins
Mr. James B. Ford	Mr. J. R. Planten
Mrs. Geo. S. Fraser	Miss Blanche Potter
Miss J. K. Fraser	Mr. George T. Powell
Mrs. Walter Geer	Mr. John J. Riker
Mr. George Giatras	Mr. Samuel Riker
Mr. James J. Goodwin	Mrs. A. Rogers
Mrs. William Preston Griffin	Mr. Mortimer L. Schiff
Mr. A. M. Guinzburg	Mr. James A. Scrymser
Mr. E. S. Harkness	Mr. Alonzo B. See
Mr. Theo. A. Havemeyer	Mr. Isaac N. Seligman
Mr. Ferd Hermann	Mr. Wm. Shillaber
Mrs. A. S. Hewitt	Mr. Franklin Simon
Mr. Rich. M. Hoe	Mr. Francis Lynde Stetson
Mr. Adrian Iselin, Jr.	Miss Mary O. Stevens
Mr. C. O'D. Iselin	Miss Ellen J. Stone
Miss Georgine Iselin	Mrs. James Sullivan
Mr. T. F. Jackson	Mr. C. A. Tatum
Messrs. Lager & Hurrell	Mr. Samuel Thorne
Mr. Adolph Lewisohn	Mr. Myles Tierney
Mr. Luther S. Livingston	Miss E. Tuckerman
Mr. C. Mallory	Mrs. B. B. Tuttle
Mr. D. H. McAlpin	Mr. Samuel Untermyer
Mr. A. L. Miller	Mr. H. F. Walker
Mr. Clement Moore	Mr. C. W. Ward
Mr. J. Pierpont Morgan	Miss Theodora Wilbour
Mr. F. R. Newbold	Mr. A. L. Willis
Mr. Wm. Nilsson	Mr. W. Ziegler, Jr.

PROCEEDINGS OF THE SOCIETY

SEPTEMBER 16, 1911

A meeting of the society was held on Saturday, September 16, 1911, at 3:30 P. M., in the Museum Building, New York Botanical Garden, Mr. Pierson presiding.

THE HORTICULTURAL SOCIETY OF NEW YORK

The minutes of the meeting of August 26, 1911, were read and approved.

There being no other business before the society, adjournment was taken at 3:35.

GEORGE V. NASH,
Secretary.

OCTOBER 18, 1911

A meeting of the society was held on Wednesday, October 18, 1911, at 4 P. M., in the East Assembly Hall, American Museum of Natural History, the president presiding.

The minutes of the meeting of September 16, 1911, were read and approved.

The following persons, having accepted the invitation of the council to become annual members, were referred by that body to the society for action:

Mrs. F. T. Adams, Mrs. McDougall Hawkes.

The following persons applied for annual membership, were approved by the Council and referred by that body to the society for action:

J. T. Lovett, Dr. R. A. Harper.

The secretary was instructed to cast an affirmative ballot for the election of the four persons. This was done and the parties declared elected annual members.

The following resignation was accepted:

Parker Thayer Barnes

There being no further business before the society, the lecture announced for the day, "The Northwest and its Fruit Industry," was delivered by Mr. George V. Nash, who illustrated his remarks with a series of lantern slides made from photographs secured during a visit to that region during the past summer. The lecture follows:

THE NORTHWEST AND ITS FRUIT INDUSTRY

That portion of the Northwest in which the fruit industry, especially the cultivation of the apple, flourishes is known as the Inland Empire, a vast area about 150,000 square miles in extent, embracing the territory between the Rocky mountains on the east and the Cascade mountains on the west, and including within its confines a small portion of British

Columbia, eastern Washington, northeastern Oregon, a portion of Idaho, and a little of western Montana. This area is about as large as that of New England with New York and Pennsylvania added. Certain portions of this region are well adapted to fruit culture, and here thrive, among other things, apples, pears, plums, cherries, peaches, grapes, strawberries, blackberries, and raspberries—but the apple is king, the production of this fruit in 1910 being nearly 8,000,000 boxes, of which the state of Washington contributed about sixty per cent. The name Hood River has for years been synonymous with the highest grade of apples, and Wenatchee, Yakima, White Salmon, Walla Walla and Spokane are largely interested in the industry, the development along this line in the last place during the last few years being marvellous. To the east and north of the city a large acreage has been planted to apples, and the largest irrigated apple orchard in the world is about twenty miles to the north of that city.

Of this vast Inland Empire Spokane is the capital, with a population of over 100,000. It is an enterprising, wide-awake city, located on the banks of a river of the same name. The falls of this river, located in the heart of the city, generate electrical power sufficient to light the entire city, run its electric traction, and operate mines for many miles around. This wonderful power will make of the city in the near future a great manufacturing center. Up to date in every particular, its large and substantial buildings indicate its financial worth and stability. One of its great attractions is Davenport's restaurant, in refinement and elegance of appointment vieing with anything in New York City, and enjoying the reputation of being the finest restaurant in the northwest. It has an interest other than this to horticulturists, for its proprietor, Mr. L. M. Davenport, is a great lover of plants and flowers, and the beautiful garden with which he has surrounded his home displays the plant-lover in its artistic arrangement. Situated on a steep hillside, with a brook traversing its entire length, opportunities for water effects are at hand and these have been delightfully developed. Mr. Davenport is, naturally, a member of the park commission which is developing a large park system, and some of the parks, including Manito with its "Zoo," are now laid out.

A city of individual homes, there is little place in it for flats. In the center of town there are some of the better class apartments, but the flat, as we know it in New York, is unknown. It is quite a relief to one who has been depressed by the overcrowding of our own city, to see the thousands of small individual homes which make of Spokane a home city.

It is the fruit industry and its sister, agriculture, which make for the permanent wealth of this region. Mining has played and is playing an important part in the upbuild, but mining, at its best, is a progressive exhaustion of the source of wealth, while horticulture and agriculture continually develop and increase. The desirable fruit land is limited, and is to be found in sage-brush and timber districts upon which it is possible to get water for irrigation. It is also necessary that the contour of the land be such that there be good air-drainage—there must be no pockets

into which cold air may settle with its attendant dangers of late frosts. Shipping facilities must also be considered, and proximity to a large city plays an important part, and it is for these reasons that the country around Spokane is especially valuable, for this city is the largest railroad center west of the Mississippi. Irrigation is absolutely necessary for the best results, as the rainfall rarely exceeds eighteen inches per year, and in some sections is considerably less than this. The days in summer are long, with almost uninterrupted sunshine during July and August when the fruit is maturing. This, with the ability to irrigate at this critical time, gives this section its reputation for highly colored apples of fine flavor, uniform development, and large yield.

The clearing of the sage-brush land is comparatively simple, for this vegetation is readily eliminated, but the after irrigation of land of this kind is a more serious problem for it requires much more water to produce results than is required in the timbered districts, the natural rainfall being much less. The clearing of land from which the timber has been removed represents a much greater initial cost, but the very fact of the timber growth indicates a greater annual rainfall, so that the after expense of irrigation is not so heavy, a compensating advantage. The stumps are shattered with dynamite, and the remains removed with stump-pullers. Much of this timber land has a deep soil, rich in mineral elements, and is what we would call in this country a sandy loam. It is made up largely of volcanic ash and is very retentive of moisture.

It is the irrigation feature, however, that is of especial interest to those in the east, for this is something with which we are entirely unfamiliar. It is this which makes for success or failure in many of the districts. In unusually dry seasons it is especially a deciding financial factor. The water supply is secured from rivers, lakes and wells, and is delivered upon the land through extensive systems of pipes, flumes and ditches, some of them miles in extent. The water supply may be at an altitude which will permit of a gravity system of irrigation; otherwise it is necessary to pump the water to get it upon the land.

Water, being such an important factor in the development of the country, is highly prized. The constitution and laws of Washington provide that all navigable bodies of water are the property of the state, and that she can do with them as she sees fit. The rights of riparian owners extend only to high water mark. To make use of water it is necessary to file upon the water of a given lake or river. This filing must be officially recorded, and the first in time is the first in right, the future standing of the filing depending upon the accomplishment of a certain specified amount of work in the development of the project for which the water is required.

Orcharding is a business there, and not a mere incident, and everything is done in the very best manner. They are striving for perfect apples, uniform in color and size, and to accomplish this great care is taken in pruning the trees and in thinning the fruit. During the early summer a large part of the apples, sometimes one half or more, is removed, that

those remaining may have room for development and may receive the maximum of sunlight which gives the much-desired color. The apples are carefully picked and packed in boxes, not barrels, each apple wrapped in paper. The greatest care is exercised in sorting and grading the fruit. Color counts first and size next. The grades are extra fancy, fancy, and choice. And when you buy a box of apples from that country you may feel sure that they are as represented, and that every apple is uniform in size and up to the grade designated. They are very jealous of their reputation. The compulsory spray law in the state makes for sound fruit, free from worms, and their boast is that they raise the apple which you can "eat in the dark."

In marketing their fruit, coöperation is the watchword. Each valley has its fruit growers association, through which the fruit produced may be marketed. During my visit there in July I attended a meeting of the Spokane County Horticultural Society at which preliminary arrangements were effected for the establishment of a central fruit growers association for the entire northwest. They realize that it is a question of distribution and not of overproduction which is the vital point in the market for their fruit, and they are taking steps to effect an organization so general in its scope that all in the northwest may be a part of it. Such organization spells success.

To even supply the demand for apples in this country, that is, good winter apples, is the crying need now. The question of overproduction is so remote, even if it ever occurs, that it need not be considered. In 1895 the production of apples in the United States was about 180,000,000 boxes, and in 1910 it had fallen to about 73,475,000 boxes, or about two fifths of the yield of 1895, and this in view of the fact that in the fifteen years which had elapsed the population had greatly increased. This increase in population is still going on, making a constantly larger home demand, and at the same time the demand in foreign countries for the northwestern apple is rapidly growing. The high price of good winter apples at the present time is prohibitive, excepting to the few of large means. This should not be. Have you any idea how many apples New York City alone can consume in a year? Figure it out on the basis of one apple per week per individual, allowing one hundred apples to the box, an ordinary size, and it would require two and one quarter million boxes to meet the demand, at this ridiculously low quota. The apple is a food and should be consumed largely. At the rate of one apple per day it would take nearly 16,000,000 boxes, over one fifth of the entire apple yield of 1910, to supply the demands of New York City alone.

A feature of the apple industry during the past three years in the northwest, and to occur again this fall, is the National Apple Show. At that of 1910 there were over 20,000 boxes on exhibition, representing over 2,000,000 apples. It requires about \$50,000.00 to finance these exhibitions, \$20,000.00 of which is expended for prizes.

Many eastern people are investing in orchard land in the northwest, and

THE HORTICULTURAL SOCIETY OF NEW YORK

either developing it themselves or entrusting this to companies organized for the purpose. If the company is financially responsible, is assured of its water rights, and is handled with intelligence and ordinary business caution, there should be no reason why the manufacturing of orchards should not be as successful as the manufacturing of other products.

There is something compelling in the largeness of the west. Its mountains are magnificent, its trees are giants, and its people seem to be inspired with a desire to vie with their surroundings. It is a growing country, and the future is full of promise for one who is willing to hustle. It is no place for lazy folks, however, for such people would soon be left hopelessly behind by the go and push. But for the man of push and energy, especially for the young man, it is a country of great possibilities, and the cultivation of fruit, especially the apple, offers one of the greatest opportunities.

And the people who are making their livelihood in orcharding have such a glorious country in which to enjoy life, not only as they go along, but in their times of leisure. Magnificent mountains, lakes and rivers, the wildest of scenery, and hunting and fishing in abundance. Many of these possibilities are within easy reach of Spokane. Hayden Lake and Spirit Lake, delightful bodies of crystal water nestling in the hills; Lake Coeur d'Alene, in the heart of the mining district; and magnificent, awe-inspiring Pend O'Reille, with its fifty miles of distance and twelve of breadth, enclosed and dwarfed by lofty mountains, and giving birth to a large river, bearing its name, which makes its way through inspiring mountains and deep gorges, including the wild and picturesque Box Canon; all these and many more are within easy reach of Spokane.

The cry "back to the land" is now ringing in the ears of all, and fruit culture would seem to open up possibilities which may be seized by those anxious to secure their living direct from the soil. Orcharding is not so strenuous a life as farming, and the profits are greater. It is intensive farming, getting much from a comparatively small holding of land. It is a calling in which intelligence and originality play a great part, and it offers sufficient of manual labor to keep one in good trim. And the opportunities in this great northwestern country in orchard development are great and enticing.

The meeting adjourned at 5 P. M.

GEORGE V. NASH,
Secretary.

NOVEMBER 4, 1911

A meeting of the society was held on Saturday, November 4, 1911, at the American Museum of Natural History, at 4 P. M., Mr. Pierson presiding.

The minutes of the meeting of October 18, 1911, were read and approved.

The following persons, having accepted the invitation of the Council to become members, were referred by that body to the society for action:

Life

Meyer H. Lehman, Temple Bowdoin, Geo. J. Gould, S. M. Lehman.

Annual

F. R. Cordley, Mrs. John W. Edmonds, G. C. Graves, Mrs. Nelson Hiss, J. A. Marsh, Wm. Mitchell, J. Morningstar, William S. Myers, R. W. Paterson, F. L. Rodewald, Mrs. Jas. A. Rumrill, E. G. Snow, A. Tuckerman, Geo. D. Widener, Mrs. Anna M. von Zedlitz, Coulter D. Huyler, Frederick Billings, Mrs. Dean Sage.

Mr. Chas. Weber applied for annual membership in the society, was approved by the Council, and his name referred by that body to the society for action.

The secretary was authorized to cast an affirmative ballot for the election of all of the above persons. This was done and the persons were declared elected.

There being no further business before the meeting, adjournment was taken at 4:30 P. M.

GEORGE V. NASH,
Secretary.

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Journal

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APRIL, 1912

EDITED BY THE SECRETARY

GEORGE V. NASH

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THE MONTHLY EXHIBITIONS

These have been held in January, February and March in the West Assembly Hall of the American Museum of Natural History, on Saturdays from 1 to 5, and have been well attended. Following is a detailed account of these exhibitions.

JANUARY EXHIBITION

This was held on the 27th and was devoted primarily to orchids and carnations. The judges were Messrs. P. W. Popp, Wm. Tricker, and James Stuart.

An excellent exhibition of orchids was made. For the best *Cattleya* plant the first prize went to Mrs. F. B. Van Vorst, Andrew Andersen, gardener, the second going to Mr. C. G. Roebling, Jas. W. Goodier, gardener. For the best plant of *Laelia* the first prize was awarded to Mr. F. V. Burton, Wm. Cordes, gardener, who also received first for the best *Dendrobium* plant and for the best plant of any other orchid, the second prize in the latter class going to Mr. C. G. Roebling. Mr. Roebling also took the first prize for the best *Cypripedium* plant. In the class for one hybrid orchid Mr. Clement Moore, J. P. Mossman, gardener, took first, the second going to Mr. F. V. Burton. A fine collection of cut orchids gave the first prize to Mr. C. G. Roebling, who also took the same prize for a collection of cut cypripediums.

Carnations were well represented by some fine flowers. In

the open to all class, the prize, a silver medal, was won by Scott Bros. The remaining classes were for non-commercial growers only. Miss C. A. Bliss, J. T. Bruns, gardener, secured first prize for three vases, three kinds, twelve flowers of each, the second going to Mrs. Myron I. Borg, James Aitchison, gardener. Mr. Henry Siegel, Thos. Aitchison, gardener, won first for a vase of twelve scarlet, Miss C. A. Bliss getting the second; the prize winners for a vase of twelve Winsor shade were the same. Miss C. A. Bliss took first for a vase of twelve Enchantress shade, Mrs. Myron I. Borg securing second. The first prize for a vase of twelve crimson was won by Miss C. A. Bliss, the second by Mr. Wm. H. Fischer, R. Bottomley, gardener. For a vase of twelve Lawson shade Mr. Henry Siegel gained the first, Mr. Percy Chubb, Alex. Mackenzie, gardener, second. Miss C. A. Bliss and Mr. Wm. H. Fischer were the winners in the classes for twelve variegated and twelve white, the former taking the first. A fine vase of fifty blooms, arranged for effect, any foliage permitted, was won by Mr. Henry Siegel.

Special prizes were also awarded as follows: Wm. Ziegler Estate, A. Bieschke, gardener, for vases of *Freesia* and Marguerite, "Mrs. Fred. Sander"; Mr. Percy Chubb, for a fine bunch of violets, "Princess of Wales"; Mrs. F. A. Constable, James Stuart, gardener, for a vase of *Euphorbia jacquiniiflora*; Mrs. Myron I. Borg, for a vase of stocks; Lager & Hurrell, a bronze medal for *Laelia anceps Lageriana*; Mr. C. G. Roebling, certificate of merit for *Cattleya Trianae*, "Helen Roebling."

FEBRUARY EXHIBITION

This occurred on the 24th and was arranged for miscellaneous plants and flowers. The judges were Messrs. Thos. Aitchison, Robert Stobo, and John E. Lager.

An excellent exhibition of cyclamens was displayed on the center table. In the class of ten plants of this charming flower Mrs. F. A. Constable, James Stuart, gardener, took first, the same prize for the group of six plants going to Mr. Adolph Lewisohn, John Canning, gardener, while for a single plant Mrs. Constable also took first. Among the primulas Mr. Adolph Lewisohn took first, Mrs. F. A. Constable second. Three plants of *Cinncraria* brought the first prize to Mr. Percy Chubb, Alex. Mackenzie, gardener,

the second to Mr. Adolph Lewisohn, who also took first for three plants of *Schizanthus*. In the bulbous plants Mr. Adolph Lewisohn secured first for three pans of hyacinth, and also for one pan, the second in the latter going to Mr. Chas. Hathaway, Max Schneider, gardener. For tulips, cut flowers, three varieties, twelve blooms of each, Mr. H. Darlington, P. W. Popp, gardener, won first. Mr. Adolph Lewisohn obtained first for a vase of one hundred sprays of sweet peas, Mrs. F. A. Constable, second. Twelve magnificent blooms of white calla lilies brought the first to Mr. Henry Siegel, Thos. Aitchison, gardener, the second to Mr. Chas. Mallory, W. J. Sealey, gardener. Mr. Percy Chubb was awarded first prize for one hundred blooms of single violets, Mr. Chas. Hathaway second.

Special prizes were awarded as follows: Julius Roehrs Co., for *Laelio-Cattleya Boylei* var. *Kerchoveana*, bronze medal; Mr. Henry Siegel, for bunch of mignonette; Mr. Jas. A. Macdonald, Richard Hughes, gardener, vote of thanks for a new seedling carnation; John Lewis Childs, special mention for a plant of *Calla Elliottiana*; Mr. H. Darlington, for a display of cinerarias; Wm. Nilsson, for three pots of primula, special mention.

MARCH EXHIBITION

This was held on the 23d and orchids and roses were the principal flowers. The judges were Messrs. J. E. Lager and George V. Nash.

Mrs. F. B. Van Vorst, Andrew Andersen, gardener, took first prizes for one plant each of *Cattleya*, *Laelia*, and a hybrid orchid. A collection of cut orchids brought the first prize to Mr. Clement Moore, J. P. Mossman, gardener.

Mrs. F. A. Constable, James Stuart, gardener, secured first prize for a vase of twelve pink Killarney roses, and the same prize for twelve each white Killarney, Richmond, and any other rose.

The following special prizes were awarded: Mrs. F. A. Constable, for a vase of antirrhinums; Mrs. A. M. Booth, E. Fardel, gardener, for collections of tulips, irises, and narcissus; Lager & Hurrell, for a collection of orchids, bronze medal.

PROCEEDINGS OF THE SOCIETY

DECEMBER 16, 1911

A meeting of the society was held on Saturday, December 16, 1911, at 4 P.M., at the American Museum of Natural History, Mr. Pierson presiding.

The minutes of the meeting of November 4, 1911, were read and approved.

The following persons, having accepted the invitation of the Council to become members, were referred by that body to the society for action:

Life

F. W. Vanderbilt, Elmore A. Willets.

Annual

Benj. F. Cromwell, Charles T. Wills, Mrs. S. Neustadt, Mrs. Edward H. Van Ingen, Henry S. Adams, James Talcott, Wm. J. Matheson.

The following persons applied for annual membership in the society. Their names were approved and referred to the society for action:

Sam'l Zalinsky, Wm. Cordes.

The secretary was authorized to cast an affirmative ballot for the election of all the above persons. This was done and they were declared elected.

There being no further business before the meeting, adjournment was taken at 5 P.M., after an interesting lecture by Mr. John K. L. M. Farquhar, on "Gardens in Italy." In spite of the inclemency of the weather the lecture hall was filled.

GEORGE V. NASH,
Secretary.

JANUARY 27, 1912

A meeting of the society, accompanied by an exhibition, was held on Saturday, January 27, 1912, at the American Museum of Natural History. The exhibition was held in the West Assembly Hall from 1 to 5. The meeting of the society was held in the East Assembly Hall at 4 P.M., the president presiding.

The minutes of the meeting of December 16, 1911, were read and approved.

The following persons, having accepted the invitation of the Council to become annual members, were referred by that body to the society for action:

Rudolph E. Schirmer, Mrs. H. D. Noyes, Oliver J. Wells,
Thos. L. Hughes.

The following person applied for annual membership in the society. His name was approved and referred to the society for action:

F. W. Kelsey.

The secretary was authorized to cast an affirmative ballot for the election of all of the above persons. This was done and they were declared elected.

The following resignation was accepted:

Edward H. Roehrs.

There being no further business before the society, the lecture announced for the day was presented by Mr. C. A. Darling on "Grapes and Grape Culture." Numerous lantern slides were used in illustrating the remarks. The subject proved a very interesting one, and was presented in a practical manner by one who has been engaged in this industry for about twenty years. Much discussion followed the lecture, and Mr. Darling was called upon to answer many questions.

The following is an abstract of this lecture:

GRAPES AND GRAPE CULTURE

There are two distinct types of grapes grown; the one contains varieties derived from the European grape, the other contains those derived from the American wild species. The European grapes are the ones cultivated in California and along the Mediterranean region, while those grown east of the Rocky Mountains are all from the American stock. In 1911 New York State produced about 22 per cent. of the 610 thousand tons grown in the United States. There are four principal grape-growing districts, named in order of importance, in the state: the Chautauqua Grape Belt, along the south shore of Lake Erie; the Central Lake district; the Hudson Valley district; and the Niagara Belt, near Lake Ontario.

The grape is more particular about the climate than about the soil. Practically all of the grape-growing is done near a body of water where late spring and early autumn freezes are not common, where the growing season is long. Grapes will grow well on any soil, provided there is good

drainage; clay loams give the best quality of fruit, while gravelly soils produce greater yields.

The young vines are obtained from cuttings, or short sections of the one-year old stems; these cuttings, consisting of three joints, are placed in the soil in the early spring, and after one season's growth are plowed out in the autumn and stored in root cellars free from freezing; the following spring they are set out for the permanent vineyard. The field which is to be planted to a vineyard is usually plowed in strips eight feet wide, thus making a furrow every eight feet, in which the young vine is set, about ten inches deep and seven feet apart; when the young vine is set it is trimmed back to two buds. During the first summer some cultivated crop, such as corn or potatoes, is usually planted between the rows, and clean cultivation employed so as to produce a good growth of vine. The following spring the vines are trimmed back to two buds again, insuring a better root system; no tilled crop is planted between the rows after the first season, as the vines will need all the available plant food. For all vineyards, both young and old, thorough cultivation is demanded during the growing season or until midsummer, at which time a cover-crop of clover or vetch may be sown and plowed under the following spring.

The second year after setting, posts are set one to every three vines and two wires strung, the lower attached two feet from the ground, the upper one two feet above it. The young vines, which should have made a growth of from three to six feet, are trimmed so as to have two canes or stalks extending from the ground to the first or second wire, depending on the strength of the vine. These canes are tied to the wires by means of tying twine or a small no. 18 wire about four inches long. The crop obtained the first year is usually sufficient to pay for the posts and wire used in starting the vineyard.

In subsequent years the vines are trimmed so as to leave one main stem from the ground to the first wire with a side stem or arm extending in each direction on the lower wire; from these two side arms four or five canes of one-year-old wood, each with eight or ten buds, are extended to the top wire and tied early in the spring. These canes are renewed each year, more wood being cut off than is permitted to remain on the vine; this rather severe trimming insures a good crop of good fruit. Vineyards, if well attended, will continue to bear good crops for forty or fifty years.

Harvesting begins about September 15 in the Chautauqua Belt, when the grapes have assumed the proper color; the best flavor is usually about ten days later when more sugar is to be found in the fruit. Each cluster is picked off by means of small picking shears and placed either in crates and repacked in the packing house, or else packed directly into baskets usually holding seven pounds of fruit. The fruit is then marketed as soon as possible.

At least 85 per cent. of the grapes grown east of the Rocky Mountains are used fresh for the table; about 10 per cent. are made into unfermented

grape juice; and the remaining 5 per cent. into wine. In California 15 per cent. are grown for table use, 30 per cent. for raisins, and 55 per cent. for wine. A good vineyard will produce on the average about 1,000 eight-pound baskets per year, although there are exceptional vineyards, receiving good care and on good soil, which have produced double that amount.

As to the enemies of the grape, the root-worm beetle is the worst in the Chautauqua region. In the larva stage it feeds on the fine roots and causes very serious damage to the vines. In June or July the beetle comes out of the ground and feeds on the leaves. Spraying at this time with lead arsenate serves somewhat to keep the insect in check.

In the Central Lake and in the Hudson Valley districts, mildew and black rot are very serious diseases. The mildew attacks the leaves and to some extent the fruit, using up the vitality of the vine. Spraying about twice, two weeks apart, with Bordeaux mixture soon after the leaves are well out in the spring will control this disease. The black rot attacks the fruit, causing it to decay on the vines, the worst infection usually occurring in July, especially with wet weather. Treatment for this should be by spraying every week or two with Bordeaux mixture, about a day or two before a rain if possible, as the spores begin to germinate soon after a wet day, and the poison mixture if dried on the vine will prevent the growth of the spores. There are a few minor diseases and enemies here in the east, but the ones mentioned are the most important from the grower's point of view.

The meeting adjourned at 5.

GEORGE V. NASH,
Secretary.

FEBRUARY 24, 1912

A meeting of the society, accompanied by an exhibition, was held on Saturday, February 24, 1912, at the American Museum of Natural History. The exhibition was held in the West Assembly Hall from 1 to 5. The meeting of the society took place in the East Assembly Hall at 4 P.M., Mr. Southwick presiding.

The minutes of the meeting of January 27, 1912, were read and approved.

The following persons, having accepted the invitation of the Council to become members, were referred by that body to the society for action:

Life

George A. Hearn, Mrs. Temple Bowdoin, Mrs. W. Seward Webb.

Annual

G. T. Bonner, I. M. Stettenheim, Mrs. Frederic Delano Hitch, Francis J. Arend, Hugo V. Loewi, Dr. J. H. Barnhart.

The following person applied for annual membership in the society. He was approved and his name referred to the society for action:

J. J. Spoon.

The secretary was authorized to cast an affirmative ballot for all of the above persons. This was done and they were declared elected.

The following resignation was accepted subject to the payment of any dues which might be in arrears:

John Dervan.

The following medals, awarded at the exhibition of the society, held November 3 to 7, 1911, were presented:

Gold

Special prize awarded to Mr. Adolph Lewisohn for three bush chrysanthemum plants, for excellence of cultivation.

Silver

F. V. Burton and Wm. Cordes, in competition, for two orchid plants showing highest excellence of cultivation; special prize, awarded to Lager & Hurrell, for a plant of *Vanda Sanderiana*; sweepstakes, awarded to Adolph Lewisohn, for the finest and best bush plant; special prize, awarded to A. N. Pierson, Inc., for new rose, "Double White Killarney"; special prize, awarded to A. N. Pierson, Inc., for new rose, "Killarney Queen"; sweepstakes, awarded to Julius Roehrs Co., for the best orchid plant exhibited in any class; special prize awarded to Julius Roehrs Co. for a collection of orchids; special prize, awarded to Chas. H. Totty, for new rose, "Sunburst."

There being no further business before the society, the lecture announced for the day was presented by Mr. G. R. Cushman on "The Orchard: Insecticides and Fungicides." The speaker illustrated his remarks with numerous lantern slides. The following is an abstract of this lecture:

THE ORCHARD: INSECTICIDES AND FUNGICIDES

Fruit growers generally have come to recognize the fact that it is impossible to raise fruit of good quality without spraying, and those who have sprayed most intelligently have found not only improved quality but increased yields as a reward of their labors.

While, of course, it is impossible in a short article to describe fully all the insects and diseases for which spraying should be practiced, still a few helpful suggestions may be given to guide those, who desire to spray fruit trees, to an understanding of the general principles.

Spraying should be considered under two general heads: (1) in the dormant period; (2) in the growing period.

Spraying During the Dormant Period

Spraying in the dormant period is designed to destroy the San José scale, the oyster-shell bark louse, the scurfy scale, etc.; also to destroy insect eggs, disinfect bark wounds, and generally to destroy lichens and other superficial growths occurring on the trunks and limbs of the trees. The dormant spraying may be done any time after the leaves have dropped in the fall and the leaf scars have had an opportunity to callous over. The materials which may be used during the dormant period are miscible oils or the lime-sulphur solution. The miscible oils should not be used on the stone fruits, except in certain special cases, such as for the control of lecanium or terrapin scale on peaches. It is not advisable to use a miscible oil continuously for several years upon apple trees because, owing to the high penetrating properties of the oil, its cumulative effects may amount to serious damage and ultimately kill the trees. As a rule, a miscible oil should be used only in the case of bad scale incrustation, and as soon as the scale has been cleaned up, then the lime-sulphur solution should be depended upon to keep the trees in good condition. In the case of shade trees and ornamental shrubbery a miscible oil may be used with comparative safety, because plants of this kind are more hardy and do not have the delicate bud structures as is the case with fruit trees.

As a rule, lime-sulphur solution should be used in late winter or early spring, within a few weeks of the time when the buds should normally begin to swell, because the fungicidal property of lime-sulphur solution is one of its most important features, and the availability of this property is much greater as a substantial coating over the twigs and branches of the trees in the early spring if the spraying has been comparatively late in the winter.

The application of either a miscible oil or lime-sulphur solution should be thorough, but not excessive, especially in the case of oil; the pump should be capable of giving good pressure, and the material should be applied with a fine nozzle, and a calm bright day should be selected for spraying.

Spraying During the Growing Period

Apples and Pears.—The principal insects are codling moth, curculio, canker worm and, in some sections, bud moth. The principal fungous diseases to be prevented are scab, bitter rot, cedar rust and frog-eye or leaf-spot.

The treatments for both the insects and fungous diseases may be combined in nearly all of the applications. Scab and cedar rust both appear rather early in the season and the first spraying should be with a fungicide, and the application should be made after the cluster buds push out and before the trees come into bloom. In localities where the curculio and capker worm are especially bad arsenate of lead should be combined with this spraying, after the white petals of the blossoms fall, and before the calyx closes. All varieties of apples should be sprayed with a combined fungicide and insecticide. This is the first spraying for codling moth and also the first spraying for leaf-spot and is the second spraying for scab.

Three weeks later there should be another spraying of combined insecticide and fungicide. As a rule, these sprayings will be sufficient, except in localities and on varieties especially subject to bitter rot, where later sprayings also are necessary with bordeaux mixture, the first spraying for the control of bitter rot being made in the latter part of June or early in July, and to be followed every three weeks until three or four sprayings have been made, and on especially susceptible varieties five or six sprayings may be necessary.

Materials to be Used.—For the three sprayings above recommended, growers may use the concentrated lime-sulphur solution, $1\frac{1}{2}$ gallons diluted with 50 gallons of water, with 2 lbs. of arsenate of lead added to the diluted lime-sulphur, or atomic sulphur 7 lbs. to 50 gallons of water with 2 lbs. of arsenate of lead added. And for the sprayings to control bitter rot Bordeaux mixture should be used; either the home-made formula of 4—4—50 or a prepared Bordeaux mixture containing a high per cent. of copper.

Pears as a rule should be treated about the same as apples.

Peaches.—The curculio, scab and brown rot are the three principal troubles to remedy by spraying. The curculio, which is a small snout beetle, punctures the skin of the fruit and lays its egg in the flesh of the peach from which the larva hatches which makes the wormy peaches. This should be controlled by spraying with arsenate of lead when the shucks or calyces are being shed from the young fruits.

Both the foliage and fruit of the peach are peculiarly susceptible to the influence of arsenic, and therefore in spraying peaches it is preferable to use a tri-plumbic arsenate of lead rather than the standard, the reason being that in the tri-plumbic arsenate of lead, the arsenic is more firmly bound with a lead base and, therefore, any arsenic, liberated by decomposition due to oxidation or the action of the carbon-dioxide of the air, is taken up by the excess lead so that the fruit and foliage will not sustain injury. In spraying peach trees with arsenate of lead care should be taken not to drench the trees, and it is also advisable to combine with the arsenate of lead three pounds of lime, made into a milk, to each 50 gallons of the spray.

About 20 days later, or about 4 weeks after the petals have fallen, spray

THE HORTICULTURAL SOCIETY OF NEW YORK

with self-boiled lime-sulphur, 8-8-50 formula, or atomic sulphur 7 lbs. to 50 gallons of water, and about one month before the fruit is expected to ripen spray again, using self-boiled lime-sulphur solution or atomic sulphur.

Plums.—Plums should be treated substantially the same as peaches, although scab does not affect the plum as it does the peach. Two fungicide sprayings are required to control the rot and the lead is also required to control the curculio, and should be applied when the young fruit is about the size of a pea.

While the above brief outline may be helpful, it is suggested that those who are attempting to grow fruit successfully should obtain the special bulletins and publications illustrating the diseases and describing the treatments more fully than is possible in a short lecture of this character.

In concluding, it may be stated that successful results from spraying operations can only be obtained where the material is of high quality and capable of accomplishing the result desired, and where the spraying machinery is capable of applying it properly, and, in addition to this, the fruit-growers must know the proper times of application, which is best determined by the trees themselves.

Considerable discussion followed, and Mr. Cushman was called upon to answer many questions.

The meeting adjourned at 5.10.

GEORGE V. NASH,
Secretary.

MARCH 23, 1912

A meeting of the society, accompanied by an exhibition, was held on Saturday, March 23, 1912, at the American Museum of Natural History, Mr. Wood presiding. The exhibition was held in the West Assembly Hall from 1 to 5, the meeting in the East Assembly Hall at 4 P.M.

The minutes of the meeting of February 24, 1912, were read and approved.

The following persons, having accepted the invitation of the Council to become members, were referred by that body to the society for action:

Life

Dr. James H. Parker, Mrs. William H. Bliss, Jas. A. Macdonald, F. V. Burton.

Annual

Mrs. Von R. Phelps, J. C. Havemeyer, Mrs. John Murray Mitchell, Jos. H. Steinhardt, Mrs. Joseph F. Cullman, Mrs. Richard Aldrich, Thos. Smidt, A. S. Frissell, Frank J. Logan,

Horace D. Lyon, Mrs. J. Woodward Haven, Mrs. G. L. Morgenthau, and Mrs. Edwin M. Bulkley.

The secretary was authorized to cast an affirmative ballot for all of the above persons. This was done and the persons declared elected.

The resignation of W. E. Connor was accepted.

There being no further business before the meeting, the lecture announced for the day was delivered by Mr. Robert Pyle. This was entitled "Among the Roses in Europe," and was copiously illustrated with lantern slides.

The lecture was as follows:

AMONG THE ROSES IN EUROPE

After some 7,000 miles of travel, seeking out the beauties of the rose and the secrets of growers of roses abroad, it was as if with a new vision for America and American rose gardens that I sailed into the harbor here some eight months ago; and right here at the gateway to our country occurred a little incident about which I want to tell you. Mrs. Pyle and I had disposed of the formalities of the efficient customs officials and in a taxicab were just emerging from the wharf on to the broad sunlit street, when right at the gateway we were saluted by an officer with this greeting "Welcome through my city." For some reason this seemed to send a thrill of pleasure through my breast and I thought to myself "Surely a city (big as is this) that is careful to look after such little courtesies on the part of its public servants, such a city has in store an equal welcome for the message which I feel I have brought back from Europe." It is this: that "you in New York and in your surrounding parks and estates certainly may have and should have rose gardens as fine and flourishing as those I saw in Paris, in southern France and Germany, to say nothing of the gardens of England and Ireland." So this afternoon I ask you to go with me through the public gardens and the nurseries, and meet the growers and the men who are producing the new varieties so much sought after by the rose-loving public everywhere.

Our first visit was to the old rose growing center of Colchester. A few minutes' walk brought us to the nursery of D. Prior & Son, where the men were already in the field making roses ready for the coming shows. A half mile away are Benj. R. Cant & Sons, among the largest of the growers, I think, in England. They report 100,000 tree-roses in 200 different varieties; they had sixty men at work on fifty acres, with a very interesting trial garden showing not less than four or five hundred varieties, the most of them blooming luxuriously. They were also growing climbing roses under glass, even in July. Rose growing seems to run in families. Nearby is the establishment of Frank Cant & Co., another many-times

winner of the coveted trophy awarded by the National Rose Society for the champion rose-grower of the year.

London is a most convenient center from which to visit Colchester; Canterbury, the home of George Mount & Sons; Farnham in Surrey, where are S. Bide & Son, specialists in sweet peas and other horticultural lines, as well as an extensive rose business; and most interesting and quite as important as any is Waltham Cross, the century-old place of Wm. Paul & Son, now in charge of Arthur William Paul.

At Cheshunt is another firm, Paul & Son, George Paul, proprietor. Among all these growers one is impressed by the fact that they are handling two or three times as many varieties of roses as are the largest dealers on this side of the water.

En route to Ireland we will stop at Somerset, at Kelway & Sons, and see their splendid assortment of hardy perennials with their sample perennial border for the benefit of the patrons who visit them; and their acres upon acres of peonies.

If you would see roses abroad at their best do not leave out Belfast. There are three great rose growers near Belfast. Across the street from my hotel was the town store of Alexander Dickson & Sons, of Newtownards; they are probably the best known to American growers. But of similar prominence is the firm of Messrs. Hugh Dickson, the Royal Nurseries of Belfast, and the winner this year (1911) of the National trophy, and thus declared champion rose grower of the year in the British Isles. As you well know, both firms are doing excellent work in producing, almost annually, new roses of unquestioned merit. In Belfast you will find almost everyone knows Samuel McGredy & Sons also. The present proprietor is a cousin of the Dicksons, who does his own hybridizing; he also has a son at college, so that it looks as if there was good promise of good roses to come from Ireland for many years yet; for certainly the climate is what they like, the soil is great and they do grow magnificent flowers. I noticed on the lawns around their home a real riot of roses; Mrs. Roosevelt, for example, a whole bed of them, had blossoms twice as big as any I had ever seen growing in the open here. Caroline Testout was quite as fine, if not finer than we have it in Portland, Oregon; so that when one was introduced to a new unnamed seedling, and the price of \$500 or \$1000 put on it, the question that immediately claimed one's attention was "How will these roses do in America?" But it has to be tried.

Go with me to the National Rose Show held in Regent's Park this past year. Automobiles lined up, coming and going, a constant line of not less than fifty or sixty people awaiting entrance throughout the entire afternoon to the tent of new seedling roses, and this tent but a small, though very important, part of hundreds upon hundreds of enteries. Another feature that appealed to me was the tent devoted to roses for use in table decorations, where there were special combinations worked out. On this table would be a study of yellow with a huge bouquet in the center; smaller ones around the table, with boutonnières or place roses.

A visit was made to the Bagatelle Garden, Paris. If there is any here who does not know the rose Gravereaux, let me recommend that he cultivate its acquaintance. This rose was named in honor of a French gentleman whose contribution to our profession deserves a more than ordinary decoration. His own garden, about which I will tell you later, should be a Mecca for continental travelers. But it is rather inconvenient of access, and is private; therefore, with very good reason, he early advocated the establishment of a rose garden that should be the gem and a jewel in the popular park of the city of Paris. That rose garden is now established and among French rose-growers, at least, if not of international importance, forms a trial ground and a meeting place for the best of the old and nearly all of the new continental introductions.

It was in this garden, in the Bois de Boulogne, upon invitation from the city of Paris, that I went last summer to act as a judge and in so doing was asked to represent America. The Bagatelle is a little park in the Bois de Boulogne; some people might say it is quite a large park. It is surrounded by a high stone wall. More than half of it is covered with woods, the rest in lawns and landscapes laid out with beautiful drives, and nearly all well kept. It was built possibly by, and certainly for, Marie Antoinette. After the French revolution it was sold to an Englishman and afterward bought back by the city of Paris for park purposes. The grounds are now in charge of M. Forestier who seems most affectionately interested in this comparatively new rose garden. It covers, I suppose, two acres, laid out with the roses arranged in families, with the climbers mainly at one end or along certain avenues or walks. The roses of the last two years are each grouped separately and will later find their permanent place in the garden.

The Bagatelle Rose Garden has so much of interest that one could readily spend several days there; and in going to or from it one may run across the "Battle of Flowers" or "Fete des Fleurs," in some of the prominent avenues of the park, lined up with people four tiers deep on both sides; carriages and automobiles, sumptuously decorated with roses and other flowers, parade up and down, prizes being given to the most exquisitely decorated ones, after which the occupants of the vehicle begin hurling their flowers at the bystanders who often toss them back. And this exchange and riot of beauty has become known as the "Battle of Flowers." I understand the proceeds, whatever they may be, go to the hospitals.

There is much more of interest in Paris, even horticulturally, than one can stop to speak of, for here one finds the rose-growers whose names have been associated with flowers in our own American gardens and greenhouses; for example, here was M. Cochet, M. Guillot, M. Gravereaux, all men whose namesakes we grow. Therefore, it was with keen interest that we set out to visit the establishments of these prominent rose growers.

At Orleans we found M. Barbier, in whose well kept gardens we saw

blooming not only Alberic Barbier, but also the new Wichmoss with its fascinating mossed blossoms and its Wichuraiana foliage. Near by was M. Chenault, and on the same avenue, Levavasseur, whose Polyanthus are now well known among our rose growers. They have big blocks of seedling Baby Ramblers and are doing quite a tremendous business. Another friend is M. Benard, who is already well known to many American growers, and the variety of whose products makes one wish to stay and study for a week at least.

At Lyon down toward the Mediterranean, there is another famous group of growers, M. Bernaix, and M. Guillot, who, I believe, is editor of their journal, "The Friend of Roses"; and the prominent Pernet of Pernet-Ducher, whose Sunburst is only one of a long list of valuable introductions. He with his son and family live in simple French fashion, and the walls of their home are covered with medals, photographs and diplomas of awards received for fine roses. It was most interesting to walk among his seedlings and to note his love for his pets. The climate here seems more genial, quite like our own in many respects, though not so cold in winter, I presume. The soil was quite different in different localities, but the culture was most carefully looked after almost universally. I suppose weeds do grow there but we did not see many of them. One is impressed with the hospitality and openness of these men, their cordiality makes one leave with regret that his stay was not longer.

At Trier, on the Moselle, we found Peter Lambert a cordial host and his trial garden a most interesting one. His hybridizing is on an extensive scale and he is careful to keep records, not only of his own work, but of the work of others. I think his supremacy among rose growers in Germany is quite established, judging from the work he continues to do for some of the more prominent cities—in the public parks at Berlin, Baden-Baden and elsewhere. Mr. Lambert has studied horticulture in the best of the German schools; he comes to his profession by heredity. He is editor of some works on the rose, one of which I commend to hybridizers, the "Stammbuch der Edelrosen." He is a very busy man, is raising a grand young family of boys, is building larger offices and a new home, and with all these demands on his time thinks it will be some years before he can come to America.

Near Trier is Luxembourg, the quaint and interesting old Grand Duchy, an independent principality, with its little army of 200 men, with its own stamps and its own small money, safe in one sense because of its position between Germany and France and apparently on the best of terms with both. Those of you who know the old Clothilde Soupert Rose, the Mme. Melanie Soupert and the Souv. de Pierre Notting will be interested in the firm of Soupert & Notting, one of the oldest, and still prominent in their work of introducing new roses. We next visited Ketten Bros., another family of two generations of rose growers, who have considerable ground outside of the city. The climate of Luxembourg in winter is doubtless quite like our Pennsylvania climate, at least they must dig and store prac-

tically all their stock, and for this purpose have huge cellars entirely under ground, as a rule, in which they heel in their plants, having men label with lead labels and using their catalogue numbers on every single plant before it is dug. Mr. Lambert does more growing of own root roses than anyone else we met, most growers there, you know, using the budded stock.

A little side trip from Luxembourg down to Nancy gave a most interesting day with M. Lemoine, whose father, at eighty, was lying ill, but whose four young boys, developing splendidly toward manhood, gave promise of more famous Begonias, Deutzias, Lilac, Clematis—in fact one scarcely knows where to stop in speaking of the contributions which have emanated from this rare and interesting establishment. I did not hear that they called him a wizard either, but Victor Lemoine certainly deserves the name, if ever man did, among plantsmen.

Back to Paris, let us without fail accept the kind invitation of M. Gravereaux for a day in his garden. Take a taxicab. It is a beautiful ride over the hills to an eminence from which the city itself is in view, and here M. Gravereaux, by special permission, is glad to have you come and luxuriate in his truly wonderful rose garden. M. Gravereaux is said to have become a millionaire through his business in the Bon Marché in Paris. Imagine if you can, 6000 or more different varieties of roses, arranged in families and classes, grouped into avenues which are bordered with the climbing roses, banked with the bedding varieties and edged with box and neatly kept paths; bits of statuary here and there with the surprise of a playing fountain as you turn a corner; a little thatched roof summer house for a laboratory, with appropriately placed standard tree roses having stems 12 to 15 ft. high and heads of bloom 10 ft. in diameter; everything kept with immaculate neatness and every rose carefully labeled with the name, class, date of origin and catalogue number; and in the center of all a museum in which has been collected not only the documents that are to serve as a history of the rose, but specimens of the products of science and art in which the rose has figured, and also a collection of literature from the Greek, Latin, Arabic, and also the modern languages in which we find mention of the rose. Here indeed one's enthusiasm knows no bounds. We felt filled with the beauty of the place, for it seemed that every rose was in full bloom. The day was a perfect one and the air fragrance-laden. M. Gravereaux was most hospitable and the scene was impressed indelibly upon one's mind.

You and I must realize that America is as yet in its infancy; still more is it true of rose-growing in America. The time is already here when we need to awaken the interest of the amateur rose-growers of America. Thousands, if not millions, throughout this country of ours, even with its varied climate, might have the pleasure, the inspiration, and the uplift which come from knowing and cultivating the Queen of Flowers.

The meeting adjourned at 5.

GEORGE V. NASH,
Secretary.

THE HORTICULTURAL SOCIETY OF NEW YORK

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JULY, 1912

EDITED BY THE SECRETARY

GEORGE V. NASH

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THE SUMMER EXHIBITIONS

The summer exhibitions, held in coöperation with the New York Botanical Garden, were inaugurated this year with the exhibition of May 11 and 12. A special exhibition was held on the 25th and 26th of the same month, consisting primarily of a large display of lilacs by Mr. T. A. Havemeyer. The June exhibition occurred on the 8th and 9th, and it was decided to hold the regular July meeting and exhibition on June 29 and 30. The August exhibition will occur toward the end of that month. The exhibitions take place in the halls devoted to paleobotany on the ground floor of the museum building. The prizes at these summer exhibitions are offered by the New York Botanical Garden, and are awarded through the exhibition committee of the council of The Horticultural Society of New York.

At the conclusion of the exhibitions the flowers, after delighting the many who come to view them, are donated to hospitals and other similar institutions, thus giving many more, unable to attend, the opportunity of viewing these beautiful products of the art of the horticulturist.

At the exhibition of May 11 and 12 the schedule provided premiums for collections of flowers of shrubs and trees, herbaceous plants, bulbs, and for wild flowers and other plants. The first prize in the class of shrubs and trees was taken by the F. R. Pierson Co., the second going to Mr. T. A. Havemeyer, A. Lahodny, gardener. Mr. Havemeyer also took the first prize for

a collection of *Narcissus*. Mr. E. B. Southwick made an interesting exhibit of wild flowers, for which he received first prize; he was also awarded a special prize for a collection of the English daisy, *Bellis perennis*. Special prizes were awarded as follows: Lager & Hurrell, for orchids; Jas. A. McDonald, Richard Hughes, gardener, for gloxinias; L. C. Tiffany, John Miller, gardener, for four plants of self-colored calceolarias; Adolph Lewisohn, John Canning, gardener, for three excellent plants of *Calceolaria hybrida*.

At the exhibition of May 25 and 26 the main feature was a large display of lilacs, over sixty kinds, exhibited by Mr. T. A. Havemeyer, who has a large collection of these delightful shrubs at his place at Glen Head, Long Island. The gem of this display was *Mad. Antoine Buchner*, the lavender buds, opening white, daintily flushed with rose. The clusters of flowers are large and well-formed, the color clear and crisp, and the foliage perfect. The following were also noteworthy: *Dame Blanche* and *Miss Ellen Willmott*, pure white, double; *Montaigne*, white flushed with lilac; *Sieboldi*, with creamy white buds, opening almost white, with just a faint indication of cream; *Montgolfier*, dull lilac, the involute margins exposing the paler outer surface, giving to the flowers a pale margin; *Cristophe Colomb*, pale lavender, large clusters; *Edmund Boissier*, large flowers of deep bright lilac; *Reaumer*, bright lilac, full clusters; *Milton*, deep lilac; *Pasteur*, deep bright lilac; *Monument Carnot*, almost a light blue; *Volcan*, full clusters of deep bright lilac; and *Negro*, deep red purple. Mr. Havemeyer also made a large exhibit of the flowers of shrubs and trees, azaleas, and of tree peonies. An unusual exhibit of his was a seedling hybrid of the tree peony, *Paeonia Moutan*, with *Paeonia lutea*, the flowers very double, the yellow petals ruby at the base.

An attractive vase of *Gladiolus Panama* was exhibited by Mr. John Lewis Childs, the flowers a bright pink; also vases of *Silver Sheen* and *Niagara*, of the same genus. A display of the flowers of trees and shrubs, herbaceous plants, and tulips was made by the New York Botanical Garden.

The largest summer exhibition ever held by the society occurred on June 8 and 9. The largest exhibitor was Mr. T. A. Havemeyer. The most attractive feature here was a large and magni-

ficent display of herbaceous peonies made by him. Over twelve hundred blooms, in over two hundred vases, were shown. Many delightful things were among these, ranging all the way from the purest white, through pink and rose, to the deepest crimson, and in every form, from the single, with its center of yellow stamens, to the large fully double ones. This collection entirely filled one of the center tables and also considerable floor space.

To Mr. Havemeyer was awarded the first prize for the largest and best collection of these flowers, not less than six flowers of each variety; his display contained about one hundred and ninety vases. He also won the first prize for the best six flowers each of white, light pink, rose, and crimson varieties, and for the best collection of singles, three flowers of each. The F. R. Pierson Co. took second in all of these.

Being a little too early, only three entries were made in the rose class. A choice collection of sixty-five varieties secured the first prize for Gen. E. A. McAlpin, J. Woodcock, gardener, the second going to Mr. H. Darlington, P. W. Popp, gardener, with a collection of fifty-nine varieties. A large collection of flowers of shrubs and trees made Mr. Havemeyer, A. Lahodny, gardener, the winner of the first prize, the second going to Mrs. F. A. Constable, Jas. Stuart, gardener. Among the notable things in the collection of Mr. Havemeyer were some charming forms of the genus *Philadelphus*, commonly known as mock orange or syringa: Lemoine's Glory, with large striking flowers; Mer de Glace; Coquet; Manteau d'Hermine, very graceful and floriferous. Another pleasing plant was an azalea, unfortunately without a label, resembling in its pure white delightfully fragrant flowers a compact form of *Azalea viscosa*.

The prize for the best collection of rhododendrons and azaleas, or either, was secured by the F. R. Pierson Co., for a fine display of rhododendrons, the second going to Mr. Havemeyer. Herbaceous plants were not well represented, the single collection taking the first prize for Mr. Henry Siegel, Thos. Aitchison, gardener. There were several entries for irises. The large collection of fine flowers, some ninety odd vases, gave the first prize to Mr. Havemeyer; a smaller collection of twenty-seven vases of fine flowers secured the second prize for Mrs. F. A. Constable.

There was not a large exhibit of orchids, but a number of the

plants were choice. Lager & Hurrell took the first prize for the best collection of six orchid plants, six varieties. For three orchid plants, three varieties, the first prize went to the same parties, the second to Mr. Clement Moore, J. P. Mossman, gardener. *Cattleya Gigas*, in a superb plant, made Mr. Moore the winner of the first prize for the best single orchid class; an unusual form of the same species bringing the second to Lager & Hurrell. Mr. Moore also took first prize for a collection of cut orchids.

A special prize was awarded to Mr. Henry Siegel for *Lilium microphyllum*, a recent introduction from China by Mr. Wilson, and exhibited in May at the International Flower Show. Other special prizes were awarded as follows: Mrs. F. A. Constable, for vases of campanulas; John Lewis Childs, for a collection of yellow callas; H. Darlington, for a collection of gladioluses and sweet peas.

An attractive display of herbaceous peonies and of flowering shrubs and trees was made by the Garden.

PROCEEDINGS OF THE SOCIETY

APRIL 20, 1912

A meeting of the society was held at the American Museum of Natural History on Saturday, April 20, 1912, at 4 P.M. No business was transacted. The lecture advertised for the afternoon was delivered by Mr. George V. Nash, on "Flowers for the Spring Garden."

MAY 11, 1912

The annual meeting of the society was held on Saturday, May 11, 1912, in the Museum building, New York Botanical Garden, at 3:30 P.M., Mr. Southwick presiding. The exhibition accompanying this meeting was held in the same building, continuing also on Sunday.

The minutes of the meetings of March 23 and April 20 were read and approved.

The following persons, having been approved by the Council and referred by that body to the society, were proposed for membership:

THE HORTICULTURAL SOCIETY OF NEW YORK

Life

Chas. H. Davis.

Annual

Geo. Arents, Copley Amory, Mrs. Frederic Bronson.

Upon motion, moved and carried, the secretary was instructed to cast an affirmative ballot for the election of these persons. This was done, and they were declared elected.

The resignation of Anton Bauer was accepted.

The twelfth annual report of the Council was read, and it was ordered printed in the next issue of the JOURNAL.

The following nominations were made for officers and members of the Council for the year 1912-1913.

President

Geo. T. Powell

Vice-presidents

N. L. Britton

Patrick O'Mara

T. A. Havemeyer

Samuel Thorne

James Wood

Treasurer

Frederic R. Newbold

Secretary

George V. Nash

Members of the Council

F. L. Atkins

W. Nilsson

John Canning

F. R. Pierson

Mrs. Louis S. Chanler

H. H. Rusby

J. W. Cromwell

H. A. Siebrecht

Henry F. du Pont

Robert Simpson

I. S. Hendrickson

E. B. Southwick

John E. Lager

Robert Stobo

J. A. Manda

James Stuart

E. S. Miller

J. H. Troy

Clement Moore

C. W. Ward

THE HORTICULTURAL SOCIETY OF NEW YORK

Upon motion, seconded and carried, the secretary was authorized to cast an affirmative ballot for the election of the above nominees. This was done and they were declared elected.

The meeting adjourned at 4 P.M.

GEORGE V. NASH,
Secretary.

JUNE 8, 1912

A meeting of the society was held on Saturday, June 8, 1912, in the Museum building, New York Botanical Garden, at 3:30 P.M., Mr. Pierson presiding. The exhibition accompanying this meeting was held in the same building, continuing also on Sunday.

The minutes of the meeting of May 11, 1912, were read and approved.

The following persons, having been approved by the Council and referred by that body to the society, were proposed for membership:

Life

Chas. G. Thompson, Mrs. Henry F. Dimoch

Annual

Chas. Gotthelf, Mrs. A. Murray Young

Upon motion, seconded and carried, the secretary was instructed to cast an affirmative ballot for the election of these persons. This was done, and they were declared elected.

Dr. N. L. Britton was reelected delegate to represent this society upon the council of the New York Academy of Sciences.

The following committees for the coming year were announced:

Exhibition Committee: F. R. Pierson, chairman; T. A. Havemeyer; I. S. Hendrickson; J. E. Lager; J. A. Manda; John Cannings; James Stuart; George V. Nash.

Committee on Membership: James Wood, chairman; N. L. Britton; F. R. Newbold.

The meeting adjourned at 3:45.

GEORGE V. NASH,
Secretary.

TWELFTH ANNUAL REPORT OF
THE COUNCIL

PRESENTED MAY 11, 1912

This completes the twelfth year of the society, and the tenth of its incorporation. Its monthly exhibitions, which have been reported in detail in the JOURNAL, have kept it prominently before the public, and greatly increased its usefulness in the advancement of horticulture.

Nine exhibitions were given, those from May to September in the Museum building, New York Botanical Garden, the remainder at the American Museum of Natural History. The society fully appreciates this courteous action on the part of both institutions, and herewith expresses its thanks for the use of the exhibition halls.

Below is a list of the exhibitions, detailed accounts of which will be found in the JOURNAL, as follows: May to July in the issue of July; August and September in the October issue; November in the issue for January; January, February and March in the issue for April.

Wednesday and Thursday, May 10 and 11, 1911. Held in connection with the annual meeting of the society. Devoted to miscellaneous plants and flowers.

Saturday and Sunday, June 10 and 11, 1911. Devoted largely to peonies and roses, with many exhibits of a miscellaneous character.

Saturday and Sunday, July 1 and 2, 1911. For miscellaneous plants and flowers.

Saturday and Sunday, August 26 and 27, 1911. Devoted primarily to gladioli. One of the finest exhibits of these flowers ever seen in New York was here brought together.

Saturday and Sunday, September 16 and 17, 1911. Dahlias and asters were the principal flowers at this exhibit.

November 3 to 7, 1911. The fall exhibition, held as usual at the American Museum of Natural History, by permission of the trustees of that institution. A special fund was necessary to defray the prizes and other expenses connected with this exhibition. Eighty-six contributed to this fund, as against eighty in the

THE HORTICULTURAL SOCIETY OF NEW YORK

previous year, and forty-six in 1909. The exhibition was opened with a private view to members of the society, Museum, and affiliated organizations. The attendance was the largest in the history of the society, a total of nearly 45,000, nearly 26,000 of which attended on Sunday afternoon.

Saturday, January 27, 1912. Premiums were offered mainly for orchids and carnations.

Saturday, February 24, 1912. For miscellaneous plants and flowers.

Saturday, March 23, 1912. Primarily for orchids and roses.

There have been twelve meetings of the council, held each month during the year. A meeting of the society has been held each month, those from May to September at the Museum building, New York Botanical Garden, the remainder at the American Museum of Natural History. They were as follows:

May 10, 1911. Annual meeting, with election of officers and members of the council for the ensuing year. An exhibition with this meeting.

June 10, 1911. An exhibition was held in conjunction with this meeting. A lecture, in the Garden course, illustrated with lantern slides, was delivered by Dr. Wm. A. Murrill on "The Royal Gardens at Kew, England."

July 1, 1911. An exhibition was held in conjunction with this meeting. Dr. N. L. Britton gave a lecture, illustrated with colored lantern slides, on "Wild Flowers of Summer."

August 26, 1911. An exhibition of gladioli was held in connection with this meeting. A lecture, illustrated with lantern slides, was delivered by Mr. George V. Nash on "Evergreens: Their Uses in the Landscape."

September 16, 1911. An exhibition was held in connection with this meeting. The lecture, illustrated with lantern slides, was delivered by Mr. George V. Nash, in the Garden course. It was on "The Fruit Industry of the Northwest."

October 18, 1911. It was decided to omit the flower show this month. The lecture, which was illustrated with lantern slides, was by Mr. George V. Nash on "The Northwest and its Fruit Industry."

November 4, 1911. Held during the flower exhibition.

December 16, 1911. On account of the holiday season it was

decided to omit the exhibition this month. A lecture was delivered by Mr. John K. L. M. Farquhar on "Gardens in Italy."

January 27, 1912. This meeting was accompanied by an exhibition. Mr. C. A. Darling gave a lecture, illustrated with lantern slides, on "Grapes and Grape Culture."

February 24, 1912. An exhibition accompanied this meeting. Mr. G. R. Cushman gave a lecture, illustrated with lantern slides, on "The Orchard: Insecticides and Fungicides."

March 23, 1912. There was an exhibition in connection with this meeting. The lecture was by Mr. Robert Pyle on "Among the Roses in Europe," and was illustrated with lantern slides.

April 20, 1912. It was decided to omit the exhibition this month. The lecture was by Mr. George V. Nash on "Flowers for the Spring Garden," and was illustrated with lantern slides.

Two monthly meetings of the society were found impracticable at the present time, and so it was decided to merge the meeting of the Orchid Section with that of the general society.

The JOURNAL has been issued quarterly as follows: no. 8, July, 1911, 20 pages; no. 9, October, 1911, 12 pages and 1 plate; no. 10, January, 1912, 14 pages and 1 plate; no. 11, April, 1912, 16 pages; making a total of 62 pages and 2 plates.

The membership of the society is now 415, divided as follows: Patrons, 2; Sustaining, 1; Life, 83; Annual, 329. The total number of new members is 85, of which 17 are life and 68 annual. The losses in membership are as follows: by death, 14; resigned, 13; dropped on account of non-payment of dues, 11; total 38. This leaves a net gain for the year of 47 members, 17 life and 30 annual. Nearly all of the new members were obtained through invitations, of which about 7,400 were sent out. The cost of this was about \$296.00. As a result \$850.00 was added to the permanent fund through new life memberships, and \$340.00 secured for the annual expenses by dues from new annual members.

Three of the annual members, Dr. S. T. Armstrong, Chester W. Chapin, and F. R. Newbold, have qualified as life members by the payment of the fee of fifty dollars.

It is desirable that the number of patrons, sustaining members, and life members be increased, and it is advised that steps be taken to formulate some method of accomplishing this.

Fifteen more shares of U. S. Steel Preferred stock have been

THE HORTICULTURAL SOCIETY OF NEW YORK

purchased by the treasurer, making a total of fifty shares now owned by the society.

A list of the membership is appended to this report; as is also the report of the treasurer.

GEORGE V. NASH,
Secretary.

F. R. PIERSON,
Chairman.

TREASURER'S STATEMENT

FOR THE YEAR ENDING MAY 11, 1912

GENERAL ACCOUNT

RECEIPTS

Balance from 1910-11 account	\$ 105.03
Life fund	\$1,195.00
Sale of publications	24.10
Dues collected during year	1,537.50
Special fund for November show	1,189.00
From Broadway Savings Inst.	1,000.00
Loan from treasurer to pay for U. S. S. stock	1,200.00
	<u>6,145.60</u>
	\$6,250.63
Balance forward to 1912-13 account ..	\$179.94
Balance due from life fund	56.88
	<u>\$236.82</u>

EXPENDITURES

Printing and publishing	\$ 818.77
Secretary's salary for year	300.00
Premiums paid during year	1,011.00
Expenses of shows	183.54
Petty cash and postage to secretary ..	275.00
15 shares U. S. S. stock, preferred ..	1,618.13
Deposit in Broadway Savings Bank ..	658.75
Loan repaid to treasurer	1,200.00
Rent safety deposit box, 1 year	5.00
Postage by treasurer50
	<u>\$6,070.69</u>
Balance forward to 1912-13 account ..	179.94
	<u>\$6,250.63</u>

THE HORTICULTURAL SOCIETY OF NEW YORK

LIFE FUND IN ACCOUNT WITH GENERAL ACCOUNT

RECEIPTS

Due fund 1910-11 account	\$ 25.00
19 life members in 1910-11 account	950.00
Steel dividends for year	245.00
Loan from treasurer	1,200.00
From savings inst.	1,000.00
	<u>\$3,420.00</u>
Balance due General Account	56.88
	<u>\$3,476.88</u>

EXPENDITURES

To savings inst.	\$ 658.75
15 shares U. S. S. stock, preferred	1,618.13
To repay loan from treasurer	1,200.00
	<u>\$3,476.88</u>

PERMANENT FUND

In Broadway Savings Inst.	\$ 16.58
50 shares U. S. S. stock, preferred	5,777.84
	<u>\$5,794.42</u>

FREDERIC R. NEWBOLD,
Treasurer.

MAY 11, 1912.

MEMBERSHIP

MAY 11, 1912

Patrons

Huntington. Archer M. Sage, Mrs. Russell

Sustaining Member

Chanler, Mrs. Louis S.

Life Members

Adams, Edward D.	Blumenthal, George
Agnew, Cornelius Rea	Bowdoin, George S.
Andrews, Constant A.	Bowdoin, Temple
Archbold, John D.	Bowdoin, Mrs. Temple
Armstrong, Dr. S. T.	Brown, Geo. McKesson
Billings, Miss E.	Burk, Louis
Bliss, Miss Catharine A.	Burton, F. V.
Bliss, Mrs. William H.	Campbell, Mrs. Ina

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Chapin, Chester W.	Nesbitt, Abram G.
Chapin, S. B.	Newbold, F. R.
Chubb, Percy	Olcott, Dudley
Colgate, W.	Parker, Dr. James H.
Collord, Geo. W.	Peabody, G. F.
Constable, Mrs. F. A.	Peters, S. T.
Conyngham, W. S.	Pierson, F. R.
Davis, Chas. H.	Potter, Miss B.
Delafield, Mrs. John R.	Proctor, Frederick T.
Estabrook, A. F.	Read, Wm. A.
Ford, James B.	Riker, John J.
Frothingham, H. P.	Robinson, Nelson
Gould, Geo. J.	Roosevelt, Mrs. James
Harkness, E. S.	Satterlec, Herbert L.
Harrah, Charles J.	Stevens, Miss Mary O.
Hearn, Geo. A.	Stickney, J.
Hoyt, Theodore R.	Stillman, C. C.
Hubbard, Thos. H.	Stokes, Miss C. Phelps
Iselin, Adrian, Jr.	Stokes, Miss O. E. P.
Iselin, Columbus O'D.	Stone, Miss E. J.
James, Mrs. D. Willis	Taylor, Wm. H.
Kane, John Innes	Thorne, Samuel
Lane, Edward V. Z.	Troy, J. H.
Lehman, Meyer H.	Untermeyer, Samuel
Lehman, S. M.	Vanderbilt, F. W.
Macdonald, Jas. A.	Van Emburgh, D. B.
MacMillin, Emerson	Wadsworth, W. A.
Marshall, Louis	Warburg, Felix M.
Marwick, James	Waterbury, John I.
Mills, A. G.	Webb, Mrs. W. Seward
Morgan, J. Pierpont	Webster, Mrs. Sidney
Morgan, J. P., Jr.	Willets, Elmore A.
Morgan, Mrs. J. P., Jr.	Ziegler, Wm., Jr.
Morton, Hon. Levi P.	

Annual Members

Adams, Mrs. F. T.	Aldrich, Mrs. J. Herman
Adams, Henry S.	Aldrich, Mrs. Richard
Agnew, Mrs. C. R.	Alexander, Douglas

THE HORTICULTURAL SOCIETY OF NEW YORK

- | | |
|--------------------------|-------------------------|
| Allerton, D. D. | Butterworth, John |
| Amory, Copley | Caesar, H. A. |
| Anderson, A. J. C. | Cammann, H. H. |
| Archer, George A. | Campbell, James |
| Arend, Francis J. | Canning, John |
| Arents, Geo. | Cassard, William J. |
| Atkins, F. L. | Cathcart, Miss J. R. |
| Auchincloss, Hugh D. | Childs, John Lewis |
| Avery, Samuel P. | Childs, Wm., Jr. |
| Baldwin, G. E. | Chisholm, Hugh J. |
| Barnhart, Dr. J. H. | Clausen, G. C. |
| Barron, Geo. D. | Coffin, C. A. |
| Barron, Leonard | Coghlan, Michael |
| Bauer, Anton | Collier, R. J. |
| Belmont, August | Combe, Mrs. Wm. |
| Bendheim, C. D. | Conklin, Roland R. |
| Benedict, Mrs. J. H. | Cordes, Wm. |
| Benson, Miss Mary | Cordley, F. R. |
| Bieschke, A. | Crane, F. D. |
| Billings, Frederick | Cravath, Mrs. Paul D. |
| Blauvelt, C. D. | Crimmins, John D. |
| Blumenthal, Hugo | Cromwell, Benj. F. |
| Boddington, Arthur T. | Cromwell, James W. |
| Bond, F. S. | Cullman, Mrs. Joseph F. |
| Bonner, G. T. | Curtis, G. Warrington |
| Breunich, Henry | Darlington, H. |
| Brinsmade, Charles Lyman | Davies, J. Clarence |
| Bristol, John I. D. | De Forest, H. W. |
| Britton, Dr. N. L. | DeKlyn, B. F. |
| Bronson, Mrs. Frederic | Delano, Warren |
| Brown, Hon. Addison | Dexter, Jos. |
| Brown, Robert I. | Dietrich, C. F. |
| Brown, Robert T. | Dike, Miss A. M. |
| Bruggerhof, F. W. | Dimock, Geo. E. |
| Bryce, Mrs. W. | Douglas, J. |
| Bulkley, Edwin M. | Dows, David |
| Bulkley, Mrs. Edwin M. | Du Bois, Mrs. Geo. W. |
| Bulkley, L. Duncan | DuPont, Henry F. |
| Butterfield, Mrs. Daniel | Dwight, Mrs. M. E. |

THE HORTICULTURAL SOCIETY OF NEW YORK

Ebel, M. C.	Hess, Mrs. Emilia K.
Edmonds, Mrs. John W.	Hewitt, Mrs. A. S.
Ehret, George	Hicks, Henry
Fairchild, Benjamin T.	Hiss, Mrs. Nelson
Fardel, E.	Hitch, Mrs. Frederic Delano
Farrington, Wm. Hyatt	Hoe, Mrs. R.
Ferguson, Mrs. Farquhar	Hoe, Richard M.
Fischer, William H.	Holden, E. R.
Foulke, J. B.	Howell, M. D.
Fraser, Mrs. George S.	Hoyt, Gerald L.
Fraser, Miss J. K.	Hoyt, Miss Gertrude L.
Frissell, A. S.	Hughes, Thos. L.
Gay, J. E.	Hunt, Thomas
Geer, Mrs. Walter	Hurrell, Henry
Giatras, George	Huyler, Coulter D.
Gibson, Robt. W.	Inglis, Wm.
Golly, Francis X.	Isclin, Mrs. Columbus O'D.
Goodier, James W.	Iselin, Miss Georgine
Goodwin, J. J.	Iselin, Wm. E.
Gottheil, Paul	Jackson, T. F.
Graves, G. C.	Jacobus, Martin R.
Greenhut, Benedict J.	Jennings, Robt. E.
Griffin, Mrs. William Preston	Jesup, Mrs. Morris K.
Guernsey, H. W.	Jones, Mrs. S. Beach
Guinzburg, A. M.	Kahn, O. H.
Guttman, A. J.	Kean, Mrs. Hamilton Fish
Hale, G. H.	Kelsey, F. W.
Haddock, John C.	Kinney, Morris
Hall, Mrs. John H.	Kitchen, Dr. J. M. W.
Hamilton, Miss Elizabeth S.	Knight, Thos.
Harper, Dr. R. A.	Koehne, Robert
Havemeyer, J. C.	Kohlman, C.
Havemeyer, T. A.	Komitsch, Herman
Haven, Miss Frances A. L.	Lager, John E.
Haven, Mrs. J. Woodward	Langmann, G., M.D.
Hawkes, Mrs. McDougall	Lawrence, Miss Lydia G.
Henderson, Chas.	Lewisohn, Adolph
Hendrickson, I. S.	Lichtenstein, Paul
Hermann, Ferdinand	Lisman, F. J.

THE HORTICULTURAL SOCIETY OF NEW YORK

- | | |
|----------------------------|----------------------------|
| Livingston, Luther S. | Neustadt, Mrs. S. |
| Loeb, Morris | Nilsson, W. |
| Loewi, Hugo V. | Notman, George |
| Logan, Frank J. | Noyes, Mrs. H. D. |
| Lovett, J. T. | Ochs, Adolph S. |
| Lyon, Horace D. | O'Mara, Patrick |
| MacDougal, Dr. D. T. | Opdyke, Wm. S. |
| MacDougall, G. R. | Ordonez, Manuel |
| Mackenzie, David | Osborn, Prof. H. Fairfield |
| Macy, V. Everit | Paterson, R. W. |
| Mallory, Chas. | Paul, Mrs. G. E. |
| Manda, A. J. | Pepper, J. H. |
| Manda, J. A. | Perkins, G. W. |
| Manda, W. A. | Pfeiffer, Curt G. |
| Marcou, John B. | Phelps, Mrs. Von R. |
| Marsh, J. A. | Piel, Michael |
| Marshall, W. E. | Planten, J. R. |
| Marston, Edgar L. | Plump, Chas. H. |
| Marston, Edwin S. | Popp, P. W. |
| Matheson, W. J. | Post, A. S. |
| Maynard, W. E. | Powell, Geo. T. |
| McAlpin, Dr. D. H. | Pryer, Charles |
| McCagg, Louis B. | Pulitzer, Mrs. Joseph |
| Merkel, Herman W. | Quincy, C. F. |
| Meyer, Edwin O. | Rapp, Charles |
| Middleton, Geo. | Richter, Max |
| Miller, A. L. | Riker, Samuel |
| Miller, E. S. | Roberts, Miss M. M. |
| Miller, Dr. Geo. N. | Robertson, Miss Jennette |
| Mitchell, Mrs. John Murray | Rodewald, F. L. |
| Mitchell, Wm. | Roehrs, Julius |
| Montgomery, W. S. | Rogers, Mrs. Arch'd |
| Moore, Clement | Rogers, E. L. |
| Morgan, Wm. Fellowes | Rolley, Thos. |
| Morgenthau, Mrs. G. L. | Rowland, Mrs. Chas. B. |
| Morningstar, J. | Rumrill, Mrs. Jas. A. |
| Munson, C. W. | Ruppert, Mrs. Jacob |
| Myers, William S. | Rusby, Dr. H. H. |
| Nash, George V. | Russ, Edward |

- Sachs, Paul J.
 Sage, Mrs. Dean
 Schiff, Mortimer L.
 Schirmer, Rudolph E.
 Schurz, Miss Marianne
 Scott, C. W.
 Scott, Wm.
 Scrymser, James A.
 See, Alonzo B.
 Seitz, Charles E.
 Seligman, Isaac N.
 Seligman, Jefferson
 Shillaber, Wm.
 Siebrecht, H. A.
 Simon, Franklin
 Simpson, John Boulton
 Simpson, Robert
 Sloan, Benson Bennett
 Smidt, Thos.
 Smith, Adelbert J.
 Smith, Frank Morse
 Snow, E. G.
 Solotaroff, William
 Southwick, E. B.
 Spingarn, J. E.
 Spoon, J. J.
 Stanton, Frank McM.
 Stanton, J. R.
 Steinhardt, Jos. H.
 Steinway, Fred. T.
 Stern, Mrs. Benjamin
 Stetson, F. Lynde
 Stettenheim, I. M.
 Stevens, Alex. H.
 Stewart, Wm. R.
 Stimson, Dr. Daniel M.
 Stobo, Robert
 Struck, George F.
 Stuart, Jas.
 Sturgis, F. K.
 Suckley, Mrs. R. B.
 Sullivan, Mrs. James
 Taggart, Rush
 Tailer, E. N.
 Talcott, James
 Tatum, C. A.
 Tesla, Nikola
 Thorne, J.
 Tierney, Myles
 Tiffany, Louis C.
 Traendly, F. H.
 Trageser, W. C.
 Trevor, Mrs. J. B.
 Tricker, Wm.
 Troescher, A. F.
 Tuckerman, A.
 Tuckerman, Miss E.
 Tuttle, Mrs. B. B.
 Van Ingen, Mrs. Edward H.
 Verplanck, Mrs. Samuel
 Von Herff, B.
 Von Zedlitz, Mrs. Anna M.
 Wales, Edward H.
 Walker, H. F.
 Ward, C. W.
 Warren, Mrs. John Hobart
 Weathered, C. W.
 Weber, Chas.
 Wells, Oliver J.
 Westcott, Mrs. Robert E.
 White, W. A.
 Wicke, William
 Wilbour, Miss Theodora
 Willets, John T.
 Willis, A. L.
 Willis, W. P.
 Wills, Charles T.
 Wilson, Geo. T.

THE HORTICULTURAL SOCIETY OF NEW YORK

Wilson, M. Orme	Wright, Mrs. J. Hood
Witherbee, F. S.	Young, John
Witherbee, Mrs. F. S.	Zalinsky, Sam'l
Wood, Mrs. Cynthia A.	Zoller, Charles
Wood, Mrs. C. B.	Zvolanek, A. C.
Wood, James	

Patrons	2
Sustaining Member	1
Life Members	83
Annual Members	329
Total	415

CONSTITUTION

AS AMENDED MAY 14, 1902, MAY 13, 1908, AND MAY 10, 1911

1. The name of this Society shall be THE HORTICULTURAL SOCIETY OF NEW YORK.

2. The object of this Society shall be to collect and diffuse information on all topics relating to the culture and care of plants, fruits, flowers and vegetables, and to promote a taste for the same.

3. The officers of the Society shall be a president, five vice-presidents, a treasurer, and a secretary; their duties shall be those usually appertaining to these offices. The officers shall be elected by ballot at each annual meeting; they shall assume office on the second Wednesday in June succeeding, and shall hold office for one year, or until the election of their successors. The treasurer shall give such bond as may be approved by the council.

4. The officers and twenty-two other members shall constitute the directors or council. This council shall have charge of all the business of the Society and shall submit a report of its proceedings at each annual meeting of the Society, and whenever instructed to do so by the Society. Five councilors shall constitute a quorum for the transaction of business, but a less number may adjourn. The council may form committees for the direction of the work of the Society, either from its own membership,

or from the general membership of the Society, or both. The composition of all committees shall be reported to the Society at the next meeting subsequent to the formation of any committee. The councilors in addition to the officers shall be elected by ballot at each annual meeting; they shall assume office on the second Wednesday in June succeeding, and shall hold office for one year, or until the election of their successors. The secretary of the Society shall also be the secretary of the council. The council shall annually elect a chairman. Any vacancies that may occur in the officers or directors from any cause whatever may be filled by the council at any regular or special meeting.

5. The committees of the council shall include: (1) A Botanical Committee; (2) a Floral Committee; (3) a Fruit Committee; (4) a Vegetable Committee; (5) a Forestry Committee; (6) a Membership Committee; (7) a Finance Committee.

6. The Society shall consist of members, associate members, corresponding members, and patrons. The members shall be such as are elected under that designation and conform to the regulations of the Society. Corresponding members may hold seats at the meetings of the Society and make suggestions for the promotion of its objects; they shall not be eligible to office nor entitled to vote. Honorary members may be chosen from horticulturists who have distinguished themselves by important original investigations, and shall be limited in number to ten. Any person contributing two hundred and fifty dollars or more at any one time to the funds of the Society shall be designated a patron.

7. Each member, upon his election, and annually thereafter, shall pay to the treasurer the sum of five dollars. Members may become life members by the payment of fifty dollars at any one time. Associate members shall be elected in the manner prescribed for members. They shall have all the rights and privileges of members except voting and holding office, and may become members at any time subsequent to their election by paying the annual dues prescribed for members. The annual dues for associate members shall be one dollar.

8. All fees received from patrons and life members shall constitute a permanent fund, only the interest of which may be expended; said fund to be held by trustees to be duly appointed in accordance with the laws of the State of New York.

9. Regular meetings of the Society, accompanied when practicable by exhibitions, shall be held at places and on dates determined upon by the council during each month in the year. Special meetings of the Society may be called at any time by order of the president or chairman of the council and must also be called at the written request of any ten members, notice of such proposed meeting being sent by mail to each member of the Society at least three days in advance of the meeting; such notice of special meeting shall specify generally the business which is the subject of that meeting and none other than that shall be transacted. The council shall meet on the same day in advance of the meeting of the Society and may adjourn to any such time as it may see fit. Special meetings of the council may be held at any time on the call of the chairman of the council.

10. The annual meeting shall be held on the second Saturday in May. A quorum of the Society for the transaction of business shall consist of twenty-five members.

11. Amendments to the constitution may be made by a majority vote of the annual meeting of the Society on the recommendation of a two-thirds vote of the members of the council present at any stated meeting, fifteen days' notice thereof having been given.

THE HORTICULTURAL SOCIETY OF NEW YORK

OFFICERS

President

GEORGE T. POWELL, New York City.

Vice-Presidents

N. L. BRITTON

PATRICK O'MARA

T. A. HAVEMEYER

SAMUEL THORNE

JAMES WOOD

Treasurer

F. R. NEWBOLD, Poughkeepsie, N. Y.

Secretary

GEORGE V. NASH, New York Botanical Garden,
Bronx Park, N. Y. City

Council

Ex-Officio Members

THE OFFICERS OF THE SOCIETY

Elected Members

F. R. PIERSON, *Chairman*

F. L. ATKINS

W. NILSSON

JOHN CANNING

H. H. RUSBY

MRS. LOUIS S. CHANLER

H. A. SIEBRECHT

J. W. CROMWELL

ROBERT SIMPSON

HENRY F. DU PONT

E. B. SOUTHWICK

I. S. HENDRICKSON

ROBERT STOBO

JOHN E. LAGER

JAMES STUART

J. A. MANDA

J. H. TROY

E. S. MILLER

C. W. WARD

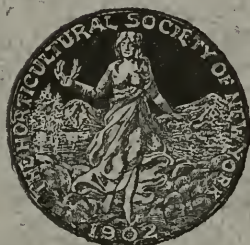
CLEMENT MOORE

Journal

of the

Horticultural Society of New York

Vol. I, No. 13



OCTOBER, 1912

EDITED BY THE SECRETARY

GEORGE V. NASH

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PUBLISHED BY THE SOCIETY

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THE COMING FALL EXHIBITION

The Annual Fall Exhibition of plants and flowers will take place at the American Museum of Natural History, commencing on Friday, November first, and continuing until Tuesday, the fifth. A private view, opening at seven, will be given on Friday evening to members of the Society, of the American Museum of Natural History, and of affiliated organizations. Cards of invitation will be issued for the private view, and if extra invitations are desired they may be had by application to the secretary.

The premium-list prepared by the Exhibition Committee carries a total of about \$1,400.00. A copy of this has been sent to all members of the society. This can be made the largest and finest exhibition ever given by the society, if all will help, either by contributing to the special fund required, or by making exhibits, or both. There being no admission fee with which to help meet the expenses, it is necessary to secure a special fund to defray the premium-list and other expenses connected with the exhibition. Last fall the exhibition was visited by nearly 45,000, about 26,000 of these attending on Sunday afternoon. Many public school children are among the visitors, making an educational factor of the exhibition, where may be seen the finest and best examples of the art of the horticulturist. At the conclusion of the exhibition many flowers are distributed to hospitals and other public institutions, thus giving those unable to attend an opportunity of enjoying these beautiful flowers.

About one half of the sum offered is devoted to prizes for the chrysanthemum, which holds first place in the heart of the public at this season of the year. The premiums for specimen bush plants have been much increased over those of last fall, and a

few additional classes have been added. Cut roses have been allotted liberal prizes, the classes this fall being designated by color, with the exception of the American Beauty, rather than by variety as heretofore. This will allow a greater latitude. Carnations have a prominent place in the list. Foliage and decorative plants call for many exhibits of this nature. Among the orchids, premiums have been offered for both plants and cut flowers, and second prizes have been offered in all cases, a change from last year.

The premiums in chrysanthemum plants are open to all, while in the cut flower classes there are prizes for commercial and non-commercial growers. This will permit those who make a business of selling chrysanthemums an opportunity to exhibit without entering into competition with their customers. Roses, carnations, and orchids also have premiums for both commercial and non-commercial growers, while the premiums for foliage and decorative plants are open to all.

The exhibition is entirely free, and will be open to the public on Saturday, Monday and Tuesday, the second, fourth and fifth, from 9 A. M. to 5 P. M. and from 7 to 10 P. M., and on Sunday, the third, from 1 to 5 P. M.

SUMMER AND FALL EXHIBITIONS

The exhibition usually held in July took place this year on June twenty-ninth and thirtieth, Saturday and Sunday, in the Museum building, New York Botanical Garden. It was held in coöperation with the Garden, which offered the premiums, to be awarded by the exhibition committee of the council of The Horticultural Society of New York. Premiums were offered for roses, Japanese irises, sweet peas, herbaceous plants, shrubs and trees, and vegetables. In the classes for irises and sweet peas prizes were offered in an open to all class and also for non-commercial growers.

The first prize for roses was awarded to Mr. A. P. Stokes, of Noroton, Ct., Andrew Whitelaw, gardener, for a collection of fine varieties, the second going to Mr. H. Darlington, of Mamaroneck, N. Y., P. W. Popp, gardener, for a smaller collection.

Scott Bros. secured the first prize, open to all, for twelve vases of Japanese irises, with an exhibit of superb blooms, Mr. John Lewis Childs, of Floral Park, N. Y., taking second.

Six vases of sweet peas, in the open to all class, gave the first prize to Miss M. T. Cockcroft, of Saugatuck, Ct., Adam Paterson, gardener, the second to Mrs. J. B. Trevor, of Yonkers, N. Y., Howard Nichols, gardener. Miss Cockcroft also took the first prize for a vase of sweet peas, Mr. H. Darlington, second. To Mrs. F. A. Constable, Mamaroneck, N. Y., James Stuart, gardener, was awarded the first prize for a collection of flowers of herbaceous plants. A large collection of the flowers of shrubs and trees gave the first prize to Mr. T. A. Havemeyer, of Glen Head, N. Y. A. Lahodny, gardener, the second to Mr. H. Darlington.

To Mr. James A. Macdonald, Flushing, N. Y., Richard Hughes, gardener, was awarded the first prize for six vases of Japanese irises, in the class for non-commercial growers, the second to Mr. T. A. Havemeyer. The first prize, for non-commercial growers, for three vases of sweet peas, was secured by Miss M. T. Cockcroft, the second being taken by Mrs. J. B. Trevor.

The classes for vegetables were open to all. For twelve vegetables Mrs. J. B. Trevor received the first prize, and Mrs. F. A. Constable the second. Six vegetables brought the first prize to Mr. James A. Macdonald, the second to Mr. T. A. Havemeyer.

Of a collection of miscellaneous plants exhibited by Mr. John Lewis Childs special mention was made. Special prizes were awarded to: Mr. Louis C. Tiffany, of Oyster Bay, N. Y., John Miller, gardener, for twelve chrysanthemum blooms; and to Mr. T. A. Havemeyer, for collections of lilies and hydrangeas.

The New York Botanical Garden exhibited large collections, not for competition, of the flowers of herbaceous plants and of shrubs and trees,

The exhibition of Saturday and Sunday, August thirty-first and September first, was held in the same building. On account of Monday, the second, being Labor Day, the exhibition was continued through that day. It was primarily an exhibition of gladioli, for which most of the premiums were offered; a few premiums were offered for montbretias. Prizes were offered in classes open to all and for non-commercial growers. There was

a large and magnificent display of these attractive flowers, filling the two long center tables and several side tables. The flowers were in excellent condition at the close of the exhibition and were sent to hospitals and other institutions.

A large collection of gladioli, excellent flowers, was exhibited by Mr. John Lewis Childs. This almost filled one of the long center tables, and secured for him the first prize for a collection of named varieties, in the open to all class. For twelve varieties, three spikes of each, in the same class, the first prize was awarded to Mr. Arthur Cowee, of Berlin, N. Y., for a collection of superb flowers, the second going to Mr. T. A. Havemeyer. Mr. Cowee also captured the first prize, in the class open to all, for the best vase of any white variety of gladiolus, twenty-five spikes. The first prize for a table center piece went to Mr. T. A. Havemeyer.

The prizes offered to non-commercial growers were won as follows: For a collection of named varieties of gladioli, the first by Mr. T. A. Havemeyer, the second by Mr. H. Darlington. For six varieties of gladioli, two spikes of each, the first by Mr. Havemeyer, the second by Mr. Darlington. For a vase of any white variety, six spikes, the first by Mr. Havemeyer, the second by Mr. Darlington. For a vase of any pink variety, six spikes, by Mr. Havemeyer.

The first prize for a collection of montbretias, in the class open to all, was won by Mr. John Lewis Childs; that for non-commercial growers by Mr. H. Darlington.

The exhibition of Saturday and Sunday, August twenty-eighth and twenty-ninth, was also held in the Museum building, New York Botanical Garden. This was arranged mainly for dahlias and asters. The inclement weather just previous to the time of the exhibition so damaged these flowers that few were fit for exhibition purposes. Mr. H. Darlington won first prizes for the following: collection of fifty dahlias; collection of twenty-five dahlias; and for five each of show, decorative, cactus, and peony-flowered; vase of ten single dahlias.

The New York Botanical Garden made an exhibit of the flowers of herbaceous plants.

THE WHITE CEDAR AND ITS RELATIVES

Here are included our common white cedar, *Chamaecypris thyoides*, the yellow cedar, *C. nootkatensis*, the Port Orford cedar, *C. Lawsoniana*, and the Japanese plants commonly known as retinisporas. These last are known as *Retinispora obtusa* and *R. pisifera*, and from them, by selection and cultivation, have been derived a host of forms, including some of our most valued ornamental evergreens. Under cultivation the species are usually of much lower stature than in their wild state, thus lending themselves readily to various kinds of ornamental and decorative planting. It is these derived forms, interesting and unusual on account of color or peculiarities of growth, that are of especial value from the standpoint of horticulture and landscape gardening. Some of the forms are well adapted to formal work, and others, of a dwarf habit, are very useful in rockeries. The more desirable forms will be enumerated below under each species.

Chamaecypris obtusa, *C. pisifera*, and *C. nootkatensis* are hardy, in sheltered situations, as far north as New England, while *C. Lawsoniana* can be grown with satisfaction only south of the latitude of New York City; *C. thyoides* is hardy much farther north than any of the others.

A light sandy loam, somewhat moist but well-drained, suits them best. *C. obtusa* and *C. Lawsoniana* will stand somewhat drier situations than the others, while *C. thyoides* is the only one which will grow in swampy or very wet places. A position of partial shade is grateful to them, and to secure the best results they must be protected from dry winds, which are especially destructive in late winter and early spring, before root-action has been reestablished.

They may be propagated by seeds, cuttings, and grafting. Seeds should be sown in the early spring. Cuttings, which should be made from mature wood in the fall, are best placed in sandy loam and kept in cold frames or a cool greenhouse during the winter. A gentle bottom heat early in the spring will hasten the formation of roots. For the propagation of the various horticultural forms the method of cuttings should be adopted,

for the characteristics of the old plant are thus insured. *C. nootkatensis*, *C. obtusa*, and *C. thyoides* do not propagate readily in this way, and for them it may be necessary to resort to grafting.

A consultation of the following descriptions will readily suggest the use for which each is best adapted.

The genus, which includes 5 species, all in cultivation, inhabiting North America and Japan, may be briefly characterized as follows:

CHAMAECYPARIS Spach. Hist. Nat. Veg. II: 329. 1842

Retinispora S. & Z. Fl. Jap. 2: 36. 1842.

Evergreen trees, with opposite scale-like appressed or somewhat spreading leaves (or linear and widely spreading in seedlings and in some of the horticultural forms), arranged in 4 rows and usually densely crowded. Flowers of 2 kinds, staminate and pistillate, borne on the same plant, the staminate yellow or red, of numerous stamens, and often very conspicuous by their abundance, the pistillate inconspicuous, globose. Cones ripening the first year, globular, the abruptly enlarged and rounded scales flat or somewhat depressed at the apex and sometimes with a short central projection. Seeds with two broad wings, 1-5 under each scale.

KEY TO THE SPECIES

Cones less than 4" in diameter.

Cones bluish purple, with a bloom when young; fruiting branchlets $\frac{1}{2}$ " wide or less. 1. *C. thyoides*.

Cones brown, without a bloom; fruiting branchlets over $\frac{1}{2}$ " wide. 2. *C. pisifera*.

Cones 4" in diameter or more.

Cones with 4-6 scales; leaves without glands. 3. *C. nootkatensis*.

Cones with 8-10 scales; leaves with a gland on the back.

Scales without a terminal projection; fruiting branchlets much compressed, over $\frac{1}{2}$ " wide. 4. *C. obtusa*.

Scales with a stout projection at the apex; fruiting branchlets usually less than $\frac{1}{2}$ " wide. 5. *C. Lawsoniana*.

Many of the forms rarely if ever produce cones, so that in their absence it is difficult for those unfamiliar with these plants to identify the species. For such the following key, based upon leaf characters, is provided.

Leaves thick, at least the basal portion more or less appressed to the branchlets.

Leaves with glands on the back or sides.

Leaves acute.

1. *C. thyoides*.

Leaves obtuse.

Branchlets 1" wide or nearly so.

4. *C. obtusa*.

Branchlets rarely exceeding $\frac{1}{2}$ " wide.

5. *C. Lawsoniana*.

Leaves without glands, or the glands very obscure.

Leaves acute, cuspidate.

Old foliage green or yellowish green.

2. *C. pisifera*.

Old foliage a dark rich green.

3. *C. nootkatensis*.

Leaves obtuse, blunt.

4. *C. obtusa*.

Leaves flat, thin, spreading, with 2 white lines on the lower surface.

Branches erect; habit cylindrical.

1. Varieties of *C. thyoides*.

Branches spreading; habit globular to broadly conic.

2. *C. pisifera squarrosa*.

I. CHAMAECYPARIS THYOIDES (L.) Sargent. White Cedar.

Swamp Cedar. Swamp Juniper

Cupressus thyoides L. *Chamaecyparis sphaeroidea* Spach. *Thuja sphaeroidea* Spreng.

This tree, in a wild state, reaches a height of 75 feet, with a trunk diameter of a little over 3 feet; in habit it is narrowly cone-shaped. Branches widely spreading, the branchlets somewhat flattened or nearly round; foliage bluish green, the leaves appressed, in 4 rows, imbricated, usually very acute, $\frac{1}{2}$ "-1" long, and with a distinct gland on the back, the leaves on young or robust growths and on seedlings linear, spreading, and $2\frac{1}{2}$ "-3" long; staminate flowers 1"-2" long, with 10-12 stamens; pistillate flowers reddish and about 1" in diameter; cones sessile or nearly so, globular, 2"-3 $\frac{1}{2}$ " in diameter, glaucous and bluish purple when young, the scales flat or nearly so at top and with a short projection; seeds 1 or 2 under each fertile scale, about 1" long.

A native of the United States, extending along the coast from Maine to Mississippi, and inhabiting wet woods and swamps. The two following well-marked dwarf varieties occur:

Leaves of 2 forms, the one short, appressed and scale-like, the other, less frequent occurrence, spreading.

Var. 1. *Andelyensis*.

Leaves of one form, all widely spreading.

Var. 2. *ericoides*.

Variety I. ANDELYENSIS (Carr.) Nash. *Chamaecyparis sphaeroidea Andelyensis* Carr. *Retimispora leptoclada* Hort.

Leaves of 2 forms, the juvenile spreading ones soon disappearing. Branches erect and much-divided, the divisions forming dense corymbiform masses. It rarely attains a height of 10 feet.

Variety 2. ERICOIDES (Carr.) Nash. *Chamaecyparis ericoides* Carr. *Chamaecyparis sphaeroidea ericoides* Beissn. & Hochst. *Retinispora ericoides* Zucc.

A dense low shrub of cylindrical habit, with erect branches. Leaves spreading, linear-lanceolate, when mature usually less than $\frac{1}{4}$ in. long, flat, gray-green, becoming of a reddish brown or violet color in winter, with 2 broad white lines on the lower surface.

Other varieties of *C. thyoides* are as follows: *glauca*, with bluish foliage; *aurea*, foliage golden; *atrovirens*, foliage deep green; *pyramidata* and *fastigiata*, of strict erect habit; *pendula*, with weeping branches; *nana*, and *pygmaea*, both dwarf forms; and *variegata*, a form with slender branches partly colored yellow.

2. CHAMAECYPARIS PISIFERA S. & Z. Sawara Cypress. Pear-fruited Retinispora or Japanese Cedar

Retinispora pisifera S. & Z. *Cupressus pisifera* Koch. *Thuja pisifera* Masters.

A tree, attaining in its native country a height of about 100 feet, with widely spreading branches, the flattened branchlets arranged in a 2-ranked manner; in cultivation a smaller tree of ovate outline. Leaves ovate-lanceolate, pointed, thick, fleshy, appressed or ascending (flat and widely spreading in some of the forms with juvenile foliage), 1"-2" long; staminate flowers obtuse, cylindrical, consisting of 8-10 stamens; cones nearly globular, less than 4" in diameter, of 10-12 scales which have a very small point in the slightly depressed apex.

A native of Japan, where it is plentiful in forests and around the grounds of the temples. The following are marked horticultural varieties:

Leaves convex or keeled on the green back.

Branches with slender elongated pendulous tips, the leaves and branchlets scattered, the former appressed or nearly so. Var. 1. *filifera*.

Branches spreading, but not pendulous, the leaves spreading decidedly at the tips.

Var. 2. *plumosa*.

Leaves with the lower surface flat and bearing two wide white or bluish white lines, widely spreading. Var. 3. *squarrosa*.

Variety 1. FILIFERA Beissn. *Cupressus pisifera filifera* Masters.
Retinispora filifera Gordon.

A very distinct variety, conic in shape, highly decorative, with slender elongated drooping tips to the branches. The leaves are triangular in cross-section, the free portion appressed or but slightly spreading. There are a number of forms of this variety, among them being: *aurca*, with the tips of the branches golden yellow; *aurca gracilis*, with the golden tips very slender; and *gracilis*, with the tips green and very slender.

Variety 2. PLUMOSA Beissn. *Cupressus pisifera plumosa* Masters.
Retinispora plumosa Gordon.

A low tree of conical outline, the branchlets short and ascending and furnished with numerous lateral divisions. Leaves triangular in cross-section, awl-shaped, spreading at an angle of about 45°. Forms of this variety are: *albo-picta*, having the tips of the branches a creamy white; *argentea*, with the young growth a creamy white, becoming green later; *aurca*, the apex of the branches a light golden yellow, which turns to a deep green later.

Variety 3. SQUARROSA Beissn. *Cupressus pisifera squarrosa* Masters. *Retinispora leptoclada* Zucc. *Retinispora squarrosa* S. & Z.

A dense shrub or small tree of great decorative value, with an irregular conic outline. Leaves flat, widely spreading, linear, with the lower surface furnished with two broad bluish white lines, these, with the glaucous color of the upper surface, giving the plant a striking silvery appearance. Forms of this variety are: *sulphurea*, with the tips of the branchlets a light yellow; *Veitchii*, of dwarf habit, more dense and compact than *squarrosa*, and not so silvery.

Other varieties of *C. pisifera* are: *aurca*, with the young growths a rich golden yellow; *sulphurea*, with the young growths of a pale yellow.

3. CHAMAECYPARIS NOOTKATENSIS (Lamb.) Spach. Nootka Sound Cypress. Yellow Cedar. Sitka or Yellow Cypress. Nootka Cypress. Alaska Ground Cypress. Alaska Cypress

Cupressus nootkatensis Lamb. *Thuyopsis borealis* Hort.

A tall tree in its native state, attaining a height of over 100 feet and a trunk diameter of nearly 6 feet, with spreading branches, forming a tree of narrowly conic outline; in cultivation a small tree of conic or somewhat globular habit. Branchlets nearly round, or slightly flattened, rather stout; leaves about $1\frac{1}{2}$ " long, bluish green, ovate, pointed, closely appressed, or on young plants or on young and vigorous shoots of old trees larger and spreading; staminate flowers about $2\frac{1}{2}$ " long, oblong, of 8-10 stamens; pistillate flowers less than 1" long, light reddish; cones nearly globular, dark reddish brown, glaucous, about 6" in diameter, of 4-6 scales tipped with a stout projection and bearing 2-4 seeds.

This magnificent tree is found from Alaska to Oregon, inhabiting sea-level in the north, but ascending to higher altitudes as it goes south.

Under cultivation this has not produced so many forms as some other members of the genus. The following are known: *glauca*, with very glaucous foliage; *pendula*, a weeping form; *compacta*, of dwarf dense habit; *gracilis*, of round outline and with the branches more slender than in the type; *argenteo-variegata*, variegated with creamy white; *lutea*, variegated with pale yellow; *aurco-variegata*, variegated with golden yellow.

4. CHAMAECYPARIS OBTUSA (S. & Z.) Endlich. Hinoki or Japanese Cypress

Retinispora obtusa S. & Z. *Cupressus obtusa* Koch. *Thuja obtusa* Masters.

A tall tree, sometimes reaching a height of 100 feet or more, but of much lower stature in cultivation, and a trunk diameter sometimes of 3 feet. Branches spreading, the branchlets distichous, flattened, and arranged in a frond-like manner; leaves appressed, obtuse or merely acutish, the lateral pairs often glandular; staminate flowers oval, pale yellow; cones globose, about $\frac{1}{2}$ ' in diameter, of 8-10 scales, each with a short terminal point and bearing 2-6 seeds.

A native of Japan, where it is found in the southern mountainous provinces. It is sacred to the followers of the Shinto

faith, and it is much planted in the neighborhood of their temples, from the wood of which they are built. It is the favorite tree employed by the Japanese in the production of their dwarf trees.

The following are well-marked varieties of this species:

Variety 1. BREVIRAMEA (Maxim.) Rehder. *Chamaecyparis breviramea* Maxim. *Chamaecyparis obtusa filicoides* Hort. *Cupressus obtusa filicoides* Kent. *Retinispora filicoides* Gordon. *Thuja obtusa filicoides* Masters.

A variety of dwarf dense habit. The spreading flat branches are crowded with short flat branchlets of about equal length, giving the branches somewhat the appearance of fern-fronds, hence the name. Of this variety there is also a golden yellow form of dwarf habit, known as *aurea*.

Variety 2. LYCOPODIODES (Gordon) Carr. *Retinispora lycopodioides* Gordon. *Retinispora monstrosa* Hort. *Cupressus obtusa lycopodioides* Kent.

A dwarf form with the stout branchlets short, of irregular length, and crowded on all sides of the branches, especially toward their ends.

Other varieties of *C. obtusa*, depending upon habit or color, are: *albo-spica*, with the branchlet tips whitish; *aurea*, of a deep golden yellow, changing to dark green later; *compacta*, a low form of compact habit; *gracilis aurea*, of slender habit and golden yellow foliage; *Keteleerii*, of denser habit than the typical form, the deeper green of the foliage contrasting with the light yellow of some of the terminal growths; *Mariesii*, with the terminal growths light yellow or creamy white; *nana*, a low form with deep green branches, and the golden form of this known as *aurca*; *nana filifera*, a dwarf form with the tips of the branches elongated, the branchlets themselves irregularly arranged and not forming fan-like masses; *pendula*, with the elongated branchlets of the spreading stout branches drooping; and *pygmaca*, an exceedingly dwarf form with horizontally spreading branches.

5. CHAMAECYPARIS LAWSONIANA (A. Murray) Parlatore. Lawson's Cypress. Port Orford Cypress. Oregon or White Cedar. Ginger Pine

This tree, in its wild state, attains a height sometimes of 200 feet and a trunk diameter of 10-12 feet; in cultivation in the east

it is a small tree of dense conical habit. The branches are spreading, usually drooping at the end, and furnished with flattened branchlets arranged in a frond-like manner; leaves appressed, obtuse, or sometimes acutish, with a distinct gland on the back, commonly less than 1" long, or on vigorous branchlets or on young plants often longer and spreading at the apex; staminate flowers oblong, red, of about 12 stamens; cones reddish brown and usually glaucous, about 5" in diameter, and composed of 8-10 scales, each tipped with a short projection, with 2-4 seeds under each scale.

This beautiful conifer occurs on sandy ridges along the coast or on mountain sides in southwestern Oregon and northern California. It is extremely variable, many forms having originated in cultivation, depending upon peculiarities in habit or in the color of the foliage. Some of the best of these are the following: *albo-spica*, of slender habit and with the tips of the branches creamy white; *Alumi*, hardier than the type, with glaucous foliage of a metallic hue, and a columnar habit; *compacta*, of dense dwarf habit and glaucous young growths; *argentea*, the foliage almost silvery and the habit slender; *erecta*, a dense fastigate form of pyramidal shape, and with the lateral branches very short—there is a form of this with bright green foliage known as *viridis*, and another with glaucous foliage known as *glauc*; *filiformis*, of a dwarf globose habit and with elongated branches with few short lateral branchlets; *lutea*, compact in habit and with the young growths of a clear yellow; *nana*, of dwarf globular habit.

PROCEEDINGS OF THE SOCIETY

JUNE 29, 1912

A meeting of the society was held on Saturday, June 29, 1912, in the Museum building, New York Botanical Garden, at 3:50 P. M., Mr. Pierson presiding. The exhibition accompanying this meeting was held in the same building, continuing also on Sunday.

The minutes of the meeting of June 8, 1912, were read and approved.

The following person, having been approved by the Council and

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referred by that body to the society, was proposed for life membership:

Eugene Delano.

Upon motion, seconded and carried, the secretary was instructed to cast an affirmative ballot for the election of this party. This was done, and the person declared elected a life member of the society.

The resignations of the following persons were accepted with regret:

Mrs. Samuel Verplanck, Henry Breunich, A. L. Willis, B. von Herff, D. D. Allerton, and Mrs. John W. Edmonds.

Adjournment was taken at 4 P. M.

GEORGE V. NASH,
Secretary

AUGUST 31, 1912

A meeting of the society was held on Saturday, August 31, 1912, in the Museum building, New York Botanical Garden, at 3:45 P. M., Mr. Pierson presiding. The exhibition accompanying this meeting was held in the same building, continuing also on Sunday.

The minutes of the meeting of June 29, 1912, were read and approved.

The resignations of the following parties were accepted, subject to payment of arrears in dues, if any:

Francis X. Golly, H. A. Caesar, G. R. MacDougall.

There being no further business before the meeting adjournment was taken at 3:55 P. M.

GEORGE V. NASH,
Secretary

SEPTEMBER 28, 1912

A meeting of the society was held on Saturday, September 28, 1912, in the Museum building, New York Botanical Garden, at 3:30 P. M., the president presiding. The exhibition accompanying this meeting was held in the same building, continuing also on Sunday.

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The minutes of the meeting of August 31, 1912, were read and approved.

The following persons, having been approved by the Council and their names referred to the society, were presented for annual membership:

Mrs. Ethel Anson S. Peckham, Mrs. L. E. Van Etten.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected annual members of the society.

There being no further business before the meeting, adjournment was taken at 3:45.

GEORGE V. NASH,
Secretary

THE HORTICULTURAL SOCIETY OF NEW YORK

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Bronx Park, N. Y. City

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Elected Members

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EDITED BY THE SECRETARY

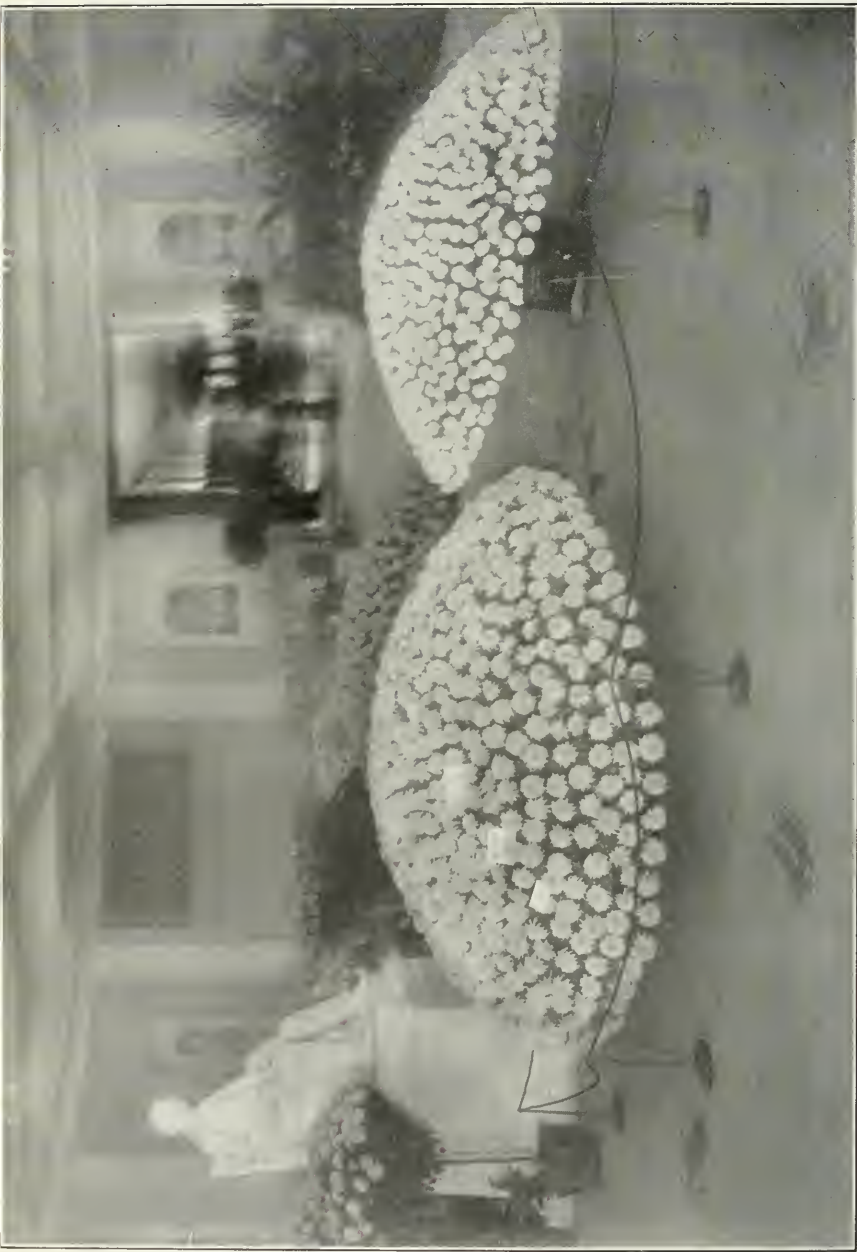
GEORGE V. NASH

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Fall Exhibition of 1912. Group of three bush chrysanthemum plants, each plant a first-prize winner, exhibited by Mr. Adolph Lewisohn. The plant to the left is Well's Late Pink, winner of the sweepstakes prize for the best bush plant.

That to the right is Lady Lydia; the one in the rear is R. F. Felton. This group was awarded a special prize of a gold medal.

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By subscription, \$1.00 per year

THE EXHIBITION OF LAST FALL

The annual fall exhibition has come and gone, and it will be remembered by all as the greatest ever given by the society up to the present time. It opened on Friday night, November 1, in the American Museum of Natural History, with a private view to members of the society, the museum, and affiliated organizations. It was open to the public, free of charge, the four days following, closing on the evening of the fifth. The open hours were 9 A.M. to 5 P.M. and 7 to 10 P.M., excepting on Sunday, when it was open from 1 to 5 P.M. only. The attendance of 44,892 at the fall exhibition of 1911 was considered large, but this year far exceeded that record, the attendance totaling in the four days and five nights 130,287, distributed as follows: Friday evening, the private view, 831; Saturday, 15,761; Sunday, 90,769; Monday, 10,801; Tuesday, 12,125. This is not only the record for the flower show, but it is the record for attendance at the museum. The greatest previous attendance was during the tuberculosis exhibit some years ago when something over 60,000 people passed through the halls in the same length of time on a Sunday afternoon.

Consider the attendance for Sunday, and what it means. Over 90,000 in four hours, 22,692 per hour, or 378 per minute. A crowd was waiting when the doors opened at one, and from that time on a steady stream surged through the entrance. Every car on the eighth avenue line emptied itself at 77th St., and all bent their steps toward the Museum. Within an hour after opening the halls became so crowded that it was necessary to close the doors on the lower floor, directing the people up the main steps outside, thus affording them entrance to the upper floors.

In this manner the crowds were dispersed through other parts of the building, all finally finding their way to the flower show on the ground floor.

And in spite of the vast crowd, filling the aisles with a solid mass of interested spectators, not a person was injured, nor a plant upset, nor a flower broken. Mr. J. B. Foulke, superintendent of the Museum, aided by his corps of able assistants, kept perfect order, the crowds moving in orderly lines. Great credit is due to him for the precautionary measures taken before the opening of the doors and for the excellent methods employed in handling the crowds after gaining entrance. At about three o'clock it was necessary to close the doors of the West Assembly Hall, in which was the main display of orchids, a barrier in the shape of a bar excluding the visitors. Soon the crowd about the door to this exhibit became so great that it impeded progress in the main halls, making imperative the closing of the doors of this room.

The exhibition was held in the foyer, the north and west halls, and the Indian hall extending to the north from the end of the west hall. The foyer and the north hall held the chrysanthemum plants, the palms and other decorative plants, and the decorative groups. In the West Assembly Hall and in the corners adjoining the entrance the orchids were displayed. To the west hall and the alcoves opening therefrom were allotted the large cut chrysanthemum blooms, and also some of the pompons and singles. In the southwest hall and the Indian hall opening out of it to the north were the roses, carnations, and the greater part of the cut blooms of the single, anemone, and pompon chrysanthemums.

The exhibits were larger and of better quality than those of any previous show. The competition was keen, in some cases twelve to fifteen entries. And of all the exhibits the chrysanthemum was queen, and rightly so, for is this not the flower of fall? It was to be found in all forms, from the little pompon, which is of so easy culture that all may have it in their garden, however small, to the large blooms requiring the expert care of the professional. Chrysanthemum plants in their normal growth, others grown to a single stem with a large bloom on top, standards with their crown of gorgeous blossoms, and the specimen bush plants, all



Fall Exhibition of 1912. In foreground, collection of twenty-four varieties, one of each, stems twelve inches long, exhibited by Mr. Percy Chubb, first-prize winner.

were there. And it was these, the specimen bush plants, which made the center of attraction, and which made this show the talk of the city. Never before, anywhere, in this country or across the big water, had there been seen such marvellous specimens of the horticulturist's art. This was the verdict of all who saw.

In the center of the foyer, in front of the statue of Mr. Jesup, was a group of three of these plants. Emerging suddenly from the entrance, one's attention was at once arrested by this marvellous group. Three large plants in perfection of detail, every flower in prime condition, a group of yellow, and white, and pink. So impressed were the exhibition committee with the unusual merit of this group that a special prize of a gold medal was awarded to the exhibitor, Mr. Adolph Lewisohn, whose able superintendent, John Canning, had brought these fine plants to such a state of perfection.

The foremost plant was a specimen of Lady Lydia, ten feet eight inches in diameter, with 1,500 flowers, all in perfect condition and of equal maturity. To the right of this was a still larger plant of R. F. Felton, eleven feet six inches in diameter, aglow with its yellow flowers, about 1,400 in all. The remaining plant of the group was a magnificent specimen of Well's Late Pink, eleven feet six inches in diameter. This plant was considered by the judges the best bush plant on exhibition and was awarded the sweepstakes prize, a silver medal. Each of these plants secured the first prize for the best specimen bush white, yellow, and pink. The second prize for the white was awarded to Mr. Samuel Untermeyer, W. H. Waite, superintendent, who also took second prize for the yellow, with a fine plant of Old Gold. Mr. Wm. B. Thompson, R. L. Cushman, superintendent, received the second prize for the pink, with a plant of Well's Late Pink. Mr. Lewisohn won the first prize, with Black Hawk, for a specimen bush any other color, Mr. Untermeyer taking the second, with Brutus.

In the anemone or single bushes, Mr. Untermeyer won the first in the white with Garza, there being but one entry. For any other color, Mr. Untermeyer secured first, Mr. Lewisohn second, with Dosoris.

Among the specimen standards, Mr. George Schlegel, S. G.

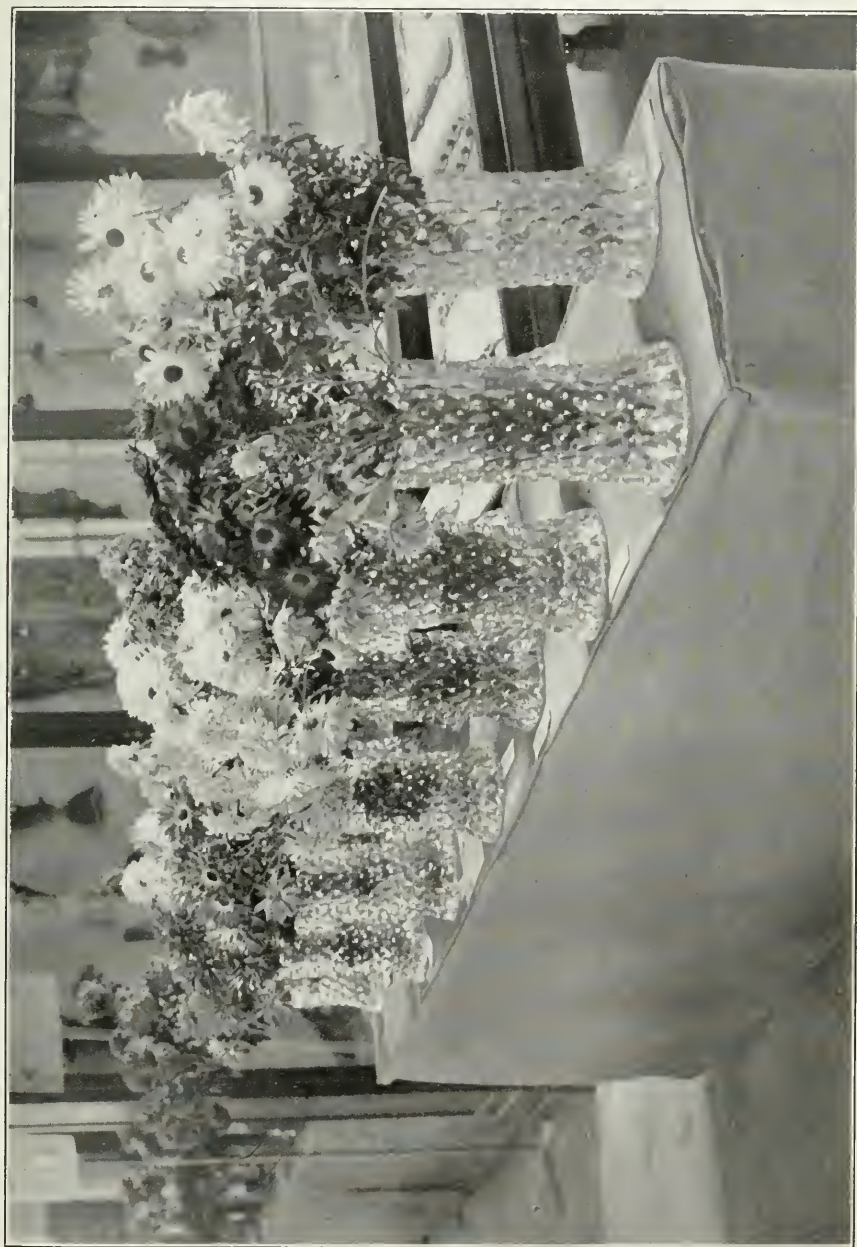
Milosy, gardener, took first for the yellow. In the class for any other color Mr. Schlegel and Mr. Chas. Hathaway, Max Schneider, gardener, both entered plants of Enguehart, the former taking first prize, the second going to Mr. Hathaway.

For plants grown to a single stem, Mr. Samuel Untermyer won first prize for twelve plants, in the following varieties: Mrs. David Syme, Mary Mason, Mrs. H. Stevens, J. E. Dunne, Merza, Pockett's Crimson, Well's Late Pink, H. Gould, W. Mease, F. E. Nash, Wm. Turner, and F. S. Vallis. For six plants in the same class Mr. Untermyer was also the winner of first with the following: J. E. Dunne, Yellow Miller, Wm. Turner, Mrs. H. Stevens, Well's Late Pink, and Merza.

In the class of twenty-five pompons, singles or anemones, not less than twelve varieties, in not over eight inch pots, Mr. Untermyer won first with, among others: Lilian Doty, Garza, Dosoris, Mary Richards, and Sylvia Slade; Mrs. Myron I. Borg, Jas. Aitchinson, gardener, took second with, among others: Felix, Elsa Neville, and Catherine Livingston. For twelve plants of the same kind, not less than six varieties, in not over eight inch pots, Mr. H. M. Tilford, Jos. Tansey, gardener, was awarded first prize, Mr. Untermyer second.

In the classes for cut chrysanthemum flowers there were many more entries than in the previous year. The competition was especially keen among the non-commercial growers.

In the classes for commercial growers the following were prize winners. For stems not less than three feet long, twelve flowers of each, Messrs. Traendly & Schenck won first for the white, pink, and any-other-color classes, a second prize in the pinks going to Mr. Chas. H. Totty. A vase of twenty-five blooms, arranged for effect, autumn or other foliage permitted, gave the first prize to Messrs. Traendly & Schenck. The silver medal, for six new varieties not in commerce, one bloom of each, was won by Mr. Chas. H. Totty. For a collection of thirty varieties, stems not over twelve inches, all named kinds, one of each variety, Scott Bros. secured first prize, Chas. H. Totty second. Among the hardy pompons, twenty-five varieties, five sprays to a vase, Mr. Chas. H. Totty won first, Scott Bros. second. A collection of



Fall Exhibition of 1912. Collection of singles and anemones, twelve varieties, exhibited by Miss M. T. Cockerott, winner of the first prize.



singles and anemones, twenty-five varieties, five sprays to a vase, won the first for Mr. Totty, the second for Scott Bros.

In the classes provided for non-commercial growers, the following were winners. For stems not less than two feet, six blooms, in the whites, both prizes were won with Wm. Turner, the first by Miss M. T. Cockcroft, Adam Paterson, gardener, the second by Mrs. Wm. E. S. Griswold, A. J. Loveless, superintendent. There were seven entries in this class. In the pink, the first was won by Mr. Wm. B. Thompson. In the yellow, for which there were seven entries, Miss Cockcroft secured the first, Mr. Thompson the second. In the any-other-color class, Miss C. A. Bliss, John T. Burns, gardener, won first, Mrs. F. A. Constable, Jas. Stuart, gardener, second. A vase of one or more varieties, arranged for effect, any other foliage permitted, brought the first prize to Mr. Percy Chubb, Alex. Mackenzie, gardener, the second to Mr. Herbert L. Pratt, Henry Gaut, gardener. For a collection of six varieties, three of each, eighteen inch stems, there were five entries, with Miss M. T. Cockcroft the winner of the first, exhibiting Mrs. Stevens, and Miss Blanche Potter, George Wittlinger, gardener, the second, exhibiting Manhattan. For a collection of twenty-four varieties, one of each, stems not over twelve inches, all named kinds, the first prize winner was Mr. Percy Chubb, the second Mrs. F. A. Constable; there were four entries. A collection of six varieties under the same conditions gave the first prize to Mrs. Wm. E. S. Griswold, for blooms of Mrs. Stevens, Ursula Griswold, Mrs. Wm. Duckham, Wm. Turner, Well's Late Pink, and Onunda; the second to Miss M. T. Cockcroft, for blooms of Mary Mason, W. Mease, Mrs. H. Stevens, Morton F. Plant, Mrs. David Syme, and M. Rosseau. There were fifteen entries. Mr. Chas. Mallory, Wm. J. Sealey, gardener, won the first prize for a collection of hardy pompons, twelve varieties, five sprays to a vase, exhibiting Queen of the Whites, Alma, Canova, Clifton, Elberta, Inga, Lilian Doty, Viola, M. Mamoset, Lulu, Delicatessen, and Prince of Bulgaria. A collection of the same kind brought the second prize to Mr. Frederick Sturges, Thos. Bell, gardener, who exhibited Etau, Mrs. Porter, Queen of the Whites, Golden Mme. Martha, Bohemia, Julia Lagravere, St. Illoria, Excelsior, Marian Willard, Wind-

land, Queen of Bal, and Hijos. There were nine entries. A collection of twelve varieties of singles and anemones, five sprays to a vase, made Miss M. T. Cockcroft first prize winner with Miss M. Pope, Judge Hoyt, Sylvia Slade, Mrs. E. Roberts, Seedling no. 1, Herbert Henderson, Margarite Totty, W. Buckingham, Mary Richardson, Katie Corell, and one other. A similar collection secured for Mrs. F. A. Constable the second prize with, among others, Mrs. Redden, Fair Rosamond, Gracie Trower, Jessie Curtis, Hilda Wells, Roupel Beauty, Metta, Mrs. Parsons, and Evelyn Nason. There were thirteen entries.

There was a fine display of roses, in both the classes for commercial and non-commercial growers. The following prizes were awarded in the commercial classes. In American Beauty, fifty blooms, Mr. Louis A. Noe won first prize, the F. R. Pierson Co. second. For fifty white roses, both prize winners entered White Killarney, the F. R. Pierson Co. securing first, Mr. L. B. Coddington second. Mr. Coddington also took first prize for fifty red roses, with Richmond. Fifty pink roses brought the first prize to Messrs. Traendly & Schenck for Radiance, the second being secured by Mr. Louis A. Noe with Killarney Queen. Two excellent roses were prize winners in the yellow class, Messrs. Traendly & Schenck first with Sunburst, and L. B. Coddington second with Lady Hillingdon. The silver medal for a new variety not in commerce was won by Mr. Chas. H. Totty, with Mrs. George Shawyer.

In the non-commercial classes, calling for eighteen blooms, the following prizes were awarded. Richmond was the prize winner in the red, Mr. H. M. Tilford, Jos. Tansey, gardener, taking first, Mrs. F. A. Constable second. Mr. Tilford also took first in the white, with White Killarney. Radiance was the winner of the first prize for Mr. Tilford in the pink, Mr. Wm. B. Thompson taking second with Killarney. In the yellow, Sunburst was the winner of both prizes, Mr. Tilford first, Mr. Untermyer second.

Carnations were well represented, there being many more entries than for the previous year. In the classes for commercial growers, fifty blooms, the following prizes were won. For white, the first went to Messrs. Traendly & Schenck, with White Enchantress, the second to Messrs. Scott Bros., with Alma Ward.

Traendly & Schenck also secured first for Winsor shade. For Enchantress shade, the first was won by Messrs. Traendly & Schenck, the second by Messrs. Scott Bros. For scarlet, Scott Bros. won first with Wm. Eccles, Traendly & Schenck second, with Beacon. C. W. Ward secured the first prize for Traendly & Schenck in the Lawson shade, this also winning the silver medal sweepstakes prize for the best vase exhibited; the second prize was won by Mr. J. D. Cockcroft, with Northport. For a new variety, not in commerce, not less than twenty-five blooms, the diploma was won by the Cottage Gardens Co. with Matchless.

In the classes for non-commercial growers, eighteen blooms, the following were prize winners. In the white, Miss C. A. Bliss obtained first, with White Perfection, Mr. H. M. Tilford second, with Alma Ward. Miss Bliss also won the sweepstakes prize, a bronze medal, with this vase. In Winsor shade, Mary Mason won first for Miss Bliss, Winsor second for Mr. F. R. Newbold, F. W. Saenger, gardener. In the scarlet, Mr. Newbold won first with Robert Craig, Mrs. Wm. E. S. Griswold second with Beacon. The first prize went to Miss Bliss, in the Enchantress shade, for Enchantress, the second to Mr. Jas. A. MacDonald, R. Hughes, gardener, also for Enchantress. In the crimson, both winners were Harlowarden, the first by Mr. W. W. Heroy, the second by Miss Bliss. Mr. H. M. Tilford won the first in the Lawson shade with Mrs. C. W. Ward, Mr. Jas. A. Macdonald the second with the same flower. Miss Bliss also won the first for white ground variegated, with Benora.

The classes for foliage and decorative plants were open to all. For a group of stove and greenhouse plants, covering one hundred square feet, the first prize was won by Mr. Untermeyer, the second by Mr. Wm. B. Thompson. An exhibit of bay trees secured the first prize for Julius Roehrs Co. For twelve crotons, in as many varieties, in not over six inch pots, Mr. Wm. B. Thompson won the first prize. For six crotons, under the same conditions, Miss Blanche Potter won first. Mr. Wm. B. Thompson won first prize for the best specimen of Begonia Gloire de Lorraine, and also for three plants of the same, Messrs. Sidney & Austen Colgate, Wm. Reid, gardener, winning second with a specimen plant. For a specimen of any other palm, Mr. Wm. B. Thompson won first,

and also the same prize for a specimen of *Adiantum Farleyense*. A fine display of *Nephrolepis exaltata* and its varieties brought first prize to the F. R. Pierson Co. Mr. Lewisohn exhibited a fine trained specimen of English ivy, for which he was awarded first prize.

The display of orchids was hardly up to that of the previous year, although many interesting things were on view. The prizes offered were about equally distributed between commercial and non-commercial growers. The following prizes were won by commercial growers. A collection of not less than twenty-five species and varieties secured the first prize for Messrs. Lager & Hurrell, among other interesting things being *Barkeria Skinneri*, *Oncidium Forbesii* in several forms, *Vanda Sanderiana*, *Laelia Digbyana*, and *Laelia purpurata* × *pumila*. For a novelty not before exhibited before the society, the same firm won the silver medal with a fine plant of *Oncidium bicallosum*. They also won first prize for six cattleyas and laelias, with the following: *Laelio-Cattleya luminosa*, *Laelio-Cattleya Arnoldiana*, *Cattleya Fabia*, *C. munitia*, *C. Mendeli*, and *C. Olivia*. For six varieties, one plant of each, Lager & Hurrell also won first with: *Platyclinis Cobbiana*, *Odontoglossum grande*, *Vanda Sanderiana*, *Vanda coerulea*, *Brassia brachiata*, and *Miltonia vexillaria*. Julius Roehrs Co. won first prize for six cypripediums with the following: *C. Minos Youngii*, *C. Lccanum Clinkaberryanum*, *C. insigne Harefield Hall*, *C. Mrs. F. Wellesley*, *C. Frau Ida Brandt*, and *C. Gaston Bulltet* var. King Edward VII. Lager & Hurrell won second here with: *C. insigne Sanderæ*, and the varieties *Harefield Hall* and *Brightness* of the same species, *C. Transvaal*, *C. Stonei Canaertianum*, and *C. Maudæ*. Lager & Hurrell won first prizes for three plants each of *Cattleya labiata* and *Oncidium varicosum*; and also for three varieties, one of each, with *Miltonia candida*, *Vanda Sanderiana*, and *Phalaenopsis amabilis*. For a collection of cut orchids Mr. J. A. Manda won first. Lager & Hurrell secured first for a collection of cut blooms of cypripediums, not less than twelve varieties.

In the non-commercial classes the following were prize winners. Mr. Untermeyer obtained first for a collection of orchids, not less than twelve varieties, exhibiting, among other things, the follow-



Fall Exhibition of 1912. In foreground, group of orchids, twelve varieties, exhibited by Mr. Samuel Untermeyer, winner of the first prize.

ing: *Laelio-Cattleya Lesliei*, *Dendrobium Phalaenopsis Schroederianum*, *Burlingtonia fragrans*, *Laelio-Cattleya Pacovia*, and *Laelia prestans*. Both prizes for a specimen of *Cattleya* were won by *C. labiata*, the first by Mr. Untermyer, the second by Miss M. T. Cockcroft. For a specimen of *Cypripedium*, a fine plant of *C. insigne Sanderae* with eleven flowers, won the first prize for Mr. G. C. Graves, Edwin Thomas, gardener. This plant also won the sweepstakes prize, a silver medal, for the best orchid plant exhibited in either the commercial or non-commercial classes. An excellent plant of *Dendrobium Phalaenopsis Schroederianum* gave the first prize for a specimen of *Dendrobium* to Mr. Untermyer. A spray of *Cattleya labiata* won the first prize for Mr. Untermyer, the second for Miss M. T. Cockcroft. For a spray of *Oncidium*, *O. varicosum Rogersii* secured first for Mrs. F. A. Constable, second for Messrs. Sidney M. & Austen Colgate. For a spray of *Vanda*, Mrs. Constable won first with *Vanda coerulea*, Mr. Untermyer second with *Vanda tricolor*. *Dendrobium Phalaenopsis Schroederianum* made Mr. Untermyer the first prize winner, Mrs. Constable the second. For a spray of any other orchid Mrs. B. B. Tuttle, M. J. Pope, gardener, won first with *Odontoglossum grande*, Mr. Untermyer second with *Epidendrum Godseffianum*.

There were a number of entries of plants for which no premiums had been offered in the schedule. Special prizes were awarded to the following among these. Mr. George Schlegel exhibited two fine plants of standard chrysanthemums, Brutus and Well's Late Pink, for which a special money prize was awarded. An excellent collection of single chrysanthemums secured a special cash prize for Mr. John T. Pratt, J. W. Everitt, gardener. A collection of hardy pompons, fine flowers, was exhibited by Mr. Chas H. Rice and received a special cash prize. A collection of seedling chrysanthemums, some fine things among them, secured for Mrs. Westinghouse, Edward J. Norman, superintendent, a special prize. A collection of stove and greenhouse plants made by the Julius Roehrs-Co., not for competition, was deemed worthy of a special prize of a silver medal. A magnificent plant of *Odontoglossum grande*, the finest orchid plant exhibited, was awarded a special prize of a silver medal. It was exhibited by Mrs. B. B.

Tuttle, M. J. Pope, gardener. There was no premium offered for this particular variety in the schedule, so it could not compete for the sweepstakes prize. A collection of dahlias in fine condition was displayed by Mr. H. Darlington, P. W. Popp, gardener. It was an unusual sight to see these flowers so late in the season. A special cash prize was awarded the collection.

The judges were: W. C. McCollom, Robert Stobo, A. H. Wingett, Robert Angus, Wm. Turner, and Wm. Reid.

The special fund required to defray the prizes and other expenses connected with the exhibition was contributed by the following members of the society:

Mrs. C. R. Agnew	Mr. Paul Gottheil
Mrs. Jas. Herman Aldrich	Mr. George J. Gould
Mr. A. J. C. Anderson	Mr. G. C. Graves
Mr. Geo. A. Archer	Mrs. Wm. Preston Griffin
Dr. S. T. Armstrong	Mr. A. M. Guinzburg
Mr. Samuel P. Avery	Mr. Edw. S. Harkness
Mr. Geo. D. Barron	Mr. T. A. Havemeyer
Miss Elizabeth Billings	Mr. George A. Hearn
Mr. Frederick Billings	Mrs. Sara Hermann
Mr. C. D. Blauvelt	Mrs. Wm. C. Hess
Miss Catherine A. Bliss	Mrs. Frederic Delano Hitch
Messrs. Bobbink & Atkins	Mr. Richard M. Hoe
Mr. George S. Bowdoin	Mr. E. R. Holden
Mr. Jno. I. D. Bristol	Mr. Adrian Iselin, Jr.
Mr. Geo. McK. Brown	Mr. C. O'D. Iselin
Mr. Louis Burk	Mr. Wm. E. Iselin
Mr. William J. Cassard	Mr. Theo. F. Jackson
Mrs. Wm. Combe	Messrs. Lager & Hurrell
Mrs. F. A. Constable	Miss Lydia G. Lawrence
Mr. B. F. Cromwell	Mr. Adolph Lewisohn
Mr. James W. Cromwell	Mr. Jas. A. Macdonald
Mr. Eugene Delano	Mr. Charles Mallory
Mr. James Douglas	Mr. D. H. McAlpin
Mr. D. Dows	Mr. Edwin O. Meyer
Mr. H. F. du Pont	Dr. Geo. N. Miller
Mrs. M. E. Dwight	Mr. Clement Moore
Mr. Arthur F. Estabrook	Mr. J. Pierpont Morgan
Mr. James B. Ford	Mr. William S. Myers
Mrs. George S. Fraser	Mrs. S. Neustadt
Miss J. K. Fraser	Mr. Frederic R. Newbold
Mrs. Walter Geer	Mrs. Thomas Newbold
Mr. George Giatras	Mr. Wm. Nilsson
Mr. James J. Goodwin	Prof. Henry F. Osborn

THE HORTICULTURAL SOCIETY OF NEW YORK

Mr. John R. Planten	Messrs. J. M. Thorburn & Co.
Miss Blanche Potter	Mr. Samuel Thorne
Mr. George T. Powell	Mr. Frank H. Traendly
Mr. F. T. Proctor	Mrs. J. B. Trevor
Mr. John J. Riker	Mr. A. Tuckerman
Mrs. James Roosevelt	Mrs. B. B. Tuttle
Mr. Alonzo B. See	Mr. F. W. Vanderbilt
Mr. Isaac M. Seligman	Mr. D. B. Van Emburgh
Mr. Jefferson Seligman	Mrs. Edward H. Van Ingen
Mr. E. G. Snow	Mr. Hy. F. Walker
Mr. Francis Lyndé Stetson	Miss Theodora Wilbour
Miss Mary O. Stevens	Mr. F. S. Witherbee
Miss Ellen J. Stone	Mrs. Antoinette E. Wood
Mrs. James Sullivan	Mr. Wm. Ziegler, Jr.

NEW MEMBERSHIP

The following new members have been added since the annual meeting in May, 1912:

Sustaining

Dinsmore, Mrs. W. B.

Life

Callender, W. R.	Sands, Daniel C.
Cammann, Miss K. L.	Schley, Grant B.
Cutting, Mrs. Bayard	Thompson, Chas G
Dimoch, Mrs. Henry F.	Thompson, Mrs. Frederick F.
Dodge, Mrs. Cleveland H.	Underwood, Frederick D.
James, Mrs. Arthur Curtiss	Van Gerbig, Mrs. Barend
Lanier, Charles	Warburg, Paul M.
Mortimer, Richard	Washburn, Thomas G.
Morris, Newbold	Wetmore, Geo. Peabody

Annual

Allein, Mrs. Frederick	Calman, Henry L.
Blair, Mrs. D. C.	Colon, George Edward
Boettger, Henry W.	Crawford, William
Brown, Mrs. S. A.	Dickey, Mrs. C. D.
Bunker, William	Duer, Mrs. John Beverly

Erlanger, Abraham	Platt, Mrs. Frank H.
Gotthelf, Charles	Pulsifer, Mrs. N. T.
Griffith, Miss Margarette E.	Robinson, Thos. W.
Griffith, Miss Susan D.	Shoemaker, Henry W.
Jenkins, Alfred W.	Strauss, Charles
Jones, Miss Beatrix	Strobel, Emil L.
Krower, Louis	Stroock, Joseph
Levy, Emanuel	Totty, Chas. H.
Holbrook, Mrs. Edward	Untermeyer, Alvin
Marshall, Alex. L.	Van Etten, Mrs. L. E.
Noe, Louis A.	Wilson, Andrew
Paterson, Adam	Young, Mrs. A. Murray
Peckham, Mrs. Ethel Anson	

This additional membership of 54 since the annual meeting in May is made up as follows: Sustaining, 1; life, 18; annual, 35. The total membership of the society is now 434. If this could be increased to 500 by the time of the next annual meeting, the society would be in a position to do much more effective work. The secretary will be glad to receive nominations for membership from the present members, and if each would propose one new name, the above desire could be fulfilled. All fees from patrons, sustaining members, and life members, by a resolution of the council passed some years ago, must be added to a permanent fund until such time as the fund with accrued interest shall amount to \$10,000.00, when the income from this amount will be available for the current uses of the society. This fund is now a trifle over \$7,000.00, and it would be possible, by an increase in these forms of membership, to raise this to the required amount by the time of the next annual meeting.

PROCEEDINGS OF THE SOCIETY

OCTOBER 26, 1912

A meeting of the society was held on Saturday, October 26, 1912, at 3:45 P.M., Mr. F. R. Pierson presiding.

The minutes of the meeting of September 28, 1912, were read and approved.

THE HORTICULTURAL SOCIETY OF NEW YORK

The following persons, having been approved by the Council and their names referred to the society, were presented for membership:

Life

Frederick D. Underwood, Thomas G. Washburn, Richard Mortimer, Mrs. Cleveland H. Dodge, Miss K. L. Cammann, and W. R. Callender.

Annual

Henry W. Boettger, Alvin Untermyer, Emanuel Levy, Miss Beatrix Jones, Wm. Crawford, Henry L. Calman, Miss Margarette E. Griffith, and Miss Susan D. Griffith.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected members of the society.

There being no further business, adjournment was taken at 4 P.M.

GEORGE V. NASH,
Secretary

NOVEMBER 2, 1912

A meeting of the society was held on Saturday, November 2, 1912, at 4 P.M., Mr. Southwick presiding.

The minutes of the meeting of October 26, 1912, were read and approved.

The names of the following persons, having been approved by the Council and their names referred to the society for action, were presented for membership:

Life

Mrs. Bayard Cutting, Mrs. Frederick F. Thompson, Charles Lanier, Mrs. Barend van Gerbig, Grant B. Schley, Newbold Morris, Mrs. Arthur Curtiss James, and Geo. Peabody Wetmore.

Annual

Henry W. Shoemaker, Joseph Stroock, Emil L. Strobel, Alfred W. Jenkins, Mrs. Frederick Allein, Mrs. D. C. Blair, Louis Krower, William Bunker, Mrs. John Beverly Duer, John Jones, J. F. Ruzicka.

THE HORTICULTURAL SOCIETY OF NEW YORK

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected members of the society.

There being no further business before the society, the advertised lecture, "Horticulture in the Northwest," was delivered by Mr. George V. Nash, illustrated with lantern slides.

GEORGE V. NASH,
Secretary

DECEMBER 21, 1912

A meeting of the society was held on Saturday, December 21, 1912, at 4 P.M., the president presiding.

The minutes of the meeting of November 2, 1912, were read and approved.

The following persons, having been approved by the Council, were presented for membership:

Life

Paul M. Warburg, Daniel C. Sands

Sustaining

Mrs. W. B. Dinsmore

Annual

Mrs. Edward Holbrook, George Edward Colon, Thos. W. Robinson, Louis A. Noc, Chas. Strauss, Mrs. Frank H. Platt, Abraham Erlanger, Mrs. N. T. Pulsifer, Mrs. S. A. Brown, Mrs. C. D. Dickey, Alex. L. Marshall, Chas. H. Totty, Adam Paterson, and Andrew Wilson.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the parties declared elected members of the society.

The following resignations were accepted with regret:

G. Langmann, M.D., Wm. Childs, Jr., J. T. Lovett.

On account of the proximity of the meeting to the Christmas holidays, and the consequently small attendance, it was decided to postpone the lecture announced for the day to the next meeting.

Meeting adjourned at 4:10.

GEORGE V. NASH,
Secretary

Journal

of the

Horticultural Society of New York

Vol. I, No. 15



APRIL, 1913

EDITED BY THE SECRETARY

GEORGE V. NASH

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THIRD INTERNATIONAL FLOWER SHOW

The largest flower exhibition ever given in this city, perhaps in this country, closed its doors on Sunday, April thirteenth, at eleven P. M. It opened on the fifth, and its closing day was announced for the twelfth, but a demand for one more day was granted. The New Grand Central Palace, located on Lexington Avenue between 46th and 47th streets, was the place of the show, and the main and mezzanine floors were filled with plants and flowers. Magnificent specimens, representing the best efforts of horticulturists, were everywhere. Stately palms, impressive groups of foliage plants, ferns, cycads, tulips, hyacinths, daffodils and other bulbous plants, orchids, roses, carnations, gladioli, sweet peas, azaleas, in fact all plants and flowers of the season known to horticulture were in evidence, and in great abundance. Another feature was the displays of table and mantel decorations, bouquets and floral baskets. There were competitive exhibits of these on several days, and they aroused much interest. It was a sight long to be remembered and those in charge are to be congratulated on bringing this immense exhibition to a successful termination.

The attendance was large and a keen interest was manifested in everything. Representatives were present from all parts of the country and from across the water, and many people of prominence and influence in this city made more than one visit, thus attesting their real interest in horticulture. Let it never be said again that New York has not an active interest in plants and flowers, for her quick appreciation of and keen interest in this large show just closed offers the strongest kind of denial. New York has come into her own, and the success of this great exhibi-

bition will give a new impetus to horticulture, not only in this city, but throughout the country.

Monday was rose day. And such roses as were exhibited! In the opinion of experts they excelled all previous efforts. American Beauties, great bunches of them, with their dark strong foliage, filled large vases. Masses of Killarnies, both white and pink, vied with the American Beauties in luxuriance. This is especially true of a large vase of Killarney Queen, with stems six or seven feet long and the fully expanded flower over six inches across. What a sight this was! And those who saw will never forget. Among the yellow roses Lady Hillingdon was much admired, while Sunburst appealed to others. There were glorious vases of Richmond, aglow with color. Rose day will long linger in the memory of those fortunate enough to have been there.

No one will ever forget the large group of roses displayed by A. N. Pierson Inc. Such a magnificent display of this popular flower was never seen before. Imagine a large pyramidal mass, ten or twelve feet tall and with a greater base, topped with a magnificent bunch of Killarney Queen, with hundreds of other roses, yellow and white, and pink and red, and you have a picture of this fine group, the admiration of all. Over twenty-two hundred roses were used in the display, including, besides Killarney Queen, great bunches of Killarney, Double Pink Killarney, Dark Pink Killarney, Double White Killarney, Milady, Richmond, Mrs. Aaron Ward, Lady Hillingdon, and Mrs. Whiteford Christie-Miller, with masses of Farleyense fern to heighten the effect.

Tuesday was carnation day, and every where were groups of this popular flower in all the favorite colors, ranging all the way from white, through pinks and scarlet, to the deepest crimson.

On Thursday the sweet pea held court, and this delightful flower, sometimes called the "poor man's orchid," captivated all. The delicacy of coloring in some of the flowers was exquisite. The largest group was displayed by Wm. Sim, who had thousands of this popular flower in many colors.

The Horticultural Society of New York decided, through its Council, to award medals at this exhibition, and that body on February twenty-fourth, 1912, passed the following resolution:

THE HORTICULTURAL SOCIETY OF NEW YORK

RESOLVED, That the Gold, Silver and Bronze medals of the society be offered at the National Flower Show, to be held in New York City in the spring of 1913, for exhibits of unusual merit, the exhibits to be judged and the awards made by The Horticultural Society of New York.

Acting in accordance with this resolution, the Exhibition Committee devoted considerable time to a careful examination of the many exhibits. After due consideration medals were awarded to the following exhibits:

GOLD MEDALS

Thomas Roland, Nahant, Mass., for a collection of acacias. This was a superb group, containing, among others, *Acacia pubescens*, *A. longifolia floribunda*, *A. armata*, *A. hispidissima*, *A. spiralis*, *A. paradoxa pendula*, and *A. cordata*. This display probably could not have been duplicated anywhere in the country. The specimens were large and showed greatest excellence of cultivation. The group was of very unusual merit.

A. N. Pierson Inc., for the extent and unusual excellence of rose exhibits. The vase of magnificent Killarney Queen and the large rose group, together with the excellence of the many other competitive vases exhibited by this company, brought them into the class of unusual merit.

SILVER MEDALS

R. and J. Farquhar & Co., Boston, Mass., for a group of about fifty pots of the new lily, *Lilium myriophyllum*, discovered in China recently by Mr. E. H. Wilson. This is a superb lily, delightfully fragrant, and said to be hardy in the neighborhood of Boston.

Sir Jeremiah Colman, Gatton Park, England, for a fine orchid plant, showing a high state of cultivation and unusual merit, *Odontoglossum Queen of Gatton*, a hybrid between *Odontoglossum triumphans* and *Odontoglossum percultum*.

Knight & Struck, New York City, for an unusual exhibit of young heather and other hard-wooded plants. These plants are unusual in cultivation and their further cultivation should be encouraged.

A. C. Zvolanek, Bound Brook, N. J., for exhibit of winter-

flowering Spencer sweet peas. Mr. Zvolanek has developed these to an unusual state of perfection.

Julius Roehrs Co., Rutherford, N. J., for an unusual group of rare and well-grown orchid plants.

Chas. G. Roebing, Trenton, N. J., Jas. W. Goodier, gardener, for artistic arrangement of orchid group.

Wm. Sim, Clifftondale, Mass., for extent and variety of sweet pea display.

BRONZE MEDALS

Mrs. D. Willis James, Madison, N. J., for a group of *Amaryllis* of unusual excellence.

Wm. Ziegler, Jr., Noroton, Conn., A. Bieschke, gardener, for a fine group of hydrangeas.

FLOWER EXHIBITIONS

Exhibitions of plants and flowers have been held in the West Assembly Hall, at the American Museum of Natural History, in January, February, and March, on one Saturday in each month. In addition to the regular premium-list, the exhibition committee has let it be known that special prizes would be awarded for worthy exhibits not provided for in the schedules. Advantage of this opportunity has been taken in many instances.

The January exhibition was held on the twenty-fifth. The schedule was arranged especially for carnations and orchids. Among the carnations, in the open-to-all classes, silver medals were awarded to the following: J. D. Cockcroft, for carnation "Northport"; Cottage Gardens Co., for white carnation, "Matchless."

In the non-commercial classes the following awards were made. For a vase of twelve scarlet, the first prize went to Mr. Henry Siegel, Mamaroneck, N. Y., Thomas Aitchison, gardener, the second to Mrs. Westinghouse, Lenox, Mass., Edw. J. Norman, gardener. Mr. Siegel also took first prizes for a vase of twelve Winsor shade, and for a vase of fifty blooms, arranged for effect. First prizes, for a vase each of twelve Enchantress shade and

twelve crimson, were won by Mr. James A. Macdonald, Flushing, N. Y., R. Hughes, gardener.

Among the orchids, a fine plant of *Cattleya* secured the first prize for Mr. Samuel Untermyer, Yonkers, N. Y., W. H. Waite, superintendent, the second going to Mr. Clement Moore, Hackensack, N. J., John P. Mossman, gardener. For an *Oncidium* plant Mr. Untermyer took first prize. First prizes were also awarded to Mr. Moore for a plant each of *Cypripedium* and a hybrid orchid, and for a collection of cut flowers. The superior excellence of the collection of cut flowers, made up largely of fine *Cattleya* blossoms, decided the exhibition committee to award this exhibit an additional prize of a silver medal.

Special prizes were awarded as follows: James A. Macdonald, for three *Amaryllis* plants; Lager & Hurrell, for a collection of orchid plants, and a silver medal for a plant of *Miltonioda Ajax*; Wm. Ziegler, Jr., Noroton, Ct., A. Bieschke, gardener, for a vase of *Freesia* hybrids.

The judges were Wm. Tricker and Geo. E. Baldwin.

The February exhibition was held on Washington's birthday. The schedule was arranged primarily for carnations, with a few prizes for miscellaneous things. There were some excellent carnations shown. In the open-to-all classes, for a vase of one hundred blooms, the prize, a silver medal, was won by the Cottage Gardens Co. A vase of fifty Lawson shade secured the first prize for Mr. J. D. Cockcroft.

In the non-commercial classes, the first prize for eighteen scarlet carnations went to Mrs. J. Hood Wright, N. Y. City, Chas. Webber, gardener. Mr. Adolph Lewisohn, Ardsley, N. Y., John Canning, superintendent, took first prizes for one vase each, eighteen blooms, of Winsor shade, Enchantress shade, and white, Mrs. J. Hood Wright taking the second prize in the Enchantress shade, and Miss C. A. Bliss, New Canaan, Ct., John T. Burns, gardener, the second prize in the white. Miss Bliss also took first prize for a vase of eighteen variegated.

Among the exhibits of miscellaneous plants, the first prize for a vase of *Schizanthus* was won by Mr. Adolph Lewisohn, the second going to Mrs. F. A. Constable, Mamaroneck, N. Y., Jas.

Stuart, gardener. A fine vase of *Freesia* gave the first prize to Mr. Wm. Ziegler, Jr.

Special prizes were awarded as follows: Wm. R. Seymour, West End, N. Y., for a vase of a white seedling carnation, certificate of merit; Valentine Cleres, Glen Cove, N. Y., for a vase of seedling scarlet carnation, "Red Spring," certificate of merit; Mr. Samuel Untermyer, for a miscellaneous collection of plants; A. N. Pierson Inc., for vase of a new rose, "Milady," silver medal; Mr. H. Darlington, Mamaroneck, N. Y., P. W. Popp, gardener, for fifteen plants of cactus-flowered cinerarias; Lager & Hurrell, for a plant of *Lycaste Skinneri alba*, silver medal; T. A. Havemeyer, Glen Head, N. Y., A. Lahodny, gardener, six plants of Easter lilies.

The judges were W. H. Waite, and A. Bieschke.

The exhibition for March was held on the fifteenth. The schedule was arranged especially for roses and orchids, with a few prizes for miscellaneous things. In the class for non-commercial growers, the first prize for a vase of twelve pink roses was won by Mrs. F. A. Constable, who also took the first prize for a vase of fifty assorted roses, arranged for effect.

Among the orchids, Mr. Samuel Untermyer took first prizes as follows: for plants of *Cattleya*, *Dendrobium*, *Oncidium*, and any other orchid, and for a collection of cut flowers. Mrs. F. B. Van Vorst, Hackensack, N. J., Andrew Anderson, gardener, secured second prizes for a plant each of *Cattleya*, any other orchid, and a hybrid orchid.

Among the miscellaneous exhibits, Mr. Samuel Untermyer took second prize for a vase of *Antirrhinum*, and Mr. Lewisohn first for a vase of sweet peas, one or more varieties.

Special prizes were awarded as follows: Geo. W. Perkins Estate, Riverdale, N. Y. City, Maurits Anderson, gardener, for four plants of *Schizanthus* and twelve of primroses, and a bronze medal for a plant of *Hydrangea Mousseline*.

The judges were Jas. Stuart, J. A. Manda, and George V. Nash.

PROCEEDINGS OF THE SOCIETY

JANUARY 25, 1913

A meeting of the society was held on Saturday, January 25, 1913, at 4 P.M., at the American Museum of Natural History, accompanied by an exhibition which was open from 1 to 5 P.M. Dr. Southwick presided.

The minutes of the meeting of December 21, 1912, were read and approved.

The following person, having been approved by the council, was presented for annual membership:

Mrs. E. Robt. Mager

The secretary was authorized to cast an affirmative ballot for her election. This was done and the person declared elected an annual member of the society.

The following resignation was accepted with regret:

Dr. J. M. W. Kitchen

There being no further business before the meeting, the lecture announced was given by Mr. George T. Powell, on "The Educational and Financial Importance of Horticulture to the Community." The lecture follows:

THE EDUCATIONAL AND FINANCIAL IMPORTANCE OF HORTICULTURE TO THE COMMUNITY

An industry usually reflects an influence or affixes its stamp upon those who are engaged in it. In a mining district, where men work underground, there is usually little interest or pride in the homes overhead. The houses are poor and unattractive, the streets are neglected, the surroundings of the houses are generally dreary and void of any features that are homelike and joyous.

This is not altogether the fault of the workers, however, in the mines, for when the owners of the houses take no interest in making them comfortable and attractive, those who spend their working hours mainly away from them can hardly be expected to do so.

Again, the factory workers, who day in and day out work with the same machines for weeks and months, and perhaps for years, in time tend to become as automatic in thought and action as the machines they handle, and the community in which such workers live, if in large numbers, is to a greater or less extent influenced by the industry in which

they work. From the tradesman, merchant or broker, whose daily work and thought are given up to the one purpose of money-making as the chief and only object of life, the community often gets but little more of real help or benefit from the business in which they are engaged, than from the miner or the factory worker.

In horticulture, however, what a vast difference is recognized in the influence that is reflected upon those who are engaged in it, and in its benefits to both the workers who are engaged in the industry, and to the community in which the work is carried on.

To a community, the educational value of horticulture cannot be estimated. It leads into the most interesting fields of scientific knowledge; it deals with, and brings its followers into close touch with the workings of the laws of nature. It is constantly dealing with the most fascinating and beautiful things in life; it cultivates the best thought and finest sentiment; it makes for the best in human character; its work and influence pervade the entire community and stamps itself on the character and life therein. It interests equally the old and the young; it is intimately connected with the soil, while it is equally linked with the atmosphere above for its most perfect life. It is as many-sided in its marvelous beauty and changing manifestations of life, from the putting forth of buds, blossoms and foliage, to the final perfection of fruit, as are the changing forms of a kaleidoscope.

An industry that has such a wealth and breadth of scope in its work, with ramifications that call for such a wide variety of knowledge, cannot be but attractive in its nature, and naturally draws to it those who represent the best in life. In educational influence there is no association equal to that of living things. When an apparently lifeless seed is planted in what to many may seem only inanimate, lifeless soil, it requires some measure of faith to believe that it will take on active life, grow into a thing of beauty, and become a necessary connecting link in the continuance and support of all life. It is not until we have observed the delicate, tiny stem of a plant pushing out of, and up from, a small seed in the soil, struggling against a hard crust of earth in its attempt to get into the world above, breaking and lifting bodily a piece of it more than ten times its own weight, that faith is strengthened in the possibilities of a successful struggle for existence under extreme difficulties.

The educational value of horticulture, in its relation to the community, has not been fully estimated or understood. It is only within the past decade that there has been an active awakening to this fact, and a fuller appreciation of horticultural study and work as an educational force of great value. One of the chief reasons for the more recent and universal interest in this country-life movement, in which there is a marked tendency of many in cities to go out to the land, may be found in our educational system. It has very largely failed to make known to young people during their school period, at the time when their tastes and impulses are most readily influenced and directed, the great pleasure

that is to be derived from study and observation of the life of the country, its soil, trees, plants, animals and insects, all of which are so intimately associated with country life, and all of which are so essential for successful coöperation with the land. Our teaching in the public schools has failed to give this helpful aid to young people to recognize the value of the development of opportunity about them, especially in our rural schools; and it has not been discovered and appreciated by them until years afterward, when out of the struggles that have to be encountered for existence and rational living in cities, that the land really furnishes opportunity such as is impossible to reach in the work of the city. Cities have taken the lead in this kind of education.

Nature-teaching has been introduced in city schools. Children's gardens have been made possible where thousands of children have had opportunity to receive instruction in planting seeds, in the culture of plants, and in seeing, as the result of their study and work, flowers and vegetables brought to their complete development and fruition. Courses in agriculture are being added in high schools, but lessons in nature-study should be given in every school.

In addition to the teaching of nature-study in the schools, and of children's gardens in the city, horticultural societies have done most valuable service in the field of scientific horticultural education. The Horticultural Society of New York, through its public discussions, its published reports, and its monthly exhibits of plants and flowers, is doing educational work in horticulture which is having influence upon many of those who attend its meetings and exhibitions, by inspiring in them a desire to know more about this line of work that has in it so much of interest. When over 90,000 people have shown interest to visit the recent very beautiful exhibit of chrysanthemums and other flowers at the American Museum of Natural History on a Sunday afternoon, and during the three days over 130,000 took in the exhibit of the most beautiful flowers that are produced—it is little wonder that there are many who, in addition to being delighted with the great beauty of such exhibits, are caused to think of the possibilities of acquiring land and of attempting to make it produce, not only flowers, but other necessities of life. Through horticultural education, flowers to many have become as much a necessity in daily life as fruits.

Never has there been so general an awakening and interest in country life as at the present time. In the very wide movement that has set in toward the ownership of land and coöperation with the soil in making it productive, there is surprising interest in the development of different lines of horticultural work.

In a very great number of instances, among the questions asked by those who desire to purchase land and to establish homes in the country are these: Is there an apple orchard to be had? Is the soil suitable for growing vegetables? What are the opportunities for the culture of small fruits and flowers? This is the natural outcome of the exhibitions of

fruits, flowers and vegetables that are now so frequently held in cities, and from the general discussions that have been so active in relation to the high-living cost of recent years.

This general movement toward country life has come at an opportune time, when our cities are growing at a rapid rate and in many of them population has become so congested that every winter finds increased demand for charitable and philanthropic aid to be extended to thousands of the dependent class. Increasing numbers are now annually found swelling bread lines and filling charitable institutions, while in the country there is a great dearth of labor, and much land is being unused because of want of labor with which to work it.

In New York State, in twenty years, from 1881, 14,000 farms were practically abandoned, which meant a depreciation in the value of land representing \$168,000,000. Much of this land is now being sought and taken up. The old houses and barns are being repaired, new orchards are being planted, school houses that have been closed for want of children to teach are now being opened again, and opportunity is broadening for many with small capital and willing hands, to again acquire land and to live in the enjoyment of independent homes.

The school house in the country should be the center of every interest of the community,—educational, social, religious and industrial. It should have surrounding it ample land for the planting of trees, shrubs and flowers. It should represent all that is attractive and beautiful in the development of country homes, as a park in the city makes possible for those, both with and without homes, an opportunity for pure air, for some green sward, the grateful shade of trees and the beauty and perfume of shrubs and flowers. The needs of the present times are more of the teaching of horticulture, as also of general agricultural subjects, in our country schools, that a strong rural population may again, as in the earlier history of our country, occupy the soil.

Country life needs to be made not only more prosperous, but more attractive, by beautifying to a greater extent the homes and the highways, the church and school grounds, and country villages, through ornamental tree-planting. This, together with improving the soil and making it productive of larger income, will check the overgrowth of cities by giving wider distribution of industries and population to rural sections. At the present time, New York leads all other states in the union, with over 9,000,000 of population, fifty-two per cent. of which live within the limits of Greater New York. Seventy-eight per cent. of the population of the state live in cities of 25,000 or over, while but twenty-two per cent. live on farms and in cities of less than 25,000.

With the shortening up of many farm productions and with the increasing importations of many foreign fruits and vegetables, thereby adding to the *high* and *oppressive* cost of living to those in cities, the vital importance of horticulture to the highest welfare of the entire nation becomes significant. Its financial importance can scarcely be compre-

hended. *First* is the assurance, on the part of the owners of land, with knowledge and industry combined, of an abundant food supply for themselves and families. Anxiety on that score is with the millions of the underfed and others in cities. *Second* are the possibilities of income, beyond the family needs. This will depend upon the knowledge, skill and capital that may be put into the work.

In the cultivation of flowers, a very small area of land, not exceeding one or two acres, will, under intelligent management and knowledge of the business, bring a satisfactory income and support to a family. One acre of plants and flowers grown under glass has produced a value of over \$20,000 a year. Glass culture, however, requires capital, knowledge and skill to a high degree.

The culture of vegetables requires intensive methods and high fertilizing, and on either small or large areas gives large acreage returns. These productions being of a perishable nature are usually grown about cities and towns, where they may be promptly delivered. Consequently, this branch of horticultural work is carried on upon high-priced land.

In the gardening about Paris, land rents of \$100 to \$150 an acre are paid annually, to which a further expenditure for fertilizers of \$200 per acre is frequently made, in addition to the cost of labor. So skillful have the French gardeners become in the improvement and preparation of soil for garden work, that when their leases expire and they lease a new piece of land, the law of France gives them the right to take a thin layer of the surface soil and put it in boxes, barrels or bags, and take it with them as their personal property. If one may be so fortunate as to look into the home life of the best French gardeners, he would be surprised to see the degree of comforts they are enabled to bring about them. After paying high rent for land and a heavy cost for fertilizing it and for its improvement, they are enabled to realize good profits.

The fruit-growing interests of New York state have invested in land and equipment \$51,157,185. Floriculture has invested \$8,692,039. Vegetable culture has an investment of \$101,102,441 in land. The number of acres of land devoted to fruit culture in the state are 542,792; for floriculture 7,362 acres; and for vegetables 596,834 acres. The annual returns on these investments are, for fruit culture, \$17,998,894; floriculture \$5,149,000; and for vegetable growing \$36,309,544.

Large as are the money returns from the culture of flowers and vegetables, the growing of fruit is one of the most interesting branches of horticultural work and is one which gives most satisfactory financial results.

The Rocky Ford melon industry of Colorado has made fortunes for those engaged in it. It has built many beautiful and luxurious homes and prosperous towns, and has contributed millions of dollars to the earnings of transportation companies.

The citrus fruit industry of California has, on a much larger scale, produced millions of wealth, both for individuals and for the state, while

THE HORTICULTURAL SOCIETY OF NEW YORK

peach orchards in a dozen states have exceeded the combined value of the melon and citrus industries.

But it remains for the apple orchards, that produce the great staple, standard fruit, most in demand and used by every class of consumers, to rise to the greatest heights of financial value. There are records of \$1,800 having been received for the fruit from one acre of apple trees. In New York state we saw the Baldwin apples in an orchard of five acres that brought the owner \$3,500; and also twenty Northern Spy apple trees, occupying but three quarters of an acre, the fruit of which brought the owner \$1,000.

There is a record in this state of a rundown farm of 100 acres that was bought for \$5,000. The thirty-acre neglected apple orchard was sprayed, pruned, cultivated and put in good condition, the fruit of which six months after brought the owner \$6,000 cash. The instances of large value that has been received from other kinds of fruits much in use are many, but those cited are sufficient to show the important financial relation which horticulture holds to the community, and by a wider dissemination of horticultural knowledge and practise, the benefits that follow in this most interesting line of work may be largely multiplied.

While these figures show the possibilities in horticulture from the financial standpoint, the average returns are much less, and these are the safe guides by which to judge, but the lower scale of average value is yet favorable in comparison with other investments.

Our cities will ever continue to grow, and to be great centers of industry and trade, but the highest and best development of the country, and of a rural population, is imperative to the best prosperity of all, and there is no one interest, or industry, that has in it so much of good and of helpfulness to this desired end as that of horticulture.

Meeting adjourned at 5 P.M.

GEORGE V. NASII,
Secretary.

FEBRUARY 22, 1913

A meeting of the society was held on Saturday, February 22, 1913, at 4 P.M., at the American Museum of Natural History, accompanied by an exhibition. Dr. Southwick presided.

The minutes of the meeting of January 25, 1913, were read and approved.

The following persons, having been approved for membership by the Council, were presented for membership:

Annual

Mrs. Alfred M. Coats, Valentine Cleres, Ledyard Avery
The secretary was instructed to cast an affirmative ballot for

their election. This was done and the persons declared elected members of the society.

There being no further business before the meeting, the lecture announced was given by Dr. Mel. T. Cook, on "Possibilities of Controlling Orchard Diseases." The following abstract of the lecture, which was illustrated with lantern slides, was furnished by the lecturer:

POSSIBILITIES OF CONTROLLING ORCHARD DISEASES

The great progress of agriculture and horticulture in recent years has resulted in the advance of a number of related sciences, viz.: plant breeding, soil bacteriology, entomology and plant pathology. These subjects are so closely interwoven that the advance of any one is largely dependent on the advance of the others.

Plant pathology is a branch of applied botany of comparatively recent development but it is, and will become more and more essential to progressive agriculture. It may well be considered a science for the prevention of waste.

Its importance is well shown by such startling epidemics as the late potato blight which appeared about 1840 and caused famine in Ireland in 1845, and by the more recent epidemic of chestnut blight. However, epidemics are not new to the practical horticulturist. He knows that epidemics are likely to occur any year and that some diseases are likely to become epidemic every year unless precautions are taken to prevent them.

Plant diseases are becoming more and more prevalent. It is the opinion of the speaker that every specific plant disease will eventually spread to every part of the world in which the climatic conditions and the food supply make it possible. Most diseases are due to specific organisms which may be restricted to definite small or large ranges and to one or more host plants.

Plants from foreign countries may be the carriers of diseases which may prove more destructive in their new homes than in the old; or introduced plants may become the victims of diseases of the indigenous plants.

For our purpose we may say that a plant is diseased when it does not possess the optimum vitality, make the optimum growth or produce an optimum quantity and quality of fruit. As a matter of convenience we will group the diseases with reference to the parts on which they occur, *i. e.*, roots, stems, leaves, flower and fruits.

The methods of control are (1) national or state inspection of marketable stock, (2) quarantine to prevent the introduction of certain diseases, (3) treatment of plants for prevention or control of diseases, (4) development of resistant varieties.

Meeting adjourned at 5 P.M.

GEORGE V. NASH, *Secretary.*

MARCH 15, 1913.

A meeting of the society was held on Saturday, March 15, 1913, at 4 P.M., at the American Museum of Natural History, the president presiding. A flower exhibition was held in connection with this meeting.

The minutes of the meeting of February 22, 1913, were read and approved.

The following persons, having been approved for membership by the Council, were presented for membership:

Life

Mrs. J. McLean

Annual

Charles Krumweide, Jr., Mrs. Walter P. Bliss, S. R. Bradley, Fred'k Girard Agens, Sr., Miss M. L. Baugh.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected members of the society.

There being no further business before the meeting, the lecture announced for the day was given by Mr. Edw. Jenkins on "Roses: Outside and under Glass." The lecture follows:

ROSES: OUTSIDE AND UNDER GLASS

The rose has ever been a favorite flower of mankind, perhaps the greatest favorite of them all. Poets of every land and of every age have sung its praises, and rightly so, for truly a plant that yields such delightful fragrance, that comes arrayed in such diversity and such splendor of color, is worthy of the homage of all.

It flourishes alike in the garden of the humble cottager and in the garden of the millionaire. In fact it thrives nowhere better than in the cottage garden or on the cottage wall, and possibly this is because it gets the real loving care to which every plant seems to respond and to repay with its best.

Its poetry and praises have been sung by so many abler than I, that something tells me you would rather hear from me things more to the point, such as what soil and manures are best suited to its needs, and how best to combat its insect and fungoid enemies.

Location of the Garden

First, choose an open spot where no large overhanging trees can cut off the life-giving sunshine or absorb the necessary light, or where the roots of trees are likely to enter the rose beds and rob the roses of their own rightful food. It is well to remember that the roots of some trees travel a long way in search of food. If you are fortunate enough to have the choice of soils, select a medium heavy loam rather than a light sandy or black peaty soil, and if it is of a yellow or reddish tinge and has been growing grass for a number of years, so much the better. However, let no one despair because the soil is not just what he could wish, but take heart from the thought that good roses can be grown, with a little intelligent care, in most any soil that is not absolutely acid or alkaline. The best aspect is a gentle slope to south and east, as the rose, in common with most all vegetation, thrives and luxuriates the better for being kissed by the morning sun; and if the chill winds that blow from the north and west are cut off by some friendly building or belt of trees, so much the better. The rose loves a cool moist medium for its roots, but it cannot endure wet feet. To make sure that our roses will not suffer from a water-logged subsoil, test pits should be dug at several different points of the proposed location. These pits should be at least four and a half feet deep. If water stands more than a few inches deep in average weather, the ground should be tile-drained. Should you find it necessary to drain, be sure to do a good job. Put the tile down at least four feet, and cover the top two thirds of the joints with tarred paper. Do not be led into false notions of accelerated drainage by putting gravel or other porous material on top of the tile, as it is a mistake, and leads ultimately to trouble. Refill the ditch with the soil excavated from it and tamp it thoroughly.

I shall not attempt to advise you about the design of the garden, as that is work for the garden architect, after studying all the local conditions. But whether the belt of trees or building previously referred to is in existence or not, I would build a pergola along the north and west sides to shelter the rose garden from the cold winds. This may be as simple or as elaborate as your taste dictates or your purse will allow. The pergola, in addition to furnishing some protection to the garden from the wind and to the rosarian from the hot sun, makes a splendid place for the various climbing or rambling roses and is a charming feature of any rose garden. Whoever designs the garden should keep in mind certain practical features. Among these are easy means of access for the periodical mulchings; and that narrow beds are to be preferred, because they are more easily worked, it being unnecessary to set foot upon them. Tramping upon the soil in wet weather makes the surface hard and sticky which when dry bakes and excludes the air.

Preparation of the Soil

Dig Deep should be the motto of every grower of outdoor roses. Nothing less than two feet of well-manured, thoroughly broken-up soil should satisfy the earnest rosarian. In most cases to get this it will be necessary to remove entirely about one foot of the subsoil and cart in good loam from elsewhere to take the place of that removed. That this sounds like a big undertaking I am well aware, but for those who can afford it, it is well worth while. Human nature being what it is, there is one pleasure in enjoying the exquisite color and delightful fragrance of the rose, and there is another pleasure, more earthly perhaps but none the less potent, in having better, bigger, finer roses than our neighbor. The competitive spirit is strong in mankind, whether it be in the display of wealth or the display of roses.

What manures shall we use in preparing the soil? If it is to be had, use cow manure and use it in large and impressive quantities. If one sixth to one eighth of the bulk of prepared soil is cow manure, it will hardly be too much. Do not put it at the bottom or in layers, but thoroughly incorporate it with the whole mass of the soil. A generous sprinkling of bone meal throughout the mixture will be beneficial, as it will supply the phosphoric acid which is deficient in all animal manure. Naturally, if cow manure is unobtainable, horse, sheep or pig manure will make a good substitute. There is something about cow manure very grateful to the rose.

Planting

I shall assume that you will make your own choice of varieties, consulting some good nursery catalogue or some of the later standard works upon roses, acquiring the number of plants to suit your garden and the colors to suit your taste. But I should like to make an appeal on behalf of a few of the oldtime favorites, such as the beautiful moss rose, the cabbage or Provence rose, the damask rose, and the old Persian yellow, the yellowest of yellow roses. These are but a few of the roses of another day which are well worthy of a place in every rose garden, both for the fond remembrances they bring back to most of us, and for their intrinsic beauty. Nor would the garden be complete without some of the fine rugosa hybrids, of which Conrad Ferdinand Meyer is the prince. And then there are the newer Irish single roses of Dicksons, of which Irish Elegance is perhaps the best. But I promised to leave the selection of varieties to the grower and will do so.

Roses planted in the autumn will thrive better the following summer than spring-planted stock, so if possible plant in the autumn. But whether planting in spring or autumn, the ground should be moderately dry and the day, to be ideal, should be cool, cloudy and still. If the plants are on their own roots there will be no trouble from suckers, and shallow planting will be all right. It is advisable to plant budded or grafted stock so that the union is two to three inches below ground, for by

so doing we lessen the trouble from suckers and keep the graft in better condition. The distance apart to plant will depend upon the variety, whether it is a strong or a weak grower, and upon this the planter should inform himself before planting. About three feet should be the extreme distance for the strongest growers, and eighteen inches to two feet for the weaker ones. Prune back the tops to three or four good buds, and likewise trim out any bruised or broken roots. If there are any large coarse roots, these should be shortened, as it will help in the formation of more small fibrous rootlets. Make the hole for each plant large enough to lay out the roots all round, and in replacing the soil do not be afraid to tamp it till it is really firm, that is, providing it is in the proper condition for planting, not too wet. Amateurs are very apt to fail in this particular matter of thoroughly firming the soil.

Pruning

To the unprofessional rosarian, pruning seems the most perplexing problem, but if its objects and principles are once thoroughly grasped, then ordinary common sense will make its application to suit the varying conditions a more or less simple matter. The object of pruning roses is: first, a rejuvenation of the plant, getting new wood; next, the removal of weak or superfluous branches so as to throw all the plant's energy into the remaining growths, and to let in a maximum of air and light. Personally I believe that there is something in mutilation that tends to produce floriferousness, but this is merely a hypothesis and is given for what it is worth. There are certain rules, however, which may be laid down in regard to pruning of outdoor roses, not hard and fast rules, but rules susceptible of modification. One of these rules is that the weaker growers should be pruned back harder than the stronger growing ones. A few good buds of last season's growth left annually may be taken as a guide in pruning the weak growers, but if the very strong ones, such as Margaret Dickson, for instance, were treated this way, we should get but few flowers and exceedingly thick strong wood. The way to treat the latter is to shorten back the longest growths by a foot or two and then tie or peg them down, hence the reason for allowing lots of room for these when planting. Should too many buds on these long stems start into growth, so that they threaten to crowd one another, practice a little judicious thinning. Of course there are intermediate growers between the very strongest and the very weakest, and these must be treated accordingly.

The climbing and rambling type of roses require very little pruning, except for the removal of dead or decaying wood. After flowering the old flower growths may be removed advantageously; in fact, much may be done with roses as well as fruit trees by a little careful summer pruning, especially in removing old flowering wood. In pruning try to cut back to a bud on the outside of the shoot, so that the coming growth will be outward and not inward. Always try to make a nice clean cut,

close to the bud, so that there will be no ugly spur sticking up, which cannot heal over, and which will surely die back, to the injury of the plant.

Propagation

The propagation of roses is fortunately a very easy matter. Budding, grafting, layering, seeds and cuttings are the several means employed. Most of the hardy roses which come from Europe are budded or grafted on the dog-rose or manetta stock, while in America a great many are grown from cuttings on their own roots. I shall not attempt any detailed account of the methods of budding and grafting roses, as those who would learn this had better consult some of the standard works, where very plain illustrations will be found which will be far more helpful than any words from me would be.

Cuttings from growing wood may be put in sand through the summer in a cold frame with a northern exposure, and if kept shaded and well watered will root freely enough. The best shading is a piece of cheese-cloth tacked to a frame of wood to replace the ordinary sash. Cuttings should be about four or five inches long and have one or two leaves. It is well to make a nice clean cut near a bud at the bottom. Cuttings of dormant wood put in flats of sand and set in a cool greenhouse will root through the winter and grow when spring comes.

Layering consists in taking a shoot and making a slit in it, cutting it part way through, then bending it to the ground and burying it two or three inches deep at the point where the cut is made. After a while roots will be emitted at the cut, and when these have made some growth, the layer may be entirely cut from the parent plant and transplanted.

Propagation by seed is only resorted to for the purposes of raising new varieties or for raising the various wild stocks for grafting and budding.

Insect Enemies

The competitive spirit has been previously referred to as one of the prominent characteristics of human nature, and the rosegrower is engaged during the growing season in another kind of competition—a competition to see whether the various beetles, caterpillars, aphids and mites shall have the lion's share of the roses or not. However, it has been said that difficulties are made to be overcome, and the enthusiastic rosarian will engage these enemies as they appear, and, with vigilance and care, will come off victorious. Aphis, the green fly or green louse, is so well known that description is unnecessary. As soon as any of these are seen, and they are generally found on the growing tips, measures should immediately be taken for their eradication, as they are tremendously prolific. One authority tells us that one aphis may become in five generations the progenitor of nearly six thousand millions of descendants. I confess that I have not verified this statement by actual count, but my observations on their possibilities of increase have impressed me with the necessity of immediately

setting about their destruction. Fumigation being impracticable outside, our remedy must be a spray of some soap and tobacco compound, of which there are a number on the market. Aphine, an American remedy, and X. L. All, an English preparation, are both excellent for this purpose. Thrips are a great deal more troublesome on the rambler type of rose than on the other kinds. It is a large white thrip which causes the yellow sickly appearance in rambler foliage which is only too common. The same remedies will destroy thrips as are recommended for aphids. Red spider is sometimes troublesome on the outdoor roses, but if the hose is within reach and they be thoroughly and forcefully syringed on the underside of the leaves, the spider will be easily controlled. The rose bug or beetle is a rather disgusting and a very difficult pest to control. If they are not too numerous, handpicking is at once the simplest and most efficient means of destroying them. As they easily fall off, a sheet may be spread on the ground and the bushes be shaken over it. After gathering the beetles this way they may be destroyed by burning or by putting them in kerosene. Most of the different caterpillars which eat the foliage of the rose may be killed by spraying with arsenate of lead, one half pound to ten gallons of water. This is a safe and effective spray for all the biting insects, and the wise thing to do is to spray early and spray several times through the summer, on the principle that prevention is better than cure. Remember that you are dealing with two kinds of insects, biting, such as the beetles and caterpillars; and sucking insects, such as aphids and thrips. For those that eat the leaves use a poison, like arsenate of lead, and for those that suck the juices of the plant, tobacco and soap sprays. The larva of the June bug, a large white grub that spends three years in the soil before emerging as the full-fledged bug, sometimes does serious damage by feeding upon the roots of roses. Should you find that they are working at the roots, or that there are many in the beds, make holes about a foot apart and four or five inches deep and pour a spoonful of bisulphide of carbon into each hole, covering it up quickly, so that the gas will diffuse through the soil.

Fungoid Diseases

Mildew is naturally the first of these to come to mind and is, perhaps, the worst. Sulphur dusted over the foliage with a bellows is one of the commonest remedies, but liver of sulphur, one ounce dissolved in ten gallons of water, sprayed on the foliage is by far and away the best, both as a cure and as a preventive. Black spot and orange fungus are both very destructive at times, for which the liver of sulphur is the best remedy known to me. Cleanliness and general good cultivation are among the best preventives for nearly all diseases.

Winter Protection

Most of the roses require some degree of winter protection if grown north of Philadelphia. The climbing roses will come through the average

winter if a few evergreen branches are tied over them to protect from the sun. But the teas, hybrid teas, and hybrid perpetuals must have something more. Protection is especially necessary against the ravages of field mice, which cause great destruction in some places by gnawing the bark for three or four inches above the base. The only way to prevent this, so far as I know, is by banking soil or manure sufficiently high, so that even if the mice eat the plant above, there will be enough wood left to start again. The freezing of this soil prevents the mice attacking the bark which is covered. Above the banked earth evergreen branches or any coarse litter will answer for further covering. Any very tender roses, however, had better be bent over and entirely covered with soil.

You will note that I have made no special mention of standard roses. The treatment of these, as far as ordinary cultivation goes, will be the same as for the others. They will require more elaborate winter protection. Grafted on rugosa stocks, they may, with great care, be laid over and covered with soil. If this is not possible, a good covering of straw bound around them will do, at the same time supporting with a stout stake.

Conclusion

The successful grower of roses must be an optimist, as there is much to contend with. The reward is however commensurate with the effort, and as Dean Hole so beautifully expresses it: "He who would have beautiful roses in his garden must have beautiful roses in his heart. He must love them well and always."

Roses under Glass

It would be presumptuous on my part to attempt to tell the commercial rose-grower anything about growing roses under glass, and my remarks will be such as I think may be suggestive to the amateur, or the beginner in indoor rose-culture.

The rose house, like the rose garden, must be well away from the shade of trees or buildings. Even on the north side large trees, especially evergreens, are not desirable in close proximity to the greenhouse, as they will absorb some of the light that should go to the roses. The pitch of the roof should be as steep as is practicable for the width of the house, and good clear glass, not less than sixteen inches wide, should be used. The house should run nearly east and west, facing about twenty degrees east of south. This slightly eastern aspect will mean in the winter an hour earlier warming up of the house on bright mornings, permitting of syringing that much sooner, consequently giving the plants a better chance to dry before night. This is a very important matter.

The house should be at least five feet high at the eaves, so that there may be a walk on each out side, thereby enabling the grower to get at both sides of all the beds or benches. This also gives the roses a better circulation of air, and more head room. I prefer solid beds to benches, but

I recognize that good roses may be grown in either. It is true that with solid beds the placing of the heating pipes is not so simple, but with the walk laid out as suggested most of the pipes may be hung on the two out-side walls, especially now that most of the heating is with two-inch pipes.

The soil should be a good heavy fibrous loam, preferably from an old pasture, mixed with about one sixth its bulk of rotted cow-manure and a good sprinkling of bone meal. Plant the roses as early as possible, as there is nothing gained by keeping them in pots any longer than necessary. And having planted and made them reasonably firm, stake them so that they may be thoroughly syringed, for if they are not properly staked and tied they will be loosened at the graft; if they are on their own roots, the knocking about which a good hard syringing gives will be harmful.

Water around each plant carefully until it gets a hold of the soil, and then water carefully, but plentifully. Many gardeners run roses too dry; in some cases more water would mean better roses. Ascertain the optimum temperature for the varieties you have, and then do your utmost to maintain that temperature. The gardener and amateur, being mostly without a night fireman, are handicapped in this matter of night temperatures, but a lot may be done by real care.

By persistent fumigation the several insects, such as green fly and thrips, may be kept in check, but red spider, which is the greatest enemy of indoor roses, can only be controlled by thoroughly syringing, with a forcible spray of water, the underside of the foliage. Mildew is best controlled by painting the pipes with sulphur or spraying with liver of sulphur, but the good grower relies on prevention rather than cure. All-round good cultural methods are the means he uses. Black spot is another fungoid disease which attacks certain varieties very readily. The optimum temperature and dry foliage at night are the means of warding off attacks of this disease.

The lecture was very practical, and aroused much interest, manifested by the discussion which followed.

The meeting adjourned at 5 P.M.

GEORGE V. NASH,
Secretary.

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of the

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JULY, 1913

EDITED BY THE SECRETARY

GEORGE V. NASH

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THE SUMMER EXHIBITIONS

The summer exhibitions are being held monthly, Saturdays and Sundays, in coöperation with the New York Botanical Garden, in the halls devoted to paleobotany, on the ground floor of the Museum building. The prizes for these exhibitions are offered by the New York Botanical Garden, and are awarded through the exhibition committee of the council of The Horticultural Society of New York. As has been the custom in the past, the flowers, at the conclusion of the exhibitions, are donated to hospitals and other similar institutions, bringing pleasure and a breath of the outdoor world to the less fortunate.

The May Exhibition was held on the tenth and eleventh, with a large attendance on both days. The center table in each end of the hall together with a number of smaller tables were filled with exhibits. Large collections of the flowers of shrubs and trees, tulips, and wild flowers were exhibited. The collection of lilacs exhibited by Mr. T. A. Havemeyer, forming a part of his entry of flowers of shrubs and trees, was much admired. There were some striking forms among these, perhaps the most notable being Pasteur, with flowers of the deepest red-purple, fully one and a quarter inches in diameter. The New York Botanical Garden made a large display of the flowers of herbaceous plants, and also of shrubs and trees.

The display of calceolarias was excellent, and a fine group of pelargoniums added a touch of dainty color. The sweet peas shown by Mr. John I. Downey were of unusual merit and exhibited great skill in cultivation. The display of hybrids between

Primula polyantha and *vulgaris*, exhibited by Mrs. A. M. Booth, was one of the attractions.

Following is a list of the prize-winners:

The first prize for a collection of the flowers of shrubs and trees went to Mr. T. A. Havemeyer, A. Lahodny, gardener, the second to the F. R. Pierson Co. Mrs. A. M. Booth, E. Fardel, gardener, secured first prize for a collection of tulips, Mr. Havemeyer taking the second. An interesting collection of wild flowers gave Mr. E. B. Southwick the first prize, the second going to Mr. John Hartling. Mrs. F. A. Constable, James Stuart, gardener, won the first prize with six pots of fine pelargoniums. This exhibitor also took the first prize for six pots of calceolarias, the second going to Mr. Louis C. Tiffany, John Miller, gardener.

Special prizes were awarded as follows: Wm. Kleinheinz, for six excellent plants of *Calceolaria Stewartii*; John I. Downey, Thos. Ryan, gardener, for a collection of Spencer sweet peas; Mrs. F. A. Constable, for six pots of *Calceolaria Stewartii*; Siebrecht & Son, for a hybrid of *Laelia purpurata* \times *Cattleya Lawrenceana*, certificate of merit; Mrs. A. M. Booth, for a collection of hybrids of *Primula polyantha* \times *vulgaris*.

The judges were F. R. Pierson, J. H. Troy, and George V. Nash.

The June exhibition was held on the seventh and eighth. There was a large attendance, especially on the afternoon of Sunday. The prizes offered were mainly for peonies and roses, resulting in a fine display of these flowers. The competition in the rose classes was keen, there being nearly three hundred vases of this popular flower on exhibition. There were also large displays of the flowers of hardy shrubs and trees, irises, rhododendrons and azaleas, and herbaceous plants. Many fine orchid plants added much to the interest of the exhibition. The display of peonies was very effective. In the classes for three varieties of white, light pink, and rose, six flowers of each, the first prize was won by the Cottage Gardens Co., the second by Mr. T. A. Havemeyer, A. Lahodny, gardener. In the class for three crimson varieties, Mr. Havemeyer took first, the Cottage Gardens Co. second. A fine group of single peonies brought to Mr. Havemeyer the first prize, the second to the F. R. Pierson Co. In the

large collection, not less than six flowers of each, Mr. Havemeyer was again the first prize winner, the F. R. Pierson Co. second.

There were four competitors in the rose classes, resulting in the finest display of hardy kinds ever seen at any of the society's exhibitions. The first prize was won by Mrs. Benj. Stern, W. D. Robertson, gardener, with an excellent collection of ninety-three vases, the flowers of fine quality. The judges had considerable difficulty in deciding upon the winner of the second prize, finally awarding it to Gen. E. A. McAlpin, J. Woodcock, gardener, for a display of seventy-three vases, over Mr. H. Darlington, P. W. Popp, gardener, with a collection of sixty-three kinds.

The collection of the flowers of hardy shrubs and trees displayed by Mr. Havemeyer contained many fine things and won the first prize. The large semi-double flowers of *Philadelphus Virginal* made a fine display. Others of this genus were: *Conquette*; *Bouquet Blanc*; and *erecta*. Branches of *Styrax japonica* made a dainty effect with their graceful bells of white. *Deutzia crenata magnifica*, a late production of Lemoine, was striking in its large trusses of white flowers. *Kalmia latifolia superba* has flowers larger than in the common type, and the variety *Pavardi* of this same shrub has flowers of a deep rosy pink, especially marked in bud-form. The second prize in this class went to Mr. H. Darlington. Mr. Havemeyer also took first prize in the class for hardy rhododendrons and azaleas, the F. R. Pierson Co. securing second.

The first prize for a collection of hardy herbaceous plants went to Miss B. Potter, Geo. Wittlinger, gardener. A fine group of Spanish irises won the first prize for Mr. H. Darlington. The flowers were excellent, fresh and clean. The following were especially striking: *Cajanus*, bright yellow, shaded with orange; *Leonida*, indigo, shaded with orange; *Louise*, white, with a faint lavender tinge, the falls shaded with yellow and spotted orange; *Thunderbolt*, the falls dark greenish-yellow, spotted orange, the standards dark purple; *British Queen*, white, the falls spotted orange. The second prize for irises went to Mr. John Lewis Childs.

Mr. Clement Moore, J. P. Mossman, gardener, was the winner of the first prize in the class for six orchid plants, six varieties,

the second going to Messrs. Lager & Hurrell. A group of three orchid plants, three varieties, brought the first prize in that class to Messrs. Lager & Hurrell, as did also a single orchid plant, Mr. Moore winning the second prize in each case.

The following special prizes were awarded: Messrs. Bobbink & Atkins, for an excellent collection of hardy herbaceous plants, bronze medal; Clement Moore, for a so-called pink variety of *Vanda coerulea*, certificate; Clement Moore, for a plant of *Cattleya speciosissima* \times *Dozwiana*, raised and grown by himself, silver medal; Clement Moore, for a collection of Laelio-cattleyas and Cattleya hybrids, silver medal; Mrs. F. A. Constable, Jas. Stuart, gardener, for three Fuchsia plants; W. A. Manda, for a plant of *Dendrobium Sanderæ*, silver medal.

The judges were James Stuart, I. S. Hendrickson, and Wm. Tricker.

A LARGE SPRING EXHIBITION

The Third International Flower Show was held this past spring at the Grand Central Palace, N. Y. City, under the auspices of the Society of American Florists and Ornamental Horticulturists and contributing societies, in cooperation with the International Exhibition Co. The success of this show had inspired those interested in the advancement of horticulture with the hope that a spring flower show might become an annual event in this city. So when the International Exhibition Co. approached the New York Florists' Club with a proposition in reference to holding a show next spring, the way was open. This club, however, felt that The Horticultural Society of New York, owing to its large and influential membership, should take the lead in matters of this kind, and appointed a committee to confer with our society as to the possibility of accepting the proposition made by the International Exhibition Co. At the request of this committee, a special meeting of the Council was called to meet the committee from the New York Florists' Club, on the evening of May 17th, and was attended by twelve members of our Council. The proposition submitted was thoroughly discussed and a joint committee appointed to take up the matter with the International Exhibition Co., with power to act, if satisfactory terms could be arranged. The result

of this conference is that The Horticultural Society of New York, in cooperation with the New York Florists' Club, will conduct a spring show in 1914 at the Grand Central Palace, under an agreement and contract with the International Exhibition Co., under the terms of which neither The Horticultural Society of New York nor the New York Florists' Club is financially responsible. These two organizations will provide the funds for the premium-list, which will be covered by a guarantee fund provided by individuals ready to undertake this. The expenses, other than those of the prize-list, are provided for in the agreement with the International Exhibition Co.

The date of the exhibition is fixed for March twenty-first to twenty-eighth.

THE WILLIAM BARR FUND

Mrs. William Barr, in memory of her husband, has given the society the sum of five hundred dollars, to be known as the William Barr Fund, the interest of which is to be used for flower prizes. Mrs. Barr has been enrolled as a patron of the society.

The late Mr. Barr was much interested in horticulture, assembling valuable collections at his estate, known as Baronald, in Llewellyn Park, West Orange, N. J. These collections embraced, among other things, choice stove and greenhouse plants, orchids, ferns, and especially chrysanthemums, in which Mr. Barr was particularly interested. He had large collections of these fall flowers, and exhibited them frequently at the exhibitions of the local society, in which he was much interested. Some of the new varieties were raised there, among these being Baronald, Alice Byron, and Jessie King.

The creation of a fund of this kind is a fitting way in which to honor the name of one who has done so much to advance the cause of horticulture. Plants and flowers are loved by all, and he who aids in placing them where others may enjoy is a public benefactor.

PROCEEDINGS OF THE SOCIETY

APRIL 12, 1913

A meeting of the society was held on Saturday, April 12, 1913, at 4 P.M., at the New Grand Central Palace, Mr. Pierson presiding. This meeting was called for the American Museum of Natural History, but the presence of many at the flower show then in progress, made it advisable to hold the meeting at the above place.

The minutes of the meeting of March 15, 1913, were read and approved.

The following persons, having been approved by the Council, were presented for annual membership:

Mrs. Fred'k H. Eaton, Daniel S. Hage, Chas. A. Draper, Max Schling.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected annual members of the society.

The following resignations were accepted with regret:

Chas. H. Plump, William J. Cassard.

There being no further business before the society, the meeting adjourned at 4:15.

GEORGE V. NASH,
Secretary.

MAY 10, 1913

The annual meeting of the society was held on Saturday, May 10, 1913, at 3:45 P.M. in the Museum building, New York Botanical Garden, Mr. Southwick presiding. An exhibition of plants and flowers was held in conjunction with this meeting.

The minutes of the meeting of April 12, 1913, were read and approved.

The following persons, having been approved by the Council, were presented for annual membership:

J. R. De Lamar, Wm. Nelson Davey, Mrs. De Lancy Kane.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected annual members of the society.

THE HORTICULTURAL SOCIETY OF NEW YORK

The following resignation was accepted with regret:

W. C. Trageser.

The thirteenth annual report of the Council was read, and it was ordered printed in the next number of the JOURNAL.

The following nominations were made for officers and members of the Council for the year 1913-14.

President

George T. Powell

Vice-Presidents

T. A. Havemeyer	Samuel Thorne
N. L. Britton	Patrick O'Mara
	James Wood

Treasurer

F. R. Newbold

Secretary

George V. Nash

Members of the Council

F. L. Atkins	Clement Moore
Arthur T. Boddington	W. Nilsson
Robt. T. Brown	F. R. Pierson
John Canning	H. A. Siebrecht
J. W. Cromwell	Robert Simpson
M. C. Ebel	E. B. Southwick
I. S. Hendrickson	Robert Stobo
John E. Lager	James Stuart
J. A. Manda	Chas. H. Totty
E. S. Miller	Wm. Tricker
	J. H. Troy

Upon motion, seconded and carried, the secretary was autho-

THE HORTICULTURAL SOCIETY OF NEW YORK

rized to cast an affirmative ballot for the election of the above nominees. This was done and they were declared elected.

The meeting adjourned at 4 P.M.

GEORGE V. NASH,
Secretary.

JUNE 7, 1913

A meeting of the society was held on Saturday, June 7, 1913, at 3:50 P.M. in the Museum building, New York Botanical Garden, Dr. Britton presiding. An exhibition of flowers and plants was held in conjunction with this meeting.

The minutes of the meeting of May 10, 1913, were read and approved.

The following persons, having been approved by the Council, were presented for membership:

Life

Mrs. Edward S. Harkness

Annual

James Bell, Harry A. Bunyard, T. Murray, John Young.

The secretary was authorized to cast an affirmative ballot for their election. This was done and the parties declared elected members of the society.

The following resignations were accepted:

Mrs. J. H. Benedict, V. Everit Macy, L. S. Livingston.

There being no further business, adjournment was taken at 4 P.M.

GEORGE V. NASH,
Secretary.

THIRTEENTH ANNUAL REPORT OF THE
COUNCIL

PRESENTED MAY 10, 1913

The thirteenth year of the society and the eleventh of its incorporation have now been completed.

Ten exhibitions were held, those from May to September in

the Museum building, New York Botanical Garden, on Saturdays and Sundays, the remainder at the American Museum of Natural History on Saturdays, with the exception of that for November. This action on the part of the two institutions is fully appreciated by the society, which herewith expresses its thanks for this courtesy. The following is a list of the exhibitions, detailed accounts of which appear in the *JOURNAL* as follows: May and June, in the July issue; July, August, and September in the October issue; November in the issue for January; January, February, and March in the issue for April.

May 11 and 12, 1912. Held in connection with the annual meeting of the society.

May 25 and 26, 1912. A special exhibition at which Mr. T. A. Havemeyer made a large exhibit of lilacs.

June 8 and 9, 1912. The largest summer exhibition ever held by the society. Roses and peonies were the features.

June 29 and 30, 1912. It was decided to hold the exhibition normally scheduled for July at this time.

August 31 and September 1, 1912. This was the gladiolus show, at which large quantities of this popular flower were exhibited.

September 28 and 29, 1912. The main exhibits were dahlias and asters.

November 1 to 5, 1912, Friday to Tuesday. The fall exhibition, held as usual at the American Museum of Natural History by permission of the trustees of that institution. Ninety-four members contributed to the special fund necessary to defray prizes and other expenses connected with this exhibition. The first evening was devoted especially to a private view for members of the society, Museum, and affiliated organizations. The attendance at the previous fall show, at that time thought large, was greatly exceeded this year, totaling 130,287, of which number 90,769 visited the exhibition on Sunday. This is not only the record attendance for this society, but also for the Museum, the previous record of about 60,000 on a Sunday being at the tuberculosis exhibit some years ago.

January 25, 1913. Schedule prepared primarily for orchids and carnations.

February 22, 1913. Especially for carnations.

March 15, 1913. Orchids and roses.

The premiums for the exhibitions of May to August were offered by the New York Botanical Garden, to be awarded by the exhibition committee of the council of The Horticultural Society of New York.

There were twelve meetings of the council and of the society, those from May to September at the Museum building, New York Botanical Garden, those from October to March at the American Museum of Natural History, and that for April at the New Grand Central Palace, during the progress of the Third International Flower Show. They were as follows, all accompanied by exhibitions, excepting those for October, December and April:

May 11, 1912. Annual Meeting, with election of officers and members of the Council. A lecture occurred on this day in the Garden course by Prof. H. M. Richards on "The Deserts and Mountains of Southern Arizona."

June 8, 1912. A lecture, in the Garden course, was delivered by Mr. George V. Nash on "Orchids."

June 29, 1912. A lecture, in the Garden course, was delivered by Dr. W. A. Murrill on "Exploring the Pacific Coast—I. New York to Seattle."

August 31, 1912. A lecture, in the Garden course, was delivered by Dr. W. A. Murrill on "Exploring the Pacific Coast—III. Oregon to California."

September 28, 1912. Mr. George V. Nash delivered a lecture in the Garden course on "The Upper Delaware Valley and its Flora."

October 26, 1912. A business meeting only was held.

November 2, 1912. Held during the progress of the fall show. A lecture was delivered by Mr. George V. Nash on "Horticulture in the Northwest."

December 21, 1912. On account of the proximity of this meeting to the holidays the lecture announced for this day was postponed to the next meeting.

January 25, 1913. Lecture by Mr. George T. Powell on "The

Educational and Financial Importance of Horticulture to the Community."

February 22, 1913. Lecture by Dr. Mel. T. Cook on "Possibilities of Controlling Orchard Diseases."

March 15, 1913. Lecture by Mr. Edwin Jenkins on "Roses, Outside and under Glass."

April 12, 1913. A business meeting only was held.

The JOURNAL has been issued quarterly as follows: no. 12, July 1912, 20 pages; no. 13, April 1912, 14 pages; no. 14, January 1913, 14 pages and 4 plates; no. 15, April 1913, 22 pages; making a total of 70 pages and 4 plates.

The membership of the society is now 438, divided as follows: Patrons, 2; Sustaining Members, 2; Life Members, 101; Annual Members, 333. The total number of new members during the year is 71, of which 1 is Sustaining, 20 Life, and 50 Annual. The losses in membership are as follows: by death, 20, of which 3 were life members; resignation, 15; dropped on account of non-payment of dues, 13; total 48. This leaves a net gain for the year of 23: 1 sustaining, 18 life, and 4 annual.

One annual member, Mrs. McDougall Hawkes, became a life member by the payment of the fee of \$50.00.

As noted in the annual report of last year, it is desirable that the number of patrons, sustaining members and life members be increased, and it is advised that importance be placed upon this the coming year, and that steps be taken to formulate some method of accomplishing this.

At the meeting of the Council, held on February 24, 1912, the following action was taken:

Resolved: That the Gold, Silver and Bronze medals of the society be offered at the National Flower Show, to be held in New York City in the spring of 1913, for exhibits of unusual merit, the exhibits to be judged and the awards made by The Horticultural Society of New York.

In compliance with this resolution the exhibition committee awarded two gold, seven silver, and two bronze medals at that exhibition. The details of these awards will be found in the JOURNAL for April of this year.

The Council extended in the name of the society an invitation

THE HORTICULTURAL SOCIETY OF NEW YORK

to the National Association of Gardeners to hold its fall meeting and convention as the guests of the society at the time of its fall exhibition. This invitation has been accepted.

A list of the present membership and also the report of the treasurer are appended to this report.

F. R. PIERSON,
Chairman,

GEORGE V. NASH,
Secretary.

TREASURER'S STATEMENT

For the year ending May 10, 1913

Life Fund

Permanent ' Account in	Life Fund, May, 1912....	\$5,720.96
Broadway Savings Inst. \$1,388.53	New Life and Sustaining	
Investment Account, 50	Members	1,075.00
shares Steel Stock, pfd.,	Interest	353.83
at cost		<u>\$7,149.79</u>
5,761.26		
\$7,149.79		

General Account

Sale Publications	\$ 14.00	Salary Secretary	\$ 300.00
Special Fund, Nov. Show	1,393.00	Petty Cash, Secretary...	200.00
Dues	1,540.00	Petty Cash, Treasurer ...	48.59
	\$2,947.00	Printing account	571.46
Balance from 1912-13		Prizes account	1,208.75
Account	236.82	Medals account	102.50
	\$3,183.82	Expense account	216.02
			<u>\$2,647.32</u>
		By 1913 Balance.....	536.50
			<u>\$3,183.82</u>

Statement of increase

Life Fund	\$1,428.83
General Fund	299.68
	<u>\$1,728.51</u>

MEMBERSHIP

MAY 10, 1913

Patrons

Huntington, Archer M. Sage, Mrs. Russell

Sustaining

Chanler, Mrs. Louis S. Dinsmore, Mrs. W. B.

Life

Adams, Edward D.	Delafield, Mrs. John R.
Agnew, Cornelius Rea	Delano, Eugene
Andrews, Constant A.	Dimoch, Mrs. Henry F.
Archbold, John D.	Dodge, Mrs. Cleveland H.
Armstrong, Dr. S. T.	Estabrook, A. F.
Billings, Miss E.	Ford, James B.
Bliss, Miss Catherine A.	Frothingham, H. P.
Bliss, Mrs. William H.	Gould, Geo. J.
Blumenthal, George	Harkness, E. S.
Bowdoin, George S.	Harrah, Charles J.
Bowdoin, Temple	Hawkes, Mrs. McDougall
Brown, Geo. McKesson	Hearn, George A.
Burk, Louis	Hoyt, Theodore R.
Burton, F. V.	Hubbard, Thos. H.
Callender, W. R.	Iselin, Adrian, Jr.
Cammann, Miss K. L.	Iselin, Columbus O'D.
Campbell, Mrs. Ina	James, Mrs. Arthur Curtiss
Chapin, Chester W.	James, Mrs. D. Willis
Chapin, S. B.	Lane, Edward V. Z.
Chubb, Percy	Lanier, Charles
Colgate, W.	Lehman, Meyer H.
Collord, Geo. W.	Lehman, S. M.
Constable, Mrs. F. A.	Macdonald, Jas. A.
Conyngham, W. S.	MacMillin, Emerson
Cutting, Mrs. Bayard	Marshall, Louis
Davis, Chas. H.	Marwick, James

THE HORTICULTURAL SOCIETY OF NEW YORK

McLean, Mrs. J.	Stillman, C. C.
Mills, A. G.	Stokes, Miss C. Phelps
Morgan, J. P.	Stokes, Miss O. E. P.
Morgan, Mrs. J. P.	Stone, Miss E. J.
Morris, Newbold	Taylor, Wm. H.
Mortimer, Richard, Jr.	Thompson, Chas. G.
Morton, Hon. Levi P.	Thompson, Mrs. Frederick F.
Nesbitt, Abram G.	Thorne, Samuel
Newbold, F. R.	Troy, J. H.
Olcott, Dudley	Underwood, F. D.
Parker, Dr. James H.	Untermeyer, Samuel
Peabody, G. F.	Vanderbilt, F. W.
Peters, S. T.	Van Emburgh, D. B.
Pierson, F. R.	Van Gerbig, Mrs. Barend
Potter, Miss B.	Wadsworth, W. A.
Proctor, Frederick T.	Warburg, Felix M.
Read, Wm. A.	Warburg, Paul M.
Riker, John J.	Washburn, Thos. G.
Robinson, Nelson	Waterbury, John I.
Roosevelt, Mrs. James	Webb, Mrs. W. Seward
Sands, Daniel C.	Webster, Mrs. Sidney
Satterlee, Herbert L.	Wetmore, George Peabody
Schley, Grant B.	Willets, Elmore A.
Stevens, Miss Mary O.	Ziegler, Wm., Jr.
Stickney, J.	

Annual

Adams, Mrs. F. T.	Arents, George
Adams, Henry S.	Atkins, F. L.
Agens, Frederick Girard, Sr.	Avery, Ledyard
Agnew, Mrs. C. R.	Avery, Samuel P.
Aldrich, Mrs. J. Herman	Baldwin, C. E.
Aldrich, Mrs. Richard	Barnhart, Dr. J. H.
Alexander, Douglas	Barron, Geo. D.
Allien, Mrs. Frederick	Barron, Leonard
Amory, Copley	Baugh, Miss M. L.
Anderson, A. J. C.	Belmont, August
Archer, George A.	Bendheim, C. D.
Arend, Francis J.	Benedict, Mrs. J. H.

THE HORTICULTURAL SOCIETY OF NEW YORK

- | | |
|--------------------------|--------------------------|
| Benson, Miss Mary | Combe, Mrs. Wm. |
| Bieschke, A. | Conklin, Roland R. |
| Blair, Mrs. D. C. | Cordes, Wm. |
| Blauvelt, C. D. | Cordley, F. R. |
| Bliss, Mrs. Walter P. | Crane, F. D. |
| Blumenthal, Hugo | Cravath, Mrs. Paul D. |
| Boddington, Arthur T. | Crawford, Wm. |
| Boettger, Henry W. | Crimmins, John D. |
| Bonner, G. T. | Cromwell, Benj. F. |
| Bradley, S. R. | Cromwell, James W. |
| Brinsmade, Charles Lyman | Cullman, Mrs. Joseph F. |
| Bristol, John I. D. | Curtis, G. Warrington |
| Britton, Dr. N. L. | Darlington, H. |
| Bronson, Mrs. Frederic | Davies, J. Clarence |
| Brown, Robert T. | De Forest, H. W. |
| Brown, Mrs. S. A. | DeKlyn, B. F. |
| Bruggerhof, F. W. | Delano, Warren |
| Bryce, Mrs. W. | Dexter, Jos. |
| Bulkley, Edwin M. | Dickey, Mrs. C. D. |
| Bulkley, Mrs. Edwin M. | Dietrich, C. F. |
| Bulkley, L. Duncan | Dike, Miss A. M. |
| Bunker, William | Dimock, Geo. E. |
| Butterfield, Mrs. Daniel | Douglas, J. |
| Butterworth, John | Dows, David |
| Calman, Henry L. | Draper, Chas. A. |
| Cammann, H. H. | Du Bois, Mrs. Geo. W. |
| Campbell, James | Duer, Mrs. John Beverly |
| Canning, John | Du Pont, Henry F. |
| Cathcart, Miss J. R. | Dwight, Mrs. M. E. |
| Childs, John Lewis | Eaton, Mrs. Frederick H. |
| Chisholm, Hugh J. | Ebel, M. C. |
| Clausen, G. C. | Edmonds, Mrs. John W. |
| Cleres, Valentine | Ehret, George |
| Coats, Mrs. Alfred M. | Erlanger, Abraham |
| Coffin, C. H. | Fairchild, Benjamin T. |
| Coghlan, Michael | Fardel, E. |
| Collier, R. J. | Farrington, Wm. Hyatt |
| Colon, George Edward | Ferguson, Mrs. Farquhar |

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- Fischer, William H.
 Foulke, J. B.
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 Giatras, George
 Gibson, Robt. W.
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 Gotthelf, Chas.
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 Greenhut, Benedict J.
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 Griffith, Miss Susan D.
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 Guinzburg, A. M.
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 Hage, Daniel S.
 Hall, Mrs. John H.
 Hamilton, Elizabeth Stewart
 Harper, Dr. R. A.
 Havemeyer, J. C.
 Havemeyer, T. A.
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 Haven, Mrs. J. Woodward
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 Hicks, Henry
 Hiss, Mrs. Nelson
 Hitch, Mrs. Frederic Delano
 Hoe, Mrs. R.
 Hoe, Richard M.
 Holbrook, Mrs. Edward
 Holden, E. R.
 Howell, M. D.
 Hoyt, Gerald L.
 Hoyt, Miss Gertrude L.
 Hunt, Thomas
 Hurrell, Henry
 Huyler, Coulter D.
 Inglis, Wm.
 Iselin, Mrs. Columbus O'D.
 Iselin, Miss Georgine
 Iselin, Wm. E.
 Jackson, T. F.
 Jacobus, Martin R.
 Jenkins, Alfred W.
 Jennings, Robt. E.
 Jesup, Mrs. Morris K.
 Jones, Miss Beatrix
 Jones, John
 Jones, Mrs. S. Beach
 Kahn, O. H.
 Kean, Mrs. Hamilton Fish
 Kelsey, F. W.
 Kinney, Morris
 Knight, Thos.
 Koehne, Robert
 Kohlman, C.
 Komitsch, Herman
 Krower, Louis
 Krumweide, Charles, Jr.
 Lager, John E.
 Levy, Emanuel
 Lewisohn, Adolph
 Lichtenstein, Paul
 Lisman, F. J.
 Livingston, Luther S.
 Loewi, Hugo V.
 Logan, Frank J.
 Lyon, Horace D.
 MacDougal, Dr. D. T.

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- | | |
|----------------------------|------------------------------|
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| Mallory, Chas. | Paul, Mrs. G. E. |
| Manda, A. J. | Peckham, Mrs. Ethel Anson S. |
| Manda, J. A. | Perkins, G. W. |
| Manda, W. A. | Phelps, Mrs. Von R. |
| Marsh, J. A. | Piel, Michael |
| Marshall, Alex. L. | Platt, Mrs. Frank H. |
| Marshall, W. E. | Plump, Chas. H. |
| Marston, Edgar L. | Popp, P. W. |
| Marston, Edwin S. | Post, A. S. |
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| McAlpin, Dr. D. H. | Pryer, Charles |
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| Merkel, Herman W. | Pulsifer, Mrs. N. T. |
| Meyer, Edwin O. | Quincy, C. F. |
| Middleton, Geo. | Richter, Max |
| Miller, A. L. | Roberts, Miss M. M. |
| Miller, E. S. | Robertson, Miss Jennette |
| Miller, Dr. Geo. N. | Robinson, Thos. W. |
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| Mitchell, Wm. | Roehrs, Julius |
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| Morningstar, J. | Rowland, Mrs. Chas. B. |
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| Myers, William S. | Ruppert, Mrs. Jacob |
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| Nilsson, W. | Sachs, Paul J. |
| Noe, Louis A. | Sage, Mrs. Dean |
| Notman, George | Schiff, Mortimer L. |
| Noyes, Mrs. H. D. | Schirmer, Rudolph E. |
| Ochs, Adolph S. | Schling, Max |
| O'Mara, Patrick | Schurz, Miss Marianne |
| Opdyke, Wm. S. | Scott, C. W. |
| Osborn, Prof. H. Fairfield | Scott, Wm. |

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- Scrymser, James A.
 See, Alonzo B.
 Seitz, Charles E.
 Seligman, Isaac M.
 Seligman, Jefferson
 Shillaber, Wm.
 Shoemaker, Henry W.
 Siebrecht, H. A.
 Simon, Franklin
 Simpson, John Boulton
 Simpson, Robert
 Sloan, Benson Bennett
 Smidt, Thos.
 Smith, Adelbert J.
 Smith, Frank Morse
 Snow, E. G.
 Southwick, E. B.
 Spingarn, J. E.
 Spoon, J. J.
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 Strauss, Chas.
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 Stroock, Joseph
 Struck, George F.
 Stuart, Jas.
 Sturgis, F. K.
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 Sullivan, Mrs. James
 Taggart, Rush
 Tailer, E. N.
 Talcott, James
 Tatum, C. A.
 Tesla, Nikola
 Thorne, J.
 Tierney, Myles
 Tiffany, Louis C.
 Totty, Chas. H.
 Traendly, F. H.
 Trageser, W. C.
 Trevor, Mrs. J. B.
 Tricker, Wm.
 Troescher, A. F.
 Tuckerman, A.
 Tuckerman, Miss E.
 Tuttle, Mrs. B. B.
 Untermyer, Alvin
 Van Etten, Mrs. L. E.
 Van Ingen, Mrs. Edward H.
 Von Zedlitz, Mrs. Anna M.
 Wales, Edward H.
 Walker, H. F.
 Ward, C. W.
 Warren, Mrs. John Hobart
 Wells, Oliver J.
 Westcott, Mrs. Robert E.
 White, W. A.
 Wilbour, Miss Theodora
 Willis, W. P.
 Wills, Charles T.
 Wilson, Andrew
 Wilson, Geo. T.
 Wilson, M. Orme
 Witherbee, F. S.

THE HORTICULTURAL SOCIETY OF NEW YORK

Witherbee, Mrs. F. S.
Wood, Mrs. Cynthia A.
Wood, Mrs. C. B.
Wood, James

Wright, Mrs. J. Hood
Young, Mrs. A. Murray
Zoller, Charles
Zvolanek, A. C.

THE HORTICULTURAL SOCIETY OF NEW YORK

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T. A. HAVEMEYER	SAMUEL THORNE
JAMES WOOD	

Treasurer

F. R. NEWBOLD, Poughkeepsie, N. Y.

Secretary

GEORGE V. NASH, New York Botanical Garden,
Bronx Park, N. Y. City

Council

Ex-Officio Members

THE OFFICERS OF THE SOCIETY

Elected Members

F. R. PIERSON, *Chairman*

F. L. ATKINS	E. S. MILLER
ARTHUR T. BODDINGTON	CLEMENT MOORE
ROBT. T. BROWN	W. NILSSON
JOHN CANNING	H. A. SIEBRECHT
J. W. CROMWELL	ROBERT SIMPSON
M. C. EBEL	E. B. SOUTHWICK
I. S. HENDRICKSON	ROBERT STOBO
JOHN E. LAGER	JAMES STUART
J. A. MANDA	CHAS. H. TOTLY

WM. TRICKER

Journal

of the

Horticultural Society of New York

Vol. I, No. 17



NOVEMBER, 1913

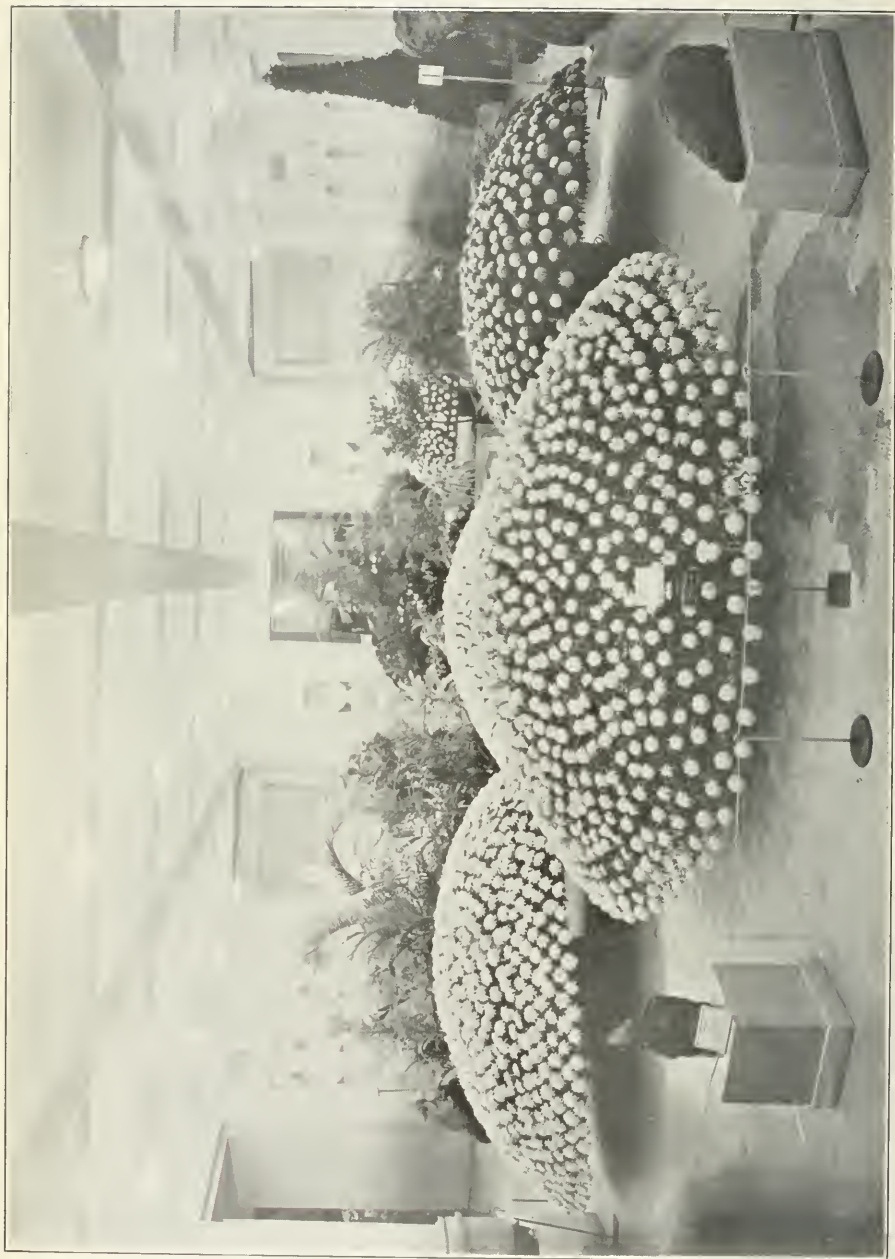
EDITED BY THE SECRETARY

GEORGE V. NASH

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THE NEW ERA PRINTING COMPANY
LANCASTER, PA.



Fall Exhibition of 1913. Group of Bush Chrysanthemum Plants, exhibited by Adolph Lewisohn, Esq. Three first-prize winners: "Wells' Late Pink" on left; "R. F. Felton" in center, with "Lady Lydia" just visible in the rear. The plant to right is "Bronze Novelty," winner of the second prize.

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INCORPORATED 1902

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Quarterly

NOVEMBER, 1913

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THE FALL EXHIBITION

The largest exhibition ever given by the society closed its doors on Tuesday night, November fourth. It opened on the evening of Friday, October thirty-first, at seven, with a private view to the members of the society, the museum, and affiliated organizations. It was open free to the public the four following days. The open hours were 9 A.M. to 5 P.M. and 7 to 10 P.M., except on Sunday when it was open from 1 to 5 P.M. only. The opening day coincided with the birthday of his Imperial Majesty, the Emperor of Japan. The chrysanthemum, the feature at this exhibition, is the national flower and emblem of the Japanese Empire, and for the development of this flower we are indebted largely to Japanese horticulture. It was therefore suggested by Dr. Geo. F. Kunz that it would be peculiarly appropriate to have the exhibition opened by His Excellency, Kametaro Iyima, the Japanese Consul General. An invitation was therefore extended to him to be present at the opening. He accepted and promptly at seven fifteen, the time appointed, the Consul General arrived, accompanied by Dr. Kunz and Mr. Lindsay Russell, president of the Japan Society in this city. A rather hurried inspection of the exhibits preceded the opening exercises which were held in the East Assembly Hall, known as the Academy Room. This was filled to overflowing, many finding standing room only in the approach to the hall.

In addition to those already mentioned, there were present on the platform, as representing The Horticultural Society of New York, the president, Mr. George T. Powell, the treasurer, Mr.

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JUN 20 1914

Frederic R. Newbold, the secretary, Mr. George V. Nash, and the chairman of the council of the society, Mr. F. R. Pierson.

Mr. Powell presided at the exercises, and in introducing the Consul General made the following remarks:

Ladies and Gentlemen:

In behalf of The Horticultural Society of New York, and of the other associations affiliated with the Academy of Sciences which have their home in the American Museum of Natural History, it is not only a pleasant duty, but a privilege, to extend a welcome to the distinguished representative of a country and of a people that has given to the world, not only a most wonderful record of achievement and valor in war, but even greater accomplishments in the fields of art and science.

Our United States Department of Agriculture is recognized for the great scope and breadth of its work in agricultural science, investigation and research, yet with its more than twenty-five centuries of accumulated knowledge, in the science of agriculture, our highest scientific authorities have gone to Japan for information that could be obtained from no other nation in the world.

It is an interesting coincidence that the opening of the Annual Autumn Flower Show of this Horticultural Society on this date, should occur on the anniversary of the birthday of his Imperial Majesty, the Emperor of Japan, and the flower that will most attract many thousands of visitors to this exhibition, upon which the highest and best skill, care and culture that is known have been given in its most marvelous development, is the chrysanthemum, the national favorite and beloved flower of Japan.

The remarkable exhibition, now so auspiciously opened, will command the interest and admiration of all who are privileged to visit it.

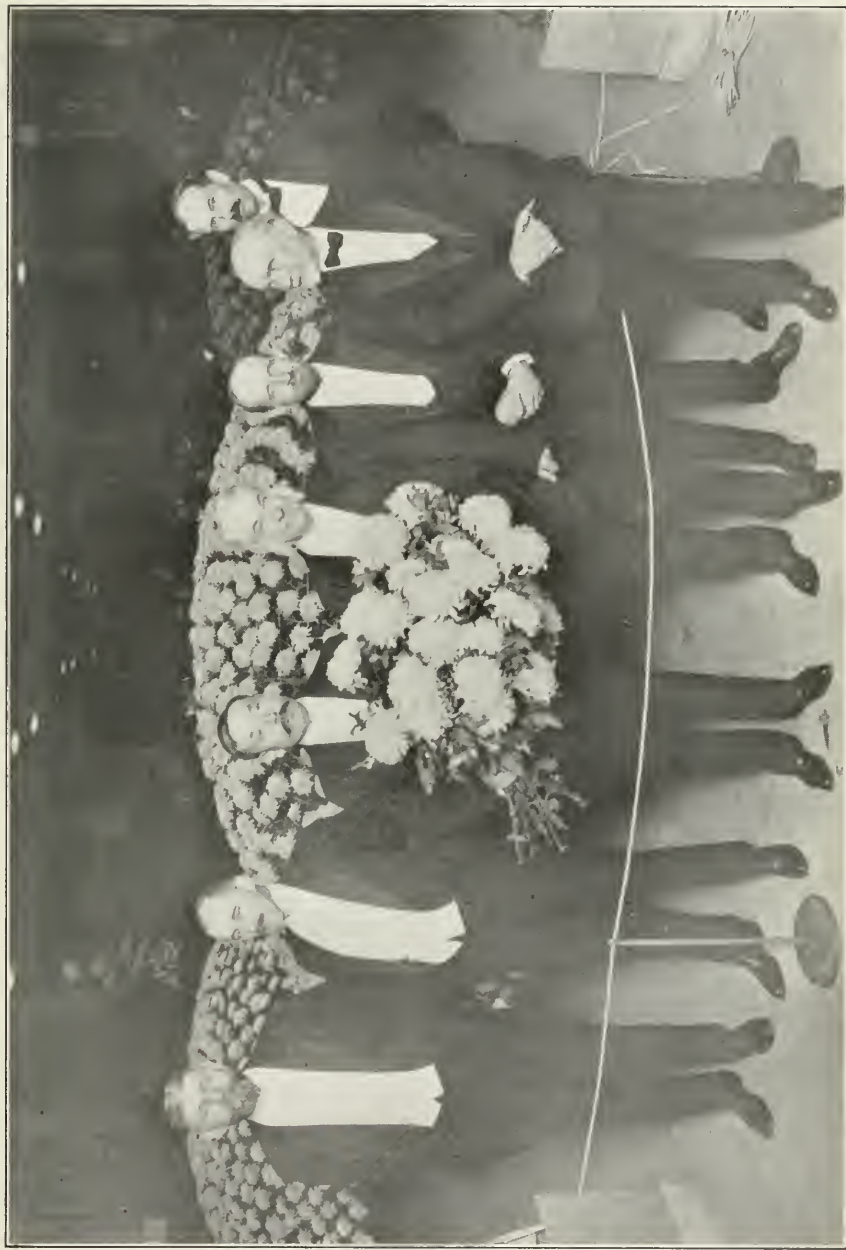
It gives me great pleasure to introduce Mr. Kametaro Iyima, Consul General of Japan.

The Consul General made quite evident the love of the Japanese people for their Emperor and for flowers, especially for the chrysanthemum. His address follows:

Mr. President, Ladies and Gentlemen:

I deem it a great honor to participate in the opening of this chrysanthemum show. To me the occasion has a two-fold significance. This superbly beautiful blossom exhibited here is the national symbol of Japan and to-day we celebrate the birthday of his Imperial Majesty, the Emperor of Japan. This coincidence, coupled with the irresistible fascination which a flower show always holds for a Japanese, makes it a pleasure and a duty to accept your invitation.

There are indeed many things transplanted from the East to the West and vice versa, which are found more flourishing than in their native country. To obtain this result, no effort nor pains is spared in the nurture



Fall Exhibition of 1913. Opening of the Exhibition. Left to right: Dr. George F. Kunz; Mr. Lindsay Russell, President Japan Society; His Excellency, Kametaro Iyima, Consul General of Japan; Mr. George T. Powell, President; Mr. George V. Nash, Secre-

and care of the specimen. The wonders achieved in chrysanthemum cultivation in America is one of the most striking examples of this fact.

This flower is universally admired and sought after in Japan; it is the emblem of the imperial household and as the symbol of long life it is drunken mixed with "sake," the Japanese wine, on a certain festive day. It has inspired Japanese poets and artists to produce fine masterpieces in their respective spheres of mental activity. It typifies the autumn as the cherry blossom represents the spring.

Among the Japanese there is a custom to interpret flowers according to their color, shape and time of blossoming. For example, cherry trees come to full bloom in spring when the plants and flowers come up, birds sing cheerful melodies, plains and fields are spread with a green carpet and everything is bright and gay. But should rain or wind come at the time of blossoming, the flowers fall and wither immediately and retain nothing of their former luxuriance. In this sense, the cherry blossom is very often compared with a charming and fascinating woman whose captivating power surpasses every other quality. To our great regret, fascination in a woman is not always combined with constancy and virtue, but, on the contrary, very often with frivolity and caprice and, like the cherry blossom, perishes and fades with exposure to the slightest storm. This fact accounts for the reason that Japanese women seek their ideal symbol in the chrysanthemum and the plum blossoms instead of in the cherry blossoms. They take these flowers, especially the chrysanthemum, as the symbol of feminine virtue and love and cherish them with universal admiration. They adore the chrysanthemum because it stands against the severe frost and, in the midst of the autumn season, when the lotus dies and the leaves of the trees fall, it remains to inspire and cheer us with its wondrous splendor.

There are numerous legends and traditions associated with this flower. When I was a child, I used to hear from my mother, who was an ardent admirer of this blossom, the following romantic story: In the medieval stage of Japan, fight and duel were often of daily occurrence among the chevalier class. One day two men of close friendship had a quarrel and, after a spirited argument, they thought nothing else than a duel could properly settle the matter. They agreed to meet again in the evening at a certain spot to stake their fate by the sword. They hurried home and bade farewell to their dear families and started for the place of fighting in a disturbed state of mind. They had to cross a rivulet to reach the appointed place of meeting. It was the evening of an autumn day, and the rays of the setting sun cast his golden light upon the water, making a most entrancing scene. Along the banks of the rivulet grew thousands of the purest white chrysanthemums. There could be nothing in nature's beauty more splendid and fascinating than the view before them, and, as they approached the edge of the stream, their nature-loving passions were awakened and utterly absorbed in the picturesque sight. In fact, so much so, that they immediately began to indulge in poetical meditation and were

so calmed in spirit that they speedily came to the realization that it was a wrong thing for two such warm friends to seek each the life of the other in combat over a foolish dispute. They shook hands and renewed their former friendliness, and in order not to forget this memorable incident and to express their deep gratitude for the chrysanthemum's power, they adopted the flower as their family emblem, and were many times seen in the field on horseback with dainty white chrysanthemums on their helmets. So, as the friends in the foregoing story, we also, as individuals and nations, may, if we look over and above our petty disputes, gain from the beauties of nature, as seen perhaps in the matchless beauty of the chrysanthemum, an inspiration which will temper our prejudices, remove our misunderstandings, and enlighten us in our ignorance.

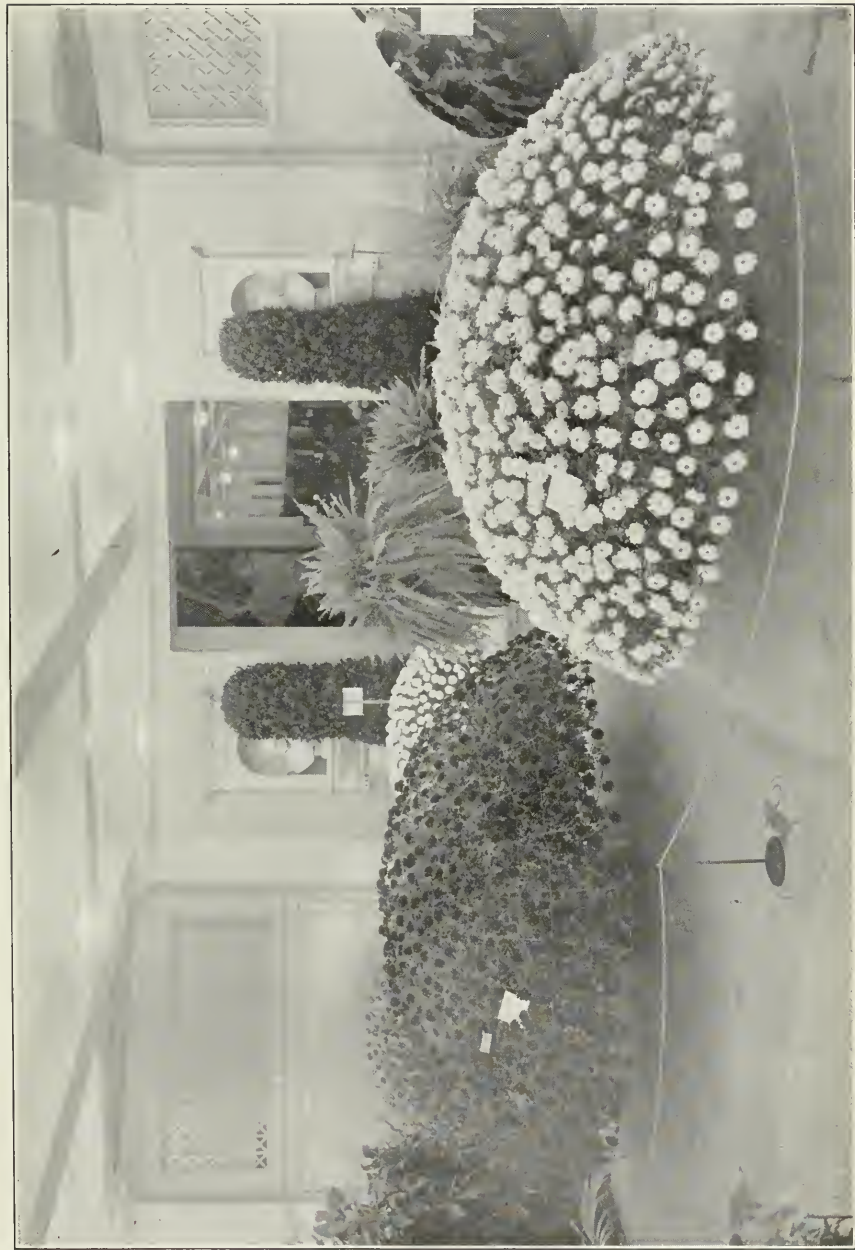
Quite recently I heard another story which beautifully illustrates with what deep love the cultivation of the chrysanthemum is regarded in Japan. Some years ago there was a great national show in Tokyo, and one of the newspapers of influence offered a large sum of money for the prize-winning flower, but with the condition that it should be named for that newspaper. The highest award came to a poor humble gardener, as having the finest flower in all the great show. The prize of money offered by the paper would have been sufficient to keep the poor gardener comfortably for the rest of his life, but the beautiful plant had already been named for his faithful wife whose constant care had made the wonderful development possible, and, although the temptation was very strong, he refused the prize money and the beautiful chrysanthemum was long known under the name of his faithful and loving wife.

I thank you again for the great honor which you have conferred upon me by inviting me to this opening ceremony of the chrysanthemum show.

In closing the meeting Mr. Powell remarked as follows :

I am certain all have been interested in the address of our distinguished visitor, and in the delightful insight he has given us of the sentiment, work and life of the country which he represents here this evening.

I was particularly interested in the illustration given of beautiful women and the cherry blossoms. I am glad to be able to assure Your Excellency, that in our city of New York, and in other sections of our United States, many of our most beautiful American women are leaders in the most beautiful and skillful work that is done in horticulture. There are many among them who, by their own hands, give the finest care and culture in the development of exquisite roses and other plants and flowers, and are possessed of scientific and technical knowledge of horticulture. This may be said and is known of your own beautiful women of Japan, who, by their knowledge and deftness of hand, are enabled to so weave and direct the growth and development of the leaves upon rose bushes, that in the finished operation is produced the perfect rose in its completeness in form, from the leaves of the plants. In industrial art Japan gives valuable lessons to the world.



Fall Exhibition of 1913. Bush Chrysanthemum Plants exhibited by Samuel Untermeyer, Esq. First-prize winners, "The Bard" on left; seedling variety on right.

The Horticultural Society of New York desires to express its pleasure and appreciation of your presence with us on this occasion, by presenting you with a collection of chrysanthemums, and to convey to you, and to your people, the feeling of the same good will that you have expressed toward us to-night.

A large bunch of yellow chrysanthemums was then presented by Constance Devereaux Nash, the little eight-year-old daughter of the secretary of the society.

This gift was graciously acknowledged by the Consul General. He was then shown some of the principal exhibits, and was much struck by the size of the chrysanthemum blooms and their wonderful perfection, remarking that they could not produce such perfect flowers in Japan. He admired exceedingly the large bush chrysanthemum plants. Just before his departure a photograph of the party was taken, standing in front of the large yellow chrysanthemum bush plant exhibited by Mr. Adolph Lewisohn, the first prize winner for this color. This photograph is here reproduced.

The attendance far exceeded that of any other exhibition ever held in the American Museum of Natural History. During the four days and five nights 167,503 visited the exhibition, distributed as follows: Friday evening, the private view, 1,488; Saturday, 18,695; Sunday, 97,953; Monday, 25,065; Tuesday, 24,302. This great total means that over 40,000 people a day visited this flower exhibition.

The attendance for Sunday was extraordinary, being about 8,000 more than for the same day last fall. For a great part of the time a solid line, four people wide, extended all the way from Eighth Avenue through Seventy-seventh Street to the museum doors. A similar line from Columbus Avenue merged with this at the museum approach.

This vast crowd was handled without a mishap of any kind. They went in an orderly line around the museum, following the way indicated by the arrows on the signs. This result was brought about by the foresight and care of Mr. J. B. Foulke, superintendent of the museum, aided in the execution of his plans by a corps of able assistants. The arrangement of the exhibits was planned to allow ample pathway, in anticipation of the crowds, all devious lines being eliminated. Think what it means to handle a crowd of

this magnitude. They came at the rate of about 24,500 per hour, a little more than 400 per minute.

The exhibition was held in the foyer and the halls radiating therefrom, extending into the Indian Hall which runs to the north from the end of the west hall. In the foyer were placed the large chrysanthemum plants, the groups of stove and greenhouse plants, and the larger specimens of decorative plants. In the east hall, in large vases, were displayed the long-stemmed chrysanthemum blooms, and some of the larger exhibits for which room could not be provided in the foyer. In the north hall the large and valuable exhibits of orchids were placed. In the west hall were the exhibits of short-stemmed chrysanthemum blooms, including the entries for the society's silver cup, the fruit exhibits, and some of the specimen plants. In the Indian Hall were the roses, carnations, and the greater part of the small-flowered chrysanthemum blooms.

Coming in the fall of the year the center of attraction of this exhibition is the chrysanthemum. And here they were in great profusion. Never before had such a display been seen. The bush chrysanthemums were larger and better than those of last autumn, and the quantity and quality of the cut blooms, especially of the large-flowered sorts, were far ahead of the previous year. Competition was keen in nearly all of the classes, adding much to the interest of the exhibition.

Again it was the large bush chrysanthemum which was the sensation of the show. Larger and better than ever before, they were the talk of everyone. There were eight of these large bush plants this time, so it was necessary, in order to properly display them, to make use of both ends of the foyer, separating the two groups by a central space, in the center of which was an exhibit of stove and greenhouse plants.

Mr. Adolph Lewisohn again had a trio of plants which defied competition, each plant taking the first prize. They occupied a prominent place in the west end of the foyer. The finest of this trio was a magnificent specimen of Wells' Late Pink, to which the judges awarded the sweepstakes prize, the society's gold medal, for the finest and best bush plant exhibited. Its diameter was 14 feet, and it contained about 1,200 flowers. The specimen



FIG. 1. Collection of Chrysanthemum Blooms exhibited by Miss M. T. Cockcroft. Winner of the Society's Silver Cup, offered for twelve varieties, three of each.



FIG. 2. Collection of Chrysanthemum Blooms exhibited by Mrs. Wm. E. S. Griswold. Winner of the first prize for twenty-four varieties, one of each.

bush plant with yellow flowers was the variety known as R. F. Felton. This had a diameter of 14 feet, 7 inches, with about 1,600 flowers. The third plant of the trio had white flowers, and was the variety known as Lady Lydia. This in its perfection of individual bloom was superb. Its diameter was 10 feet, 8 inches, and the number of flowers about 1,000.

Mr. Samuel Untermeyer captured the second prize for a specimen bush, white, with the same variety, Lady Lydia. For a specimen bush, any other color than yellow, pink or white, Mr. Untermeyer took first prize with The Bard, the second going to Mr. Lewisohn for Bronze Beauty.

For a specimen bush, anemone or single, the first prize was secured by Mr. Untermeyer with a seedling variety, the second by Mrs. W. D. Guthrie, Locust Valley, N. Y., Wm. T. Ross, gardener, with Garza.

The display of chrysanthemum cut blooms was large and the quality of the flowers excellent. In the classes for commercial growers, twelve blooms, stems not less than three feet long, Mr. Chas. H. Totty took first prizes in the white, pink, yellow, red, and any other color. The silver medal offered for six new varieties, not in commerce, one bloom of each, was awarded to Mr. Totty. For a collection of twenty-five varieties, one of each, stems not over fifteen inches long, all named varieties, Scott Bros. took first, Mr. Chas. H. Totty second. For a collection of pompons, twenty-five varieties, Mr. Chas. H. Rice was awarded first, Mr. Thos. W. Head, second. The first prize for a collection of singles and anemones, or either, went to Scott Bros., the second to Mr. Chas. H. Totty.

In the classes for non-commercial growers the following were prize winners. For six white blooms, stems not less than two feet, Mrs. W. D. Guthrie first, with Wm. Turner, Miss M. T. Cockcroft, Saugatuck, Ct., Adam Paterson, gardener, second. For six pink, Mr. J. T. Pratt, Glen Cove, N. Y., J. W. Everitt, gardener, won first with Wells' Late Pink, Mrs. F. A. Constable, Mamaroneck, N. Y., Jas. Stuart, gardener, second. Six yellow brought the first prize to Mr. J. T. Pratt, the second to Miss M. T. Cockcroft. Mrs. S. Neustadt, Chappaqua, N. Y., David Gordon, gardener, took first for six red, Miss Cockcroft second.

For six any other color, except white, pink, yellow or red, Mrs. Neustadt also received first prize, with Mary Mason, Miss B. Potter, Ossining, N. Y., Geo. Wittlinger, gardener, second. For a vase of one or more varieties, arranged for effect, any other foliage permitted, Mrs. Constable won first, Prof. H. F. Osborn, Garrison, N. Y., Wm. Ritchie, gardener, second.

The competition for the society's silver cup, valued at one hundred dollars, was keen. This prize was offered for twelve vases, twelve varieties, three blooms of each variety, stems eighteen inches long. The cup was won by Miss M. T. Cockcroft with the following varieties: Wm. Turner, M. Loiseau-Rosseau, Mrs. Gilbert Drabble, Lady Hopetoun, F. S. Vallis, Rose Pockett, W. Woodmason, Mary Mason, Wells' Late Pink, Frank Payne, Alice Lemon, and Pockett's Crimson. Messrs. J. M. Thorburn & Co. offered a second prize in this competition, a silver cup, valued at twenty dollars. This was won by Mrs. D. Willis James, Madison, N. J., W. H. Duckham, superintendent, with the following: Beatrice May, Mary Mason, M. Loiseau-Rosseau, Mrs. Gilbert Drabble, Harry E. Converse, F. S. Vallis, Pockett's Crimson, Onunda, W. Woodmason, Lady Hopetoun, and Hon. Mrs. Lopes.

For a collection of twenty-four varieties, one of each variety, stems not over fifteen inches long, all named kinds, the first prize was awarded to Mrs. Wm. E. S. Griswold, Lenox, Mass., A. J. Loveless, superintendent, with, among others, the following: Mrs. Gilbert Drabble, Annie E. Angus, F. S. Vallis, Mrs. J. C. Neill, Mrs. H. Stevens, Beatrice May, Mrs. G. C. Kelly, W. A. Ethrington, W. Mease, Chrysanthemiste Montigny, Christy Mathewson, Manhattan, Pockett's Crimson, Mrs. W. Duckham, Valerie Greenham, Merstham Blush, W. Woodmason, Mrs. W. E. Tricker, and Lady Hopetoun. The second was won by Mrs. S. Neustadt. For a collection of six varieties the first prize went to Prof. H. F. Osborn, the second to Mr. J. T. Pratt.

A collection of pompons, twenty-four varieties, secured the first prize for Mr. H. Darlington, Mamaroneck, N. Y., P. W. Popp, gardener, showing, among others: Lilian Doty, Inez, Alma, St. Illoria, Meg, Ruth, Myers' Perfection, Delicatissima, and Donald. The second was won by Mr. Fred'k Sturges, Fairfield,



Group of Stove and Greenhouse plants, exhibited by Samuel Untermeyer, Esq. Winner of the first prize.

Ct., Thos. Bell, gardener. A collection of twelve pompons gave the first prize to Mr. Chas. Mallory, Port Chester, N. Y., Wm. J. Sealey, gardener; Canoya, Julia Lagravere, Alma, Lulu, and Wm. Sabey were some of those shown. The second went to Mr. Fred'k Sturges. Mr. H. Darlington won first prize with his collection of singles and anemones, or either, twenty-four varieties, with, among others: Laurie Hearn, Metta, Alpine Glow, Clio, Felix, Polly Duncan, Florrie King, and Oriole. Mr. Fred'k Sturges secured second. A special first prize was also awarded to Mr. J. T. Pratt for his exhibit in this class. Among other things he showed: Josephine, Mrs. Sam Nash, Alex Rowbottom, Red Light, Merstham Jewel, J. H. G. Williams, Snowflake, Margaret Totty, and Metta. Miss C. A. Bliss, New Canaan, Ct., John T. Burns, gardener, was the first prize winner for a collection of singles and anemones, or either, twelve varieties. The following, among others, were a part of her exhibit: Miss May Thorn, Ceddie Mason, E. Nottell, Mrs. W. A. Higgs, Metta, Dorothy Dunn, R. B. Burge, Alaska, Alex Rowbottom, Margaret Walker, and Merza. Mr. Adolph Lewisohn won the second prize.

The display of roses was large and the competition in the non-commercial classes keen. In the commercial classes L. A. Noe took first for fifty American Beauty and fifty white, the F. R. Pierson Co. second. For fifty red the F. R. Pierson Co. took first with Milady, L. A. Noe second. Killarney Queen gave the first to the F. R. Pierson Co. for fifty pink, Chas. H. Totty taking second. The F. R. Pierson Co. was winner of the first with Lady Hillingdon for fifty yellow. The silver medal for a new variety, not in commerce, was awarded to Mr. Chas. H. Totty, for Shell Pink Shawyer.

In the non-commercial rose classes Mr. Samuel Untermeyer took first prize for twelve American Beauty. Mr. G. G. Mason, Tuxedo, N. Y., David S. Miller, gardener, took first for eighteen red, with Richmond, Mr. Samuel Untermeyer second. For eighteen white, Mr. John J. Riker, Port Chester, N. Y., W. R. Fowkes, gardener, was awarded first prize, Mr. G. G. Mason second. In the class for eighteen pink, Mr. G. G. Mason again took first with Mrs. Chas. Russell, Mr. John J. Riker second. Mrs. F. A. Con-

stable took first for eighteen yellow with Sunburst, Mr. Samuel Untermyer second. For a vase of fifty assorted roses, arranged for effect, the first prize went to Miss C. A. Bliss.

In the carnation classes for commercial growers the competition was not keen. The Cottage Gardens Co. took first for fifty white with Matchless. This vase also won the sweepstakes prize for the best vase of fifty. The Cottage Gardens Co. also took first for fifty Winsor shade with Mrs. C. W. Ward, and fifty Lawson shade with Vivid. A sport of Mrs. Ward also gave them the diploma for a new variety not in commerce.

In the non-commercial classes Mr. G. G. Mason took first for eighteen white carnations with Alma Ward, Mrs. W. D. Guthrie second. This exhibit of Mr. Mason also took the sweepstakes prize for the best vase of eighteen. Mr. G. G. Mason also took firsts for eighteen each, in Enchantress shade with Enchantress Supreme, in Lawson shade with Mrs. C. W. Ward, in scarlet with Beacon, and in white ground, variegated, with Benora. The seconds were won by Miss C. A. Bliss in the Enchantress shade, scarlet and white ground, variegated, and by Mrs. F. A. Constable in the Lawson shade. Miss C. A. Bliss took first prize in the Winsor shade with Rose Pink Enchantress. For eighteen crimson, the first prize went to Mr. John J. Riker.

The classes for foliage and decorative plants were well represented, the notable exception being the palms which were few in number. There were three excellent groups of stove and greenhouse plants. The first prize was won by Mr. Samuel Untermyer with a very artistic arrangement. Mr. W. B. Thompson, Yonkers, N. Y., R. M. Johnston, superintendent, was awarded the second prize. A third group was exhibited by Mrs. F. A. Constable, and was of such merit that the exhibition committee decided to award to it a special third prize.

The Julius Roehrs Co. took first prize for six pairs of bay trees, and also for an exhibit of conifers. The first prize for a specimen of *Begonia Gloire de Lorraine* was won by Messrs. Sidney and Austen Colgate, Orange, N. J., Wm. Reid, gardener. Mr. W. B. Thompson was awarded the first prize for a specimen of *Begonia*, any other variety, for a large plant showing a high state of cultivation. The only palm exhibited was *Phoenix Roebelinii*, entered



FIG. 1. Collections of Orchids, not less than twelve varieties. The group at left exhibited by Samuel Untermyer, Esq., winner of the second prize. The group at right exhibited by Clement Moore, Esq., winner of the first prize.



FIG. 2. *Cypripedium insigne* Sanderae, exhibited by Mrs. Henry Graves, winner of the first prize for the most beautiful *Cypripedium* plant, and also winner of the sweepstakes prize for the best orchid plant.

by Mrs. H. I. Pratt, Brooklyn, A. J. Manda, gardener, in the class for any other palm. It took first prize. For a specimen of *Davallia Fijiensis*, Mrs. J. Hood Wright, N. Y. City, Chas. Webber, gardener, secured first, Mrs. H. I. Pratt second. A fine specimen of the Boston fern brought the first prize to the F. R. Pierson Co., the second to Mrs. H. I. Pratt. The F. R. Pierson Co. made their usual fine display of *Nephrolepis exaltata* and its varieties, taking the first prize. Mr. Adolph Lewisohn won first prize for a trained specimen of English ivy.

The silver medal for a new plant not yet in commerce was awarded to Mr. George Giatras for a new fern, *Nephrolepis New York*.

The display of orchids was superb, far exceeding in quality and quantity the exhibits at any previous exhibition. Many valuable individual plants were shown. The value of the display was variously estimated at from fifteen to twenty-five thousand dollars. An exceedingly interesting and valuable plant was *Laelio-cattleya Golden Oriole*, exhibited by the Julius Roehrs Co. The display of yellow forms of *Cypripedium insigne* by Mrs. Henry Graves could not be duplicated in this country. The collection of generic and bi-generic hybrids shown by Mr. Clement Moore was exceptional. This may also be said of a group of cattleya hybrids raised and grown by him. Some of the forms were exquisite.

In the commercial classes for plants the Julius Roehrs Co. took first for a collection of twenty-five species and varieties, covering fifty square feet of table space; Lager & Hurrell took second for a similar group. There were a number of unusual plants in the group winning the first prize. One of the most valuable was *Dendrobium Phalaenopsis album*. Another was *Laelio-cattleya Cranstounae*, and still another was *Laelio-cattleya Rothschild*, with the sepals and petals lilac, the lip deeply bordered with magenta-purple. One of the gems of this collection was a fine plant of the rare *Vanda Lowii* in full flower. A hybrid, *Laelio-cattleya Golden Oriole*, exhibited by the Julius Roehrs Co., took the silver medal offered for a novelty not before exhibited before this society. For six varieties, one of each, the first prize was awarded to Lager & Hurrell. The Julius Roehrs Co. secured first for six cypripediums, in six varieties, Lager & Hurrell second. Three plants of *Cattleya labiata* gave the first prize to

J. A. Manda, the second to Lager & Hurrell. J. A. Manda exhibited *Cattleya chrysotoxa*, *Odontoglossum grande*, and *Cattleya labiata*, in the class calling for three varieties, one of each, taking first prize, Lager & Hurrell second.

In the non-commercial classes for plants, Mr. Clement Moore was awarded first prize for a collection of twelve species and varieties, covering twenty-five square feet of table space, the second going to Mr. Samuel Untermyer. Mr. Moore also took the first prize for one *Cattleya labiata*. Mrs. Henry Graves took first for one cypripedium plant with *C. insigne Sanderac*. For one dendrobium plant, Mr. Samuel Untermyer took first with *D. Phalaenopsis*.

The special prize offered by Mr. Clement Moore for the most beautiful cypripedium was won by Mrs. Henry Graves with a fine plant of *Cypripedium insigne Sanderac*. This plant also won the sweepstakes prize for the best orchid plant in the exhibition. The special prize for the most beautiful cattleya, color, form and variety only to be considered, offered by Mr. Clement Moore, was awarded to Mr. J. A. Manda. The magnificent display of yellow forms of *Cypripedium insigne* made by Mrs. Henry Graves, to which allusion has already been made, won the first prize in this class, the second going to Lager & Hurrell. In the class providing for a display of Laelio-cattleya, Brasso-cattleya, Brasso-laelia, or hybrid Cattleya, Mr. Clement Moore won first prize with a splendid collection.

In the classes for cut blooms, for commercial growers, Mr. J. A. Manda won first for a collection to cover twenty square feet, arranged for effect. For a collection of cypripediums, not less than twenty-five species or hybrids, Lager & Hurrell were awarded first.

In the cut-bloom classes for non-commercial growers, for a collection to cover ten square feet, arranged for effect, Mrs. H. I. Pratt won first, Mr. Clement Moore second.

There was a large number of entries made for exhibits not covered by the schedule. To many of these special prizes were awarded as follows:

Alonzo J. Bryan, for a new yellow canna, certificate of merit; John Lewis Childs, for gladiolus "Mrs. Francis King," special mention; Miss M. T. Cockcroft, for a bunch of black Hamburg

grapes, cash; Mr. H. Darlington, for a display of dahlias, cash; Robt. D. Foote, J. K. Lindabury, gardener, for three bunches of Barbarossa grapes, cash; Chas. Hathaway, Max Schneider, gardener, for chrysanthemum "Glory of Seven Oaks," cash; Mr. A. Lewisohn, for three plants of Impatiens, cash; J. A. Manda, group of *Cattleya labiata*, cash; W. A. Manda, for *Polypodium Mandaianum*, silver medal, for *Anthericum Mandaianum*, bronze medal; Mr. Clement Moore, group of cattleya hybrids, silver medal; A. N. Pierson Inc., for varieties of exceptional merit of pompon, single and large-flowered chrysanthemums, silver medal; Mrs. W. H. Pullan, for six pears, special mention; S. J. Reuter & Son, for new seedling rose, "Prince E. C. de Arenberg," certificate of merit; John J. Riker, vase of Mrs. Chas. Russell, cash; Julius Roehrs Co., for collection of stove and greenhouse plants, silver medal; Max Schling, for collection of bouquets, special mention, for flower combination, diploma; Robt. Scott & Son, for new rose, "Killarney Brilliant," silver medal; Wm. Shillaber, for collection of single hardy seedling chrysanthemums, cash; Steinhardt & Kelly, for display of northwestern fruit, silver medal; Mr. Chas. H. Totty, vase of Lilian Doty chrysanthemum, cash; Mr. J. H. Troy, collection of orange trees, silver medal; Mr. Samuel Untermyer, for fan-trained specimen of Sylvia Slade chrysanthemum, cash, for three vases long-stemmed chrysanthemum blooms, cash.

The judges were: Robert Williamson, William Kleinheinz, John T. Allan, S. W. Carlquist, S. Redstone, and John F. Johnston.

One of the most popular exhibits was the fine display of fruit, mainly apples, from the Northwest. It attracted much attention. The fruit was the ordinary commercial pack, not especially selected for the exhibition. Its superb quality and appearance illustrates forcibly what can be accomplished by care and attention to detail.

The special fund required to defray the prizes and other expenses connected with the exhibition was contributed by the following members and friends of the society:

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Journal

of the

Horticultural Society of New York

Vol. I, No. 18



FEBRUARY, 1914

EDITED BY THE SECRETARY

GEORGE V. NASH

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THE JANUARY EXHIBITION

An exhibition of plants and flowers was held in the West Assembly Hall, American Museum of Natural History, on Saturday, the seventeenth, from 1 to 5. The schedule offered premiums for orchids, carnations, and sweet peas. There was a fine display of orchids and carnations, with keen competition in some of the carnation classes. The premiums for sweet peas also brought out some interesting exhibits. Following is a list of the prize winners.

For a Cattleya plant the first prize went to Mr. Clement Moore, of Hackensack, N. J., J. P. Mossman, gardener. Mrs. H. I. Pratt, of Brooklyn, A. J. Manda, gardener, took the first prize for a Cypripedium plant, Mr. C. G. Roebling, Trenton, N. J., J. W. Goodier, gardener, second. For a plant of any other orchid Mr. C. G. Roebling secured first, Mrs. Pratt second. A fine hybrid orchid plant gave the first prize to Mr. Clement Moore in that class, the second going to Mr. Roebling. The judges had difficulty in deciding upon the first-prize winner for a collection of cut orchids, finally awarding it to Mr. Roebling, the second to Mr. Moore. A fine display of cut Cypripediums won for Mr. Roebling the first in that class.

There were no entries in the open-to-all class for a vase of carnations. There was, however, a fine display of carnations in the other classes, confined to non-commercial growers. For three vases, three kinds, the first prize went to Mr. Samuel Untermyer, of Yonkers, N. Y., Mr. W. H. Waite, superintendent, the second to Miss C. A. Bliss, New Canaan, Ct., J. T. Burns, gardener.

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Miss Bliss also took firsts for vases of 12 each of scarlet, Winsor shade, Enchantress shade, and variegated, Mr. Untermyer securing seconds for the scarlet, Winsor shade, and the variegated, the second in the Enchantress shade being won by Mr. A. Lewisohn. Mr. Jas. A. Macdonald, of Flushing, N. Y., R. Hughes, gardener, secured first for a vase of twelve crimson, Miss Bliss second. A vase of twelve Lawson shade gave the first to Mr. Untermyer, the second to Miss Bliss. Mr. Lewisohn won the first for a vase of twelve white, Miss Bliss second. For a vase of fifty blooms, arranged for effect, the first prize was awarded to Mrs. F. A. Constable, of Mamaroneck, N. Y., Jas. Stuart, gardener.

Mr. Lewisohn exhibited a fine vase of one hundred sprays of sweet peas, thereby winning the first prize. In the class for three vases, three varieties, twenty-five of each, Mr. Lewisohn was also first prize-winner, Miss Bliss second.

The following special prizes were awarded: Lager & Hurrell, for a collection of cut orchids, cash; Miss C. A. Bliss, for a plate of mushrooms, cash; Mr. Lewisohn, for two plants of *Geranium Dagetta*, cash; A. N. Pierson Inc., for the new rose "Hadley," silver medal; Max Schling, for three floral pieces, diploma; Clement Moore, for a plant of *Cattleya Rafaeli*, *Clement Moore* variety, certificate, and the same for a plant of *Cattleya Trianæ Backhousiana*, var. *Clement Moore*; Mrs. J. B. Trevor, Yonkers, N. Y., Howard Nichols, gardener, for a plant of *Lilium speciosum*, cash.

The judges were: Howard Nichols, Jas. Bell, and Thos. Aitchison.

PROCEEDINGS OF THE SOCIETY

JULY 5, 1913

A meeting of the society was held on Saturday, July 5, 1913, at the New York Botanical Garden, Mr. Pierson presiding. An exhibition was held in conjunction with this meeting.

The minutes of the meeting of June 7, 1913, were read and approved.

The following persons, having been approved by the Council, were presented for membership:

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Annual

Wm. H. Siebrecht, Mrs. W. S. Montgomery, Chas. H. Plump.

The secretary was authorized to cast an affirmative ballot for their election. This was done and the persons declared elected annual members of the society.

Dr. N. L. Britton was re-elected delegate to represent the society on the Council of the New York Academy of Sciences for the ensuing year.

Meeting adjourned.

GEORGE V. NASH,
Secretary.

SEPTEMBER 6, 1913

A meeting of the society was held on Saturday, September 6, 1913, at the New York Botanical Garden, Mr. Southwick presiding. An exhibition was held in conjunction with this meeting.

The minutes of the meeting of July 5, 1913, were read and approved.

The following persons, having been approved by the Council, were presented for membership:

Annual

Mrs. Peter Fletcher, J. Jas. de Vyver.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected annual members of the society.

The following resignations were accepted with regret:

Mrs. H. D. Noyes, Curt G. Pfeiffer, F. J. Lisman.

Mrs. John Hobart Warren.

Meeting adjourned at 4:45.

GEORGE V. NASH,
Secretary.

NOVEMBER 1, 1913

A meeting of the society was held on Saturday, November 1, 1913, at the American Museum of Natural History, Mr. Pierson presiding.

The minutes of the meeting of September 6, 1913, were read and approved.

THE HORTICULTURAL SOCIETY OF NEW YORK

The following persons, having been approved by the Council, were presented for membership:

Life

Wm. B. Thompson, Julius Roehrs, Mrs. Christopher M. Bell, Henry C. Phipps, Mrs. Wm. Gilman Nichols, Hamilton Fish Webster, R. J. F. Schwarzenbach, Edmond E. Wise, and M. H. Tilford.

Annual

Mrs. Isaac Untermyer, Mrs. William Samuel Hawk, Edward S. Pegram, Mrs. Glover C. Arnold, George Massey, Theodor A. Simon, Miss Isabella C. King, Miss S. Grace Fraser, J. G. Webb, Mrs. Thos. Crimmins, Edmund Penfold, A. W. Evarts, Mrs. John E. Alexandre, Prof. A. S. Bickmore, Mrs. Chester Griswold, Sr., Pierre J. Smith, Mrs. Sidney J. Jennings, Mrs. Payson Merrill, J. Ernest Stern, A. J. Porter, Mrs. G. G. Wheelock, Samuel J. Bloomingdale, and Geo. A. Anderson.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected members of the society.

The following resignations were accepted with regret:

R. W. Paterson, J. T. Ruzicka, Mrs. Dean Sage.

The secretary announced the following committees appointed by the chairman of the council at the meeting of that body on October 15, 1913:

Membership: Wood, Newbold, and Britton.

Exhibition: Pierson, Nash, Havemeyer, Lager, Canning, Hendrickson, Manda, J. A., and Jas. Stuart.

Meeting adjourned at 4:45.

GEORGE V. NASH,
Secretary.

DECEMBER 13, 1913

A meeting of the society was held on Saturday, December 13, 1913, at the American Museum of Natural History, the president presiding.

The minutes of the meeting of November 1, 1913, were read and approved. The following persons, having been approved by the Council, were presented for membership:

Life

Mrs. Anna Woerishoffer, Mrs. Geo. H. Richardson, Mrs. Chas. W. Harkness, and James C. Parrish.

Annual

Mrs. Emerson Opdycke, Henry Gleason, Miss Eliza R. Greenwood, Mrs. Arnold Hague, Mrs. H. L. R. Edgar, John W. Frothingham, Miss Margaret Lawrence, W. S. Gordon, Miss I. M. Cammann, Dudley D. Sicher, James MacMachan, Wm. F. Beller, L. H. Somers, Miss Catherine L. Hamersley, L. Gordon Hamersley, Mrs. Robert Huntington, Milton E. Erlanger, Mrs. Alfred A. Whitman, Mrs. Herbert L. Satterlee, and Mrs. Russell Wellman Moore.

The secretary was instructed to cast an affirmative ballot for their election. This was done and the persons declared elected members of the society.

The following resignation was accepted with regret:

Miss Marianne Schurz.

The lecture announced for the day, "Some Phases of the Fruit Industry in the Northwest," was then delivered by Mr. George V. Nash. This was illustrated with lantern slides.

GEORGE V. NASH,
Secretary.

JANUARY 17, 1914

A meeting of the society, accompanied by an exhibition, was held on Saturday, January 17, 1914, at the American Museum of Natural History, the president presiding at first, followed by Mr. Southwick.

The minutes of the meeting of December 13, 1913, were read and approved.

At the close of the business meeting, a lecture on "Sweet Peas" was given by Mr. Edwin Jenkins. This was of exceeding interest. The lecture follows:

SWEET PEAS

I was led to choose the sweet pea as a subject for my discourse this afternoon for several good and substantial reasons. First, because this beautiful annual is perhaps more truly "everybody's flower" than even the

rose or any other plant in cultivation. For its seed can be purchased for the merest trifle, and it will grow and give some returns in the shape of graceful, sweet-scented blossoms, even in the city yard, or in a tub, or under almost any sort of adverse conditions. Secondly, because the sweet pea above any other plant responds to good cultivation and liberal treatment by yielding to us a magnificent display of flowers over a long period, forming a grand exception to the old adage which says "you can't have your cake and eat it too," for the more sweet peas you pick the more you have, and, in fact, if you don't pick them you won't have them for very long. The rose and the carnation are sometimes so improved by the hybridist as to lose one of their greatest charms, their perfume, but not so with our favorite, no matter how we improve the sweet pea it is the *sweet* pea still.

While realizing that you expect from me practical cultural remarks, I feel sure that you will pardon a brief excursion into the history of the introduction to cultivation and the subsequent development of the sweet pea to its present measure of perfection, believing, as we do, that the pleasure and fascination of the cultivation of any plant is enhanced by a knowledge of its history.

As it is almost certain that the sweet pea reached America through Great Britain, we must go back there for a glimpse of its earlier development. About the last year of the seventeenth century, an Italian priest, named Cupani, found the sweet pea growing wild in the island of Sicily and sent some plants of it to a Doctor Uvedale, at Enfield, in England. We do not know much about it from this date for the next hundred years or more, but suppose it to have been cultivated to some extent. In 1820 some six colors or shades were listed and in 1860 there were nine. Then, about 1877, commenced the great Eckford epoch, when varieties and shades of color were multiplied with great frequency, together with an increase in size and substance. This period of development continued without interruption till about the dawn of the twentieth century, when the sweet pea world was delightfully astonished by the advent of the waved standard, better known as the Spencer type. As this type reigns supreme to-day, at least among the summer-flowering kinds, we may well spare a minute to note this wonderful occurrence, and to observe that when the sweet pea had reached such a stage of development that it was ready to make a break—or, as gardeners call it, "to sport"—it did so in three different places the same season, viz:—in Earl Spencer's garden, Northamptonshire (whence the name of Spencer); with Mr. Unwin, at Cambridge; and with Mr. Eckford, at Wem, in Shropshire. This tendency to break into several different sections the same year has been noted in some other plants, and one might argue that it was a sign that nature was jealous and opposed to monopoly. The old grandiflora variety *Prima Donna* appears to have been the chief factor in the parentage of the Spencers, and its general tendency to throw four flowers to each stem seems to have been transmitted as a characteristic of this type. The last few years have brought still another change, in duplex standards and occasionally duplex petals.

What the future may have in store we know not, but that greater glories await us, the past gives us every reason to hope and to believe.

Cultivation

The next phase we have to consider is how to treat the sweet pea so as to get a maximum of quality and quantity. The ordinary everyday method is to sow the seed in rows very thickly, as soon as the ground is ready to work in spring. Then, with the exception of giving supports of some kind, the grower leaves the plants to take care of themselves until the flowers appear. On some naturally rich soil, if perchance the rainfall is more than ordinarily abundant, very good results may thus be obtained. However, the true lover and sweet pea enthusiast will not be satisfied by any such uncertain methods, but will cast about to find means whereby success is more nearly assured.

Apart from good seed, the fundamental requirement, the all-important foundation of success, lies in the proper preparation of the soil. If this operation is shirked, or in any way skimmed over, your efforts will, in a great measure, be set at naught, and disappointment will almost surely be your lot, unless you are fortunate enough to possess one of those rare conditions of an ideal soil, rich, deep and porous. Possessing this, you might well ignore this part dealing with the preparation of the soil. But as in about ninety-five per cent. of the cases we are only blest with some six to eight inches of tolerably good soil, we must labor heartily to improve this, so that we may have from twenty-four to thirty inches of well-manured compost. The time to do this, to the best advantage, is during the months of September and October, as at that time the ground is usually in good condition for manouvering. Work generally is not so pressing as in spring, and, furthermore, time is then given for settling of the soil before planting.

Let me now describe the method which I have found very satisfactory, though making no claims to superiority over other methods. Assuming a hypothetical case of six rows, each fifty feet long, we would lay out a rectangular plot thirty-six feet by fifty, and on the shorter or thirty-six foot side, three feet from the corner, set a stake, then every six feet a stake, until the six rows are indicated. Stakes should be placed opposite each other at both ends and should denote the center of each row. Now, commencing on the fifty foot side, we remove the top nine inches of soil from three feet on both sides of the center of row one and place it outside of our plot entirely, to be later carted or wheeled to finish the last row. The top soil being removed, we dig a trench (always using the end stakes as a center) eighteen inches deep and two feet wide, placing the subsoil removed on either side of the trench where the good topsoil has just been dug off. Next, commencing on row two, we remove the topsoil from the six-foot-wide strip, and to the same depth as before, using it to fill trench one, mixing with it about a ton of half-decayed farmyard manure, fifty pounds each of bonemeal and woodashes, and about two

pounds of well-pulverized sulphate of iron, being sure to thoroughly incorporate the whole mixture. Proceed thus to the last row, when the soil from row one will be used for filling. As each row is finished, endeavor to leave the soil ridged up so as to give the frost a chance to do all the disintegrating possible. That all this sounds like a heavy task I know full well, but if you would have good, long-stemmed peas, from the middle of June till at least the middle of September, this, or some modification of this method, must be followed.

Having prepared the soil, we next come, by logical sequence, to the sowing of the seed. By all means spare no effort to secure good seed from a reliable seedsman. If you would not be disappointed in securing some choice variety which you have set your heart upon, get seed as early as possible and keep in a cool place until sowing time arrives.

Before we sow, or perhaps before we buy, it will be in order to determine how many seeds we require. On the basis of six rows fifty feet long, it will require six hundred plants to space the plants six inches apart, which is quite thick enough. At any rate, if we start to raise six hundred the chances are that, from one cause or another, a few will succumb between germination and planting time. If they do, we can plant eight inches apart and still fill up the rows, possibly securing better flowers than if planted six inches apart. To raise our six hundred plants we must put in about nine hundred seeds, estimating a seventy per cent. germination, which is about what we may reasonably expect. At the outside, it will only require three ounces, as each ounce contains more than three hundred seeds.

This immediately brings up the question of what is the best time to sow. While personally convinced by reasoning that the autumn is the *ideal* time to sow in pots or flats, carrying the plants through the winter in frames or a very cool greenhouse, and planting out as usual in spring, and while I am following this method this winter, still I do not feel that I have given it a sufficient trial to conscientiously advocate it.

The system I have followed for several years is to sow in small pots about the middle of February or the beginning of March. Before sowing we treat the seed with cultures of the nitrifying bacteria, believing, for the small expense and trouble involved in this operation, that the possible results make it well worth while. But I will not enter into the details of nitro-cultures, as full directions always accompany each purchase, any more than to say that its application is very simple.

The seed being sown, we prefer to germinate at a temperature not less than fifty, because at lower temperatures the whites and creams especially are very liable to rot. Some advocate the filing or chipping of the seed coat, and others soaking in tepid water to promote more rapid germination, but at the temperature mentioned, and with plenty of water, we have never found these aids necessary. As soon as germination has taken place and the growing points are above the soil, a temperature of forty-five or even lower at night will suit. During the day a free circulation of air

is always desirable, for if the plants are in any way coddled the natural resistance to disease will be impaired, and instead of thrifty, hardy plants, we shall have nothing but weaklings. As soon as weather permits remove the plants to a cold frame, for the sooner they get away from artificial heat the better. On every favorable occasion remove the sash completely, so that the air may have full freedom to play around the plants. Needless to say, they must never be allowed to suffer from lack of water, or to become starved for the want of repotting. According to locality, the plants may generally be planted out in their permanent quarters from the tenth of April to May 1.

Still cloudy weather is the ideal time for planting, as on such a day injury to the plants from temporary exposure of the roots will be minimized. The trenches should have been moderately firmed by walking on them and then finely raked. Do not fear to open the ball and spread out the roots, even at the risk of breaking a few rootlets, as the advantages gained by so doing will more than offset any little damage. In planting be sure to press the soil into intimate contact with all the roots, and, if the soil be on the dry side, follow the planting with a good watering, finally hoeing the ground thoroughly.

Let not those, who lack facilities to accomplish these things, despair, because much may be accomplished and very gratifying results follow, even if we are obliged to sow directly outside, provided we thoroughly prepare the soil, in some such manner as here advised, and our subsequent treatment be of the right kind. If we must sow in the open, let us make drills about two or three inches deep on top of the prepared trenches and sow just as early as possible, putting the seeds about an inch apart, so as to allow for losses. If they come up fairly thick, take out enough to leave the plants from six to eight inches apart.

Supports

It is advisable to place around newly set-out plants some bushy brush a foot or so high, to afford some slight protection from the cold biting winds, which may be expected at this early season. This will also give the plants something to cling to as soon as there is need of it.

For permanent supports there is nothing better than good brush six to eight feet tall, set firmly in the ground, but as this is sometimes rather difficult to obtain, a fairly good substitute will be found in large-meshed poultry wire, nailed to posts.

Having provided good supports for the plants, the routine work will be to keep the ground hoed as frequently as possible and to prevent overcrowding. A little judicious thinning will occasionally be necessary. This may be accomplished by cutting away superfluous shoots. If flower buds appear before the plants have reached a height of about three feet, it will be well to disbud the plants, as too early flowering will militate against the future well-being of the plant. When the plants have acquired the requisite height and strength and flowering begins in earnest, you must be sure

to keep all flowers picked clean, for if plants are allowed to produce seed they will soon cease growing, and your flowering season will come to an abrupt end.

Feeding

After the plants have been flowering for some time, the careful grower may note that the flower stems are getting shorter and that there is a general slackening of growth. Now is the time when some quick-acting manure, well watered in, will give the required stimulation, and in a few days normal growth will be established, which may be assured in future by a repetition of some such method as has just been suggested.

Fertilizers

The question may well be asked here, what shall we use to feed and stimulate our plants into more vigorous growth? I do not believe one thing is much better than another, so long as good judgment is used in the application. I would, however, especially urge beginners to err on the short side, rather than to over-do it. I have found that after the plants have been flowering for a week or two they will generally stand a light feeding once a week. An application of two pounds of nitrate of potash, dissolved in fifty gallons of water, to each fifty foot row every two weeks, alternating the week between with about five pounds of superphosphate, sprinkled along the row, will keep the plants tuned up to their work at all times. If weak liquid manure is available, an occasional dose will be beneficial. A sprinkling of soot, well watered-in, will do good, not only as a food, but as a tonic which seems to immensely brighten and intensify the colors.

Mulching

Mulching forms an important part in the treatment of the sweet pea during our hot dry summers, but care must be exercised here as elsewhere. The two danger points to avoid are, getting it on too early, and using too close material. Wait until the ground has thoroughly warmed up, which will not be till nearly the first of July, conserving the moisture, in the meantime, by frequent hoeings. If a mulch is put on too early in the season the ground is kept cold by the exclusion of the sun's rays, and the bacteria which inhabit the soil (and upon which many plants depend in a large measure for their sustenance) are retarded in their development; and because bacteria must have a free supply of air, the mulch should be of a loose nature, straw-litter or dried leaves.

Shading

Unfortunately, some of the finest kinds of orange, salmon, scarlet and crimson shades must be protected from the sun, if we would have them at their best, and so, to facilitate the application of shade, these varieties should be planted together. Light cheesecloth is sometimes used to stretch over these, as it is quite inexpensive, but a more satisfactory shade is made

by erecting a light wooden framework covered with ordinary builders' lath spaced about an inch apart. Through this the plants get the light necessary, a free circulation of air, and the flowers will not burn.

Labeling

If there is one thing more exasperating than another to the sweet pea grower, it is to find that when his plants come into flower the varieties are more or less mixed. This is more likely to happen where the plants are sown and grown in pots. To avoid this, we recommend putting a label in each pot, and at planting time make a plan and keep a record of the location of each variety. In this way confusion and annoyance will be avoided. This will be of great importance if we go in for crossing and seed production.

Crossing and Seed Saving

To those who have had no experience in hybridizing the sweet pea, some puzzling situations may occur. They must learn that several days before the blossom opens the pollen is ripe, the stigma is ready, and fertilization has taken place, if it is ever going to occur. It is therefore necessary to carefully open the keel of the flower when in bud and examine the anthers with a pocket lens, to find out if the pollen grains are shed or ready to shed. If we find the anthers closed, we cut them all away, leaving only the stigma to which you apply the pollen from the flower which you wish to use in making the cross. It is well to fertilize all the flowers on a stem, as in this way you are more certain of securing the cross you desire. If you do not think this advisable, cut away the unfertilized flowers. Tie a small durable label to the stem with the record of the cross.

To make sure of good seed, either artificially or naturally fertilized, July is none too early to begin, as the plants are then at the height of their vigor, and there is a chance of the seeds ripening before the fall rains set in. If you determine to save your own seed, you will go carefully over the rows, removing all those not true to type (and alas there are always a goodly number) before allowing any seed to set. In raising and flowering your crosses you will have many disappointments, as well as some delightful experiences, and it is well to remember that it takes several years for a cross to settle down to a fixed type; but this delightful uncertainty is only one of the many charms of raising new kinds.

Insects and Diseases

Even the dainty fairy-like sweet pea is not exempt from the attacks of insect pests. Among these, green fly is perhaps the worst. The only remedy for this pest is some form of nicotine spray, of which there are a number on the market, and a careful grower will not let this or any other insect get a very strong hold on his plants before he takes measures for their eradication. Red spider may be kept in check by forcible spraying with water. Thrips, like the green fly, must be fought with a nicotine spray.

Of the fungoid diseases, mildew is at once the most common and perhaps the hardest to deal with. While there are many preparations on the market for its prevention and cure, the best way to combat it is to keep up the natural resistance of the plants by conserving their vigor as long as possible. A soil well supplied with potash is supposed to preserve the plants from attacks of the so-called streak disease, but healthy plants set out on new ground annually is the surest way of avoiding all diseases.

Various Methods of Planting.

No one should think that rows are the best and only means of planting the sweet pea. Rows undoubtedly are the most satisfactory means where cut flowers and economy of labor are the main objectives, but where a pleasing artistic effect is desired we may plant in clumps at the back of herbaceous borders, or in beds or in curved lines, or even in tubs for standing on terraces or verandas; or they may be planted to hide an unsightly wall or building. In fact, there is almost endless scope for the grower's ability in forming harmonious color combinations and pleasing effects in general by the proper disposition of this charming plant.

What Varieties to Grow

There is such a host of varieties to choose from that the prospective grower may well be bewildered in making a choice. With the idea that it may aid some, I will name a few of each color, which, from experience, I know to be good:

- White: King White, Snowdon, Nore Unwin.
- Cream: Dobbies Cream, Primrose Beauty, Isabel Malcolm.
- Lavender: Orchid, R. F. Felton, Mrs. Heslington.
- Maroon: Nubian, Mrs. Cowdy, King Manuel.
- Scarlet: Scarlet Emperor, Vermillion Brilliant.
- Crimson: Maud Holmes, Kind Edward Spencer.
- Dark blue: Navy Paradise, Lord Nelson Spencer.
- Cream pink: Mrs. Hugh Dickson, Doris Usher, Mrs. Routzahn.
- Pink: Margaret Atlee, Hercules, Countess Spencer.
- Rose pink: John Ingram, George Herbert, Rosabelle.
- Orange pink: Edrom Beauty, Helen Lewis.
- Orange scarlet: Edna Unwin, Thos. Stevenson.

The following dozen kinds are bi-colors, flaked, striped and mottled, but are wonderfully fine things and should be grown by everyone who can afford the space: Afterglow, Prince George, Bertie Usher, Mrs. W. J. Unwin, Arthur Green, Senator Spencer, Helen Pierce Spencer, Inspector, Melba, Charles Foster, Agricola, and Mrs. Cuthbertson.

To those sweet pea enthusiasts who would have a more extended knowledge of their favorite flower than is possible in a brief half hour's paper, I would commend them to the following books: "The Sweet Pea Annual," issued by the National Sweet Pea Society of Great Britain;

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Walter P. Wright's "Book About Sweet Peas"; or "The Modern Culture of Sweet Peas," by Thomas Stevenson. But above all, show your interest by joining the American Sweet Pea Society and by attending its exhibition to be in this building on June 27 and 28.

The Rev. W. T. Hutchins said of the sweet pea: "The sweet pea has a keel that was meant to seek all shores; it has wings that were meant to fly across all continents; it has a standard which is friendly to all nations; and it has a fragrance like the universal Gospel, yea, a sweet prophecy of welcome everywhere which has been abundantly fulfilled."

Adjournment was taken at 4:50.

GEORGE V. NASH,
Secretary.

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