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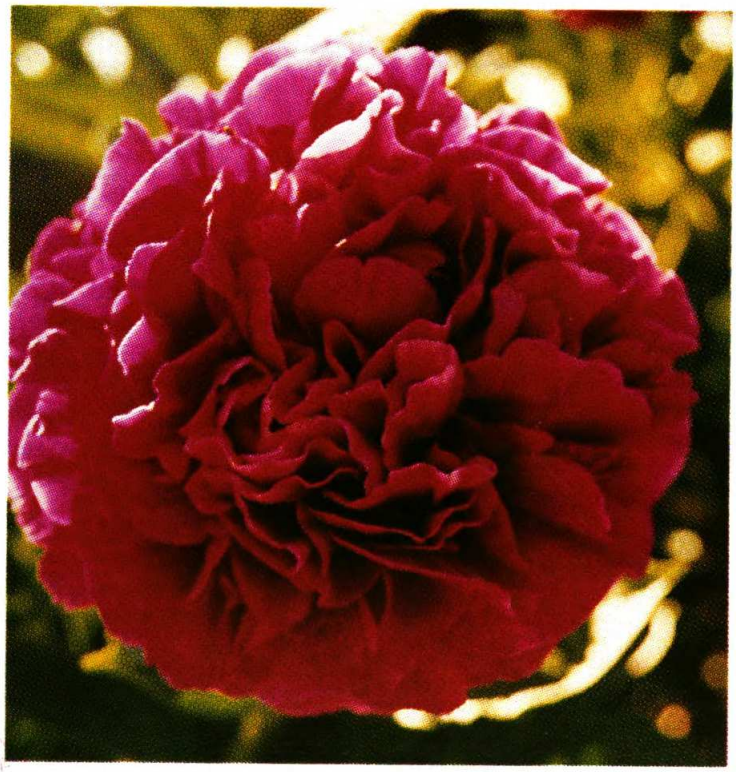
The American Peony Society Bulletin



OLD FAITHFUL, Gold Medal for 1997
Glasscock-Falk (1964)

Photograph—Dr. Kent Crossley

See Page 4

Announcing

The limited publication of a "TABLE TOP" edition devoted exclusively to

AMERICAN

TREE PEONIES

The AMERICAN TREE PEONY

63 BRILLIANT FULL COLOR PHOTOS

True, tree peonies with their 1400 year history are not native to America. But a class of exceptional HYBRID tree peonies are. Efforts by seven world renowned American hybridizers* who successfully cross-pollenated P. Lutea with P. Suffructicosa are covered in this limited edition. Photos are razor sharp in detail and reflect all the brilliance and subtle hues of these native Americans, including the new generation of ITOH's.

Appended cultural notes cover:

- *Tree Peony history*
- *Planting and general culture*
- *Propagation by root grafting of scions*
- *Pruning, fertilization, winter protection, etc.*

Compiled and edited by Greta M. Kessenich; photos by Roy Klehm and David Reath

* *A.P. Saunders, William Gratwick, Nassos Daphnis, David Reath, Toichi Domoto, Don Hollingsworth and Roger Anderson*

$25 Postpaid

Send check or money order to—

AMERICAN PEONY SOCIETY
250 Interlachen Road, Hopkins, MN 55343

AMERICAN PEONY SOCIETY

250 Interlachen Road **(612) 938-4706** Hopkins, MN 55343

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DEPT. OF REGISTRATION

The department was formed to properly supervise the nomenclature of the different varieties and kinds of peonies. All new varieties should be registered to avoid duplication of names.

Greta M. Kessenich, Secretary

OBJECTIVES

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

The AMERICAN PEONY SOCIETY BULLETIN is the official Society publication. It is mailed postpaid quarterly to all members in good standing.

MEMBERSHIP

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

Single Annual	$7.50	Junior or member family	$2.50
Single Triennial	20.00	Life	150.00
Family Annual	10.00	Commercial membership	25.00
Family Triennial	27.50		

Family membership, any two related members in same household .....One Bulletin
Junior membership, any age through completion of high school .....Separate Bulletin

For those who wish to further support the Society, the following special memberships are available.

Contributing	$25.00	Supporting	$100.00
Sustaining	50.00	Patron	250.00

AMERICAN Peony Society Bulletin

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PRESIDENT'S MESSAGE

This President's message was written 25 years ago by Roy Klehm. Our talented President of today, Scott Reath, looks ahead in his long range planning with the same goals and enthusiasm.

Dear Peony Friends:

It certainly is an honor to be president of the American Peony Society. With such a wonderful subject and such nice people to work with, I am looking forward to many wonderful times and experiences with you folks, mutually enjoying one of God's greatest gifts to nature—the Peony.

I would like to outline my goals for the next two years even though I feel these things will probably happen automatically because of the increased enthusiasm and newfound vigor of all our members.

A. Definite commitments and planning for our national shows three, four, and five years in advance of the actual happening.

B. Bringing together all the various interest groups within the society to achieve a high esprit de corps and pulling together to achieve our major goals. This would include the breeders, growers, show people, and amateur enthusiasts.

C. Revitalizing the importance and understanding of the two main reasons the society was originally chartered in 1904.

1. The Nomenclature function—the value of having a clear, concise, and correct system for keeping present and future peony varieties properly named should be of paramount interest to all members.

2. The enthusiastic promotion and captivating interest of our favorite subject—the Peony—coupled with the dissemination of correct, interesting, and vital information to all members, present and future.

Onward we'll go, with a very fine, talented board of directors, an extremely capable vice-president, David Reath, and an equally fine talented and enthusiastic membership.

★ ★ ★ ★

BULLETIN COVER:

OLD FAITHFUL, Glasscock-Falk (1964), Gold Medal for 1997

Old Faithful is a rich dark red double with the bloom of heavy substance. It is a fourth generation hybrid, blooms late for a hybrid. It is a vigorous plant, with strong stems, which holds the flower adequately. Good green foliage, about 38" in height.

THE NATIONAL PEONY CONVENTION

Vernon Kidd, 500 West 43rd St., PH-A
New York, NY 10036

The National Peony Convention and Exhibition at the Royal Botanical Gardens in Hamilton, Ontario, was blessed with cool, sunny weather for both the opening of a new garden and the peony exhibition and its winning entries for 1997. A riot of colorful blooms with their intoxicating scent greeted visitors, who progressed from one table of extraordinary blooms to the next. The winning floral arrangements, the different category winners and the Court of Honor winners combined to generate exclamations of delight, and in a way it was like rediscovering *"The Peonies"* in all their glory.

Chris Laning's Grand Champion, **Lois Elaine Laning**, attracted so many admirers it was difficult at times to get near for a close look. This new hybrid tree peony, named for his lovely wife, was breathtaking and difficult to describe, because its color, a varying multi-colored shade of raspberry pink to subtle under-shades of yellow radiating from its center, changes with the light. It is as yet unavailable, for it must be propagated through grafting, but I hope to be on the long list of admirers waiting to add this regal beauty to the garden when it does become available.

Every flower in the Court of Honor was exceptional, and the best Lutea tree peony, **Zephyrus**, entered by the Prestons of Pickering, Ontario, drew me back again and again to view its subtle beauty and form. An unexpected pleasure was meeting Nassos Daphnis, the distinguished hybridizer of this prize winner who visited the exhibition on Sunday. Best double pink, **David Harum**, was entered by Robert G. Wise of Sidney, Ohio, and all who experienced its beauty for the first time will want it for their garden. **Kinkaku** was the best European Tree Peony, entered by John F. Tai of Etobicoke, Ontario. **John Harvard** was the best semi-double hybrid, entered by Floyd Kimball of Stillwater, Minnesota, and it was a pleasure to see **Vivid Rose**, best double light pink, in the Court of Honor again, entered by Don Hollingsworth, whose **Garden Treasure** was singled out again this year as best Itoh Hybrid. His recently introduced **Command Performance** was another winner, a watermelon red bomb of exceptional clarity, which is even more brilliant in natural light. Other winners by Don Hollingsworth included **Summer Glow**, best double hybrid; **Francis Mains**, best double blush, and **Mother's Choice**, best double white. These were but some of the highlights from a room filled with extraordinary peonies, and the array of color was exceptional.

The auction, following the banquet on Saturday evening at the Royal Conaught Hotel in Hamilton, was lively and full of good humor, thanks to auctioneer John Simkins, who deserves special

praise for his role in organizing the convention with the Royal Botanical Gardens. Members from as far away as Italy were bidding on peony roots offered by members of the society as a means of fundraising, and it was an opportunity to acquire some rare specimens, including groups of two or more offered by Reath's Nursery and the Hollingsworth Nursery.

The Society's annual convention and exhibition provides an opportunity to see a generous portion of the extraordinary variety of peonies in their moment of glory, which too often a color photograph doesn't quite capture. It is a chance to see not only what is new but also wonderful older varieties that have stood the test of time and changing tastes.

I was eager to see the annual miracle unfold in my own garden, but as luck and the weather would have it, the week of the Hamilton exhibition turned out to be my garden's prime bloom. Of course, the tree peonies **Madame Andre de Villier**, first to bloom this year, along with **Shintenchi** and two unknown Chinese of Japanese varieties (one is quite likely **Hana Kissoi**) had already startled the neighbors with their stunning early display. Reath's **Waucedah Princess** gave two first-season blooms with just a hint of what is in store for coming seasons. Chris Laning's **Sunny Girl** had opened shortly afterward, joining **Red Charm** (only one large bloom this year). **Red Grace**, finishing its main bloom the week before the convention, was loaded with some of the most fragrant peonies in the garden, while smaller buds were still opening as I prepared to leave for Hamilton, the first time this has happened.

Cytherea, another early bloomer, was awesome in its first season of bloom: beginner's luck no doubt. But the peak garden bloom was to be enjoyed through photographs, thoughtfully supplied by my neighbor Allen Robertson, who annually presents a photographic survey of the garden. Sudden, very warm weather opened buds in profusion, and numerous friends enjoying this peak bloom left messages pinned to the door. I returned in time for ***Garden Treasure's*** first season of bloom. It proceeded to drop its petals the next day, and it seems to like its choice spot in the garden.

After a setback **Cheddar Cheese** returned to health with fragrant blooms of great beauty and size. This very large, creamy white double with golden petals interwoven in the center makes a good cut flower, and the golden inner glow is even more colorful indoors or if the plant receives afternoon shade.

A recent week was spent agonizing over what to plant in the fall to extend the next blooming season. The choices are limited, however, by lack of space. Unfortunately, **Elsa Sass** has been reluctant to bloom in a weeklong heat wave, and **Vivid Rose** failed to open all blossoms, depending on where they were located. **Cheddar Cheese** and **Myra MacRae**, somewhat earlier than **Vivid Rose**, were out-

standing, with the latter finally saying yes to the seashore after years of coaxing, and what a fragrant beauty she is.

The beach garden, a hideaway for writing assignments, offers conversations with catbirds and a chance to watch peaches, apples and tomatoes ripen. Momentary respites are stolen from the computer to pick sour cherries for pies, followed by raspberries and then blueberries.

In Manhattan, a 33-story apartment building mushrooms, a floor a day, just outside the windows. Men in miniature slosh through ankle-deep concrete hoisted aloft by a giant crane, smoothing it into a mold before it hardens, and this building ballet races toward its final tableau, thankfully several floors short of blocking the view.

To all members who contributed time and effort to the annual convention, particularly those who submitted their blooms for consideration, I offer a grateful thank you.

★ ★ ★ ★

THE 1997 AMERICAN PEONY SHOW

Royal Botanical Gardens, Hamilton, Canada

People came from far and wide to the Show at the Royal Botanical Gardens in June 14th-15th this year. Beside the regular members John Simkins sat at his computer spreading the word on the Net far and wide about the Show.

Three people came from Italy, some from Quebec and Ontario and many from New York to Minnesota.

We were lucky in obtaining one of the large Showrooms at the RBG instead of a smaller one previously booked. A wedding had been cancelled at the last minute. This meant the display area was much better and there was plenty of walking space for visitors. Five peony arrangements were placed on pedestals along one wall created by the Design group of the RBG Auxiliary. An added bonus was that the Iris Society held their Show in the next room on Sunday.

The hotel prepared an elegant banquet for sixty-six people. Six people registered for just the Show. Registration name tags gave the owners free access to the vast area of the RBG from the Mediterranean Garden through the Lilac, and Rock gardens and the Arboretum, etc.

The Auction after dinner was fun and not too long. Peonies were donated for the auction by:

Dr. Kent Crossley	Galen Burrell
Leila Bradfield	Chris Laning
Vernon Kidd	Don Hollingsworth
Reaths Nursery	John Simkins—special peony seed

GLAMOROUS PEONIES SURROUNDED BY GROUNDS OF EXCEPTIONAL BEAUTY

Steven and Margaret Johnson, Shorewood, Minnesota

We find it hard to believe that two weeks have already passed since our first APS show. The peonies and iris were at their full glory on the ground of the Royal Botanical Gardens, in Canada, making the timing, and weather just perfect. The many peony blooms on display by the breeders and growers were very impressive.

We were especially drawn to the many double herbaceous blooms, most we had ever seen before. Photographs in books and catalogs do not do justice to the beauty and splendor of these fine flowers.

Being our first experience as new APS members, we didn't know what to expect at the show. It was so refreshing to see peony blooms almost every color of the rainbow—dark reds, creams and blushes, yellows, and salmon shades were all compelling. There were tree peony singles, fully packed double blooms, new hybrids, and old favorites, all with their own personality and appeal. The judges certainly had their work cut-out for them as there was not a bloom in the show that we would not be happy to have in our own garden.

The banquet that evening was lovely, with a very good meal and conversation that was informative and insightful for us beginners. We thought that the self introduction of everyone at the dinner was a very nice way of getting to know fellow members.

The root auction was definitely a highlight, and we are looking forward to growing the **"Command Performance"** we first saw at the show and later was at auction. Auctioneer John Simkins spiced-up the bidding with entertaining and informative commentary. The donations of roots for auction by member growers should be applauded. Their generosity helps the society and adds beauty to many gardens, one as far away as Italy.

We are now busy preparing new areas in our garden for fall plantings. Knowing all the while that the patience required to produce mature flowers will be worth the wait.

★ ★ ★ ★

JAPANESE TYPE PEONIES

So called because the Japanese people prefer them to all other types of blooms and were the first to develop many new kinds. This type is the first advance toward the double type, with narrow center staminodes, usually edged with yellow.

They furnish color contrast in the same flower obtained in no other type and are especially valuable for cutting. —*Edward Auten, Jr.*

Some very beautiful varieties are **DIGNITY, CARRARA, BRIDE'S DREAM, TORO-NO-MAKI, AMA-NO-SODE, WESTERNER, BU-TE, DO-TELL, KAY TISCHLER, TOM ECKHARDT, BARRINGTON BELLE**.

PEONIES IN CANADA

B. J. Porter, Horticulture Specialist, Department of Agriculture
Regina, Saskatchewan, July 7,1997

I would like to order a copy of the new 1986-96 Checklist. Payment of $15.00 is enclosed.

The peony season is a bit late this year, with a few such as **Douglas Brand**, **Glory Hallelujah**, **Kelway's Glorious**, **La France**, **Mme Jules Dessert**, **Shaylor's Sunburst**, **Tourangelle** and **Mother's Choice** still in bloom; a few blooms are also on **Cytherea**, **Ludovica**, **Burma Ruby**, **Minnie Shaylor**, **Attar of Roses**, **Top Brass**, **Do Tell**. Botrytis has been a problem on a few. Had better bloom on **Age of Gold** as it wintered more wood this year than it usually does (perhaps due to heavy snowfall as the winter was very severe). My first Itoh hybrid, **Garden Treasure**, planted last October, a couple of weeks before freeze-up, wintered well underneath a bale of peat moss, and gave me one bloom.

I've been helping design a peony planting at Rosthern, Saskatchewan—Seager Wheeler Farm, designated as a national historic site, and we hope to plant about 40 peony cultivars, ranging from **Edulis Superba** up to the 1990's but the emphasis on historic ones. It's been fun to plan; a bit of a challenge finding some on the ones I want—a number of the older ones seem to have become extremely scarce in the last 15 years.

The peonies at Indian Head, of which I've written in the past, have been downsized and many sent elsewhere. I will write about them sometime in the future also, but I still need to find out how many different places obtained roots. Indian Head kept two of each cultivar, but unfortunately a few have succumbed to botrytis since replanting (the entire collection was relocated). Some of them are now in Regina, but vandals eliminated all the labels (I'm not sure if they all had labels), so still hope to see if the City Parks Dept. can provide a plan. We also had a small planting of 36 cultivars at Government House, (planted by the Regina Horticultural Society) but an Historical Society took over the grounds and decided an herb garden was more appropriate. All the peonies were moved and replanted carelessly elsewhere on the grounds (some beneath ash trees), and no records were kept of the names (I had the master plan but no one checked with me before they were moved). I hope to identify some of them, but so far the peonies are doing very poorly and not blooming—and a few have died. I did discover recently that about five have regrown from root fragments (**Garden Peace** and **Princess Margaret** are two I recall), so I'm hoping these will be cared for or that I can convince them to replant them, with labels, in a decent location. The biggest problem is that the soil is very heavy, and needs considerable improvement.

Last week I traveled to Alberta on vacation and saw peonies in a few locations. I had hoped to see an old planting at Brooks, Alberta, but found out this spring it had been eradicated with only a few replanted in general perennial beds. The last time I visited there, about 10 years ago, it was past peony season. They had some very old ones such as **Delachei**, **Faust**, **Gismonda**, **La Rosiere**, **La Tulipe**, **Mme Calot**, **Modeste Guerin**, **Philomele**, **Rubra Triumphans**, most of which I had never seen. It's too bad they didn't donate them elsewhere. After visiting there, I went to the Devonian Botanical Garden near Edmonton. They had some glorious peonies but unfortunately the best ones are unidentified. They have some newer plantings but my impression is that the location is too poorly drained and I suspect many will never do well. After that I visited Roy Campbell of Sherwood Park, also near Edmonton, and saw his peonies for the first time, including an Itoh hybrid. He had several I had not seen before; many were not out yet, although most of the hybrids were through. Unfortunately, botrytis has been a major problem for him. Overall the peonies in Edmonton area seemed to provide much larger blooms than I am accustomed to getting here in Regina—perhaps cooler weather helps?

I enjoy the *Bulletin* very much—there is always much of interest. It is such a bargain.

A friend of mine is hoping I'll start a peony society here in Regina. I haven't noticed a lot of interest, so am uncertain of the success, but we may see what we can do as a small group. We now have one garden center that carries a number of named cultivars each year—from Ferncliff Gardens that has been the main Canadian supplier for years, so perhaps there are a few more educated individuals out there. Some of the other garden centers bring in supposedly named cultivars, but the tags are almost generic, some are merely by color, so its a gamble to know if any of them are tagged correctly. But I am noticing there are more mail-order sources starting up in Canada. Most of my peony acquaintances have stopped ordering from the USA because of the exchange rate and the high inspection fees, which in Canadian dollars are $48 and up. It's unfortunate that we don't have a good peony propagator in Saskatchewan, as it always stimulates interest and might help support a peony society. Mostly it seems that it is flower arrangers that get interested in peonies around here.

★ ★ ★ ★

If you cut a tree, plant a tree.
It is nature's replaceable energy.

LANING PEONIES

Professor Saunders produced hybrids of superior quality that has not been equaled. His work has been carried on and merit the award of excellence. Now stock is available in this line breeding.

Chris Laning talks and we listen.

There comes a time when a hobby becomes real labor—and the joys of the hunt turn to aches in the knees and back! Then it is, that cutting back on the work is a necessity, not an option. THAT TIME HAS ARRIVED!

The materials (peonies) in my garden are too valuable in genetic contents to be lost. Let me explain parenthetically: Professor Saunders' hybrids were the beginnings of the "advanced" generation hybrids; Roy Pehrson carried on to increase fertility of a grand selection of these Saunders' hybrids; falling heir to Roy's, I carried on in the distribution of their offspring through our Seed Distribution Program.

Now is the time to offer some of these plants. The potential of them from my years of work, in continuing on the work of the great hybridizer Saunders, then Pehrson continuing, is beyond any imagination, offering endless possibilities to you.

TETRAPLOID ADVANCED GENERATION HYBRID PEONIES FOR SALE AT THE RATE OF $100 PER DOZEN SELECT DIVISIONS.

Write directly to Chris Laning, 553 West F. Ave., Kalamazoo, Michigan 49004

★ ★ ★ ★

IN MEMORIAM

Mathilda Glocka of West Allis, Wisconsin died May 4, 1997. She was a 25-year member of the American Peony Society. She had a life long love for peonies. At peony time she was out with the peonies helping Joe cut and get blooms ready for the peony exhibitions. Joe, her husband of 54 years has been a member of the Board of Directors for many years. He has a beautiful hybrid peony that he will name and register in her memory.

★ ★ ★ ★

From **Zlatana Draskovich**, Gary, Indiana

My peonies loved our cold wet weather. **Little Red Gem**, **Guardian of the Monastery**, **Fern Leaf**, **Gaugin**, **Hesperus**, **Hephestos**, **Hana Daijin**, **Anja King**, rebloomed this month. Never have I had so many to rebloom. **Redon** has a second set of blooms. It had 57 blooms early in May and I count 47 new buds on her this week. **Little Red Gem** appears to be setting a phenomenal 3rd set of bloom shoots—hope this hot weather does not discourage her.

JAMES WILLIAM (J.W. and D.M. McFarlane), No. 9, R.D., Waimate, New Zealand, May 24, 1997.

Seedling #McF 106. Parentage SH 46 x **Golden Era.** First bloomed 1995. Cream wine, flushed, very dark flare. This hybrid tree peony is reliable—seed from Bill Seidl. Good substance, semi-double, flat form. The flower looks bronze. Seeds and pollen. A strong growing plant, good stem strength. Height 1-1/2 mtrs, with flower size 21-22 cm. Held very well on the bush. Photo on file.

SCOTT JAMES (J.W. and D.M. McFarlane), No. 9, R.D., Waimate, New Zealand, May 24, 1997.

Seedling #McF 35. Parentage, seed from Seidl, **Golden Era**. First bloomed 1993. This hybrid tree peony bloom is a semi-double, cream heavily flushed rose with small wine flare. Flat form. No seeds, a circle of stamens around rose shaded carpel. It is an attractive plant. Good stem strength, flower size approximately 20 cm. Photo on file.

KATE ELIZABETH (J.W. and D.M. McFarlane), No. 9, R.D., Waimate, New Zealand, May 24, 1997.

Seedling #McF111. Parentage unknown. Seed from Bill Seidl, USA. First bloomed 1995. This hybrid tree peony is a double, lavender plum, good substance, pollen, no seeds. The plant is strong, holding the 24-25 cm flower well above the foliage. Very floriferous. Blooms late. Photo on file.

GEORGINA JANE (J.W. and D.M. McFarlane), No. 9, R.D., Waimate, New Zealand, May 24, 1997.

Seedling #McF 103. Parentage fSH 20x **Autumn Harvest**, seed from Bill Seidl, USA. First bloomed 1994. Hybrid tree peony, double, gold flushed red. Reliable, good substance, stamen, seeds, pollen with a good amount of bloom. Tall growing plant. 2 mtrs., late bloom, good stem strength. Photo on file.

PEONY SEED

Peony seed available from our seed bank. The seed is free for the asking—$2.00 is asked for postage and packaging, address below.

1. Lactiflora — mixed colors
2. Advanced generation tetraploid — mix
3. Tetraploid seed from red clones
4. Macrophylla — white and some pink
5. Tetraploid from yellow flowered plants
6. Roy Pehrson's Best yellow F2
7. A few suffruticosa — T.P.'s

Please send to:

Dr. Kent Crossley, 1245 Delaware, St. Paul, MN 55118
OR Chris Laning, 553 West F Ave., Kalamazoo, MI 49004

THE APPLICATION OF THE LIMITATION OF FLOWER STEM TO TREE PEONY

By Wu Jingxu, General Manager & Senior Agronomist working in Luoyang Huafeng Peony Horticulture Co. Ltd.
(Address: No. 3 Daonan Rd., Luoyang, China)

Tree Peony (peonia suffruticosa) is a kind of world's famous bloom plant originated in China. Its flowers are extremely large and beautiful and ever called as "The King of Flowers" and "The National Flower of China". It is very closely watched and the cost is enjoyed and admired by the people in the world. However, as its flower stems are shorter, etc. and not very suitable to use as a cut flower. Therefore, it limits people's use of it and its development. For this reason, we conducted the research on the application of the imitation of flower stem to the tree peony. The results proved effective.

"The imitation of flower stem" is namely a section (generally 40–60 cm length) of man-made plant stem. This technique is to use a part of a longer artificial flower stem (40–60 cm length) to replace true plant flower stem and connect to shorter flower stem, thus have the plant flower stem lengthened and become a fresh cut flower possessing higher commodity cost. This stem has not only certain toughness and strength, but also has better property absorbing water and nourishment etc., and its outward appearance is also similar to true stem.

Regarding its freshness-preserving function, etc., we conducted a special test using luoyanghong cultivar (P. suffruticosa cv. luoyang Red) etc. Its results make clear that the amount of absorbing water (average 3.95 ml every day) and freshness-preserving days (10 days) under the room temperature. Conditions in spring are all almost the same with ck (average 4.0 ml and 9.5 days). Also, the base part of flower stem of the imitation is attached less by bacteria than ck the true flower stem.

★ ★ ★ ★

SO WHAT IS PAEONIA STEVENIANA?

From the Wild Peony and Hybridizers Newsletter

Galen Burrell, P.O. Box 754, Ridgefield, Washington 98642

There has been a great deal of interest this past year in a yellow-flowered peony named **Paeonia steveniana**. (It seems that any yellow-flowered peony gets a lot of attention.)

Surprisingly **P. steveniana** was first described by Steven in 1848 from samples collected by Wittman in "the shady forest between Kartalinia and Akhaltsikh near Atskhur", Georgia. But instead of being described as a new species it was lumped with **P. wittmanniana** which grows in the Southern Caucasus Mountains and in Northern Iran. In 1961 L.M. Kemularia-Natadze separated **P. steveniana** from **P. wittmanniana** and gave it the name **P. steveniana** to honor the person who had first described the plant back in 1848.

I have taken the description of the plant from Kemularia-Natadze, L. M. (1961). Caucasian representatives of the genus Paeonia L. Tbilisi, Tr. Tbil. Bot. Inst. 21, 51pp. It was translated by two Ukranian botanists—Nikolay Kravchuk and Valeriy Kuznetsov and made available by Leo Fernig. (A more complete description will come in another translation of this paper which will be written and published by Will McLewin and Nigel Rowland. I will let you know when it is available.) "The plants are large, 50–100cm high or somewhat higher; rhizomes are branchy with dark-brown, long spindle-like root thickenings; the stem is firm, cylindrical or slightly ribbed; the leaves are double thrice ternate, green, bare at the upper side, grayish, with more less dense long white hairs at the lower side; leaf-lobes are ovate or oblong-oval, of which the lateral lobes are with a rounded or nearly heart-shaped base, upon short petioles or being nearly sessile, narrowed at the apex; the terminal lobe is large and, usually, tapered at both tips. The blossoms are not broad-patent, with sharply concave petals, filaments are yellow as a whole, or flesh-coloured as a whole or up to the middle; ovary is oblong-ovate, naked; stigmas are flesh-coloured, tapered, with a more or less long style. The fruits are naked, oblong-ovate or oval, curvedly spreading." Surprisingly there is no reference to flower color in the description—maybe it was left out in the translation.

There is also a description and drawing of **P. steveniana** in the Flora of the U.S.S.R. However, the text is in Russian and I do not have a translation.

For the first time this year I had a plant of **P. steveniana** bloom in my garden. The plant was four years old and had come from wild seed sent to me by a friend in Germany. The only real difference between my plant and the description by Kemularia-Natadze is that the undersides of the leaves do have long white hairs but they are not dense. The flowers were almost the same color of yellow as those of

P. mlokosewitschii. (Will McLewin, however, has told me that overall the flower color is a deeper yellow than of **P. mlokosewitschii**.) The naked fruits are beautiful and remind me of the fruits of **P. obovata** rather than those of other members of the **P. wittmanniana** complex.

I also had a yellow-flowered form of **P. wittmanniana** bloom in my garden this year. The primary difference between this plant and **P. steveniana** were that the flower color was a bit paler, the undersides of the leaves had dense long white hairs and the fruits were densely tomentose (hairy). Both are exceptional garden plants.

I have a few three year old plants of **P. steveniana** from seed collected in Kartli in Georgia, Borzshomskiy district, near the village of Bakuriana that I am hoping will bloom next year so that I can compare them with my plant which bloomed this year.

This year I used the pollen of **P. steveniana** on many other species plants and on a few "lactifloras". So far it looks like many of the mother plants are producing seeds. Probably the most exciting cross I made was between **P. emodi** and **P. steveniana**. It would be great to obtain a plant from this cross with the beautiful foliage of **P. emodi**, the yellow flowers of **P. steveniana**, more than one flower per stem like **P. emodi** and the delightful fragrance which is produced by the flowers of **P. emodi**.

In a later newsletter I will let you know the crosses that I made that were successful and those that were not successful.

Both **P. steveniana** and **P. wittmanniana** have proven to be easy to grow in my garden. They should be hardy wherever peonies are grown. (F.C. Stern says in his Study of the Genus Paeonia that "**P. wittmanniana** is said to be perfectly hardy at Leningrad without any covering in winter.)

This newsletter is monthly, six pages—hybridizing, seed, all on species peonies. $5.00 per year.

★ ★ ★ ★

The grafting of named varieties of Japanese tree peonies should be accelerated and it is recommended strongly that if you have any Japanese tree peonies, you should learn to graft. Increase your efforts every year. This applies to all tree peonies.

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Dear Mrs. Kessenich, Editor

All my life, I have studied and been involved with Nature, from university and in all occupational employments. This article reveals many secrets of Nature and their practical application to improve the quality of perennials, peonies and other plant life.

It is written for both the home gardener and the commercial grower, so all may benefit from years of practical experiences and knowledge acquired through academic research and application of these common sense principles. They have worked very well for me, by producing beautiful plants, flowers and fruits, even through the unusual weather conditions we have experienced in the recent past.

I hope these articles will benefit all who read and study that which is contained here within.

Sincerely,

John Oeltjen, 4853 Cordell Avenue, Bethesda, MD 20814-3022

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PREPARATION OF BETTER SOILS FOR PEONIES AND OTHER PLANTS TO SURVIVE DURING AND AFTER MAJOR CLIMATIC AND WEATHER CONDITIONS AND CHANGES

Part I - Understanding pH, Essential Elements and Minerals for Plant Growth.

Introduction

In the Spring of 1993, the watershed of the Mississippi River and many of its tributaries, began to receive daily drenchings of rain, far and above normal. Large volumes of water were evaporating from the Rocky Mountain forests, which had received record winter snowfalls. We, in America, had never witnessed such a natural phenomena take place, as the rain continued unabated, and the flood waters rose. We were witnessing the beginning of massive cleaning changes by the elements of Nature. Storms kept developing. Dikes started to fail and the once peaceful Mississippi River became mightier than ever. It flooded vast expanses of farmland, beyond the comprehension of all who lived near and far from her shores.

What happened to the residents and farmland of the Mississippi watershed remained a mystery until more major rivers, across the continent, began experiencing similar flooding, from continuous precipitation, one storm after another. Blizzards burying us from coast to coast. Every few weeks, news reports were surveying another ele-

ment of Nature, showing vast areas of land and cities buried and inundated. Droughts, with temperatures so high and for such long periods of time, that we thought they would never end. Summers with extreme and prolonged heat, were followed by early and prolonged cold, snowy winters. It is our responsibility to prepare our land, our garden, farmette or farm, to withstand these climatic changes, so our peonies and other plants will survive—before, during and after Nature's fury. The earth is experiencing a period of purification. Nature will continue to cleanse her land, streams and air until her conditions are back to normal. We must do our part too.

The following article is divided into two parts. The first part discusses pH, natural resources of nitrogen, phosphorous, potassium, trace elements and clay with two examples of improving soils. The second part discusses compost, how to make it and use it. A straight forward approach to cleaning and creating good soils to withstand Nature's fury is given in outline form. Discussion is concluded with sources of rock mineral, materials and recommended readings.

The knowledge gained was from many years of research and practical application. My peonies, daylilies, hostas and other quality perennials have survived and multiplied during and after the extremes in weather, that have occurred since 1993. To help all of you grow better perennials, this knowledge is shared with you, so you, too, may enjoy better quality and yield, solve problems and reduce your losses.

pH

pH is frequently used in agriculture and horticulture to state the acidity "sourness" or alkalinity "sweetness" of soils. The numerical value does not have units, which makes pH confusing. Once a suitable means is made using litmus papers or an electronic pH meter, then pH has more meaning and its concept can be understood. Once you apply the mystery of pH, to soils, then you can understand its relationship to the soil and its application to plant growth. To help you understand pH and its power, obtain an electronic pH meter from your local hardware store. The one I use is the AMI Instamatic soil pH Meter. It costs about $20.00.

The pH reading obtained for a substance indicates the balance or imbalance between the H^+ (hydrogen ion concentration), the acidity of the soil; and the OH^- (hydroxide concentration), the sweetness of the soil. When there are an equal number of H^+ ions and OH^- ions in a cubic unit of soil, the pH is neutral and carries a numerical value of 7. When the number of H^+ ions increase and the number of OH^- ions decrease in a unit of soil, we state that the pH is becoming acidic. As the number of H+ ions continue to increase and the OH^- ions continue to decrease in number, then the soil becomes even more acidic and the numerical value will also decrease to 6.0, 5.5, 5.0, 4.5, etc. Peonies like a pH between 6.0 and 7.5. The best level is between 6.0 and 6.5. In this pH range, more ions of the essential elements are liberated from their chemical bondings in compounds, will become free ions and become soluble and available for the peony's feeder roots.

The application of dolomitic limestone (Ca, Mg) $CaCO_3$ to soils to increase pH of soils, is by formula—fifty pounds per one thousand square feet of surface land. This will raise the pH of the soil 1.0 pH point. But there is a deception. Over a period of one year, the dolomitic limestone either in granular or crushed form, will only, with the action of precipitation, travel in solution to a maximum depth of nine inches. The greatest concentration of limestone will be at the top and the least will be at nine inches. Peony roots, or the peony roots I grow, reach far below nine inches. If the pH of the soil is 6.0 at the top, I can be assured that, as the soil depth increases the pH lowers or becomes more acidic. This is why it is vitally important to sprinkle the equivalent of dolomitic limestone at the various depths while you are preparing the peony soil in trenches and holes. If spreading ls on farms, then the ls must be disced or chiseled plowed to the desired depth.

Before applying any dolomitic limestone use the pH meter and follow directions exactly. The six inch probe will measure the pH in the bottom one-half inch of the probe's length. To determine the pH at lower depths, holes must be dug and the probe immersed in the soil. Keeping records of all testings are the only way I know of ascertaining what the limestone has done or has not done after application.

Formulas for the application of dolomitic limestone. When you receive twenty inches of precipitation per year, use only 25 pounds of limestone per one thousand square feet of surface land. When you receive forty inches of precipitation per year, use fifty pounds of limestone per one thousand square feet of surface land. When you receive more than 40 inches per year, then spread your limestone according to your calculations based on fifty pounds per one thousand square feet of surface land.

When you incorporate leaves and wood chips into your soil, these organic materials, will over time, begin to neutralize your soil, or your soil will approach the pH of 7. To be on the safe side, add compost, leaves, chips and limestone. This year we received over sixty inches of rain, about twenty inches above normal. This spring, when I tested my soil, the pH was still at 6.5, because the organic material which had been incorporated over the years, kept the pH at 6.5, instead of the pH being dropped by leaching rains.

Another part of the garden, not under cultivation, was tested at increments of one inch, every inch, down to a depth of two feet. The top of the untreated soil had a pH of 6.2. At a foot below the surface, the pH of the hole had dropped to 4.8. The pH at the bottom was 4.0. When I prepare this soil for planting any perennial, then I must sprinkle the equivalent of fifty pounds per one thousand square feet of surface area every six inches of depth and thoroughly mix the soils, with the limestone and other rock minerals. When the peony roots reach those levels, then the nutrients will be there for proper nourishment of the feeder and anchor roots.

Spreading pelvitized and pulverized limestone in the fall is better for you and the soil. First you don't have to do it in the spring, when

you have too much work to do, and second, the physical weathering forces of precipitation, freezing and thawing will break down the limestone and get it to the roots faster than during spring rains. When the feeder roots start to grow, during the warming of the soil, the limestone is already in place for its ability to allow other nutrients to be assimilated. If you have other materials to spread, do it at the same time as the limestone, except for manure. Limestone counteracts the action of manure and neutralizes its actions. If you have a rototiller, mix the minerals into the soil, as deep as possible. If you have larger acreage, use a chisel plow. Chisel plows can be purchased in 24" and 36" lengths and widths up to 12 feet.

Take a basic course in chemistry. It will help you immensely to understand all the relationships of soils, pH, minerals, compounds, elements, acids, inorganic and organic acids and a host of material related to plant growth and everyday situations. Be sure that your chemistry course has laboratory with it. In the lab, you will learn what will be very valuable in all forms of life.

Nitrogen

Nitrogen is one of the essential elements necessary to sustain good plant growth. Because of its vital importance, its application in organic forms must be dug in a solid state into the ground and acquired from using mulches. The percent of nitrogen in the soil from organic materials should be about five percent by mass. Its percent must be in balance with the other essential and trace elements. Compounds containing nitrogen must be applied using common sense. Unlike phosphate rock and greensand, which can stay in the soil for up to ten years, nitrogen needs to be applied every year, until the five percent ratio is achieved. The best and most reliable sources are the organic compounds found in compost and mulches. Ground covers in the form of legumes will also provide nitrogen, but of a lower percent.

Organic forms of nitrogen are stable and become available for plant use gradually. Organic matter hold nitrogen within its structure until decomposition, then slowly releases it. It takes time for the decomposition to be thorough. The amounts produced by the microbial activities are sufficient to provide plants their needs. Plants need organic nitrogen. They do not want nor need artificial chemical substitutes. If your car battery is low on sulfuric acid, you don't shove a dandelion into the cells to give the battery the necessary sulfur compound. Likewise, you don't give plants unnatural food for their survival. You give them organic food.

The following chart lists common sense nitrogen sources. These materials will provide the nitrogen needed for sturdy and vigorous growth, while maintaining the nutrient balance in leaves, so their foliage is the proper color. Apply these materials annually to build up the supply and the reserve of nitrogen from organics. Some of the nitrogen will be used the year that it is applied, some will not. By adding yearly, you will feed the soil its nitrogen needs. As you feed

the soil, on an annual basis, you will notice positive changes in the plant's quality.

Common Sense Organic Nitrogen Sources

Source	Percent Nitrogen
Fish Emulsion (liquid)	1.0
Steamed bone meal	2–3
Cottonseed meal	7.0
Cattle manure—fresh	0.3 Must be composted
Chicken manure	1.6 Must be composted
Egg shells	1.0 Must be composted
Dried Blood (animal)	10–14
Dried ground fish	8.0
Coffee wastes	2.3
Nut shells	2.5
Oak leaves	0.8
Apple leaves	1.0
Clover	2.0
Red Clover	0.55
Vetch hay	2.8
Alfalfa	2.4
Timothy hay	1.9
Fresh seaweed	0.2 Must be composted
Dried seaweed	1.1

All of the above have been used at one time or another to make compost. Leaves and hays have been shredded before using as mulches and also, just spread "as is" to save time and energy. Both provide a neat and clean appearance to the garden.

One fall day, I was at Ocean City, MD and visited the local fish market. Spied a barrel of fish heads. "How much for your fish heads?" "Two Bucks." "Fine, I'll take them!" Into every hole that would be a place for a future daylily, peony or hosta, a fish head was dropped in and buried. As soon as I buried one, Fritz, my silver tabby cat unburied them. I finally gave him one and he left the rest alone. If the Indians can achieve good results with fish heads, so can I. My plants thanked me for the fish heads. A good source of nitrogen and trace elements.

Phosphorous

One of the best courses I studied in the Earth Sciences was mineralogy. The study of rocks and minerals, how and where they were formed, where they can be found and collected has proven to be valuable in the preparation of soils. The most important mineral of phosphorous is apatite—Ca_3 $(PO_4)_3$(F, C1, OH). Collophane is the name given to a crystalline rock, in which apatite is the main mineral, but is massive. It is also the most important constituent of rock phosphate. Phosphate materials of bones and teeth are also considered in this group. The phosphate minerals are widespread, but in small quantities. They can be found in all rock types—sedimentary, igneous and metamorphic. Large bodies of phosphorite (rock phosphate) are derived from the accumulation of animal remains, as well

as chemical precipitation of sea water or marine water, not fresh water. All the major deposits were deposited over the entire history of the earth. Many have been physically weather and redeposits in small amounts in the above mentioned rocks. In the United States, highgrade phosphate deposits are found in Tennessee, Wyoming and Idaho. The most productive deposit is found in Florida. The largest deposit in the world is found in Russia.

Minor deposits of phosphate are found in granite pegmatites, high grade quartz-rich metamorphic rock and associated with lead minerals. Other phosphates are associated with rare minerals, some gem stones. Turquoise—$CuA1_5(PO_4)_4(OH)_8 \cdot 5H_2O$ is found in veins that traverse decomposed volcanic rock.

Since the occurrence of phosphate in the quantities we need for proper peony and other plant growth in our soils is doubtful, then we need to either buy the product or make the product which contains phosphate or phosphoric acid—H_2PO_4, which is the medium that can be assimilated by the roots. Sources of useable phosphate are: phosphate rock (pulverized) colloidal rock phosphate, bonemeal and compost. Sources for rock phosphate and bonemeal will be given at the conclusion of this article. The chemical formula for bonemeal is calcium phosphate. Soil application of both bonemeal and rock phosphate are fifty pounds per one thousand square feet of surface area. After application dig into the top six inches of the soil. These sources are especially needed when we notice roots and leaves turning purple. This sign means that the soil lacks available phosphate or phosphoric acid. Roots will become very large or bloated in their search for phosphate nutrients. I have purchased peony roots from many growers across the United States, and most growing areas lack sufficient phosphate in their soils. All roots are examined before planting, not only for the eyes present, but more importantly for the color and quality of each root. Roots that are usually the size of a man's fingers, on the surface, indicate good soil. But closer examination is always needed. Roots are sliced to reveal a cross section. If the roots are purple, bloated and very long, then extra phosphate rock is placed in every hole to ensure that the root will receive the TLC of phosphate rock over the next two to three years, necessary for the root to return to its normal size. Sometimes the roots have enough phosphate in their systems to make it through the winter and sometimes they don't.

Rock phosphate contains other compounds and mineral elements, many of which are essential to plant growth. They are usually termed trace elements because they are in trace amounts. Their mass is designated as being from one to several parts per million. These are calcium carbonate, calcium floride, iron oxide, iron sulfide, alumina, silica, managanese dioxide, titanium oxide, sodium, copper, chromium, magnesium, strontiu, barium, lead, zinc, vanadium, boron, silver and iodine. All trace elements are just as essential as the main elements.

Carbon dioxide produced by the plant's roots, in organic acids and bacteria in the soil, can break down these elements quickly. When

phosphate rock and bonemeal are added to soils and compost, the organic acids in the compost and soils break down and distribute these forms throughout the compost pile in solutions. Therefore, the longer you allow the compost to sit and remain moist, the greater the distribution of all these trace elements by the organic acids. The effect is long term, because the bacteria continue to live and thrive in organic soils and excrete phosphorous compounds.

Do not use super phosphate. Super phosphate is an industrial product, in which phosphate rock has been treated with an equal mass of caustic sulfuric acid to make the rock phosphate more soluble. The product produced is a slowly, water soluble neutral salt. This calcium sulphate causes the beneficial soil bacteria to die and kill the fungus in the soils that the bacteria feed on. A vicious cycle continues. Good bacteria continues to be killed and the soil gradually becomes lifeless. The use of super phosphate causes an imbalance in the microbiological population of the soil. Super phosphate only gives a temporary boost, like a shot of whiskey. The use of ALL artificial industrial fertilizers eventually will kill all the microbiological activity in the soil in which it is placed.

The benefits of rock phosphate are superior to super phosphate because it will outlast it by many years. Rock phosphate stays in the soil until the roots come in contact with the minute grains. Roots will wrap themselves around the grains and extract the phosphoric acid as the plant needs it. This is why rock phosphate in a pulverized form is available to the plant for such a long period of time.

Another explanation or to say it in another way. When the carbon dioxide and certain organic acids come into contact with the bonemeal, compost and/or rock phosphate, then it is assimilated by the fine feeder roots. Phosphate rock, dug, tilled, chisel plowed into the soil to a depth of two feet, stays in place until these roots come into contact with the mineral particles. These particles do not LEACH out. To understand this better, previsualize the soil, the rock minerals, all mixed in the soil, the peony's anchor roots and the small feeder roots, radiating in all directions reaching, growing and seeking the rock phosphate particles dispersed throughout the soil. Put yourself in place of the roots. Which would you rather like to feast on? Rock phosphate, bonemeal, compost or disgusting super phosphate?

Rock phosphate only has to be applied once per year for a maximum of three years, tilled or chisel plowed or dug into the soil. It remains in the soil for up to ten years, depending on the root growth and root distribution of your beautiful plants. Super phosphate, on the other hand, must be spread every year. If you have a large farm, consider the cost to buy large machinery, spreaders, the labor involved, and the spreading of super poison every year. The return on the investment of rock phosphate in contrast to super phosphate is greater than ten times. Not only are you saving money, making more money, but more importantly you are saving the soil, the earth and life, with the use of rock phosphate.

Potash – Potassium

Potash (K) is essential for the growth of strong plants and necessary for fighting diseases. Potash is the catalyst for the manufacture of starches and sugars. Without potash in the soil, sugars and starches are not available for plant use.

Strong cell walls are built to contain the protein and counteract the negative influences of determental fungi. A continuous supply of natural potash will encourage strong plants. Fruits and flowers will be richly colored and the plant will be very resistant to diseases.

Soil that lacks potash will transfer this deficiency to plants. Plants will not be able to resist intense heat, cold or diseases well. The process of manufacturing chlorophyll will be reduced. Harvest of crop yields will be reduced.

The majority of soils across the country lack sufficient amounts of potassium which can be made available to the root systems. To eradicate this deficiency, there are several natural sources which can be used. The following chart will give you numerous options.

Common Sense Sources of Potash that Yield K_2O (1)

Source	Percent of K_2O
Wood Ashes (broad leaf)	10.0
Wood Ashes (coniferous)	6.0
Vegetable wastes (ash)	1.6
Cotton seed meal	1.8
Vetch hay	2.3
Alfalfa hay	2.3
Red clover hay	2.1
Timothy hay	1.4
Apple leaves	0.4
Oak leaves	0.2
Granite dust	3.0 to 5.5
Greensand	7.0
Basalt rock (pulverized)	1.6
Cow manure fresh	0.1
Cow manure dried	1.5
Horse manure fresh	0.3
Horse manure dried	1.6
Chicken manure fresh	0.6
Chicken manure dried	1.2

To offset the imbalance of potash in your soil, use both organic (compost) and mineral fertilizers. Potassium in compost will be used for the short term seasonal needs, and rock minerals will satisfy the long term need. Any organic material added to the soil will stimulate bacterial activity to make it easier for the potassium minerals to be released.

Greensand is a marine deposit. Today, it is mined off the New Jersey coast. Since it was formed in marine water, millions of years ago, over a long period of time, it contains traces of many, if not all, of the sixty-seven elements found in sea water. Sixty-seven elements.

Think of that! Sixty-seven of the 104 elements known to man can and most likely are found in greensand. Look at the Periodic Table of Elements. Study the first sixty-seven elements. To me that is a GOLD MINE. Yelp, and sea water also contain traces of gold. Find another product that contains sixty-seven elements in it that can be used in the garden. There are two—one is called seaweed and the other is called phosphate rock.

Greensand is packaged in five and forty pound bags. Be careful when spreading for the "sand" is very fine. Maximum protection is one-fourth pound per square foot. Lessor amounts can be used, if you don't want or can't afford to apply it by formula. Greensand has been used by organic gardeners and farmers for the past century because it is the best source of potash and sixty-seven trace elements.

Greensand, like phosphate rock and dolomitic limestone, must be spread, then thoroughly mixed and worked into the soils, to the depth that you think that your perennial roots will go. Use one or two applications for optimum distribution. It will last for up to ten years, depending on its rate of use. Greensand will stay in the soil, like phosphate rock, until the organic acids of the roots will dissolve the K_2O for assimilation. Greensand may be applied at any time of the year without damaging the root's systems. Again, best time for application is in the fall, along with the other rock minerals. Application at this time will have the power of physical weathering to distribute it further with the soils, before spring planting and spring growth.

All sources listed in the chart may be used in a compost except wood ashes. Use wood ashes at one-quarter the rate of dolomitic limestone. Wood ashes are very caustic (alkaline) and will increase the pH more than you think. Do not substitute wood ashes for any limestone. Keep wood ashes from your fireplace and use them carefully, in your garden, around trees, plants, etc. They have been used for centuries and are known to be one of the best agents to counteract plant diseases. Always keep them dry—never allow moisture to contaminate them until they are dug into the soil, or the source of potassium will be lost or leached out. A light sprinkling of wood ashes or rock phosphate on foliage seriously deters harmful insects, slugs and etc.

Clay

When I first became interested in peonies for hybridizing, I bought The Handbook of the Peony. In one article, the author states that the best soil for growing peonies, in Minnesota, is clay. But the clay in Minnesota is not like the clays that are found in the rest of the peony growing temperature zones. The word clay, is a term that has two distinct properties to its meaning. One property is its physical size. Clay particles are smaller than 0.002mm. The other property of clay is its mineralogical composition. Clays are identified by the

percent of the mica mineral found in them. The important clay minerals are muscovite mica—$KA1_2(OH,F)_2\ AlSi_3O_{10}$ and biotite mica—$K(Mg,\ Fe)_3(OH,\ F)_2AlSi_3O_{10}$. These micas will appear like plate-like crystals that form in masses like pages in books. The elements (K) potassium, (Al) alumina, (Fe) iron, (Mg) magnesium, (Si) Silica throughout the soils can be dissolved by the organic acids of feeder roots and compost.

Some of the clays, that are found in Texas, Maryland and Virginia, resemble paper mache when wet, and cement when dry. They are called shrink swell soils or gumbo clays. Walk on them too long, when they are wet, and you could become a fossil. This gumbo clay clings to your boots like sticky bubblegum and you cannot get it off, unless you leave your boots behind, walk away, in your socks, throw them away, then go back and chisel out your boots when it gets a bit drier. Clay is not conducive to peony growth.

Clay can take on descriptive names like glacial clays, till, dolomitic clay, argillaceous clays, loamy clay, micaous clays, sandy clay, alkaline clay, siliceous clay, etc. All mean something different because of the percent of the minerals found within their mixture. All have their innate problems, solutions and good points. Every clay soil, within a mappable soil unit, may be of the same composition or totally different. Therefore, it is vitally important that you analyze your clay or have the local Soil Conservation Service thoroughly analyze the clayey soil for you. It's composition must be understood and solutions given, before you change its structure and plant. It is to your benefit that this be done. If you buy a car, without tires, you will be very limited in your driving to railroad tracks. Likewise, if you have gumbo soils, and you do not get them analyzed, your peonies will be limited in their growth.

A couple of experiences I have had in the preparation of soils for perennials, which include peonies, daylilies and hostas, using clayey materials are worth mentioning. Some of my original soil, was so awful, that I got rid of it and started from scratch. Luckily, I found river sand containing a mixture of sand, silt, clay with mica flakes and minute mineral chips. Found a mountain of freshly excavated clay with biotite and muscovite in its composition. After receiving permission from the State Highway foreman, I hauled all I could—100 tons—by the shovelful and unloaded it by the shovelful. Equal parts of river sand, clay and compost plus leaves and chips were mixed to fill long trenches, previously dug, two feet wide and two feet deep. Assorted rock minerals, like those previously described, were added and everything thoroughly mixed, in the trenches, again, with a spade.

When clay and sand are mixed, they will usually only consist by gravity about ten percent, while the volume of organic matter—will compress a lot, as it breaks down over time, dissolve by solution and

is used by the roots. More organic matter is added annually, to replenish the organic matter used in the plant's development. Over the years of building trenches, I have found that drainage is very important, especially when one receives an unexpected six inches in a day. To reduce standing water and facilitate better drainage, small stones are added to the soil mix, not to exceed five percent. Pebbles of igneous and metamorphic rock, up to an inch across, are added during all trench building stages. These stones contain small amounts of minerals, which over time, up to fifteen years or longer, will release elements to the surrounding soil, thus providing another source of trace elements, while they provide good drainage.

I also have in the garden a lot of metamorphic rock called mica schist. As a rock, it is useless. But after analyzing a piece, under a 40X microscope, I realized that it contained the best clay minerals, quartz and hornblende—$(Ca, Na)_2(Mg, Fe, Al)_5Si_6-(Si, Al)_2O_{22}(OH)_2$. A unique treasure. Since mica schist can only be removed by swinging a pick, sizeable chunks were removed and spread out on poor soil. Stable manure was spread on top on the mica schist. With winter approaching, I would let frost action do a better job than what I could do.

Manure teas seeped into the minute cracks between the mineral layers. Freezing and thawing broke and crumbled the mica schist into fine particles. The tea released the elements in the biotite, muscovite and hornblende. In the spring, I had a rich mass of soil, which was rototilled with the former poor soil underneath. Plants grown in this mixture exceeded all expectations. When you have rock that looks useless to the naked eye, don't throw it out. Get it analyzed and see what you can do with it for your benefit. What may appear to be worthless, turns out to be just the opposite.

Everytime artificial fertilizers are used by someone, they are polluting the earth, eventually the groundwater and streams. Artificial fertilizers are a toxic by-product of the chemical industrial giants. Legally, they cannot dump toxic materials on land or in the rivers, since it would result in massive fish kills and polluted soils. So they doctor their junk with glorious psychological malarky and make the American public, suckers to their poisons, stating that your plants and grass will be green and grow faster.

During summers, while I was teaching the Earth Sciences at a local high school, I was a research assistant for the top brass at United States Environmental Protection Agency in Washington, D.C. I became involved in the Chespeake Bay program and in writing regulations for the 1976 Reclamation and Recovery Act, to curb stream and groundwater pollution. Many people contribute to the destruction of the environment, due to ignorance and an "I don't care" attitude. On-site inspections of dumps, fish kills, and studying computer printouts of the chemical analysis of rivers and streams was so

appalling, that I made up my mind that I would pursue the aesthetic qualities of life and the use of the natural sciences for the betterment of mankind.

EPA has done a lot, but they cannot regulate every single individual and industry. That is our responsibility. All the major flooding, that we have seen in the watersheds of the Mississippi, Missouri, Platte, Ohio, Potomac, Red, Sacramento, Columbia, Rappahannock, Susquehanna and all the lessor streams that flow into great rivers, is not just a coincidence. It is Nature's way of cleaning her earth, purifying the land and returning her earth to what it was before polluting the earth began. When we get dirty, we take a shower to cleanse us externally. When the earth becomes saturated with pollutants, then the elements of Nature will cleanse the earth. Rainfall, blizzards, drought and high winds are in direct proportion to the amount of chemical pollutants spread over the land over times. Flooding is two fold. First the contaminates are removed by solution. The more it rains, the higher the flood waters rise, in proportion to the depth that the pollutants have seeped into the earth and their concentration. Nature, by design, will dilute, pull by swirling, mixing and other forces to remove every trace of poison within the permeable soils. The faster the waters move over the land, the more chemical pollutants are redissolved and extracted from the clays, sands and rock crevices. After most of all of the pollutants have been dissolved and carried away by the fast moving waters, then a rich, carpet of mud, new silt, new clay and new sand are spread over the cleansed area to restore the natural fertility, so the soils can rejuvenate. If man returns to his former ways of polluting the earth with chemicals, then we can expect the rains, blizzards and flooding to return, with the same or greater magnitude. We can expect 100 and 500-year floods to return at any time. The earth will be purified, by whatever means are necessary, for our natural resources to be returned to their natural state.

We all can avoid losses by practicing preventative organic medicine, the use of natural rock minerals as fertilizers, in our gardens and on our farms. When we respect Nature and provide our plants with natural foods, then Nature will protect us, our land and our plants, even during the worst natural changes. In the 1906 earthquake that leveled San Francisco and many outlying towns and communities, Luther Burbank, who lived nearby, had extensive damage to his home and some buildings. But, not a single glass pane in his large greenhouses was broken. That says a lot. Luther Burbank, unlike his contemporaries loved manure, and used it in all his hybridizing work. Nature protected Luther Burbank because of what Luther Burbank did for Nature.

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FINANCIAL STATEMENT
June 1, 1996 – June 1, 1997

Balance on Hand June 1, 1996		$ 81,509.57
Receipts:		
Membership Dues	$ 9,987.86	
Advertising	515.00	
A.P.S. Auction	1351.31	
Nomenclature Registration	177.50	
	$ 12,031.67	
Publications:		
Handbooks	$ 1,457.19	
"The Peonies"	673.50	
History of Peonies and Their Originations	480.00	
Book, A.P.S. "75 Years"	465.00	
Book, Peonies 1976-1986	205.00	
Book, Peonies 1986-1996	625.00	
American Tree Peony Book	630.00	
American Hybrid Peony Book	1,150.00	
	$ 5,685.69	
Interest on Savings	$ 2,521.97	
Total Receipts		$ 20,239.33
Disbursements:		
Publications - Four Bulletins (June, September, December, March)	$ 8,048.48	
American Peony Postage	3,354.30	
Office Supplies	954.00	
Exhibitions	175.19	
Printing	7,542.41	
Miscellaneous	305.00	
Total Disbursements		$ 20,379.38
Balance on Hand June 1, 1997		$ 81,369.52

Greta M. Kessenich
Secretary/Treasurer

REPORT 1996-1997

In 1904, Mr. C. W. Ward of Queens, NY, a florist and grower of carnations, called a meeting for the purpose of organizing a peony society, as preliminary meetings of this Society had been held in Brooklyn in 1903 and before.

The Society was formed and incorporated. The first order of business was to straighten out duplicates and near-duplicates and worthless varieties of peonies, and make it possible for the trade to list 50 or 60 varieties with descriptions that would make identification certain in assuring the buyer of getting what he wanted whenever he placed an order.

An extensive test plot was planted at Cornell University, with an upward of 1,000 varieties. This experimental peony plantation was made possible by voluntary contributions of the principle peony specialists in America and Europe. The results accomplished were done mostly by peony specialists who gave of their time to the culture, and invested their capital in peonies.

In 1915, Prof. A. P. Saunders became Secretary of the American Peony Society. It was then that the first *Bulletin* was published. He wrote to all members to send their Registrations to him and they would be published in the *Bulletin*. This directive has been followed to this day.

Mr. Allen Wild of Sarcoxie, Missouri dedicated to the nomenclature of the peony, arranged that his offices and all staff members work with Mr. Gist in compiling all the peony names, hybridizers and descriptions, and be recorded for a Check List. This was completed in 1956.

That Check List was published with the Check List of all peonies and hybridizers listed with their introductions to 1975.

Another Check List was published from 1975-1986. Now ten years have elapsed, and this new Check List from 1986-1996 has been completed and was published in March 1997. It is available from this office.

Depending on the number of peonies introduced, the American Peony Society will have a Check List in book form every ten years. Introductions continue to be published in the *Bulletin* when received.

There is more interest in the peony now than in the past, according to letters with various requests. With many new members enrolling, requests are for: starting a peony garden, growing peonies from seed, general culture, cut flowers, tree peonies, and the species. The species are of special interest to some members, and information is wanted regarding seeds and plants.

A letter was sent to all members in November as a reminder for their 1997 membership dues, as well as their new zip code and/or address. Membership cards were returned.

Four *Bulletins* were mailed during the year. All bills are paid in full, with no outstanding accounts. This includes paying for the publishing of the Check List book.

The financial statement will tell you about the business of the Society. We continue to be in a very satisfactory status.

Thank you for your continued support and for your genuine interest in the peony and the Society. This Society has traveled a long road since 1903; at times the going was rough, but dedicated men and women like you looked to the future, and we go forward.

Sincerely,
Greta Kessenich
Secretary/Treasurer

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BUSINESS MEETINGS
Hamilton, Ontario, Canada, 1997

The Board of Directors meeting was incomplete for publication as written by Robert Wise for the information regarding this meeting, June 15, 1997.

No report was received regarding the Annual Business Meeting. The Board of Directors that had served their three-year term were returned to office. The nominee, Galen Burrell, was elected.

For the selection of nominees, a permanent committee was appointed by Marvin Karrels, previously. The Committee should always consist of the present President, the immediate Past President, and the Secretary. This action was approved by the Board of Directors and the nominating duties will continue this following year 1998.

At the same time, the Board of Directors issued a directive that all outgoing members of the Board of Directors be asked in advance of their term ending if they would accept another three-year term. This has always been done.

Greta M. Kessenich, Secretary

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SINGLE TYPE PEONIES

Five or more petals arranged around a center of pollen-bearing stamens and carpels. A class of peonies that is not recognized sometimes by the viewers at an exhibition. Many viewers only know the peony as a large ball form double that has been grown for years. Now they see a single pink beauty called **SEA SHELL**, and **PICO**, a pure snowy white with large cup-shaped bloom, followed by **VIRGINIA DARE**, a medium-sized white, a real beauty. The list goes on with **SPELLBINDER**, **SPARKLING STAR**, **LOTUS QUEEN**, **MR. THIM**, and **CAMDEN**.

AMERICAN PEONY SOCIETY CONVENTION
THE 94TH ANNUAL MEETING AND THE 92ND ANNUAL EXHIBITION
THE 5TH INTERNATIONAL SHOW
ROYAL BOTANICAL GARDENS, HAMILTON, ONTARIO, CANADA
JUNE 13, 14, 15, 1997

COURT OF HONOR

Grand Champion—**Lois Elaine Laning**—P.C. Laning
Best Double Lactiflora, White—**Mother's Choice**—Don Hollingsworth
Best Double Lactiflora, Blush—**Frances Mains**—Don Hollingsworth
Best Double Lactiflora, Dk Pink—**Vivid Rose**—Don Hollingsworth
Best Double Lactiflora, Red—**David Harum**—Robert G. Wise
Best Hybrid or Species, Double, Any Color—**Summer Glow**—Don Hollingsworth
Best Hybrid or Species, Semi-Double, Any Color—**John Harvard**—Floyd Kimball
Best Hybrid or Species, Single, Any Color—**Late Windflower**—Donna Linsley
Best Tree Peony, Lutea, Any Type or Color—**Zephyrus**—The Prestons
Best Tree Peony, European, Any Type or Color—**Souvenir de Maxime Cornu**—John F. Tai
Best Itoh Hybrid, Any Color—**Garden Treasure**—Don Hollingsworth
Best Collection of Ten Herbaceous Hybrid Peonies—American Peony Society Award—Floyd Kimball
Best Collection of Ten Tree Peonies—American Peony Society Award—John Simkins

DIVISION I. OPEN TO ALL EXHIBITORS

No entries in Classes 101, 102, 105

Class 103—Ten Varieties—Herbaceous Hybrid Only, Any Type or Color

1. Floyd Kimball—**Alexander Woollcott, Carina, Cytherea, Golden Glow, John Harvard, Legion of Honor, Paula Faye, Red Charm, Red Grace, Requiem.**
2. J. Thomson—**America, Black Swan, Command Performance, Early Daybreak, Henry Bockstoce, Heritage, Paula Faye, Pehrson's Best Yellow, Red Charm, Summer Glow.**

Class 104—Ten Varieties—Tree Peonies Only, Any Type or Color

1. John Simkins—**Angelet, Ariadne, Coronet, Gold Finch, Golden Era, High Noon, Kronos, Rocks Variety, Sun Rising, Vesuvian.**
2. J. Thomson—**Black Panther, Canary, Delavayi, Fuji No Akebono, Kasumi No, Naniwa Nishiki, New Era, Reknown, Shima Musume, 248–Mystery.**
3. John Simkins—**Angelet, Ariadne, Gold Finch, Kronos, Mystery, Roman Gold, Savage Splendor, Shin Towen, Shuchiuka, Thunderbolt.**

Class 106—Five Varieties—Single Type Lactiflora—Any Color

Three blooms, one variety lactiflora only, in one container

Class 110—Double White

1. Don Hollingsworth—**Mother's Choice**
2. Don Hollingsworth—**Elsa Sass**
3. Don Hollingsworth—**Mother's Choice**

Class 111—Double Blush

1. Don Hollingsworth—**Frances Mains**
2. Don Hollingsworth—**Mme. de Verneville**
3. Don Hollingsworth—**Nancy Nicholls**

Class 112—Double Light Pink

1. Don Hollingsworth—**My Love**
2. Don Hollingsworth—**My Love**
3. Don Hollingsworth—**Mrs. Franklin D. Roosevelt**
4. Charlotte Wilhelm—**Lottie Dawson Rea**

Class 113—Double Dark Pink

1. Don Hollingsworth—**Vivid Rose**
2. – –
3. Floyd Kimball—**Edulis Superba**

Class 114—Double Red

1. Don Hollingsworth—**Paul M. Wild**
2. – –
3. Robert G. Wise—**Detroit**

Class 115—Semi-Double White or Blush

1. Don Hollingsworth—**Minnie Shaylor**
2. Robert G. Wise—**Susan B. White**

Class 116—Semi-Double Pink

No Entries

Class 117—Semi-Double Red

1. Robert G. Wise—**The Mighty Mo**

Class 118A, B, C—Bomb

No Entries

Class 119—Japanese White or Blush

1. Don Hollingsworth—**Moon of Nippon**
2. Robert G. Wise—**Nome**
3. Don Hollingsworth—**Moon of Nippon**

Class 120—Japanese Pink

1. Robert G. Wise—**Alstead**
2. Don Hollingsworth—**Le Charme**
3. Don Hollingsworth—**Le Charme**

Class 121—Japanese Red

1. Don Hollingsworth—**Karen Gray**
2. Don Hollingsworth—**Nippon Beauty**

Class 122—Single White or Blush

1. No Entries

Class 123—Single Pink

No Entries

Class 124—Single Red

1. The Prestons—**America**

One Bloom, Lactiflora Only

Class 130—Double White

1. Don Hollingsworth—**Mother's Choice**
2. Don Hollingsworth—**Elsa Sass**
3. Don Hollingsworth—**Mother's Choice**

Class 131—Double Blush

1. Don Hollingsworth—**Frances Mains**
2. Don Hollingsworth—**Frances Mains**
3. Don Hollingsworth—**Nancy Nicholls**

Class 132—Double Light Pink

1. Don Hollingsworth—**Lady Alexandra Duff**
2. Don Hollingsworth—**My Love**
3. Don Hollingsworth—**Tourangelle**

Class 133—Double Dark Pink

1. Don Hollingsworth—**Vivid Rose**
2. Charlotte Wilhelm—**The Fawn**

Class 134—Double Red

1. Don Hollingsworth—**Paul M. Wild**
2. Don Hollingsworth—**Lowell Thomas**
3. Don Hollingsworth—**Paul M. Wild**

Class 135—Semi-Double White or Blush

1. Robert G. Wise—**Minnie Shaylor**
2. Calvin Helsey—**Miss America**
3. Robert G. Wise—**Mrs. Franklin D. Roosevelt**

Class 136—Semi-Double Pink

1. Don Hollingsworth—**Sweet Melody**
2. Don Hollingsworth—**Gene Wild**
3. Don Hollingsworth—**Sweet Melody**

Class 137—Semi-Double Red

No Entries

Class 138—Bomb White or Blush

1. Robert G. Wise—**Eastern Star**
2. Robert G. Wise—**Top Brass**

Class 139—Bomb Pink

1. Robert G. Wise—**Mons. Jules Elie**

Class 140—Bomb Red

1. Robert G. Wise—**Detroit**
2. Robert G. Wise—**Big Ben**

Class 141—Japanese White or Blush

1. Don Hollingsworth—**Primevere**
2. Don Hollingsworth—**Moon of Nippon**
3. Robert G. Wise—**Nome**

Class 142—Japanese Pink

1. Don Hollingsworth—**Glennie Carlene**
2. Floyd Kimball—**Kay Tischler**
3. Pamela Dewey—**Cora Stubbs**

Class 143—Japanese Red

2. Calvin Helsley—**Commanche**
3. Calvin Helsley—**Hot Chocolate**

Class 144—Single White or Blush

1. John Simkins—**Krinkled White**

Class 145—Single Pink

1. Calvin Helsley—**Seashell**

Class 146—Single Red

No Entries

Three blooms, one variety herbaceous hybrids or species, in one container

Class 150—Double or Semi-Double White, Blush or Yellow

1. Don Hollingsworth—**Summer Glow**
2. Don Hollingsworth—**Summer Glow**

Class 151 Double or Semi-Double Coral

No Entries

Class 152—Double or Semi-Double Pink

1. Don Hollingsworth—**Show Girl**
2. Scott Reath—**Coral Fay**
3. Floyd Kimball—**Cytherea**

Class 153—Double or Semi-Double Red

1. Don Hollingsworth—**Henry Bockstoce**
2. Pamela Dewey—**Postilion**
3. The Prestons—**Heritage**
4. Don Hollingsworth—**Command Performance**

Class 154—Japanese, Any Color

1. The Prestons—**Walter Mains**

Class 155—Single Yellow

No Entries

Class 156—Single White or Blush

One Entry

Class 157—Single Coral

No Entries

Class 158—Single Pink

1. Brenda Maguire—**Sweet May**
2. Scott Reath—**Wind Chimes**

Class 159—Single Red

1. Floyd Kimball—**John Harvard**
2. Don Hollingsworth—**Burma Ruby**
3. Don Hollingsworth—**Color Magnet**

Class 159A—Itoh Hybrid, Any Color

1. Don Hollingsworth—**Garden Treasure**
2. P. C. Laning—**Old Rose Dandy**

One Bloom, Herbaceous Hybrid or Species

Class 160—Double or Semi-Double Yellow

1. The Prestons—**Goldilocks**
2. P. C. Laning—**Lois' Choice**

Class 161—Double or Semi-Double White or Blush

1. Don Hollingsworth—**Summer Glow**
2. Don Hollingsworth—**Summer Glow**
3. Don Hollingsworth—**White Charm**

Class 162—Double or Semi-Double Coral

1. Robert G. Wise—**Coral Charm**
2. Robert G. Wise—**Coral Charm**

Class 163—Double or Semi-Double Pink
1. Scott Reath—**Coral Fay**
3. Floyd Kimball—**Cytherea**
4. The Prestons—**Paula Fay**

Class 164—Double or Semi-Double Red
1. P. C. Laning—**Red Charm**
2. Don Hollingsworth—**Command Performance**
3. Don Hollingsworth—**Henry Bockstoce**
4. Pamela Dewey—**Red Charm**

Class 165—Japanese, Any Color
1. Don Hollingsworth—**Show Girl**
2. P. C. Laning—**Burma Ruby**

Class 166—Single Yellow
2. John Simkins—**Pehrson's Best Yellow**

Class 167—Single White or Blush
1. Floyd Kimball—**Requiem**
2. Scott Reath—**May Music**
3. Brenda Maguire—**Avant Guarde**
4. Scott Reath—**Early Daybreak**

Class 168—Single Coral
2. John Simkins—**Janice**

Class 169—Single Pink
1. Brenda Maguire—**Sweet May**
2. Brenda Maguire—**Firelight**

Class 169A—Single Red
1. Floyd Kimball—**Legion of Honor**
2. Don Hollingsworth—**Alexander Woollcott**
3. The Prestons—**America**

Class 169B—Itoh Hybrid, Any Color
1. P. C. Laning—**Yellow Heaven**
2. P. C. Laning—**Dark Eyes**
3. P. C. Laning—**Yellow Dream**
4. P. C. Laning—**Yellow Heaven**

Three blooms, one variety, tree peonies only, in one container

Class 170b—Japanese (Moutan) White, Semi-Double
1. John Simkins—**Rock's Variety**

Class 171b—Japanese (Moutan) Pink, Semi-Double
1. Scott Reath—**Shinfu Ku Jin**
2. Scott Reath—**Hinode Sekai**

Class 173a—Japanese (Moutan) Violet, Single
3. John Simkins—**Lilac Rocks**

Class 176a—Lutea Hybrid, Yellow, Single
3. John Simkins—**Golden Era**

Class 185a—Japanese (Moutan) White, Single
2. John Simkins—**Rock's**

Class 185b—Japanese (Moutan) White, Semi-Double
3. Scott Reath—**Choni**
4. John Simkins—**Yuki Zasa**

Class 185c—Japanese (Moutan) White, Double
2. John Simkins—**Dr. Martin Smirnow**

Class 186b—Japanese (Moutan) Pink, Semi-Double
1. Scott Reath—**Hana Kisoi**
2. Scott Reath—**Yae Zakura**

Class 186c—Japanese (Moutan) Pink, Double
1. John Simkins—**Sen 'yo Mon**
3. Scott Reath—**Teikan**

Class 187b—Japanese (Moutan) Red, Semi-Double
2. Scott Reath—**Taiyow**

Class 188a—Japanese (Moutan) Violet, Single
3. Scott Reath—**Hana Daijin**

Class 188b—Japanese (Moutan) Violet, Semi-Double
2. Scott Reath—**Shima Daijin**

Class 188c—Japanese (Moutan) Violet, Double
2. John Simkins—**Kamada Fuji**

Class 189c—Japanese (Moutan) Maroon, Double
1. John Simkins—**Rimpow**

Class 190b—Lutea Hybrid White to Cream, Semi-Double
1. John Simkins—**Guardian of the Monastery**

Class 191a—Lutea Hybrid Yellow, Single
1. John Simkins—**Angelet**
2. Pamela Dewey—**Tria**

Class 191b—Lutea Hybrid Yellow, Semi-Double
1. John Simkins—**High Noon**
2. Pamela Dewey—**Golden Mandarin**

Class 191c—Lutea Hybrid Yellow, Double
1. John Simkins—**Age of Gold**

Class 192a—Lutea Hybrid Blend, Single
1. John Simkins—**Tessera**

Class 192b—Lutea Hybrid Blend, Semi-Double
1. John Simkins—**Marie Laurencin**
2. John Simkins—**Happy Days**
3. Pamela Dewey—**Savage Splendor**

Class 192c—Lutea Hybrid Blend, Double
2. John Simkins—**Sun Rising**

Class 193b—Lutea Hybrid Pink, Semi-Double
1. P. C. Laning—**Lois Elaine Laning**
2. The Prestons—**Zephyrus**

DIVISION II. AMATEUR

Class 201—Ten Varieties, Any Type or Color
First Award—Donna Linsley
Anomala, Archangel, Delavayii, Diantha, Duchesse de Nemours, Nova, Roselette, Saunders 10996, Viking Vanguard, Wittmanniana.

Three blooms, one variety lactiflora only, unless otherwise stated, in one container
No Entries in 205, 206, 207, 209, 211, 213.

Class 208—Semi-Double, Any Color
3. The Prestons—**Miss America**

Class 210—Japanese, Any Color
3. The Prestons—**White Cap**

Class 212—Hybrid, Any Color
1. The Prestons—**Firelight**
2. The Prestons—**Red Charm**
3. The Prestons—**Black Swan**

One bloom lactiflora, unless stated otherwise
No Entries in 220, 221, 222, 223, 224, 226, 228.
Class 225—Semi-Double, Any Color
1. The Prestons—**Miss America**

Class 227—Japanese, Any Color
1. The Prestons—**Wine Angel**
2. The Prestons—**White Cap**

Class 229—Hybrid, Any Type or Color
1. The Prestons—**Firelight**
2. The Prestons—**Heritage**
3. The Prestons—**Red Charm**

Class 230—Tree, Any Type or Color
1. The Prestons—**Zephyrus**

DIVISION III. NOVICE

Class 301—Five Varieties, Any Type or Color
First Award—Donna Linsley
Alexander Woollcott, Cytherea, Late Windflower, Peregrina "Fire King," Starlight.

Three blooms, one variety lactiflora, unless otherwise stated
No entries in 305, 306, 307, 308, 309.
One bloom, lactiflora, unless otherwise stated
No entries in 315, 316, 317, 318, 319, 320, 321.
Class 322—Hybrid, Any Color
1. Emily Cain—**Janice**

Class 323—Tree, Any Color
1. John F. Tai—**Souvenir de Maxime Cornu**
2. John F. Tai—**Alhambra**
3. John F. Tai—**Kamada Nishiki**
4. John F. Tai—**Godaishu**

DIVISION IV. SEEDLINGS AND NEW VARIETIES

Class 401—Seedlings—Three blooms, one variety, not currently introduced
1. Scott Reath—**#84-17**
2. Scott Reath—**#80-10**
3. P. C. Laning—(No Number)

Class 402—New Varieties
No Entries
Cl;ass 403—Seedlings—One bloom, for display only
P. C. Laning (14)
Scott Reath (1)

DIVISION V. SPECIAL ENTRIES

Class 501—Commercial Exhibit
Don Hollingsworth
Class 502—Visitor from Greatest Distance—Five Varieties, Any Type
Floyd Kimball—**Alexander Woollcott, Festiva Maxima, Kansas,**

Red Charm, Virginia Mary.
Class 503—Multiple Bloom
No Entries
Class 504—North Dakota Memorial Award—Five Full Doubles, Named Varieties, Any Color
Don Hollingsworth—**Amalia Olson, Mary Nicholls, Nick Shaylor, Paul M. Wild, President Taft.**

DIVISION VII. ARTISTIC DESIGN CLASSES

Five Entries.

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THE DIFFERENCE OF YOUNG ROOT-GRAFTED AND DIVISION PLANT OF TREE PEONY

By Wu Jingxu, General Manager & Senior Agronomist working in Luoyang Huafeng Peony Horticulture Co. Ltd.
(Address: No. 3 Daonan Rd., Luoyang, China)

Root-grafting and division are two main different ways for tree peony propagation. Namely, the former is to cut a section branch i.e. scion (about 15 to 20 cm length) containing 1 to 4 buds from some cultivar's plant, and graft to peony root i.e. rootstock, then cultivate it into a new living plant. The latter is to divide a larger plant (generally 3 to 5 years old) into several smaller ones (usually 2 to 6 plants). Grafted plant and division separately mention reproduction by the ways of grafting and division, and their form and characteristic etc. are not the same, as the two propagation ways are different. But in general, I think that division plant is superior to grafted plant. Now I try to compare them as follows, for reference.

ITEM	GRAFTED PLANT	DIVISION PLANT
Propagation operation and rate	difficult and high	easy and low
Living rate	low	high
Roots	thick and less	thin and more
Growing	slow	rapid and vigorous
Branches	less	more
Plant	smaller but size identical	larger but not identical
Blooming	late and less	early and more
Life	shorter	longer
Weight and freight	more	less

CUT PEONIES

The late Clarence O. Lienau

Some commercial growers have eight or ten varieties that they know will produce the type of bloom best suited for their business. For the small cut flower grower, I am recommending 25 varieties of peonies that will meet the need for every occasion.

Cut flowers must be given special attention so as to keep them properly for the trade. A refrigerator unit is very essential. It could be a large used walk-in box or a discarded body from a refrigerated truck or build an 8 ft. x 10 ft. cement block room in a garage which must be well insulated with a good refrigerator door.

Cut blooms in the early morning and also in the early evening. Being a small operator, with one or two helpers, I have cut bloom almost the entire day. It is advisable for the owner to do all the cutting, as care should be taken so that the yearly production of bloom would be assured. For local trade, cut the bloom stalks 18" to 20" and only 2/3 of the bloom should be taken from each plant. Two bottom separate leaves must be left on each stock as your plants must have foliage for future growth. Blooms cut properly at the correct opening stage will keep 10-15 days or more.

RECOMMENDED VARIETIES

	White
Mme. de Vernville	Early white bomb. May be cut fairly tight. Profuse bloomer. Very good keeper.
Charlie's White	Early white tall bomb.
Florence Nicholls	Medium bloomer. Large.
Baroness Schroeder	Late, stiff stems.
Elsa Sass	Late. There are two strains of this variety. Purchase the tallest strain.
Mrs. Frank Beach	Late, large profuse bloomer, not tall.
	Pink
Mons. Jules Elie	Rose pink, best of all cut peonies. May be cut almost tight.
Sarah Bernhardt	Rose pink, late, fine cut flower. Do not cut tight.
Reine Hortense	Light pink, good keeper when cut properly.
Helen Hayes	Dark pink bomb. Late.
Truly Yours	Fine late light pink, fine keeper and excellent for arrangements.
	Red
Big Ben	Early dark red, profuse bloomer.
Rubio	Good early dark red.
Karl Rosenfield	Medium dark red.
David Harum	Medium red bomb.
Mary Brand	Medium dark red.
Dixie	Medium very dark red bomb.
Felix Supreme	Late, medium red.
Shawnee Chief	Medium red, fine bud.
Sir John Franklin	Late dark red.
Virginia Dare	**Single—White** Good single white, small, opens from fairly tight, stiff stems, good keeper, excellent cut flower.
Sea Shell **Mischief**	**Single—Pink** Good brilliant pink. Late pink, all singles open from fairly tight bud.
Neon **Rose Valley**	**JAPANESE** Rose and gold. Rose and yellow.

ANEMONE TYPE PEONIES

While this peony resembles the Japanese type, it is easily distinguished from it because there are no anthers and the stamens, called petaloids, are broader, forming the center of the flower. The petaloid centers have no contrasting yellow marking, though some have yellow centers. The anemone has been favored by many peony fanciers and the varieties have been accepted as having much individual beauty.

To name a few, **PRIMEVERE** is a creamy white with a center of sulphur yellow. **GOLDEN DAWN** has ivory white petals with a pale yellow center. **GAY PUREE** is a beautiful two-color novelty peony. **PRAIRIE AFIRE** is a pink with fiery red petaloids. **PINK LEMONADE** is a soft blend of pink with yellow centers. **POWDER PUFF** is a pink with cream anemone bomb center.

★ ★ ★ ★

A peony will last a lifetime, if given some care. Patience and Peonies go together. Give a new plant a year or two to develop into maturity. The third and fourth year will be most rewarding as to bloom and it will continue for years.

★ ★ ★ ★

Do not remove the foliage of your peony after blooming. The plants secure nourishment in form of oxygen and nitrogen through the leaves. When cutting the bloom for the house leave at least two sets of leaves on each stem. Do not cut all flowers from the plant. It is better to leave at least half the bloom.

★ ★ ★ ★

If you have a beautiful peony growing in your yard, that rewards you with blossoms year after year, do not be tempted to dig down and break off a section for a friend or relative. Wait until early fall and then remove the entire plant and divide it, replanting the portion or portions that you want to keep. Replanting or disturbing them after they have become established retards their productivity of both roots and flowers.

★ ★ ★ ★

Cut off all foliage and stems of peonies close to the ground and burn, to prevent spread of disease. Early November is a good time to do it. Just before that time is permissible.

★ ★ ★ ★

Some Peony Don'ts—Herbaceous and Hybrids

1. Don't divide plants less than two years old.
2. Don't plant big clumps or big roots.
3. Don't plant too deep or you will have no bloom. Two or three inches to the topmost bud is deep enough.
4. Don't try to divide the plant immediately after digging it up. Let it stand in the air for an hour or two.
5. Don't plant where peonies have grown before without changing the soil.

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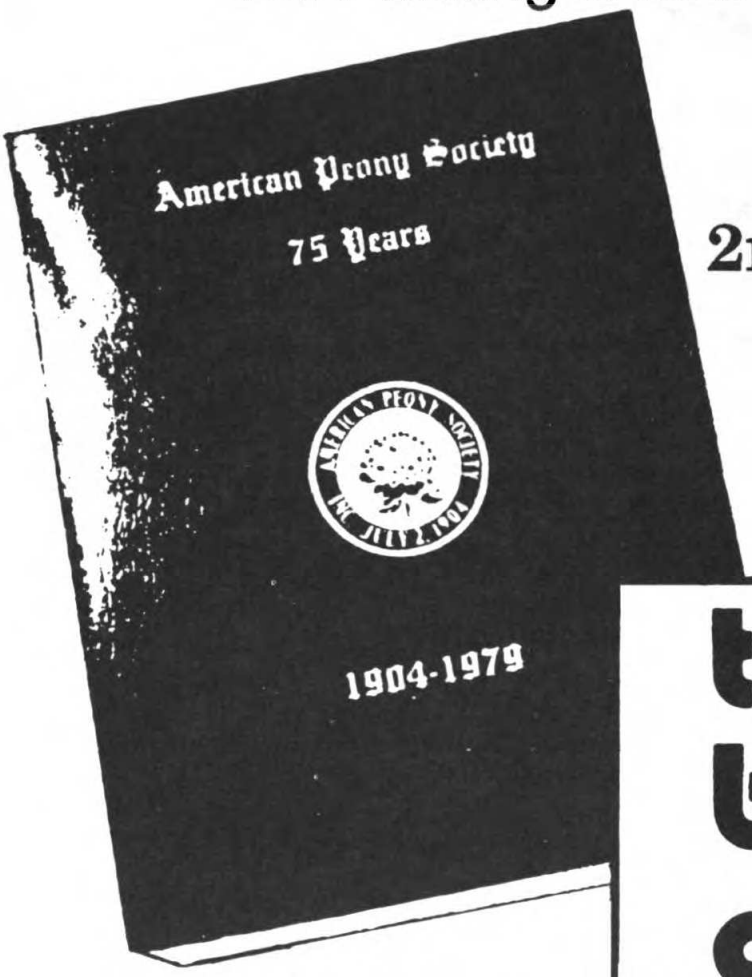

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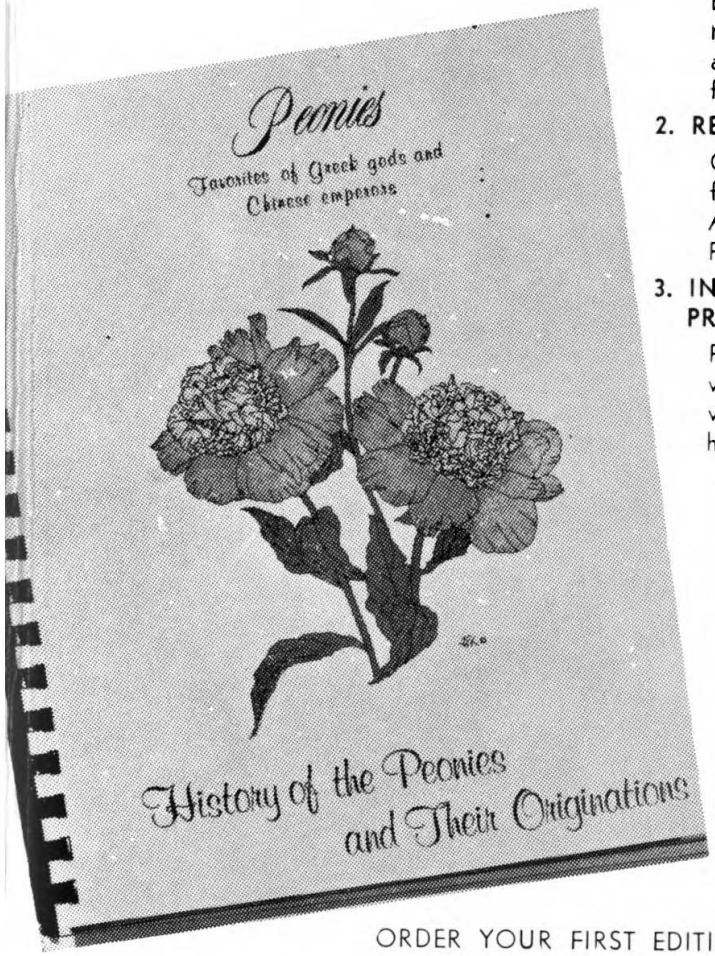

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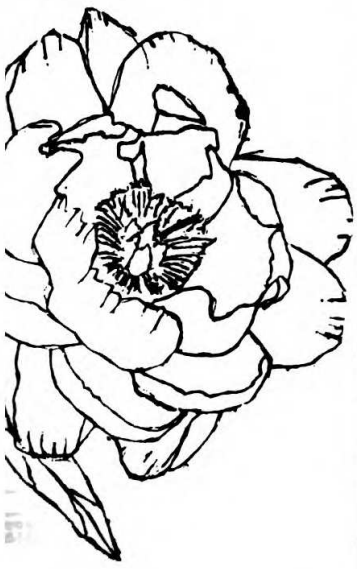

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Chinese Tree Peony. Dark purple when first open,
changing to purple red or dark rose in full bloom.
Photograph—Wu Jingxu, No. 3 Doanan Road, Luoyang, China