

AMERICAN PEONY SOCIETY

Bulletin

SCHOOL OF AGRICULTURE
AND EXPERIMENT STATION



THE PENNSYLVANIA STATE COLLEGE

STATE COLLEGE, PA.

December, 1939

NUMBER 77

Table of Contents

W. F. CHRISTMAN, Editor
Northbrook, Ill.

	page
Interesting Experiences in Planned Peony	
Crossing— <i>Reno Rosefield</i>	3
Eliminating Root Gall— <i>Louis R. Potter</i>	5
Comments from Wisconsin— <i>Louis R. Potter</i>	8
North Dakota Peony Show— <i>Mrs. M. B. Kannowski</i>	13
Report of Rochester, Minn. Show— <i>Roy W. Goddard</i>	14
Yellow Peonies Are Coming— <i>L. E. Foster</i>	16
Rare Plants from Eastern Asia— <i>A. S. Loukashkin</i>	22
A Few Notes On Peony Culture— <i>John L. Rea</i>	25
Over Rated Peonies vs. Under-Rated Peonies	
— <i>Roy W. Goddard</i>	26
Report of Saskatchewan Show	29
Notes on European Trip— <i>W. Ormiston Roy</i>	30
Peonies	33
Report of Show in Chicago District No. 5	
— <i>Mrs. Frank C. Lambert</i>	42
The Rating List & Supplement to the Manual	
— <i>George W. Peyton</i>	47
Medals & Certificates Awarded, 1939	48
New Members	50
Secretary's Notes	51
Correction	55
Duluth Peony Show	56
Communications	57

Entered as second-class matter at the post office at Northbrook, Ill.,
July 3, 1928, under Act of March 3, 1879.

Annual Subscription, \$1.00 Per Year. Included with Yearly Dues.

Published quarterly by the
AMERICAN PEONY SOCIETY
Northbrook, Ill.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24th, 1912.
Of American Peony Society Bulletin, published quarterly at Highland Park, Ill.

STATE OF ILLINOIS, COUNTY OF COOK,—ss.

Before me, a Notary Public in and for the State and County aforesaid, personally appeared W. F. Christman, who, having been duly sworn according to law, desposes and says that he is the Editor of the American Peony Society Bulletin, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption required by the act of Aug. 24th, 1912 embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names of the publisher, editor, manager and business managers are, publisher, Singer Printing & Publishing Co., Highland Park, Ill.; editor, W. F. Christman, Northbrook, Ill.

2. That the owner is: This is the official publication of the American Peony Society and is mailed to all members of the Society who have paid dues of three dollars per year membership, which includes the publication.

3. That the known bond holders, mortgagees and other security holders owning or holding 1% or more of the total amount of bonds, mortgages, or other securities are: None.

W. F. CHRISTMAN, Editor.

Sworn and subscribed before me this 16th day of October, 1939
(Notarial Seal)

HERMAN MEIR,
Notary Public.

My Commission expires 12-19-39.

AMERICAN PEONY SOCIETY

OFFICERS

President—W. W. COOK, Clinton, Ia.
Vice-President — DR. EARLE B. WHITE, Kensington, Md.

Secretary and Editor— W. F. CHRISTMAN, Northbrook, Ill.

Treasurer— C. F. WASSENBERG, Van Wert, Ohio.

Directors

A. M. BRAND, (1941), Faribault, Minn.

W. W. COOK (1941), Clinton, Iowa.

HARRY W. CLAYBAUGH, (1941), Franklin, Pa.

W. F. CHRISTMAN (1942), Northbrook, Ill.

PROF. A. P. SAUNDERS (1942), Clinton, N. Y.

CHAS. F. WASSENBERG (1942), Van Wert, Ohio.

H. F. LITTLE (1940), Camillus, N. Y.

W. H. THURLOW (1940), West Newbury, Mass.

DR. EARLE B. WHITE (1940), Kensington, Md.

L. W. LINDGREN (1941), St. Paul, Minn.

Edw. AUTEN, Jr. (1941), Princeville, Ill.

J. F. STYER (1941), Concordville, Pa.

REGIONAL VICE PRESIDENTS

District No. 1

District No. 2—

District No. 3—George W. Peyton, Rapidan, Va.

District No. 4—

District No. 5—Frank M. Drake, 1017 Kentucky Home Life Bldg., Louisville, Ky.

District No. 6—T. E. Carpenter, Arcade and County Road, St. Paul, Minn.

District No. 6—Later appointment to be announced.

District No. 7—J. A. Bongers, 413 N. Sheridan Ave., Ottumwa, Ia.

District No. 8—Later appointment.

District No. 9—E. J. Berneche, RR 6, box 504, Portland, Ore.

District No. 10—J. D. Long, Boulder, Colo.

District No. 11—J. E. Carter, Guelph, Ont., Can.

District No. 12—C. F. Wood, Box 658, London, Ont., Can.

Province of Alberta, Dr. J. F. Brander, 10652 81st Ave., Edmonton, Alberta.

Saskatchewan—Prof. Jas. Neilson, University of Saskatchewan, Saskatoon, Sask.

Manitoba—J. R. Almey, Room 237, Canadian Pacific Ry. Co., Winnipeg, Man.

Flash!

Word just received of the death of W. C. Otis of Woburn, Mass., Dec. 21, 1939. Notice received too late for printing in bulletin. See March bulletin for more detailed account.

—EDITOR.

y — —

tie,
all
the
hat
ful
rue
er-
nat

ad
as
es.
ost
re
re
ne
ch
s

The number of crosses made through this day as was naturally limited. When the seed pods began to de





AMERICAN Peony Society Bulletin



DECEMBER, 1939

Interesting Experiences In Planned Peony Crossing

Reno Rosefield, Tigard, Oregon

With the introduction of *Gertrude Gibson*, *Joseph Christie*, *Moonglow* and *Sibelius* it may be interesting to know they are all very closely related; some perhaps brothers and sisters from the same original seed pod. It may also be interesting to know that in respect to the cross which produced the above very beautiful peonies the primary object was to produce a clear yellow of true rose-type and without many of the faults of some of the otherwise outstanding peonies such as weak stems, ragged buds that open imperfectly, poor foliage, etc.

The parentage was very closely selected after much time had been spent in study and observation with a view to bringing in as many good points as possible and eliminating the undesirable ones.

The day on which this particular cross was made was most ideal, warm and clear yet somewhat hazy with a heavy atmosphere that seemed laden with the perfume of countless flowers. There was no wind and no interference with the work of any kind. The crosses were made as soon as the selected bloom was ready which happened to be between nine and ten in the morning. All crosses were previously planned and none were made at random or without some definite object in view or without careful selection of parents.

The number of crosses made through this day and this season was naturally limited. When the seed pods began to develop it was

gratifying to note everyone that was crossed began to make strong growth, much more so than the seed pods left to natural fertilization throughout the field.

In due time the seed was planted, came up in good shape, grew from year to year until large enough to be lined out in rows and finally began to bloom.

At this point I must confess I was surprised at the great proportion of really fine peonies in this small bed of seedlings. Out of some five hundred I selected nearly a hundred that seemed above average for further trial. Many of these are still under trial and observation. There was a greater proportion of doubles than I have ever before seen in any block of seedlings. There were also some good singles and Japs and particularly one unusual "near yellow" with unusually clear deep yellow petals and pink guard petals, somewhat on the order of *Primevere* or *Laura Dessert* as to type of bloom but with a better color of yellow than any of the so-called "near yellow" so far in commerce and with pink outer petals instead of white.

Crosses were also made with a view to producing some improvement in red peonies, especially doubles, and it was hoped to produce one the size and shape of *Mons. Jules Elie*. While I did not get all I hoped for the results were very interesting. There are some outstanding reds particularly a most beautiful large clear brilliant red single with the most perfect foliage imaginable. Among other things I did get the red *Mons. Jules Elie*, in fact a number of them. Part of the crosses were possibly so perfect that the result was some six or more so identical I was unable to tell them apart although they were individual seedlings. Unfortunately these with a few others in this lot were lost in the winter season here. One of this type remains in good shape and while it was not the best it is of the type I had worked for. Out of some five double reds are two or three that may prove outstanding or at least worthwhile. They all have especially nice foliage and good strong stems.

In making the crosses with improved reds as the primary object, considerable use was made of a very clear deep red single seedling selected from one of my previous seedling beds. This was out of line to use white and pink as a parent to produce red but crossed with selected varieties from white to pink. It might seem

this selection was decided on in order to bring in certain qualities of foliage and stem not available in existing reds, also to bring in certain vigor. I figured the red seedling which was used to supply the pollen would bring in a good proportion of red. Here again I had a big surprise. The resulting seedlings turned out to be about 98 percent red. There were only about two pinks among a hundred seedlings and the rest were red. These reds were mostly different from the usual crimson. Most of them were a shade lighter and are closer to true red.

While it is true a great many fine peonies have been produced through the course of nature in seed production I am convinced that the proportion of useless seedlings in this process is very much greater than when careful planning and hand pollinating is practiced. In days gone by it was not unusual to find but one worthwhile seedling in a block of from one to five thousand seedlings when the seed was the result of natural fertilization of the bloom. This is in sharp contrast with my experience of one good one in every five! True, I will not introduce all those I have selected but many of them I will discard surpass what were formerly selected and introduced. With this in mind, what will we say of some of the best of this group. The popular practice in looking upon a new peony is to observe the blossom and forget all about the type of plant generally, foliage, bud, stem etc. However, they all count in the general make-up of the whole. If all these features can be satisfactory and in addition to that the bloom possess unusual beauty and perfection there will be much satisfaction and little or no disappointment.



Eliminating Root Gall

Louis R. Potter, Milwaukee, Wis.

Having a few minutes time, I started looking at my peony bulletins. I find that the last one I have is Number 66, December, 1936, which shows that for the past few years I have been so terribly busy that I have not had a chance to tend to or look at my garden. I don't believe I saw my peonies in bloom once during this period, except at the very tail end of the season. The same holds good for my other flower likes, but of course I did not lose my

interest in peonies and all other plants as I was around for the dividing period as I always got a bit more time in late September and October than I did in May, June and July.

There are a number of things that I have noticed about peonies at dividing time and also noticed during the late period of the season, as to behavior, which, when I get a bit of time, I want to write to you about. I believe that if those interested in peonies would spend more time in the study of their behavior that we would get healthier and better plants and finer bloom. To my mind the hybridizers have been wasting lots of time. There is no doubt but that you can get just about (within certain limits, and I believe that yellow, red and pink are within those limits) the color, shape of bloom, and size of stem you want if you are an expert at hybridization and understand the laws governing same and are willing to spend enough time to bring it about. The iris people have been doing it for the past ten years, but just because peonies take a little longer to show result, is that any reason why the old haphazard method of crossing two blooms that seem nice together should still continue? It seems to me that all good peonies coming in this way are merely accidents; good ones, I grant you, but accidents, nevertheless. I got a peony with a good healthy, sound root, not subject to rot by crossing with a peony that has proper form of bloom by crossing with another peony that has proper color characteristics and by crossing with another peony that has the proper fragrance. I grant this takes time but since when was anything good and lasting gotten in a hurry? To my mind there is no more lasting flower in the garden than the peony.

In looking over Number 47, September, 1931, I find a statement by George W. Peyton which I should have replied to, not in way of argument, but by way of information. On page 49 he says: "I note what Louis R. Potter has to say about gall. I agree with him in many ways. I find that my soil which is a very heavy red clay, is very discouraging to gall and nematodes. I got a number of my old plants infected by planting them in the vegetable garden where potatoes and tomatoes had been grown and since moving them to the field they have come clean again. However, I think he is wrong about treating with hot water, for I have tried it and it kills the nemas at once, so why wait to kill them out by planting in heavy

clay when the hot water treatment will do it at once? It is very easily given and plants so treated will show no ill effects from it". In answer to that let me say that it is true that hot water will kill the nemas, but what good does that do? Unless the peony when planted is planted in a very heavy soil (and that is the only soil which prevents the nemas from traveling well, if at all), the plant being susceptible to the nemas, will become infected again. By planting the infected plant in a very heavy soil (removing all of them that you can get at before so doing, by cutting away, but not to the extent of cutting too much root away) the same result is accomplished and the plant is then where it should be. Nor have I found from my experience that the plant treated with hot water grew any better than the plants which were pruned a bit more and placed in the heavy soil. I have tried this and found the result to be identical, and that is why I believe that the hot water treatment is just extra work. I did not try this on a very large scale however. I believe I worked with about two dozen plants on his project, consequently I may not be speaking with authority. What has been your experience, if any?

P. S. So you can understand what I mean—I believe that the hot water treatment is a good one, but what sense is there in giving it such a treatment unless the soil is such that the plant can't be re-infested. It seems that the nemas can't travel in heavy soil and **can't live in heavy soil** because that is the only explanation I can have of the fact that I have planted peonies with the so-called Le-moine disease, which is another form of swelling of the nemas, in exceptionally heavy clay, and have found after taking them up that they were clean as a peony can be. It means to me that the nemas and the gall cannot remain or exist in heavy soil and it seems that the only answer there ever will be to peonies which are susceptible to gall (there are many which are not seemingly susceptible) is to plant them in a good heavy clay. The growth will be slower, but the blooms will be finer and the plant will be a better one.



Comments From Wisconsin

LOUIS R. POTTER, MILWAUKEE, WISCONSIN

In looking through the peony manuals which you sent me, which start with No. 67, I found a number of propositions commented on which I desire to comment.

First: What is a standard three to five eye division?

While this is not an easy matter to determine, it can be done. The difficulty lies in the fact that some people furnish small single eye divisions one year old, or sometimes two years old, which have three to five eyes. These are three to five eye divisions. Others take divisions with two or three eyes which they plant and at the end of the year they divide these into three to five eye divisions. These are also three to five eye divisions. Again, some growers divide their clumps at the end of about three or four years and they make a number of three to five eye divisions out of their plants. Those also are three to five eye divisions.

The question is—what kind of division does the purchaser want? If a purchaser wants a large division irrespective of best quality, then obviously the purchaser should buy a division of the last kind and should so specify. If, on the other hand, the purchaser wants a fairly young root, but a fair sized division, the purchaser should ask for the second type of division. If the purchaser, however, really wants the best division that money can give them, they should ask for and receive the first type of division, which, however, is only about one-third the size of the last type of division and about one-half the size of the second type division.

Another thing the purchaser should bear in mind when ordering is to find out whether the roots are grown in sandy or light soil or in heavy soil. They should bear in mind the kind of soil they are going to plant them in. A division from sandy or light soil will sulk for a year or so when planted in heavy soil, whereas a division from heavy soil will grow well in heavy soil and exceptionally well in sandy or light soil. The prospective peony purchaser should know what he or she wants before they order, and should so specify. The three types of divisions mentioned are all three to five eye divisions and are all fair to be sold and to be pur-

chased. The purchaser is entitled to hugeness rather than quality, if that is what he or she wants.

Furthermore, the purchaser should know soil conditions and should inquire of the grower's soil conditions and should, with such knowledge in mind, buy what he or she wants. The last type of division even if grown in heavy clay will do exceptionally well in lighter sandy soil; the second type of division will do fairly well; the first type of division will do well, but not as well as the other types in sandy soil. In moderate clay or heavy clay the first type of division is best, the second is second best and the third is poor. The solution of the whole problem is that the purchasers should be educated enough to ask for what they want and then not complain if they get what they ordered. The nurseryman can't know what the purchaser wants or what the purchaser's soil conditions are, and consequently the nurseryman is not to be blamed for sending what he or she thinks is best.

Second: Regarding mulches—I noticed in one article that rock wool or glass wool has been determined to be the best mulch. I have also noticed in other articles that it is stated that mulches are not so necessary for peonies, and I have heard much comment that after the first year of planting mulching was unnecessary for peonies.

The latter is true where you don't have alternate thawing and freezing in January, February and March. In such places mulching is necessary each and every year. This is due to a fact which has not been commented on. When a division is planted the new shoots grow out of the top of the crown of the old division and eventually form a circle all around it and thereafter a new circle is formed from the top of the first circle, if the division is left in the ground long enough. The first circle is higher than the normal division and the second circle is still higher than the first circle. By the time the second circle is formed the eyes are very close to the top of the ground and the roots are contiguous thereto. Sharp thawing and freezing during the months mentioned will very often heave up the entire root and thereafter it will rot. For that reason mulching is necessary on all plants under such conditions or the peonies must be covered with heavy soil in fall so as to prevent the danger of such heaving. Four years ago I lost over two hundred clumps

of fine peonies in this way. I wasn't around to tend to my garden. Everyone at home thought that mulching was unnecessary and that my labors each year were just so much waste of effort, material and time, so nothing was done about it. The next summer my stomach dropped about a foot when I saw what happened. Since then my people, when I have been away, have always mulched. I wonder what others have experienced in this regard? That is, I mean in observation as to the way in which new peony roots and eyes are formed. I don't think there is any question about it, but if there is I would like to hear from other members. Please bear in mind that the soil I grow my peonies in has a depth of about two feet of top soil, which is a very good clay; below that there is about three feet of a moderate very heavy clay, which is dry; below that about a foot of blue clay; below that conglomerate.

Third: There are too many new peonies in the market without adequate information regarding them. There ought to be articles continuously in the bulletin by those who originated them and those who have grown them and by those who have seen them, with reference to them.

Furthermore, the bulletin should be printed more often. I would suggest an additional 25c charge to each member and give at least four more bulletins a year; in other words, raise your dues to \$4.00 instead of \$3.00 and give more bulletins. I think that the nurserymen also ought to contribute something to the cost of the extra bulletins because dissemination of information about so many new seedlings all of which seemingly are exceptionally good. As it is, the purchaser does not know what to choose or what to pick from unless he or she can take off a month traveling around during blooming time (which very few can do, except nurserymen), and the prospective purchaser is left in a daze. He does not know what to pick. The originators and the nurserymen could pay the entire cost of the extra bulletins and charge it up to advertising and come off very cheaply.

Fourth: I have stated before that I believe that the American Peony Society should have new peonies under observation and give its own rating after such observations. My statement, however, was not complete. I should have added that the new peony should be grown in identical soil under as near as possible identical con-

ditions and that the reports when given for the purpose of rating same, should state the soil in which the peony was grown and the conditions under which it was grown. It would be very simple, for instance, for someone to take a new peony, turn it over to twenty five or fifty of the best growers in the country and have them grow it in a moderate clay soil (ordinary top clay garden soil). If the persons to whom it is sent did not have such soil they could dig a hole and fill it with such soil for the purpose of growing and rating the particular peony. Also, in each instance, the peony should be planted where it does not get excessive moisture and where it is not interfered with by trees, bushes or other growth; in other words, where it is free from outside influence. It should be grown for a period of five years and reports should be made of its growth, its bloom and all the other items which go into rating each year. At the end of the five year period rating should be given on the basis of the combined reports of all who grew it. Only in this way or some similar way can you fairly give the amateur grower the break which he or she so richly deserves. If at the end of the five year period you report that a certain peony is a very fine peony which should have a rating of at least 9.5 or 9.6, then doesn't the originator and the nurserymen benefit thereby? In the meanwhile plants can be sold without rating, the originators and the nurserymen stating that same will be rated at the end of such and such a time, that it has no present rating, that it is grown in such and such soil under such and such conditions and that it does so and so. If the purchaser, under such circumstances is willing to buy and pay the price and later on the rating is a poor one, the purchaser has only himself or herself to blame. If, on the other hand, no one buys during the five year period and a good rating comes therefrom, then the originator and the nurserymen have a very fine stock on hand from which they can handsomely realize. Five years is not too long a time because many peonies do not give true bloom until five years, some at four and most do not give true bloom until three years

I would like the opinion of originators and nurserymen on the last point and this one. The reaction should be very helpful and enlightening.

Fifth: Fertilizer—I have read the comments in the bulletins in this regard with much interest. I believe that Mr. Edward Auten,

Jr. hit the nail on the head when he said that all that was necessary to do was plant peonies in good soil, and by that I presume he meant a good garden clay soil which had not been used before for peonies and which was free from nemas. That is so. From my own experience I found that the peony root is strong enough so that if given a little peat moss or some similar moisture keeper worked in the soil and on top of the soil that they will get all the food that they need out of such soil. Fertilizer merely increases root growth and does not help the bloom. If anything, it is detrimental to bloom. In as much as a good garden clay soil has enough food in it if same is made available by working in peat moss or something of the like for at least twenty years there is no necessity to fertilize. If you have a sandy or light soil you must fertilize as I did when I planted some peonies in sandy soil some years ago. I used commercial fertilizer which is light in nitrogen. Potassium and phosphorus and a small amount of nitrogen are essentials. I used muriate of potash after liquifying same and diluting same considerably in powdered rock phosphate and potassium nitrate. Sulphate of ammonia is good for clay soils and bad for light soils as it sours such soils. In light soil it is better to use the potassium nitrate. Sulphate of ammonia is all right for clay as it is by nature sweet (very alkaline). I, however, don't see any sense in growing peonies in a light soil unless for the purpose of making divisions. They do not, with the single exception of *Reine Hortense*, do anywhere near as well in light soils as in clay. The color is not good and the growth is poor. If you have light soil and you want to grow peonies for your personal use, dig out the light soil and fill in with a good clay. I, for my part, don't want to grow any peonies unless I can grow them at their best. If I had a place where I could not grow peonies at their best I would get a place where I could grow them at their best, even if I had to do what Dr. Brethour did—travel thirty miles daily to take care of them and see them. Unless you are willing to go through a little hardship for good plants and bloom then you do not love or deserve good peonies and you had better not grow them.

Sincerely,

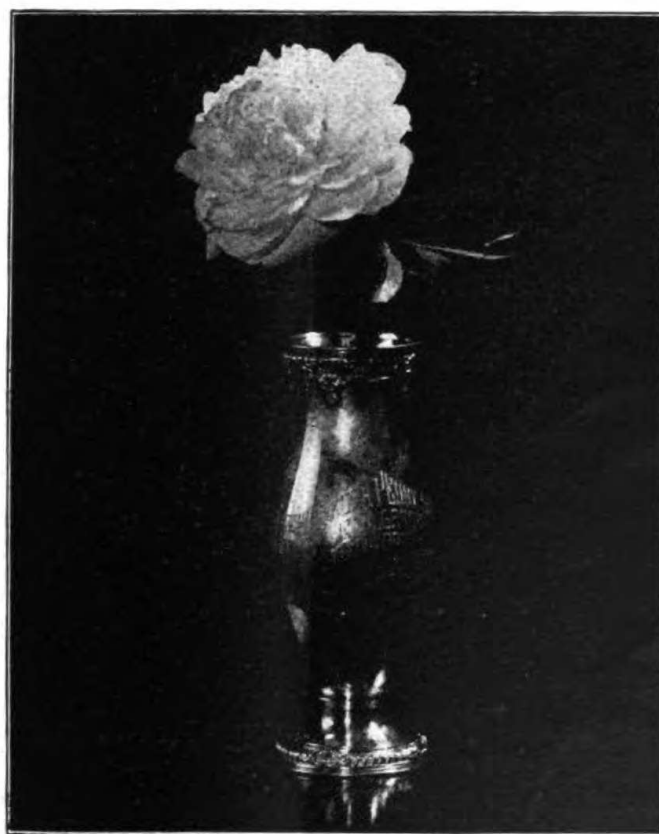
Louis R. Potter, Milwaukee, Wis.

North Dakota Peony Society

1939 Peony Show

Mrs. M. B. Kannowski, Grand Forks, N. D.

Peony *Avalanche*, not particularly large, but a perfect bloom, carried off the grand championship honors at the 18th annual show of the North Dakota Peony Society, held in Grand Forks June 17th and 18th, and won for its grower the E. J. Lander silver cup. The grand champion was grown by Martin Lystad of Grand Forks, and sweepstakes were carried off by his neighbor, R. J. Darling, who won the same honor a year ago.



Peony "Avalanche", Grand Champion Bloom,
North Dakota Peony Society Show, June 1939.

Avalanche won over a huge bloom of *Hansina Brand*, and an equally fine one of *La Lorraine* because Judge Franklin Page could not find a flaw and this in a season when all blooms were burned by a heat wave on the last two days of May.

Last fall's drouth was quite apparent in the size of the blooms and the unpredictable way many of the flowers opened. Early peonies bloomed late, and late varieties were unusually early, and the color on many was not up to standard. But in spite of that, there were many new exhibitors this year, and the interest in good peonies grows apace throughout the state.

At the annual meeting of the Board of Directors it was decided to change the system of operation of the Society. Membership dues will be taken and cards issued, and the meetings held during the year with a view of further improving the class of peonies grown in this state.

Mrs. H. O. Ruud of Grand Forks was named president, R. J. Darling vice president; the secretary, and W. W. Blain, treasurer, were re-elected.



Report of Rochester, Minn., Peony Show

Roy W. Goddard, Rochester, Minn.

The Southeastern Minnesota Show was held in Rochester, Minnesota, June 13 and 14. Each of the thirty-five classes had entries with a total of 383. The personnel of committees was essentially the same as will stage the National Show in Rochester, June 22 and 23, 1940. Mrs. A. M. Walters, Clerk of the Show and her corps of assistants and the other committees did their work so efficiently that judging started only ten minutes later than the hour set. Our committees will be enlarged and others formed for 1940. Work for the National Show has already begun and will progress with increased tempo.

The outstanding flower of the Rochester show this year was *Mrytle Gentry*; a bloom of which, exhibited by Dr. John L. Crenshaw, well deserved being judged the best flower of the show. When this bloom was placed on the Court of Honor table, it was within ten feet of a big vase of beautiful red peonies named *John L. Crenshaw*, a coincidence which payed tribute to a keen judge of flowers and an ardent peony enthusiast. A *Mrs. J. V. Edlund*, also exhibited by Dr. Crenshaw, was judged the best white. *Mons. Martin Cahuzac* was the best red, and *Mikado* the best Jap. Both were exhibited by Dr. F. C. Mann who also won the most points and per-

manent possession of the cup donated by the Rochester Garden and Flower Club to the exhibitor winning the most points for three years.

Interest in the artistic section for peonies and garden flowers has grown each year. This section was judged by Miss Nellie Fischer of Minneapolis. A neat arrangement of roses exhibited by Mrs. Burt E. Eaton was best in the garden flower section. A vase of *Krinkled White* exhibited by Mrs. R. W. Goddard won in the peony section. *Krinkled White*, when properly stored, has always attracted attention at our show and this year was no exception.

This season was a good one for the light pinks. Mr. T. E. Carpenter, our regional vice-president of the American Peony Society who with Mr. Louis R. Fischer of Minneapolis judged the peony section, said he considered the exhibit of light pinks as fine a collection as he had ever seen. *Myrtle Gentry*, *Tourangelle*, and *Hansina Brand* were outstanding. In the two classes of light pinks six ribbons were awarded; four went to *Myrtle Gentry* and two to *Hansina Brand*, but *Tourangelle* was in competition in both classes.

A first on three to a vase and second on one to a vase were won by the writer on *Myrtle Gentry* picked from one plant grown from a root set out on May 20, 1934. Last year a *Mary Brand* from the same planting was judged the best red. We have become so favorably impressed with spring planting of properly stored roots that we set out yesterday (June 18) roots of *Walter Faxon*, *Myrtle Gentry*, and *Le Cygne* at our summer home on Lake Vermilion in Northern Minnesota.

New peonies in the commercial exhibits which attracted attention were *John L. Crenshaw*, a distinct red exhibited by Brand; and a flesh colored seedling, X10W, with broad petals of good substance exhibited by Franklin. This seedling with its rose type petals reminds one of *Elsa Sass*.

When judging started at 11:10, there were no unoccupied areas on the tables, the straight lines of the rows of peonies were broken on each side of the room by the artistic arrangements, and ever-green bows decorated the walls. These effects were secured by the Staging Committee under the direction of Mrs. Burt E. Eaton as chairman.

Last year we endeavored to create an interest in peonies among the children by giving each child from ten to twelve, who registered

at the show a root of *Sarah Bernhardt*. A cash prize of five dollars was given to the best flower grown from that planting. We repeated the registration this year and some other variety will be given this fall to all who registered and agreed to care for the plant and exhibit in the future.

Rochester has a large transient population and visitors from points as distant as California, Texas, West Virginia, and Canada attended our show this year. Some were from localities where the peony is not grown extensively; such people frequent our shows each year and our committee answer many questions relating to peonies and their culture. New friends of the flower are gained each year. With several hundred visitors from all parts of the United States and some from other countries, the National Show of 1940 should provide excellent opportunities for spreading enthusiasm for the peony.



Yellow Peonies are Coming

L. E. Foster, York, Nebr.

Just around the corner are super-peonies of all colors, including brilliant yellows and blues, so wonderfully beautiful that our present high rated varieties may be subject for discard. Thirty years may be required to turn this interesting corner but it looks quite certain that the really wonderful flowers of the peony kingdom will soon be here. All we lack now is an enterprising experimenter who will spend several thousand dollars for colchicine and a month of each year for a quarter of a century for his experiments and the gate will swing ajar for a peek into this promised land of peony enchantment.

For now Albert F. Blakeslee of the department of genetics, Carnegie Institution of Washington, after several years research has found the magical process for doubling the chromosomes in plants, which means whole centuries of natural plant development will be skipped wherever this process is applied. Mr. Blakeslee's best method is to soak seeds in a solution of colchicine (\$25 an ounce) and in two generations the double chromosomes are manifest. There may be some little difficulty with peony seed. If all peony seed produced beautiful blooms, then the problem would be

simplified, but since a very small percentage of seed produce worthwhile varieties, either the experiments will have to be conducted on a large scale to get several good varieties or else Lady Luck will have to lend a helping hand with the crosses and tests. From correspondence with Mr. Blakeslee I figure there have been no experiments with peony seed. So this field is wide open for some ambitious young man to win fame by his researches. After reading about Mr. Blakeslee's success in doubling the chromosomes in plants, I wrote him asking how one could proceed to use colchicine for doubling the chromosomes in peonies. I am sure his answer in the following personal and form letters will enlighten any who are interested in the subject.

* * *

June 26, 1939

Mr. L. E. Foster
Foster Dry Cleaners
York, Nebraska

My Dear Mr. Foster:

I am answering your letter in part by the enclosed form letters. Seeds are by far more satisfactory, we have found, than the growing points of adult plants for treatment. We have used the pollen to determine whether or not we have gotten chromosome numbers doubled. There are other methods such as the size of the guard cells which can be used on the vegetative parts of plants. The newspaper accounts of the use of colchicine have underestimated the difficulties which may be involved and overemphasized the favorable results.

The peony is not as suitable a type as many with which to get doubling of chromosome numbers. When I first was looking for a suitable experimental plant with which to carry on experiments in plant genetics I remember visiting a peony farm, having been attracted by the wealth of color varieties. I had to give up the idea of working with peonies on account of the length of time between generations. We are working primarily with the Jimson weed and other *Daturas*. In the Jimson weed we can get four generations in a year and hence for scientific purposes we have a

much better plant. The peony is, however, a very beautiful plant and I wish you success in your endeavors to obtain improved varieties.

With best wishes,

Sincerely yours,
Albert F. Blakeslee, Director

* * *

Carnegie Institution of Washington
Department of Genetics
Cold Spring Harbor, Long Island, N. Y.

To those who have written about doubling chromosomes with colchicine:

So many inquiries have come regarding the use of colchicine as a method of doubling chromosomes that it seems impossible to answer each one personally. I trust you will pardon our making reply by this form letter.

We have used colchicine alkaloid amorphous, U. S. P. This is for sale by all the larger drug firms. The price ranges around \$25.00 or somewhat less per ounce dependent upon the firm and the quantity. As little as one-eighth of an ounce can be purchased. We have used colchicine from Eimer and Amend, New York City, from Malinkrodt Chemical Works, New York City and from the Inland Alkaloid Company, Tipton, Indiana, in solutions ranging from 0.0004% to 0.8%. With *Datura* an effective method has been to soak seeds in a 0.2% to 0.4% solution for four to ten days before planting. The most desirable strengths will have to be worked out for different species.

The following papers on our methods have been published or are in press—(1) *Dedoublement du nombre de chromosomes chez les plantes par traitement chimique*, Comptes rendus de l'Academie des Sciences (Paris), 205; 476-479, Sept. 13, 1937. (2) *Methods of inducing chromosomes doubling in plants by treatment with colchicine*, Science, 86: 408, Nov. 5, 1937. This is an abstract of paper presented before the National Academy of Sciences in Rochester, October 25, 1937. (3) *Methods of inducing doubling of chromosomes in plants by treatment with colchicine*, Journal of Heredity, in press. This article gives methods of use of colchicine both in seed treatment and in treatment of vegetative parts

of the plant and is fully illustrated. Publication is expected within a month's time. Advance orders for copies may be made of the editor, Journal of Heredity, Victor Building, Washington, D. C. (4) Separate of the 1937 Year Book of Department of Agriculture (in press), which will be obtainable through the Superintendent of Documents, Washington, D. C. This describes the chromosomal basis of heredity and the practical use which can be made of our present knowledgs of chromosomes. Work on the doubling of chromosomes will be exhibited at the Washington office of the Carnegie Institution on December 11-13. It does not seem desirable to release information other than already published nor to supply further photographs to the press until after the annual public Exhibition at Washington which presents selected phases of the researches being carried on in the various Departments of the Carnegie Institution.

Colchicine is a well known drug listed as highly poisonous, which in minute quantities is used as a remedy for gout. It is obtained from seeds of the autumn Crocus, *Colchicum autumnale*. We did not originate its name.

We know of no attempts to use colchicine in doubling the chromosomes of higher animals. The further suggested uses of colchicine to grow hair on the head and to create a race of super men and the like are based on newspaper interpretations of our work for which we are not responsible. The Carnegie Institution's Department of Genetics is not located at Woods Hole as was stated in an article by the Associated Press.

It seems probable that colchicine will prove a useful tool in the study of fundamental problems of genetics and that doubling of chromosomes will be put to practical application. Too much, however, should not be expected since some forms with doubled chromosome numbers are inferior to the normal types. Furthermore, the first effect of treatment is to dwarf the plant and malform its leaves and branches. It is only in the second generation that pure races with doubled chromosomes can be expected. Experimental doubling of chromosomes presupposes a certain amount of technical knowledge and training on the part of the experimenter and a microscopic examination of pollen would seem to be necessary in order to determine in which flowers the chromosome number had

been doubled. It should be realized, therefore, that our methods are not like those of a magician who waves a wand and at once takes a bigger and better rabbit out of the hat!

November 15, 1937

Sincerely yours,
A. F. Blakeslee

* * *

Postscript—January 25, 1938

The two articles (3) and (4) which are listed on preceding page have been published. Their citation follows:

Albert F. Blakeslee and Amos G. Avery. Methods of inducing doubling of chromosomes in plants by treatment with colchicine *Journal of Heredity* 28:392-411. 1937.

For sale by Editor of *Journal of Heredity*, Victor Bldg., Washington, D. C., price 35 cents.

Albert F. Blakeslee. Studies in the behavior of chromosomes. U. S. Department of Agriculture Year Book Separate No. 1605: 1-35. 1938. Price 15 cents.

With the limited number of reprints that will be available of these two papers it will not be possible for us to supply copies to all whom we should like to send them. Copies may be purchased, however, from the Editor of the *Journal of Heredity* and the Superintendent of Documents as indicated above. We hope to be able to send out reprints of these two papers together with others to those on our regular exchange list. In addition, we should be glad to do what we can to see that at least a single copy is available in any research or educational institution in which a need for it arises.

A. F. B.

Lanolin Emulsion

(Formula and morpholine obtained from Carbide and Carbon Chemicals Corporation, 30 East 42nd Street, New York City)

Stearic acid 1.5 gms.

Tap Water 20.0cc.

Morpholine 0.53 cc.

Lanolin 8.0gms.

Colchicine 0.12 gms.

Add the water to the stearic acid and morpholine and heat the mixture until the stearic acid is melted. Then stir to a creamy soap solution. Add the lanolin and continue heating without stirring until the lanolin is melted and the mixture is just below boiling. At this point add the colchicine and stir the mixture until a thick creamy

emulsion results. Continue stirring intermittently until the emulsion has cooled to room temperature.

This emulsion is a smooth lightly colored cream of excellent stability and may be applied directly to the growing tips of plants with a camel's hair brush. Such treatment must be used with caution, however, for a single application usually reacts quite severely.

For spraying, we have diluted the above by adding to one part of the thick emulsion four parts by volume of a .4 percent colchicine solution in water. Such a diluted emulsion in our experience has kept for months and is sufficiently thin to be sprayed in an atomizer.

If it is not desired to use the thick emulsion as such, the dilute emulsion may be made directly by adding four parts of water to one part of the thick emulsion (minus the colchicine) and then adding colchicine to make a .4 percent solution of the whole. Other dilutions of thick emulsion and water and other concentrations of colchicine may be made up if desired.

As has been pointed out earlier (H. E. Warmke and A. F. Blakeslee, "Introduction of tetraploidy in *Nicotiana sanderae* and in the sterile hybrid *N. tabacum* x *N. glutinosa* by colchicine treatment", *Collecting Net*, XIII, 116, p. 158, Aug. 27, 1938), a lanolin emulsion has been found more convenient and effective than water or than lanolin alone as a carrier in treating plants to induce chromosome doubling. Spraying buds three times a week with 0.4 percent colchicine in the thin emulsion appears to be more effective than spraying three times a day with the stronger 0.8 percent water solution of colchicine.

In using a spray with water or emulsion there is danger of killing the buds if the treatment is too severe either because of using a too concentrated solution of colchicine or because of too frequent applications. Treated buds are checked in growth and normal 2n branches are likely to grow out from neighboring untreated buds. Such 2n outgrowths must be cut out or checked by further colchicine treatment. The experimenter must adapt methods to the particular form with which he is working since species differ greatly in the susceptibility to treatment.

November 1 1938.

Rare Plants from Eastern Asia

A. S. Loukashkin, Manchuria, Asia
Manchuria Research Institute

Hunting and searching for new plants is unquestionably an interesting occupation, but in such countries as have hardly been scientifically investigated this becomes increasingly interesting and fascinating, since the investigator may at times expect the most unusual finds. Besides one has the undisputable moral satisfaction to feel that plant hunting is morally much higher than any other form of hunting for wild life since not only does this occupation in any way decrease the existing supplies of native fauna or flora but just to the contrary the plant hunter is responsible for further extension and distribution of any plants he may be fortunate to find that prove of interest. Naturally his activities are not limited to the collecting of a herbarium of floral samples, but he goes a step further and collects seed, roots, tubers or bud-wood cuttings and sends over seas to interested parties, although at times with great difficulty and in limited numbers abroad, where as hunting for animals is always associated with their destruction.

The area of North Manchuria proper represents one of the best and most promising localities whence the best finds may be expected to be obtained for introduction into the colder climates to satisfy the basic requirement of excessive hardiness beyond all other virtues. The nature of this region is outstandingly interesting owing to obvious and tangible traces of a curious intermixture of the north and south with regard to both plant and animal life. Here in one and the same place is to be seen the northern limit of distribution for numerous species of animals and plants which normally inhabit China and Japan. The Dahurian larch and Korean pine give a natural support for vines (*Vitis amurensis* and *Actinidia arguta* etc.). The Black cock, a specific inhabitant of Siberian virgin forests, heavily takes to the wing to perch on an adjacent walnut, oak or cork tree, disturbed by the stealthy step of a woolly tiger or leopard, both of whom it is even difficult to imagine as permanent inhabitants of a region with but a few warm months a year, and a long and exceedingly severe winter, with its natural covering of snow everywhere dotted with the trails or traces of the

ringed pheasants, whose gorgeous plumage would appear still more out of place on a background of white snow than even the striped fur of the tiger. Yet such are the paradoxical facts actually meeting the investigator at every step he takes, and doubtless this is the only country in the world to possess such contrasts.

Whilst in search of rare plants, which I have carried on for a number of years, I had more than one occasion to run across curious and rare plants little known, not only to the general public but even to botanists. At the same time many could be advantageously used, owing to their original form, decorative or many other features, in nursery or garden cultivation and prove hardy in practically any climate, including the severest, since the climatic conditions in North Manchuria will well rival any other of less favoured countries.

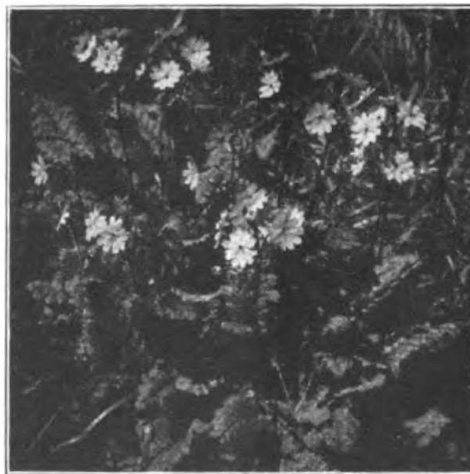


The new cream colored peony
as it grows in the wilds of Manchuria.

I am pleased to submit two photographs of remarkable flowering perennials located in 1938 in the forests east of Harbin. These are the Manchurian Cream Paeony (*Paeonia oregon*) and the Manchurian valley primula (*Primula patens*). Both are endemic to Manchurian forests and to the best of our information have never yet been photographed in their natural surroundings or described in any publication. The photographs produced were taken on May 25th 1939 in natural conditions in the region of the station of Ertaohotze, 80 kilometers east of Harbin in the Tachinshan Mountains, North Manchuria.

The Manchurian Cream Peony is distributed there sporadically, and grows in shady sections of the mountain forests exclusively on the northern slopes in association mainly with such shrubs as Manchurian hazel-nuts (*Corylus heterophylla*, and *C. mandshurica*). It reaches 3 feet and yields one single large flower of a fine delicate cream colour. Contrary to all other known species of *Paeonia* both wild and cultivated it blooms in the spring in the second half of the month of May. The seeds ripen towards the end of June and start of August. The seed are contained in a three-horned container (box) and represent berries of a black-bluish colour resembling in colour the fruit of the bird-cherry, differing from the latter only in that the large hard kernel is covered by a thin covering of skin. Each such fruit inside a separate horn is divided from neighboring seed by a special partition of bright red colour, thus it does not touch other berries.

Practice teaches that the roots while in transport from the locality of natural growth to Harbin and then forwarded in the winter across the ocean retain well their livelihood. At the present time experiments are being made with the growing of the cream paeony from wild seed.



New Primula. See article for description.

The other plant not in any way less interesting and handsome with a definite future before it in due course of time when properly brought to the notice of interested parties, as shown in the photo-

graph is the Manchurian Valley primula. This is the largest and most bushy species of all known Siberian and Manchurian primulas. It grows along the mountainous currents, in river valleys, on wet meadows and along stretches well lit with the sun. This primula reaches 6 to 10 inches and yields a whole bouquet of handsome large flowers of a bright pink colour. Very rarely (exceptionally so) specimens are found with pure white flowers. It blooms starting from the second half of May till the first ten days of June. The seed are very small similar to those of the wild poppy seed. They come ripe in the second half or end of July. In the shape of its handsome flowers and large leaves this primula resembles very much the widely distributed cultivated forms of the primula obconica of Central China.

The roots when transplanted in to garden soil, when well watered grow well in their new environment and yield yearly flowers, becoming excellent decorative plants for the garden.

* * *

A Few Notes On Peony Culture

John L. Rea, Plattsburg, N. Y.

While peonies are sometimes planted in the spring of the year, early autumn is a much better time for the work. The reason for this is that for a time in the fall peony plants are more or less dormant. From the middle of September to the end of October is the ideal peony planting period, although it is safe to set roots up to the time the ground freezes.

It is of the utmost importance that peony roots should not be planted too deep. The buds or 'eyes' should never be more than two and a half or three inches under the surface of the earth. In a dry time it is advisable to water newly set roots, and this helps to make the soil firm about them. A light covering of straw or evergreen boughs or something of similar nature is advisable the first winter. Alternate thawing and freezing in late winter sometimes throws newly set roots out of the ground. One should look for this the first thing in the spring.

Peonies send their roots wide and deep, often a foot and a half. Enriching the soil deeply before planting pays. Commercial fertilizers, bone meal and sheep manure, or well rotted manure are

all good. Peonies do well in any good garden soil. They like plenty of water but insist on fair drainage. Never plant them where water is likely to stand for any length of time.

In late fall all foliage and stalks should be removed and destroyed. This helps in controlling the fungus which is often the cause of bud blasting before flowering time.

* * *

Over Rated Peonies vs Under Rated Peonies

Roy W. Goddard, Rochester, Minnesota

Several years ago when I purchased my first peonies I had room for but three plants. Wishing the best in each color, the national ratings were consulted; *Le Cygne* and *Therese* were ordered. In the reds *Mary Brand* with less than nine was selected because of a lack of interest in that color and a preference for that particular shade of red. Later our interest in peonies increased and our landscape plans were changed to make room for the noble flower. Varieties were added on the basis of what we saw growing in the nurseries and displayed in the show rooms. We found ourselves purchasing those with a rating of less than nine and later admiring some of the newer varieties more than our highly rated *Le Cygne* and *Therese*. When we began having peony shows at Rochester, we found ourselves winning ribbons on other than our first purchases. I engaged in some discussion with friends about ratings, but did not get serious until the 1939 List of Peonies for Rating arrived. This, with some Peony Bulletins, The Manual, and memories of four peony shows were taken to the summer cabin on Lake Vermilion for cogitation in case of some rainy days.

Rain was plentiful and Mrs. Goddard and I were soon engaged in a discussion as to what rating should be given *Le Cygne* and *Therese*. She thinks a lot of them. I do too, but contend that they are both over rated. I began consulting the Bulletins with their report of shows. The more these reports were studied the stronger my convictions became. Why not try some simple mathematics?

The reports of the 1936, 1937, and 1938 National Shows were used as they were all that were available. Since *Le Cygne* and

Therese are in the white and pink classes and the best flowers generally come from these classes, the names of each peony winning in these classes in the open and advanced amateur groups were tabulated. Three was credited to each name winning first, two for second and one for third. In view of the territory from which exhibits were sent to the three shows at Toronto, Lincoln, and Lansing there is a good representation of growing conditions.

Fifty-five named varieties were listed on the above tabulation. Those receiving five or more points were as follows:

<i>Blanche King</i>	18	<i>Clemenceau</i>	6
<i>Le Cygne</i>	16	<i>Myrtle Gentry</i>	6
<i>Mrs. J. V. Edlund</i>	11	<i>La France</i>	6
<i>Hansina Brand</i>	11	<i>Sarah Bernhardt</i>	6
<i>Lady Kate</i>	11	<i>Solange</i>	6
<i>Mons. Jules Elie</i>	9	<i>Walter Faxon</i>	6
<i>Mme. Jules Dessert</i>	8	<i>Martha Bulloch</i>	5

La France received two firsts at Lincoln where it was especially fine.

Some weight should be given to the blooms judged the best flower of the show. What ratio to select is open to question but ten seems none too high. Records at hand and memory for the past seven shows are as follows:

Chicago 1933, *Hansina Brand*
 St. Paul 1934, *Hansina Brand*
 Boston 1935, *Avalanche*
 Toronto 1936, *Mrs. J. V. Edlund*
 Lincoln 1937, *Mrs. J. V. Edlund*
 Lansing 1938, *Harry F. Little*
 Boston 1939, *Mrs. J. V. Edlund*

With ten added for these awards and listing all receiving ten or more points the order follows:

<i>Mrs. J. V. Edlund</i>	31	<i>Le Cygne</i>	16
<i>Hansina Brand</i>	31	<i>Lady Kate</i>	11
<i>Blanche King</i>	18	<i>Avalanche</i>	10
<i>Harry F. Little</i>		10	

The Peony Bulletins for 1936, 1937, and 1938 listing the best flower of reported local shows give *Le Cygne* twice and the following once: *Sarah Bernhardt*, *Walter Faxon*, *Martha Bulloch*,

Enchantresse, *Hansina*, *Brand*, *Mrs. A. M. Brand* and *Solange*. If we credit these wins with five points, the order is slightly changed to,

<i>Hansina Brand</i>	36	<i>Sarah Bernhardt</i>	11
<i>Mrs. J. V. Edlund</i>	31	<i>Solange</i>	11
<i>Le Cygne</i>	26	<i>Walter Faxon</i>	11
<i>Blanche King</i>	18	<i>Avalanche</i>	10
<i>Lady Kate</i>	11	<i>Harry F. Little</i>	10
<i>Martha Bulloch</i>		10	

Harry F. Little is new and not rated in the 1933 symposium, but *Hansina Brand* and *Mrs. J. V. Edlund*, who run neck and neck in the above tabulations, have ratings of 9.04 and 9.44 respectively with *Blanche King* only 8.9. The highly praised *Le Cygne* with a rating of 9.9, places second in the list which does not give any weight for the best flower of the shows. She drops to fourth when full performance at National Shows alone is considered, but rises to third when winnings at local shows are added. Perhaps when *Mrs. J. V. Edlund* and *Hansina Brand* are grown as extensively as *Le Cygne* (many perhaps purchase her for the same reason I did) she will disappear from a list compiled as above, as have *Therese* and *Kelways Glorious*. Looking over the list of fifty-five peonies compiled from the three shows of 1936, 1937, and 1938, *Therese* with a rating of 9.8 has two points; *Kelways Glorious*, 9.8 has none; and *Solange*, 9.7 has six. These three with *Le Cygne* are the four highest rated peonies.

On what basis have they been rated? Certainly not as a garden variety. Perhaps their euphonious names have helped them. If performance at shows is a criterion of merit, *Therese* and *Kelway's Glorious* might very well take the rating of *Blanche King*, and *Solange* about what *Hansina Brand* now has. *Le Cygne* should be placed nearer nine with both *Mrs. J. V. Edlund* and *Hansina Brand* well up toward ten. And why not give reliable *Blanche King* the 9.7 of *Solange*? Performance at the shows does not conform to the ratings of "the four leaders" and neither does my experience with them in the garden. On the other hand ratings above 9.6 should not be so sacred that some of our reliable performers in both garden and show room should not be given some of these honors.

Brief Report on Peony Show Held at Saskatoon

The first peony show, under the auspices of the American Peony Society, District 14 (Saskatchewan), was held at Saskatoon, Saskatchewan, on June 29th and 30th, 1939. While not large, the show was a decided success. Over six hundred blooms were on exhibition. In a few cases, exhibits were put up by very small growers, but in most cases, the exhibits were those of growers with peonies in considerable number. Non-competitive exhibits, that added a great deal to the show, were put up by; Dominion Experimental Station, Indian Head; Dominion Experimental Station, Rosthern; Government of Saskatchewan, Regina; Weaver's Nursery, Saskatoon; S. A. Taylor & Sons, Edmonton; Saskatoon Parks Board and University of Saskatchewan, Saskatoon. Two exhibits came from a point 350 miles distant, while another came a distance of 250 miles.

Blooms of a number of the newer and high rating varieties, and blooms of many of the older varieties were on exhibition. Fine specimens of *Le Cygne*, *Kelway's Glorious*, *Lady Alexandra Duff*, *Therese*, *Frances Willard*, *Tourangelle*, *Philippe Rivoire*, *Auguste Dessert*, *Solange*, *Longfellow*, and *Monsieur Martin Cahuzac* were in evidence, while outstanding blooms of *Festiva Maxima*, *Sarah Bernhardt*, *Karl Rosenfield*, *Louis Renault*, *Marie Lemoine*, *Eugene Verdier*, *Monsieur Jules Elie*, *Rachel* (Lemoine), *La Perle*, and many others among the older varieties were on display.

Very creditable collections of peonies shown in competitive classes were those of Dr. J. F. Brander, Edmonton; A. G. Nelson, Wilcox; Weaver's Nursery, Saskatoon; and Professor James Neilson, Saskatoon. Many outstanding varieties were represented in these collections.

The selection of the best bloom at the show was probably the most difficult task that the judges were called upon to perform. The bloom of a seedling exhibited by the University of Saskatchewan, and one of *Louis Renault*, shown by the same exhibitor, were very close in their ratings, and the award was finally made to the bloom of *Louis Renault*.

The placings at the show were made by Mr. R. M. Wilson,

Assistant in Horticulture, Dominion Experimental Station, Indian Head, Sask., and Mr. J. E. Park, Provincial Landscape Architect, Government of Saskatchewan, Regina.

[A few notes dictated by W. Ormiston Roy relative to his annual trip to Europe (from the 3rd August until the 25th September, 1939) mostly during the crisis and after the war broke out.]

I arrived in Southampton on the 10th of August and, spending a day in Hampshire, got to London on the 12th. On Sunday, the 13th I was in Holland, and was back in London on the 14th. On the 15th I left with W. H. Judd, of the Arnold Arboretum, on a horticultural research trip which was to take us to France, Italy, Switzerland, Germany and Holland.

Around Nice, in the south of France, and at Ventimiglia, in Italy, there was a little more evidence of border troops, etc., than in other years, but when we arrived at Genoa on the 21st of August, everything seemed quiet with no indication of war.

We spent the next few days visiting Pisa, Florence, Milan and gardens on Lake Como, in blissful ignorance of any approaching storm. Only on Friday, the 25th of August, when we went to Cook's office to have our tickets re-routed through a different part of Germany, did we find there had been a crisis and that two days before all Britishers were ordered out of Germany. On visiting the Canadian, British, and American Consular offices in Milan all three advised us to get out of the country unless very urgent and important business would detain us, (and this advice we followed.)

We left Milan on Saturday morning, the 26th of August (just after midnight) and arrived in London just after midnight on Sunday the 27th of August and from that time on, of course, we were in the thick of it until we got home.

I was in London one week during the crisis; one week after war was declared, and one week in Holland, and preparations for WAR, WAR, WAR, were in evidence on every hand. I do not know which phase was the most spectacular, but one could not help being impressed with the cool, methodical, way, in which the British people acted, (and the French). The saddest sight was the evacuation of the school children and their mothers, the latter worried and many in tears, but most of the children appeared cheerful and

happy—in fact one cartoon explained their feeling, in most cases, better than I could. It was a School Mistress asking a class to spell “holiday”, and the answer was “e-v-a-c-u-a-t-i-o-n”.

London (and the whole of England for that matter) during a blackout is something one can never forget. To give one a little idea of how completely light has been extinguished—the little slits of green, amber or red, that are not blackened in the traffic lights, could be seen distinctly for over a quarter of a mile on Oxford Street at night, when everything else was in darkness, but it is one devil of a job to try to follow the faint and dim light that directs the traffic, from these same slits, in the daytime.

There is so much to wonder at, and so little one can do. If ever I felt helpless it was in London where there is absolutely nothing that a 65 year-old can do except a sort of Boy Scout or Rotary service in helping mothers with their parcels and baggage (during evacuation) around the railroads and underground stations. I could tell you of a very pathetic instance where a very poor woman and her daughter with four children, and burdened with baggage, handed me a shilling for the little help I gave them when I told them I was a Canadian stranded—(of course I meant stranded for a boat, not for pocket money.)

I asked a medical friend of mine, who had charge of an Ambulance Corps in the last war, (and is younger than I am) if I could be of any use, feeling that under his direction I could soon learn to render First Aid (until my own block was knocked off) but he seemed as helpless as I was. He had been to the War Office dozens of times offering his services and when I left he was still looking for something he could do.

To describe how sandbags were piled against the buildings; how Air Raid Precaution Shelters had been established through London, and three air raid alarms, would perhaps be censored, as well as restrictions about taking money out of the country, etc.

No information was available from Shipping Companies, neither as to date of sailing or whether British Ships would be convoyed, etc. The ship I was booked to return on, on the 9th of September, I understand has not sailed yet. Perhaps the saddest scene of all was the pathetic enquiries at shipping offices and other places for

the survivors of the "Athenia", or to know definitely if friends or relatives had been lost.

The shipping offices around Trafalgar Square looked like a run on a bank (so many Americans wanting to return). "Exit Permits" were required from the Passport Office of the War Department and one had to wait in line for hours and take his turn. (Youths from the south of Ireland predominated on the days I waited in the queue). Until your passport was stamped by the passport office no steamship line would sell a ticket. At last I was granted a permit to go to Holland to conclude a business transaction (I had tentatively placed an order there on the 13th of August for a million bulbs for clients in the United States) and on Saturday, the 9th of September I sailed for Rotterdam on the Dutch steamer "Batavia V" (the boat which a few days before brought Ambassador Henderson home from Germany).

I arrived in Amsterdam on Sunday morning, September 10th and spent a week with friends with whom, for the most part, I had done business for forty years and, through their influence, succeeded in booking passage on the Holland American Line, new one class boat—the "Zaandam" (which, in normal times, I would class as among the very best transportation value on the ocean.) On this particular voyage we were crowded with 50 per cent additional passengers in upper berths hanging to the ceiling in each two berth cabin.

From Amsterdam we were piloted through Dutch mine fields out into the North Sea, and when we reached the East Coast of England we took on a British pilot and were piloted through mine field in the North Sea and English Channel. What with life-belt and life-boat instruction, and cabin doors left open day and night, we were on our toes until well out in the Atlantic. We had no mishaps of any kind and the smoothest crossing I think I ever made. For the first time, I think, on any of my Atlantic trips, the fog-horn never blew. I was asleep when we left the Bishop light in the Scilly Islands, but saw the Nantucket Lightship a week later, on the 24th of September, and docked at Hoboken, N. J., safe and sound, on Monday, the 25th. At the mouth of the Thames and the Dover Downs we stopped to let one pilot off and take on another. I never saw so many ships of so many nations as were at anchor at

the mouth of the Thames, and in that region. We only saw a few British warcraft, including airships which every now and then flew over our heads. In the daytime there would be a large Holland flag and the name of the boat spread on the deck and the name and flag painted and illuminated on the sides of the ship, and at night the flag and the name and country of the ship were lighted, and no lights were extinguished.

I arrived home a little too soon and found the Ragweed still untouched with frost and had to go back into the Laurentians for a few days to get clear of a slight attack of Hay Fever and Asthma and today, the 11th of October, 1939, I am back at my office, thankful to be home, and yet with a longing to be of some use somewhere and feeling keenly for my friends in the British Islands and Europe where so many of them must be "scared onlookers" at this time of Hell on Earth. For the first time in many years I did not get to Scotland (That saved me from being torpedoed on the "Athenia").

* * *

Peonies

C. M. Clarke, Tepee Creek, Alberta, Canada

No other perennial that can be grown in the Peace River district will give gardeners so much satisfaction as the peony. Long-lived, thoroughly hardy, requiring no protection whatever even in the severest winter, almost immune to insect pests, subject to few diseases, its culture is simple and very easy compared with that of the rose, whose blooms it surpasses in size and in variations of form, at least equals in beauty of form and of colour, and very nearly equals in fragrance. Its only disadvantage is a short flowering season, individual plants remaining in bloom for little more than two weeks only, but where space and means allow, by a careful selection of early, midseason and late varieties, peony blooms can be enjoyed in the garden for about eight weeks, from early June to the end of July, and by cutting them at the proper stage and storing them at 35 to 40 degrees they can be made available for use indoors for several weeks longer.

SPECIES AND VARIETIES IN CULTIVATION AND BLOOMING SEASON.

Of the three species commonly found in gardens, the fernleaf peony (*Paeonia tenuifolia*) is earliest. It is a dwarf species with very narrow leaves and bright crimson flowers that open here about

the first of June, and it can be had in both single and double forms.

Next in order of earliness is the old-fashioned peony (*Paeonia officinalis*) that was grown almost exclusively in our grandmother's day. It is easily distinguished from the other two species by its leaves and by its peculiar root system. Both single and double forms are available in red, white and pink, and it usually comes into bloom about a week after the fern-leaf peony, lasting till the earliest varieties of the Chinese peony begin to open.

Most of the very large number of named varieties of peony grown today belong to the species commonly called Chinese peony, (*Paeonia albiflora*) of which the American Peony Society now recognizes four distinct types—single, Japanese, semi-double and double. Three of these terms are self-explanatory. The other may not be quite clear. Japanese peonies do not necessarily come from Japan, nor did the type originate there. This type was so named because the people of Japan particularly admire that form of the Chinese peony and grow it extensively. It differs from the single peony in having the stamens changed into staminodes—sterile stamens, or nearly so; greatly enlarged, thick and narrow, of various colours, and bearing very little pollen, or none at all. Sometimes they are petaloid. Early, midseason and late varieties of all four types of the Chinese peony can be obtained in colours that range from pure white through many shades of pink to very dark red, and there are a few that are very nearly yellow. The earliest varieties of this species will usually come into bloom in the Peace River District during the fourth week of June, when the last flowers of the *officinalis* varieties are fading, and the latest during the second week of July, with the great majority of them blooming between those dates, but there is no fixed blooming date. June 21, 1938, is the earliest date noted in 16 years by the writer on which the earliest *albiflora* variety opened its first flower, while in 1935 the earliest variety of Chinese peony to bloom did not open its first flower till July 7.

RECOMMENDED VARIETIES.

All peonies in cultivation are worthwhile flowers, but as some varieties are undoubtedly much better than others, gardeners may as well have good varieties as poor ones, and it should be remembered that price is not necessarily an indication of quality in peonies but is determined rather by scarcity of stock due to recent introduction. Many excellent varieties are found among the lowest-priced, because they were introduced many years ago and have been so extensively propagated that stock is now readily available from all growers. The beginner of limited means can make no mistake in selecting any of the following varieties, all of which are very fine and are also among the cheapest:—

White:—*Festiva Maxima*, 9.3—Early. *Albatre*, 8.7—Late mid-season. *Marie Lemoine*, 8.5—Late.

Pink:—*Monsieur Jules Elie*, 9.2—Early. *Reine Hortense*, 8.7—Midseason. *Livingstone*, 8.1—Late. *Albert Crousse*, 8.6—Late.

Red:—*Adolphe Rousseau*, 8.5—Early. *Karl Rosenfield*, 8.8—Midseason. *Felix Crousse*, 8.4—Late.

Adolphe Rousseau is a semi-double; all the others named above are double. A more complete list can be obtained on application to the Superintendent, of the Experimental Substation at Beaver-lodge.

The figures placed after the names of varieties in the foregoing list are the ratings of the American Peony Society and may be used by those not familiar with peony varieties as a guide in making their selection. A score of 10 represents a perfect variety. Any variety with a rating of more than 8 will prove satisfactory, while those with ratings of 9 or over will all be excellent. Differences in soil and climatic conditions influence the character and performance of peony varieties, and as these figures are the average of ratings given the varieties by growers all over the United States, Canada and other countries, it is quite possible that a variety with a comparatively low rating may do better here than another with a higher rating. It is therefore advisable to visit the Experimental Station when peonies are in bloom and, if possible, when on vacation outside the Peace River District, the large plantings of commercial growers as well, before making one's selections.

SOIL.

Peonies prefer a slightly alkaline condition but will grow in any type of soil that is well provided with organic matter, and are at their best in a cool, clayey loam. When planted on light soils they make a very rapid growth, but bear inferior blooms, of light substance, that fade quickly when cut, and some authorities advise addition of clay to such soils before planting peonies. In a heavy clay soil they develop more slowly but will eventually produce magnificent flowers if given proper care.

LOCATION.

Selection of a suitable location for the peony bed at the outset may save much disappointment later on, and certain sites frequently used ought to be particularly avoided. They are heavy feeders and will not tolerate grass and tree roots among their own. If planted on a lawn, a clear space of at least 18 inches must always be kept between the plants and the edge of the grass. As tree roots extend beyond the spread of the branches, peonies should not be planted too near trees or tall shrubs. Make allowance for the branch spread of the full-grown tree or shrub and locate the peony bed a little beyond it if the planting is to be permanent. If peonies are planted closer than that to young trees, they will have to be moved as the

trees develop. And they should not be planted near the foundation of a building as the walls absorb moisture and radiate heat and will keep the roots in a dry, unhealthy condition. The location chosen must be well drained because, although they use a good deal of moisture during the growing season, they will not thrive on wet, soggy ground. It should have full, all-day exposure to sunlight if possible, and not less than half a day's sunlight in any case. If too heavily shaded they will bear poor blooms or none at all.

PREPARATION.

Most herbaceous perennials must be divided and replanted every three or four years in order to keep them in healthy and vigorous condition, but peonies resent division. As a rule, they do not bloom the first year after division, and may not bloom the second year. In any case, the first and second year's blooms are usually small and often not true to type or colour. Full-sized blooms of perfect type and colour should not be expected till the third year, and some varieties—*Madame Calot*, for instance—may take longer. When they once bear perfect blooms of full size, however, they will continue to do so indefinitely, and if no accident should interfere, they will usually outlive the planter, so that, except when grown specially for propagation, they need never be divided at all and, in any event they should be allowed to remain undisturbed for 7 or 8 years. For this reason a plantation of peonies should be regarded as a permanent investment and it is well worth while to take some extra pains in giving the ground thorough preparation. They are deep-rooted and will go down as far as the grower may care to dig, but if only a shallow preparation is given, the roots will spread out laterally on reaching hard, unbroken subsoil, and, having only a limited feeding range, will suffer much more from unfavourable weather conditions than those planted in properly prepared ground. Too shallow preparation is a very frequent cause of failure to bloom.

MANURE AND FERTILIZERS.

For garden culture, Mr. A. M. Brand and Mr. Harry Little, two of America's most noted living growers, advise removing the soil to a depth of two feet, placing one foot of thoroughly rotted and well trampled manure on the bottom and filling in with a foot of good garden soil. A modification of this method has given good results here. After removal of the soil to a depth of two feet, the earth on the bottom of the trench is broken up as deep as the spade will go and the excavation is then filled with alternate two-inch layers of soil and well-rotted manure, weeds, or other organic material, and turned with the spade after three layers have been placed. The upper eight inches is filled with surface soil without

any mixture of manure, and only as much as the subsoil is discarded as may be displaced by the manure used. This preparation should be done some time before planting so that the earth may settle, and if it is allowed to stand over winter before being used it may be left loose so that frost may aid more effectively in flocculating hard soils. If planting is to be done soon after preparation, the soil should be trampled well from time to time as the trench is filled in; otherwise, it will settle later and the crowns may be left exposed, or the roots may go down with the soil and as the depression is filled, the crowns will be covered too deep.

Deep preparation of the bed is of much greater importance than the use of manure, especially in heavy soils with a high organic matter content, and excellent blooms can be and are produced without its aid. In fact, the opinion of growers is divided regarding the use of manure, particularly that from horses. "Do not use stable manure in any way at any time" is the advice of the late James Poyd; and Dr. Weiss, plant pathologist of the United States Department of Agriculture, says "The use of stable manure in contact with peony roots and crowns is to be avoided." Even those who recommend its use agree that it should be kept away from the crown and roots, and that fresh manure should never be used.

If preparation of the soil has been well done, as outlined above, frequent cultivation to a depth of two or three inches is the only care the plants will require till the third year. Thereafter, an annual or biennial application (sandy soils will require more frequent applications than heavy soils) of two or three spoonfuls of 11:48 ammonium phosphate and two handfuls of wood ashes per plant will be beneficial. An application of two handfuls each per plant of steamed bone meal and wood ashes; or of vigoro, a complete fertilizer, is also recommended by both Mr. Boyd and Mr. Brand. The latter also recommends, as a substitute, half a cubic foot per plant of well rotted manure, and warns against the use of liquid manure and chicken droppings. "Both of these fertilizers," he tells us, "are pretty sure to burn the roots and severely injure if not kill the plant." It should be borne in mind that these different methods of fertilizing are alternative, not complementary. Much injury may be done by over feeding.

When bone meal is used fall application is generally recommended. Thoroughly rotted manure and soluble chemical fertilizers are generally applied in the spring.

Watering may always be done, of course, in dry weather; but enough should be given at one time to go down to the roots. Sprinkling is useless.

PROPAGATION. As seed is slow in germinating and peonies do not come true from seed, they are usually propagated by root division, for which purpose two or three year old plants may be used.

Dig up the whole plant, remove the stems, shake off the loose earth and leave the roots exposed for two hours or more so as to wilt them. They are very brittle when freshly dug and will break badly if division is attempted as soon as they are taken up. After wilting, wash away the remaining earth and examine carefully to find where it may be most easily divided. Use a strong, sharp knife and make divisions with about five eyes each.

TIME OF PLANTING. Divisions should always be made in the fall as soon as growth is completed. Further south this usually occurs early in September, but up here plants are not ready for division, as a rule, till the end of that month.

Planting should preferably be done in the fall, from the time roots are available until the ground freezes. Good results will be obtained from early spring planting, however, provided imported plants do not grow in transit as, in that case, the buds are likely to be broken off in handling; or, if they are some weeks in reaching their destination, they may develop in the package long, weak shoots that will probably heat and rot.

SPACING AND PLANTING. Plants should be spaced not less than three feet apart, and four feet would be better as free circulation of air between the plants is important. Too close planting will produce conditions favorable to the development of blight. If given the full spacing, annuals may be planted between the peonies the first year, but later on the peonies will require the whole space. Care should be taken when planting to set the crown—the point where stems and roots unite—at the proper depth, i. e., two inches beneath the surface in heavy soils, or three inches in sandy soils. If planted too deep they will not bloom, and if the crown is exposed the plant will die.

INSECT PESTS. Up to the present, ants are the only insects that have been observed here on peonies. They are attracted by the sugary exudate given off by the developing bud and do no mechanical injury to the plant, but they may carry from plant to plant spores of *Botrytis*, a fungus that causes peony blight. It is said that they will not cross a 1-inch wide strip of cloth that has been soaked in coal oil and wrapped around the stem.

DISEASES. Blight, caused by various fungi—notably by *Botrytis*—is the only serious disease that is frequently met with here. Wet weather, poor drainage and too close spacing—conditions which the grower can easily correct—are favorable to the development of the causal organisms. Frequent cultivation throughout the growing season will aid greatly in its control. Diseased parts should be removed and burned as soon as they are observed and the plants sprayed with Bordeaux mixture, or treated with lime copper dust. It is also advisable to remove the earth from about the crowns of diseased plants and replace it with clean soil. As spores of the

fungi go through the winter on the stems and leaves, it is a good preventive practice to cut the stems off as low as possible without injuring the buds as soon as the plants cease growing in the fall, and burn them.

CAUSES OF FAILURE TO BLOOM. "Why don't my peonies bloom?" is a question so frequently asked that it may be well to summarize the chief causes here though they have been already indicated. They are:

1. Recent transplanting, especially of small divisions.
2. Too deep planting.
3. An unsuitable location, i. e., one in which there may be (a) Excessive shade; (b) Deficiency in soil moisture due to the presence of tree or grass roots, buildings; (c) Poor drainage.
4. Poor preparation resulting in lack of moisture, restricted root growth and small feeding area.
5. Coddling—mainly by over-fertilizing.
6. Diseased roots.
7. Blight.
8. Untimely spring frosts.

CUTTING FOR USE INDOORS. Blooms for indoor use should always be cut early in the morning and as the flowers of most varieties—especially yellow ones—bleach when allowed to open on the stem, it should be done before they open fully. If cut when the first outer petals begin to lift and while the bud is still hard, it will open indoors in about three days, and cutting is best done at that stage, or at any time between that and when the bud is half-open. The stems should not be too short. Sixteen inches would be about right, provided not more than one-third of the blooms of any single plant are cut in that manner as it may mean removal of too many leaves. It may be observed that commercial cut flowers (peonies) are taken with much longer than sixteen-inch stems. If even a single large flower like a peony is cut with a very short stem, it would look unnaturally rigid when placed in a vase, and if two or more very short-stemmed blooms are placed in the same container, in order to get the stems into water, the flowers must be pressed together so that the outline of individual blooms is destroyed and the beauty of form lost.

EXHIBITION BLOOMS. For exhibition disbudding is essential. Select one or two promising stems of each variety that is intended to be shown. Remove the lateral buds as soon as they develop, leaving only the large terminal bud and, in order to prevent sunburn, cover it when about the size of a marble with a half-pound paper bag on which the name of the variety is clearly written in indelible ink. A one-inch rubber band will keep the cover securely in place. After

heavy rain the bag should be raised if it touches the bud as discoloration may take place if they are allowed to remain in contact. Cut with sixteen-inch stems, or longer—all the same length—when the upper third of the bud is soft to the touch. Remove all but two or three leaves and place in water in a cool dark place for about six hours. Then remove the covers and bring them into the light and they are ready for the show.

If they are to be kept for any length of time, the leaves and stems should be carefully dried with a cloth on removal from the water and the blooms placed in cold storage at a temperature of 35 deg. to 40 deg., from which they should be taken 24 to 36 hours before they are required, depending upon the length of time they have been in storage. Cut an inch from the ends of the stems on taking them from cold storage, and place them in cold water in a cool place. Loosen, but do not remove the covers till they are required for use.

FRAGRANCE. Fragrance in peonies is largely a matter of opinion. Red varieties, as a rule, have very little fragrance—often none at all—and white varieties are generally more fragrant than pink ones. Japanese and single peonies — and some semi-doubles— usually have a peculiar fragrance, attributed to pollen which many people dislike, and it is usually described in the manual as “unpleasant” or “disagreeable” but I do not find it so myself. Under the system of rating in use up to the present one point out of ten is allowed for fragrance, so that any peony with a rating of 9 or over should have some fragrance else it would have to be perfect in every other respect to get a rating of 9. In the following lists the notes on fragrance (where given) are taken from the American Peony Society’s Manual:

List A—Desirable Low-priced Peonies, Usually Listed at Less than a Dollar.

WHITE VARIETIES. Early—*Duchesse de Nemours*, 8.1; notably fragrant. *Festiva Maxima*, 9.3; fairly fragrant. *Madame de Verneville*, 7.9, (rating generally considered too low); sweet, rose-like fragrance.

Midseason—*Madame Emile Lemoine*, 8.9; mildly fragrant. *Monsieur Dupont*, 8.3; strong fragrance.

Late—*Albatre*, 8.7; fragrance strong but not sweet. *Couronne d’Or*, 8.1; odour strong, like water lilies. *Marie Lemoine*, 8.5; richly fragrant.

RED VARIETIES. Early—*Adolphe Rousseau*, 8.5 (semi-double); odour somewhat disagreeable. *Cherry Hill*, 8.6 (semi-double); slight odour of pollen. (no note on fragrance in A.P.S. manual).

Midseason—*Karl Rosenfield*, 8.8 (an excellent variety, but not

fragrant). *Monsieur Martin Cahuzac*, 8.8 (early midseason); not fragrant. *Victoire de la Marne*, 8.2; decidedly unpleasant odour.

Late—*Felix Crousse*, 8.4; poor fragrance.

PINK VARIETIES. Early—*Edulis Superba*, 7.6; very fragrant. *Modeste Guerin*, 7.8; rose fragrance. (Ratings of these two varieties considered too low.) *Monsieur Jules Elie*, 9.2; moderately fragrant.

Midseason—*Eugenie Verdier*, 8.6 (early midseason. Not to be confused with *Eugene Verdier*); fragrance not notable. *La Perle*, 8.5; spicy fragrance. *Lady Alexandra Duff*, 9.1; fair fragrance. *Madame Ducel*, 7.9 (Rating generally considered too low); not very fragrant. *Reine Hortense*, 8.7; slight, unpleasant odor.

Late—*Albert Crousse*, 8.6; mildly fragrant. *Claire Dubois*, 8.7; odor not pleasant. *Livingstone*, 8.1; fragrance strong and sweet. *Madame Emile Galle*, 8.5; fair rose fragrance.

NEAR YELLOW. Midseason—*Primevere*, 8.6; white guard petals, yellow center; moderately fragrant.

List B—Desirable Peonies, Usually Listed at One Dollar, or Over.

WHITE VARIETIES. Early *Le Cygne*, 9.9—Highest rated variety at present. Rating may be reduced this fall as it was included this summer in a list of varieties to be re-rated. Though listed as an early variety, it has always been a mid-season bloomer here. Moderately fragrant.

Midseason—*Alice Harding*, 9.4; none better; fragrance sweet. Sometimes listed as pale flesh pink. *Frances Willard*, 9.1; mildly fragrant. *Kelway's Glorious*, 9.8. Included in list for re-rating this summer. Strong, rose-like fragrance.

Late—*Baroness Schroeder*, 9.0; fragrant. *La Lorraine*, 8.6; rather poor fragrance. (Late midseason. Rating generally considered too low). *Solange*, 9.7 (Sometimes listed as a pink. Rating may be changed this fall). Very faint, unpleasant fragrance.

RED VARIETIES. Early—*Richard Carvel*, 8.8; only slightly fragrant. *Inspecteur Lavergne*, 8.7 (Early mid-season); not fragrant. (No note on fragrance in A. P. S. manual).

Midseason—*Longfellow*, 9.0; not notably fragrant. *Mary Brand*, 8.7; notably fragrant for a red variety. *Philippe Rivoire*, 9.2 (Highest rated red at present, but I think *Longfellow* is a better peony. Though listed as an early variety, it has always been a midseason bloomer here). Richly rose scented. ("Not richly rose-scented, though it has a slight fragrance"—A. P. Saunders). *Winnifred Homme*, 8.3; not fragrant.

PINK VARIETIES. Early—*Judge Berry*, 8.6; slight fragrance. Midseason—*Mabel L. Franklin*, 9.0; strong lemon fragrance. *Marie Crousse*, 8.9; moderately fragrant. *June Day*, 9.0; fragrance sweet, but not strong. *Souvenir de Louis Bigot*, 9.1; mildly fragrant. *Therese*, 9.8 (Highest rated pink peony at present. Was included this summer in a list of varieties for re-rating. Not particularly fragrant. *Walter Faxon*, 9.3; mildly fragrant.

Late—*Cornelia Shaylor*, 9.1; fragrance very faint. *Georgiana Shaylor*, 8.9 (late midseason); fragrance sweet, but not strong. *Grandiflora* (Richardson's) 8.8 (very late); fragrant. *La France*, 9.0; fragrant. *Madame Jules Dessert*, 9.4; fragrance slight. (No note on fragrance in A. P. S. manual) *President Wilson*, 9.3; rich, spicy fragrance. *Sarah Bernhardt*, 9.0; agreeably fragrant.

NEAR YELLOW VARIETIES. Early midseason—*Laura Dessert*, 8.8; guards pale cream, center yellow; moderately fragrant.

Late midseason—*Aureolin*, 8.9—light pink guards, center yellow. Sometimes listed as a Japanese peony; very fragrant.

Report of First Regional Show District No. 5

HELD IN CHICAGO, ILL., JUNE 10th and 11th, 1939

The peony show of the American Peony Society held in cooperation with the Midwest Horticultural Society, Garfield Park Conservatory, Chicago, Ill., was staged June 10th and 11th.

Horticultural Hall has an exhibition space of 18,000 square feet. An additional hall adjoins this exhibition hall which contains about 25,000 square feet for show room. All of this with daylight, yet protected from the sun by the glass being sprayed with white wash.

Japanese grass embankments, pergolas, garden seats, gazing globe, huge urns and gravel walks help identify the scene as a Japanese garden. The mass of thousands of blossoms comprised a picture that was breath taking.

Our committee worked most efficiently, although to all except Mr. Christman, it was their first peony show, yet each person serving on the committee had a vast knowledge of flower shows.

To my mind, the most spectacular thing was the peony seedlings



The upper two pictures show two-thirds of exhibition hall the day following the show. Most exhibits had been removed. Several of Glasscock's seedlings in foreground. Lower left picture shows small section of Mr. Napier's exhibit. Lower right shows three of Mr. Glasscock's seedlings.

of Mr. Lyman D. Glasscock of Elwood, Ill., and also of Edw. Auten, Jr., of Princeville, Ill.

Mr. Glasscock entered two hundred of these strange, beautiful blooms. I want to use the words "simply amazing" in connection with them. Mr. G. Roy West, noted Landscape Architect of Chicago, gave me this expression and it fits the picture very well.

In some the texture and delicate tints, also transparency, reminded one of delicate sea shells. Others resembled waxed water lilies. Some were the deepest double purple; others almost black. They are hybrids, a cross between the *officinalis* species and the *Chinensis* peony.

A brief description of seedlings I thought possessed exceptional merit follow.

Glasscock's 12-K 17, beautiful Jap, formation, rose red, some gold in the stamenodes which have the appearance of swirling around. Texture like wax.

Dainty Lass (Glasscock), Coral pink Jap. Very finished. Large cup shaped bloom. Gold stamenodes. Fine stem. Transparent texture. A lovely flower.

8-R-17 (Glasscock), Hybrid of *Chinensis* X *officinalis* *Sunbeam*. Pink single, gold stamenodes, Like wax in texture and appearance.

23-C-2 (Glasscock) Bomb type, salmon pink.

4-N-1 (Glasscock) Brilliant, black red Jap. Stamenodes black-red, edged yellow. Carpels white, tipped red. Heavy substance, wonderful sheen.

10-R-15 (Glasscock) Coral pink. Petals have the delicate coloring of sea shells. Simply wonderful in new shape and coloring. Single. Received First Class Certificate of the American Peony Society at Lincoln, Neb. in 1937.

8-E-10 (Glasscock. Large, dark red maroon, gold stamendoes. Mottled appearance on guard petals gives the appearance of marbelizing on sea shells.

19-K-1, (Glasscock) Bomb form, blue black in color. An interesting novelty.

1-M-18, (Glasscock) Very dark red Jap. almost black. Complete black center of stamenodes.

9-R-33, (Glasscock) Hybrid of *Chinensis* X off. *Sunbeam*. Bright spectrum red. Shell appearance with gold stamendoes.

66-G-46, (Glasscock) *Chinensis* variety, full double rose form. Medium pink. Large, heavy substance and strong stem. Splendid in every way.

9-C-5 (Glasscock) Cherry red, full double, ball shaped bloom.

clear, transparent red. Awarded First Class Certificate of the A. P. S. in 1933.

Red Giant, (Glasscock) Dark red, double, simply gorgeous.

The above are a few of what I thought very outstanding.

The following seedlings of Edw. Auten Jr., of Princeville, Ill. were also outstanding creations.

A. P. 2261 (Auten) Large, double pink, rather flat, fragrant, very tall, stiff stems.

A. P. 2155 (Auten) To be named *Virginia Lee*. A late, double, glorified pink which deepens at center. Good substance.

Dr. J. G. Maxon of Harvard, Ill., had a number of seedlings on display and one lovely, double white, tinted pink in the center, similar to *Hansina Brand* was very fine. Strong stems, heavy substance.

He also had a very fine red among other good ones in his exhibit.

Mr. R. A. Napier of Blue Island, Ill., showed an excellent pink of a very delicate shade. Very large. A lovely, deep formed flower of fine keeping quality.

Mr. Henry Reineke of Defiance, Ohio showed a number of very fine seedlings, among which the following were outstanding.

No. 20 (Reineke) A large, deep, midseason rose pink. Very full and fragrant. Center has intense rose color shading to deep rose on outer petals. Nice foliage, nice straight stems. Held up well. Very much worth while.

No. 137 (Reineke) *Myrtle Reineke*. Exceptionally large flesh white, fading to pure white. Fragrant. Good stem. Very full, with no stamens. A magnificent flower.

No. 27 (Reineke) Large, loose, full white, flush of pink. Golden glow in center. Shows a few stamens, a collar of fine, feathery petals.

No. 68 (Reineke) Large, late, light pink, full flower. Fragrant. Good stem and foliage. Won First Class Certificate of the American Peony Society at Lincoln, Neb. in 1937.

No. 69. (Reineke) Large double flower, medium pink. Good stem. Stands up exceptionally well in sun. Slight odor. Early.

No. 43 (Reineke) White, very fine.

No. 405 (Reineke) Deep pink Slightly inferior to the others mentioned but a very promising flower.

Mr. Chas. Klehm of Arlington Heights, Ill., showed a large, double pink seedling of considerable promise.

The best peony in the show selected by the judges present was the variety *A. B. Franklin* exhibited by Mr. A. L. Murawska of River Drive Peony Gardens, River Grove, Ill.

The silver medal of the American Peony Society was awarded to Mr. R. A. Napier of Blue Island, Ill., for the best collection of bloom of from 50 to 100 varieties, Class No 1.

Mr. L. D. Baker of Kendallville, Ind., won second award in Class No 1.

Most of the classes had exhibits and the following made from one to a large number of exhibits in the various classes, winning prizes.

Mrs. T. Thompson, 849 W. 49th Place, Chicago.
Dr. J. G. Maxon, Harvard, Ill.
River Drive Peony Gardens, River Grove, Ill.
Edward Auten, Jr., Princeville, Ill.
R. A. Napier, Blue Island, Ill.
Lyman D. Glasscock, Elwood, Ill. RFD 2.
Northbrook Gardens, Northbrook, Ill.
E. Karch, McHenry, Ill.
Henry H. Reineke, Defiance, Ohio.
H. P. Heizer, 2134 W. 109th St., Chicago, Ill.
I. G. Boehland, Rockford, Ill.
E. C. Freed, R. R. 2, Downers Grove, Ill.
L. D. Baker, Kendallville, Ind.
Mrs. E. A. Julius, 5873 N. Forest Glen Ave., Chicago, Ill.

Plans for the 1940 exhibition to be held at Garfield Park Conservatory, Chicago, Ill., are now under way and the dates have been set for June 15th and 16th, which we feel will give more exhibitors an opportunity to exhibit.

Splendid prizes were provided in the various classes and it is planned to have a much larger, representative exhibition this coming June.

A splendid luncheon was provided under the direction of Mrs. Geo. J. Reiter and a select musical program arranged by Mrs. William Beaudry featuring Miss Florence Lambert, National Champion High School solo harpist who gave a number of beautiful selections and some splendid tenor solos by Mr. Frank Finn, as well as some glorious soprano solos by Joan Young.

Mrs. Frank C. Lambert
General Show Chairman
5445 Iowa Street, Chicago, Ill.

The Rating List and Supplement to the Manual

George W. Peyton, Rapidan, Va.

In answer to several inquiries requesting information about the above, the attention of the members is called to the following facts: At the last meeting of the Board of Directors in Boston in June, 1939, a resolution was passed forbidding the publication of any rating for a variety that had not been approved by the Board. The new ratings cannot be submitted to the Board until its next meeting which will be held in Rochester, Minnesota on June 22, 1940. In as much as these ratings will be used in the new supplement, it is obvious that it will have to be held for the action of the Board. This will mean that it will be sometime late in 1940 before the completed work can be published. An endeavor will be made to have as much ready as may be possible before the meeting of the Board so that only the ratings will have to be added.

Only the ratings already submitted on that may be submitted within the next few weeks can be used as there would be no time for compiling those submitted after the 1940 season. It is deeply regretted that so few of the members of the Society found it convenient to submit rating lists. So far less than ten percent of the membership have answered the call. The society spent almost two hundred dollars in cash out of its scanty resources to publish this Rating List. The preparation of it cost many hours of hard labor, yet the response of the membership who have to make the ratings has been such that few of the newer varieties will receive the required number of votes for a final rating.

Our sincere thanks and appreciation is due those few who did their duty.

The attention of originators is called to the fact that many have failed to send in adequate information in regard to their varieties, even though personally appealed to. If your variety is not adequately presented it is your fault. Get busy.

Referring to letter of Mr. Potter, pages 44 and 45, latest Bulletin:

Lemoine disease and nematodes pretty definitely are not two

phases of the same trouble, nor even in any way related. Lemoine disease is a sap disease. Nematodes is not a disease, but an infestation of the roots by a certain kind of tiny worm. Neither can cause the other. Presumably a plant may have both, but I doubt if a plant heavily diseased is so much relished by the nematodes as a healthy one.

As to other species I have no opinion, but I do not believe any chinensis root is immune to the nematode. The probability is that, when Mr. Potter set the plants, it was in uninfested ground, and the *Harriet Olney* did not have the nematodes, but one or some of the others did have, and the nematodes never migrated far enough toward the *Harriet Olney* to reach it. That roots from the other plants may have crossed its roots does not necessarily signify, as the soil down there may have been firm, and the roots of all the plants at that depth may have been free of the nematodes.

The chances are that, when dug from their infested soil, the new *Harriet Olney* plants will be abundantly infested.

Next time Mr. Potter has some aristocratic plants he thinks are too full of nemas to be worth planting, have him send them to me, and I'll grow some good clean plants from them. I'll remove all the fibrous roots and rootlets, the slender root-ends, and the new white rootlets, and plant what is left. It is in the young growth that the nematodes are. Even though an old root show their wounds, that is not evidence that they are in those old roots, but that they have been there.

Medals and Certificates Awarded 1939—

- A. P. S. Gold Medal—Awarded Harry F. Little, Camillus, N. Y., for best display peonies 80 to 100 varieties, Boston, Mass., 6-22-39.
- A. P. S. Silver Medal—Awarded Cherry Hill Nurseries, second award, Class 1, Boston, Mass., 6-22-39.
- A. P. S. Silver Medal—Awarded A. G. Nelson, Wilcox, Sask., for most outstanding exhibit peonies, Saskatoon, Sask., 6-29-39.
- A. P. S. Silver Medal—Awarded R. A. Napier, Blue Island, Ill.,

best collection peonies Class No. 1, Chicago, Ill., 6-10-39.

B. H. Farr Bronze Medal—Awarded L. W. Lindgren, St. Paul, Minn., best peony bloom A. P. S. Show Boston, Mass., 6-22-39. Variety, *Mrs. J. V. Edlund*.

James Boyd Bronze Medal—Awarded Harry F. Little, Camillus, best red peony exhibited Boston, 6-22-39. Variety, *Hiawatha*.

James Boyd Silver Memorial Medal awarded Harry F. Little, Camillus, N. Y., for the most distinguished entry in the Boston, Mass. show, June 22nd, 1939.

American Home Achievement Medal awarded Harry F. Little, Camillus, N. Y., for the best new peony exhibited at Boston, Mass., June 22nd, 1939. Variety, "*Snow White*."

American Home Achievement Medal awarded River Drive Peony Gardens, River Grove, Ill., for the best new peony exhibited, Chicago, Ill., 6-10-39, variety, "*A. B. Franklin*".

CERTIFICATES AWARDED AT BOSTON, MASS.

June 22nd, 1939

First Class Certificate to Harry A. Norton of Ayers Cliff, Quebec, for seedling, "*Mrs. Harry A. Norton*".

First Class Certificate to Harry F. Little, Camillus, N. Y., for seedling No. 68, pink double.

First Class Certificate to Harry F. Little, Camillus, N. Y., for seedling No. 21.

First Class Cert. to Cherry Hill Nurseries, West Newbury, Mass., for seedling No. ME 81.

Honorable Mention Certificate to Prof. A. P. Saunders, Clinton, N. Y. for his tree peony seedling "*Black Pirate*".

Honorable Mention Cert. to John L. Rea, Plattsburg, N. Y., for his seedling "*Lottie Dawson Rea*".

Honorable Mention Cert. to Ernest F. Kelsey, East Aurora, N. Y., for his seedling "*Charlene*".

Honorable Mention Cert. to Ernest F. Kelsey, East Aurora, N. Y., for his seedling "*Marilla Beauty*".

CERTIFICATES AWARDED AT CHICAGO, ILL.

June 10th, 1939

Honorable Mention Certificate awarded to Lyman D. Glasscock, Elwood, Ill., for his seedlings No. 66, G-46 and 7A17.

CERTIFICATES AWARDED AT GUELPH, ONT.

June 22nd, 1939

First Class Cert. to Mrs. Evelyn Lossing, Norwich, Ont., for her seedling peony "*Louise Lossing*."

First Class Cert. to Wm. Jerry, Woodstock, Ont., for seedling "*Lockie Wilson*".

First Class Cert. to J. W. Keagey of Dundas, Ont., for a fine, blush, pink seedling, not named or numbered.

Honorable Mention Cert. to Wm. Brown of Elora, Ont., for his seedling "*Fairleigh*".

CERTIFICATES AWARDED AT SASKATOON, SASK.

June 29th, 1939

First Class Certificate awarded to Prof. James Neilson of Saskatoon, Sask., for his seedling No. 5.

First Class Certificate to the University of Saskatoon, Department of Horticulture for seedling No. 1044.



List of New Members

Anderson, Mrs. Geo. M., 831 Park Ave., Baltimore, Md.

Borene, Roy E., R.R. 1, St. Joseph, Mo.

Brow, J. B., 88 Upper Prince, Charlottetown, Prince Edward Island, Canada.

Cash, W. N., R.R. 3, Box 18, Janesville, Wis.

Coe, W. T., 210 Hodgson Bldg., Minneapolis, Minn.

Higley, Parker, 2000 S. Grandview Ave., Dubuque, Iowa.

Johnson, Geo. W., 350 Hughson St., N., Hamilton, Ont., Canada.

Lockwood, C. M., Opportunity, Wash.

Lynde, Winnie E., Box 508, Gillette, Wyo.

MacCrea, John A., R. R. 2, Lockport, N. Y.

Mason, James, 605 N. Michigan Ave., Chicago, Ill.

Massey, B. R., Black Oak Ridge Road, R.R. 1, Peterson, N. J.

Redman, Mrs., Box 530, Burlington, Ont., Canada.

Rivinus, Mrs. E. F., 416 W. Moreland Ave., Chestnut Hill, Pa.

Sawyer, Mrs. J. E., Elgin, Minn.

Stauffer, C. J., Dillsburg, Pa.

Thee, Mr., Uniontown, Ohio.



Secretary's Notes



December 15th, and the weather still keeps so mild that we can plant peonies daily. The ground is not frozen and with Christmas just around the corner, we are wondering if we will have snow by that time. It has been a perfect fall for planting and all other work. We have not had our usual fall rains which will doubtless result in heavy snows this coming winter. In this section we have yet to have our first snow storm.

We have just completed a planting of about 40,000 peonies and not a single one was planted in the mud or in wet ground. I cannot recall a fall when we were able to accomplish a more desirable piece of work with no interference from the elements.

The past season in this section was much more satisfactory, as far as bloom was concerned, than 1938, and while we lacked rain for some weeks during the growing season, considerable root growth was made on young plants due to continuous cultivation.

We have been privileged to see some very good new peonies that have considerable promise. We have also planted a number of new varieties that will give us their first bloom next June and fortunately, we have acquired some of these outstanding ones for our collection.

* * *

In going through a large planting of several thousand seedling peonies owned by Dr. A. C. Wilhelm of Chicago, Ill., I came across a very attractive red, resembling very much the color of *Philippe Rivoire*. The flowers were not large but were held rigidly erect on stiff, strong stems. Color did not show any fading nor the usual bluish cast in many reds, after they have been exposed to a hot sun for several days. The pronounced fragrance of *Philippe Rivoire* is lacking, although it does possess a slight fragrance. It was outstanding in a field of over 12,000 seedling peonies four and five years of age. It will be named "*Lydia Wilhelm*," and will be exhibited at our future shows within the next year or so.

* * *

Last spring we spoke of color slides for the society. Col.

J. C. Nicholls of Ithaca, N. Y., responded with a considerable number and a few weeks ago sent an additional collection of nearly fifty more. We now have quite a collection of color slides which we will be prepared to send to any peony organization or flower club desiring them in a short time. We want to add to the list this coming year and make the collection an outstanding one. The slides are 2" x 2" in size. The Society has no lantern or screen but this will be arranged for at a later date. A small fee will be charged for the use of the slides in addition to transportation costs to and from this office.

* * *

Plans for the Rochester, Minn., show to be held June 22nd and 23rd, 1940, are progressing very nicely and a full schedule will appear in the March issue of the Bulletin. The Duluth Peony & Iris Society are asking for over twenty classes for iris. They plan on bringing an outstanding exhibit of iris to Rochester since the iris season will be at its height in Duluth at the time of the show. Full details regarding this show will be found in the March bulletin. Mr. R. W. Goddard of Rochester, Minn., is General Chairman and any communications addressed to him will receive prompt attention.

It is our plan to have this bulletin reach our members by the first of the year, or sooner, if possible. While it may reach you soon after Christmas the officers and directors of the society extend the season's greetings for a most Happy New Year and a wish that 1940 may bring you many unexpected surprises in the new peonies. We thank you for your assistance and co-operation in the past and solicit your continued support in the future.

As your secretary, it has been a pleasure to serve you and we also gratefully acknowledge the many contributions to the bulletin made by our members. These various articles make the bulletins worth while and we are hopeful that they will continue to come in freely during the year. We are desirous of receiving articles on peonies from all sections of the country and abroad where peonies are grown. An exchange of ideas will be found most helpful.

On August 22nd we picked a bloom of *Marie Crousse* from the field. In a large planting it is not at all uncommon to find some belated blooms showing up long after the regular season of bloom has passed.

In propagating the variety of *Le Jour* this fall I found three roots broken off of plants that had a prominent bud that protruded from the side of the root at least five inches from the crown of the plant. I put them to one side hoping to photograph them and present them in the bulletin but in some manner the boys got hold of them and they were planted with the balance of the stock. This is not at all unusual in the officinalis varieties but I have not seen this characteristic manifested in the Chinensis varieties. If some of our readers have had similar experiences, let us hear from you with information as to the variety, etc.

* * *

In Bulletin No. 76 we gave a brief description of a splendid book that had been received, "Growing Plants Without Soil."

Since then we have received two more very interesting and instructive books that I desire to briefly describe for the benefit of anyone who is interested and who has not seen the books.

The first is entitled, "Plant Growth Substances" which fully explains how to promote plant growth and hasten the rooting of cuttings. The author, Hugh Nicol and the Publisher, Chemical Publishing Co., 148 Lafayette Street, New York City. There has been a great deal of work done along this line within the past few years and interest in this line of work is increasing steadily. The book contains information of value to gardeners, horticulturists, nurserymen, botanists, and students of agriculture as well as chemists. Much of the book is necessarily technical but two chapters for the layman give in simple language directions for using the new substances in some horticultural work and also gives outline of the development of knowledge regarding the chemical regulators of plant growth. The price of the book is \$2.00.

The other book "Introduction to Floral Mechanism' by S. G. Jones, D. Sc., also published by the Chemical Publishing Company of New York City, N. Y. Price \$4.00.

Anyone interested in Plant Morphology will find this a most valuable treatise on the subject. There are seventy-two line illustrations of outstanding merit by the author. The book is primarily intended as a text book for first year university students for whom the course was originally drawn up. The book is divided into two parts for convenience.

The illustrations are among the finest of their kind I have

ever seen and the book of 274 pages is filled with valuable information for any botany student or flower lover.

* * *

We have had requests for back issues of the bulletin that are not now in print. This refers to numbers from 1 to 12 inclusive. If any member is interested in securing any of these numbers, communicate with E. Don Bullian, 7T-D Ridge Road, Greenbelt, Md., as he may be able to secure a complete file of back numbers for you.

In a letter from our friend Mr. E. F. Kelsey of East Aurora, N. Y., under date of Oct. 20th he states that he and Mrs. Kelsey motored to Salamanca, N. Y., recently to a family party and I quote a section of his letter.

"I never saw those Catterangus Hills so colorful. It reminded me of the days when I, too, tramped those hills with my trusty muzzle loader on my shoulder. Those were wonderfully happy days. I was an outdoor boy, hunting, fishing, trapping, sometimes sleeping in a hollow log up on old south mountain, cooking my catch of trout on a forked stick, which reminds me of a poem I wrote some years ago that went something like this,—

"Just at the edge of evenin',
When the lamplighter lights the stars,
And the shadders get deeper and deeper
And night lets down the bars;
And the peep frogs start their chorus
Way out in the pasture lot;
That's the time for rememberin'
The by-gones you've half forgot."

"So I guess I'm rememberin' but perhaps my rememberin' doesn't interest others as it does me. Yours truly."

Mr. Kelsey will read this as a surprise, as he doesn't know that I am going to quote this section of his letter, but it surely does make one do a little "rememberin'" and how many of us have passed similar experiences in our younger days.

* * *

A CORRECTION

I have a letter from Mr. Lyman D. Glasscock of Elwood, Ill., in which he makes the following statement:

"In Bulletin No. 76 the peony *Bright Knight* is registered as *Black Knight*, which is not a bad name but it does not fit this peony as it is a very bright red."

We are glad to make this correction.

* * *

To save expense in postage and secretarial work, would appreciate remittances for 1940 dues. Some have already been received and we expect many more within the next few weeks.

* * *

We want to make the peony still more popular this coming year of 1940, and while the peony is one of the commonest of our garden flowers, the old time peony has been greatly superceded by the gorgeous new forms and colors produced by careful and scientific hybridization. As early as 1879, Mr. H. Huftelen in Vick's Magazine had this splendid tribute to the peony:

"No flowering plants capable of enduring our northern winters are more satisfactory than the peonies. Massive without being coarse, fragrant without being pungent, grand without being gaudy, various in form and color, beyond the possibility of being successfully superseded, they stand in the first rank of hardy flowers."

Correction

Further comments and corrections; In Illinois Bulletin 447, under the description of *Edith West*, several varieties are mentioned which were apparently identical, judging from specimens planted in the trial garden. In the June-September Bulletin it was suggested by James Kelway that the name *Lady Lillian Ogle* should, therefore, have priority. In bulletin 447 similar or apparently identical varieties were mentioned in alphabetical order, and one reason for this was the fact that mixups in varieties made it impossible in all cases to give credit where it should be given.

In the case of the variety, *Edith West*, Mr. A. M. Brand points out that: *Edith West* was originated by us and I remember distinctly of selecting it out of the seedling patch, so it could not be identical with *Lady Lillian Ogle*. We never had *Lady Lillian Ogle* and have never seen it and so there could have been no mixture on our part between the two varieties. The chances are that either your *Lady*

Lillian Ogle is an *Edith West* or what you have as *Edith West* has been sent you by somebody who did not have the true *Edith West*. I introduced the varieties *Edith West*, *Mellen Knight*, and *Harriet Olney* the same year and these three varieties were selected from a seedling bed of thousands of different seedlings, and in the seedling bed we never have a named variety. We hope that you will correct this mistake so that the impression will not go abroad that we are renaming old varieties and sending them out as our own introductions."

F. F. Weinard,
Associate Chief in
Floricultural Physiology

Duluth Peony Show

On July 6th and 7th the annual peony exhibition of the Duluth Peony & Iris Society was held. This is the 24th annual peony show held by this Society. It was held in the ball room of the Hotel Duluth and many hundreds viewed over 5,000 blooms shown at this exhibition. Mr. Wm. Tunnell of 3510 Allendale Ave., Duluth, Minn., kindly sent me the following brief report of the show taken from the DuluthHerald of July 7th. Mr. Tunnell writes: "If you want to see a REAL PEONY SHOW come to Duluth next summer and judge for yourself. You can sleep every night and drink the best water that the sun ever shone on."

We know the nights are cool up there, even in the hottest summer, and the water from Lake Superior is ice cold and truly refreshing. We have sampled both the sleep and the water and know whereof we speak.

Hundreds of Duluthians visited the ballroom of Hotel Duluth yesterday and today to look over more than 5,000 blooms shown in the 24th annual peony show of the Duluth Peony and Iris Society.

Two of three trophies offered the exhibitors were won permanently yesterday by persons who had taken top honors in their respective classes three years in a row.

Mrs. William Tunnell, 3510 Allendale Avenue, showed the finest collection of 25 to 30 name varieties and carried off the First & American National Bank cup for good. The Morris Plan trophy became the permanent possession of Estelle and Omer Prudhomme,

children of Mr. and Mrs. W. C. Prudhomme, 44 Minneapolis avenue, and the Duluth Herald and News-Tribune cup went to Joe Priley in the professional class.

Sharing in sweepstakes prizes were Mr. Priley for his "*Modele de Perfection*," best named peony in the show; Mrs. Joseph M. Sellwood with "*Felix Crousse*," best named red peony, and "*Fuyajo*" best named Japanese peony, and Angus Macauley with *Thomas B. Macauley*," best named single peony. Mrs. Sellwood scored first in the artistic arrangements section, also and Jean Rooney, daughter of Mr. and Mrs. P. A. Rooney, was first in the children's division.

Judges were L. R. Fischer, A. B. Franklin, Minneapolis, and John M. Kleitsch, Duluth, for general exhibits, and Mrs. Fred Kemp and Mrs. Herbert Juneau, Superior for artistic arrangements.

Mrs. William Tunnell won the First and American National Bank trophy which became her permanent property, having won first place in Class No. 1 for the third consecutive year.

Communications

I wrote you that I saw but few peonies while in Japan, but did not mean by that to imply peonies were actually rarities there. I meant that one would have to hunt for them, lacking advance information on addresses, and that the peony was not as common in the average garden as it is with us in the eastern United States. Perhaps they have been revered for so long that it is not good form for the proletariat to have tree peonies in his back yard in Japan. But the herbaceous peonies were not in evidence, either.

Peony seed gathcred, as you suggested, just as the pods were ready to open in late summer had given fair germination by early October when I moved them from a flat into the seed bed.

I have been interested in the various comments upon the importance of the old peony roots when one sets out a planting. There are two schools of thought. One suggests cutting most of the old root system out and planting only the crown tissue carrying the eyes; the other wants a substantial root system retained. Quoting from the Bulletin of the Peony Society will illustrate these points.

Bulletin No. 74, page 14 (E. F. Kelsey), "This deponent sayeth

that he would rather have a one or two eye division on a healthy, sizable root system than any number of eyes on a sawed off pick handle."

Bulletin No. 75, page 25 (Geo. W. Peyton), "one good root for each eye that is not more than three quarters of an inch in diameter and from six to ten inches long." Page 35 (B. C. Auten), "In resetting peonies, all old parts of the root system should be removed from the divisions." (Perhaps the writer refers here to the roots, wash the necks, . . . plant them, and throw away the roots". roots dating back to a previous planting?) Page 36, "I would cut off

The above are the sentiments of experienced growers and their experience shows the two techniques work, but there seems to be room for speculation as to why they are equally successful, if they are.

When I read Kelsey's note on "Standard Divisions" I thought he had made some very good points, for I have been shopping among a number of growers to get the varieties of peonies I want and noticed that there was no such thing as a "Standard Division," in spite of the fact that every grower claimed to sell them. I, too, have received "sawed-off pick handles" and sizable shipments packed in handkerchief boxes, or something but little larger. Sometimes my roots came in generous clumps, sometimes the roots had been carefully pruned to short lengths. All the roots seemed to grow but some better than others. I have not checked them closely enough or under such standard conditions that I can cite personal experience to back up a belief, but it would be strange if some of the men who have worked on peonies for years have not determined the usefulness of these old roots. Perhaps you can help me.

My first conclusion would be that a sound root, even if it is an old one, has a large store for essential food for the eyes and that discarding any great part of it results in a loss to the plant. Under favorable planting conditions, the new shoots will draw on the food stored in these old roots and the new feeding rootlets will come out of them as well as from the crown tissue. If the shock of lifting the peony for division is so great that thereafter the old roots are finished and a completely new root system *must* be established, then the crown and the eyes alone are important. The "sawed-off pick handle" with good eyes (and some of the largest

eyes I have ever seen were on these big, old roots) will be just as useful as any division if everything up to the crown is to be trimmed off and thrown away.

I quoted the passages from the Bulletin because they were the easiest for me to look up, but I could cite other writers on both sides, there does appear to be this big difference in treatment of roots. Bonnewitz now advertises single eye divisions; many authors definitely advise against planting anything smaller than a three-eye root, and so it goes.

Perhaps the peony is so good natured that it can tolerate anything short of complete annihilation and still push up eyes in the spring, but I am curious as to the *best* way to treat the roots.

One more query and then I am through. Everyone advises thorough and frequent cultivation about peony plants as soon as growth starts. Sometimes I find a network of the fine feeding roots so close to the surface that cultivation below an inch or two will ruin them. Should one scratch with a ruthless hand and tear into these rootlets or stop with a mere surface agitation? The plants in question bloom profusely so I have not considered that the planting was too shallow and more covering over the roots was indicated. My chief concern has always been to avoid deep planting.

Assuring you of my appreciation for any advice or comments you may give me, I remain,

Very sincerely yours,
H. E. ANTHONY, D. Ss.
Curator, American Museum of Natural History,
New York City, N. Y.

Editor's Note—

We have replied to Mr. Anthony's letter but would like to have comments from a number of our membership expressing their views on the various points brought out by Mr. Anthony.

JOIN THE AMERICAN DAHLIA SOCIETY

All Dahlia "fans" are cordially invited to join this great organization which is devoted solely to spreading information about and the improvement of the Dahlia.

Read the quarterly Bulletin, a sample copy of which will be sent on request, giving all the latest information and cultural hints on Dahlias. Membership includes the Bulletin, a season ticket to our National exhibitions and all other privileges of the society.

Dues \$2.00 per year.
461 Court Street

C. Louis Alling, Sec'y.
West Haven, Conn.

WASSENBERG'S

Catalog Free
Quality Stock
Peonies, Irises, Poppies
Hemoracallis
Over 1800 of the Best Varieties
C. F. Wassenberg, Van Wert, Ohio

TREE PEONIES

Finest Named Varieties
—ALSO—
Herbaceous Peonies
Oberlin Peony Gardens
P.O. Box 115, Sinking Springs, Pa.

AN EXCEPTIONAL OFFER

With a time limit covering the balance of 1938, the Directors of the Society have reduced the price of the Peony Manual and supplement to \$2.25 delivered. Membership for one year and Manual for \$5.00.

This is truly an exceptional bargain which should promptly place this valuable Manual in the hands of every peony lover. If you already possess a copy, secure another one for a peony loving friend or persuade them to send for one at once before the limited supply is exhausted.

There are only a few hundred copies available and this offer will be withdrawn promptly at the end of this year, or at any time before that period if available stock has been depleted to a point beyond our actual requirements.

Supplements will be prepared, which may be obtained at a nominal cost to cover preparation, printing and mailing, that will keep the Manual constantly up-to-date.

Send in your order for as many books as you can use while they are still available. All checks should be made to the American Peony Society and sent to:

W. F. CHRISTMAN, Secretary,
American Peony Society,
Northbrook, Ill.

To members who do not have the manual whose 1938 dues are paid, manual will be sent them for \$2.00.

Dealers, why not offer the manual as a premium for a certain sized order?

PEONIES

**Shaylor's 1931 Introductions
and other Choice Varieties**

Price List on Request

SHAYLOR & ALLISON

11 Ridgeway Road
AUBURNDALE, MASS.

3 NEW PEONIES

W. E. BLANCHETTE

The largest good red peony in cultivation.

L. W. POLLOCK

A pure bright Solferino Red self.

MRS. BRYCE FONTAINE

The richest dark red peony we have ever seen.

Most good peony collections run entirely too much to whites and pale pinks.

They need good reds and deep pinks to give contrast and make the collection interesting.

Beautiful Catalog Free

Brand Peony Farms, Inc.

333 East Division St.,
Faribault, Minnesota

The Cottage Gardens

Lansing, Michigan

TREE PEONIES

Pot-grown. We can ship almost any time. Also large collections all other types of peonies.

**Send for new
catalog now ready**

**Lists 10 Franklin intro-
ductions of 1939**

**Also best standard vari-
eties at new low prices.**

**Franklin Nursery
Minneapolis, Minn.**

Cherry Hill Strain

of PEONIES embraces the FINEST VARIETIES in PEONYDOM and their consistent winnings of GOLD AND SILVER MEDALS prove beyond doubt that they have intrinsic value.

Please ask for catalog showing varieties and list of awards.

**Cherry Hill Nurseries
(Thurlows and Stranger, Inc.)
WEST NEWBURY, MASS.**

CONDITIONS OF MEMBERSHIP

Membership in the Society is open to both professional and amateur growers. Nomination is not necessary for those desiring admission, but a list of applicants for membership is presented to the Society at its annual meeting and the names are there voted upon.

Those who make application for membership at any time receive the current publications of the Society as they are issued.

The dues are \$3.00 a year, of which \$1.00 is toward a year's subscription to the American Peony Society BULLETIN. *All checks covering membership dues should be made to The American Peony Society and sent to the Secretary with application for membership.* Dues in future are to run from January 1st to January 1st of the following year.

Back BULLETINS of the Society will be charged for at the rate of 25 cents per copy and 50 cents for the Symposium Number (No. 14). To non-members these prices are doubled. No BULLETINS available prior to No. 13.

THE AMERICAN PEONY SOCIETY

WISHES ALL

A HAPPY & PROSPEROUS

NEW YEAR.

Patronize our advertisers. They are patronizing
us and deserve your patronage.

PEONIES AND IRISES

We have just prepared a new price list covering both peonies and iris in which will be found some of the most outstanding varieties. A copy is yours for the asking.

For several years we have specialized in growing the finest peonies and iris obtainable and in many varieties have considerable stock, enabling us to fill orders promptly regardless of size. If we can be of assistance in your planting problems, don't hesitate to write us. Visitors always welcome.

NORTHBROOK GARDENS
NORTHBROOK, ILL.

AMERICAN IRIS SOCIETY

The American Iris Society has, since its organization in 1920 published 70 Bulletins which cover every phase of Iris growing and should be useful to all gardeners.

The society has copies of all but three of these bulletins for sale. A circular giving list of contents of each Bulletin, price, etc., may be secured from the Secretary, Howard R. Watkins, Room 821, Washington Loan & Trust Bldg., Washington, D. C.

In order to dispose of surplus stocks of some numbers we offer 6 Bulletins (our selection) for \$1.00.



Through an endowment given as a memorial to the late Bertrand H. Farr, the American Iris Society is able to offer free to all Garden Clubs or Horticultural

Societies the use of our traveling library. This library contains all books ever published on Iris and a complete file of the Bulletins of this society and the English Iris Society, and miscellaneous pamphlets.

The library may be borrowed for one month without charge except the actual express charges. Organizations desiring it should communicate with the nearest of the following offices:

Horticultural Society of New York, 598 Madison Ave., New York City.

Mrs. Lelia M. Bach, 1111 E. Grove St., Bloomington, Ill.

Sydney B. Mitchell, School of Librarianship, Berkeley, Calif.

Lantern Slides Rental Fee (to members) \$10.00. Apply to Mrs. Herman E. Lewis, 180 Grove St., Haverhill, Mass.

The American Horticultural Society

invites to membership all persons interested in any phase of gardening. As specialists in peonies you will certainly want to know about all the other sorts of plants that go into a good garden. In the quarterly NATIONAL HORTICULTURAL MAGAZINE you will find authoritative articles on many kinds of plants and superb illustrations. We can also supply a reprint of peony species, pictures only, for fifty cents. Membership is by the calendar year. The annual dues are three dollars, and should be sent to the Society in care of the Secretary, 821 Washington Loan and Trust Building, Washington, D. C.