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AMERICAN PEONY SOCIETY

W. F. CHRISTMAN, Editor
Northbrook, Ill.

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Table of Contents

	PAGE
Party for Twenty — <i>Neal R. Van Loon</i>	1
Roots, the Hidden Key to Peony Success — <i>Roy G. Gayle</i>	2
Mulches for Peonies — <i>J. F. Styer</i>	5
Comments from Iowa — <i>Mrs. Ruth H. Brant</i>	7
Experience of an Amateur — <i>W. T. Coe</i>	9
A Communication from Stembel Gardens — <i>Mrs. Chas. Stembel</i> . . .	10
Fragrant Peonies — <i>James Mason</i>	13
Unburdening My Mind — <i>Benjamin W. Guppy</i>	15
What's Wrong with Fertilizers? — <i>Prof. Alex Laurie</i>	17
My Northern Peony Garden — <i>W. T. Coe</i>	18
Planting Peonies in Home Gardens — <i>J. F. Jones</i>	19
Comments from Missouri — <i>B. C. Auten</i>	20
Bulletin No. 100 — <i>George W. Peyton</i>	23
Nematodes and How To Control Them — <i>W. F. Christman</i>	33
Rosenfield Peonies — <i>Floyd Bass</i>	37
How to Cut and Prepare Flowers for Shows — <i>L. W. Lindgren</i>	39
Peonies in Colorado — <i>M. J. Webber</i>	40
Comments from Indiana with Cultural Directions — <i>Fred E. Winslow</i>	42
Random Notes — <i>Edward Auten Jr.</i>	45
The Brand's Golden Anniversary — <i>L. W. Lindgren</i>	48
List of New Members and Corrections of Addresses	49
Peony Rambling — <i>M. C. Karrels</i>	51
I Planted a Peony — <i>Ralph Schroeder</i>	53
Two New Races of Peonies — <i>Prof. A. P. Saunders</i>	55
Secretary's Notes — <i>W. F. Christman</i>	59
Beginnings — Progress — Accomplishment — <i>E. F. Kelsey</i>	60
Special Notice: Annual Exhibition and Meeting	65



AMERICAN Peony Society Bulletin

DECEMBER - 1945

"Party for Twenty"

NEAL R. VAN LOON, "*Madylone*," Newton, N. J.

In this neighborhood recently a very unique party was given in the home of Mr. and Mrs. Peonia Fann. It was for celebrities only. Specific and strict orders were given to the doorkeepers not to admit more than twenty guests. No attention whatsoever was to be paid to size, age, height, color, race, breed, background, pull, palaver, or pedigree. Each guest was required to wear finest party duds. The real sixty-four dollar question to be put to each would-be guest before being admitted, was to be on his or her character and temperament: "Have you gracefully fulfilled your purpose in life, year after year, and are you still disposed to keep on keeping on, in that dutiful attitude even when circumstances turn against you?"

A whole host of aspirants were turned away because of serious flaws in their character. Quite a number of really important people were heartlessly blackballed just because the doorkeepers had heard that they had shirked their work a few times or had lost their poise and temper, or had just sulked.

Le Cygne and *Hansina Brand* were not deemed too trustworthy. It was feared they might ruin an otherwise splendid party.

Therese and *Mons. Jules Elie* came together. It was plain to see that they really were somebody, but unfortunately they had been caught in a shower and they looked too bedraggled to mingle in such company.

Mrs. A. M. Brand and *Grace Loomis* had faces that were not open, nor frank enough. *Walter Faxon* was all pale and faded, and *Phyllis Kelway* (so some people reported) had been seen several times tousled and soused, although on the other hand she was also thought of as the prettiest girl in town.

The list of the twenty fortunate ones who finally got in and who made a night of it, follows:

Martha Bulloch, buxom, but magnificent.

Myrtle Gentry, with her customary expensive, tempestuous perfume.

Cornelia Shaylor, plainly and elegantly dressed.

Minuet was there, as was also one *Dancing Nymph*. This last one got quite flirtatious, but was well liked anyhow.

Alice Harding came in on *A. G. Perry's* arm and did the people turn their heads to gawk again and again at that couple!

Demure *Elsa Sass* scarcely came up to other folks' shoulders, but she was the darling of the evening and the sweetheart of everybody just the same.

Venus herself was there, tall and delectable, and proud.

With supreme self-confidence *Nick Shaylor* never batted an eye as he stalked past the guards. (Good old Nick, lovable old Nick.)

Mrs. F. D. Roosevelt blustered and barged past also, still going places with much ado!

Mary Auten reminded one of a modest country maiden.

Frances Willard was not so garish, but everyone knew that the very heart of sturdiness, fidelity and honor was ingrained in her character.

Dressed all in white was *Plymouth*, as was also *Kelway's Glorious*, except for a few red accessories.

There was nothing in their names to recommend them, but *Kickapoo*, *Nippon Beauty*, and *Isani Gidui* were allowed in.

A tall, dusky gentleman was ushered in. He was peculiarly clad in deep crimson, head to foot. He came late, but was soon a party favorite. It was learned he bore the name of *Cherry Hill*.

Last to arrive was *Lady Alexandra Duff*. Maybe Mr. and Mrs. Fann were unwise to say it so openly, but they exclaimed, "Why, she is about the loveliest person present. So ineffably dear and beautiful is she that she reminds us of some low sweet psalm upon the water when the sun is down. How can anyone resist her?" They couldn't!



Roots

The Hidden Key to Peony Success

ROY G. GAYLE, *Rockford, Ill.*

Peony growers in general are disposed to blame soil-conditions for plant and flower failures. The use of the word "failure" is construed to mean weak plants and mediocre flowers.

My personal opinion is that, by far, the majority of failures can be attributed to improper preparation of root-divisions and careless planting.

The dividing of peony roots is, to me, the most interesting and the most important phase of peony culture. It is as essential to successful results as skilled surgery is to human welfare, and skilled tree surgery is to horticultural operations.

Tree surgery is the science of removing unnecessary surplus wood, interfering or injured limbs, or such limbs and branches which in later years will interfere, or produce an unbalanced pattern. Anybody can saw a limb from a tree, or prune a branch from a shrub, but to do this properly requires an understanding of the habits of the tree or plant, and knowledge of the proper balancing of the root-system to the plant superstructure, in order to obtain a strong vigorous plant. The same fundamental principles, if applied to peony roots, will pay big dividends.

It is a difficult task to attempt to treat, in words, the subject of root surgery. If this were like a surgical clinic, wherein the victim is exposed to observation, then the task would be quite simple and no doubt much more interesting and instructive.

On several occasions I have been invited to address garden clubs on the subject of peonies. Fortunately these assignments have occurred at the normal peony dividing time, so I took advantage of the opportunity by digging a plant and dividing it in the presence of the audience. I consider this method of "talking" to be far more instructive than debating the uncontestable fact that the peony is the monarch of the flower kingdom.

An eminent peony authority once stated that a root division should never exceed the size of the hand with outstretched fingers. That is a good general guide and quite generous. However, size alone is not the key, as other details are far more important.

A new division is comparable to a lazy "nigger"; give either plenty of food and they refuse to work. A large division with a surplus of food stored in its roots is not disposed to start working to make new roots the first year. It simply gets lazy and only bothers to assimilate the over-supply of stored-up food. The first year the eyes develop into many fine strong-looking stems — and the gullible owner thinks he sure hit the jackpot on his purchase. But, lo — the second year! Having expended its resources the preceding year, by not having been forced to work to send out new roots, the multiple of eyes that developed finds the food supply to be insufficient and the plant becomes devitalized and never again seems to regain sufficient stamina to produce fine flowers. The moral is to cut-back hard — starve it — and force it to get to work and build a sturdy root system.

If a properly divided three to five eye division produces but one or two stems the first year, which do not even appear to be strong, do not let this alarm you, for you can place your bets that those "weaklings" will ultimately produce grand flowers. By severe dividing a plant will be a bit slower in arriving, but it is well worth the sacrifice of the first-year bloom (which is subnormal anyway) to gain the thrill of many succeeding years of flowers which will cause your friends to regard you as a successor to Luther Burbank.

Keep in mind that you are aiming at a first-year root system. A third-year-sized plant the first year will most likely produce a first-year flower the third year.

Just what is a perfect root division? My idea of a perfect division is in fact *not* a division, but is the complete two-year development of an originally small division. Its roots "star" out in all directions from the crown like the spokes of a wagon wheel. A division of that type does not require shock surgery. By simply severing the original planting-stock root, a perfect pattern results, with fresh, clean, healthy, vigorous roots — capable of supporting a self-balanced group of plump eyes.

But to acquire a perfect division is another thing! Why? Well — if a commercial grower took the time to first properly divide propagation stock, then grow, cultivate, dig, clean, trim, label, pack, and ship this "perfect" division at the prevailing market price, he would develop a permanent case of malnutrition.

Propagation stock with roots in excess of three-fourth-inch in diameter seldom produces a first-class, well-balanced division. A small propagation division will in two years produce one perfect division; in three years: one perfect and one semi-perfect, plus some suitable stock for continued propagation. After three years the grower has developed a commercially profitable plant — from which the purchaser acquires perfectly abominable

merchandise. A heavy plant divided through the crown does not make a good division as it requires a heavy draft on its vitality to heal the wound and also results in a lopsided, unbalanced system.

Even viciously manhandled and mutilated roots are endowed with the will to live and grow regardless of the brutal treatment given to them. There is, however, no secret known which will change the destiny of an improperly trimmed and carelessly planted peony. The problem is, what to do about it! And that forces out the purpose of this discourse. The first step in dividing or retrimming roots is to clean off all fiber and secondary roots. Then start eliminating the surplus roots, and cut off volunteer eyes that may have developed too low down or underneath the crown, provided there are sufficient upper eyes.

As previously stated — the root pattern should be shaped like the spokes of a wagon wheel. If the roots are tight together, like the fingers of the hand with the fingers held together, then take a narrow-bladed sharp knife and cut out alternating roots so the remaining roots will have room to expand. Be careful not to cut into or damage the adjoining roots, and leave a clean-cut smooth surface which will heal quickly.

The cleaning off of all small rootlets is the most important detail of all. Then let nature take the initiative and you will find that she's too smart to grow new roots all tangled up and girdling each other, thus choking off food supply. The mess and mass of gnarled and twisted roots we usually find is the result of negligence of this detail.

Some varieties develop abnormally large-sized roots (*Reine Hortense* for example), and if large roots are cut off square at the ends, the result will ultimately be a mass group of small roots forming around the cut, similar to what is known as a "witches' broom" formed on improperly pruned tree limbs. Cut the root on an angle of 45 to 60 degrees and slightly round the sharp edges of the cut. Make the cut on the under surface of the root except where two heavy roots are quite close together, in which case make the cuts on the outer sides (not top or bottom), leaving the pointed tips to the inside. This is the reverse of tree-trimming principles wherein cuts are made so the terminal buds will branch in opposite directions. But peony roots do not have buds like trees and shrubs and the new roots, instead of forming at the terminal, will form at the heel and thus are directed away from the two roots. This is probably due to the fact that the base of the cut is closer to the crown, but we are probably more interested in the fact than in the theory. Our scientific members could very likely make this a highly controversial subject and convict me as being incorrect. My defense is that all I know about it is the result of many years of observation of this feature.

While roots are the key — planting is a procedure which should be given due consideration, so a few remarks regarding care in planting may be apropos. My personal regard for a peony prohibits any guesswork. I am such a strict believer in proper depth that I use a gauge in planting. This gauge is made from a three-fourth-inch piece of pine, three inches wide and 3 feet long. To the side of this, at the center, is nailed a piece of lath projecting two inches below the bottom. The gauge being wide, lies flat over the hole and does not tip over. This permits the use of both hands in planting. It is simple and takes no time to use, eliminates guesswork, and accuracy gives one a sense of security. I even use it when planting small propagation stock.

Be sure to firm the under soil on which the roots rest to prevent settling later. If the hole is too deep, keep adding earth and pound it down solid

with the fist until the roots are resting on a solid base, and the eyes touch the gauge. Then carefully fill in around the roots and up over the crown, being extremely careful not to injure either "eyes" or roots. This will leave a cone-shaped depression like the top view of a sombrero. Around the rim pour two or three quarts of water and let it soak in well so as to force out all air pockets. When sufficiently absorbed, fill the rest of the hole and gently firm with the palm of the hands. Fill over the top, above grade, to a height of from four to six inches, and then insert a stake from the outer edge of the hole, at an angle, so the top is over the crown of the plant. This will protect the new shoots the following spring from damage by animals — and clumsy people.

By mounding over with earth it is not necessary to mulch with leaves or straw. In the spring, do not try to level off the mound, as you will damage the tender shoots. The spring rains will reduce the mound considerably and the tender new shoots will need this cover to protect them from late freezes. Early cultivating at a distance of about eight inches away from center, if a crust is formed, may be beneficial, but do not worry about those delicate little shoots, for old Mother Nature has provided them with plenty of power to lift a ton of weight. Don't pamper the child or you'll have a spoiled weakling. Let 'em fight and they'll be more rugged. About the time you feel so sorry for the "pore lil feller" with a huge hunk of crust bending the back of his tender little neck — along will come a rain to take care of the situation. Old Ma Nature looks after her young. The ignorance of man is her greatest opposition.

To divide properly, to dress up the divisions you receive in a rough state from the grower, and to exercise care in planting, will take only a few minutes longer than haphazard methods — and the reward will more than justify the extra time and slight effort.



Mulches for Peonies

J. F. STYER, *Concordville, Pa.*

Peonies ordinarily grow best over a long period without a mulch. But circumstances of soil and climate frequently wander far from the normal, and mulches are famous as buffers against certain abnormal conditions.

The greatest value of a mulch is its power of retaining moisture. There is great difference between mulches in this respect; true granulated peat moss is about tops, certain composts come next, with humus, manure, leaves and sand farther down the list. Spent mushroom compost, "mushroom soil," is a poor moisture holder. Marsh or prairie hay, corn fodder, and straws increase in moisture-balancing power as they decompose, up to a certain limit.

A mulch for retaining moisture would be useful for peonies only in time of drought and in areas of normal dry spring or summer weather. It should be removed in wet weather during summer or fall; it should probably be removed from June to December in the North anyhow, and from July to December in the South. It should be removed because dryness and soil aeration in this period are best for the plant, and because any watering given in this period should be infrequent and heavy, which is impossible through a mulch. Here in southern Pennsylvania we have experimented with moisture mulches and with watering, and have never seen any gain at all from either. This, however, is on good deep rich

soil. The best roots we ever dug, in 1944, had no rain from June 30 to September 20.

A second use for mulches is the equalizing of soil temperature. If we could foresee any period of freezing and thawing of wet soil, with the palisading of ice crystals and heaving of small plants and crushing of old crowns, we could save much loss by using any kind of mulch. For this purpose the cheaper, drier mulches of hay or straw would be the best. I suspect that coarse sand or gravel would help, too. It is probably wise in the North to mulch any valuable peony the first winter, or to heap the soil high over it in the late fall and remove the mound early in spring. In the South the shade of a very loose dry mulch may be helpful to hold down summer soil temperature; such a layer should not be a moisture holder.

Needless to say, it is again recommended that temperature mulches be removed when the special need for them ceases to exist.

A third use for mulches is the prevention of erosion. Fresh horse manure lies more heavily than hay or straw and may safely be used in winter, if removed to some distance before the shoots emerge. Rotted manure is perhaps safer.

Allow me to remind the reader that the best winter mulch is snow. The peony grower often loses the best of protection when he cuts the stems down in fall, leaving nothing to hold the snow when the wind blows. It is worth some extra work to clean up the old stems in late winter; provided, let me hasten to say, the ground is worked to cover and rot the dry leaves which carry gleosporium or leaf-spot.

The fourth value of mulches is in their end-products which transfer the moisture holding power to the soil. The slowly decomposable ingredients undergo two main processes in the soil. The celluloselike portion eventually disappears entirely, stimulating certain bacteria and fungi into temporary activity of negative value to the plant. The ligninlike portion resists decay and takes on the form and properties of soil humus.

While the cellulose is being reduced, it is important that the mulch remain above the soil, or the organisms involved will rob the soil of nitrate during the period of their activity. A small amount of nitrate or other nitrogen-carrying fertilizer may be incorporated into a mulch for the protection of plants, let us say one pound of nitrate per 100 square feet, but this will speed the shrinking of the mulch, so it is better to add it if and when the mulch is mixed with the soil. High-cellulose mulches, like hay, straw, sawdust, leaves, take longer to reach this mellow old age, and I would prefer to remove and compost them elsewhere.

The humus-forming residue, or the high-lignin mulches like peat-moss, humus and rotted manure or composts, are ordinarily used a few months and then are safely dug into the soil. It is a good idea to add some fertilizer, however, as suggested above. These materials definitely mean a great deal to a peony; they create the dark color of most soils and it can't be denied that the peony responds to black soil. It is unfortunate, however, that the peony feeds deeply, between six and twelve inches deep, and so we must wait for the earthworms to carry the humus downward. Humus at this level in the original soil means so much more than any surface application that we may say ten cents' worth in the planting hole is equal to a dollar's worth thereafter.

This discussion brings us to the last point in favor of the mulch. The humus in or produced from the composted or peat-moss mulch is a sponge

to absorb, chemically, the fertilizers it may be necessary to feed the peony. The humus is the laboratory in which the main activities of the soil are carried on. The organic fertilizers find their way to the humus particles, where they undergo many changes, but largely remain in a form compatible with the needs of the plant. It is common knowledge that fertilizer must be applied carefully and frequently to crops in yellow or sandy burnt-out soils, but may be used without great caution on good dark soils. The breaking-down mulch on or in the soil becomes thus a storehouse for food as well as water and a great aid to the horticulturist whose soil is not of the best.

A few dangers in mulches should be noted. The worst is the holding of moisture when the soil should be drying out. In my State this is a serious obstacle to the use of any mulch. Another is the interference with cultivation, which is important only in soils so heavy they must be loosened. Another is the harboring of disease. The aged mulches like peat moss and composts, or inorganic types like gravel are safest on this score. Then some mulches are too acid for peonies. Peat-moss and spent-mushroom compost are in this class most of the time. Such materials can be used if mixed with two percent of pulverized limestone. Sphagnum moss will not decompose and is injurious to soil, and should not be used. Spent-mushroom compost is nearly devoid of humus or lignin, and is worth little more than soil with added fertilizer.

New mulches are constantly being placed on the market. The amateur should demand guaranteed figures on these materials with respect to air-transmitting capacity, moisture-holding capacity, content of nitrogen, and content of cellulose or balance between cellulose and lignin. With accurate information he can decide whether the mulch fits the purpose he has in mind.



Comments from Iowa

MRS. RUTH H. BRANT, *Iowa City, Iowa*

After reading the Secretary's notes in BULLETIN 99, I discovered the date of the first issue received by me to be No. 6, of May 1919, so may I claim the distinction of being one of its oldest friends, at least in point of years, and every number has been of much interest and instruction.

As I have before mentioned, my days of active labor are over, and now my daughter, Mrs. Meade, and her husband are living with me and have assumed the care of the ten-acre place and become farmers.

It has been quite a task to remove to a new situation and we were very glad to have it accomplished just before the heavy snow that set in on Thanksgiving day, followed by the first real cold snap of the season.

The new planting, 100 feet square, contains over 600 two-year-old plants and about 1000 new divisions. We were strict in weeding out inferior varieties, but retained some kinds of lower rating to use for color effect in Memorial Day trade. According to a check list in the September BULLETIN 1943, I have seventeen well known varieties rated 9. or more, and, of course, many others that I cannot do without — some endeared by association and some, I admit, by their entrancing fragrance.

Having more time to spare than usual last summer, I was surprised to discover how many of my seedling peonies, regardless of quality, possessed the attribute of fragrance in varying degree, a characteristic I have stressed by sowing seed of fragrant varieties.

Among reds I have named *Zuleima*, *Amaranthus* and *Sardonyx* from *Richard Carvel* seed: *Egyptian* (rich maroon) from *Some Ganoko*, and *Nisei* from *Mikado* seed. There is also a double white and a double pink of exceptional fragrance that I hope to register after further observation.

Here is a bit of fantastic verses illustrating my hobby. If you find room for it, all right — if not, all right too; just keep it and may there be many more centennials of the American Peony Society.

CHINESE MAGIC

MRS. RUTH H. BRANT, *Iowa City, Iowa*

From far-off China came a plant
White petaled like a single rose.
To English gardens and French parterres,
Unnoticed in the flower decked close.

One canny gardener viewed his stock
With an eye to future dower:
And found a seedling in the group
That bore a silken double flower.

Another showed a guard of pink,
Its inner petals splashed with red:
So he was fain to sow their seed
Within his choicest garden bed.

From that chance cross there came a prize —
A blossom like a bloodred ball:
"Eureka!" The magician cried,
"This flower is clearly king of all."

But then his questing soul proclaimed
That there must be a queen to reign,
And brought a spray of orange bloom
To shed sweet fragrance in its train.

Then scented thyme, a lilac spray,
The perfumed hearts of lilies too,
And blooms of pungent daffodils
With sweet-briar leaflets sifted through.

But now he paused and pondered long,
His brow perplexed with deepest care.
"Ah, yes! My cherished Chinese tea
Of all flower fragrances most rare!"

The herbs were simmered o'er the flame
And stirred most carefully and oft:
Then cooled, and in the fragrant stew
The seeds were popped while they were soft.

This old magician figured well,
That the seed is parent of the flower,
And sown for perfume will disclose
The secret of its royal power.

* * *

If this sounds like a fairy tale,
I hope when roses bloom in June,
You'll happen by my Peony patch
And note their rivals in perfume.

And when the Annual date arrives,
You'll find true peony fans all know;
That fragrant blossoms most appeal
To visitors at our Peony Sow.



Experience of an Amateur

W. T. COE, *Minneapolis, Minnesota*

About ten years ago I decided to grow peonies. Soon they became a hobby. I am now an addict.

I soon became interested in a standard division and depth to plant.

I now own some 400 varieties in two gardens, one in Minneapolis, Minnesota, and the other at Beaver Bay, on the North Shore of Lake Superior.

I have bought my stock of nearly a dozen growers: John V. Edlund, H. P. Sass, C. A. Pfeiffer, A. M. Brand, A. B. Franklin, Edw. Auten Jr., Lee Bonnewitz, Geo. W. Peyton, Cherry Hill Nurseries and a few others. All are reliable and satisfactory. All sell clean stock, true to name. In general, they all sell a similar more or less standard 3-5 eye division. I find the divisions are pretty well standardized. A. M. Brand shows in his catalog an almost ideal division. But just *what* is the *best* division I am unable to determine. If you expect bloom the first and second years, then you must plant a division with a substantial amount of old root and at least five buds. But, if you are planting for permanence without regard to results inside three years, then I recommend a division very closely cropped to the crown. I'll give a personal experience with a division of *Edulis Superba*. By accident I chopped *all* of the roots off and left only the crown with five or six good buds on it. I was disgusted at my carelessness, but decided to plant the remnant. I set it about three inches below the surface in a fertile spot in my garden. The first year five shoots came up and made about a six-inch growth with no bloom. The second year more shoots grew and made about twelve inches growth of very nice green foliage, and no bloom. To my surprise, the third year there were ten to twelve fine stalks, and each one had a grand bloom on it. I never saw a finer clump of *Edulis Superba*. The following September, I took it up and divided it, and I never saw a more perfect root system naturally dividing into four standard divisions, almost exactly a duplication of a "Brand Division." A. B. Franklin showed me the kind of divisions he plants for himself, and they are mere nubbins. Since then I have divided many of my own, with results in accord with the above. So, almost any division with at least two or three buds will prosper and bloom well the third year.

As to Spring Planting

I find a well prepared root carried over from the fall and planted as early in the spring as frost will permit; setting in the ground, will do almost, if not fully, as well as if planted in the fall.

In February 1943, Geo. W. Peyton shipped me a three-bud division of *Mrs. Livingston Farrand*. It arrived on February 28. I got a large flower pot and some dirt and I set it well and put the pot in my root cellar. As soon as the ground thawed, I set it in my garden. One stalk bloomed the first season. In 1944, there were six beautiful blooms. At this writing, July 1944, the plant is splendid.

As to Depth to Plant

Most growers recommend to set the division so that the top bud is from two to three inches from the surface. H. P. Sass recommends a little deeper, but he lives in Nebraska, where often the summer is very hot and dry. A. B. Franklin tells me he often plants from four to six inches deep, and sometimes deeper, but his plantation is in sand, and on a southeast slope. One of the Experimental Stations recommends planting at the surface of the ground. It says: "Lay a lath on the surface and set the top bud to it." I have done that with excellent results. But in that event, you must cover late in the fall with a shovelful of earth. It can be raked off in the spring.

As to Winter Protection

I find not all peonies are hardy in Minnesota. Most of them are. But all of the varieties with *Cahuzac* blood are more or less tender. Old *Mons. Martin Cahuzac* himself should be covered in winter. I am of the opinion that all peonies in Minnesota at least should have a light covering of hay. If there is much snow, no covering is necessary, but when a snowless winter comes along, you are sure to lose a percentage of your clumps by winterkill if you do not cover. I shall cover my whole garden next winter.

The Sins of the Father

Six years ago I bought twelve red seedling peonies of a well known grower, that were a hand-hybridized product. — *Cahuzac x Fuyajo*. I also bought *Cahuzac* and *Fuyajo* and set them all. The third year *Cahuzac* died. Last winter six of his progeny died just like the father. They were all males or non-fertile. The other six were females and vigorous like their mother. One is tall, fully forty-eight inches tall, and grew sixty fine blooms, much like *Cahuzac* in form and color, and it bears seed.

It may be that all clumps of *Mons. Martin Cahuzac* are not weak. Mr. Geo. Becker of Excelsior, Minnesota, tells me his clump is strong.

I shall be interested in comment from other growers.



A Communication from Stembel Gardens

MRS. CHARLES STEMBEL, *Boswell, Indiana*

We have been members of the American Peony Society for many years, but have never written to tell you how much we have enjoyed the BULLETIN, so now will write up some of our experiences for the 100th issue of the BULLETIN, if you want to use them.

We moved on the farm where we now live forty years ago, and we then found here two large plants of an old-fashioned white peony, *Queen Victoria*, I think. One of these plants we divided and the other is still growing and blooming well in the same spot; would judge that it has been there for at least fifty years.

My father gave me a start of *officinalis rubra*. The original start of this plant my great-grandmother had carried over the mountains from Pennsylvania to Ohio on horseback when they moved to Ohio, and later when they moved on to Indiana in 1848, this red peony traveled with them — a precious treasure.

This was our peony collection until in the early twenties we went to visit the beautiful gardens of Mr. W. L. Gumm at Remington, Ind., and of Harry F. Little, of Goodland, Ind. Mr. Gumm is now dead and Harry Little moved to New York State, so both of these beautiful gardens are gone, but their beauty and inspiration will long live in the memory of many people around here, and many yards and gardens in this vicinity will long be more interesting and lovely because of the plants which came from their fields.

Some of us sell plants, but none of us can ever estimate the influence of the beauty of these plants on the lives and thinking of those who grow up in the communities where they bloom. Flowers have always had a very distinct place in the lives of many people. The great-grandmother, riding horseback as a bride over the mountains to her new home in Ohio, could carry only a few treasures with her, and the fact that one of them was a red peony root means that flowers have a real place in the lives of those who love them.

The first peonies we bought were a \$5 collection from Mr. Gumm, but from this collection came the germ that started the peony fever that will burn in our hearts as long as we live. Each year we have bought more and more plants until now we have about three acres of peonies of some 250 varieties, and a "want list" that grows longer and longer.

I hope that many people today are getting as much pleasure from our fields as they did from Mr. Gumm's gardens in years past. I remember one time when we had about 150 varieties and a very fine crop of flowers. an old lady who lived in the neighborhood came and said she wanted to see my peonies. I took her around and very proudly showed off my finest specimens, including such varieties as *Mons. Jules Elie*, *Therese*, *Mrs. Edward Harding*, *Le Cygne*, *Solange*, *Adolphe Rousseau*, *Longfellow*, and all the choice ones of those days. She looked them all over critically and then said: "Humph! you haven't anything I haven't got. I've got red, white and pink, and that's all that you've got." Rather took all the wind out of my sails, but did remind me that all people do not get as much joy out of beautiful flowers as we do.

Another time during the depression years we needed someone to hoe. and Mr. Stembel approached a man, who was on relief, about the job. He wanted to know what it was we wanted hoed. Said he would hoe anything that could be eaten, but he would go hungry rather than to hoe flowers. They were a waste of time.

One year one of our neighbors had a hired man from the South who had never seen good peonies before. He thought they were the most beautiful things he had ever seen. That was a good year for *Mons. Jules Elie* and we had some flowers as large as a man's head. He wanted to buy one of these. We gave him the largest one we could find. The neighbor told us he took it home, put it in a vase in front of his place at the table where he could gaze at it three times a day and there it sat until it fell off.

We always enjoy having other folks get all the pleasure they can from our flowers and have made it a habit to give everyone who came a bouquet. A few times we have had some one take advantage of this generosity by

coming the day before they had a party. But the light that comes into the eyes of children when we fill their hands with flowers has more than paid for the times someone has taken advantage of us.

We have one woman who comes every year and spends half a day just wandering up and down the rows, soaking up the beauty of the blossoms. She always asks us not to cut a single flower for her, she just wants to remember the splendor of the glowing blooms.

We have been able to attend only one national show. It was at Fort Wayne, Ind. — I think, in 1926 — but the inspiration of that marvelous display is still with us. That was the year that Mr. Gumm's *Lillian Gumm* was the best flower of the show and we bought four plants of it from him. Today we probably have 600 plants from these four and have sold several hundred more from them. It has proved to be one of our best growers.

Like all true peony fans, we have grown some seedlings and have had a world of pleasure from them. There is no thrill that quite equals that of rushing to the seedling rows the first thing on an early June morning to see what new beauty has opened during the night. We have never introduced any of these peony children, but we have had the pleasure of watching customers choose some of our seedlings in preference to the fine varieties around them.

There is always a thrill in seeing a new variety bloom the first time. I remember one time we just had one plant of *Raoul Dessert* and had never seen it bloom. The buds were just ready to open the day we had to leave home for a few hours. When we came home I rushed out to see these new flowers — someone had cut every one. What a disappointment! There were thousands of flowers they might have cut and I would not have missed them, but they picked this one plant.

Through the years we have learned to love certain varieties above the others. One favorite of ours that we seldom see mentioned is *Mr. L. van Leeuwen* which always stands out any place in the field where it is planted. The flowers are large, petals large and round — almost true rose colored. Does not have as many stems as some, but always stands straight and tall.

One of the best sellers we have ever had is *Mons. Martin Cahuzac*. *Lora Dexheimer* is one of our favorite reds. *Philippe Rivoire* is one of the loveliest, but has never been a very good grower here. *Brand's Magnificent*, *Mary Brand*, *Longfellow* and *Karl Rosenfield* are among our best reds. *W. F. Turner* is a good red with us that we seldom see mentioned.

Le Cygne and *Solange* both generally do well here, but there are other whites that we like very much. One of these is *Bayadere*. They look almost like mammoth roses, but it does have one fault — does not stand hot sun well. It never needs disbudding, and two others that we never disbud are *La Rosiere* and *Lady Alexandra Duff*.

Mrs. Edward Harding, *La Lorraine* and *Kelway's Glorious* have always been very good for us. This year *James Kelway* and *Frances Willard* were very fine.

Walter Faxon has always been very popular here, and another that we don't see mentioned often is *Souv. de Louis Bigot*.

Reine Hortense, *Lillian Gumm* and *Lafayette* always make good flowers here. Another that we like very much and seldom see mentioned is *Chestine Gowdy*.

Among the Japs, *Torpilleur* has always been our favorite. One day last summer a lady told us she wanted another plant of "The single red with a center that looked like a bowl of jelly." This proved to be *Torpilleur*. We also have a seedling very much like *Torpilleur*, that we think very lovely. The white Jap *Yeso* is popular here, doing better for us than many of the finer Japs.

We think *King of England* is still one of the showiest red Japs, but it is not a very good doer for us.



Fragrant Peonies

JAMES MASON, *Chicago. Ill.*

The word "fragrance" is used twice on page 7 in BULLETIN 99. "Not notably fragrant," appears on page 1. That is all, brother. On page 11, there is a poem about lilacs which have "fragrant branches."

Mr. Karrels of Milwaukee wrote me a letter saying many nice things about fine peonies, but one sentence sticks in my memory, "The most fragrant were *Mrs. John M. Kleitch* and *Martha Bulloch*." To my nose these varieties seem pleasant, and so does *Philippe Rivoire*. We have sweet-peonies named for men and many named for women.

Irving Flint is said to be the most fragrant peony, but I have not seen it. *Sistie* is the most fragrant that I grew in 1945. *Lois Kelsey* is described in Kelsey's list as a fragrant water-lily peony in white.

The fragrance of *Edulis Superba* and its sport *Memorial Queen* is the same quality and "tone" of pleasing odor that we find in other peonies such as *Kelway's Glorious* or *Last Rose*. I do not detect this same odor in roses or other flowers. You can get peony perfume in bottles at Vaughan's Seed Store in Chicago, where several different natural perfumes are for sale. The peony odor they sell is the one you can capture from a bloom of *Edulis Superba*.

Some peonies have a fragrance similar to that of lily-of-the-valley. There are other qualities of pleasing odor in peonies. Mr. Auten offers one with the perfume of orange blossoms. In Mr. Glasscock's seedling field we discovered a hybrid deep pink bloom with a fine fragrance like a field of sweet clover. The only plant of it died. Perhaps he can produce another from the same cross, and it will be a sensation.

No Japs and no singles are fragrant. The pollen odor is so strong that perfume cannot be detected. Once I had a report on a fragrant Jap, a bud of which Mr. Bonnewitz cut for me. I put it in a vase (milk bottle to you) and sat reading while this beautiful flower opened. It was fragrant for almost half an hour. For three days, I kept sniffing that bloom and it never again gave out odor which was any improvement on skunk cabbage.

You've heard the harmony of a barber shop quartet singing "Sweet violet, sweeter than all the roses," and I was whistling that tune, as I drove one day to Whitnell Park near Milwaukee. Imagine my surprise when I sniffed hundreds of roses and could not find one that could be called fragrant. Next spring I visited that beautiful park again and found dozens of peonies with pleasing perfume, like that of *Myrtle Gentry* or *Lost Chord*.

Tree peonies do not have what I call fragrance. I have not tested many, but the ones I sniffed are reminders of an old barn floor. They do not give perfume suitable for your boudoir.

If you take peony specimens to ten different people, at least four of them will say that the singles and semi-doubles are fragrant. This means that to some noses the odor of pollen is pleasant. My wife and my mother find pollen odor pleasant. They and two-fifths of the readers of this article will disagree with my list of fragrant kinds which follows.

One variety that seems to have fragrance and pollen is *Walter Faxon*. In this case the fragrance is probably strong enough to overpower the "disagreeable" odor of pollen.

The reds usually lack fragrance, although *Philippe Rivoire* and *Richard Carvel* have it in excellent quality. Mr. Brand has *Prairie Afire* and Mr. Auten has *Creve Coeur*, both fragrant reds of anemone type.

Here is a list of fragrant kinds in two color groups:

RED

Creve Coeur
Philippe Rivoire
Prairie Afire
Richard Carvel

WHITE, BLUSH and PINK

A. B. C. Nicholls
A. B. Franklin
Anna Sass
Auten's Pride
Belle
Belle Chinoise
Betsey Ross
Blanche King
Cathie Ann
Dr. J. H. Neeley
Duchesse de Nemours
Duluth
Edulis Superba
Ella Christiansen
Ella Lewis
Eloise
Frankie Curtis
Flower Girl
Grace Batson
Grandiflora (Richardson)
Hansina Brand
Hazel Kinney
Ideal
Irving Flint
Ivory White
Jane Addams
John M. Good
Kelway's Glorious
La Perle

Last Rose
Laverne Christman
Lost Chord
Mabel L. Franklin
Majestic
Martha Bulloch
Mary Auten
Memorial Queen
Miriam Napier Rohe
Miss Salway
Mrs. A. M. Brand
Mrs. F. A. Goodrich
Mrs. Frank Beach
Mrs. Eva Barron
Mrs. Harry Little
Mrs. John M. Kleitsch
Mrs. R. M. Bacheller
Mrs. Rowland
Mme. de Verneville
Modeste Guerin
Mons. du Pont
Myrtle Gentry
Phoebe Cary
Pierre Duchartre
Plymouth
President Coolidge
R. A. Napier
Robert E. Lee
Sistie
Splendida
Spoon River
Sweet Sally
Tom Carpenter
Tourangelle
White Delight

Nearly 70 named varieties here, but this is not a complete list of fragrant peonies. Perhaps enthusiasts will send me the names of others which should be included? Address your letter to 9953 South Longwood Drive, Chicago 43, Illinois.

Comments from New York State

MRS. W. L. McLAUGHLIN, *Chappaqua, N. Y.*

In the last BULLETIN, No. 99, I was much interested in the article written by Mr. Louis R. Potter on "Experimenting with Humus."

My experience with humus has been of a different nature. I use lots of compost on my flower garden here in Chappaqua. I find that what few peonies I grow here do not amount to much and I would not advise anyone to use any big amount of humus. Many kinds of plants grow well here, but not peonies.

I find that the eyes seem to grow up on the stem, in spite of shallow planting, and the roots when dug are in poor condition. Much rot must be cut out before they are replanted.

Most of our peonies are grown up on our farm. The soil there is good loam with some limestone rock. I use very little fertilizer, perhaps not enough. Use only bonemeal or wood ashes. These plants have not been worked in the past three years, but I do have fine blooms and fine plants. One grower told me recently they were the finest, clean, big roots he ever saw.



Unburdening My Mind

BENJAMIN WILDER GUPPY

This is the elaboration of a few thoughts that came to me after reading the September 1945 BULLETIN.

Take together the three articles titled "Natural versus Artificial Nitrates," "Experiments with Humus" and "Rose Gumm," and in connection with these articles read the book, "Pay Dirt, Farming and Gardening with Composts," by J. I. Rodale, the editor of *Organic Gardening*. You will learn that the greater the amount of humus there is in the soil, the greater will be the number of earthworms in it; that earthworms clean up nematode-infested plants by eating the nematodes, and that the use of chemical fertilizers kills the earthworms and hardens the soil. So much for that.

Then the question of names is always debatable. See "Comments on Comments." After all, a name should be a means of identification and not necessarily a description of the flower. If you try to give descriptive names to all your peonies, you will end up by giving yourself innumerable headaches.

The writer believes it is fit and proper to give peonies the names of the lakes, rivers, and mountains of New England, and also the names of the former tribes and individual Indians. He finds these names very euphonious. For instance, *Amoskeag*. This name identifies a fine single white peony originated by the writer. The Amoskeag Falls of the Merrimac River are located north of the city of Manchester, New Hampshire.

The Namaoskeags or Amoskeags, a tribe of the Abnaki Indians, formerly frequented this locality to fish. The fact that Amoskeag means a fishing place for alewives has nothing to do with the case.

A Northern New England Peony Garden

HOWARD F. DUNHAM, *Hanover, N. H.*

- March 31.* Dark, showery, mild. A long stroll through the garden just before supper. Saw red eyes of *Umbellata Rosea*, *Red Monarch*, *Fontenelle*, *King of England*, and *Henry Webster* protruding from the ground.
- April 5.* Cold, windy clear, after a rainy night. Temperature 40°. Eyes of dozens of peonies are visible.
- April 11.* Warm and sunny. 32° in morning, 84° in afternoon. Everything growing fast.
- April 13.* Sunny and July-like. 85°. Peonies are up several inches.
- April 23.* A frost last night.
- April 24.* Another frost last night.
- April 29.* Cloudy, cool, breezy. 52°. Peonies are growing fast.
- May 11.* Clouds and sunshine. Cool wind. Temperature ranged from 32° to 50°. Eight and a half inches of heavy, wet snow fell last night! Freed some of the drooping peony plants. A queer sight. Their bright green foliage, formerly 2½ feet tall, now held down by the white snow. Many stems broken.
- May 12.* The stems of most of my 200 peonies are twisted and curled like old-fashioned chandeliers, as a result of being pinned down for so many hours.
- May 30.* Dark and raw. The strong northwest gale snapped off the largest stem of the Auten hybrid *Red Monarch*.
- June 13.* First peonies of the year bloomed today: white *La Fiancee* and pink *Umbellata rosea*. Warm and overcast.
- June 14.* Two more peonies in bloom: *Lady Alexandra Duff* and *Edulis Superba*. Sunny, hot, sultry. 87°.
- June 17.* Among the loveliest varieties at present are *Lady Alexandra Duff*, *Silvia Saunders*, *Imperial Red*, *Grover Cleveland*, *Festiva Maxima* and *Mme. de Verneville*.
- June 19.* Thirteen more varieties in bloom. Cut five big bouquets for neighbors and friends. Garden visitors are all admiring *Suzette*, which is unusually tall and large this year and stands out conspicuously. Other favorites are *L'Etincelante*, *Longfellow*, *Richard Cavel*, *Arcturus*, *Asa Gray*, *Therese*, *Victoire de la Marne* and *Mrs. F. D. Roosevelt*. One feminine visitor declares pale pink *Madame Calot* the most beautiful of all, and stands in ecstasy before a row of the plants.
- June 21.* The loveliest of today's list are *Dr. F. G. Brethour*, *Mischief*, *King of England*, *Nippon Gold*, *Krinkled White* and *Marie Jacquin*.
- June 23.* Outstanding among the new arrivals of the past two days are *Madame Duce*, *Gloriana*, *Reine Hortense*, *Georgiana Shaylor*, *Isani Gidui*, *Ama-no-sode*, *Sarah Bernhardt*, *Madame Emile Galle* and *Mikado*.
- June 25.* One beauty follows another in the procession. *Blanche King*, *David Harum*, *Nippon Brilliant*, *Rose Shaylor*, *Frances Willard*, *Lady Kate*, *Inspecteur Lavergne*, *War Hawk*, *Primevere*, *Nick Shaylor*, *Eugene Verdier*, *Gay Paree*, *Sword Dance* and *Nippon Beauty*.

June 26. *Myrtle Gentry* is the queen of the garden today.

June 27. *Tourangelle*, very good this years. I rate it among the best. *Solange* and *Elsa Sass* not far behind. Varieties that have not done so well this year as they did last are *Monsieur Jules Elie*, *Monsieur Martin Cahuzac*, *Fuyajo*, *Mary Brand*, *Karl Rosenfield*, *Pride of Langport*, *Madame Jules Dessert*, *Adolphe Rousseau*, *Felix Crousse*, *Baroness Schroeder* and *Dorchester*. But in spite of excessive March heat, April frosts and May snow, most varieties have come through magnificently.

I have come to the conclusion that the peony is one of the most satisfactory plants for our northern gardens. As this record for 1945 indicates, it can "take it!"



What's Wrong With Fertilizers?

ALEX LAURIE

Chemical or inorganic fertilizers have been in use for many years and have served their purpose well provided judgment was used in their timeliness and quantity of application. In recent years a revival of the old theory that "chemicals" are injurious has developed, largely because of a publication called *Organic Gardening*, which stresses the almost absolute necessity of the use of organic materials and ascribes all plant ills to the use of inorganic or "chemical" fertilizers.

We are told, for example, that the typical discoloration of the leaves of African Violet, which is due to the use of cold water, may be corrected by application of liquid manure. We are advised that bacteria in the soil are depleted or exterminated by the use of nitrate of soda, muriate of potash, etc., when actually such materials act as nutrients for the bacteria, which are microscopic plants. We are scolded for the advocacy of the use of superphosphate because it acidifies the soil, which is hardly the case. In place of that, bonemeal is to be given preference and only such bonemeal as comes from animals on a certain diet. And we might go on at length and present such views which have little foundation of fact.

To make the matter clear, let us understand first of all that organic matter from manure, peat, cover crops, is definitely beneficial to the soil, primarily from the standpoint of providing humus, which acts to correct the soil structure, to aid aeration, to help in breaking down and recombining of minerals into compounds usable to plants. Organic matter further aids in water-holding and has other important functions. In all our recommendations we grant that large quantities of such materials should be incorporated in most soils for the purposes outlined above. But we also insist that to provide fertility commercial fertilizers should act as supplements. Thus a combination of a well prepared soil from the standpoint of structure and sufficient nutrition through use of fertilizers makes it ideal.

The notion that sheep manure, tankage, blood, bonemeal, fishmeal, cottonseed meal, and other animal or plant residues should be substituted for inorganic commercial fertilizers is based on the premise that such materials actually add organic matter and thus humus to the soil. They do to a slight degree, but when you stop and consider that manure is added at the rate of 40 tons to the acre and tankage at the rate of one ton, it is readily seen that in the one case we really add organic matter in adequate quantity, while in the other we do not.

Unquestionably the organic fertilizers are usually safe to use because they are more slowly available since their chemical contents have to be changed into forms which plants can utilize, and that takes time. Likewise because of this slower availability the organic materials last longer. Insofar as the intake into the plant is concerned the proteins in tankage or blood have to be changed into ammonium or nitrates before plants absorb them. The chemical fertilizers act in the same way, except that the end product, nitrates, is available at once.

To say that the use of nitrate of soda or ammonium sulphate will produce a different taste in tomatoes or a color in zinnias different from that obtained by the use of tankage is mostly nonsense. Hence we feel that if judgment is used, proper amounts supplied and the right mixtures added to the soil, the only difference which may be expected from the use of organic or inorganic fertilizers is the matter of quick or slow availability.

In the makeup of many trademarked fertilizers, chemicals of different rates of availability are commonly used and the majority of such trademarked fertilizers are excellent. Some makers charge double for their products because of the addition of organic carriers. This is a good talking point, but after using and testing dozens of different kinds side by side we cannot agree that the slight differences warrant the sales argument and higher prices. It is easy enough to advocate one kind or another by trying only one at a time. The only sure way to compare them is to grow one crop and divide it into comparable plots, using fertilizers in exact proportions to one another. Then you have some guide for a recommendation. To make a trial of one kind one year and another kind next year takes for granted that the rainfall, heat, sunlight, etc., are exactly the same each year.

Instead of doing all that, why not trust your experiment station, where unbiased trials are run, instead of listening to fanatics with preconceived ideas, which are forced to come true.

Thus to answer the title question — "What is wrong with commercial fertilizers?" — Nothing.

(From Garden Notes)



My Northern Peony Garden

W. T. COE, Minneapolis, Minn.

My peonies were late this year. The first to open was *Silvia Saunders*. July 8. It was five or six days before any other opened. *Edulis Superba*. Early June. *Inspector Laverne*, and others followed in season. The last to bloom were *Peerless* (Franklin), *Ella Christiansen* (Brand), *Duluth* (Franklin), and *Harry L. Burden* (Neeley). These last-named were in full bloom on August 1. It was very cold and dry until July 18. Then there were ten days of hot weather with two rains, one a downpour, with wind.

The well known peony producer and grower, C. A. Pfeiffer, of Winona, Minnesota, visited my garden. Much to my regret, I was away from home. He seemed much interested and much pleased with my peonies, many of which he had sold me.

A late freeze destroyed the buds on several clumps, *Liberty Bell*, *Acme*, and *Milton Hill*.

Mary Brand, this year, bloomed well, but more than half of her flowers were only semi-double. She produces seed which I understand won't grow. I planted thirty, one year and none grew.

If I were to pick an outstanding variety this year, I would select *La France*. I have a great clump planted between two great rocks at the end of the drive. It has a bed two feet wide and three feet deep, filled with rotten manure and sifted glacial silt. There were 25 great flowers measuring eight inches across by five inches deep. I never saw a single clump that would equal it.

Among varieties I wish to comment on, are *Early June*, much like *Edulis Superba*, only better, stronger stemmed and more vigorous; *Harry L. Burden* (Neeley), a perfectly formed pink, perfumed and very late; *Duluth* (Franklin), a marvelous white; *Peerless* (Franklin), latest, white, slightly greenish, which should be in every garden; *Mrs. J. H. Neeley*, which stood up 4½ feet tall and drew comment from everyone. There was no disease on any plant.

I grew some seedlings which bloomed well, and several are worthy of saving. One, a Jap with dark red petals and a white center, another, a deep red like *Burma*. Both are second generation from a cross made by H. P. Sass between *Mons. Martin Cahuzac* and *Fuyajo*.



Planting Peonies In Home Gardens

J. F. JONES, *Minneapolis, Minn.*

Peonies when properly planted and cared for are as choice and interesting flowers as we can have. In the first place, peonies should be planted in the open where the sun strikes most of the day and should be planted away from trees and buildings, so that they will not have to work against shaded areas or tree roots.

After selecting the proper location, the next thing is to select the spot where you are to plant and see to it that the distances between the plants are sufficient. Peonies should be planted not less than three to four feet apart. I plant my peonies four feet apart between rows, three and one-half feet apart in the row. Dig your holes about 20 inches deep and the same in diameter. See that your soil is first class. If not, it would be well to bring in some good soil to secure the best results. If you plant where peonies have been removed, fill holes with new soil. Careful growers always do this. In filling up the hole, pull in four or five inches of dirt, then sprinkle quite liberally, an equivalent of about two or three handfuls, with a mixture of bonemeal and sheep manure. Stir this up till well mixed, then tramp down with feet, then pull in four or five inches more of dirt and sprinkle again as above, and repeat, in the meantime packing the ground by stepping in the hole so that it becomes well firmed. When you have the hole filled to within five or six inches of the top, pull in the dirt until it is filled, but do not fertilize this top portion, and then allow the hose to run into the hole until thoroughly soaked, or if a hose is not available put in two or three pails of water. If well rotted cow manure is available, it is excellent and if used it would be a good plan to prepare the holes quite a while in advance to be sure that the ground is well firmed. Many commercial fertilizers are good, but for this purpose I consider them dangerous as it would be easy to harm your plants by an overdose of these strong fertilizers. When the holes are prepared, allow this area to dry off well for a day or so, then when you are ready to plant, dig a hole large enough to receive the root so that when planted the eyes will not be more than two inches from the top of the ground. If the ground is not firmly packed, set plant so

that the eyes are only one inch from the top. Then pull in the dirt and make a little mound over your plant of about five inches. This is for the first year only. See that the roots, after planting, are kept watered well enough to keep them in good condition as drying out in late fall might possibly kill the roots before they have a chance to become established.

The best time to plant peonies is early in September, but they may be planted until the ground freezes, but the later planting is not recommended. For winter protection cover them with straw or hay, something that is loose in character, but not leaves or any material that will pack, as this may kill the plants. Then in the spring of the year sprinkle about a handful of bonemeal around your young plants perhaps six inches away from the stocks and work it in the soil lightly with a cultivator. For larger and well established plants two or three handfuls of bonemeal is not too much.

For the first year I do not allow my peonies to bloom, preferring to throw the strength into the roots. After two years you may begin to cut the blooms, but when you do, always leave a few leaves below the point of cutting, as they are the lungs of the plant and are needed for further development. Experienced growers find it advisable always to leave at least three stems uncut on each plant to support the roots. See Peony Manual, page 183. I do not cut off the tops of peonies until after September 1, then I haul the tops away as a precaution against spread of disease. Cover plants with loose material as described above, but not till after the ground freezes. Before you do all of these painstaking things, be sure that you have bought your roots from reliable growers. Cheap roots are offered by some growers, but they may be your poorest investment. When your peonies are nicely planted in Mother Earth, do not think your duties are done; they will not grow like Topsy, but must have sufficient moisture, with good and frequent cultivation till early in August.

If you follow the directions above you should have peonies of the highest quality.



Comments From Missouri

BENJAMIN C. AUTEN, *Carterville, Mo.*

BULLETIN for December 1942, page 4, "How to Keep Diseases out of Peonies." One of the fungi that afflict peonies is not mentioned, Rhizoctonia, I think is the name. It works in hot weather, especially if the foliage does not shade the crowns and the soil around the crowns, or if the soil has been washed away from the crowns. It is the same organism that is to blame for rusty potatoes. It makes the crowns look like they had been blackened by fire. Sometimes the outer scales of the crown buds are afflicted so that they dry up and rub off easily, leaving only the center, making them look like small buds. Sometimes a scale of the second or third layer of a bud is killed under a live outer scale, and shows black under the live surface, giving suggestion of a dangerous condition, but it is not much to worry about. Buds deep in the soil, as also deep ends of the crowns, are not affected, nor the roots, unless very shallow. The infections die out with the advent of cool weather. Whether or not the plants reinfect the next year depends on weather conditions, and exposure of crowns to sunshine and outer air. As the spores are

abundant from other sources, any attempt to clear the disease from the peonies is idle.

Not all rotting of roots is due to disease. Sometimes it is due to old age. That "all flesh must die" is as true of peony flesh as of any other. Also peony roots do not like a really wet condition, for long suffering from it will kill that portion of the root system that is immersed in it, i.e., in wet soil, especially in hot weather. Any dead roots are liable to be attacked by penicilum, blue bread-mold, the same as Roquefort-cheese mold, but more likely by rhizopus nigricans, black bread-mold. To the growing parts of the peony plants, both of these are harmless, though they may make trouble in peony plants that get wilted in warm storage. They can also make trouble in storage for tulip and narcissus bulbs, if any of them have been allowed to lie in the sun.

In any newly set peony plantation, unless there are diseased plantings in the neighborhood, it pays to go to great pains to eliminate all traces of the dangerous fungi. If the neighborhood is bad, control is all that can be hoped for.

Page 5. Bordeaux Mixture. Some ideas about Bordeaux mixture are peculiar. The standard formula uses equal weights of lime and bluestone. There is only one excuse for so crude a formula: it can be used by almost any blunderer without much risk of an overstrong mixture. If the lime is pure and is perfectly slaked, one pound of lime is sufficient for six of bluestone. Do not try it, though, for the margin of safety is too small. The strength of a batch of Bordeaux mixture is utterly independent of the amount of water used, but is determined only by the relative amounts of the lime and the bluestone. For example, a 4-4-50 mixture, four pounds of bluestone, four of lime and fifty gallons of water, is exactly the same strength as a 2-2-50 mixture, or a 1-1-50 mixture, but no one of them is nearly so strong as a 2-1-100 mixture. The heavy mixture spreads on thicker, but, when dry, is no different in substance from the thinner applications. Thickness is of no value; all that is necessary is a film coating of the active chemical. I would suggest a 2-1-100 formula.

In the equal proportion formula, three quarters of the lime is a useless dead weight, being no part of the desired fungicide, and thins, therefore weakens, the active chemical. Also the plaster it makes is decidedly unsightly on the plants. The 2-1-100 formula gives a more efficient fungicide, and unless applied in useless quantity, is but slightly noticeable on the plants. Also it should be safely non-burning. There should be enough lime to take up all the bluestone, with a small additional quantity to make sure there is enough.

As to the efficiency of the modern hydrated lime, compared with the old hot stone lime, I do not know, but I suppose more of it is required, but I think only a little more. The preceding figures all refer to hot stone lime.

When one is making a narrow-margin-of-safety mixture, the mixture should be tested with potassium ferrocyanide test paper. Any pharmacist can make it or one can make it himself. Dissolve the potassium ferrocyanide in a little soft water in a clean dish. With the solution, wet some filter paper, and let the paper dry. Keep the water always clean and handle it as little as possible. Drop a bit of the paper on the surface of the Bordeaux mixture. If the paper turns brown, stir a little more lime into the mixture until it will no longer discolor the test paper. If

the mixture does not stain the paper, it is safe for use. Both the chemical and the filter paper can be purchased at the drug store.

In Bordeaux mixture there are two substances. One is the fungicide, a chemical which is formed by the union of lime and bluestone, but is not either one, nor a mixture of the two, but a new substance. The other ingredient is the surplus of unused lime, which is a detriment to the fungicide, except that there should be a little surplus lime to counteract any attempt of the fungicide to revert back to its original constituents. The fungicide part of the mixture has more adhesiveness than any amount of flour. Any lack of adhesiveness in Bordeaux mixture is due to the surplus lime in it.

On peonies, there is no use whatever for arsenate of lead, unless for an adhesive. The old-form paste arsenate of lead is the most adhesive of anything used in horticulture.

The following points may have already been discussed by me. I do not remember. I found notations with page numbers, but not the date of the BULLETINS.

Mulch. Peonies should not be mulched. A mulch makes the growth-buds, the crowns buds, develop at or above ground level; so also mounding of the soil up to the plant. A mulch on a newly set plant should be removed in early spring, as soon as freezing weather is past.

* * *

The ultimate price value of any variety will be determined by its qualifications as a commercial flower.

* * *

Pink, a "diluted red"? Not always. There are many pinks, pinks of add degrees, due to the blending of red and blue in varying degrees of dilution.

* * *

Neither climate nor other growth conditions have anything to do with Lemoine disease. A plant either has it or does not have it. It is transferred from diseased to healthy plants by inoculation. A plant once diseased remains so, and continues so in all its progeny except seedlings.

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Botrytis blight varies according to the amount of infestation and according to weather conditions of the season.

* * *

Peonies change color in storage. *Augustin d'Hour* fades. *Felix Crousee* maintains its color. *Meissonier*, *Fuyajo* and *Darkness* deepen in color. All these are reds. Some pinks, too raw in color to be desirable for out of door blooming, come out of storage exquisite and refined.

* * *

"Strengthening a plant by cutting out supernumerary stems?" I think it can be done. Strong growing plants usually have comparatively few stems. Some varieties habitually make a profuse number of stems, none of them very strong. By pinching the tips, at time of emergence from the soil, of all but the strongest stems, the full strength of the root system is thrown into those strongest stems.

However, there are conditions that can be at fault in bringing about a profusion of stems, especially nematodes and over-deep planting; perhaps also an uncongenial soil.

Comments From New York

L. SMIRNOW, *Great Neck, L. I.*

I have just completed the task of covering for protection, for the winter 31 tree peonies. I have just added *Chromatella*, *Flambeau*, *Gate of Opulence*, and with the others, I should have some good blooms in the spring of 1946. I placed chicken wire around each plant and filled in the space between the wire and plant with leaves from the woods. From my previous experience, this is excellent protection. As a matter of fact, I have adapted this form of winter coverage for the plants and have obtained excellent results.

To my list of 135 herbaceous peonies, I have added *Victory*, *King Midas*, *Mattie Lafuze*, *Marilla Beauty* and a few others of the old standbys.

The results I had this past year were very poor, but I am looking forward to good results in the spring of 1946. This will be the third spring after planting all varieties. The plants of *Louise Lossing*, *Mrs. Livingston Farrand*, and *Elsa Sass*, all look promising.

I plan to make my usual excursion into the territory in and around New York to examine peonies in bloom at the various gardens and hope to get enough information together to report in the summer issue of the 1946 American Peony Society BULLETIN.

It is amazing how little gardeners know about peonies. People talk to me about varieties of lilies, dahlias, azaleas, etc., but it is seldom that you meet anyone who can talk to you about any peony by name. Since moving to Great Neck in 1944 I have made several "converts" to the point now where next spring we expect to have a good showing of peonies at our local garden club.

It seems to me that the time is ripe to organize an Eastern Peony Society. There is no such organization in the east so far as I know, and I would be perfectly willing to undertake such an organization if I can obtain cooperation from a few other club members. We may even be successful in trying to put on a show, with the cooperation from the Horticultural Society of New York.

If there is anyone who reads this and is interested in helping me with the formation of such a club, I would be pleased to have him communicate with me.

Best wishes to all my fellow peony fanciers.



Bulletin No. 100

GEORGE W. PEYTON, *President, Rapidan, Virginia*

As this is our one-hundredth issue of the BULLETIN, it seems only fair and fitting to pay some tribute to the two men through whose efforts it has been maintained on such a high plane of excellence. Though often unavoidably late in appearing, it has always eventually turned up and brought pleasure and profit to our members.

While I have no account at hand of the history of the conception of the idea of issuing a BULLETIN periodically and its ultimate reality, I think it can safely be said that Professor A. Percy Saunders of Clinton, New York, was largely responsible. It is certainly true that to him we owe the pattern of excellence which our BULLETINS have always followed. He gave unstintingly of his time and mind to the difficult task of launch-

ing the boat, and its subsequent success is largely due to those first efforts. Throughout a long membership in the Society, dating almost from its first beginning, this charming and able man has given invaluable service and loyalty to the Society in all his duties and connections with it. We hereby acknowledge our debt and express our gratitude to you, Prof. Saunders. May you live many years longer so that the world may profit still more from your labors from which it has already gained so much.

Following Prof. Saunders in the early twenties, our present Editor, William F. Christman, took over the helm and he has since piloted us through both calm and troubled waters in safety, avoiding hidden shoals and treacherous currents and handling troublesome and even dangerous situations with wisdom and good humor, but withal with firmness. To him more than to any living man the Society owes its present existence and prosperity, for he alone bore the brunt of battle during the long tedious days of despondency in the disastrous thirties and at great sacrifice to himself of time and money. To you, Bill Christman, we acknowledge a debt so great that it can never be repaid except in love, gratitude and loyalty and these we pledge you. May the remaining years of your life be many and filled to the end with that true happiness and contentment that can come only to one who has given so much of his life in generous service to his fellow men, as you so unswervingly have done.

During its forty-two years of life, our Society has engaged in many activities, some of which are recounted in the following articles.

Nomenclature

The first task to which the Society devoted itself was to clarify the nomenclature of the peony, which was then in a sorry mess. In fact, this was probably the main reason for which it was founded. At that time often one variety bore many names, and one name was often applied to many different varieties. No one could ever be sure that if he ordered a certain variety he would get the particular flower he wanted, or if he ordered several varieties he would not find duplications in them. No time was lost in getting down to business and a committee was appointed to gather together at Cornell University every known variety and get every nurseryman who would do so to send in his complete collection. This was gladly done by a great many firms both here and abroad. So in a very short time a collection of a thousand or two plants was assembled. Meanwhile another committee went to work on the problem of compiling a list of all names found in use. Mons. Auguste Dessert sent one of all known French varieties. A Japanese list was also obtained, and with these and catalogs from everyone known to list peonies, the Cornell Check List was published, giving the source of every name and naming many magazine articles where it was mentioned as well as the catalogs in which it appeared.

As soon as the plants reached maturity, they were the subject of intensive study by a select committee for several years. So gradually order came out of chaos and the results were published in three Cornell bulletins. This committee finally boiled down the list to about six hundred authentic varieties, not including the Japanese, which were little known then. As a result today we have little fear of not getting what we order.

This work has been continued by the Department of Registration and the Committee on Nomenclature. Even now it is sometimes difficult to avoid duplication. Some originators go ahead and use names without submitting them for approval, and, even though they are often duplicates

of others already in use, they are, in a few cases, hard to convince of the impropriety of doing this. Such practices result invariably in confusion and trouble, and often to the great detriment of the varieties involved. When an originator wishes to name his baby he should first look in the Manual and see if it has the name he wishes to use listed. If not he should then look in BULLETIN No. 91, September 1943, or, if a tree peony, in BULLETIN No. 95, September 1944. If he does not find if there he should send it into the Society for approval and when approved register it without fail. Only in this way can he be sure his name is not a duplication and be protected in its use. The small fee charged, two dollars, is usually only a fraction of what is received for one root and it surely can be afforded by anyone in view of the protection it gives.

The Annual Show

Evidently from the first it was considered an essential part of the activities of the Society to hold an annual show, for we find that with the exception of the first year one has been held every year until 1945, when travel conditions seemed to be such that it should be postponed until this year.

The first show was held in New York in June 1904. There were no classes and only displays were made. There were seven exhibitors, three from New York, two from Philadelphia, one from Ohio and one from Missouri (C. M. Wild of Sarcoxie). It will be seen that exhibits were made by people from long distances from the very start. One had two hundred varieties all unnamed; 123 named varieties were shown. Unnamed varieties numbered 260. Of these seven exhibitors, five were individuals and two firms. Several of the individuals were heads of firms I feel sure. I think all of these are dead and the two firms have now gone out of business so far as I know. But the present firms of Gilbert H. Wild & Son and Wild Brothers of Sarcoxie, Mo., are probably connected with Mr. Wild who himself died some years ago. The exhibitor from Ohio was Mr. C. Betscher, who originated *Modella*. It would be interesting to some of us if a record had been made of the varieties shown. The next show in 1905 was held in Chicago. This one was more after the pattern of our present ones. There was a schedule which had classes for both commercial and amateur exhibitors, though there were no entries in the latter. There were about twenty classes and most of them called for collections. Class No. 1 was for the largest and best collection of varieties one bloom each and with limitation now placed on the number that can be shown it is still the same class. It was won by C. W. Ward of New York, who also showed the previous year with his 200 varieties. It is not recorded how many he showed at Chicago. Class No. 1 was the only class in which only one bloom of a variety was called for. In all the others anywhere from three to one hundred were demanded. Cash prizes were given. Only two awards were made in each class. Ten dollars was the first prize and five the second except in No. 1, where each was increased five dollars. The individual color classes all called for collections and the colors were: rose-pink, salmon and flesh, white, cream white and light yellow, crimson with stamens, crimson without stamens, and tricolor. Peterson's Nursery won most of the awards. The most outstanding exhibit was one hundred blooms of *Lee's Grandiflora rubra*, shown by E. A. Reeves of Cleveland, Ohio. Only the varieties which won in the classes for one hundred blooms one variety are given. The white was *Festiva Maxima*, the first pink, *Livingstone*, second, *Floral*

Treasure. The first red was *Lee's Grandiflora rubra* mentioned above and the second Rosenfield's No. 206. Could it have been *Karl Rosenfield*? Our good friend Charles Klehm was a judge and also made a display exhibit. Peterson's Nursery was the forerunner of Northbrook Gardens. The three sons of Mr. J. F. Rosenfield and his son-in-law are still actively engaged in growing peonies. Vaughan's Seed Store is still going strong, and we all know that Charles Klehm runs the foremost peony cut-flower farm in the country. In the Boston show in 1906 Cherry Hill Nurseries began their career as prominent showmen at our shows, and Prof. Saunders in 1907 at Ithaca. Many of our shows since then have been far richer for the participation of these men.

There are no full accounts of any show for the next few years that I can find. The report of the 1914 show was more comprehensive, and beginning with the 1915 show we have quite full reports of all up to date. About that same time we find separate classes for both single and Japs.. It was in this show that we find first mention of class for seedlings. In looking over these reports of shows it will be noted that the tendency has been to reduce the number of blooms of one variety shown and also the number of varieties required in collections. Now the greatest number of blooms of one variety required is ten, quite a drop from the original one hundred. We find complaints or criticisms registered about the unsightliness of these large numbers of blooms in one container. Even with ten not too much attention is paid to arrangement. It could be, with great gain to the shows. We also note the great increase in the number of classes. Now it is often around seventy-five. The tendency is to add more each year. When tree peonies and hybrids really come into their own, we shall probably find many more added to care for them. The number for hybrids has already had a big jump.

The largest attendance of which I can find any record was at New York in 1916 when sixteen thousand entered the doors. If we could get the peonies for a show there now we would probably have this record far exceeded, as New Yorkers love a flower show if attendance records prove anything.

The varieties shown for many years were predominantly European, but now they are far in the rear as may be seen by reading the lists of any recent show.

These shows have been one of the leading factors in promoting interest in the peony. May they long continue.

The Bulletin

For the first twelve years of its life the Society had no periodically issued publication. It issued in connection with Cornell University the Check List and three descriptive bulletins. It also issued two pamphlets giving the proceedings of the Society from 1903 to 1914. In none of the accounts of these proceedings is there any mention that the BULLETIN had ever been planned or discussed, but BULLETIN No. 1 made its appearance dated August 1915, with this note as its excuse for such temerity: "The present BULLETIN is published as the result of action taken at the Boston meeting." This seems to show it must have been authorized by the Board of Directors or the members of the Society itself, but the reason for the omission of such action in the records as published is not at all clear, may be just an oversight, may be such a small thing did not deserve any notice. However that may be, the appearance of that modest

little pamphlet of 34 pages marked the beginning of one of the most potent factors in the life of the Society, and it is to the BULLETIN that we owe the continued existence and popularity of the Society more than to any other cause, not excepting the Annual Show. At least that is my opinion.

In looking over the contents of that first BULLETIN we find it contained much the same kind of articles as we have in it now. There are two articles by Arthur H. Fewkes, one asking the question: "What Are You Doing for the Cause of the Peony?" which question is quite pertinent for today, and one, "Some Notes on the Recent Exhibition." There is a communication from the late Auguste Dessert of France dealing with the identity of *Albatre* and *Avalanche* which he was firmly convinced were the same, as we are today, and with several other pairs of identical varieties. There are five articles under the heading "The Season's Experiences From Some of Our Members." They are: "An Amateur Near Philadelphia," by James Boyd; "Peonies in Missouri," by Benjamin C. Auten, who still gives occasional words of wisdom from his long experience to the benefit of us all; "Growing for Cut Flowers in Ohio" is from W. J. Engle; "Notes from the Pacific Coast," by H. E. Weed; and "Peonies Good, Bad and Indifferent," from the pen of H. W. Groschner of Napoleon, Ohio. More about this later. Then come four articles on raising seedlings, written by Eugene Secor, Everett P. Wheeler, O. L. Ringle and A. P. Saunders. The Proceedings of The American Peony Society for 1914 and 1915 are published, a Report on the Boston Show and From the Secretary's Office all from Prof. Saunders. A List of the Officers and Members of the Society ends the book. There were 127 members. There are no advertisements. They first appeared in No. 3, six of them, all the same size and so limited by action of the Board. One advertiser, Mr. Brand, has never missed a copy since. Cherry Hill Nurseries has only missed one (No. 23), may be an accident. Mr. Groschner lists 12 Extra Fine varieties, 25 Fine, 17 Good and 27 Common or Mediocre. The twelve Extra Fine are: *Asa Gray*, *Mons. Jules Elie*, *Milton Hill*, *Avalanche*, *Le Cygne*, *Solange*, *La France*, *Alsace-Lorraine*, *Baroness Schroeder*, *Therese*, *Karl Rosenfield*, *Claire Dubois*. Nine of these are French, two American and one English. The top twelve today include one English, three French and eight American. However, we see these three French in both lists. None of the others are. But all of his Extra Fine are still so considered. Seven of the Fine ones have practically disappeared and five more are rarely found. Only four of the seventeen Good ones are still listed extensively. Five of the Common are all that are left of 27. One of these, *Grover Cleveland*, is by some at least considered above the common brand. Of the seven American varieties listed in the last three lists only *Grandiflora* and *Grover Cleveland* are now found.

When the BULLETIN was first issued, it does not seem that any definite plan was made for any specified number of issues a year. The Board of Directors decided at each meeting how many should be published and limited the cost. We find two were authorized for 1916 to cost not more than one hundred dollars and two for 1917 to cost not more than one hundred fifty dollars. The four issued in 1944 cost slightly over eleven hundred dollars. 1920 was the first year four issues were gotten out. This was not repeated until 1926. Only one year have as many as five been published and that happened in 1936. The largest issue was for August 1925, 92 pages. The smallest, 18 pages, Nos. 2 and 15.

Prof. Saunders was responsible for the first sixteen issues. He then went to Europe for part of two years. His brother, W. E. Saunders of

London, Ontario, seems to have gotten out Nos. 17 and 18. Mr. Christman made his initial bow in No. 19, so a note on page 41 of that issue tells us. No. 20 seems to have been his work. But when Prof. Saunders returned from Europe he seems to have gotten out No. 21. Beginning with No. 22 Mr. Christman has been the fellow guilty.

One difficulty has always dogged our footsteps ever since the beginning and that is the problem of getting the issue out on time. Just now the main bottleneck seems to be the June issue. This issue is supposed to carry accounts of the Annual Show and of as many others as we can get reports from. As all these shows are held the latter part of June, some even running into July, it is impossible for the reporter to have his copy ready before the middle of that month and usually a little later. It then takes about two or three weeks for the proof to come through. Then about a month before the completed work is ready to be mailed. Then the mail takes two weeks to bring it to some of us. So our so-called June issue reaches us anywhere from August 15 to September 15. This delays the September number and this delays the December number. The March number has to wait for the schedule very often. What are we going to do about it? All of us would like to see it come out sometime during the month of its date. Don't think Mr. Christman is responsible for these delays. He is not, emphatically. If he had the material in hand, they would come out on time nearly always. What can we do about it? One possible solution would be to issue the June number on time and give the Show Reports in the September issue. The principal objection to this is that many of our members seem to wait for these reports before ordering any new varieties, and September is rather late for that. If we could get this issue out about the first of August or very shortly after that, the problem might be solved. This would mean fast work by our reporters and even faster by the linotype operators and publishers. We might try it. It is always a large issue and I should like to see it made even larger by making it a real planting guide by including in it as many reports on performance as possible and the offerings of all new varieties for the year with as much information about them as can be obtained. All of this would have to be carefully planned some months ahead, but if it could be done, this issue would be of considerable value to all of us. What do you think of this idea? A very familiar note runs through all the BULLETINS beginning with No. 1. That is the request for articles, especially on performances of new varieties. This will probably continue for as long as the BULLETIN is published, but you can do a lot about it by resolving to send in every year your experiences and any other information that may be of value to the members. Then we would have plenty of material to choose from and if all could not be published a condensed record of performances at least could be compiled. We would like to have these reports from every section of the country and Canada. There are fine collections of peonies in almost every State in the Union with the possible exception of Florida. Why are the owners so chary of telling us about them? Surely they could give us an hour or two once a year and let us know how they are doing. Many say they cannot write. That makes no difference. Send us a report and we will edit it for you if it needs it. Only by getting such reports can the ultimate value of a variety be judged. And thus some very definite ideas of which ones do well in each section may be obtained. Think it over and this coming season write us within ten days after it closes for you and give us your experiences. Only by having articles to publish can we make the BULLETIN a

success. Do not be bashful. Send them in. Mr. Christman will see that the results are published. Of course, we occasionally get articles that are too controversial or personal in nature to be published and these we have to omit. Sometimes they touch only remotely on the peony or not at all and would be of no value to our members. These are also omitted. Nor can we publish articles just to gratify the vanity of someone. Such articles are sometimes received and are always of no value to our members and we have to refuse them space. But we do wish articles on every phase of peony growing, and we know that there is no member in the Society who is not capable of telling us what he knows. So let us have them. And do not get angry if your article does not appear in the first BULLETIN after it is received. It will appear, if worthy, even though it may be delayed some time, or the information it contains will be condensed with others of the same nature and the results given.

Finally may we have any suggestions you may care to make as to how you think the BULLETIN may be improved. Good ideas are always welcome.

Seedlings and New Varieties

At the annual meeting held in Ithaca in 1907 the then President of the Society, Mr. C. W. Ward of New York, stated that he considered it impossible to get new sorts from seed better than those already in commerce, that the growing of peonies from seed was a waste of time, labor, and material and expressed the opinion that if the same amount of time were put into growing the most reliable kinds much more profit would result. He did recommend that anyone who did attempt to grow seedlings should go about it in a systematic way and not trust to accidental crosses. I wonder if he would change his opinion if he could see our present-day varieties nearly all produced since those remarks were made? How would he react to the fact that one of our prominent members sold over five thousand dollars worth of new varieties he introduced that year at one sitting? Or that a new variety this year has brought in around thirteen hundred dollars? Many other similar instances could be mentioned.

In spite of this opinion of its president the Society from the first fostered the origination of more and better peonies in every way it could, by giving them recognition at shows, by writing them up in the BULLETIN, by setting up a Department of Registration and in other ways also. The results have certainly justified its stand. Maybe *Le Cygne* is still the most perfect peony in form and beauty, maybe *Kelway's Glorious* is the best all-around peony we have, maybe *Solange* and *Tourangelles* are the most beautifully colored ones and *Therese* the best pink. There are those who would dispute all of these statements and with good reason. But granted they are facts yet we must know that the number of outstanding peonies is today far greater than it ever was before and the general average of those now widely grown, far higher than it was in Mr. Ward's day. The American Peony Society is largely responsible for this state of affairs.

The most remarkable development has been in American varieties. Inspired by the efforts of Richardson, Hollis, and Terry and led by Brand the number of American and Canadian originators of good peonies has grown year by year and no longer do all the best ones come from the large grower. The amateur's backyard and the small field of the little fellow are sending out seedlings of the best quality in increasing numbers every year.

Nearly all the best reds and dark pinks have come out in the past twenty-five years. Where we once had only a few good whites, blushes

and light pinks, we now have dozens of the first rank. Singles and Japs have come to the fore by leaps and bounds. Hybrid peonies, thanks to our American men, are just beginning their career which promises to be the most spectacular of them all. Tree peonies are still lagging behind, but the new hybrid trees mark a beginning of things that can only be imagined in beauty and excellence. New colors have come in. The season has been much prolonged. Still better work along these and other lines is promised for the future. Let us do all in our power to encourage it. Have you any suggestions as to how we can help? If so, let us have them. Can we improve our system of honoring and giving recognition to new peonies? If so, how?

The Rating Lists

The first rating list was sent out by Prof. Saunders as a part of BULLETIN No. 2, in May, 1916. He seems to have done it on his own initiative for the reason that he thought in this way a good gauge of the value of a variety might be obtained by giving it a numerical rating with ten as highest score, though not necessarily perfect. This list contained 123 names of the latest French and a few English varieties. Nineteen lists were returned. The results were published in BULLETIN No. 3, September, 1916. It was so favorably received that a second list was sent out in May, 1918, which had about all the known varieties listed, including 435 of American origin. The results appeared in BULLETIN No. 7, January, 1919. It was decided to send out these lists periodically and the third was sent out two years later and the results are in BULLETIN No. 14, May, 1921; 685 varieties receiving ratings. These three lists were sent to all members of the Society. The next list, mainly of the very new varieties and those that did not get twenty votes in 1921 went out in 1925 and the Ratings appeared in BULLETIN No. 26, January, 1926. This list was sent to a select jury of about fifty. Likewise the next new list, a very small one, was sent to a very few in order to get tentative ratings for a number of new varieties that had not been rated in the 1926 list, these to be used in the Manual about to be issued. The next list was sent out in 1932 again to a small jury of about fifty and these results appeared in 1933 in a special supplement to the Manual.

As so many new varieties had come out by 1939 and were grown by so few, another list went out that year to all the members with over a thousand varieties listed. The results were published in BULLETIN No. 82 for March, 1941, and also in a special rating list.

These lists have always produced a great deal of discussion, often quite violent, as to their merits. While all know that mistakes have crept in, yet on the whole the general opinion seems to be that they do give a fairly accurate idea of the value of a variety and that they should be continued. They are certainly used a great deal by buyers of peonies as guides to the best.

If we are to continue the practice, it is now time to get out the next one. Shall we do it? If so, to whom shall it be sent? All the members or a select few? Shall we publish the ratings of every variety listed on which we receive votes or shall we publish only those that receive a given number of votes? If the latter, how many votes should be the lowest published? Should the ratings be asked for numerically as before, or use letters and have only a few grades? Give us your ideas along this line and any other that may be connected with this rating.

The Manual

From the beginning the Directors of the Society made plans to get out a Manual of the Peony giving complete lists of all varieties in cultivation with more or less complete descriptions of each and also articles dealing with all phases of peony growing. Committees were appointed from time to time and a large amount of material collected, but for many years no one seemed willing to complete the job. Finally, in 1926, Mr. James Boyd said he would do it. He afterward said he wished he had not done so. But he never turned back after he put his shoulder to the plow and the finished product came out in the fall of 1928. Most of us know it well, so it is useless to comment on it here except to say that Mr. Boyd did a monumental job for which we may all be thankful. While we know the lists of varieties need renovating and additions made yet the greater part of the book is still of much value to all peony growers. The possession of several later BULLETINS will bring the list of varieties fairly well up to date. These BULLETINS are Nos. 60, 61, 82, 91, 95. Of course, the 1933 Supplement is now included with every Manual sold.

There were about three thousand copies of this book printed at a cost of now well over ten thousand dollars. The edition is almost exhausted, only about one hundred and fifty remaining. When these are exhausted, shall we get out a new Manual? If so, on how extensive a scale? We have just finished paying for the first one. Should we go into debt to get out a second? Would a very much less pretentious book costing only a small fraction of what the first one did and which could be sold for a dollar or a dollar and a half, consisting mainly of descriptions of the new varieties and maybe a list of all varieties now in commerce in the United States and Canada with a few select articles on cultivation, cut flowers, hybrids, tree peonies and maybe a few other topics, be sufficient for the present? Let us have your ideas on the subject. We should like to have ideas on how to finance it without going into debt to any extent. Personally I am very much opposed to saddling the Society with any debt that will take us years to pay. Let us have your ideas.

Test and Show Gardens

The last activity of the Society that I shall mention is the establishment of Test and Show Gardens in many parts of the country under the protection of some university or park. The first one was at Cornell, of course. This one was kept up until very recently and may still be, though I am not certain of this. When I last saw it, it was still in good shape though it had very few varieties under twenty-five years old.

Another was established at Washington under the control of the Department of Agriculture. This was moved from Arlington to Beltsville, Maryland, some years ago, and was in very fine condition when last heard of, though it also had none of the later introductions.

There are others at Toronto and Ann Arbor with which I am not familiar. The last big effort was the establishment of one at Urbana, Illinois, under the university there in order primarily to bring order out of the chaos that had developed in the Japanese and single peonies due to the renaming by many of the varieties imported from Japan and Europe. This has been in the main a very successful planting and a good work was done by the university authorities. If the Society had taken the trouble to send a committee each year in blooming season to check these plants a very much better job might have been done. But all of us must know that the students who did the observing under the direction

of their professors did a most commendable job and one that was of much value to the Society. The results were published in Bulletin No. 447 issued by the Agricultural Experiment Station of the University of Illinois and a copy was sent to every member of the Society. Whether this bulletin is still obtainable I do not know. However, as the work of identification was practically completed, this garden was turned into a show garden and a fine collection of doubles also was promised the university. This promise has been only partially fulfilled, I think. It should be completed as soon as possible and new ones added each year as they come out. If the members of the Society who live nearby would visit these gardens each year and make reports to us on their condition and give the authorities in charge suggestions which I am sure would be gratefully received, especially truing up the varieties as errors in labeling always creep in, I am sure their value would be almost incalculable in promoting interest locally in peonies among those who otherwise have no opportunity to see them. More of these gardens are being established. Under the able guidance of Mr. John C. Wister a very comprehensive one has already been a going concern at Swarthmore College in Pennsylvania for some years. He is yearly adding the best varieties to this collection. Its collection of tree peonies, all named varieties, is the finest probably in this country and maybe in the world. Large numbers of hybrids have also been added as well as the *albiflora* varieties. As we all know, Mr. Wister is a top peony man and we may be sure this collection will always rank among the best as long as he has charge and he will surely train his successors.

Mr. Wister also has charge of establishing a garden in a park in Omaha, Nebraska, and he intends to plant there another representative collection of peonies. We shall hear more about that later, we think. Planting may start this fall.

The Society should do all in its power to foster such undertakings. What do you think about it?

Notice to Originators and Introducers of New Peonies

In BULLETIN No. 91, dated September, 1943, lists of all peonies that had been introduced since 1928 were published in order to bring the list of varieties in the Manual up to date. Some additions and corrections were made to these lists in the March, 1944, BULLETIN No. 93. However, there are still varieties that should be added and corrections of errors made. Therefore will each originator or introducer who has sent out any new varieties since then send in to me a list of them giving complete information and description of each. Also please look over the lists in these two BULLETINS and report any errors or omissions that have not been corrected or added. Also give me full information as above about any variety you may contemplate introducing or naming in the near future. Always give the seedling number under which the variety has been grown if possible.

This information will be much appreciated and we can bring these lists up to date in a future issue of the BULLETIN. It will be done as soon as I have the information and it can be put into shape for publication. It will be hard winter when you get this BULLETIN and you should have plenty of time on your hands to take a few hours off and give us this information, which will be of as much value to you as to us. Do it now.

Notice to All

If you are so kind as to send us the reports and suggestions asked for in the articles in this BULLETIN, it will be much appreciated, if you use a typewriter, if you will make a carbon copy and send one copy to me and one to Mr. Christman. If you do not use a typewriter, send me the original and I shall then send it on to Mr. Christman. By doing this you will help us to avoid at least one mailing. Double space all articles.

* * *

Nematodes and How To Control Them

W. F. CHRISTMAN, *Northbrook, Ill.*

Every good grower of peonies gets a great deal of satisfaction out of the fact that his stock, so far as he is aware, is free from nematode infestation. Nematodes, like thrip with gladiolus, have been working against us for some years, but it has not been until comparative recent years that the thrip has made gladiolus growing in some localities unprofitable, in fact a complete failure unless a program of spraying is carefully followed through. The thrip is considerably more prolific than the nematode worm in northern climates and more readily and easily handled. Correct spraying formulas will take care of thrip. Nematodes do not appear on the foliage of the plant where they might be handled very easily, but their life cycle is carried on in the roots of the plant and removal of the plant is necessary in order to get at them.

For years this question of nematodes has been a sort of family skeleton that no one wanted to talk about, but as it can found to a more or less degree in any large planting, or small one for that matter, I think it is high time that we were all better informed on how to handle this pest. Instead of decreasing in numbers it is apparently increasing its hold on the peony.

There are many forms of nematode and some of them are particular as to their host plant. Other species of this disturbing nuisance are not so particular, some even devouring others of its kind or species.

The information I am about to give you should be helpful in giving a better understanding of how to cope with this destructive pest.

I am indebted to the Blakiston Company of Philadelphia, Pa., and the author of "The Nature and Prevention of Plant Diseases" for most of the information I am presenting, having had permission to quote at length from a very informative article appearing in this publication on the nematode worm.

Many nematodes (eelworms or roundworms) are saprophytes in soil and water, others are predatory on one another, some are important intestinal parasites of higher animals, as the roundworms of horses and swine and the hookworm of man, a number are parasitic on plants, including a few species that are causes of important disease of economic crops.

The most important plant parasitic genera are *Heterodera*, in which the adult female is pear-shaped, and several species of the family *Tylenchidae*, with wormlike adult females. The plant-parasitic and free-living species are usually microscopic; the animal parasites include some forms that are larger, sometimes up to several inches in length.

ROOT KNOT (*Heterodera marioni*).

In warmer climates and greenhouses root knot is a common and very serious disease. Because of its wide host range, it ranks as one of the

most important diseases of agriculture. Few home vegetable gardens are free from the pest. The grower of nursery stock suffers most from the disease because even lightly infested stock cannot be sold, and is often a total loss. In certain crops the loss is increased because root-knot predisposes the plants to injury by other diseases. Thus wilt-resisting varieties of cotton, tomato and melon become susceptible to wilt if the root-knot organism is present.

Nematodes are known to infest at least 1288 species of plants. Now this fact should cause us to give the matter a great deal of thought and consideration, for it is from these host plants that we get infestation in our peony roots.

The more important plants that the nematode worm attacks include beans, beets, cabbages, alfalfa, cucumbers, muskmelons, spinach, strawberries, tomatoes, most soy beans, watermelons, etc. However, a number of crops are resistant to the disease, and these may be used in rotation to starve out the worms. The resistant crops include practically all grain and grass crops, cowpeas of the Monetta, Victor, Brabham and Conch varieties, and soybeans of the varieties Laredo, Biloxi, and O-too-tan.

Nematodes have been known to live in peony roots that have been exposed to temperatures of five degrees below zero and when the roots were taken into a greenhouse and thawed out, the nematodes under a microscope, showed life. Freezing, then would not be the best way to kill them. They will succumb to heat of 120 degrees for a half hour period and we will speak of this later on in this article.

Symptoms and signs of affected peony roots may be observed in the foliage of the plant. Take the variety *Mons. Jules Elie* which is one that is quite generally affected with nematode worms. In fully matured clumps, a part of the plant not badly infested may grow to normal height, while the diseased portion will produce foliage about half the natural height. In some varieties of peonies, as with other plants, the infestation does not greatly impair the blooming qualities of the plant. This is true with the variety *Alice Harding*. The writer has made futile efforts to get absolutely clean stock of this fine variety, but invariably it would show disease. If it could not be seen it could readily be detected by running the fingers over the surface of the root. You can even shut your eyes and detect the undulations on the roots.

The roots may have large and small swellings involving the entire thickness of the root in contrast to the beneficial legume nodules which are attached to the side of the root, and these nodules may be mistaken for nematode infestation. Within the root-knots are pear-shaped, adult female nematodes, just visible to the unaided eye. In advanced stages, the knots show extensive decay, caused by secondary fungi and bacteria attaching the weakened tissues.

Etiology. When mature, the female nematode exudes a jellylike sack filled with about 400 eggs. Within the older eggs, the wormlike larvae can be seen with the aid of a microscope. The larvae hatch, escape from the decaying knot, move about a short distance in the soil, and attack the root at a new point, embedding themselves in the root tissues, and secreting a stimulating chemical which causes a new knot to form around the larva. Fertilization of the females may occur or may be omitted. Under optimum conditions the life history is completed in 22 to 30 days, but this is lengthened to as much as 80 days in cool climates.

In nematodes, as in rusts, powdery mildews, and several other groups of plant pathogens, a parasitic species may consist of several identical-

appearing races or strains. Each race will attack certain plants within the host range of the species and will avoid others. The races are sometimes highly specific. Thus a strain of the stem and bulb nematode from oats attacks only oats and cocksfoot (*Dactylis*), but no other of the one hundred hosts of this nematode species. A strain from hyacinth would not attack narcissus, and that from narcissus would not attack hyacinth. Other strains are less particular; one from potato attacks 53 species of plants.

Ephiphytology. By their own efforts the nematodes move only short distances — not even a foot a year. Movement, of course, is greatly retarded in heavy clay soil as compared with sandy soil or light loam. They are rapidly spread down furrows with surface or irrigation water. Any manner of moving soil will spread the nematodes across a field or from one field to another, as on farm machinery, shoes, or hoofs. They are not carried in seed, but are often introduced into vegetable plantings on the roots of infected tomatoes, cabbage, strawberry, lettuce, sweet-potato plants, or on Irish potato tubers, and in the same way they can be introduced with diseased nursery stock.

High temperatures favor nematode development. The worms are most prevalent in the southern states and in greenhouses, where the long period of warmth increases the number of generations. In Oklahoma there are six or seven generations a year, in Florida twelve, and farther north only one or two. The nematodes are most abundant in light, sandy soils, which aid free movement. Their spread is favored by temporary water transport, but they are destroyed by prolonged flooding. The worms and eggs are killed by temperatures of 120° F. in 30 minutes.

Control. Control of root knot may be accomplished by different practices, depending on how the crop is grown. Except under greenhouse and seedbed conditions, complete and permanent eradication of the parasites is not practicable. The most that can be accomplished is to reduce the worm population to a low level and keep it there. Since we cannot wipe them out, we must learn to live with them, but we can treat them rough and keep their damage down to a point where no appreciable crop loss is incurred. This may be done in the following ways:

1. *In field crops.* Two or three years of resistant crops will largely starve out the root-knot worms, and make it possible to grow a susceptible crop for a year or possibly more. Root-knot-resistant field crops have been briefly mentioned, and the list is long enough to allow a liberal choice in planning a rotation program involving resistant cash and fodder crops, or resistant soil-enrichment crops, or both. Ordinarily root-knot is not as serious in the field as in the garden, nursery, and orchard, and it becomes troublesome only when susceptible crops are grown year after year on the same land, when land becomes foul with susceptible weeds or when susceptible legumes are planted between rows or other row crops. These practices should be avoided.

2. *In fruit orchards.* In starting a new orchard, if possible, select land which has not been in susceptible crops or overgrown with weeds for a number of years. The condition of the land, with reference to root knot, can be tested by examining the roots of susceptible weeds which may be present. The common lamb's quarters and the wild lettuce are particularly good indicators of root knot. Another way would be to take some of the soil and plant it with seed of a susceptible crop such as okra, vetch, cowpeas, or tomatoes. If these show no knots after four to six weeks, the soil can be considered relatively free from the parasite.

3. *In nurseries.* Most of the suggestions indicated above on controlling root knot in the orchard also apply to the nursery. A considerable number of varieties of nursery stock and ornamentals are root-knot-resistant, and full use of these should be made in nurseries subject to this disease. In case part of the nursery is infested, it may be a good plan to return the land to corn, or some other resistant field crop for two or three years before planting with susceptible stock, and some nurserymen do this as a regular practice. Most of the evergreens are resistant to root knot and may be successfully grown in infested ground. Arizona growers have indicated that clean bare fallow will starve out the worms in two or three years, but Florida workers report that this is injurious to the soil.

Treatment. It has been found that heating to 118° F. (the Government tests report 120° F.) for 30 minutes destroys the root knot parasite in infested roots, and some nursery stock can withstand the temperature without injury. Where nursery stock is only lightly infested with root knot (up to 5 percent), the hot water treatment is permissible as a means of disinfecting stock. The treatment consists of immersing the roots in water for one-half hour, usually at 118° F. The work may be done in a vat, controlling the temperature by means of steam which bubbles through the water in the vat at a controlled rate. The peony roots may be placed in gunnysacks and placed in the vats so they will not touch the bottom, and provision made that the water is thoroughly agitated at all times.

Where is it impractical to use heat, certain chemicals may be used for destroying the worms. Of the many chemicals that have been used or tried, the two that are most suitable are carbon disulphide and chloropicrin (tear gas). The application of tear gas requires a special type of equipment, and for small plantings it would be best to have the treatment performed by a professional tree, landscape, or termite specialist. Few are equipped to do this work at the present time, but the good results reported from the treatments justify the general availability of this service, and practicing specialists are beginning to look into the possibility of supplying this service to home owners. Carbon disulphide for root-knot control has been found to be an efficient agent of soil disinfestation in a number of states. The formula is: carbon disulphide, 3 gal. + rosin fish-oil soap, 1 quart (36 oz.) + water, 1 gal. The soap and water are thoroughly mixed and then the carbon disulphide is added with stirring. This is a concentrated emulsion which is diluted for use with fifty parts of water and applied at the rate of one gallon per square foot of soil. The soil should be warm, loose and moist. Carbon disulphide is highly explosive. The emulsion is less dangerous to handle, but its vapor has been known to explode. The emulsion is injurious to living plants and should not be used near trees or shrubs. The soil should be allowed to air out thoroughly before planting.

Both carbon disulphide and tear gas are fatal to plants and cannot be used closer than three feet from perennials without danger of killing them. Formaldehyde, and other chemicals sometimes recommended for soil disinfestation, are not as effective against the root-knot organism as heat, carbon disulphide, and tear gas.

Biological Control. "Mononchs" (species of the nematode genus *Mononchus*) feed on other nematodes. This is probably of little importance as a practical control of parasitic nematodes, since the mononchs are not restricted to a diet of nematodes, but also feed on rotifers and other soil organisms. They, themselves, are subject to a number of diseases

caused by sporozoa and other parasites which frequently destroy the mononch colonies.

Roots that are badly infested should be burned or destroyed, particularly if they are not expensive varieties or rare originations. In which case the hot water treatment should be employed to eliminate the nematode worms.

While I cannot say with certainty that some varieties are resistant to the nematode worm, I can state there are hundreds of varieties that do not seem to ever show infestation. Varieties that must be watched are *Mons. Jules Elie*, *Marie Crousse*, *Felix Crousse*, *La Lorraine*, *Alice Harding*, *Sarah Bernhardt* and a few others.



Rosenfield Peonies

FLOYD BASS, *New Augusta, Indiana*

To me it is always interesting to read about the successful and unsuccessful peony years in the different sections of our country, and the honest comments on which varieties do well in some localities and not so well in others. It has been wisely said that "confession is good for the soul," and how true that goes for the flower grower and lover. Tall stories like the fishermen are prone to tell may be all right for them, but to the flower lover, truth adds beauty to the flower enthusiast's dream.

During my years of working with and among peonies, and not having the time to devote much in the way of coddling some varieties to get the most from them, I think I have learned some of the natural habits that are peculiar to specific varieties here in our climate of central Indiana, which is very hard on most perennials.

I have learned that the late blooming varieties are erratic as to good results year after year. We generally have weather in June that is too hot. *Richardson's Grandiflora* is one of the most reliable ones. The early blooming and mid-season kinds generally show good results, and I will not take the space to list them. The white and pink varieties are generally better than the reds. From the longevity standpoint, very few reds seem to grow and thrive in one location as long as the others.

I think I have had it proved to me by Mother Nature, much to my financial loss, that peonies will not thrive in soil on the acid side of neutral. Over a three-year growing period under field conditions, I have just recently lost practically two acres of various varieties of peonies. I had growing in this block two of the seedling varieties of the late Mr. John F. Rosenfield, which were planted through the center of the block. Strangely enough, these, with some *Mons. Jules Elie*, seem to thrive head and shoulder above all the rest in the block. In fact, they increased in root production to a wonderful extent, while those on each side for about thirty rows just simply deteriorated to nothing, the farther they were removed from the center of the block. At first I thought that these three named seedlings, *Lowell Thomas* and *Memorial Queen* and *Mons. Jules Elie* just had what it takes to come through a couple of very wet winters, etc., and I was thanking our Creator of all nature for the privilege of having a very fine stock of such varieties, and having them do so well. Then I decided to have the soil tested to see if anything was wrong or lacking that should be corrected so that I might have good results with evergreens which I intended to plant there after removing the peonies this fall. The report from Purdue University was that the two outside sec-

tions were highly to slightly acid and the center was neutral. This over a section 150 feet wide. As to fertility, the available phosphate in the outside sections tested low to very low, and medium in the center. Potash was low to medium in the outside sections and very high in the middle. Why such a variation should show up in some of my supposedly best soil in such a small section just didn't seem possible, since it had all been apparently treated alike in the past as to crops, etc. Years ago, I had peonies on the same section and had good results. Since then oriental poppies and soy beans have been grown there. Well, maybe that is a partial answer to the complaint of some gardeners that their plants just do not do so well, or just "run-out." Their soil conditions aren't adaptable to the plant, yet the plant gets the blame, or maybe the grower of the plant.

As to varieties that do well here in Indiana, there are a number that do and a number that don't, but since you asked about some of the seedlings that Mr. Rosenfield developed, but did not disseminate generally, I think his two most valuable ones will prove to be the two named varieties *Lowell Thomas* and *Memorial Queen*. *Lowell Thomas* is a vigorous growing deep pure red of medium height, and has outstanding foliage in that it is a dark glossy green, large and heavy to make the erect growing stems stand up as if they were in a well-arranged container of peonies for show purposes. One can spot a *Lowell Thomas* plant growing among others without any difficulty at all, owing to its outstanding foliage. Further, it opens well from the bud, which some reds do not.

Memorial Queen is one of those unusual happenings among peonies in that it is a sport from *Edulis Superba*. I suppose other growers have discovered some of these occasionally. I have one of my own, which came in a plant of *Giant*, a deep pink variety. This sport is a definite light red and a much better color than its parent. But, to get back to *Memorial Queen*, it has all the characteristics of *Edulis Superba* as to growing habits, time of bloom, etc., but is a light pink with a slight salmon tint. As a cut flower for the early market and for garden use, it is a definite addition. Once in awhile, maybe one plant in a hundred or more will revert to the *Edulis Superba* color, but I think it has much value for an early bloomer to pair with *Edulis Superba*. Last spring I discovered one plant that developed a stem with a large bloom that was exactly divided in color, in that one-half of the bloom was dark pink (*Edulis Superba* pink), and the other half light pink (*Memorial Queen* pink). This was a clear-cut division and not a mixture of color throughout the flower. It will be interesting to see if it repeats. If so, those who like novelties would surely have one in such a peony.

I have about twenty-five other seedlings of Mr. Rosenfield's growing here, some of which he named, and I have reserved judgment on the majority, since most of them are late blooming kinds, which probably would do well farther north, but do not open well here. Among them is a beautiful dark red of the same shade as *Mons. Martin Cahuzac*, but is a better and more reliable grower. It is named *King Gustave*. Another splendid variety is *Gold Standard*, which is a Japanese type with two rows of white petals tinted yellow and a center of golden yellow petaloids, tall upright heavy grower.

Mr. Rosenfield became a critical judge of the worth of a new variety, or rather of peonies in general and probably that is the reason why he did not disseminate more of his later varieties, and death arrived before this was accomplished.

Another thing that I have learned from him was this: With regard to the mold that sometimes develops on peony roots, which has been called "mustard seed fungus" (which may or may not be correct), and it seems to be a sure cure here, if one will mulch such affected plants with sifted coal ashes, they will be clean in a year or so, and stay clean.



How to Cut and Prepare Flowers for Shows

L. W. LINDGREN, *St. Paul, Minn.*

The American Peony Society has welcomed to its fold many new members during the last few years. We are very happy indeed to see our membership thus expand and no doubt many of these new members will in a few years become expert showmen.

I am writing this article in hope of encouraging more members to exhibit at our shows and also to offer a few suggestions which I hope will be helpful to the person making his first exhibit.

At every peony show the question is always asked "At what stage of development should peony buds be cut?" In general, singles, Japs, and semi-doubles should be cut when the buds show color and just as they become soft to the touch. Doubles that are not too full, should be cut just a little later, or when a petal or two has started to expand. Full petals should not be cut until the guard petals have all unfolded.

Experience is the great teacher, and so in cutting, make careful observations and it won't be long before you can put on a beautiful exhibit. It really does tingle one's spine to see a group of fifteen to twenty or more beautiful specimens and to know that you are represented in this group.

In cutting exhibition blooms from a small number of plants, or as is usually the case you wish to save blooms from some new variety, then special precautions should be taken to prevent the loss of a single bloom. First of all care should be exercised in disbudding. The side or lateral buds should all be removed, leaving only the terminal bud to each stem. If the plants are vigorous, then all the terminal buds should be left, a few cripples may develop and these should be removed, leaving only the perfect buds. Some varieties produce poor looking buds, but these sometimes develop into fine blooms.

Disbudding should be done early, the lateral buds should be the size of peas. If disbudding is done earlier, the terminal bud may be injured and may not develop.

As the buds develop to near the cutting stage, paper bags should be placed over the buds and held in place with a rubber band. I have found the number 2 size to be best for doubles and number 1 for singles and Japs. I cut off all four corners of the bag, making about 1 inch diameter holes, in order to provide ventilation. I have had buds actually cooked in the bag on a hot day when no holes were provided.

If the bud nears the expanding point and rain threatens, I slip another bag (without the holes) over the first bag, and in this way the bud is fully protected. In case of rain and the outer bag is wet, this bag should be removed before the bloom is placed in cold storage. It is important that the bloom be dry.

It is sometimes advisable to support a bud with a wire of about No. 8 gauge and about four feet long. Push the wire into the ground in such

a way that the bud will be held in a vertical position. Come rain or wind, the bud is then safe.

In cutting your blooms do not cut your stems too low, but leave at least two leaves. Stems should be 14 to 16 inches long and all foliage stripped off except the top leaf. Place the stems in water as soon as possible and get your blooms to the cold storage plant without delay. I have found this to be very important. A storage temperature of 34 to 36 degrees is best. A thorough chilling is very beneficial to the blooms. Sometimes we see freshly cut bloom wilt badly in the showroom. In most cases, if the blooms are given a good drink and then chilled for even as little as two hours, wilting does not occur.

The question is often asked, how long can blooms be held in cold storage? Blooms will keep perfectly for several weeks, but for show purposes, two to three weeks is all that is usually required.

It might be well to mention at this point that placing labels on your blooms before cutting saves considerable time in the showroom and avoids the possibility of mistakes in labeling.

Blooms handled as I have outlined should be brought to the showroom from 15 to 18 hours before judging; the stems should be cut and the bags removed.

The most satisfactory method of transporting your blooms is in a florists' corrugated paper box. Place the box in the cooler for a day or two in advance of packing, and your blooms will remain cool for many hours.

In order to produce show flowers one must have good, strong plants, and to grow good plants the following rules must be observed:

- 1st. Good clean roots planted in good soil.
- 2nd. Full sun.
- 3d. Away from trees and shrubs.
- 4th. Good cultivation.

Peonies should be cultivated at least once a week until they begin to bloom and in dry weather should be given a thorough soaking about once a week. When the plants are four years old or older, a little feeding is beneficial, but it must be remembered to use moderation.

Don't ruin a fine plant by heavy feeding. Bonemeal and hardwood ashes are the safest fertilizers.

I hope these rambling remarks may be of some benefit to the novice exhibitor. Those who have had many years' experience may use a slightly different technique in cutting and handling bloom. Whatever the technique, the fact remains we have so many expert showmen scattered about the country that regardless of where the National Show is held there are enough experts locally to provide a good show. The peony is the "sportingest" of all flowers; pack a box, start the flivver and one of your blooms may be lined up with the best in the show. Try it, and good luck to you.



Peonies In Colorado

M. J. WEBBER, *Arvada, Colorado*

On the desk before us is a pile of 75 Peony Society BULLETINS. The earliest number bears the date of the year 1921, which reported the vote of the second Symposium.

In the record of votes from twenty states and provinces of Canada, much to our regret, Colorado had no representative. However, the late Darwin M. Andrews (is the name suggestive?) is accorded honorable mention in the Manual's biographical sketches. While Mr. Andrews' work with peonies was incidental — he gave more attention to hunting and cultivating Rocky Mountain native plants — of the varieties which he submitted for registration, his *Nimbus* should place Colorado on the Peony map.

To us who have not been privileged to attend the Society's annual exhibitions to acquire first-hand knowledge of the best in peonydom, these BULLETINS, together with the Manual, are our chief guide in selection of additional varieties for our collection.

As elsewhere, one incentive to the growing of peonies in Colorado is the value of the flower on the cut-flower market. Since Denver is of importance as a commercial center, peony culture is given considerable attention in its suburban district, yet Denver's needs for Decoration Day observance have seldom been met by local producers, only a few of the *officinalis* being available at that time. While the *officinalis* group may not have been accorded the attention it deserves, dependence cannot be placed on the *Chinensis* varieties, as even *Edulis Suprba* and *Mons. Jules Elie* are nearly always a few days late. To relieve the situation, some of the more favored sections in the State — as Canon City or Grand Junction, where the season is a week earlier — are drawn upon.

Receipts from Missouri or Iowa have not always been available, neither do such blooms prove superior to Colorado grown, especially as to keeping quality.

After the first week in June, Denver is obliged to dispose of a surplus through markets outside the State, shipments being made on certain occasions to distant points — as Houston, Texas. Thus waste is eliminated.

Colorado is favored by its forty garden clubs — one being registered from Leadville, altitude 10,000 feet — which do their full share to popularize the peony, adjusting date of their spring flower shows accordingly. A flourishing garden club in Alamosa (altitude 7,500 feet) exploits the peony in its flower show in late July.

As to the matter of rating — by the second Symposium vote certain varieties were placed in the 8 and 9 groups, which position they have continued to hold by several subsequent Symposiums. We have the utmost confidence in the judgment of the voters, yet to evaluate some of the varieties by their performance in our fields, they fail to measure up when planted alongside some which have long since been relegated to the discarded list. So we have the audacity to fix in our own minds a rating in many instances and sometimes we are disposed to place the decimal point before the numeral. For instance, BULLETIN 99, page 7, a writer exclaims: "*Adolphe Rousseau* beats them all!" and farther on — "*Mme. Gaudichau* is always an attractive dark red." We have had both of these varieties in our fields for many years. During this period ten plants of *Adolphe Rousseau* have yielded not more than a half dozen blooms, while five plants of *Mme. Gaudichau* have produced a total of not more than three flowers. They usually fail to show trace of flower bud. Both of these varieties are placed in the 8 class.

We would be loath to discard *Alexandre Dumas* — its varied coloring and excellent keeping quality have an appeal; *Fragrans* — not because of its individual beauty, but its decorative value. *Mons. Krelage* is an outstanding landscape subject because of its sturdy habit of growth, its de-

pendable blooming quality, its color — which is well liked in this district, and the unusual keeping quality of the flower. Calot's *Jeanne d'Arc* in our display room seldom fails to elicit expressions of admiration. *Grandiflora Rubra* (*Marechal Vaillant*) as a late bloomer is much admired. We would make special mention of *Mireille*. It seldom fails and produces some of the most perfect blossoms in our fields.

Some of these varieties are all but lost to commerce, but they have an appeal to us as well as to observing visitors.

While we covet many of the newest productions mentioned by Mr. Peyton, and which we hope to add from time to time, yet we console ourselves that our own collection embraces many varieties that occupy exalted positions in the most recent shows, and June weeks find our indoor display gay with choice blossoms of such varieties as *Avalanche*, *Albiflora*, *Crystola*, E. B. Browning, *Festiva Maxima*, *Frances Willard*, *Isani Gidui*, John M. Good, *Jubilee*, *LaRosiere*, *Marie Jacquin*, *Mireille*, Mrs. A. M. Brand, Mrs. Edward Harding, Mrs. Frank Beach, Mrs. Harriet Gentry, *Nimbis*, *Rose Shaylor*, *Solange*, *Nina Secor*, *Augustin d'Hour*, *Cardinal*, Charles McKellip, *Cherry Hill*, *Grandiflora Rubra*, Karl Rosenfield, *Longfellow*, Lord Kitchener, Mary Brand, Mons. Krelage, Mons. Martin Cahuzac, Mr. L. van Leeuwen, Philippe Rivoire, Winifred Domme, W. F. Turner, Albert Crousse, Claire Dubois, Cornelia Shaylor, *Eduilis Superba*, E. C. Shaw, Ella Christiansen, Eugenie Verdier, *Florence Macbeth*, *Georgiana Shaylor*, *Grandiflora*, *Hansina Brand*, *Helen Hespanola*, *Jeanne d'Arc*, Jeannot, Lady A. Duff, *LaPerle*, Lillian Gumm, *Livingstone*, Mabel Franklin, Marie Crousse, Martha Bulloch, Maud Richardson, Mons. Jules Elie, *Montrose*, Mrs. Dean Funk, Myrtle Gentry, Pres. Wilson, *Rachel*, *Reine Hortense*, *Rosine*, Sarah Bernhardt, *Souv. de Louis Bigot*, T. C. Thurlow, *Therese*, *Tokio*, Walter Faxon. Mr. Andrews' "*Diadem*" is our most popular Jap.

If we were to be deprived of the varieties awarded higher rating by the various Symposium votes, we would cease to be interested in peony culture.

Our indoor display affords an opportunity to observe the conduct of the varieties shown. Results gave proof of substance as one virtue of the Colorado product. *Walter Faxon* brought in when half its ultimate size continued for several days to improve in form, retaining its original color.

Our 1945 season of bloom began May 18 with *tenuifolia* (single), and July 15 found *Grandiflora* and *Florence Macbeth* in good condition and *Last Rose* properly named.

On the local cut-flower market pinks are in especial favor and whites come next. Reds do not command a premium as on some other markets.

Labor shortage resulted in unfinished plan of fall planting, however, some of our spring plantings have proved gratifying.

As we consider the marvelous semi-double and double forms evolved from the single, *albiflora*, by the numerous propagators, we ponder the peony of the future.



Comments from Indiana with Cultural Directions

FRED E. WINSLOW, *Salem, Indiana*

It is possible that a newcomer in the American Peony Society should read the BULLETIN, play with his peonies and keep silent, but as a new member I am anxious to learn about raising more and better peonies.

While the earlier numbers of the BULLETIN no doubt cover all the points as well or better than these notes, I am writing especially for the newer members, who, like me, do not have access to these earlier numbers of the BULLETIN.

Since early boyhood when I gathered fragrant pink and white peonies from along the walk in the old-fashioned garden, which clumps were planted over 75 years ago, I have loved, and for most of the time raised peonies, with many other flowers for my pleasure and the pleasure they give my friends. What flower lover does not enjoy sharing their beauties with his friends? I love to see trees and plants grow.

One of the first tragedies I learned about peony culture was when a friend of mine who had many clumps of fine peonies told me of cutting off the tops of her peonies to make room for other flowers. When I spoke of the injury this would do them she said, peonies did not require tops after they bloomed. A few years later on a visit to this otherwise fine garden, I asked what had become of her fine peonies. She replied that they had not been doing well lately so she had them dug out and thrown away. This continued cutting of the tops resulted in the loss, although other growing conditions were of the best.

The latest experience was last spring when I was away from home. Some friends came and wanted "some of those lovely peonies," and were told to go and help themselves. They cut all the stems from two choice clumps, about three inches above the ground. I expect it will take three years for these clumps to recover.

When cutting flowers it is a good rule to leave more than half the foliage. Never cut the tops off until the stalks and foliage turn yellow in the fall. All growing plants and trees require, and must have, sunshine on their leaves to make and keep them vigorous.

It is well to prepare the soil well before planting peony roots. Most plantings remain from six to ten years or longer, except perhaps for nursery stock. My finest ones were prepared for by digging the soil and pulverizing it in a trench 18 inches wide and 18 inches deep and mixing a pint of pulverized sheep manure or a pint of raw bonemeal for each three feet of trench. Then dig the holes three feet apart at sufficient depth for the roots. Firm the soil below the roots with the feet. Another half pint of pulverized sheep manure-raw bone, was mixed thoroughly with the soil from the hole. The root is set with top bud one inch below the level, with the soil and the pulverized soil carefully filled in around the roots with reasonable pressure. The soil below the root will usually settle so the permanent depth of the top bud will be $1\frac{1}{2}$ to 2 inches below the level of the soil. The final operation is to make a cone of pulverized soil six inches high above the root to keep water away and to prevent heaving of the root and possible injury by the freezing and thawing of early spring. Freezing the roots does not injure them, but the expansion of freezing water, if allowed next to the root, may break them.

It is said peonies will not bloom unless the roots are properly chilled during the dormant winter period.

If peonies are mulched with manure, straw, trash, sawdust or other organic matter, it may be expected that the plants and roots will be attacked by fungus growth that breeds in such material, and severe damage may be done to the roots, crown and stems. The stems begin dying by turning black at the surface of the ground and soon the stem becomes black at the top. I was recently asked by a friend "What made my

peonies die?" She confessed that she had mulched them with unrotted cow manure.

My only experience with crown rot was with a few roots planted near where there had been a manure pile rotting for several years. There was no manure in the soil except what had soaked into it from the pile 12 to 15 feet away. In this case I am wondering if finely crushed limestone, mixed in the soil, would not have prevented it. Most rotting organic matter, especially sawdust, excelsior and woody substances, produces organic acids, wood alcohol, etc., while decaying. The fertilizing qualities of the decaying woody mulch is nil and they can retain enough moisture around the root and stems to help cause Botrytis in wet seasons. I have never seen even weeds or grass grow well around a pile of rotting sawdust.

Peonies do best in full sun. Some authorities say at least half-sun should be given them for satisfactory growth. It is well, if possible, to avoid locations where tree and shrub roots will rob them of moisture and fertility, especially those that throw out dense masses of small roots near the surface of the ground.

Good drainage is also a matter of great importance, for peonies will not do well if exposed to extended periods of water standing around the clumps. I am wondering if the main causes of Botrytis are not due to standing water and lack of sunshine. For small plantings in yards and gardens, it is practical to fill in the selected locations with soil so water will run away from the plants.

Cultivation is an essential for best growth. In most soils and seasons, a few inches of fine mulch of soil — such as is produced by good cultivation — will eliminate, in general, the necessity of watering. The soil mulch will allow the air to enter the soil and protects evaporation of the moisture coming up from the subsoil, as in dry farming. In heavy soils, sand or sifted coal ashes dug into the soil will help the physical properties by making it lighter. Caution should be used in adding wood ashes due to their caustic properties. I would add a similar warning about using quicklime, or even slaked lime. Cultivation should keep weeds and grass down and sod from near the clumps. Cultivate only when ground is so dry that a handful will not form a ball when pressure is applied. This, and packing it down as by walking on it, will make the soil hard, which is not good.

My ideal for a location for peonies is a sloping, limestone clay or loam soil of fair fertility. Turning under a crop of clover or alfalfa and a year's cultivation should improve its texture and 2½ to 5 tons per acre of crushed agricultural limestone should prepare it for planting. Limestone is slightly soluble in water and neutralizes organic acids that may be injurious.

My limited experience leads me to believe the best time to dig and divide peonies is as soon as the leaves and stems turn a straw yellow color in the fall. At that time they are dormant. The earlier they are planted after this the better, for the small roots, especially near the crown, will begin to grow and form with the fall rains. The plants will make a more vigorous growth the next year. Most varieties will give a fair percentage of small blooms the next year after planting. However, after three years' growth, it will be hard to tell clumps that were planted in the fall from those planted the next spring. Other things being equal, the most of us are impressed by the greater growth in the first two years that we are anxiously awaiting our first flowers. In a recent planting I was struck with the blooming of *Richard Carvel*. Of 205 roots planted on April

16, there were 105 in bloom on June 16. Other varieties planted the same week developed a small fraction of blossoms.

It is possible that in writing my experiences and drawing from them general conclusions, they may not agree with the experiences of others, especially in other locations and zones.

I hope these notes may be helpful to others who are trying to raise more and finer peonies, the flower that can take more abuse and come up smiling than any other perennial I know.



Random Notes

EDWARD AUTEN JR., *Princeville, Illinois*

It is now twenty years since I introduced my first peony, and about twenty-nine years since I planted the first seeds. Recently I wondered how many disappointments I had experienced during all those years. Surely there were several times more disappointments than successes. One, of course, does not expect every seed he plants to develop into a winning variety. But when a fine vigorous, sturdy plant gives its first bloom, and it proves to be inferior, that is a real trial. And a still greater one comes when some long cherished cross proves a dud, even with fifty or a hundred plants. *Nippon Brilliant* came from a second block of seedlings, the first having been entirely different from what I had sought. One block of 150 plants planned for a pink single turned out all singles, but all of them worthless reds. Especially disappointing is a worthless block coming from some of the advanced, clear reds. Even though a variety may be of high quality as regards color, that does not necessarily mean that its offspring will be as good. So my advice to anyone wanting to start developing new kinds of peonies is to let the game alone unless you can take a steady stream of disappointments as a part of the process.

Some preconceived plans do turn out just as hoped. *Moon of Nippon* was our most outstanding example of this. An infinitesimal amount of pollen split from a narrow petaloid in the center of *Marie Lemoine* was deposited on *Isani Gidui*. Three plants were obtained, and *Moon of Nippon* was one of them. We got the high quality of *Isani Gidui* on a more vigorous plant with a better stem. I will never forget how a visitor to the field bawled out my son, who was making this cross, because he was not using a camel's hair brush to apply the pollen. Well, one dip of the brush and that pollen would have disappeared forever.

The large proportion of singles among new seedlings is also disappointing. One of my greatest successes in average quality of bloom was 99 plants in one block, which ran sixty percent double or semi-double, and eighty percent worthy of advanced trial, with at least sixteen ultimately named. One interesting feature of this lot was the great variation in characteristics other than color. Almost all were white, and there were no Japs. Some had stiff stems and perfect plant carriage. Others had stems so weak the blooms lay on the ground. Some were loose and opened easily, others so full petaled they never could be named. Some were extra early, others very late. An almost exact duplicate of *White Delight*, which is hardy, was so subject to frost damage to the small buds I had to abandon it. Susceptibility to blight and to root rot are also variable factors in many blocks of seedlings.

One of my keenest disappointments has been the necessity of discarding many Japanese type seedlings simply because there was no need for so

many kinds in a catalog. With their centers colored often so differently from the outer guard petals, and with their charming shape, they made wonderful decorative effects as cut flowers, either one kind in a vase alone or in an assortment. Had I lived near a large city, where visitors would have been more numerous, I could no doubt have sold most of these to people who like the unusual. But the general public simply will not buy numbered seedlings from a catalog in quantity that justifies offering them.

Whether a strain or cross can ultimately be bred to the point where all seedlings will come of high quality even in color alone, remains to be seen. Since we do not have to depend on seedlings for increase of stock of a certain variety, that point in itself is not as important as one might at first think. But I have taken considerable satisfaction in having in several different blocks of seedlings recently a high percentage of high quality reds, and among these good ones, in each block, at least one seedling that seemed to be in the "super" class as regards color—a bit clearer, richer, and more durable than the others.

Among the many thousands of people who have visited our fields, one finds great difference in the degree of sensitiveness to variations in color, especially red. If any of these visitors were completely color blind, they did not let anybody know it. (This affliction is said to affect men only, and scientists say that women as a class are more sensitive to color than men.) Different people like different shades of red. Some people apparently like almost any bloom that is red, including some very ugly shades. This I attribute to an inferior degree of color-sensitiveness. Some others like the darkest red best, with a minimum of purple in it. I admit that I am one of that class myself. Then others prefer the medium reds with a definite purple cast, such as that of the old American Beauty rose, now almost extinct. This class is very large, so large in fact that most florists seem to think that everybody prefers a medium purple red to a clear dark shade.

My underlying theory of all gardening is that except for a professional flower grower, each person should be allowed to raise those flowers that he himself likes. If he wants his garden to contain only dandelions and jimson weeds, I have no objection. With 300 named kinds, 200 of my own origination and seedlings by the hundreds, all different, there is a chance for great difference in preferences. It has often been said that men prefer the reds, ladies the whites and pinks. But there have been many ladies at our fields who would look at only the dark reds like *Mons. Martin Cahuzac*, and many men who liked only white or light pink. I always let a person order what he likes, unless I am pretty sure that he is not very discriminating, and then I try to steer him away from the inferior colors, or from kinds not good every year, which happen to be good at the time. One man this summer, trained in a profession, was one of the most discriminating customers I ever had. He wanted only the purple reds, in a definitely light shade, and he picked these out with unerring accuracy. These older purple reds are most of them quite ugly as they fade, maybe not even a clear shade at their best. I have taken considerable satisfaction in having been able to get these purple medium reds in a clear color, which was much better as the bloom aged than the older kinds. *Sentinel*, a Jap, is outstanding in this respect, has genuine charm, and grows on a magnificent plant. Instead of the yellow edges on the center petaloids, it is unique in having only small specks of yellow.

One of the, to me, most suprising displays of color preference has appeared with the variety *High Jinks*, a very purple red Jap shading to near

white in the center. I withdrew this from my catalogs years ago, feeling that it was entirely too "bloody" to ask anybody to buy it. One day, a lady visitor, an experienced gardener, to whom price was no deterrent from anything she wanted, saw *High Jinks* in bloom, exclaimed, "There, that is just exactly the shade I want." And, of course, I sold it to her. Then this year, grouping the orders which included *High Jinks*, I was surprised to find that they included more *High Jinks* than *Philippe Rivoire*. One other lady customer always gets the most purple varieties she can locate in the field, and if she cannot come during blooming time, she asks me to pick out for her my most purple kinds.

Just what quality is it that gives the final boost to one variety which puts it at the top in its class? With the dark pinks, giving the honor to *Mrs. Livingston Farrand*, I think it is color. This, however, I consider unusual, and I fully expect to see other new peonies as fine in color as this variety, and better in some other respects. Usually, and for show purposes at least, I believe the deciding characteristic is not color, but FORM, or FINISH, if you wish to call it that. Of course, the variety has to have good color to be considered at all. I believe that it is form or finish that holds *Le Cygne* at the top. *Kelway's Glorious* in comparison is a ragged unfinished bloom, and I have been willing for my own pleasure to kiss it goodbye for some time. *Priscilla Alden*, while not fragrant and not a very heavy yielder for me, makes a larger *Kelway's Glorious* look cheap. I shall never forget the magnificent blooms of Hans Sass' *Evening Star* at the Lincoln (Nebraska) National Show. The "finish" of the blooms was superb. By these statements I do not mean to imply, though, that a bloom to reach the top has to be of the bomb type or full rose type with incurved petals. One flat semi-double may be ragged and disheveled, another as beautifully formed as a big bloom of bomb type.

Every originator should be allowed to give his new kinds any name he chooses, provided it is pronounceable and not too difficult to spell. His pocketbook will suffer if he gets an unappealing name. I have given names to several of my trial seedlings which I thought appropriate, but perhaps you can imagine why the varieties were never introduced. One was *Hari-kari*, and I applied the name *Dog Fight* to several different seedlings in succession.

The great increase in sale of peony roots, along with all other nursery stock, in the last few years, has helped only to emphasize more strongly than ever how much cheaper, relatively, new peonies are to many other new kinds of flowers. A new peony, introduced at say \$25, is, in proportion to the time and effort required to originate it and work up a stock for sale, much cheaper than a patented rose at \$1.50. Rate of increase is so vastly different. Similar comparisons might be made with bearded iris, gladiolus, dahlias, etc. If stock of a new peony is small, a sale to an amateur takes just that much production out of the market. Many of the newer peonies are now very scarce, and will be so for some years to come. *Philippe Rivoire* even, is in short supply and old *officinalis rubra* also. Considering its very high quality and the tremendous demand it will eventually enjoy, I believe the variety *Mrs. Livingston Farrand* ought very well to be priced at its original \$75 instead of the 1945 price of \$15.

There has been in recent years a strong tendency for iris breeders to use only the newest kinds in their breeding work. A gladiolus breeder tells me most of the worthwhile new gladioli have been developed from the pink *Picardy*. I do not believe there is any such chance to narrow the field of peony breeding. A magnificent peony may produce hundreds of inferior offspring. This probably because it came from parents inferior to itself. Then, contrariwise, some fine new ones may be obtained from kinds that are inferior in visible characteristics, but seem to have carried valuable hidden traits that pop out in the offspring. *Joyce*, a charming medium pink double, came from one of the ugliest Japs in my fields, a variety I never could identify. Some of my outstanding reds are from kinds that get ugly as the bloom ages, and are not especially beautiful at their best. But I do not mean to imply that there are some ugly kinds that *always* have fine offspring. The whole problem might then be stated as follows: The *albiflora* species of peony, in its hundreds of varieties good and bad, is so mixed genetically that no one can tell for certain just where the sources of all good new peonies lie. In conclusion, then, let me say, if you want to originate new peonies, study the present kinds, use your imagination, keep going despite failures, and leave the rest to luck. Above all, do not waste your time on chance pollenized seed. True, many fine kinds have come from chance seed. Railroads were built years ago with horses and scoop shovels, but they wouldn't be built that way today. Make your peony crosses by hand. There is no magic connected with it, and no secret processes involved.



The Brand's Golden Wedding Anniversary

L. W. LINDGREN, *St. Paul, Minn.*

Mr. and Mrs. A. M. Brand of Faribault, Minn., celebrated their Golden Wedding Anniversary, Sunday, November 4, 1945. There are not many couples who attain this milestone in life. I am sure all the members of the American Peony Society join in offering congratulations and best wishes.

The Brands were married in Linden, Minn., and among the guests present at the anniversary was Mr. Samuel Pattridge, who was Mr. Brand's best man at the wedding. The bridesmaid, Mrs. W. J. Wolaver of California, Mrs. Brand's sister, was unable to be present.

Mr. and Mrs. Brand both are peony lovers and they have given to the world many fine creations. It is very fitting that two of our finest flowers should be named in honor of Mrs. Brand, namely *Mrs. A. M. Brand* and *Hansina Brand*. All who have seen these two plants in Mrs. Brand's garden marvel at their beauty. We look forward to many more equally fine creations from the Brands.

One of the guests present was Mrs. Brand's aunt, Mrs. S. S. Mack, who recently celebrated her 91st birthday. Mrs. Mack, who is very active for her years, read a poem which was fitting for the occasion.

You have walked the trail together Fifty years,
You have found the marriage tether one that cheers.
You faced the storms that came, with a love that
Held the same, Fifty years.

You have been to each a blessing, you have carried heavy loads,
While you walked life's changing roads, Fifty years.

You have faced it hand in hand, solid rock and shifting sands,
Learning patience to withstand, Fifty years.

Now today we view it with you, in all the tangled skein,
Hued with gladness, dyed with pain.
We can find no shameful stain.
Fifty years you have done the nearest duty this appears.

Sing! "grow old along with me, the best is yet to be."
Love has bloomed both full and free, Fifty years.

Best wishes, Mr. and Mrs. A. M. Brand, and may you enjoy good
health along with many more anniversaries.



List of New Members

Beard, George W., 2710 W. Jefferson St., Louisville 12, Ky.
Briscoe, Wendell F., 701 W. Kentucky, Anadarko, Okla.
Doherty, Mrs. R. J., 4405 Glenwood Park Ave., Erie, Pa.
English, J. Albert, Toronto 8, Ontario, Canada
Frenzen, Paul, 3237 Maple Ave., Berwyn, Ill.
Gardner, Edward J., Nursery, Horicon, Wis.
Graves, Dr. R. J., R.F.D. 1, Concord, N. H.
Griffith, Mrs. H. O., 4832 Pershing, Fort Worth 7, Texas
Holliger, Herbert H., D.D.S., Huron, Ohio
Isel, Frank G., Addison, Ill., Box 12
Johnson, Margaret R., 762 Bellevue Ave., Hammonton, N. J.
Joost, Dr. Geo. H., 234 Linden Place, De Kalb, Ill.
Keinath, Ottomar, R.R. 1, Frankenmuth, Michigan
Lowenstein, Herman J. 143-16 Boulevard, Neponsit, L. I., N. Y.
Lundy, Percy S., R.F.D. 2, Waterloo, N. Y.
McConnell, Charles V., 344 Ryall St., Marseilles, Ill.
Maxon, Harry Jr., c/o Maxon Premix Burner Co., Muncie, Ind.
Minnig, H. D., R.F.D. 2, Erie, Pa.
Perino, Maree A., 610 9th St., San Bernardino, Calif.
Popenee, Mrs. C. H., Rt. 2, Box 135, Fairfax, Va.
Purviance, Mrs. Ann, Clarkston, Wash.
Riley, A. M., 621 E. Kansas, Independence, Mo.
Robinson Gardens, Box 1806, Anchorage, Alaska.
Sampson, Kenneth, Box 26, Park Ridge, Ill.
Steele, Miss Birdie B., 316 E. Dunlap St., Kentland, Ind.
The Home Garden Co., A. L. Chapin, Mgr., Lysander, N. Y.
The Sheridan Nurseries, Ltd., 4 St. Thomas St., Toronto 5, Ontario,
Canada
Willard, A. M., Box 834, Portsmouth, N. H.
Wise, Miss Mildred, 321 Fifth St., Brookville, Ind.

New Life Members

Anderson, William, Lake Lillian, Minn.
Dickinson, Mrs. Albert, Velva, N. D.

Correction in Addresses

Mull, Harry J., 452 Taylor Ave., Glen Ellyn, Ill., instead of Washing-
ton, as shown in bulletin No. 99.

Newcomb, W. L., 6653 Broadway R.F.D. 2, Alden, N. Y., formerly Clarence, N. Y.

Note: We will greatly appreciate advice in case any of these addresses are incorrect, or in fact any we list. Changes of address are often not reported to this office, resulting in bulletins being returned and our inability to locate the addressee. We want to keep our mailing lists correct at all times.



Peony Ramblings

M. C. KARRELS, *Milwaukee, Wisconsin*

1945 Season

The finest, largest, best colored bloom of any season I can recall in fifteen years of peony growing. There was some frost damage and crooked stems caused by late frosts and freezes, but as if to compensate for all the anxiety and misgivings caused by the late freezes, Mother Nature provided a perfect blooming season. The blooming period was one of the latest and longest I have ever had. The weather was cool, very often cold, with rain coming just when it caused the least damage to open flowers. Beginning with Prof. Saunders' *Julia Grant*, which opened on May 25 and ending on July 10 when I cut two blooms of *Mrs. John M. Kleitsch* the varieties all came true to their blooming seasons. There were many 9- to 12-inch blooms of perfect form and almost all varieties did well. Some of the primadonnas that have off seasons some years showed what they really can do under perfect conditions. *Nancy Dolman*, which some years does not open a single bud, was really breathtaking. *Frankie Curtis*, another erratic performer in my garden, was really a gorgeous white *Mons. Jules Elie* with stems far better than *Mons. Jules Elie* ever has. The largest blooms were the following: *Elizabeth Huntington* (the largest), *Martha Bulloch*, *Sarah Bernhardt*, *Minuet*, *Victoire de la Marne* and *Nancy Dolman*. The most perfectly formed and exquisitely colored were the following: *Solange*, *Elsa Sass*, *Tourangelle*, *Le Cygne*, *Doloradell*, *Mrs. F. D. Roosevelt*, *Elizabeth Huntington*, *Philippe Rivoire*, *Minuet*, *Martha Bulloch*, *Myrtle Gentry*, *Nick Shaylor*, *Alice Harding*, *Blanche King*, *A. B. Franklin*, and *Dr. J. H. Neeley*. The following were the most floriferous: *Souv. de Louis Bigot*, *Avalanche*, *Duchesse de Nemours*, *Edulis Superba*, *Philippe Rivoire* and *Mme. Emile Debatene*. The best yellow was *Laura Dessert*, larger and finer form than *Golden Dawn* or *Primevere*. My best red this year was *Victoire de la Marne*. This one in my estimation comes closest in form and size to the big pinks and whites, although it is variable in color. Taken from year to year *Philippe Rivoire* is still my best red. *Kansas*, on only a one-year plant, had very fine form, and if it continues to hold this will rate with the best reds. *Ruth Elizabeth*, *Mark Twain*, and *Sir John Franklin* looked good on young plants, and I look forward to these last-named four to displace a number of the older reds in commerce. The crying need in the peony world is for better reds. The most fragrant were the following: *Dr. J. H. Neeley* (permeated an area 15 feet from the plant), *Martha Bulloch*, *Mrs. John M. Kleitsch* and *Duchesse de Nemours*. The best of each color: White — *Dr. J. H. Neeley*; flesh — *Solange*; light pink — *Nick Shaylor*; medium pink — *Mrs. F. D. Roosevelt*; dark pink — *Blanche King*; red — *Victoire de la Marne*. The finest in the garden — *Nick Shaylor*. My collection of Japs is small, but the following were the best: Pink — *Ama-No-Sode*; and large, white — *Isani Gidui*; red — *Charm*.

Diseases

Generally speaking, peony diseases are not a serious threat to peony growing nor are they widespread, but some of us have had some experience with them and especially those of us who have larger collections. Most commercial growers of a certainty have had experience with all of them. An honest reliable grower who has a love for the peony and who has the widespread popularity of the peony at heart will never send out an infected or diseased peony root. This type of peony dealer deserves the everlasting support of all peony fans and I am certain he is in the majority. I can think of no greater reward for him in the life hereafter than that the good Lord assigns him to the care of peony gardens where diseases are unknown. I am certain that so beautiful a creation of nature as the peony must exist in the world hereafter. The dollar-per-root minimum is fully justified to this type of dealer. Pursuing the same vein of thought, I can think of no greater form of punishment for the other type of dealer than that he be assigned to the care of a peony garden, when he meets the horned and fork-tailed gentleman in the hereafter, thoroughly infested with nematodes and sap diseases, there to struggle into eternity with their eradication and cure. I believe that much of the nematode infection can be traced to infected roots sent out by commercial dealers. It is also a fact that nematode infection can be acquired after planting. Garden soils sometimes have a nematode infestation before peonies are planted. Many vegetables are host plants for them and planting in the fall immediately after a vegetable crop has been harvested could infest the newly planted peony roots the next growing season. Greenhouse-grown plants set into the garden such as tomatoes, etc., can introduce them into the soil. This is especially true where the greenhouse-operator does not practice good soil culture such as heat treating or changing of bench soil. I am especially suspicious of all greenhouse-grown plants as possible carriers of nematodes. I once felt sure I traced a nematode infestation to some dahlia plants I purchased in pots. Where winters are severe and soil freezes down a foot or two, they can be eliminated from outdoor soil in a year or two by not planting host plants in the soil. Even with host plants in the soil they are often practically killed off in the severe winters with the exception of those that are in the cyst form of their life cycle. Most state agriculture departments can give you names of host plants for nematodes for your locality. The degree of infestation is in direct relation to the texture and type of soil. The lighter the soil the greater the infestation. Manures and especially mushroom composts favor the increase of the infestation. Heavy clay never contains nematodes, and therein lies a cure for nematode-infected peony roots. The hot-water treatment also is effective if care is taken that the water temperature is maintained at 120 degrees for the half-hour period of immersion. This can be done with the use of an aquastat. Temperatures of over 122 degrees will solidify the starches in the root and kill it. Peony roots treated with hot water should be planted in clay or at least a clay-type soil. Trimming back the root to one or two roots two or three inches long and dividing to one or two eyes is essential. All small roots must be removed, including the small feeding roots near the crown. The hot-water treatment is not a necessity, but will help. Planting directly in heavy clay will produce good results. The small divisions will need careful surface cultivation and mulching in the hot weather. Two years in the heavy clay will usually clean up most of the infected roots. Those that still show some galls should be again trimmed back and replanted in a new

spot of heavy clay. The hot water treatment before this second replanting will be of especial benefit. Older plants are much harder to cure than the young plants.

Sap disease, or so-called Lemoine disease, is not very prevalent with the exception of a few varieties which always have it and often bloom well with it while others won't bloom at all. *Solange* and much of *Alice Harding* has it and both will bloom well with it, but the bloom will be of better quality and larger if they are clean. It seems it is not contagious in the soil, as it does not spread from plant to plant as is the case with nematodes. All evidence points to the dividing knife as the agent for spreading it to other plants. If you divide a plant of *Solange*, the dividing knife should always be thoroughly cleaned before using it on another root. The disease manifests itself as regular swellings on all, or just a few of the roots, beginning at a point near the crown and extending the entire length of the root. Root formation is always stunted. In contrast nematode galls are usually formed only on the small rootlets. I do not think there is a cure for sap disease.

Fungus attacks of the various types, such as *Botrytis*, wilts, foliage discolorations, bud rots, etc., are more prevalent in wet, cold weather and in close plantings. They are seldom fatal. Here an ounce of prevention is worth a pound of cure. Four or five feet apart in rows with cultivation to keep down the weeds and provide air circulation around the plants will do much to prevent it. Cutting down the old foliage and burning late in the fall after the first freeze is also good prevention. If fungus attacks are present, dusting with dry bordeaux on affected plants and adjacent ones will help to check the spread of it. Dusting the soil around affected plants and the soil above the crowns will also help control.

Root-rot. Never saw it or had it in my planting. Would like to get an explanation of it.

Crown rot. This is an aggravated form of the natural rotting back of the old stems each year. The use of manures as top dressing will often cause this. Plants planted too shallow also seem to have more rotting of the crowns. I don't believe this is very serious, as a year or two will usually bring back the normal increase of stems.

Slugs and Wire Worms. Weak solutions of arsenate of lead poured directly on the crown of the plants will help eradication. The use of wood ashes as a top fertilizer will discourage the slugs. Grass snakes are very fond of slugs and if you find any around your peony garden do not kill them as they might be after slugs if you have been bothered with them. I don't think wire worms are much of a menace, but I have had them in apparently great numbers some seasons and have found them in the decaying portion of the crown upon digging.

Rose Fragrance. I made the blindfold test this year, using blooms of *Duchesse de Nemours*, *Madame de Verneville*, *Marie Crousse*, *Martha Bulloch* and *Sistie*. For comparison with roses I used *Ami-Quinard* and two varieties of hybrid perpetuals. Of six people used in the test all were able to distinguish immediately which was a peony and which was a rose. Two thought that *Duchesse* and *Sistie* had a suggestion of a rose fragrance, but not identical. Four of the six preferred the peony fragrance to the rose.

Color. *Tourangelle* still remains as the most exquisitely colored peony. I have several of the so-called improved *Tourangelles* such as *Odile*, *A. B.*

Franklin, etc., and while the stems of these are far superior, none has surpassed its color. *Solange* also still remains near the top in sheer exquisite coloring. *Geo. W. Peyton* seems destined to displace many *Solange* plantings. It is clean in plant and approaches *Solange* in color and form and is a much more reliable bloomer. Of the clear pinks in my garden I rate the following as the best: *Mrs. F. D. Roosevelt*, *Doloradell*, *Walter Faxon*, *Marie Crousse*. The most brilliant of all the pinks is *Mrs. Livingston Farrand*, and it is definitely in a class by itself. The following are usually classed as white, but they have achieved a richness in off white coloring that makes them stand out above all my other whites: *Elsa Sass*, *Alesia*, *Moonglow*, *Mount Everest*, and *Le Cygne*. *Ramona Lins* on a two-year plant showed an off white tint, but in a faint tan shade, and if this holds as the plant acquires age it will be a definite color break and a most desirable color. In speaking of exquisite color, *Alice Harding* should never be left out, this is also true of *Nick Shaylor*, especially so when it comes without the flecks.



I Planted A Peony

RALPH M. SCHROEDER, *Warrens ville, Ill.*

Twenty-five years ago I planted a peony. To be exact, I planted six of them. For a number of years I had grown quite a few flowers. Most of them had been collected wild flowers, although I had tried my hand with dahlias, cannas, gladioli and a few iris. I had that year harvested my first crop of iris seeds. As these seeds were all from hand-pollinated crosses, I was sure that in a couple of years I would revolutionize the iris world.

We already had four peonies growing in our garden. Of these *officinalis rubra plena* was the only one known to me by name. The others turned out to be *Queen Victoria*, *Fanny Crosby* and a pink, which to the best of my knowledge was only a "piny." During the summer a catalog bearing the name of Peabody found its way to the Schroeder mailbox. I tried to determine which of the varieties listed were in my small collection. Unable to do this, I picked those I thought most likely and sent in a small order.

Surely there were no better white peonies than *Queen Victoria*, so I decided to buy *Kelway's Glorious* and *Festiva Maxima*. No doubt one of these would be a duplicate of the queen, but I would be sure of the name of my nice white. I also purchased *Edulis Superba* to compare with the pink already in our garden. The name and description of *Therese* intrigued me, and as there were no other reds to bloom so late, I selected *Philippe Rivoire* and *Mikado*. The roots arrived in September, so I planted six peonies.

As the years passed many varieties were added to my list and the planting of peonies became almost a habit, and while I have far from the largest collection. I believe that my 263 varieties contain some of the very outstanding flowers of the peony world. Such beauties as *President Wilson*, *Tourangelle*, *Mme. Jules Dessert* and others soon joined my original purchase and as the seasons came and passed I planted many peonies.

As peonies came and left, only *tenuifolia* joined *officinalis rubra* as an early bloomer. I was happy adding a few new varieties and at last I heard of a peony named *Jewel*. It was a hybrid. It was early and it was

red. I planted a peony.

The following spring it bloomed and it was all that the book said. Surely if this was an example there must be more of these hybrids available. If there were I should at least have a few more. Several weeks later at the Midwest Peony Show a gentleman by the name of Glasscock displayed a number of beautiful flowers made from painted silk. They must have been artificial as most of the visitors seemed to agree that there were no peonies like that. I was thrilled to the extent that I forgot to take notes.

The following year I planted *Eros*. This is a beautiful single hybrid. The large cupped flowers open a medium coral pink and during the five days of their existence they fade through shades of salmon to a pale peach pink. Even as it fades it retains its beauty and is never unsightly on the bush. As the blooms do not all open at once, I feel assured of at least a week to ten days of bloom.

The modern peony garden is not complete without several of these hybrids. Their silken texture and clarity of color make them standouts in the early garden. Many people stop to ask if they are a cross between peonies and poppies. Their stems are stiff and the foliage is clean and bright. Wind and rain seem to affect their performance slightly.

Laddie, a dwarf scarlet red flower, is the first peony to bloom in my garden. The small plant, only 12 to 15 inches tall, bears its goblet-shaped flowers in late April. In 1945 the date was April 14. Opened the bloom would measure about seven inches across, but as it retains its goblet shape it seems much smaller, and the golden anthers are seen through an opening about 2 1/2 inches in diameter. *Alexander Woolcott*, a shining crimson semidouble, and *Golden Glow*, with its wealth of golden stamens, are excellent reds. *Dainty Lass*, a coral pink jap, and *Victoria Lincoln* a rose pink double, are near the top in their color. The latter does not become double until it is fully established. *Chalice* is the best white that I have seen. *Elizabeth Cahn* has little chance in my garden, as the bees start working on it before it is open and tear the petals badly.

Two very outstanding garden flowers are *Flame* and *Laura Magnusson*. *Flame* is all that the name implies. Its large flame red flowers can be recognized from any spot in the garden. *Laura Magnusson* is a semi-double cup described as cherry red. To me the color is pink, but not a pastel pink. It is close to fuchsia without the blue. Last year I planted *Illini Belle*. From its performance as a first-year plant, I think it is probably the best red peony. I am sure it is the best dark red. Its black red, semidouble flowers with bright yellow stamens were about all that one could wish. The color was darker than *Mons. Martin Cahuzac* or *Matilda Lewis* and achieved its darkness through its depth of color rather than by the presence of purple. The flowers were eight inches across and lasted for thirteen days through wind, rain, sun and cold. Its one fault was that it was hard to photograph. Its darkness makes photography impossible on a dark day, and in sunlight the picture must be taken with the light at about 90 degrees, as the contrast between the petals and stamens is so great.

The foregoing rhapsodic utterings do not mean that I have limited myself to the hybrids. I have planted a number of the newer *Chinensis* also. Among those which I now grow or have had time to study in other gardens, and which I hope to plant in the next year or so are several which should make names for themselves. Mr. Auten has given us *Flower Girl*, *Molly Pitcher*, *Mount Palomar*, *Radiant Red*, *Sanctuary* and

Sky Pilot. From the garden of Mr. E. H. Lins come *Dolorodell* and *Tondeleyo*. Brands have produced *A. M. Brand*, *Golden Bracelet*, *John L. Crenshaw* and *Lee W. Pollock*. The newer varieties originated by the late A. B. Franklin include such top-notch flowers as *Alice Reed Bates*, *The Admiral*, *Mary Eastman* and *Sir John Franklin*.

I have a number of Mr. Kelsey's very beautiful flowers. It is very hard to say which is the best, but I will for the time being give *Marilla Beauty* and *Laura Kelsey* top ranking. Col. Nicholls has given us a number of excellent peonies. I have as yet to see one which I would rate under 90. The lowest would be *Mrs. Livingston Farrand* on account of its weak stem. Aside from the better known varieties *Blush*, *Mary E. Nicholls*, *Nancy Nicholls* and *Thura Hires* are it. Most of the Sass peonies are rather widely known, but Hans' new red, which I have not as yet acquired, is very interesting. Its name is *Judy Becker*. My neighbor at Lincoln, Ill., Mr. Lanigan, a fine Irish lad in the seventies, has made it possible for me to grow *Mentor Graham's* flesh white, and *Mavourneen*, a beautiful pink semidouble, and from Mr. Bigger we have a very excellent jap named *Westerner*.

Next year at Rockford, Ill., I hope to be able to show a seedling, 332, for Mrs. Fischer. It is a light red, which shows much promise as a late flower.

Several years ago I was privileged to be present in the garden of Mr. Christman, when a new blush white flower from an unknown grower appeared. It remained the lost peony until 1944, when it was shown at Milwaukee by its originator, Mr. Thompson. *Victory*, with its beautiful color, its waxy texture, and its ability to open well make it one of the best of all peonies. Nothing I have seen or heard of this flower would cause me to think that it would not in time be at the top in the rating list. This year, when the flower crop at Northbrook was a near failure, a one-year-old plant of this new peony did very well.

And so, as the years pass, I hope to be able to plant many peonies.



Two New Races of Peonies

A. P. SAUNDERS, *Clinton, N. Y.*

I want to report first on a race of peonies that is still too recent to make any very definite decision on; but the plants so far obtained are sufficiently new in their characters and sufficiently beautiful in their bloom so that I want to get the race recorded without further delay.

The parentage of these plants is more complicated than any strains that have yet been reported, and one of the interesting aspects of the crosses is that they offer thus an incentive to more complicated breeding plans.

Here is the situation: One of the four parents of these plants is a pink Chinese peony of the Japanese type. There is nothing remarkable about it except that it is a vigorous plant.

The second parent, which includes the blood of three other species, is my seedling No. 14255. This is one of a group of somewhat similar plants by crossing a plant of *Otto Froebel* with my seedling No. 5397.

My plants of *Otto Froebel* are not quite alike, as they are mostly seedlings, and these are not always identical with the parent, which is a plant allied, as I believe, to *officinalis*, having pink flowers of a good shade.

No. 5397 is a cross between *Mlokosewitschi* and *macrophylla* (*tomentosa*). The flowers are pale yellow, the foliage very coarse, very light green. The odor of the leaves is faint and suggests cloves. The pollen is extraordinarily fertile and there is no difficulty in crossing this plant with an *officinalis* variety like *Otto Froebel*.

I have a strain of these crosses, *Otto Froebel* X 5397 which crossed with Chinese peonies represents the combination of the four species, *Mlokosewitschi*, *macrophylla*, *officinalis* and *sinensis*. The plants are sterile and the flowers are more uniform in character than one might expect. I have now about a hundred plants of this breeding, no two of which are really alike, but they are almost all of a certain type.

I will give the descriptions of several of them:

- 16191 Slightly semi-double; palest yellow or tending toward amber in color.
- 16208 Single, pale rose, with enormous crimson stains at the base of the petals.
- 16213 Delicate amber, flushed pink at the base. Fine, large yellow center.
- 16245 Conspicuous single, pinkish buff with bright purple rosy shading at the base.
- 16254 Strong tuft at the center. Pink, shaded amber. Tall and handsome.
- 16261 Buff yellow, pinkish single.
- 16268 Very large, cream blush with darker edges; deeply veined and flushed rose.
- 16274 Clear, delicate fresh pink single with deeper pink shading.
- 16283 Tall, fine cup, pinkish amber.

I have over two dozen of such plants which bloomed last spring and almost all of them looked good to me. Perhaps I am too favorably impressed by them; time will show. For the present there are not more than three or four plants of a kind, so they cannot be distributed yet for a few years. Each year increases and improves the stock.

Their season is about with the earlier hybrids of *officinalis* with *sinensis*. It is difficult to define the type, but as a rule the blooms are held up well and the colors are so novel that a group of them would be sure to attract notice.

* * *

The second cross of which I want to say something is not really new, although comparatively few peony growers have any first-hand experience with its results.

It is the cross *Tree peony* X *Paeonia lutea*.

P. lutea is now well known to a number of peony growers. It is not yet in commerce on any considerable scale, and I am not sure that it will be, for the bloom is very small in comparison with most of the peonies and an inconspicuous flower, but it has a strong yellow color, and that makes it a valuable parent, for it imparts its yellow tint to large blooms that result from the Moutan parent.

The great Lemoine began work with *Paeonia lutea* immediately after it was introduced to Western culture about 1884, and by the turn of the century, and for a few year thereafter, Lemoine introduced a series of very remarkable hybrids, most of them with enormous blooms in yellow or sometimes stained with red. *Souvenir de Maxime Cornu* is perhaps the most striking of these varieties, and has become better known than any of the others.

Lemoine's introductions include the following varieties:

L'Esperance	1909	Chromatella	1928
La Lorraine	1913	Aurore	1936
Mme. Louis Henry	(Henry 1919)	Flambeau	1930
Souvenir de Maxime Cornu	(Henry 1919)	Alice Harding	1936
Surprise	1920	Sang Lorrain	1939
Satin Rouge	1926		

These varieties are almost all doubles. Apparently the French have preferred the double blooms.

Among my seedlings quite a large number have been single, and I think they are not less beautiful than the doubles. Here is a list of them up to the present:

Age of Gold	Festival	Phoenix
Amber Moon		Princess
Arcadia	Golden Hind	
Argosy		Red Jade
Banquet	Happy Days	Regent
Black Douglas	Harlequin	Roman Gold
Black Panther	Harvest	
Black Pirate	Holiday	Silver Sails
Brocade	Hyperion	Spanish Gold
Canary		Spring Carnival
Centaur	Marchioness	Stardust
Chinese Dragon	Melody	
Coronal	Mystery	Tea Rose
Corsair		Thunderbolt
Countess	Narcissus	Trophy
Damask		
Daredevil	Open Your Eyes	Wings of the Morning

There are a number of very beautiful things here, quite comparable with some of the finest French varieties.

It is not necessary to give in detail the marks of beauty on all of these, since they are being introduced to commerce as fast as I can get sufficient stock of them.

A large number of these have yellow as their ground color; some of the others are reds in various shades, and some of the dark-colored ones are deep red, almost approaching black.

This is unquestionably a valuable race, for it introduces new ranges of color among the peonies.

The season of these plants is a little later than that of the tree peonies, which run from about May 25 to the early days of June, while the lutea hybrids overlap them and cover the season from early June until about the beginning of the Chinese peonies, which usually start with me about June 10.

There are no other varieties to be considered outside of those of Lemoine and my own: no one else, so far as I know, has worked on this strain.

* * * * *

Secretary's Notes

This is the one-hundredth number of the American Peony Society BULLETIN and I take considerable pride in presenting it, and wish to extend my heartfelt thanks to our most loyal members who have made it possible. The response to my requests has been more than realized, and I will be obliged to carry over some of the material received for the March issue.

Space will not permit me to comment on the splendid articles presented which cover so many subjects of interest to peony lovers. My duties have been such that I have not been able to personally thank each of the contributors for their efforts, but, believe me, I am truly grateful. Coming at holiday season there will again be some delay in getting the number set up and printed, but it is in course of production as I am writing these notes December 24.

This number is conclusive evidence of the fact that if our members will cooperate fully, we can have each number packed with helpful articles that will be of great value and assistance. By looking over the list of subjects presented you will find the field pretty well covered. You will note many new contributors, as well as some of our "old reliables," who can always be depended upon to come through when we ask them.

The task of accumulating the material in the past one hundred BULLETINS has not been a small one I can assure you. I am extremely proud of our membership, which now exceeds the 800-mark. The steady growth spurs us on to more exerted action to get out larger and better BULLETINS as time passes.

Nothing would please me more than to be able to present in each quarterly BULLETIN an equal number of splendid articles as this one contains, and it is not an impossibility.

We hope that this number will bring forth comments that will make another equally interesting number.

What a wonderful innovation color photography has been, particularly with the flower lover. We can study our favorites throughout the year at any time we desire and get a great deal of pleasure.

Some months ago, during the month of June, I clipped the following poem from our local paper written by Hilda Butler Farr, entitled Fragrant Miracle.

There's a single flower on my desk today,
A peony . . . fragrant and very gay.
And it brings to me a message direct from God
How a miracle bloomed in a bit of sod.

Our outlook for the coming year was never brighter. Our membership is steadily growing and there are a number of recent originations of peonies that will be watched with interest, as I think they are going places. See them at the Rockford, Ill., show in June, dates of which will be announced in the March issue of the BULLETIN.

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the number of copies printed each issue.

his once considerable work in this practice is

Thanking you heartily for remembering me.

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coming year. Photographs of specimen or group plantings of peonies will be as acceptable as articles. Am looking ahead to the coming year with high hopes, as we have plans for making the BULLETIN even more interesting and one that you will look forward to with increasing eagerness.

In closing, I want to extend to each and every one of our members season's greetings with the earnest wish that our big family of peony lovers may continue to grow in number, as well as in interest and enthusiasm. We would like to shake the hand of each one of you and wish you personally a Merry Christmas and Happy New Year. Your directors and officers join me in this expression of Holiday Greetings. May the year that is ahead have much in store for you that will bring happiness and prosperity.

H. F. Christman

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Beginnings - Progress - Accomplishment

ERNEST FLINT KELSEY, *East Aurora, N. Y.*

Beginnings

In the beginning God did not create a factory, a college or a church, but He did create a garden, that comprehended and implemented the three. In that garden shop were fashioned the first tools held and used by the hands of man. They did not study language in man's first Alma Mater, there language was created and first used, a language that doubtless was soft and musical and pleasant to the ear, with no jarring gutturals, grating nasals, hissing sounds or ear splitting explosives. The first church held its initial service "in the cool of the evening." After God had "lit the stars for tapers tall" He preached the first sermon that ever fell on the ears of man. This garden held the germ of every human progress and accomplishment.

In the beginning God did not create streamlined trains, he left that for man to do. In the beginning God did not write books; he left that for man to do. However, in the beginning God did create and adorn the flowers of the field. Then he invited us into his garden and said "work with me and make them still more beautiful." Ever since men have been colaborers with him in his sun-heated, river-watered global greenhouse. Organization in embryo was in that garden. "It is not good for man to be alone," was the first call to organize. The American Peony Society has followed this ancient blueprint to meet a need and accomplish a worthy purpose.

Progress

The Manual of the American Peony Society, which every peony lover should own, contains in detail an accurate History of the American Peony Society by Prof. A. P. Saunders, beginning with the letter written on June 26, 1902, by C. W. Ward, and sent out to a list of growers of peonies, calling attention to the chaotic condition of peony nomenclature and pleading for exhibitions of the peony as other flower groups were doing. From that time on progress was steady, beginning with twenty-three members. On July 2, 1904, certificate of incorporation was filed in Albany. The Society had reached a place of legal standing under the

laws of the State of New York. Further progress was made when the Society attacked the difficult job of straightening the seemingly hopeless tangle in peony names. The first step in this direction was to secure a descriptive list of varieties from Auguste Dessert, the famous French specialist, and those introduced by Belgian and French growers. In addition to this Mr. Fewkes compiled a list of American varieties originated by John Richardson, George Hollis, H. A. Terry, Ellwanger & Son and Mrs. Pleas, a very small list in comparison with today's peony originators. This list comprised about one thousand varieties, mostly doubles.

Still further progress was made when an extensive planting of these varieties, or many of them, was made at Cornell University grounds for the purpose of "elimination of duplicates, establishing correct nomenclature and writing accurate descriptions of true varieties." Cornell published three bulletins, giving in detail the work of the committee who carried out the threefold aim. This is only a brief sketch of the work. A full and complete account can be found in the Manual.

The next progressive step was the publication of *A Bulletin of Peony News*, August 1915. The first article was by A. H. Fewkes, under the caption "What Are You Doing for the Cause of the Peony?" You could lift that entire article and print it in BULLETIN 100, and it would be up to the minute. It touches an age-old sore spot that can be epitomized by some work and some shirk. The thing that impressed me the most in BULLETIN 1 is the preponderance of French influence and originations and the comparatively few American growers represented.

It is interesting to note what Mr. H. W. Groschner's rating is on the peonies of his day. Here is his rating, **Extra fine**, *Asa Gray*, *Mons. Jules Elie*, *Avalanche*, *Le Cygne*, *Solange*, *La France*, *Alsace Lorraine*, *Baroness Schroeder*, *Therese*, *Karl Rosenfield* and *Claire Dubois*. **Fine Peonies**, *Marie Lemoine*, *Couronne D'or*, *Mme. Crousse*, *La Perle*, *Mons. Dupont*, *Duchesse de Nemours*, *Marie Jacquin*, *Grandiflora*, *Adolphe Rousseau*, *E. G. Hill*, *Felix Crousse*, *Edwin Forrest*, *Alice de Julvecourt*, *Jeanne d'Arc*, *Princess Beatrice*, *Eugenie Verdier*, *Festiva Maxima*, *Livingstone*, *Madame Ducel*, *Philomele*, *Mathilde de Roseneck*, *Volcan*, *Meissonier*, *Agnes Mary Kelway*. **Good peonies**, *La Tulipe*, *Festiva*, *Floral Treasure*, *Sulphurea*, *Candidissima*, *Blanche Cire*, *Modeste Guerin*, *Mme. Calot*, *Solfatare*, *Delachei*, *L'Eclatante*, *Gloire de Chas. Gombault*, *Mme. Ducel*, *Edulis Superba*, *officinalis ruba*, *Alexandre Dumas*, *Triomphe de l'Exposition de Lille* (writer's cramp). Then follows a long list of "mediocre varieties" too long to print and too dead to disinter. It is evident the editor did not wholly agree with his classification, as he appends this significant note: "I am sure none of us would refuse Mr. Groschner the privilege of changing his mind on the merits of some varieties after he has had them under observation a few years longer."

It is interesting to note that in the 1915 show the best six blooms, any variety, was *Therese*. Just one more item and we will leave volume one, query, "what do you do to keep the ants from peony buds?" Answer, "cut strips of sticky flypaper and tie one around each stem." Quick, Watson, the needle.

Accomplishment

This Society has printed and issued 100 numbers of a Bulletin of which we have every right to be proud. It is the hub of the A.P.S. It has been uniformly well edited. The BULLETIN and the Annual Shows have raised the peony into a new niche among flower-loving people.

It has brought together peony-minded men, many who have never met each other and yet through a network of correspondence have helped and encouraged each other by exchange of varieties, by discussion of articles in the BULLETIN and by friendly criticism.

The BULLETIN has been an encouragement to beginners. It has been generous in giving space to the new varieties making their bow.

The BULLETIN has permitted criticism from some of us sharp-shooting writers and then played good Samaritan, "pouring oil and wine."

The important item in BULLETIN 2 was the recommendation of the "scale points" for judging peonies, color 20, size 20, stem, length, strength and foliage 20, form 15, substance 15, and fragrance 10. The second item of interest was a "symposium on the newer foreign varieties": 123 varieties were catalogued, the large majority of them having passed into the limbo of discarded kinds. However, some are with us to this day, including *Enchanteresse*, *Eugene Bigot*, *Galathee*, *La France*, *Laura Dessert*, *Le Cygne*, *Mons. Martin Cahuzac*, *Philippe Rivoire*, *Primevere*, *Sarah Bernhardt*, *Solange* and *Tourangelle*, perhaps others in various old gardens. From the Secretary's notes I glean this, "a middle-west member writes, 'I begin to believe everyone is peony mad. I sold *Lady Alexandra Duff* and *Jubilee* at \$25 each.'" Backward, turn backward, O time in thy flight, when peony prices were higher 'n a kite.

BULLETIN No. 3. Here is a brief report of results secured from the first symposium rating — varieties rated were all of foreign introduction.

Those rating 9.0 follow: *Genette*, *Kelway's Glorious*, *La Lorraine*, *Mignon*, *Marie Crousse* and *Madame Gaudichau*. Those rating 9.2: *Sarah Bernhardt*, *Mme. Jules Dessert* and *La France*. Then follow a group of gradually increased rating: *Solange* 9.3, *Belisaire* 9.5, *Tourangelle* 9.7, *Therese* 9.8 and *Le Cygne* 9.9.

Gleaned from the Secretary's notes, query at a show, "do you grow these from seeds or cuttings?" Ignorance concerning the peony still persists; — a sweet young thing asked me this fall, "do you plant them with the sprouts downward or upward?" Oh, for a good poker face at blooming time!

BULLETIN 4 has twelve pages of the names of French peonies with correct pronunciations, with full explanations how to convert that Yankee drawl into a nasal saxophone. Gleaned from the Secretary's notes, "clipped from a medical journal, 'I cured an obstinate case of singultus (hiccough) with a tea made of this plant.'" Why bother with the tea, just explode in his ear me-sye-mar-tin-ca-u ZAC' three times and the hiccoughs will hic away instanter.

In BULLETIN 5 there is a long article from the pen of Mrs. Sarah Pleas, Whittier, Cal. I quote one paragraph, "The singles and semi-doubles have been my favorite and I predict that within the next twenty years there will be as great a demand for these kinds as there now is for full double flowers," which illustrates that peony prophets usually forecast their immediate personal preferences instead of the trend of the times. How many hopefuls now sleeping in the Discarded Graveyard were once heralded "in ten or twenty years when better known will rank among the best" — yes, they were rank — among the best.

To lift even one item from each number of the BULLETIN would make an article too long for the BULLETIN and too tedious for the readers. I have given excerpts from the first five numbers and have omitted reams of interesting matter.

Rushing ahead to BULLETIN 25 we glean from the 22d National Peony Show held at Philadelphia, Pa., that the consistent winner of first prizes was *Therese*, as the best flower in the show as exhibited by Movilla Gardens.

This was a bulky number of 85 pages, containing a list of members and addresses, showing a healthy increase in membership and interest in the peony. The officers that year were President, A. M. Brand; Vice-President, W. W. Cook; Secretary and Editor, W. F. Christman; Treasurer, James Boyd. In this number there are reports of the National Peony Exhibition, New York Peony Show, Des Moines Peony Show, St. Paul Amateur Peony Show, Elyria Peony Show, Northwestern Peony and Iris Show, Duluth Peony Show, Boston Peony Show. How come we don't have so many local shows now?

In June, 1928, we blossomed out with an attractive cover with a fine cut of *Victory Chateau Thierry*. Heretofore it had a plain white dress with no distinctive caption and again No. 41 in March, 1939, came out with a still handsomer cover, illuminated with peony blooms scattered over it.

At half way mark, No. 50, we find the BULLETIN largely devoted to articles on Japanese and German peony growing. The first article, eight pages in length, is under the caption of "The History and Present Status of the Chinese Peony in Japan." There seems to be very little in it from which to quote. The second article, "The Peony in Japanese Life," describes *Madame Yukio Ozaki's* entrance into a temple tree peony garden, "when my enraptured gaze first fell upon those brilliant masses of noble flowers, I held my breath in silent ecstasy, marveling at their unimaginable beauty." "Tossed up to the blue dome of heaven, a sea of magnificent blossoms suddenly and triumphantly bursts upon my sight. In the delicious freshness of the still morning hour, great globes of carved alabaster gleam in the sun, miniature whirlpools of virgin snow, fresh and unsullied from the magical hand of nature — side by side with riotous blossoms of ruby crimson. There are glorious spheres of passionate carmine and cerise glowing resplendently with hues as deep as those which flush the sky to tropical glory at the hour of sunset; there are pinks as delicate as the tinting of a maiden's first blush or the lining of a cold sea shell lying on the sand. There are variegated blooms in which the color deepens at the core to a deep oleander, while the outer edges of the involuted delicate scalloped border of the corolla pale to pearly white, as if bled and chilled by contact with a harsh world, an experience spared by the more sheltered and happy heart of the flowers" — a spring flood of words covered with driftwood of adjectives; anyway, it must have been a bully show.

Report of the Van Wert Festival and Show mentions only one peony. *Alice Harding*, selected as the best flower in the show.

Here is part of Secretary W. F. Christman's Notes, quite as applicable for BULLETIN 100 as it was in 50. "With this issue we present the fiftieth number of the BULLETIN. Of these, all but 17 have been prepared by your Secretary. We know that errors have crept in and were not observed until after the BULLETINS were mailed. (I have discovered errors in some editions of the Bible, E.F.K.) Many of these issues have been compiled under trying circumstances when we were heavily burdened with other work. At the annual meeting recently held in Des Moines, Iowa, it was almost unanimously voted that I continue with the work. In accepting this responsibility I need your support in the way of contribu-

tions of articles covering different experiences you may have encountered in the growing of peonies; results you may have obtained from various cultural methods; success you may have attained in the development of new varieties; comments you may wish to make on established varieties as well as new introductions; reports from your local peony shows; suggestions of improving the BULLETIN in the way of constructive criticism (note that word "constructive" — remember your high blood pressure when you zip that sheet into your typewriter, E.F.K.): in fact, "anything of interest concerning the peony." Forty-one new members are listed in BULLETIN 50, among them my good friend, the late J. A. Bongers of Ottumwa, Iowa.

There are two outstanding features in the three-quarter post in BULLETIN 75, "Photography of Flowers" in three comprehensive articles, colored photography, lantern slides and the main article, Photography of Flowers. This leads me to observe that every Peony BULLETIN, no matter how old, is a valuable source of peony information and should be carefully preserved and studied. The other feature is a series of short pithy articles from our members in Iowa, Oregon, Alberta (Canada), Pennsylvania, Maryland, Ohio, Missouri. The BULLETIN seems to group in one issue articles relating to one or two important subjects. This makes the BULLETIN a splendid reference book, bringing a variety of opinions on vital topics into one issue.

In this issue there is also a continuation of the controversy as to whether or not peonies have bud sports. I don't know how the argument was decided, but at this late date may I say that I have discovered that many so-called bud sports were only seedlings dropped into the lap of mama plant. However, Mr. L. D. Glasscock in an article in this number says he has had them on *Mons. Jules Elie* and on *Legionnaire*, so, I bow respectfully to Gunga Din, the peony savant.

Sometimes I wonder if we are "whooping it up" about our favorite perennial now as we once did. Listen to this in this same BULLETIN. "our eighth Annual Festival will be held Thursday, June 8, with 65 floats and 65 bands, making a parade five miles long," so writes E. C. Humphrey, Van Vert, Ohio, nor is this all, it was broadcast over WOWO during the afternoon: following this was the coronation of Queen Jubilee VIII and then the Sun Valley Ice Carnival." "One hundred thousand visitors saw last year's show." Are we slippin' or have we become so commercialized and sophisticated that we have turned up our sun-burned noses at such garish advertising?

BULLETIN 76 gives an interesting method of scoring peonies, one rating for exhibition and another for performance as a garden plant. This is by L. E. Foster, York, Nebraska.

BULLETIN 77 — "Yellow Peonies Are Coming," by L. E. Foster, York, Nebraska. "Just around the corner" sez "Les," — rainbow corner with its pot of gold.

BULLETIN 79 — Class 103 — Court of Honor: Best white, *Mrs. J. V. Edlund*; best light pink, *Nick Shaylor*; best dark pink, *Martha Bulloch*; best red, *Victoire de la Marne*; best flesh, *A. B. Franklin*; best Japanese, *Tomate Boku*.

BULLETIN 80 — Photo of a peony bloom that lasted a year. No one could explain why.

BULLETIN 82 — The high-rated peonies in the symposium tabulated were: *Therese*, 9.54; *Mrs. J. V. Edlund*, 9.51; *Nippon Brilliant*, 9.46; *Le Cygne*, 9.42. The Swan seems to be slipping.

BULLETIN 85 — Chronicles the death of William Frank Christman Jr., our Secretary's son, who was fatally injured in an automobile accident. The eulogy written by his father plumbed the depths of human sorrow and reached the heights of Christian fortitude, a classic from a great heart of parental love.

BULLETIN 87 gives a report of the 1939 questionnaire. Here are the results: What is the most beautifully colored peony? *Mrs. Livingston Farrand*. Which the most charming? *Silvia Saunders*. The most magnificent? *Therese*. What is the finest peony, all things considered? *Le Cygne*. What is your favorite? *Mons. Jules Elie*. In the rating the highest three were *Kelway's Glorious*, 9.71; *Harry F. Little*, 9.70, and *Alice Harding*, 9.65.

BULLETIN 90 — Fourth Regional Show of the Fifth District of the American Peony Society. Queen of the Show, *Le Cygne*, by Roy G. Gayle. Others in the Court of Honor: best light pink, *Therese*, by Roy G. Gayle; best medium or dark pink, *Marietta Sisson*, by Roy G. Gayle; best red, 12-K-17, by Lyman D. Glasscock; Japanese type, No. 50, dark red, by A. L. Murawaska.

Summary

The peony has followed the westward trek of civilization, from China to Europe to U. S. A., with the early settlers along the Atlantic coast, on into New York, across the Alleghenies into Ohio, and finally into the the Midwest, now the peony capital of the world.

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* * *

SPECIAL NOTICE

The Annual Exhibition of the American Peony Society will be held in Rockford, Ill., June 15th and 16th, 1946. Full particulars will appear in the March issue of Bulletin. Plan to be present and if at all possible to exhibit in one or more of the many classes provided.

W. F. CHRISTMAN, Secretary

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The American Iris Society, since its organization in 1920, has published 83 Bulletins which cover every phase of iris growing. These bulletins go four times each year to all members, who may also purchase any back numbers in stock for 50c a copy. Because the bulletins are not for sale except to members a

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CONDITIONS OF MEMBERSHIP

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

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

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

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