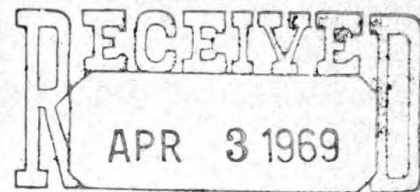


American Peony Society Bulletin

DECEMBER, 1968 — NO. 191



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Alice Harding

and its

Chromosomes



AMERICAN PEONY SOCIETY

107½ W. Main St.,
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The Articles of Incorporation state: Section (2) That the particular objects for which the corporation is to be formed are as follows: To increase the general interest in the cultivation and use of the Peony; to improve the methods of its cultivation and methods of placing it upon the market; to increase its use as a decorative flower; to bring about a more thorough understanding between those interested in its culture; to properly supervise the nomenclature of the different varieties and kinds of peonies; to stimulate the growing and introduction of improved seedlings and crosses of such flower; and to promote any of the general objects herein specified by holding or causing to be held exhibitions, and awarding or causing or procuring to be awarded, prizes therefore or in any other manner.

MEMBERSHIP

The By-Laws state: All reputable persons, professional or amateur, who are interested in the Peony, its propagation, culture, sale and development are eligible for membership.

Annual dues are \$7.50. The year begins January 1st and ends December 31st. Applicants for membership should send check or money order payable to the AMERICAN PEONY SOCIETY, c/o Secretary, 107½ W. Main St., Van Wert, Ohio 45891. The Society will not be responsible for any cash remittances.

THE BULLETIN

The AMERICAN PEONY SOCIETY BULLETIN is issued quarterly. Issues of back years \$1.00 each, when available.

DEPARTMENT OF REGISTRATION

This department was formed "to properly supervise the nomenclature of the different varieties and kinds of peonies". Those who desire to register a new variety (and all new varieties should be registered to avoid duplication of names) should apply to Chas. D. Pennell, Chairman, Nomenclature Committee. Fee is now raised to \$10.00 for each variety registered.



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Presidential Apologies

By Miss Silvia Saunders, President

Your "December" Bulletin is so reprehensibly late this year, that your President feels it incumbent upon herself to make you a profound apology. We waited, first, in order to include the minutes, and some of the accomplishments, of the Winter Directors' Meeting, held the second week of January, in Van Wert.

After that, various accidents and incidents have occurred, to delay it still further.

We have a most patient Membership, and we thank you for your forbearance. We can only say that we are always trying to do better for you. We are trying to have much better articles in the Bulletin, and to have it neater and more ship-shape as well. Punctuality would also be a Bulletin Virtue, but we feel these other matters take precedence.

We are giving you information in this issue about our forthcoming Show and Meeting in June. Saturday and Sunday, June 14-15, to be exact. At Kingwood Center, Mans-

field, Ohio. Please try to be there; we would all like to meet all of you.

We are trying to make improvements, not only in our Bulletin, but in our Show as well: This year, for example, **Three Workshops**, staffed by Those Who Know How: one on Commercial Cut Flowers; one on Health and Culture of Peonies; one on Hybridizing. We have Mr. C. Gordon Tyrrell as our Banquet Speaker. Mr. Tyrrell is Director of the Gardens at Winterthur, Delaware, the great and important estate belonging to Mr. Henry F. du Pont. The talk will be Excellent; the slides Spectacular, if we may make a Prophecy.

We hope as time goes on, that the occasions for Presidential or other Apologies will grow less, and the opportunities for Exultant Prophecies greater. Meantime, **dear** Members, please stay with us. We are trying to give you something better all the time; it is not easily brought to pass over night.

Very good wishes to you all

First Recipient of Dr. Tinnappel Memorial Award Named

Miss Susan Miller, senior at Bowling Green State University, Bowling Green, Ohio, has been awarded the first Dr. Harold Tinnappel Memorial Scholarship, which pays full tuition and fees at the University.

The scholarship is named for Dr. Tinnappel, a BGSU mathematics professor for 19 years. The award is the result of a \$10,000 gift from the Joseph J. and Marie P. Schedel

Foundation of Toledo, to establish a renewal grant.

Dr. Tinnappel, vice-president of the American Peony Society, served the Society in many capacities. His untimely death was a loss not only to our organization, but to many other Horticultural Societies of which he was a member. (See APS Bulletin, March, 1968—page 27).

Chromosome Abnormalities In *Paeonia Lutea* Hybrid 'Alice Harding' and Others

By The Reverend John L. Fiala

EDITOR'S NOTE: With a long, scholarly article that undertakes to explain the complexities of Alice Harding's chromosome structure, we introduce to our Readers the Reverend John L. Fiala of the Cleveland area. He is a Roman Catholic priest, teaches Clinical Psychology and Education at John Carroll University in Cleveland, and is now in addition the Director of the New Cleveland Central Campus High School. This is an innovative high school with four different locations in the city. "We are trying," says Father Fiala, "in the Education Department of the University to introduce many new concepts in education, and this new Central High School enables us to put many of these ideas into actual practice. It is somewhat startling to some of our traditionalists."

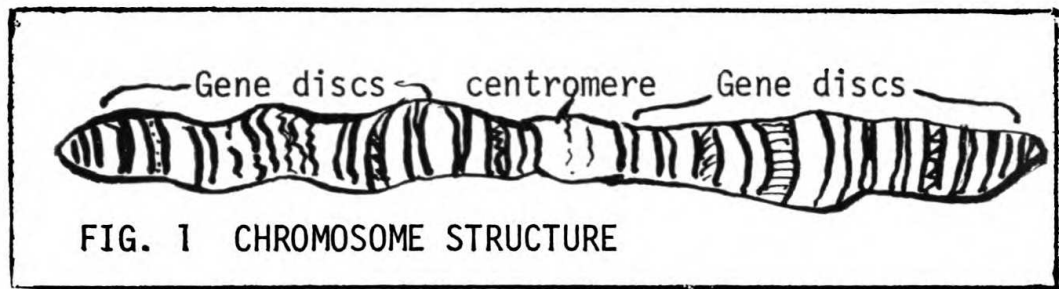
He has not been a member long, nor a hybridist long. But he is still only in his early forties, so we wish him a long and a happy life in membership, in hybridizing, and in educating the Young of Cleveland.

Wondrously the living plant cell continues to assert the characteristics of the species as well as the individuality of each particular plant. The hereditary bequest from generation to generation is far more exact and demanding than any superficial examination of the offspring would at first indicate. In recent hybridization of the peony some marvels of heredity are coming to life. Far from saying "Amen!" to the careful, painstaking work of such plant geniuses as V. Lemoine and Dr. Saunders we see their efforts as wonderful foundations for the future. What mysteries their work is now making possible and what genetic doors their keys have begun to unlock!

For years it was thought nearly impossible to cross *p. suffruticosa*, *p. lutea* or any of their hybrids with the herbaceous. Then suddenly out of the East, from Japan, there appeared a 'new race' of golden peonies! Somehow the seemingly impossible had happened! In the hands of Mr. Ito *p. lutea* hybrid 'Alice Harding' ('Kinko' in Japanese) had been crossed onto the white *p. lactiflora* 'Kakoden'! (1) Then in the United States this cross was repeated on a much wider scope in every color: *p. lactiflora*— Sky Pilot, Fancy Nancy, Fairbanks, Isani Gidui, Mikado and Minnie Shaylor

and also *p. officinalis rubra* and the triple hybrid 'Roselette's Grandchild' were all crossed and produced seed and plants from pollen of *p. lutea* hybrid 'Alice Harding'. The pollen of other *p. lutea* hybrids i.e. 'Age of Gold', 'Black Pirate' and 'Thunderbolt' also produced seed when crossed onto *p. lactiflora*, (although the pollen of these does not appear to be as fertile as that of 'Alice Harding'). (2)

Also *p. russi* x *wittmanniana* (Russi Major) pollen produced seed on *p. suffruticosa* 'Higurashi' as did the cross *p. suffruticosa* 'Sedai'



x p. hybrid 'Le Printemps'! All marvelous oracles of things to come.

In this consideration we shall investigate the wonders of how p. lutea hybrid 'Alice Harding' and others have somehow managed to break all accepted rules and by what complicated chromosome chicanery produced fertile seed and offspring with the hitherto 'untouchables' of the herbaceous peony world!

CHROMOSOME REPRODUCTION

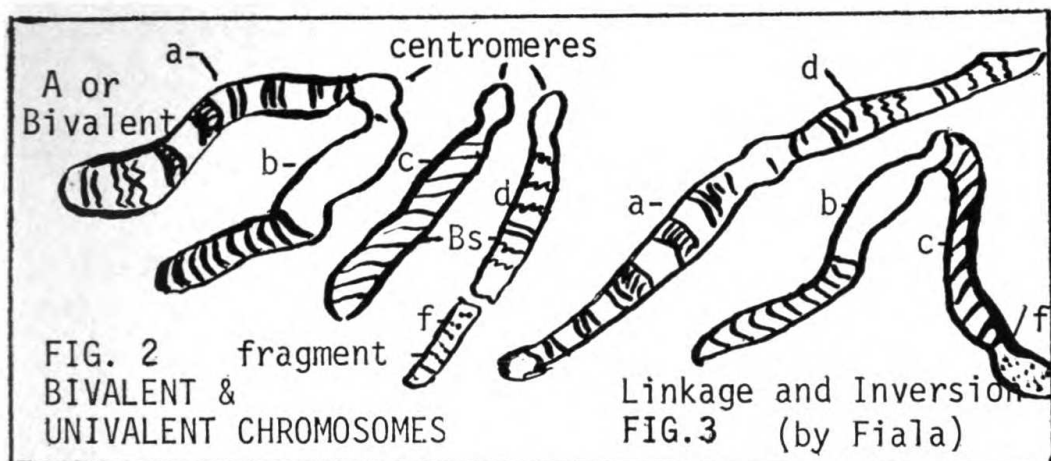
Every productive cell contains within it a determined number of chromosomes (the carriers of all inheritance that determine both the species and the individual). In the genus *paeonia* this basic number is 5 ($n=5$). Each of these chromosomes contains many discs or links called 'genes' which are the smallest hereto recognizable factors of inherited traits. (See Figure 1) Since this number in the peony is really very low we should expect some significant work in the future with an increased chromosome number. Formerly it was believed the chromosome number was always constant and uniform in the whole species and for each individual of that species. It had been fairly accepted to classify species as having "n" number of chromosomes. Modern techniques of observation, more accuracy (from watching the changing cell division under the microscope, science advanced to the photomicrography—taking pictures through the microscope, enlarging them, seeing, counting, recording chromosome structures under far more controllable conditions and with

greater accuracy) have added to our knowledge. More evidence was gathered. Exceptions to the old 'constant number theory' became more and more apparent. No longer could we define a species as merely having so many chromosomes without giving consideration to the exceptions. Extra chromosomes began to appear (or disappear) that did not necessarily change the species but rather gave it some one or other unique ability (i.e. late bloom, flower shape, height, resistance to disease or cold, increase/decrease in fertility or ability to hybridize with hitherto incompatible partners). Immediately we ask, "How?" "What is the origin of these changes?" "What brings them about?"

ORIGIN OF CHROMOSOME CHANGES

Darlington in his work on chromosomes points out that chromosome changes generally are found in three areas:

1. Changes that occur at mitosis (first cell division) spontaneously happening by themselves, or that may have been induced by special physical or chemical intervention (i.e. cold, heat, colchicine, X-rays, Napthalene acetamide etc.).
2. Changes of chromosomes which show a common origin in pairing at meiosis (2nd cell division) but somehow have managed to segregate or rearrange the structure or place of the genes in their pairing (segmentation linkage, inversion hybridity etc.) (Fig. 2-3)



3. Changes that we infer must have taken place in one or more species through evolution from a common origin.

In these three methods we apparently find the answer to all ways in which plants evolve or change their chromosomes and genes. Particularly under 1. and 2. above how do these changes come about? Basically, there are two ways these changes can be effected:

a. First of all by undergoing a change in "**the proportion of its chromosome number**" (by doubling the number we have, tetraploids or $4x$ [or $4n$], octoploids are $8x$ [or $8n$]).

In *Paeonia* some species are diploid ($2n=10$), some others are tetraploid $4x$ ($4n=20$). Triploids would be $3x$ or ($3n=15$), octoploids would be $8x$ or ($8n=40$).

These **increased proportioned chromosome numbers** are called 'polyploids'. They usually give us the 'plant giants'—thicker, finer, stronger plants than the diploids or $2x$ originals. Frequently these may be crossed back on diploids and give us plants with in-between counts of chromosomes:— triploids or $3x$, hexaploids or $6x$. Many of these have new inheritance factors: frequently they are stubborn or shy breeders, often entirely sterile. In this 'doubling process' the whole number is

doubled but frequently in the polyploid a chromosome or two may be lost by **not doubling**. Hence we find plants with $3x-1$, $4x-2$, $4x-3$ etc.

If such a chromosome loss were to occur in a diploid it would be fatal as the diploid needs **all its chromosomes** for existence of life of every cell; however, it does not always need a '**double amount**' of these same chromosomes. Whereas, however a polyploid if one or another chromosome refuses to double, (for some reason or other) the plant can continue because the basic necessary chromosome is still present in the plant tho' not in the same 'degree' as the other chromosomes that have doubled. This doubling ($4x$) or quadrupling ($8x$) of a chromosome number at times may be extremely useful (lend hardiness, height, etc.) or at times it may be fatal (in some forms of clover added height leads to freeze-out and overgrazing.)

b. Plants do not always change their chromosome structure by the 'double or nothing' method. Chromosome changes may also come about by the **breakage of the individual chromosomes at cell division**. This is far more useful to diploids than polyploids because it gives the diploid with fewer chromosomes more chance at change and diversity. Breakage can be either 'spontan-

eous', caused by some unknown weakness in the linkage of the genes or in the central portion of the chromosome called the centromere that holds its paired structure together. Or it may be caused by chemical disturbance, or error in reproduction, and the chromosome breaks in two or more parts. Again, this has some wonderfully interesting consequences. The thread-like chromosome may break in two ways:

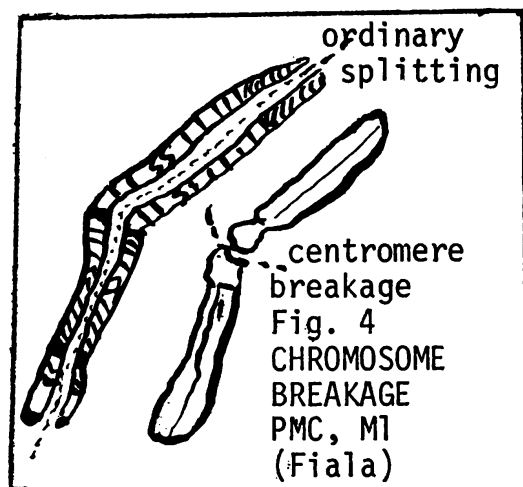
- 1) One section may break retaining the centromere (center body) while the other having no attachment to any nucleus or centromere is lost in the cytoplasm of the Mother Cell and cannot reproduce and is then called an 'acentric fragment'. By this type of chromosome breakage some of the original structure is lost to the plant.

- 2) Sometimes the chromosome breaks at two points in the body of the centromere, each having part of the centromere. The broken ends, (since chromosomes are paired) the four ends, may rejoin again but now in different ways, e.g. "AB" may now unite with "CD" to form "AC" and "BD", or "AD" and "BC" (or any such combination depending on the number of chromosome breakages). An inversion of segments or an exchange of segments may occur. **This is called STRUCTURAL HYBRIDITY (inversion hybridity or interchange hybridity).** (See Figure 3). (compare the recombination structures in Figures 2 with 3).

B CHROMOSOMES AND THEIR ORIGIN

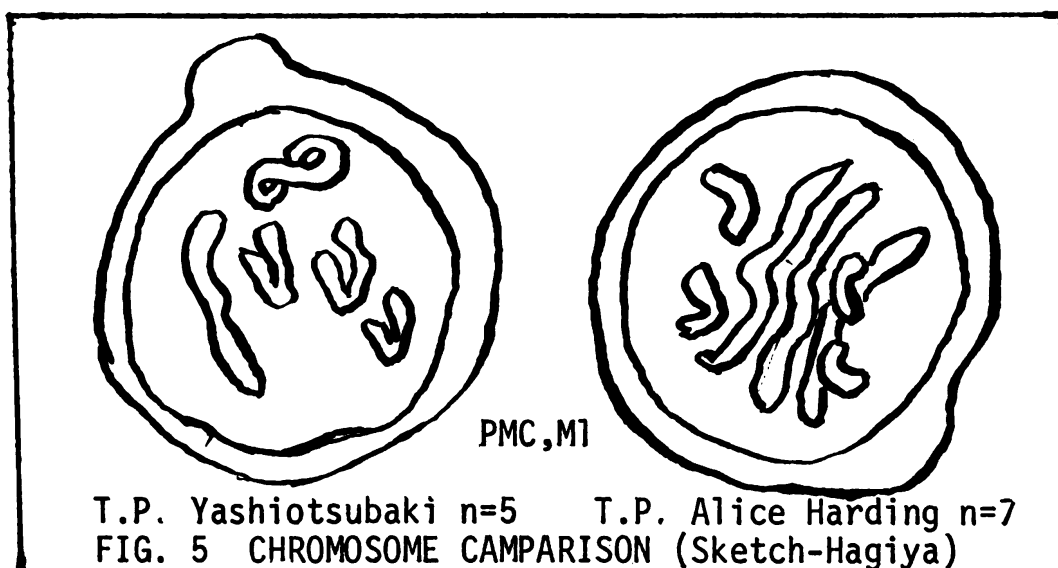
Broken chromosomes with centromeres (centric particles) arise from misdivision and more often by fragmentation as explained. These are called B Chromosomes. This simple kind of change (and a fairly frequent one) happens when unpaired chromosomes at first division,

having centromeres which are not ready to divide until second division, misdivide, i.e. they split 'crosswise' rather than 'lengthwise'. (see Fig. 4)



This breaks the chromosomes into two smaller, one-armed chromosomes. They are usually shorter than the smallest A's, often present in odd numbers, do not pair regularly; they are supernumerary, subordinate, second-class, derived from A's. Now it is believed that Bs produce smaller, less specific, however active and useful, effects. They often extend the geographic range of a species (e.g. *p. Californica*) or some other factor. B chromosomes are more useful to diploids than to polyploids. Their value may be less intrinsic to the plant as it is experimental to it: such as in inbred diploids which are being forced to be experimental by inbreeding (e.g. S. Wissing's work with inbred *p. lact.* "Minnie Shaylor") (3) or to a diploid at the edge of its range (e.g. *p. suffruticosa* x *p. lutea* as in 'Alice Harding'). A large number of Bs in a diploid may be disadvantageous e.g. lessen fertility, but on the other hand may make possible some otherwise impossible hybridity as in 'Alice Harding'.

In many species that have B chromosomes, they lag at anaphase in the first pollen grain mitosis (division). They pass undivided, that is



double, to the generative nucleus leaving the vegetative nucleus B free. There is indication of this precisely in the case of 'Alice Harding' with $n=7$ in the mother pollen cell while $n=5$ in the vegetative cell. A chromosome (or V's/or II's as they are often called, or bivalents, or bivalent) have two large, nearly equal arms with a median centromere. The B's (or I's or univalents) have nearly terminal centromeres, only one large arm and often some part of the arm recombines or changes position (inversion as explained).

Changes such as these 'inversion hybrids and fragmentation hybrids' often arise in cross pollination either between or within species. In p. lutea hybrid 'Alice Harding' we see evidence of this type of apparent misdivision. (See Figure 4)

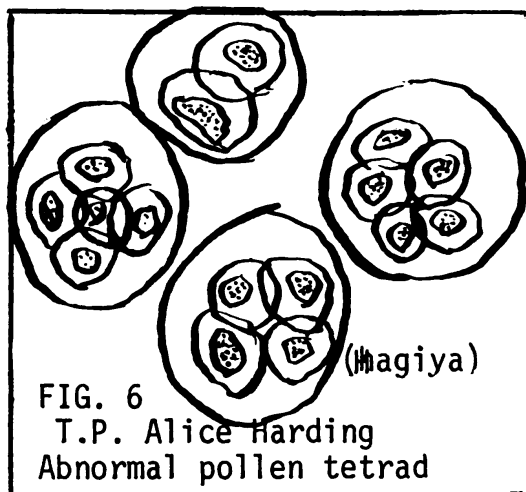
The chromosome count for 'Alice Harding' should be written $n=7$ or $n=3 \text{ II} + 4 \text{ I}$. The latter is more scientific as it tells exactly how many univalents there are. Generally $n=7$ will suffice, and is more commonly found in cited literature. In Bulletin No. 178, for September, 1965, the count given on page 35, $n=3-+4-$, is not at all correct. The count should be given in one of the two above ways.

From studies made by Kaoru Hagiya, October 1956 (4), in Japan, we have the following sketch of "pollen mother cells" PMC at first division. From this study we see that for p. lutea hybrid 'Alice Harding' in PMC — $n=7$. We see that three chromosomes have maintained their basic bivalent, two-arm structure joined in the middle by their centromeres; two other chromosomes have apparently "MISDIVIDED" within the centromere, giving four univalent or one-armed chromosomes. From this we must conclude that for pollen mother cells p. lutea hybrid 'Alice Harding' has a chromosome count of $n=7$ and not 5. However, the 'vegetative cell' apparently retains the $n=5$ count.

(See Figure 5.)

For 'breeding purposes' we must classify p. lutea hybrid 'Alice Harding' as having a count of $n=7$ and $2n=14$. Although this would not necessarily hold for the chromosome structure in leaf and stem cells which may well retain the $n=5$ count. This is not the first evidence of chromosome irregularity in 'paeonia'. J. L. Walters in 1942 (5) found in p. *Californica* counts of $n=5, 6, 7, 8, 9, 10$. In the general observations on some of the herbaceous hybrids,

by S. Saunders in 1966, photomicrographs also show chromosome breakage with irregular counts. (6) Furthermore general observations on the work of Hagiya and of the author show considerable irregularity in tetrad pollen mother cells. (See Figure 6). It is precisely this irregular-



ity and recombination that undoubtedly give *p. lutea* hybrid 'Alice Harding' and other similar hybrids their ability to cross with herbaceous *p. lactiflora*, *p. officinalis* and some of the herbaceous hybrids. Although microscopic studies are not yet available on other *p. lutea* hybrids there are indications that some i.e. 'Age of Gold', 'Black Pirate' and 'Thunderbolt' also have irregularities since crosses have been made with their pollen onto herbaceous peonies (7). Generally chromosome breakage is to be expected more in the crossing of diploid species that are being forced to be 'experimental' (e.g. *p. suffruticosa* x *p. lutea*) than would be found in crosses within any one species.

SOME PRACTICAL APPLICATIONS TO PEONY HYBRIDIZATION

Kaoru Hagiya has found the cross between *p. lactiflora* x *p. lutea* hybrid 'Alice Harding' to be rather difficult in Japan. The only available account of the precise nature of this work comes from L. Smirnow: (8)

"In 1948 (we believe this is a typographical error and should be 1958 since the chromosome studies were not made until 1956 by Hagiya) in Tokyo, Japan, a famous hybridizer Mr. Toichi Ito decided to use tree peony pollen on a white herbaceous. He was aware of the peculiarity of the chromosome count of Alice Harding (called Kinko in Japan) and felt such a cross might be successful. Because of the lateness of the season in Tokyo he sent Mr. Shigao Oshida, his assistant, to Niigata Prefecture for the pollen. Mr. Oshida then made the cross on 1200 plants using Kakoden, herbaceous white semi-double, to receive the pollen. Only 36 seeds were had and nearly all germinated. Nine of the resulting plants of Kinko on Kakoden showed their first leaves as tree peony foliage although they were herbaceous plants. Of these nine plants, six flowered all pure deep yellow doubles, herbaceous, with tree peony foliage." (Four of these six were made available through L. Smirnow who introduced them in 1967 as 'Yellow Heaven', 'Yellow Dream', 'Yellow Crown', and 'Yellow Emperor'. Those who have seen them attest to their beauty.)

The author, on the other hand, has found the cross to be a rather fertile one not only with *p. lactiflora* but also with *p. officinalis* and some of the herbaceous inter-species hybrids. (From some 200 crosses over 150 plants were obtained. Seedlings have both herbaceous and tree peony leaves. To date none have bloomed or been introduced.) Perhaps the fact that *p. lutea* hybrids and *p. lactiflora* clones bloom together as do some of the species for the author may account for the fertility of the crosses. We believe it is a relatively "easy cross" (having been made successfully in successive years) and should be tried by others. Furthermore the author has found other *p. lutea* hybrids (Age of Gold, Black

Pirate, Thunderbolt and others) with irregular pollen, and made fertile crosses onto herbaceous peonies. This is an area for further study of pollen mother cells and their chromosome counts. There is no doubt that many very wonderful hybrids lie in the near future! (The case of the crosses made by the author, of *p. triternata*, *p. 'Russi Major'* and *p. 'Le Printemps'* (all herbaceous varieties) crossed onto *p. suffruticosa* is 'another story' whose investigation is continuing as the little plants grow. It is a brand new adventure, wonderful and just as exciting!)

"For those stressing chromosome numbers of a species, B chromosomes have a different function. They have prepared a dangerous pitfall! They have created the outstanding 'exception' to the principle that chromosome numbers are uniform for a species. Where there are B chromosomes the number may not be constant at all for the seedlings of one family or even in some cases, in the same individual" (9) (pollen and plant cell counts). They break almost all the rules! They dare to be different! Varying in individuals, even in different tissue in the same individual, in the life cycle stages, they defy the rules of uniformity. (How wonderfully they fit the American concept of individuality!) In counting chromosomes unless one is aware of this he will be led astray by the Bs. Unidentified B chromosomes undoubtedly give us a clue to the unspecified variations recorded in the "CHROMOSOME ATLAS". Instead of confusing the distinction between species they are an untold aid in explaining and exploring the evolution between them.

P. lutea hybrid 'Alice Harding', most charming and beautiful in its own right, although shy and headhanging, has opened the door to what may well be one of peony history's greatest achievements—the

long awaited cross between the herbaceous and the tree peonies. The few hybrids that have so far bloomed are magnificently beautiful—bold-faced they look directly up at you! So far we have only the yellows (peachy-yellows) in bloom but soon the red, pinks etc. will give added testimony to the efforts that have gone into making them a reality. We now have a number of herbaceous varieties, including *lactiflora*, *officinalis*, and a triple hybrid, all crossed with 'Alice Harding'. What a wonderful heritage for the future and a tribute to the hybridizers of the past who made this possible, V. Lemoine, Dr. Saunders and Mr. Ito. And above all bless those little chromosomes that broke apart and dared to be different!

FOOTNOTES:

1. Hagiya, K., Chromosome Studies in Varieties of Tree Peony and Peony (Preliminary report published in Japanese, Oct. 1956).
2. Fiala, J. L. Unpublished results between crosses of *p. suffruticosa* and *p. lutea* hybrids, 'Alice Harding' and others. 1966, 1967, 1968.
3. Wissing, Samuel, Work with 'Inbreeding Herbaceous Peonies' especially 'Minnie Shaylor'—Amer. Peony Society Bulletin 173-174, June-Sept., 1964 and several articles in more recent issues.
4. Hagiya, K., cited work and unpublished letters to Silvia Saunders. Association. 1968
5. Walters, J. L.—cited work on chromosome counts of *p. Californica*. (see bib.)
6. Saunders, Silvia, photomicrographs of Triple Hybrid 'Sprite' show that n is not simply 15, but $n=16$. Or $n=14$ II — 2 I. 14 bivalent plus 2 univalent

chromosomes. (Bulletin 173-4, 1964.)

7. Fiala, J. L. unpublished studies on pollen irregularities in *p. lutea* hybrids (mostly Saunders hybrids).
8. Smirnow, Louis, report in catalogue of 1967 on 'Alice Harding' crosses being introduced into the United States that Fall.
9. Darlington, C. D., Chromosome Botany and origins of Cultivated Plants, p. 30.

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Walters, J. L., **Spontaneous Meiotic Chromosome Breakage in Natural Populations of *Paeonia Californica***, American Journal of Botany, 1942

The following Preliminary publication, written in Japanese, was made possible through the courtesy of Mr. Kaoru Hagiya:

Hagiya, Kaoru, **Chromosome Studies in Varieties of Tree Peony and Peony** (Preliminary report in Japanese, 8 pages, one of photomicrograph sketches.) Oct. 28, 1956.

The following text is extremely useful in dealing with chemically induced polyploids:

Egsti, O. J. & Dustin P., **Colchicine**, Iowa State Press, 1957

Also a number of issues of the American Peony Journal particularly articles by:

W. Gratwick and N. Daphnis—dealing with crosses of *p. lutea* hybrids and their F₂'s

S. Saunders and D. Reath—chromosome counts of herbaceous hybrids.

S. Wissing—articles on the inbreeding of *p. lactiflora*, especially "Minnie Shaylor".

Various others dealing with chemicals and polyploids.

For an extremely 'scientific' and most scholarly consideration of chromosomes and their structures the author would refer readers to the most excellent texts by C. D. Darlington who is undoubtedly one of the world's leading authorities in this area.

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REAPS REWARD BY SHARING

Ph. Henry Hartwig, formerly of Salem, Oregon, has moved to New Ulm, Minnesota and is no longer in the commercial business. When renewing his membership for 1969 and writing about his change of address, he stated, "I am in the eighties and cannot get around as easily as I would like. But I sent 150 of my best varieties to a friend here in New Ulm, Minn., in 1967. So, I will see some fair blooms this year."

Ph. Hartwig had hoped our 1969 Show might be in Minnesota, where he could see beautiful blooms in an exhibition. He has attended only one Show—in 1946-47 in Milwaukee, Wis. "But it may be feasible", he continued," some other year. Now I am anxious to grow the varieties I have as best as possible, just for my own pleasure and to make other people happy."

Growing, showing and sharing can indeed reap a rich reward for Ph. Hartwig, now that he has moved into the Minnesota area where peonies are well known and grown.

Hybridizing for the Beginner

By E. L. Pehrson

Chapter 1

How to Collect and Store Pollen

1. Watch plants closely. When the bud becomes somewhat "puffed" and soft to the touch, but before it starts to open, pull off all the petals, or "force" the blossom open with your fingers. Pull off all the stamens. You will find no pollen on them, for it will not yet have been released.

2. Prepare a square of household aluminum foil by rubbing it out very smooth on a glass table top or something similar. Place the freshly-plucked stamens on it. Set aside to dry for one week or more, where they will not be disturbed. Or do the following:

Place the foil square with the stamens on it about 10 to 12 inches below a light bulb of 60 to 100 Watts. Leave it there for 10 hours or longer. The stamens will open to release the pollen rather quickly, but leave them there until they become dry and quite hard, like very crisp bacon. This may require even 20 hours.

3. Crease one side of the foil slightly and pour the dried stamens and the released pollen into one of those small screw-top cans in which Eastman 35 mm. film is sold. Quite a bit of pollen may still cling to the foil, but you have smoothed this out very well, so you can now scrape the pollen off and into the can with a razor or very sharp knife.

4. Screw the top on tightly. It has a rubber-like sealing ring inside the cap. Label the can appropriately. The contents will now keep as long as may be needed, if stored away from sun or heat. Some hybrids produce pollen very sparsely, so if it appears that the dried mixture has very little loose pollen, place a few grains of rice in the can also. If the

can is shaken vigorously before each pollination, quite a bit of pollen can be jarred loose and become available.

Chapter 2

How to Pollinate a Peony Blossom

REMARKS:— Obtain a copy of "The Peonies". This may be ordered from the Peony Society office in Van Wert, Ohio. Price to Society Members: \$3.50 for the hardback edition, \$2.50 for the paperback. (To non-Members, \$5 and \$3, respectively). This book will return to you many times its cost in interest, delight and information. Read everything in it pertaining to peony species, existing hybrids, and hybridizing. Refer to it often. If you are completely unfamiliar with how plants propagate from seed, a brief observation of another hybridizer at work would quickly equip you with suitable technique. If this is not convenient, be assured the procedure is extremely simple and plunge right in on your own, as here outlined.

It is unlikely that you will have enough fertile hybrids to make as many seeds as you may wish, from hybrid x hybrid crosses. Use hybrid pollens on those lactifloras which have normal-appearing carpels. "Jap" and "anemone" types are best, but some "bomb" type doubles are suitable. Singles and semi-doubles are a particular nuisance as sources of contaminating lactiflora pollen, insect-borne. If you can eliminate them from your planting without regret you may choose to do so, but it is possible to tolerate them. It is time-consuming to use them as seed parents, and they are less likely to give good seedlings.

1. Go to your garden equipped with the following:

- A. Those cans of pollen previously prepared.
- B. Paper string tags.
- C. Soft lead pencil.
- D. Small paper bags.
- E. Office stapler.

2. Select for pollination, unopened blooms at the same stage of development as those from which you collected your pollens. Force bloom open, or pluck off the petals. If the bloom is a single or semi-double, pluck out all the stamens and discard them.

3. Choose the can of pollen you want to use. Shake it up. Tap the cover sharply to dislodge excess pollen adhering inside it. Remove the cover, and using tip of the little finger make a very short "swipe" on the pollen-coated inside surface of the cap. Touch the pollen coating on your finger to the outer or upper edges of the stigmas. Repeat on other blooms until the whole "swipe" is used up. Be economical if your pollen is scant in quantity. Clean the finger-tip occasionally as it becomes coated with a hardening mixture of pollen and "stickum" from the stigmas. (Especially be sure to clean finger-tip before moving to work with a different pollen). Don't become enamored of ritual and use a brush instead of finger-tip. It's wasteful of pollen and less effective.

4. Using a paper string tag, label the cross (See "The Peonies"). If a whole clump is pollinated with a single pollen, a single tag would suffice for all, but use two, as a single tag might be lost.

5. Slip a paper bag over each pollinated bloom and staple it in place. Leave it there for a week or so, then remove. This bagging procedure is not needed when some of the most effective pollens are used, but it's well to use it on all crosses at first.

6. Seeds should be ripe in 12 weeks or less. Harvest and keep separate.

7. **A comment:** Such a superb seed-setter as Battle Flag, when pollinated with some forms of lobata, will easily produce thirty good seeds per flower pollinated. Some other pollens may yield as few as one seed for each two or three blooms used. Adjust your efforts accordingly, remembering both that rewards are usually commensurate with effort, and that excess seeds can be saved over to another year before planting,—or thrown away!

Chapter 3.

How to Grow Peony Seeds (3 Methods).

1. Store the freshly harvested seeds until any which may have been still somewhat creamy in color when harvested have turned brown, or black. Two weeks should be enough. Plant outdoors about 2" deep, covering with a very friable, non-crusting soil. This planting can also be done at any time before the soil freezes. Plant about twenty seeds per 12" of row, if the young plants are to be transplanted at the end of their first year's growth, or about one inch apart if they will be permitted to grow for two seasons. But mark your planting carefully! Seeds planted the fall of 1969 will not emerge above ground until the spring of 1971.

2. This method should be greatly preferred to the one above by most gardeners. It is recommended for all beginners. Simply store the seeds until the following summer and plant them then. Any time before July 1 seems perfectly satisfactory. They will commence growth exactly at the same time as if they had been planted the previous fall.

3. The "Early Germination Method"—one version of it:

This method results in seedlings blooming one year sooner than if either of the other two methods are employed. Beginners ought not attempt it unless perhaps on a trial

basis, with excess or "worthless" seeds which they don't cherish particularly. Read about this in "The Peonies" for a more complete appreciation of how it works.

A. Harvest the seeds a bit earlier than you might otherwise do. As harvest time approaches, slightly open the top seam of a few pods and "peek" at the seeds. This does no harm. When all the seeds in a pod have changed at least partly from a cream-yellow color to brown, harvest them. Store them only until all the seeds of a cross have turned all-brown. Some hybrid plants will have seeds which change from bright red to black or to a sort of "gun-metal" blue.

B. When coloring is complete place the seeds in "Baggies" with a handful of damp—not wet—vermiculite. Close tightly with a "twistem" and attach identifying tag. Store them away at room temperature.

At the end of five weeks' storage examine them. Some of the seeds will probably have emerging hypocotyls (roots). Look them over about once a week thereafter, replenishing lost moisture as necessary. The roots will probably elongate pretty fast, but should never get longer than 3 to 4 inches. These early sprouters can be planted outdoors before the onset of cold weather. Any length of root from about $\frac{1}{4}$ inch, to full elongation, should be o.k. Mulch well this first winter. These seeds will come up the next spring.

Other seeds will continue to produce roots long after it is still possible to plant them out. Occasional seeds may require as long as 4 months. These must experience their necessary "cold" period indoors in an artificial environment. To provide this, do as follows:

C. Make up duplicate bags of damp vermiculite, and transfer the

sprouted seeds to these as hypocotyls appear. Place these bags in the refrigerator, and if possible adjust the temperature to hold them in a range as close to between 33 and 36 degrees as possible. The first transfer—of those seeds which do not germinate early enough to plant outdoors, but which do so shortly afterwards—should be delayed as long as possible. They can be kept in the sprouted condition, together with their unsprouted siblings for perhaps 3 to 4 weeks or so, but they will eventually die off if not moved into the cold. Watch them. Should the roots start to show slight indications of browning or should the root tips start to die back, transfer at once. They will not yet be hurt. Thereafter transfer others of the same groups whenever roots appear. Short root development at time of transfer is preferable to longer ones, from this time onward.

Changes in the cold storage condition develop very slowly at first, and may not be noticeable. Later, an enlargement develops just outside the seed. As this development progresses a split appears in it. This is because the two cotyledons have now been partly extruded—they never completely emerge. Hopefully, this last stage will be reached just at the right time for planting out in the spring. Some of those earliest ones however may develop a tiny first leaf emerging from between the now partly everted cotyledons. If this occurs, prompt planting is imperative—before the leaf becomes longer than about one inch. It is highly likely that when some leaf sprouts are found, all the rest of the seeds will be ready to plant. If the weather is now suitable, do so. Your own judgment must now prevail. It can be appreciated that this whole procedure is a rather tricky one, and that disaster may occur. Several years of practice may

be needed for adequate mastery. It **does** reduce the time from pollination to bloom by one whole year, and in addition, some tricky hybrid

seeds may germinate which would not do so with the warm-cold cycle which nature provides. I wish you success!



Tree Peonies

By Leo J. Armatys

What is time to a tree peony? Ask someone whose tree peonies have grown undisturbed for eight or ten or more years. There is a timeless quality about mature tree peonies that sets them apart from the crowd. So give them time!

Fall Review:

Tree peonies are in the spotlight. Apparently someone has convinced the media that the Majesty of Mount is no Myth. Here is a sampling from three widely divergent sources:

Cappers Weekly, the Topeka-based weekly news magazine, blanketing mid-America, carries a fine garden column under the byline of Eva M. Schroeder. In the September 10th issue, her column was devoted to peonies. After ten pertinent paragraphs on planting and caring for peonies in general, the article centered on tree peonies. "... perhaps its main advantage over other peonies is that it is a 'show plant' and should be given a place of prominence in your yard or flower garden. We tucked our three tree peonies wherever there was a 'vacancy' at the time in our perennial border. This was a big mistake for when the plants bloom, people can't resist walking up to them to see if they are 'real.'"

Then there was the article in **House & Garden** magazine — status symbol found on so many upper-middle class coffee tables. In the September issue, tree peony blossoms and foliage are featured in a full color, two-page spread, with headlines proclaiming that

tree peonies "... offer the garden's most dramatic springtime accent." Their comparison of tree peonies with "the familiar herbaceous garden peony," should be required reading for all gardeners. Some of the photos were mis-labeled, but this didn't detract from their beauty.

Finally, strangely, and, in my opinion, with questionable taste, a peony was featured in far-out **Avant Garde's** November issue. A prize-winning entry in that magazine's "No More War" poster contest copied the famous World War II photo of our Marines raising the flag over Mt. Suribachi on Iwo Jima — but substituted a purple peony for the American flag!

Thanksgiving:

During the Thanksgiving holiday a group of college kids, ours and some of their friends, staged a sit-in at our house. I had just received a dozen slides of Daphnis F-1 hybrids, and the kids enjoyed an impromptu showing of some of the flowers that will highlight their gardens in the 21st century. They were properly impressed with them all, but there were perhaps more curtain calls for PERSEPHONE, a brilliant silvery yellow double. Introduction dates for most of the Daphnis hybrids may still be years

away.

In the meantime, don't pass up the Saunders lutea hybrids. They are here and they are now! I doubt

that there is a tailender in the group. And there are many Japanese varieties that won't be outdated by any foreseeable hybrid!

Special Hybridists' Hybrids of the Saunders Nursery - 1968 Report

Word comes to us from the Saunders Hybrid Peonies of Clinton, New York, that during the season just past, 150 of the so-called Breeders' Hybrids were ordered by a total of 26 people. In 1963 when this Special Listing was first issued, 46 plants went out to a total of 10 people. This must be just one of the many evidences that there is indeed an ever-growing population with an ever-growing interest in, and knowledge about, plant hybrids and hybridizing.

These Breeders' Plants represent some of the more unusual hybrid strains developed by Dr. Saunders during his hybridizing lifetime. Among them are: a strain of plants containing the species *Ozieri alba*. This came from Vilmorin's in France, in 1926, and has since been reported "Lost", so that its blood may exist today only in this "Halcyon" strain. Also quite a large number of hybrids (including triple and quadruple hybrids) containing the species "Mloko" which may be our only source of yellow in the herbaceous side of the peony family.

Large numbers of the Breeders' Plants are F-2's and even F-3's, where presumably the fertility, present in the original species, but often lacking in the first (F-1) hybrid generation, has been partially or even fully regained.

New this year was Special Offer H — Hybridists' Headstart, consisting of "three hybrid plants containing at least five of these six species: *lactiflora*, *lobata*, *macrophylla*, "Mloko", *officinalis* and *tenuifolia*." The three plants were F2's and F3's to insure fertility. Packets of labeled seeds and a sheet of hybridizing in-

structions were included in Offer H. Miss Saunders is pleased to report that ten of Offer H were ordered; six of them by persons whose names are new to her nursery.

As was reported in the September Bulletin, Dr. David Reath of Vulcan, Michigan (Upper Peninsula) is to take over the Saunders Nursery as such, including not only the long-famous "Garden Plants", but very many of the "Breeders' Plants" which, both growers agree, should be in as many gardens and nurseries, as possible, and accordingly, arrangements are being made whereby any serious Hybridizer may readily obtain representatives of this part of the Nursery. Since it will presumably take several years for Dr. Reath to build up his stock, they may in the meantime be had from Silvia Saunders. The more widely these plants are disseminated, grown and used in further hybridizing, the better for the original nursery, for the plants, and for the peony world. And the less likely they will be to die out, and be, like *Ozieri alba*, forever lost.

A lovely windfall that came to the Saunders Nursery this fall was a gift of ten beautiful roots, plus 15 bean-like seeds, of our Western Hemisphere "only child" — *P. Californica*, from Mr. Frank Ruppert of California. With Mr. Ruppert's concurrence, these were distributed among seven chief Hybridists whose gardens are well established; who will give the greatest care to these rarities, and who may even make great use of this most unusual species.

PEONY BREEDING IS REWARDING, AND NOT DIFFICULT

By Sam Wissing

CHAPTER I. "SELFING"

If you will just forget about fear, and if you will do the things I am going to suggest, you might just create some worthwhile additions to the Peony Garden. The Peony has a simple Botany, and will cooperate if you will just be willing to do a few simple things. They can bring great rewards to you every year, if you will just get up the courage to start. Some of my best work has been accomplished through the simple process of "inbreeding", or "selfing" which means crossing a plant with itself.

The possibilities awaiting anyone who "inbreeds" seem endless. You might inbreed any lactiflora peony, such as "Minnie Shaylor" a thousand times and still not encompass all the possibilities of this formula.

So, this June, I suggest you start on any lactiflora peony that is single or semidouble, for those have all the necessary reproductive organisms.

Miss America, Reine Hortense, Sea Shell, Krinkled White, and many others will set seed if inbred. Be meticulous. This is important work, so why not do it the accepted, correct way. Bag all those buds selected as parents, with a one-pound or a half-pound paper bag, just as the buds begin to show color. This will protect them against rains, or against unwanted pollens borne by winds or by bees, any of which can spoil your plans. Secure the bag with a twist 'em so that the wind cannot blow it off. Then if you will feel the bag each day, they will soon feel like a marshmallow, which indicates that the bloom has begun to open. Now you may remove the bag and prepare the bloom.

First, using your fingers, scissors or tweezers, remove and throw away all the petals. The anthers on their little thread-like stems are also to be removed but keep these in a little box or container, for they

contain the pollen which you are about to use. The anthers are probably now "in dehiscence"; that is, they have split open and are now covered with their own golden-yellow pollen dust. The stigma tips probably now have a sticky substance on them which will "hold" the pollen. The process of pollination is to transfer some of the pollen onto the tips of the stigmas.

Whether you place pollen from one bloom onto the stigmas of the same bloom or another bloom, will not matter. So long as both are on the **same plant**, you are "selfing".

Selfing is the easiest and simplest way to begin to pollinate flowers. If you have only one lactiflora peony plant in your garden, and provided it is not one of the heaviest "bomb" doubles (in which case all the reproductive organisms have been transformed into petals) you can start on your career of pollinating. Do not imagine that because it is easy to do, its results are negligible. Far from it. The ancestry of the lactiflora peony is so immensely old and so immensely complicated, even if no other species are involved in it, that there are literally thousands of possible variations in its progeny.

Back to your work: you have now made the cross, which is half your labor. The other half is keeping your

record. Replace your bag, secure it, and be sure to identify it with a label attached, on which the number of this cross is marked. Then in your notebook, under the same cross-number, write the name of the plant, date, temperature and anything else notable: time of day, etc. Incidentally the temperature should not be above 90 degrees F. It has been thought that very humid weather is not good for crossing, so notes on the humidity might prove very revealing in the course of several seasons' crossing.

Another remark on records: you will be glad on that all the essential

facts are there. Others may ask you about your crosses and you will be proud to be able to refer back and say "I did so and so", or on such and such a date, or using such and such a method. The time spent in keeping the records bears as great fruit as the cross itself.

Now all you need do is await the moment when the seed will be released. I believe seed may well be planted if it has attained a light brownish color but before it has been shed from the pod. The longer warmth it can have during this first Autumn, the likelier it is to germinate the next Spring.

Pronunciation of Peony Names

By Silvia Saunders

I am so often asked about the pronunciation of our hybrid peony **CYTHEREA**, that I thought perhaps there are others of our hybrids that pose questions. So I have made up a list of about a dozen, giving the pronunciation as given by my father (and my mother, who named a good many of them, herself).

Camellia — **KA MEEL YA**

Cytherea — **CYTH ER EE AH**
(Cyth rhymes with **pith**)

Campagna — **KAM PAN YA**

Carolina — **KARO LINE AH**

Edward Steichen — **STY KEN**

Elysium — **EE LIZ IUM**

Gillian — **JILLY AN**

Halcyon — **HAL SEE ON**

Laura Magnuson — **MAG NU SON**

Ludovica — **LU DO VEE KA**
(Latin for "Louise")

Papilio — **PA PILLY O**

Postilion — **PO STILL YON**

Winterthur — **WINTER TOOR**
(This is the way to pronounce the great gardens and museum of Henry F. du Pont, in Winterthur, Delaware.)

Also a note on P. Smoothi. This should be pronounced **SMOO THIGH**. And spelled with a capital S as it was named for a Mr. Smouth, which, be he French or German, certainly was never to rhyme with our **smooth** but would have a "whispered" TH, (as in Thigh, thick, etc.) Least of all is it "smoothie" (as if you had two caterpillars, one a "roughy" and the other a "smoothie".)

The final i in species names like Smouthi, Ludlowi, Beresowskyi, etc. is always pronounced to rhyme with "eye".

End of Lesson. Thank you for staying with me.

WE RETURN TO KINGWOOD CENTER IN 1969

Announcement has been made by the Board of Directors of the American Peony Society, of the annual meeting and exhibition will be held June 13, 14, 15th, 1969 at Kingwood Center, Mansfield, Ohio.

Dr. Raymond C. Allen, Director, and members of his staff including James M. Martin, Horticulturist and Mrs. Charlotte M. Devers in charge of Activities, met with the committee to finalize plans and program.

Kingwood Center was left by Charles Kelley King, Ohio Industrialist. It consists of Kingwood Hall, a beautiful mansion housing an excellent library on gardening, horticulture, nature study and bird study maintained and available for use. In the beautifully landscaped gardens one will find extensive collections of the major herbaceous flowers. All plants, trees and shrubs are clearly labeled. For anyone interested in gardening and flowers, Kingwood Center is generally regarded as one of the finest places in the country to see. More than 200,000 visitors are attracted to Kingwood annually.

The complete schedule and program will be included in the March Bulletin.

LELAND MOTOR HOTEL— HEADQUARTERS

Board of Directors meetings and the annual banquet will be held in the Leland Motor Hotel, located but

a few blocks from Kingwood Center on the same street as the Main Entrance and Gate House. City bus service is available for those not wanting to walk or drive.

The management under the direction of Pierre J.G. Lenders, has extended special rates to members of the American Peony Society and their guests, when reservations are made on the cards we will send you from our office (A.P.S.) upon request. Excellent parking facilities courtesy of the Leland are adjacent to the Leland.

GENERAL INFORMATION IN BULLETIN

Complete and detailed information regarding highways, railroads, buses and airlines will be carried in the March Bulletin as well as shipping instructions for blooms.

BANQUET SPEAKER

We have just learned of C. Gordon Tyrrell's acceptance of Miss Silvia Saunder's invitation to be the banquet speaker. Mr. Tyrrell is Director of the famous H.F. DuPont Gardens and Museum at Winterthur, Delaware. More about the speaker and entire program in the March Bulletin.



A Walk Through the Park

By Anthony J. De Blasi

As I pace along a quiet lane in a wooded park, on a hollow autumn Sunday afternoon, my attention is absorbed by haze, branches, and leaves. Everything seems to be afloat within a cloud, with me suspended somewhere in the middle of it. The dark tree limbs assert a firmer authority now that their masculine outlines become disentangled from the blurring mantle of pastel foliage: the pale

yellow ginkgo leaves, the faded gold and orange maple leaves, the dark soft red and rusty oak leaves have had their moment of glory and find themselves on the threshold of indecision — should they linger yet a second on the twig or part company now? A light breeze settles the question. Downward they travel through the gray mist like a shower of disabled butterflies.

Peering into the more distant retreats of the lazy scene, I see even the tree trunks pale and fuse into the enshrouding gray of the atmosphere. A sense of languor pervades the air and my walking feels like I were simply moving my feet up and down, with the surroundings passing by all around me. A low-hanging branch up ahead, donning a dozen star-like carmine leaves, floats slowly toward me and brushes my shoulder. I mean to pause and study but I fear that if I interrupt the smooth rhythm of my walk, the hypnotic spell will be broken and the magic trip through mist and leaves and branches terminate. Funny how even the ground moves under my feet! Every foot of distance carries a different cluster of leaves and an ever-changing pattern of stone and earth and weeds. Below me, the results of nature laughing at herself! Capriciously, she fuses ginkgo, maple, and oak leaves in arrays suggesting the most wildly “unnatural” trees! Underfoot, their leather and wax and paper textures create mild rhythmic percussions.

Suddenly a dandelion seed head, its furry crystalline structure intact, pops into view and, without making a special effort, my foot taps it making its larger “crystal” burst into smaller, air-borne “crystals.” The radial images remind me of flowers and my mind leaps into another season, becoming crowded

with hundreds of thoughts and pictures clamoring for attention. On the heels of this accidental association, the thought of springtime soars through my mind with a trail of brilliant pinks and glistening whites and vivid greens surging through my consciousness — the clear, buoyant colors of newness and rebirth an intoxicating contrast to the sober colors of late autumn dangling about me. The competition is too strong — the urgent, vernal hues crowd out the autumn scene and begin to paint pictures: showers of cherry blossoms beaming in bright sunshine — fountains of magnolias baring their smiles to a sapphire sky — cascades of wisteria dancing over an emerald carpet — and many equally scintillating reveries of past and future springs.

Hardly does my mind recover from the weight of such extravagant images, when a final picture is painted. Nature gone utterly wild again! My mind’s eye sees but one, single, enormous blossom engulfing all of my vision with unutterable grandeur — fashioned of silk and shimmering in the sunlight, its imperious petals swell my consciousness to overflowing — clearly the conception of some great Japanese artist; yet, unnatural as it seems, it is not artificial! — it is real! Wondering whether my mind is not playing tricks on me, I remember saying to myself last May, when I actually saw such a bloom, “I see it, but I don’t believe it.” **A tree peony!**

A gray squirrel scuttles across the lane, a startling counterpoint to the path of my consciousness, and I realize I have been dreaming during my walk through the park. The unexpected appearance of the nimble animal makes me stop, and for a few seconds I am dizzy, as though I have just dismounted from a carousel. Couriously, I find myself at

the exit of the park, and looking out onto the street brings a sobering sense of reality — like a sudden cold shower. A garish orange sign nailed to a tree along the sidewalk proclaims: "... RALLY ON THE ... ISSUE ... COME ONE ... COME ALL!" An old sport car races down the street screaming its presence all the way and fouling the air with black smoke. I look

back into the warm scene behind me. For a few seconds my mind suffers the torment of the question: "Which is the real world?"

Then I leave, recognizing that the walk was itself a dream in every way — one that will probably recur whenever it is late autumn and misty, and when it is Sunday and the afternoon is hollow.

He Retired from Carrying the Mail and Found



(Register Staff Photographer Carl Voss)

An Acre of Happiness

By George Shane

— Reprinted with permission from the Des Moines Sunday Register

A retirement hobby of a 75-year-old Woodbine man has not only meant many rewarding years for himself but also has given pleasure to thousands of western Iowa residents. On his retirement 12 years ago Herbert White decided he would make peonies his hobby. He bought an acre of ground at the north edge

of the city limits and filled most of it with peonies.

White, a retired rural mail carrier, now has 456 varieties, totaling 3,316 plants. He has never sold a peony but he gives them away to churches, to residents of a nearby nursing home, to garden club visitors who come on tours from miles

around, or to any other groups which want them. Garden clubs from cities in the area plan trips to visit the garden during the growing season. The flowers begin coming into full bloom about May 10 or 12 and continue for about one month. Unfortunately, the most luxuriant blooms do not arrive until two or three days after Memorial Day.

Although peonies are his first interest, White does not have a one-crop garden. There are 101 varieties of lilacs, giving a total of 216 plants. He also has 20 varieties of magnolias—a total of 40 plants. It is, to a large extent, an experimental garden and he has eight varieties of nut trees, grafted and seedlings. These total 80. And there also are 55 other trees (40 varieties) as well as 61 shrubs and vines (45 varieties).

White is largely self-taught in floriculture. Before becoming a rural mail carrier he ran a fruit farm for a few years. A native of London Mills, Ill., he came to Woodbine in 1909. He is single and lives in a house which is five blocks from his garden. He had bought the residence in 1928 but razed the old dwelling and built a new one in 1950. He began planting trees and flowers at his home 40 years ago but when the time for retirement came in 1956 he had planted to capacity there.

White's hobby is shared with his sister, Miss Lena White, a retired Council Bluffs teacher.

To start out, White set out 300 peony plants in the fall of 1956. There were some blooms the first spring and many the second spring. He has done all the work himself until this year. The soil is very good (but White says peonies will grow in any good Iowa soil). He did no fertilizing until two years ago and then only a small amount. He keeps the weeds under control with a

light tiller powered by a three-horse power gasoline engine.

With so many plants and trees on the acre plot and at home White is able to spend a full season planting, cultivating, experimenting with new species and an ever-growing number of plant and tree graftings. When winter comes he finds many enjoyable hours working on charts and maps of his plantings. From his charts he can locate immediately any of the 10,099 flower plants, shrubs, vines or trees. Thousands of dollars have gone into the acre of trees and flowers. The best of his peony plants have cost at least \$6 each.

What will happen to this garden when White no longer can care for it?

"I don't know," White says, "but I would like to see it continued. I'm a member of the Woodbine town council. I know the city wouldn't want to finance it. I would be willing to give it to anyone who would continue with it. But I don't know who that would be. I have found so much enjoyment in it and I wish that in the years ahead, other generations could find this same pleasure."

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DISTRIBUTE BOOKS TO LIBRARY

Sam Wissing and Carl Klehm ordered ten copies of "The Peonies" they plan to distribute to libraries in their area. The book was edited by John C. Wister, Chairman of the Editorial Committee, composed of Myron D. Bigger, Marvin Karrels, William H. Krekler, the late George W. Peyton, P. P. Pirone, Silvia Saunders, Gertrude C. Wister and Horold E. Wolfe, Section I is devoted to Herbaceous Peonies and Section II to Tree Peonies.

Tree Peony Topics

By Louis Smirnow

When we visited Japan, I made it a point to talk with several growers, gardeners and students of the Japanese Tree Peony in an effort to get a list of the most popular tree peonies in that country. From many notes, the following varieties seem to be those in greatest favor in Japan.

White

Daigoku Den
Fuso No Tsukasa
Fuji No Akebono
Gekkyu Den
Gessekai
Godaishu
Hira No Yuki
Howren
Kamikaze
Tama Sudare

Pink

Akashi Gata
Hana Kisoi
Hatsu Hinode
Howzan
Mai Hime
Momoyama
Shintenchu
Shujaku Mon
Tama Fuyo
Yachiyo Tsubaki
Yomo Zakura

Purple

Gumpoden
Hana Daijin
Rimpow
Shunken Dow
Shima Daijin

Red

Hinode Sekai
Hino Tsukasa
Howdai
Hyakuraseu
Impumon
Jitsu Getsu Nishiki
Kinkaden
Nisshow
Orihime
Taiyow

Maroon

Hatsu Garasu
Kokko No Tsukasa
Ubatama
Suma No Ichi

Lilac, Lavendar, Violet

Kamada Fuji
Mifukumon
Chin Shiun Ryo
Shiun

This is a large list but there are several hundred Japanese varieties, many no longer in commerce.

This list cut to an even dozen might read —

Kamikaze, Fusow No Tsukasa, Tama Sudare, Howren, Hana Kisoi, Hatsu Hinode, Momoyama, Yachiyo Tsubaki, Rimpow, Orihime, Kokko No Tsukasa, Kamada Fuji.

Unusual colors and combinations which are generally regarded as being most beautiful are Mai Hime (Dancing Princess) — Scarlet Pink. Howren (Imperial Carriage) — White with deep pink at base. Haru No Akebono (Spring Dawn) — Large white with petals shaded crimson. Fuji No Akebono (Day-break on Fuji) Snow white crimson flares. Jitsu Getsu Nishiki (Finest Brocade) — Scarlet; white edges, double. Shiro Kagura (White Sacred Music) — Semi double white, deep red blotches in center. Gabisan (Mountain of the Arched Eyebrow) — Large white shaded pink. Seidai (Glorious Reign) — Enormous white, deep rose at base. Yachiyo Tsubaki (Eternal Camellias) — Coral pink flowers, coral stems with bronze foliage.

On my visits to various gardens I found that the average gardener is not aware of the fact that most tree peonies are grafted on herbaceous roots. Occasionally, the root stock will take over and the tree peony will disappear. The foliage

of the herbaceous root stock should be removed whenever it makes an appearance.

Another common fault is failure to plant deep enough. Be sure to plant so that the union of the understock and the scion (tree peony top) is planted at least two inches below the ground level.

Beginners should know that Tama Fuyor is earliest bloomer, followed by Hanakiso, Ubatama and the other Japanese varieties; later the Lutea hybrids bloom, so that four weeks of blooming may be

had. Of course, the European variety Banksi opens the season but the color does not appeal to most people.

Hanakiso is, perhaps, tallest of all — Saigyow Zakura the lowest. Alice Harding is a low grower and a fall bloomer — most fragrant, too.

Largest flower perhaps Gekkyuden — smallest, the Lutea hybrid Stardust.

Unusual color, Lutea hybrid Mystery, exquisite pearled lavender.

Growing Peonies in Georgia

By Mrs. W. O. Blount

Growing peonies has been a do-it-yourself project for me. I've worked alone, except for occasional assistance from my husband. Usually I follow recommended methods, but sometimes I experiment.

So much of what I have learned about peonies has been learned "the hard way". When I started, I could find no one who could give **specific** instructions on their culture. Even the directions for planting that came with roots were for Northern culture! Little by little I've learned — by reading about peonies and by trial and error. For instance, I learned never to leave mulch over peony roots during the Winter in this area. Several roots of mine rotted because I left a leaf mulch over them. Even if the roots don't rot, a Winter mulch prevents their getting cold enough to bloom. When a plant is moved, always mark it. I now have some "lost" because I forgot where they were planted. I'll have to wait for them to bloom to know where they are. When a plant is divided, don't cut the root into small pieces. It takes too long to bloom again. If you think you might want to re-order, buy labeled roots. If they are not labeled, you don't know what varieties to re-order.

To my knowledge, there are no extensive plantings of peonies in this immediate vicinity. Roots I have found in local garden centers were pre-packaged, and sometimes labeled only as to color.

Athens is located in the Georgia foothills at an altitude of 600-800 feet (811' at the Weather Bureau just out of town). It lies between two branches of the Oconee River — one branch bordering the City and the other flowing through part of the town. Therefore, the terrain is rather hilly. We live on one of the higher elevations. Athens is slightly more than 200 miles from the Atlantic and 300-plus miles from the Gulf.

My peony garden is on a wind-swept slope with Northern exposure. There are a few trees around the edges of our lot; but most of my plants are in the open. It seems plants without shade are more resistant to disease. I usually compensate for the presence of trees

by fertilizing the plants nearest them a little more than those in the open.

In most articles I've read on peony growing, much stress has been placed on how large and deep the hole should be. It is important to have a hole adequate to place the root in without crowding. Since peonies do not have to be planted so deep here in the South, mine have the crowns just barely beneath the surface.

If the soil has been improved beforehand, and is in a porous condition, the roots can penetrate it more easily. I'm not a strict, dyed-in-the-wool organic gardener; but, I do use a lot of humus matter such as leaves (dogwood, pecan, oak — gathered on our lot and worked into the soil before planting time); also, bark (pine or hardwood) for mulching. These materials make the soil easier to work, hold moisture, and encourage the production of earthworms for good aeration. An application of lime improves "hard-pan" soil, and counteracts excess acidity.

In discussing peony culture, the question of fungicides often arises. I have seen several products recommended (such as Bordeaux and Fermate). Being allergic to a number of things, I have to be careful about using chemical sprays. I tried scratching a teaspoon of Bordeaux powder into the soil around each plant in the Spring. I had no severe allergic reaction to this exposure, myself, so I have stuck to this product rather than trying others.

In regard to fertilizer, I use bone-meal under **new** plantings (about a trowelful under each root.) I am now experimenting with 0-14-14 around my **established** plants. I work about a trowelful of this around each plant in the Fall. In the Spring, a light application of fertilizer containing Nitrogen can be used.

After the peony plants are up in the Spring — before hot, dry weather begins — I mulch the entire peony bed with bark. It is important to keep the bark off the plants to prevent disease. Ground or shredded pine bark is my preference. At one time, there was a firm here that sold shredded bark. When it was no longer available from this source, I located a wood products company in the vicinity that debarks and processes logs for veneer woods. These are mostly maple, poplar, and similar hardwoods. This firm does not deliver, but offered what I needed if I could get it delivered. The big problem is finding someone with a truck who can and will haul the bark at a suitable time. I like to have it delivered in the Fall so it can partially decompose during the Winter. Not being shredded, it takes longer to decompose.

In early Fall, I rake the remaining bark off the peony bed. Much of it will have decomposed during the Summer, and will have been tramped into the soil. I also cut off the peony tops and burn them.

Sometimes, peony plants have to be staked. My husband cut some metal rods, and bent an eye on one end of each. Three or four of these rods can be placed around each plant, and cord or plastic clothesline run through the eyes. One rod can be used to mark a plant by attaching a wired label to the eye.

As to varieties, peonies that bloom early to mid-season do better here. Old stand-bys like Felix Crousse, Sarah Bernhardt, and Festiva Maxima are usually reliable. I have 60-70 varieties; but some have not been planted long enough to bloom. Some have bloomed once. They need more time to "put on a good performance". Among those that show promise are Ann Cousins, David Harum, Duchessedede Ne-

mours, Kansas, Kelway's Glorious, Longfellow (the color of this one holds well in our hot sun), Mons. Jules Elie, Nick Shaylor, Richard Carvel, Shawnee Chief, Snow Mountain. Last Spring, the blooming season extended from late April to mid-May. Hybrids should bloom earlier. We'll have to wait a year or so to see how my hybrids adjust to this locale.

Success in getting peonies into bloom, and keeping the blooms from deteriorating rapidly, depends largely on the kind of weather we have at the time. Temperatures are variable. Sometimes, it looks as though Spring will be early — then Frost! On the other hand, it might seem Spring will be late — then balmy weather suddenly prevails.

We sometimes have little rain, then again we have downpours. Last Spring, after my peonies started blooming, we had almost continuous rain for several days, followed by a brisk wind and bright sunshine.

In conclusion, let me say that some methods a hobbyist with a small number of plants can use would be highly impractical for large plantings.

For purposes of comparison with more northern gardens, here are the blooming dates of some of my peonies for the Spring of 1968: La Perle, April 28; Kansas, April 30; Henry St. Clair and Kelway's Glorious, May 1; Felix Crousse, May 2; Longfellow, May 4; and Susan White, May 6.

Summer Visit to Scandinavia

By Frank Ruppert

On our visit to Denmark and the Scandinavian Countries this past June, Mrs. Ruppert and I were delighted to see peonies growing in many home gardens. It was like meeting old friends. Big, beautiful plants with twenty-five or more blooms graced many of the little home gardens and plantings. Vegetable and flower gardening is a favorite hobby with most Europeans. Vegetables to supplant the food supply, and flowers for the love of them. We were particularly impressed by the large healthy peony plants seen on our trip from Gothenburg to Stockholm on June 22, 23 and 24. One planting in particular at Granna Harbour was peeking above the three-foot-high picket fence, a great mass of red and white flowers. The blooms we saw on

our trip were double: either pure white, dark pink, or red. Our hotel in Jonkoping, Sweden, greeted us with an enormous bouquet with stems a full three feet long. This exhibit gave me a new determination to extend my efforts, here in California.

Flowers seem to play a greater part in the daily lives of the people of Europe than with us. Every large city has its open-air flower market, and the shoppers buy flowers, along with their regular household needs. It is to be hoped that our people here will buy and enjoy more flowers in their homes. There is, indeed, some evidence of this already, as great planeloads of cut flowers are flown east from California every day.

From The Editor's Desk . . .

To all of you, both here and across both the Atlantic and the Pacific, who so kindly extended Season's greetings to the Society wish you and yours a Very Happy New Year. May the Christmas Spirit remain within your hearts and home throughout the coming year and the year be one as you would wish it!!

* * * *

We are all delighted to learn of **Mrs. Glen Colby's** successful recovery from major surgery a few months ago. She writes she is "up and at them again and looking forward to a better 1969." Mrs. Colby states she will see everyone next June at the Annual Meeting and Exhibition.

* * * *

The **Denlinger's** returned in November from their extended journey to Alaska, down the west coast from there to Mexico where they attended the Olympics. Mrs. Denlinger stated Pharon took better than 1000 pictures on the trip. Cards they so graciously sent the office depicted gardens. We hope we may have the privilege of seeing them, at a District meeting!

* * * *

Marvin Karrels is slated for major surgery in February. We are sure you will want to pray for his recovery.

* * * *

Would that we could share with all of you our color picture of **Ethel Thompson**, wife of our Director Lloyd C. Thompson, taken in their garden in North Dakota, as she was holding forward a beautiful Red Charm!

* * * *

Valdemaas P. Nesaule, Latvian Horticultural Society, 15 Lenin St., Riga-50, Latvia, USSR sent the So-

ciety one of his beautiful New Years greetings, for 1969.

* * * *

Eikichi Satomi, 342 Unane, Seta-gaya, Ku, Tokyo 157 Japan, has again remembered the Society with a beautiful card. He writes — ! I very much appreciate the Bulletin and hope prosperity of your Society and happiness of all members in 1969."

* * * *

Speaking of Christmas cards — two received by Mayor Pennell were most unusual. One, from a corporation, was a two-year Scotch Pine in a protective wrapper and instructions for planting. The thought contained in the packet — "This tree will be a perennial reminder of the good wishes of the sender." A second contained a small packet of tree seeds and expressed the wish of permanence of the tree.

Your Editor agrees with Mayor Pennell — here is a challenge to all peony lovers — perhaps peony seeds — with instructions for proper planting! !

* * * *

Imagine our delight when opening the September issue of House and Garden magazine to see a two page spread of color photographs of tree peonies!! These were taken in Mr. Louis Smirnow's Garden in Brookville, N.Y. (our own member of the Board of Directors).

The writer introduces the article with the following heading: Peony bushes, leaf and flower, offer the garden's most dramatic springtime accent. Further comment illustrated with pictures of peony leaves calls attention to pattern and coloration.

Congratulations Mr. Smirnow—

REGISTRATIONS

J. Franklin Styer, our long-time Director, registers the following peony:

CHRISTINE AINES, 1968. Double. Rose type. White, containing golden glow, with red flecks of small size. Large flower. Stems not tall, but unusually strong. Late.

Sam E. Wissing, 93 South Lombard Ave., Lombard, Illinois, registers:

ORANGE BOUQUET. From 1964 breeding of two Saunders peonies: Silvia Saunders x Roselette's Grandchild. R.H.S. color chart 28 c. Formerly Seedling No. 888 A.

Semi-double, this vigorous plant is a real color-break. Its foliage is a beautiful dark green. It has viable pollen, will take Roselette's Grandchild pollen and set 10 seeds to a pod. Will inbreed and give just one seed to a pod. Will set seed on lobata or any lactiflora. Of its parents, Silvia Saunders is a blush semi-double lactiflora; Roselette itself is lactiflora x (tenui x Mloko F2). One F2 of that cross is called Roselette's Child and the F2 of this is Roselette's Grandchild.

35 MM Peony Slides Needed

We need good 35 mm slides to update our slide collections, which are shown throughout the United States. When you are out photographing this next Spring and Summer, take an extra Transparency, especially of the new varieties, and send the extra one to the Society. What better way of having your newer varieties seen? Only original transparencies will be accepted; (in "copies", the delicate flower-tones are often lost). Send your slides direct to the Slide Chairman:

Steve C. Moldovan
38830 Detroit Road
Avon, Ohio 44011

Steve Moldovan Appointed Slide Collection Chairman

Mr. Steve C. Moldovan, member of the Board of Directors has accepted the appointment as Chairman of the Color Slide Collection. Mr. Moldovan, an accomplished photographer and speaker, is owner of Moldovan's Gardens, located in Avon, Ohio.

The Society now maintains several groups of excellent sets of peony slides (arranged by Mr. Moldovan) for rental. Each set contains 75 slides, **35 mm size**. A list of names accompanies each set. Ideal for a program and Garden club meetings, these slides are a fine way to study the standard and newer varieties.

At present 4 sets are available —

- Set of Herbaceous
- Set of Herbaceous hybrids
- Set of Tree Peonies
- Set combining the 3 types.

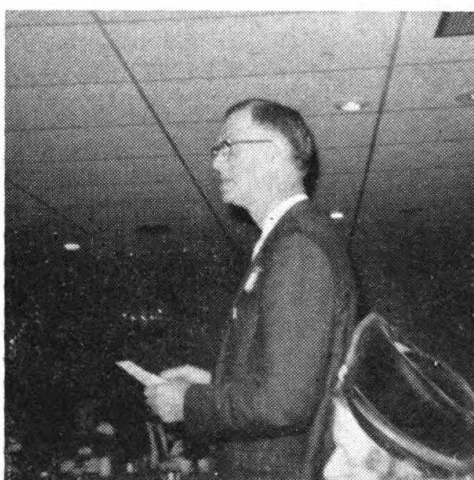
Requests for slides should be made well in advance for proper scheduling, preferably 6 weeks or longer. Give exact date desired so that slides can be sent insured, Air-mail. They are to be returned in the same manner promptly after using. The rental fee is \$5.00, payable in advance, for each set of slides. A charge of \$2.00 is made for each slide that is missing. Make checks payable to the American Peony Society and mail with request to:

Steve C. Moldovan
38830 Detroit Road,
Avon, Ohio 44011

KREKLER SHARES PEONIES WITH PUBLIC

William H. Krekler gave seven acres of his flowers, grown at Somerville, Ohio, to the public last September. He states he has retained three acres and has several good hybrid seedlings that he plans to register next summer.

MARVIN KARRELS PRESENTS PLACQUE TO SAM WISSING



To
SAMUEL E. WISSING
in recognition of his
work in the hybridizing
of peonies
and for his efforts to
disseminate knowledge
thereof
Awarded by the 5th District
AMERICAN
PEONY SOCIETY
this 3rd day
of November, 1968

Samuel E. Wissing, recipient of the above worded tribute has spent the past 29 years in peony breeding. The presentation was made during the annual Fall meeting of District V held Sunday, November 3rd, at Antioch, Illinois.

Mr. Pennell and I agreed, upon our return to Van Wert, Ohio that night, that the 526 mile trip that day was not only a day long to be remembered, but a tonic to us in our efforts to stimulate formation of Districts throughout the country.

Mr. and Mrs. Wissing, president and secretary-treasurer of the District, were gracious hosts. Mrs. Hertha Hyde, her sister, Mrs. Harriet Gorski, assisted by Mr. Walter Sir, District V membership chairman, greeted the guests upon arrival. A huge vase filled with pink peonies,

thoughtfully arranged by Carl Klehm, caught everyone's eye immediately upon entering the banquet room. Needless to say, we were not the only ones to gasp at first glance, for they were the best artificial peonies ever seen!

Introduction of new members opened the meeting after the dinner hour, followed by silent prayer in tribute to Art Murawska, whose death was acknowledged by all as a loss, not only to the Society, but to all attracted to the beauty of the peony.

Marvin Karrels gave a good report of the 1968 annual Meeting and Peony Show, held in Milwaukee, sponsored by District V. He then said "We have among us several dedicated persons, always willing to disseminate information in an effort to encourage the growing of fine flowers. The man, whose name I am about to mention, is well known for his accomplishments in peony breeding and his willingness to share his information — when he talks to you he is so enthusiastic — he ethuses those with whom he is talking!"

A plaque was then presented to Mr. Sam Wissing by Mr. Karrels, on behalf of District V. This he stated was for Mr. Wissing's contribution in the field of hybridizing. Sam also received a "model Professor" statuette, entitled "Dr. Sam Working on His Peonies" a vase of Peonies and mutated peony plant to encourage further mutation. A congratulatory telegram from Miss Saunders, president, of the parent Society was read as follows: "To promote knowledge and to interest newcomers to the delight of plant breeding, seems to be one of the greatest services one can perform toward fellow human beings. I am delighted that District V is honoring you today for the effort, experiences and knowledge you have so generously given to others."

The root auction, under the capable auctioneering of Mr. Frank Lang, netted \$261.00. This was then presented to Mr. Pennell, A.P.S. Treasurer. It was a most welcome gift and sorely needed by the Society. Contributors brought their roots to the auction so bidders could take their purchases home with them as well as see the roots. Bill Murawska's generous gift of 7 of his father's originations, including Lovely Louise, Peace, Hawaii, Mrs. Louise B. Wattsm Myrtle R. Walgreen, Princess Margaret and Col.

McCormick, brought \$94.00 in the sales total. Orville Fay contributed his new variety, Paula Fay, his second generation hybrid peony, registered in the last Bulletin (Sept. 1968—No. 190).

Carl and Roy Klehm brought Raspberry Sunday, Jay Cee, Dinner Plate, Top Brass, Vivid Rose, advertised in the Bulletin as Estate Peonies. Also donated were White Innocence, Edward Steiken, Jay Hawker, Red Charm, Bute.

The District voted a memorial gift of \$50 in the name of Art Murawska, to be given to the American Peony Society.

Election of officers for the ensuing year was held and Mr. and Mrs. Roy Klem elected president and secretary-treasurer respectively.

The meeting was concluded with pictures taken at the Milwaukee meeting and Show, taken by Len Jugle.



PEONIES IN PARK PLANTINGS

Scott Fikes, Supt. of Horticulture, Fort Worth, Texas, Botanic Garden wrote us about the varieties that have been planted in the peony beds, are Mikado, Brand's Magnificent, Karl Rosenfield, Kelway's Glorious, Longfellow, Sarah Bernhardt and Walter Faxon. Pictures are unavailable at this time, however, we hope to see the ones of the 169 blooms.

The Gallatin Empire Garden Club of Bozeman, Montana, has been working for the past two years on a plan — peony plantings in the new proposed City Park. This new Park is in the making this summer (1969) and the Club, a member of the American Peony Society, is hoping to see their plan of peony park plantings become a reality.

One of our grower members has stated he will send them a root.

American Horticultural Society Holds Annual Congress

By J. Franklin Styer

I attended the American Horticultural Society annual congress at San Francisco on Sept. 19th. There was a good attendance and a successful meeting. The next congress will be in Philadelphia in the fall of 1969, probably the Marriott Motor Hotel.

The Society is in the process of making several changes, which will lead to improved service to the affiliated organizations. The magazine and news releases will be made less expensive and the material will be more popular in nature. The dues are increased to \$15.00 for individuals. The congresses will give much more time to reports and problems of the affiliates. Such a meeting was a very fine feature of this congress.

The Society is publishing a new Color Fan produced by the Munsell Foundation. This has many more colors than the old fan and by a new process they are more highly saturated. It is recommended that this be used from now on for describing the colors of all new introductions.

There was a special discussion of the new system of National Cultivar Committees which will supplement the International Authorities which in some cases are already in existence. As I understand it, the Peony Society would set up such a committee to keep track of evaluation of the cultivars and publish their reports periodically, while transmitting the same to the International Authority. American plant societies are urged to establish such committees at once.

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MRS. FREEMAN REPORTS

The Society is indebted to Mrs. William H. Freeman, Jr. of San

Francisco, California, for her coverage of the Congress.

The report is complete with suggestions relative to the AHS Organization Members' Workshop, at which time member organizations were made aware of the possible scope of the AHS and its potential value to individual societies. (The American Peony Society is a member of the AHS). Membership files and care of mailing lists stressed by O. Keister Evans, Jr. Ex, Secretary of the American Rose Society; Publications-What and How, by Alexander Allport, Ex. Director of the Horticultural Society; Support and Service—Getting New Members, led by Mrs. Helen Van Zele, V.P. African Violet Society; Public Relations, by Carleton B. Lees, Ex. Secretary, Mass. Horticultural Society, all detailed by Mrs. Freeman has a great deal of excellent information in establishing guide-lines for our own Society. It is with regret that we cannot print the report in its entirety.

Mrs. Freeman's Summary is as follows:

The Twenty-third Congress seemed a happy and successful occasion in spite of the Treasurer's announcement that the AHS would be bankrupt by the end of the year and therefore dues must be raised. Your representative noted especially the wide range of geographical areas and of flowers represented, the international scope of the organization, and the sincerity and strength of purpose of the delegates, particularly those from the State Horticultural Societies.

This Congress certainly walked in beauty — Rep. will not forget

the color films of gardens or how Mr. Reinelt's begonias looked covering the table tops. Yet there seemed to be a feeling running through the programs that, if such beauty was its own, it might not be the horticulturalist's excuse for being. The African Violet group increased its membership by bringing the community into its enterprises. Mr. Lees stated that every organization needs a sense of involvement with the community. Dr. Morey said that it is the people, not the plants, that are making horticultural news. Those constructing the demonstration gardens, from Los

Angeles to Tucson, had been concerned with making them usable for the public. Mr. Lees stated that horticulture is important because the quality of human life is important. Mr. Baylis brought this undercurrent to the surface as he stated directly: Gardeners should extend their involvement to the whole environment.

The Twenty-third Congress seemed extremely interested in the cultivation of gardens. It seemed also to feel that it is no longer enough to cultivate your own garden. Mr. Baylis' words: A garden should be everywhere. It is a place for man.

Our Readers Write . . .

BRITISH COLUMBIA

John E. Marquis, 1112 Beatty Ave., Nelson, British Columbia, referring to the 1968 blooming season wrote; — "As usual, I had a lot of fine bloom last June. I managed to plant a few more peony roots that I moved from my Silver King property. They had been neglected for years and were simply grass bound. Is is hard to kill these roots — I was able to split them. In a couple of years, these small pieces will have grown enough to set out into a permanent location.

We have had a good amount of snow so far — must be at least 3 feet at Atabara ... I managed to transplant over 80 fairly large rhododendrons before the snow came in November. The deer play havoc with me and I would not be surprised if they have done a great deal of damage ... I always enjoy the Bulletins ..."

* * * *

GEORGIA

Mrs. W. O. Blount, 190 Grady Avenue, Athens, Ga. 30601 wrote December 2nd (just going to press) "Enclosed is my check for \$7.50 for

my 1969 dues. You might be interested to know we have already had snow this Fall — 2" on Nov. 11, unusually early for this area. We need plenty of cold for our peonies.

You might also be interested to know that my husband and I enjoyed Mr. Alexander's article on "Salesmanship" in the Sept. Bulletin.

After I finished with the usual Fall tasks of planting and cleaning up my peony bed for the Winter, I had hoped to have more time for some of my other interests — history and genealogy; but it seems I stay as busy as ever, and don't get as much done as I'd like to. I'm sure it's the same way with you." — (Yes, Mrs. Blount, how true!! — Editor)

* * * *

ILLINOIS

William Murawska, son of the late A. L. 'Art' Murawska of River Drive Peony Garden, 8740 Ridge St., River Grove, Ill. wrote the first week in December — "The weather has been quite warm for this time of year. I planted the last peony November 28th, in the rain!"

Mrs. R. H. Kienast, 519 Prairie St., Paris, Ill. 61944, has written us of her interest, stating that she has—"many good varieties and about 40 plants of Tree Peonies. Mr. Harold Wolfe started me out on them. 'Festiva Maxima' was the very first Peony when living in Detroit. This was taken with us when we moved to Paris, Illinois in 1928. I have 8 singles and 27 varieties of Tree Peonies and now have 45 varieties of the herbaceous, all good ones. 24 varieties of Japs and 9 varieties of hybrids."

* * * *

INDIANA

Claude M. Towne, Rt. 2, Box 336 Crown Point, Ind., 46307, wrote—"We are approaching our third summer at this location and you can well imagine that our peonies are not yet very mature. We have about 35 varieties divided equally between herbaceous and tree. Most of my stock has come from Marvin Karrels, whom I regard as a good friend, and the trees from Mr. L. Smirnow and the Seminary north of Chicago."

* * * *

MICHIGAN

Clarence Lienau, Lineau Peony Gardens, 9135 Beech Daly Rd., Detroit, Michigan, 48239, "The fall here in the Detroit area, was one of the finest ever. I was able to plant 1100 divisions. I worked until the first of December."

* * * *

NEW YORK

Miss Silvia Saunders, our Society President, writing about the fall season in Clinton, N.Y. — "We have had a very beautiful fall here — can't remember going beyond the middle of October with still no frost and weeks of lovely warm sun, and then a heavy downpour just when we needed it about every fortnight. Lovely ... I have been pleased because that "Hybridist's Headstart" special offer of 3 fertile

F2 hybrids, plus some seeds attracted new customers. These are fabulous days — I only wish Father were here to witness them.

* * * *

Mrs. Hollis Cornell, writing in her annual Christmas letter to friends, one which she shared with us, and from which she took the following excerpts —

"In January we managed to skip to New York City for a couple of days — Hollis on business and Marjorie and "Min" Lind to a 2-day short course in Bonsai (the Japanese art of dwarfing and potting trees), given at Brooklyn Botanic Gardens ... I took another in March to the International Flower Show and executive meeting of the Woman's National Farm & Garden Ass'n. In May to a 4-day annual meeting of the same organization. Returned home on May 9th to find my largest pink tree peony in bloom—the earliest it has ever bloomed. June continued with a parade of lovely peonies (you may recall we planted 40 more in Fall of '67) and they took their share of blue ribbons at Cambridge, New York—an Area Branch Flower Show."

* * * *

WISCONSIN

Harold R. Warren, 2985 Riverside Drive, Beloit, Wisconsin 53511, "For my own enjoyment I have various perennials such as daylilies, tulips, daffodils, iris, and peony."

Bloom in 1968 was two weeks after Memorial Day and lasted just a short time. Oriental Gold finally produced six flowers after waiting four years and I was delighted. September started out wet so digging and transplanting was at a minimum and with the help of two of my sons I only managed to move about one third of what I had planned. This year I hope to add some new varieties to my planting if the good Lord will a-

gree. I've had some peony plants since 1948 and now have about 70 varieties totalling around 900 plants.

Working in a shop, raising a family, and trying to enjoy life as we go

makes time go much faster than I desire.

I have enjoyed your Bulletin very much in the past years and look forward to receiving it again.

Tributes To Art Murawska

By Francis P. Tikalsky

Arthur Murawska was born in Chicago January 15, 1893 and passed away September 21, 1968. He became interested in growing flowers at a very youthful age and his interest in growing flowers never waned. He retired from railroading after receiving the Golden Pass designating fifty years of uninterrupted service.

The American Peony Society lost one of its stalwarts in the passing of Arthur L. Murawska in September of this year. There probably was no more critical or discreet grower of irises or peonies than Art. He was one of the first to acquire the latest introductions and watch their development and performances. Thus, he became familiar with their faults and virtues and relayed his findings to growers and prospective purchasers. If he had a large stock of an expensive item and someone expressed a desire to buy some from him, he would tell of the faults and proclaim the virtues. His savage honesty in matters like this did not win approval from his fellow growers. Personally, I do not know of any grower who was more honest. Although he appeared brusque at times, this seemed his method of expressing his sincere opinion. He was one to proclaim the elements of what he felt was a high grade peony. There was no more generous man. When the Society needed a handout, or some mortal was in distress and the hat was passed around, he was there with the "Fustest and motest". His interest was

in how flowers performed in the garden and he derided the publicity that was given to varieties that did well on the show bench only. It was his contention that Shows only benefit the grower and significantly confuse the buyer.

I visited Art Murawska for the last time this year just when the peony blooming season was about at its peak. This was just after he had partially recovered from the first stroke. He had the enthusiasm of a youth and was effervescing with the emotion of wonders. He asked that I accompany him thru part of his planting. He called upon every iota of energy, bearing his weight upon a cane, struggling to see a few varieties that he thought were outstanding. The first one was a yellow Jap named **Sun Bright**. It was a dazzler in the morning light. The next was an introduction of Whinchell a large tailored Jap identified as seedling H-9-B-7. It too dazzled. Another Whinchell origination, **Eleanor**, was a huge dark pink with over ample stalks. It should be terrific for the garden. The next that he commented upon was **Golden Sun** a light pink Jap. The last one was a hybrid single of very appealing color. It was a Murawska seedling blooming for the first time. He asked "What do you think of the color, after two days under the sun." Murawska abhorred fugitive colors in any flower. Weak stalks, poor substance and tempermentality were his dislikes. He considered the plant as much as

he did the blossom.

Art Murawska is survived by his three sons, William, Arthur and James.

* * * *

By Clarence Lienau

All of us who attend regularly the National Shows, will surely miss our good friend and fellow member Arthur Murawska. "Art", as we all called him, was a 'diamond in the rough' with a heart as big as all outdoors. He was the originator of some of the world's fin-

PEONY PLANTINGS IN COMMERCIAL SETTINGS

We are eagerly awaiting a copy of a Grounds Maintenance magazine containing a feature article written by Dr. John Baumgardt, Landscape Architect, Private Consultant, and a Director of the Garden Writer's Association.

Not only are we interested in content, but pictures. Upon request of Mr. Joe Clough, Kansas City, Mo., for prints showing peonies in a commercial setting, we were able to furnish, from this office, pictures taken of a planting which is positive proof of peonies planted properly are a permanent perennial!

Peony plantings were a definite part of the landscaping plan when the first building of the Continental Can Plant in Van Wert was completed in 1928. Expansion plans were finalized in 1947 and in 1948 (20 years later) the plantings were moved to a large circular drive in the new section. They have had proper care though limited in the 20 years since that time. The picture we sent to accompany the article by Dr. Baumgardt shows the peonies in bloom. The Continental Can Plant, manufacturer of fibre shipping containers, is the mother plant of 10 fibre drum plants.

est peonies — **Moonstone, Dignity, Lotus Queen, Princess Margaret, Break O' Day, Liebchen**, etc. Note the fine descriptive names he used for these fine peonies.

Moonstone, a Gold Medal winner, is, in my opinion, the finest blush of all. **Dignity**, a dark red Jap, has more gold in its staminodes than any other variety. **Lotus Queen, Princess Margaret, Helen Hayes**, and other varieties mentioned above, will keep the name of Arthur Murawska in the peony world for many, many years to come!

NEW ARBORETUM ADDS PEONIES

The new Cox Arboretum, 6733 Springboro Pike, Dayton, Ohio, started a fine peony planting last Fall. "Mr. Dave Stoller has planted all of the worthwhile registered hybrids," wrote William Krekler, now wintering in Whittier, California. "Besides, a good start on species, tree peonies and albifloras, Mr. Krekler continued," and he also has starts of a great many of the best iris and daylilies."

DAZZLING ARTICLE ON THE TREE PEONY

Do get the December issue of Vogue Magazine (or, ladies, you may find it at your hairdressers). It contains a dazzling article by Anthony West on the ancient and oriental splendors of the Tree Peony. And illustrated with five full-page photographs in Living Color by Irving Penn. It is, to me, a rather odd selection of peonies—for this article; not a single Tree Peony, but all herbaceous. One hybrid, and four rather old kinds and aren't these rather little known and grown? Or is it just that I've never heard of them. At any rate, the fact doesn't detract one whit from the general grandeur and opulence of the color, and of Mr. West's exotic prose!

Signed: A Reader

Peony Preferences in 1968

William H. Krekler was kind enough to take time from his very busy schedule to list, in order preferred by the 1968 visitors in his fields and gardens, the following named peonies:

Reds

DOUBLES — Red Charm Maestro, Firebelle and Alice.

SEMI-DOUBLES — Heritage and Red Red Rose.

JAPANESE — Ray Payton, West Elkton and Jessie.

SINGLES — Montezuma, Burma Ruby, Dad and Camden.

DWARFISH — Dutch Dwarf, Fairy Princess and Norma Lou.

Pinks

DOUBLES — Bessie, Mrs. F. D. Roosevelt, Schafe, Bill Krekler and Queen of Sheba.

SEMI-DOUBLES — Bev.

JAPANESE — Westerner, Do Tell and Tom Eckhardt.

SINGLES — Dawn Pink, Flame, Rose Noble and Ellen Cowley.

DWARFISH — Pleiades and Nice Gal.

Near Whites

DOUBLES — Dr. J. H. Neeley, Martha Reed, Moonglow and Mrs. Frank Beach.

SEMI-DOUBLES — Miss America, Eaton and Zuzu.

JAPANESE — Pat Victor, Bute and Moon of Nippon.

SINGLES — Garden Peace, Chalice, and LeJour.

DWARFISH — Joseph Christie and Anna Mary.

Mr. Krekler stated — "I would make very few changes in my own list of preferences. All should be on any list of best peonies. However, some other very outstanding peonies are —

Bravura, Edward Steichen, Gay Cavalier, Illini Warrior, Reward, Bride's Dream, Bob Krekler, Laura Magnuson, Nosegay, Roselette, Victoria Lincoln, A. Krekler, Buckeye Belle, Hiawatha, Lee, Rose Marie, Golly, James Lewis, Myrtle Gentry, Nancy Nora, Cincinnati, Cora Stubbs, Ludovica, Splendens, Raggedy Ann, Harry L. Smith, George W. Peyton.

I gave seven acres of my flowers to the public in September — have three acres left — Just too hard to get help and also, I'm too old now for so many. I have several good hybrid seedlings that I plan to register next summer."

Report from West Salem, Wisconsin

By William Bringe

The 1968 season was good here in West Salem. After a comparatively mild winter, the tree peonies bloomed very well.

The whites. **Haku Shuden**, **Godai-shu** and **Gessaki**, now 5 years old, were grand, with 8 blossoms each. **Tama Fuyo** and **Kamada Fuji** (pinks) were just as good. Younger plants of **Ima Shojo**, **Kamda Wishiki**, **Jitsu Getsu Nishiki** put out several fine blooms.

I hope to see blossoms on **Azuma Kagami**, **Haru No Akebona**, **Iwata Kagami**, **Impu Mon** and **Kokn Rya Nishiki** next spring.

Age of Gold was again the 8th wonder of the garden. It should be planted in a place where it gets afternoon shade. Some *Lutea* hybrids have a characteristic of drooping their blossoms in hot sun. A 6-10-20 or 6-20-30 fertilizer helps to overcome this tendency. A fertilizer

of this formula is good for all peonies, most flowering shrubs, and fruit trees.

For several years, I have observed the blooms of herbaceous peony **Jo-an Foreman**, a reliable mid-season bloomer of medium light pink. It is not as tight or heavy as **Hansina Brand**, but has much the same delicate shading and blending of salmon and buff. It is fairly large and semi-rose form. As a cut flower, it is unsurpassed for beauty. The plant is compact and the stems stiff and erect. It can take the sun and weather.

Another fine peony of a darker pink is **Ensign Moriarity**. It has much the same form and habit of growth

as **Kansas**, **Tondeleo** and **Mammoth Rose** which are fine varieties and different shades of pink. Another good one, often overlooked in the rush, is **The Mighty Mo**. It is a fine bright red, large, tall, with good stems and a profuse bloomer as well as an excellent cut flower. The golden stamens among the petals enhance its beauty.

Here in western Wisconsin, we have vigorous winters with temperatures of thirty degrees below zero not unusual and ninety degree days during the blooming season. If a peony can make it here it must be good and these are the kind I write about!

OBITUARIES

ARTHUR L MURAWSKA



A.L. Murawska, known to all lovers of peonies and iris, died Saturday, Sept. 21, 1968 after a long illness. Mr. Murawska had grown peonies and operated the River Grove

Peony Garden 8740 Ridge St., River Grove, Ill. for almost 40 years. He was an engineer for the Milwaukee Road for 50 years until his retirement. Long before his retirement, however, he began breeding peonies and irises and developed dozens of varieties. Among his peonies, a vivid red, is named for Col. Robert R. McCormick, late editor and publisher of the Chicago Tribune. Another, Princess Margaret, one of his favorites may be found in the garden at Buckingham Palace in England.

Mr. Murawska is survived by three sons, William, who is presently carrying on his father's work, Arthur G., and James.

* * * *

KREIDER

Louis S. Kreider, 4863 Oak Knoll Drive, Youngstown, Ohio died at the age of 75. Mr. Kreider had been hospitalized for ten months. Death was due to a heart ailment.

LONG

Mrs. Clara Long has informed us of the death of her husband, **W.F. Long**. Mr. and Mrs. Long had a small commercial peony garden in conjunction with their grocery business. Mrs. Long wrote she is no longer able to grow peonies as they used to.

OUR CONTRIBUTORS

Rev. John L. Fiala, 3398 E. 55th Street, Cleveland, Ohio 44127. In six short years he has developed a method of Peony seed germination.

Mrs. W. O. Blount, 100 Grady Ave., Athens, Georgia 30601.

Anthony J. DeBlasi, 81-18 261st St., Floral Park, N.Y. 11004.

E.L. Pherson, Lafayette, Minnesota 56054.

Frank Ruppert, Green Mt. Ranch, Box 308 Julian, Calif. 92036.

BEETLE BOMBARDMENT?

They had beetles in Wisconsin, however, Mrs. Fred (Jane) Gustin, 1425 Illinois, Stevens Point, Wisconsin, 54481 wrote—

“The beetles weren’t so bad last summer. Maybe they were brought to this area by the workers in the bean and cucumber fields and our cold winters are slowly destroying them. They were thin and almost transparent also not so many. If they come from south of the border, they may not be able to adapt to the cold. Many people dug their Peonies about 10 years ago but I always put plastic bags on the buds before the petal became loose enough for the beetle to crawl in. Fortunately, the pest hasn’t spread to other areas of Wisconsin—it is just here in the sandy counties. The plants my daughter has taken to Green Bay have no beetles.”

PEONY FOR NATIONAL FLOWER

We have asked for comments in one of our Bulletins regarding the Peony as our National Flower. The following reply from Edward Auten, Jr., is interesting. Do you agree or disagree with Mr. Auten? May we hear from you?

“In Bulletin you asked for comments regarding Peony for National Flower. I most certainly oppose the rose or marigold for that honor, but I am not especially in favor of the peony. A National flower should not be for all varieties of a certain race of flowers, but for one variety of a certain race — and I have reasons for feeling that way. If you want my ideas on the whole subject, I will try to make it brief. If one peony were named our national flower, I would be content if the variety **Diana Parks** were given the honor.”

--- Remember ---

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Back Bulletins. Issues of current calendar year, 50c each, when available. Issues of back years, \$1.00 each, when available.

Peonies Outdoors and In by Arno and Irene Nehrling (1960). Hearthside Press, 381 Park Avenue, South, New York, N.Y. 10016. 288 pages, including 11 color plates and 118 black-and-white sketches and photographs. A complete guide to selecting, growing and using herbaceous and tree peonies. A 50-page section on Peonies Indoors including Arrangements, and How to Stage a Show. About 40 pages are devoted to the Tree Peony. Price: To Society members, \$4.95. To non-Members \$5.95. Send check or money order to American Peony Society, 107½ W. Main St., Van Wert, Ohio 45891.

Color Slide Collection: The American Peony Society maintains several groups of excellent sets of peony slides for rental. Each set contains 75 slides. A list of names accompanies each set. Ideal for program and Garden Club meetings, these slides are a fine way to study the standard and newer varieties.

At present there are four sets available:

- Set of Herbaceous
- Set of Herbaceous Hybrids
- Set of Tree Peonies
- Set combining the three types.

- (1) Slides are for 35 mm. projector. Rentor supplies projector.
- (2) Rental fee, \$5.00. Checks made payable to American Peony Society.
- (3) Slides must be ordered at least 6 weeks in advance, mailing request to the Slide Chairman:
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38830 Detroit Road,
Avon, Ohio 44011
- (4) Slides are to be returned promptly to the Slide Chairman. Return postage, including insurance, must be paid by the rentor, and be insured for \$50.00.
- (5) A charge of Two Dollars (\$2.00) is made for every slide missing when set is returned. Count slides when received and again before sealing for return.

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—NOTES—

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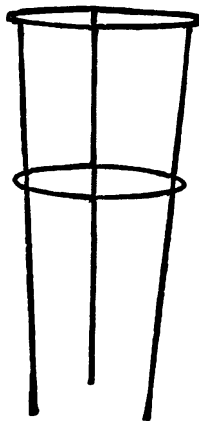
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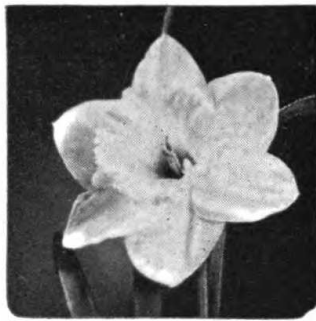
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