

## REQUIRED READING:

1. "The Peonies" by John C. Wister, \$3.50 from American Peony Society, 250 Interlachen Rd., Hopkins, MN 55343
2. Bulletins of the American Peony Society.
3. History of the Peonies and their Originations.
4. The Best of 75 Years; 3 & 4 ed. by Greta Kessenich, and available from the American Peony Society.

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## SEED DISTRIBUTION PROGRAM

These seeds are presently available:

Suffruticosa (tree peony)

Quad F<sub>3</sub>

Quad F<sub>4</sub>

Quad F<sub>3</sub> x '**Silver Dawn**' F<sub>3</sub>

'**Serenade**' F<sub>2</sub>

'**Moonrise**' F<sub>2</sub> x '**Archangel**' F<sub>2</sub>

Lactiflora mix

Lactiflora - '**Minnie Shaylor**'

Lactiflora - '**Nippon Gold**'

Tetraploid mix

## Suffruticosa Germination:

Many problems and endless challenges are presented in the raising of tree peony seedlings. One way of germination that offers limited success sowing is planting seeds any time from early spring to mid-summer. About 50% of the tree peony seeds should germinate the following spring and 50% of the remainder the following year. Protect seeds from winter freezing both years.

Tree peonies resent transplanting, especially little seedlings. So, protect the plantings for at least two years - three years is better.

Note: If you have a better way that offers a higher percentage of success, please let us know!

- Chris

QUESTION FROM CHRIS - TO DON HOLLINGSWORTH:

"Do you have any ideas on the causes of variegation of peony leaves and how one might develop this trait? I have a plant of '**Roselette**' F<sub>3</sub> that definitely has the variegation and I think it is beautiful, though the flowers are very ordinary. Also I have noticed three seedlings that have yellow areas in their leaves. This doesn't look to be caused by disease or lack of trace elements. Do you have any of this in your seedlings?"

ANSWER-

"Variegated Leaves of Peony - Beauty or Beast?"

by Don Hollingsworth

Variegated green color patterns in the leaves of some plants lead to their being selected for ornamental use. Light green, striped and mottled foliage effects are often appealing. However, light green striped and mottled effects are not always healthy. They may be caused by disease agents — pathogens. Disease agents can be transmitted from one plant to another by insects, on garden tools, by root grafts or through the soil.

The question arises whether the mottled or otherwise conspicuously different greens of some peonies may be due to congenital cause (transmitted genetically or not) or due to pathogens. If due to pathogens that do not visibly diminish the plant, there may be a strong temptation to ignore the question of what may happen to other plants which may become infected. Therein lies the problem for peony growers, for at least one disease has long been recognized in peonies which is attributed to virus — ring spot or ring mosaic. I have disposed of two different stocks of a pink double peony, believed to be the variety '**Reine Hortense**', because of mottled foliage, although there was nothing by speculation as to the cause. Even though these plants produced satisfactory flowers, I felt uncomfortable at having around the possibility that other varieties might be affected more severely, if it is caused by a virus and if some insect vector might be able to transmit the virus. There is also the more certain risk of transmitting sap-carried disease agents on cutting tools during propagation activities.

In tree peonies, I see a leaf bleaching process which develops under the influence of the most intense radiation of the sun. It shows up after the leaves are mature and is seen in parts of the most exposed leaves. At first there is a mottled pattern of chlorosis, but the injury spreads and the leaf eventually dies. The symptoms are likely to be less severe on well established plants which are making strong growth and less severe where leaves are shaded. While this condition is appealing to the eye in the early stages while there is no leaf die back, the situation is likely to deteriorate. This is definitely not desirable, although one's appetite for variegated foliage in peonies may be cultivated by having seen only the first stages.

Roy Pehrson has discussed the treatment of tree peonies with iron supplements as for iron deficiency chlorosis. However, I do not have anything concrete by which to estimate whether the symptoms Roy

treated were the same as I have described above. Having noticed that the same variety behaves differently, in the extremes to which the symptoms develop when grown on different sites, it seems entirely reasonable to suspect that a nutritional factor may be involved in resistance.

I am inclined to isolate the tree peonies which develop the chlorosis and to restrict their use to breeding. If propagated, then I mean to disinfect the tools before going on to another variety. By raising their seedlings among symptom free plants, I hope to eventually obtain some further indication whether the proneness to develop this form of chlorosis is inherited. This plan is flawed (as a research design), however, for there is no way of knowing whether some varieties can harbor a particular virus while never developing clearly distinguishable outward symptoms.

By growing propagating stocks of some fruits, apples and strawberries, for example, through shoot tip cultures (meristem culture) it has been possible to show much improved performance in the plants subsequently propagated by ordinary means — called virus free stocks. The University of Missouri plant pathology researchers have reported on apple stocks which seemed to show no outward evidence of pathogens. Nevertheless, these stocks showed a much improved rate of propagation success as compared to ordinary stocks of the same variety. Perhaps all old varieties of peony are harboring viruses, or likely to be, I wonder what benefits might be obtained from a technique for virus free stocks of peony?

In summary, I am made uncomfortable when I see variable development of variegated foliage, as has been the case when I have seen this in peonies. I believe the prudent response is to treat with suspicion even seedlings when they show such a characteristic. Try to rule out the possibility of a virus that is going to be harmful to other peonies.

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July 14, 1981

TO: Chris Lining

FROM: Roy Klehm

Dear Chris,

I noticed in the last issue of the Paeonia Newsletter that you and Don were wondering about the fertility of '**Coral Charm**'. I think I have tried it in breeding but have generally been unsuccessful in that the pollen does not seem to dehisce.

I also have a question in my mind about the parentage for '**Coral Charm**'.

- Roy

SILVER DAWN IS SILVER DAWN IS SILVER DAWN

Because of the fact that Roy Pehrson's clone of '**Silver Dawn**' F<sub>3</sub> is dissimilar (different) from the '**Silver Dawn**' F<sub>3</sub> which I received from Miss Silvia Saunders five or six years ago, I asked Don Hollingsworth what in his judgment would be the parentage of the original F<sub>1</sub> '**Silver Dawn**'. Both Roy's F<sub>3</sub> and mine are used and play a big part in my hybridizing program.

Also, Silvia gave me a plant of *P. obovata* which can become very important in future crosses. The problem developed when studying Professor Saunders' records. The title of the page in question reads "F<sub>2</sub> macrophylla x **Otto Froebel**".

Professor Saunders writes: "11578 - Rather obviously a Willmottiae hybrid. Lovely foliage. Beautiful white flowers. 1940 unquestionably Willmottiae x macro. In full bloom with the others further down in 15.4 and just like them. The seedlings came out of Frame 2 row 130 whereas the seedlings of macro x Willmottiae came out of frame 10.3 row 21. Impossible to see how they could have come together."

Note: Willmottiae is called obovata in the early years in his records.

- Chris

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Dear Chris:

My view of this question is that it is of no great consequence whether there is a cloud on the record of '**Silver Dawn**' ancestry. It is, however, of considerable consequence that some of the plants descended from this variety are proving to be very interesting to the current generation of breeders. Their worth has now been established through their progeny. It no longer is very important to be certain whether the F<sub>1</sub> '**Silver Dawn**' came from macrophylla x Willmottiae or not.

On the other hand I have no reservations whatsoever about accepting Professor Saunders' resolution of the question. I see no reason to suppose that you or I would have weighed the facts which were available to him and come up with a different conclusion. The fact that Saunders transcribed a record of the apparent discrepancy over to the permanent notebooks is a testimonial to his dedication to a careful record. I am confident his conclusions were considered just as carefully.

As for the genetic sources of the desirable traits present in the 3rd and 4th generation descendants (of the original '**Silver Dawn**'), their ancestry is more in question, as I see it, than whether '**Silver Dawn**' actually came from Willmottiae (or '**Otto Froebel**'). Professor Saunders carried out the crosses from which the F<sub>1</sub> came. He knew what parent plants were in use at the time, what seeds and seedlings were processed in the season, etc. The second and third generation plants, however, are apparently the result of open pollination, so far as any report I have seen. They might have been the result of

selfing or of outcross, or, one generation selfed and the other not. These circumstances so muddy the probabilities with respect to ancestral sources as to render any attempt to weigh these probabilities virtually meaningless.

We could select clones of macrophylla, willmottiae and '**Otto Froebel**' from those currently accessible (if?) and try to produce some new F<sub>1</sub> hybrids. The results will certainly be interesting, but we can never be certain whether they would be representative of what Saunders had. (Nevertheless, I'd like to see it done.)

One thing I see more clearly after thinking through this question, is that these proven clones which are now referred to as F<sub>1</sub>, F<sub>2</sub>, etc., of this or that named clone, ought to have distinctive names. You have told me the '**Silver Dawn**' F<sub>3</sub> from Roy Pehrson's garden is different than one which you originally had. Even if both these have been proven capable of producing appealing progeny, they are different genetically. How much more reliable would our communications about them be if each were to be given a unique designator?

- Don Hollingsworth

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Dear Chris,

First, I want to thank you for supplying pollen from your best double yellow. It's certainly appreciated and I'll make good use of it. It got me in the mood to get some crosses made - the first for the year. I used it on '**Claire de Lune**' and a couple of my early blooming seedlings.

The Jap Tree peonies started to bloom today. Shintenchi's pollen was gathered as it is one of the best Japs for hybridizing. Its pollen takes readily on luteas, including lutea No. 14 of Gratwicks.

Last year we selected our first double yellow herbaceous hybrid. I'll send a picture in this letter. It too is very fertile, and did have a few anthers among the packed petals. There were just two blooms last year, its maiden blooming. This year there may be ten if they continue to develop. It's a seedling from '**Salmon Dream**' x Reath No. F-3 ('**Cream Delight**' x '**Moonrise**'). The buds seem so very hard that I fear it will be a complete double this year.

I've heard a lot about your double. Hope to see it someday. Thanks again for pollen, Chris.

Sincerely,

David Reath  
Vulcan, Michigan 49892

SILVIA'S REQUEST: "What about putting Paeonia's subscription list in it again one day? I'd like to see it — maybe my rather forward methods of trying to put people in touch with each other were not appreciated then — but I do think its, at the very least, useful to have up to date addresses. It's all so "long ago" that I suppose some are in Homes now. I had no ways even then, of knowing how old they were." So here it is — 1981 list of hybridizers (those who subscribe to Paeonia).

Alston, Wardell  
16 Elysian Ave.  
South Nyack, NY 10960

Banziger, Richard  
Box 41, R.D. 1  
Earlton, NY 12058

Bock, Mrs. Claude  
511 Conneau Ave.  
Bowling Green, OH 43402

Bootes, Gordon  
4 Fishburn St., Red Hill  
Canberra Act 2603, Australia

Briseoe, Harley E.  
RR 1  
White Hall, IL 62092

Cross, Judith  
Hornby Island  
British Columbia V0R 1Z0

Crossley, Kent  
1245 Delaware Ave.  
St. Paul, MN 55118

Dennis, George  
415 W. Robinson St.  
Harrisburg, IL 62949

DeReamer, Marian  
5360 W. 73rd Ave.  
Merrillville, IN 46410

Dewey, L. J.  
2617 Wyndham Dr.  
Richmond, VA 23235

Domoto, Toichi  
26521 Whitman St.  
Hayward, CA 94544

Edblom, Richard  
6917 45th Ave. N.  
Minneapolis, MN 55428

Evans, Huw D. G.  
41 Waratah Rd., Turrumurra  
N.S.W. 2074, Australia

Fischer, Hubert A.  
Meadow Gardens  
16 W. 331 63rd St.  
Hinsdale, IL 60521

Geller, Robert J.  
504 S. Collinwood Blvd.  
Fremont, OH 43420

Gilbertson, Ben  
Kindred, ND 58051

Glocka, Joe  
12120 W. Oklahoma  
West Allis, WI 53227

Halas, Edward  
PO Box 2682  
Detroit, MI 48231

Harder, Larry  
Ponca, NE 68770

Healey, F. P.  
Box 27, St. Norbert  
Manitoba, Canada

Hertz, Mrs. Carl  
RR 1  
Nevada, IA 50201

Hollingsworth, Don  
5831 N. Colrain  
Kansas City, MO 64151

Howard, Mrs. Ann  
R 1, Box 476  
Pelzer, SC 29669

Jenkins, Don  
PO Box 192  
Brevard, NC 28712

Kasha, Michael  
Prof, of Chemistry  
Florida State Univ.  
Tallahassee, FL 32306

Kessenich, Greta  
250 Interlachen Rd.  
Hopkins, MN 55343  
Keup, William H.  
Mohall, ND 58761

Klehm, Roy & Chuck  
c/o Chas. Klehm & Sons  
2 E. Algonquin Rd.  
Arlington Heights, IL 60005

Krupke, Herman  
Goldsmedsgarden, Planskola  
S-52030 Ljung, Sweden

Kuesel, Harry B.  
4 Larkdale Dr.  
Littleton, CO 80123

Laney, Harvey J. Jr.  
7322 Denniston Ave.  
Pittsburgh, PA 15218

Langfeld, Joachim  
Franziusweg 21  
1000 Berlin 49, West Germany

Laning, Chris  
553 West F Ave.  
Kalamazoo, MI 49007

Michau, Edward Lee  
1412 N. Georgia  
Derby, KS 67037

Pehrson, Roy  
Highland Nursing Home  
New Ulm, MN 56973

Person, T. (Grower)  
LaHouquette, St. Lawrence  
Jersey, Channel Islands  
British Isles

Rafferty, Peter  
16 Oberdeen St.  
Reservoir Victoria  
Australia 3073

Reath, David  
Box 251  
Vulcan, MI 49892

Ringle, David A.  
Rt. 3, Box 123  
Spring Hill, KS 66083

Rogers, Allan L.  
15425 SW Pleasant Hill Rd.  
Sherwood, OR 97140

Saunders, Silvia  
Clinton, NY 13323  
Schmidt, Bob  
5320 Oakes Rd.  
PO Box 198  
Brecksville, OH 44141

Seidl, Bill  
732 S. 19th St.  
Manitowoc, WI 54220

Sieperda, Richard H.  
36 Midlumerlaan  
Harlinge, Holland

Simkins, John  
1246 Donlea Crescent  
Oakville, ON L6J 1V7  
Canada

Simpson, W. J.  
"Wayside", 602 Nepean Highway  
Frankston, Victoria, Australia 3199

Smirnow, Louis  
85 Linden Lane, Glen Head PO  
Brookville, NY 11545

Smimow, Robert  
R 1  
Huntington, NY 11743

Stribula, John L.  
252-17 Elkmont Ave.  
Bellerose, L.I.  
New York, NY 11426

Syrov, Father Joseph A.  
St. Mary's Church  
Vining, IA 52348

Trommer, Charles  
Tranquil Lake Nursery  
River St.  
Rehoboth, MA 02769

Tvrtkovic Sahin, Zelimir K.  
4 Huys met de Beyen  
Uiterweg 34  
Aalsmeer 1210, Netherlands

VanZandt, John  
9 LeMoyné Ave. Ext.  
Washington, PA 15301

Varner, D. Steve  
N. State Street Rd.  
Monticello, IL 61856

Wister, John  
735 Harvard Ave.  
Swarthmore, PA 19081

Zubrowski, Stan J.  
Box 26,  
Prairie River, SK 50E 1J0  
Canada

SILVIA ASKS: Do any members living in Europe know from whom species peonies may be obtained? Especially interested in *P. emodi* but also in many others —

Same question for the little June-blooming scarlet species *Tulip Sprengerei* (yes, *Sprengerei*) — I've never seen it offered in America and am wondering where my father obtained it — it is now naturalized in my garden where it makes a striking combination among the dazzling pink peonies.

LETTER FROM FATHER JOSEPH SYROVY: Vining, Iowa — July 15, 1981

Dear Chris:

It's time I made a report too, on the "Best Yellows", seeds and seedlings I received from you and Don and others. Found some very good "near yellows" and marked them and also hybridized. They are all prolific seed-bearers and sturdy plants. I've had this same strain in a couple of rows from plants I received from Miss Silvia long ago. I think I gave some to Don when he visited me and also sent some to him. However, I didn't learn until later about the technique of saving and storing pollen until later. He also sent me pollen. He too emphasizes using '**Cytherea**' and others to be used in doubling. It is important that our new hybridizers belong to Paeonia and read Greta's American Peony Society 75 Years, The Peonies by Wister, and of course, the Peony Bulletin. Wish I had read all of them long ago!

Looking back over the years one sees what he did and shouldn't have done, and should have done and didn't! I had a lot of room so I planted too many herbaceous or what we call ordinary peonies. I wish that I had been more selective. I do not regret planting all my tree peonies as I love every one of them. However, they need tender loving care, such as trimming, spraying, besides protection from rabbits (and I have a lot of them around!), fencing them in every fall!

I do not regret planting all the hybrids I have. They are all quite sturdy and disease free. They, however, need protection from "humans"! I do not like to "show off" my display garden to everyone. When they see '**Flame**', they exclaim, "What's that? I never saw anything like it"! Let alone, when you show them '**Red Charm**'! Finally, "You gotta gimme a piece of them!"

I have been "giving away" many of my peonies the last few years. I usually say "Bring a shovel and dig them and you can have them." I reason that if I have to retire - or expire - someone will buy or rent this land and "the cows" will take over.

Last fall a couple of "my good friends" came over, "armed with shovels", and said, "You said you would give us some peonies, so here we are"! They headed right for my hybrids! "You know, Father, that you mustn't dig on account of your heart, so we'll take care of everything." (I don't think I have one piece of '**Flame**', including the seedlings I had planted nearby, left!)

The other lady said, "I want that nice red one you showed me last spring." My poor '**Red Charm**', I thought, as she proceeded to dig. "And here's how we always divided peonies" she said. She took her shovel and really divided it! "You've got to keep a piece for yourself too Father" she said. Fortunately '**Red Charm**', my piece, survived and bloomed! As for the rest, I can always go to their house and admire my hybrids I gave them. Better to give them away and let someone enjoy them. Does a cow relish peonies?, I mused.

Peonies, like humans, don't like to be moved. They thrive in one place and die in another. Why? We don't know. I remember quite some time ago I bought '**Age of Gold**', a tree peony, and no matter what I did with it and coddled it, it finally died. I transplanted '**Oriental Gold**' after I divided it and in its new location also died out.



Year by year, the climate, the environment affects plants. This year my tree peony Kamada Fuji was a sight to behold! It had 25 or 30 blossoms and I walked by it every day - sometimes once or twice to admire it. It was so beautiful! Why?

We finally got a good rain at 1 A.M., over an inch, and relief from sweltering heat and humidity with temperatures around 90°F the past few weeks. It was hard on plants, animals and humans! I hope everything is better in Michigan!

Bless you both.

Father Joe

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Two articles were sent by Father Syrový for comments by the editor --

The scientists have transferred a protein gene from a bean seed to the cell of a sunflower, a member of another family. They call the new plant "Sunbean". Agriculture Secretary, John Block, called the step, which could lead to the development of a new kind of sunflower, a breakthrough that "opens a whole new era of plant genetics."

This new venture hopefully will enable scientists to increase nutritive value of plants, make plants resistant to diseases and environmental stresses, and make them capable of fixing nitrogen from the air thereby eliminating the need of applying costly nitrogen fertilizer.

The "Sunbean" is likely the forerunner of a whole new field of engineered plants that could fill the needs of man in a much better fashion than present plants.

Don't wait for an ever bearing peony. Maybe by using the rose we'll have "Paeorose" - or crossed with the potato we'll have "Paeonatow" (a peony that blooms underground - Ha!).

We do need help from scientists in the propagating of peonies. A breakthrough that aids peony tissue culture would be nice. Oh, let's live another fifty years and see the great things to come.

- Chris

OBOVATA — Chris Laning

In later years Professor Saunders found the right name to be "Willmottiae," so we will proceed to call it by its latter name.

From his records we glean:

Arietina x willmottiae - number of seedlings raised - 15

This strain has lovely foliage, flowers pink - pale - not extra.

Macrophylla x willmottiae - number of plants - 7

One plant recorded as: Fine plant. Huge bronzed foliage, large white blooms two or three days after *P. macrophylla*. Seven F<sub>2</sub> plants of this cross obtained.

Microcarpa x willmottiae - Eleven plants resulted, one of which: light pink in 1936 - not interesting. May 15, 1942 - pollen very few - very few - very few; 5-15% viable. Beautiful delicate lavender white in 1942. Divide (not done in 1942). One F<sub>2</sub> seed in 1942 - no records.

Officinalis x willmottiae - officinalis rosea plena x willmottiae - 3 plants, no notes.

officinalis albi plena x willmottiae - 1 plant - no notes.

officinalis rosea x willmottiae - 5 plants - no notes.

officinalis rubra plena x willmottiae - 3 plants - no notes.

F<sub>2</sub> seedlings from these plants numbered 9 total.

'**Otto Froebel**' x willmottiae - five plants. These are tall, beautiful bronze foliage, and white flowers. Pollen - very few - very few - very few; about 15% viable. F<sub>2</sub> plants - 2 - no notes.

Wittmanniana x willmottiae - seven plants. #11708 has 9 large pink blooms - good - not extra - pollen - few - few - few - 10-15% viable in 1937 and 1940.

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Note: It seems to me (Chris) that willmottiae (obovata) will be of use to us if its pollen is applied to fertile tetraploids.

One plant, '**Silver Dawn**', has been lost. But '**Silver Dawn**' F<sub>3</sub> is available. This is a plant (or strain) that sets seeds rather easily. It is tall and robust with large white blooms. As a pollen parent and as a pod (seed) parent, outstanding seedlings are produced.

I am willing to send a division to 4 or 5 persons who are willing and desirous of using it in their hybridizing programs. This is not meant to be a collector's plant but a hybridizer's tool.

In the past, *P. obovata* seeds were gotten from - Far North Gardens  
15621 Auburndala Ave.  
Livonia, MI 48154

They also have listed *emodi*, *tenuifolia* and one or two other species along with *P. lutea* seeds.