

REQUIRED READING –

1. "The Peonies" by John C. Wister, \$3.50 from American Peony Society.
2. The Bulletins of the American Peony Society.

The PAEONIA is authorized by Miss Silvia Saunders.

Editors are Chris and Lois Laning,
553 West F Avenue, Kalamazoo,
Michigan, 49007.

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SEEDS FOR DISTRIBUTION

- | | |
|---|--|
| 1. 'Archangel' | 11. 'Sable' x lobata |
| 2. 'Archangel' x 'Diantha' | 12. P. lobata |
| 3. 'Archangel' x 'Nancy' | 13. Suffruticosa (tree peony) |
| 4. Quad F ₃ | 14. 'Minnie Shaylor' |
| 5. Red Pod - Clone #2 | 15. Quad F ₂ x 'Moonrise' |
| 6. 'Rushlight' F ₄ - also F ₂ | 16. 'Roy Pehrson's Best Yellow' |
| 7. 'Sanctus' x 'Rushlight' | 17. Roy's 2nd Best Yellow |
| 8. 'Sanctus' x lobata | 18. L.T.K.A. x 'Little Dorrit' |
| 9. 'Serenade' F ₁ | 19. Roy's good flared pink x double white |
| 10. 'Serenade' F ₂ | 20. A number of crosses having only a few seeds. |

21. Seeds from other contributors which have not yet been received. These will be listed later and sent out for spring planting.
22. See Gus Sindt's letter on Page 10 - for lactiflora seed.

INSTRUCTIONS FOR FALL AND SPRING PLANTING OF PEONY SEEDS:

1. Sow seeds about 1-1/2 inches deep, 1" apart in the row, and rows 4" apart — in early fall.
2. Give them good growing conditions — water, and protection from driving rains.
3. Prevent tree peony seeds from freezing (cover with Styrofoam before soil freezes).
4. In Spring, begin a program of watering, spraying, weeding, fertilizing, cultivating (using a fork or pencil) and provide shade and protection using slats (strips of wood) nailed in such a manner as to provide "one-half" shade. Place this "slat grid" low enough to keep rabbits, dogs, cats and birds out of this nursery area. (Birds like to take dust baths.)

Now, what is to be done if the seeds don't germinate? Remember this!, some seeds (such as lobata hybrids) may take two years for germination so continue your program. Remember this too, one-half of the seeds from each lot (each cross) should have been saved (not planted in the fall). These may be planted in late spring or early summer (June or July — or even August). These seeds probably will

not show growth above ground until the following spring. Give the planting the same care as the fall planted seeds.

Note: If this seems like a lot of work, don't forget that the area of this project is small - approximately 36 seeds per square foot.

Transplant seedlings when they are about two years old. July and August are the best months for the transplanting.

These instructions are directed mainly to you PAEONIA readers who live in foreign countries.

- Chris Laning

AN IRIS BOOK WITH SOMETHING FOR PEONY BREEDERS
by Don Hollingsworth

There is a new book on irises available which contains much material that peony breeders may find to be of keen interest. The World of Irises is edited by Bee Warburton with assistance of Melba Hamblen. It is published by the American Iris Society, Carl Ramsey, Secretary, 6518 Beachy Avenue, Wichita, KS 67206.

This is a comprehensive work, having a chapter on botanical classifications, 17 chapters on various horticultural groups of irises, and several chapters covering cultural technology and breeding information. The whole is supported by ample illustrations, reference lists, and appendices. Some peony breeders will be especially interested in the account of iris pigment studies by Prof. Norlan C. Henderson, plant taxonomist at the University of Missouri, Kansas City, and an iris breeder. Prof. Henderson uses chromatography techniques to determine the pigments present in iris flowers as an aid in planning matings.

The chapter on genetics is by Kenneth K. Kidd of Yale University. He provides a remarkably lucid survey of the basic genetic principles relevant to plant breeding. For example, the effect of tetraploidy on the expected results from gene segregation and recombination is treated, something one does not expect to find at all in basic genetics texts. Of course, one cannot expect the equivalent of a genetics text in one chapter, but I believe that peony breeders may get far more understanding from the study of a textbook if this chapter is read first.

Perhaps the most inspiration for a peony breeder will be found in the chapter, "Tall Beardeds", by Melba Hamblen and Keith Keppel. Their historical perspective on the emergence of contemporary tall bearded irises affords a "yard stick" against which one might try to evaluate where we have so far come in peony breeding. (Remember the little yellow iris with the brown falls? Or, the blue one with grape fragrance? The early purple one? Contrast those with the tall boarded irises being introduced now and think about the step by step gains that led from the first group to the other.) Mostly, I feel this chapter reassures that perseverance against the low fertility odds in the interspecies hybrids brings out possibilities that can scarcely be imagined until they are actually achieved. This is a book that is worth your time if you are interested in plant breeding.

HIGHER THAN EXPECTED POLLEN GERMINATION RATE IN TWO F₁ HYBRID PEONIES by Don Hollingsworth

The low fertility that is frequently encountered in hybrid peonies — those that are hybrids between species — is often found in association with abnormal pollen grains and with reduced production of pollen grains. The abnormalities seen in individual pollen grains may be those of shape, size or ability to grow a pollen tube capable of reaching the egg, as is required before fertilization can take place. (In addition, there will be genetic and chromosome behavior causes of infertility beyond those expressed in pollen abnormalities.)

When the members of a hybrid group have been found to be generally infertile, it is usually also found that certain members of the group will have enough fertility to occasionally give offspring. Once this has been determined, one can then concentrate on these individuals, using whatever techniques can be discovered for maximizing their yield of progeny. For example, once it is known that a clone has produced a seed, this is evidence that it has produced a viable germ cell and it will probably always produce a few viable germ cells. In order to maximize the probability of recovering these few cells, one might elect to pollinate liberally with a pollen that is believed to have a relatively high fertility. If success is achieved, then it will eventually be possible to estimate the number of flowers necessary in order to get a given amount of seeds and to have a high probability of being correct in the estimate.

The same reasoning applies to pollen fertility — demonstrated seed production can be built from and one can do so with a useable degree of confidence. However, the germination of pollen on artificial media and the examination of ungerminated pollen grains — requiring relatively low power magnification, as microscopes go — can also be used to predict the ability of pollen grains to function, this significantly increasing the probability of success. This is, of course, only useful if a reasonable amount of pollen can be obtained from the individual plant that is of interest.

Following the implications of the foregoing, and for reasons of studying pollen storage life, I germination-tested many pollen samples during the 1978 flowering season. There were numerous samples from Lutea Hybrid F₁ clones and Saunders Lobata of Perry F₁ clones, both of which have a reputation of little or no fertility, as a group. The test results ran very much as expected, perhaps a little poorer this year than in previous seasons for some clones. There was, however, a surprise clone that emerged in each group.

'**Age of Gold**', of the Lutea Hybrid tree peonies, had never been used here before, because there is so little evidence of pollen in the anthers. This year my friend, Fred Lemkuhler, challenged my allegation that it is worthless as a source of pollen, so I was constrained to attempt a test. Although I gathered all the anthers available, there was only a little pollen from the batch. However, the germination was very good, almost as good as that of the best germinating Lutea Hybrid F₂ pollens that I have tested. '**High Noon**', on the other hand, yields a great deal of pollen, but I did not achieve a single pollen tube in the several batches tested. The inescapable conclusion is that '**Age of Gold**' probably makes as many good pollen grains as any other Lutea Hybrid F₁! One Gratwick/Daphnis F₂ was no better than the best previously tested F₁, '**Tria**'. D-300, an F₂, gave a little pollen which tested about like that of '**Age of Gold**'.

'**Tecumseh**' was the surprise clone of the Saunders Lobata of Perry hybrids. The F₁ individuals of this group are triploid and the fertility is expected to be poor for this reason. Many will produce a very small incidence of seeds rather dependably and their pollen often produces a small incidence of

germination on test. When their pollen is used on clones having reliable fertility, some of them have demonstrated the ability to sire offspring, in satisfactory numbers. '**Tecumseh**' pollen produced a remarkably higher proportion of pollen tubes than any other SLP tested so far. There were as many tubes as are produced by many F₂ herbaceous hybrids that are conventionally accepted as "fertile". This result is in striking contrast to my previous expectations.

'**Tecumseh**' is the one identified SLP hybrid that was not bred by Professor Saunders. It was produced by Dr. Earl B. White, who also produced '**Claire de Lune**', '**Massasoit**' and '**Nancy**'. '**Marie Crousse**' is the reported pod parent, a most happy prospect, for it has been identified as parent of some of the finest colored pink flowering Chinese peonies.

It is too early to tell whether '**Tecumseh**' and '**Age of Gold**'s superior pollen germination will result in equally better seed production from crosses using these pollens. However, since it is the season for adding peonies to your collection, I am inclined to recommend that these two be added by anyone who wishes to make crosses involving their respective hybrid groups.

MORE RESULTS OF CROSSING CHINESE PEONIES with LITTLE REDS HYBRIDS by Don Hollingsworth

Little Reds Hybrid peonies are sought primarily for their potential as breeders. Small in stature and with wild type flowers of warm red, vermillion and salmon tints, they were produced by Professor A.P. Saunders from double flowered forms of the *Officinalis* peonies. Their pollen parent was originally published as the famous Lobata of Perry, but this is now modified by the recent report that part of them are from a different Lobata clone. It has already been shown that some of the Little Reds can give bomb double progeny when mated with certain clones of the Chinese peonies (*Lactiflora*) and it is hoped that they will also prove to be satisfactory progenitors of the fine color effects that are typified in the Saunders Lobata of Perry Hybrids.

In my garden progeny of two different Little Reds have attained flowering age. One of the pollinators is '**Good Cheer**' and the other is an unidentified clone from Silvia Saunders that I carry as "Little Red" for records purposes. In addition, I will relate below a report by Richard Edblom on seedlings he has of '**Scarlet Tanager**' pollen.

With respect to the '**Good Cheer**' seedlings, the occurrence of doubles among them seems not consistent with my expectations, based on current conclusions with respect to the inheritance of doubling. '**Good Cheer**' is out of *Officinalis Alba Plena*, which has all-over transformation of stamens. The trait is believed to be inherited as a recessive and has been tentatively presumed (by me) to be equal to the gene for all-over stamen transformation that is in the *Lactiflora* peonies, so that when both are present their effect is accumulative, just as occurs within each species.

Thus, '**Good Cheer**', a tetraploid, would have four loci for the gene, one on each of four chromosome "sets". Two loci would be occupied by transformation genes from "Alba Plena" and two loci occupied by wild type (for normal stamens) genes from the other parent, "Lobata of Perry". When '**Good Cheer**' is crossed on the diploid Lacti peonies that also have transformed stamens (Japs, bombs and certain full doubles) a share, perhaps one-fourth of the triploid seedlings should be Japs or bombs in flower type, having all three loci occupied by the transformation gene. From Lacti parents that have normal stamens but which also carry the recessive transformation gene on one chromosome, a one-eighth share of the seedlings might be Japs or bombs.

My older seedlings of '**Good Cheer**' are out of '**Miss America**', '**Karl Rosenfield**', '**Christine**', '**Sword Dance**' and '**Westerner**'. The first two are genetically two-stage doubles with stamens, the others have Japanese type flowers (all-over stamen transformation). Of about 20 progeny, none have all-over stamen transformation,. From '**Miss America**' two of four have a few extra petals. From '**Karl Rosenfield**' there is one single, one with many extra petals and one that is a two-stage double (about like '**Heritage**'). The others are all singles. All have at least some normal stamens. I had believed and still hope that '**Miss America**' or '**Karl Rosenfield**' also carry the transformation gene.

In a group that commenced flowering in 1978 there are several bomb doubles. These are out of Jap flowered Lacti peonies '**Nippon Gold**' and another which I carry as "Wolfe Seeder". At least one is extra full centered and especially large. In color, a "dusty" tone, or greyed effect is very definite, but the colors are warm and pleasing in effect. I suspect that the dusty one reflects the presence of the prevailing purplish pigments of the Lacti peonies and that the warmth comes from pigment genes contributed by '**Good Cheer**'.

Dick Edblom reports that he had '**Scarlet Tanager**' pollen from Roy Pehrson and raised seedlings of it from '**Moon of Nippon**' and '**Le Charme**'. He writes that, "This year six plants bloomed and two were very double. One was a coral at least three inches wide and the other a dusty pink. One double was '**Moon of Nippon**' x '**Scarlet Tanager**', and the other '**Le Charme**' x '**Scarlet Tanager**'.

My results from using the unidentified clone, "Little Red", deserve mentioning, but only for reasons other than what they contribute to our understanding of doubling. Twenty or so hybrids of it from Japanese flowered, semi-double and double Lacti peonies all flowered single this year, except for a few having an extra row of petals. "Little Red" is of interest because it shows promise of making possible the production of a seed grown strain of garden hybrids that are especially uniform in both plant and flower. Thousands could be raised at a time, once a production system is set into motion. Seed production from its pollen on Lacti pod parents is generally excellent, germination is excellent and seedlings are strong. Except for a little group out of '**Big Ben**', they have been of uniform size at every stage of development. I do not recall a bad flower in the bunch. There is a variation in the timing of foliage die off which may be varying with the Lacti parent. By selecting the best Lacti parents out of those tried, I believe a uniform product can be developed with very little loss from roguing being necessary.

"Little Red" is a quite dwarf plant and the color quality is similar to that of '**Good Cheer**', though more densely pigmented and less translucent in petal quality. Its breeding behavior is more like one might expect from an inbred line or a species, not variable as expected of hybrids or open pollinated plants. This leads to the speculation that it is of an advanced generation in the group.

The evidence presented in a separate article by Roy Pehrson and here from Dick Edblom and me demonstrates that '**Good Cheer**', '**Little Dorrit**' and '**Scarlet Tanager**' have the genetic capability of giving bomb double and Japanese flower types from certain clones of Chinese (Lacti) peonies. '**Good Cheer**' has shown, in addition, the ability to permit the expression of two-stage doubling when the Lacti pod parent is a two stage double, specifically '**Karl Rosenfield**'. While this type of mating usually produces few seeds due to the carpel reduction and distortion encountered in double flowers, the high fertility of Little Reds clones makes this type of mating achievable. Sooner or later there will be full double progeny with both all-over stamen transformation and two stage doubling, as seen in the commonly occurring full double Lacti peonies. However, if the desired color effect is to be achieved, it may depend on using Lacti parents that are relatively free of the commonly occurring purplish flower pigments.

NEWS FROM ROY PEHRSON

A Dandy New Hybrid Peony

Some years ago, on a whim, I ordered a plant of the Saunders "Little Red," '**Little Dorrit**', from Silvia. It had a small crippled bloom the following summer and I used the pollen on a few blossoms of some lacti or other. Then I did something which has not been a common practice with me. I planted the few resulting seeds out into a short blank space in a garden row that same fall. That was all right, of course, but I neglected them afterwards. I failed to transplant them as two year olds. They continued growing there on about a one or two inch spacing, unable to develop properly. I paid no attention to them as the foliage suggested that they were nothing but "accidental lactifloras" anyway. Then in 1976 several of these crowded plants bloomed. This one was a small full double of nice lobata type coloring. It was transplanted into a choice permanent spot that fall.

In 1977, despite the transplanting, it had another and even more attractive flower, so it was with considerable anticipation that I looked forward to this summer's performance, I was not disappointed with what I saw. There were six lovely blooms on a perfectly proportioned plant and with really nice foliage. The newly opened bloom is about 4-1/2 inches in diameter, enlarging to 5-1/2 just before petal drop. It is pretty much of a round ball in form. Though it has carpels it can hardly be called a bomb type as the guards are not prominent. The color is a light red or possibly very deep pink of a warm hue which can be compared only to some of Saunders "Lobata of Perry" hybrids. As the flower ages it fades to a very pale pink, much in the same way as '**Laura Magnuson**' but keeps the red deep in the heart of the bloom.

I think this one has to be classed as a semi-dwarf as the stems are only 24 to 25 inches tall and the foliage on the upper part of the stem is not profuse. Everything fits together to make this a most attractively proportioned plant.

This is the best seedling I have obtained. I intend to register it and name it MARY JO in honor of Miss Mary Jo LeGare who has been of such great help to me in the garden the past several years.

I like to believe the following:

- (1) That this is the best border peony in existence.
- (2) That this will be considered by some as the best herbaceous hybrid to date. Someone other than me shall have to volunteer to propagate and then distribute it.

I forgot to mention that this hybrid blooms in the middle of the lacti season. With only a few exceptions, the quality of bloom this year was simply grand — the best I have ever known. It helped a lot in evaluating seedlings.

For a few years now I have been giving away seeds, young seedlings, etc., so I had thought that there was little likelihood of finding good things any more. Instead, there were more new interesting plants than in any previous year. There were several double whites among the fertile tets. Some flared singles, also in this group. Then another look at those '**Good Cheer**' hybrids. Last, but certainly not least, there was at long last a yellow Ito of real merit.

About that Ito. When this was transplanted, the note "very strong" had been marked on the stake. This is certainly accurate. It is very vigorous. The plant is just fine with foliage of medium width, dark green. The flower is a single with ten petals and opens out nice and flat in warm sun. Color is very light yellow with attractive large flares. Well formed carpels are palest green with pink tips. The half-length sheaths are white. There seems to be a modest amount of pollen. This should be a very useful addition to the existing group of these hybrids.

Results with those '**Good Cheer**' hybrids were inconclusive this year. They are really much too crowded. Two doubles of somewhat '**Red Charm**' type were not very good. Foliage may be quite poor and stems may be weak, flowers not really superior. A rather tall jap, apparently with quite good stems and good leaves. I really can't describe the odd color but call it pink for lack of a more imaginative description. The flower is fairly large because of the very long guards. On the largest bloom these are recurved or almost "folded" back at about the mid-point of their length. This is probably a flower not everyone would consider beautiful, but it is certainly very novel. As it bloomed for the first time this year, this next one was a loosely built full double of unbelievable brilliance. It immediately caught the eye of every visitor from a long way off. If this one turns out well it should prove to be a real sensation.

This next one baffles me. It had a real good flower last year. This year there was still only one stem, very heavy and strong too. This was topped by the most massive hybrid bloom I have ever seen, red, very high built, and so perfect that it would easily have taken "Best in Show" honors anywhere. Like MARY JO and '**Laura Magnuson**', it fades on aging to a light pink, and retains the petals for a long time. I wonder if it will ever repeat this great show and if it will decide to increase at a satisfactory rate. It certainly has some of the makings of a really great peony.

To phase out my operation, I must divest myself of useful plants and some seedlings which may very well have merit, but which must have the benefit of further evaluation. A few of these:

LULLABY — Let me know if you would like to have a plant; just write to me. There are plenty of them to go around.

A red jap chance seedling of the lacti '**Garden Glory**'. A big old clump. It is real good for sure. As good as any of the red japs in commerce and it is just possible that it is a bit better than any of these. Should make three divisions easily.

The accidental lacti seedling of '**Laura Dessert**' I have long known by the pet garden name JUNIOR MISS. It has a peculiar bud formation which may or may not be a detriment. This was certainly not the case this season since its performance was simply wonderful. This is a full double medium pink without either stamens or carpels. Chris, I am sending you a couple of transparencies which you might also send on to the others if you wish. These should give you a fairly good idea as to the looks of this one. This one too can be divided. Please let me hear from each of you.

Next is a big single pink-white seedling of a big pink bomb type lacti (name unknown) pollinated with '**Archangel**'. A triploid of course, but makes a small number of self-set seeds anyway. Only a single, but the flowers are big and the whole plant is so big and strong and well proportioned that it makes a rather impressive showing when it is in flower. Vastly better than its pollen parent '**Archangel**'. I have not seen any of the Saunders Lacti x macrophylla backcrosses, but I seriously doubt that any of them could be better than this. Big enough plant to go around. Again, let me know.

The above three plants should be dug this fall while I still have the help I must have for such big plants. Mary Jo will be a graduate nurse by the end of the next college year and won't be around next summer. She will be married as well. Wish her well. She is now wearing a diamond as big as a horse —. (Fly? - ED.)

Aside from the tree peonies the only pollinators used this summer were '**Little Dorrit**' and a double white, probable tet. Both are making real good seed sets. The seeds will be sent to Chris for his disposition.

Until this year, I had been sorely baffled by the behavior of the four Saunders "Little Rods" in crossings on lactiflora. Now a bit of information in Silvia's recent summary of her father's work serves to partly clarify the matter. She states that in the making of two of these — '**Good Cheer**' and '**Little Dorrit**', the "Perry" clone of *P. lobata* was used as a parent; whereas the other two — '**Scarlet Tanager**' and '**Ladybird**' — had a different clone of lobata as one of the parents. This appears to make a lot of difference in the pattern of inheritance of both a doubling tendency and of wanted color. Based upon these differences in parentage as well as on some of my own experience, I am now prepared to state my own thoughts concerning the usefulness of each of those plants as potential parents.

'Good Cheer'

There is no doubt at all about this one. It is marvelous! Possibly 50% of the seedlings will be doubles of some sort. The singles, therefore, are of little importance. Color seems to vary in shades of red from "pretty good" to "wonderful!" I have never seen or owned this plant. I have grown only a few seedlings resulting from a more dab of pollen once sent to me by Silvia. Yet I am entirely sure of myself where this one is concerned. Every hybridizer who can obtain a plant of this should surely do so. I think it's just too bad that — "man gets too zoon oldt undt too late schmart".

'Little Dorrit'

This plant has never really flourished for me. It surely lacks something in vigor in my garden. It is a tiny plant, and this is OK, but it increases hardly at all. Even now, after several years, it had only three stems. Because this plant has been so unimpressive, I made only a few crosses when it first bloomed and none in following years. It was among this small group of seedlings that I selected what has turned out to be the most pleasing hybrid I have ever obtained — the one I propose to call MARY JO. I can't know whether this was just a lucky roll of the dice or if perhaps it might produce other goodies. The presence of the Perry clone in its makeup makes me optimistic, and I used all of its very potent pollen in crossings this season. Those who may have this plant should surely try it out.

'Ladybird'

I have not seen this plant or flower either. Silvia once sent me a gob of its pollen and from this I grow perhaps about two hundred seedlings. Most were strong growers; quite tall, and every one was single. Colors were mostly nondescript, none of them showing any real evidence of that good lobata color. I did not save a single one of them. This performance was a real puzzlement to me until I finally learned, this year, that this one does not have the Perry lobata in it. Don't waste time and effort with this one!

'Scarlet Tanager'

I have this plant. I once pollinated about 90 blooms of the lacti '**Shaylor's Sunburst**' with it but obtained few, if any, seeds. Possibly I had damaged the pollen or maybe it just is not viable. At any rate, I don't really know anything about the sort of hybrids it may be capable of producing. Now that I know that its parentage does not include that good lobata, I very much doubt that it can produce anything comparable to the seedlings from '**Good Cheer**' and '**Little Dorrit**'. I'm afraid it would behave more like '**Ladybird**'. If you have the plant you may probably have tried it already. I don't object to having my guess proved incorrect.

- Roy Pehrson, Lafayette, MN.

MORE ITEMS AND IDEAS (From Roy)

I don't know why I saved this plant when I destroyed nearly all the rest of them in this row. Maybe because it is completely double as I certainly had failed to notice its unique habit. It is another of those seldom seen cluster flowered in which you are interested. Can hold 7 open at once, including perhaps the just slightly earlier and slighter larger center. The laterals are real long. Blooms have neither stamens or carpels. This in itself is rather odd in a bloom so small. The doubleness would certainly make this the winner in a show where another entry would have the same number of open blooms. Vastly better than such a one as '**Silvia Saunders**'. Look for the root which I will tag "cluster flowered".

A half dozen or so of new Itos bloomed this year. Most of these had better looking carpel tips than those previously sent to you and Bill Seidl. I'll send these too if I manage to get them dug. There were also two more dark reds with complete flowers. Both of these are stronger growers than the two which I think I divided between you. One of these reds is behaving strangely. It is making a very tall stem with big leaves, still growing. I don't think that it will finally terminate with a late bloom as some "re-blooming" luteas will occasionally.

Addition to statement about '**Scarlet Tanager**':

This one does have a desirable color, so I may be wrong about its potential. Should any reader care to have this plant, I. may manage to dig and send it on, if you will write to me at once.

I have seen only my own plant of it, but have long known that the species *P. lobata* is variable in color. It appears that it is quite variable also in other heritable factors. With this knowledge newly reinforced, I'm now sure that I can understand my own poor results with the laci x lobata cross. I bloomed a bit more than 500 plants of this, all from pollinations made in a single season. None had a wanted color, nor were the plants very good either. I did not save any.

I purchased a plant of lobata from Silvia and when it chose not to bloom right away, the late Sam Wissing of Chicago was so kind as to send me pollen from his own plant. It was this which I used in those crosses. In our exchange of letters, Sam did not describe the color of his lobata as if he was describing my own plant. I just assumed that his eye for color differed from mine. Later I was to bloom two plants from self-set seed sent to me by Sam. I was startled to see that they were crimson in color and with coarser foliage than mine. By this time I should have made some more crosses, using my own pollen, but by then I had become engrossed in trying for Itos. So??? Well, I just never did use pollen from my own plant.

It has been established, by means of paper chromatography that there is a yellow component in the scarlet color of mine. I wonder if this may mean that there is some affinity between my plant and the "Perry" lobata from which Saunders obtained some of his better hybrids. If so, perhaps my plant could produce good ones. I no longer have the time to test this.

The mature clump by now has become badly invaded by quack grass. It should be dug! I can probably break it up into a half dozen pieces or so. If any of you PAEONIA people should care to try it, I will send it out. Just let me know right away.

- Roy

LETTERS

Dear Chris,

9/11/78

Here are a few peony seeds. I didn't get the spent blooms removed and don't feel I would like to have all these seedlings coming up among my named varieties. They are from all types including a few hybrids. I managed to recognize '**Edward Steichen**' before it got into the buckets so that is separate. Too hot to plant peonies here. In the 90°s for almost two weeks -- always the weatherman promised just one or two days more. Hope you will find some use for these seeds. See you in Illinois in May.

- W. Gus Sindt, 14252 Fifteenth Street South, Afton, Minnesota 55001

Mr. Peter C. Laning - Dear Sir;

4/26/78

Thank you for the peony seeds recently forwarded and which I was very pleased indeed to receive. The variety and number of seeds in the parcel was somewhat surprising and exceeded my expectations. While it is hoped that I can do justice to them and be successful in raising them, even a low percentage success rate will give me great pleasure and I am sure of being proud of any achievement I may have with them.

Did Ms. Kessenich tell you I am a raw beginner and that information regarding Peony Culture was extremely minimal over here? I had spent two years researching the subject here but it was not until receipt of advice regarding the A.P.S. and Ms. Kessenich that much encouragement was received. There are only a few people over here with moderate collections built up at considerable expense by importing bare rooted plants which must be left in quarantine up to twelve months. Even though quarantine charges are high, the mortality rate of the plants is also correspondingly high, e.g. 25 plants imported could result in 2 or 3 only to be received, consequently it is beyond the reach of ordinary people.

Our seasons here are naturally the reverse of yours, so that I imagine the seeds would have been in cold storage prior to being sent to me. However, as a precaution I will hold them in cold storage for a while before proceeding. The labels attached appear straight forward and should present no problems; however the ones labelled Quad F₃ have no significance to me at this stage. As I presume it is a special cross you may wish me to take note of any results and advise you accordingly. However, as my venture proceeds I shall be pleased to report any success to you, and of course the A.P.S.

Again may I express my thanks for the help I have received.

- P.F. Roi du Plessis, 21 Vermont P, Groonsborough, Victoria, 3088, Australia

MORE ON SAVE THE CLONES

The Goldsmiths are discontinuing their nursery business this year. They are offering many "hard to find" clones (which should not be lost to the hybridizer) at a very good discount to induce us to take advantage of this last chance.

More than 150 hybrid clones are being offered and about 70 lactiflora kinds. They say: "We still have some of the unnamed block of lobata seedlings from Prof. Saunders, orange lacquer reds and satin pinks "01 to 034 at \$5.00 each". Now with their discount, this looks good!-- maybe our last chance!! They also say, "Most of our peony orders are filled in September, but we can fill orders through February. Their address is:

Goldsmith Nursery
9108 Olympic View Drive
Edmonds, Washington 98020