# March 1987 — No. 261

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# FROM YOUR PRESIDENT

DON HOLLINGSWORTH

#### Dear Friends:

It is a continuing source of delight to be reminded of the unusual ways in which our favorite flowers are being used. I am especially keen for the unusual, for that is where we may find new avenues for creative and competitive energies. This, in turn, suggests ways in which our peony family may grow.

For example, I am seeing a small, but growing, demand for the unique colors and forms of the hybrid peonies by practitioners of floral design. Where I am seeing this demand and appreciation right now is outside the Peony Society, among flower-arranging specialists, especially those with an oriental design focus. However, I first got turned on to the idea by Peggy Goldsmith. Peggy with her late husband, Keith, operated the Goldsmith Nursery at Edmonds, Washington, for many years suppliers of rare Saunders hybrids and other fine peonies. Peggy used her skills in both graphic arts and floral design to showcase the Goldsmith peonies in a two-month annual display at the nursery. Elsewhere in this issue is a commentary on the Goldsmith appreciation for the unusual peonies by Keith upon the occasion of a letter to the peony hybridist's newsletter about ten years ago.

What are some ways in which we can expedite the rate at which competition floral designers become acquainted with the novel coloring, patterns and sculpturing seen in many of these hybrids? First, of course, it helps for us to cherish them for these qualities ourselves; then our comments on them to others will reflect this appreciation.

I will very much appreciate having suggestions and accounts of both ideas and actual experiences in promoting peonies of all kinds to persons who are not now numbered with us as peony connoisseurs and specialists, to be shared in future Bulletins.

Best wishes for a good flowering season,

Don Hollingsworth



# IT'S THE SOIL

Don Meyer, Science Educator, Kimball, Nebraska

I would like to make some comments concerning an article in the December, 1986 Bulletin. W. F. Christman stated: "Don't excavate to the depth of 21/2 to 3 feet for the planting of your peonies, unless you want to do it just for your health!" This is probably good advice for fellow peony growers who happen to garden in areas where the original, native soil is primarily intact. But many of us live in housing subdivisions in which the building contractors stripped off and sold most of the virgin, meadow topsoil. In our "Sunnyview Addition" of Kimball, Nebraska, the contractor also economized by spreading the basement-excavation dirt of heavy, yellow clay all over each lot. Forty or more years ago, this reject dirt was hauled away by the basement contractor. This compacted, mucky clay layer is about two feet thick around each foundation and thins down to one-half foot near the streets and alleys. The "landscaper" then spread four to five inches of subsoil and "blowdirt" on this layer of excavation clay. This top layer just marginally supports a mediocre stand of grass, but it isn't conducive to the production of a luxuriant, floriferous perennial garden. Most perennial roots can't penetrate the "hard pan" of compacted, dense clay. Roots just spread out horizontally and shallowly when they reach the layer of clay. Even when this clay layer is loosened up by the addition of sharp sand and humus, plant growth is inhibited and bloom is sparse. Not only is this soil blend difficult to work with, but it also looks terrible—a brownish-creamy hue! For maximum, thriving vigor of most herbaceous perennials, this underlayment of clay dirt can't be satisfactorily improved by just adding and mixing various amendments. This clay dirt must be completely disposed of! To me, dirt is any earthen material that doesn't support prosperous plant development, while soil does. The only alternative to hauling out the clay, is to make raised or elevated beds filled with good friable. loamy topsoil—which we have done with great success and expense!

In sixteen years of serious (fanatical) gardening, my wife, Carol, and I have found that most animals and many perennials (iris, rudbeckia, echinacea, anthemis, achillea, coreopsis, helianthus, and heliopsis) don't really need a deep, rich soil in order to thrive. In fact, some of these perennials have their blooming inhibited by being "spoiled" with soil high in fertility and moisture retention. However, through years of trial-and-correction (or error) experimentation, we have found that our favorite perennials—herbaceous peonies, daylilies, roses, delphinium, hosta, mums, oriental poppies, and Darwin-hybrid tulips—perform much better with the best, deepest soil possible. Peonies and other popular perennials "love" a thick layer of humusy, fertile, friable, aerated soil with high drainage capacity.

With this experiential knowledge, any time a new flower bed is made, or an old one extended, the Meyers become "ditch-diggers."



Any good soil or topsoil is set aside and the entire layer of yellow clay is manually hauled out in a pickup to the city landfill site. At the bottom junction of the clay with the original subsoil, one often finds scraps of lumber, concrete, gravel, shingles, siding, guttering, and glass which is also discarded. Digging is continued until a depth of 1½ feet is reached, saving any good, darker subsoil.

Before the "pit" is refilled, the vertical earthen walls are lined with 27-inch wide plastic-carpet runner if there are any shrubs or trees with-

in forty feet—which is usually the case. This root-barrier liner is held in place initially by tacking with 20-penny galvanized nails along the top edge of the plastic. Instead of carpet runner, one can also use landscaping fabric, but smaller fibrous roots will eventually penetrate through the weave.

By making blatant mistakes, we have proven to ourselves the advice that it's



Putting in a root barrier of landscape fabric just before refilling the three foot deep pit. There are several elm trees and a crab apple tree within 20 feet of this future flowerbed.

extremely important not to plant peonies and other long-lived perennials near shrubs, hedges, and trees. You can, however, violate this rule if you use some kind of root barrier in the wall of your flowerbed. Using root-impermeable barriers, we have planted island-beds of thriving peonies under large locust trees.

After lining an excavated pit with root barrier, the "hole" is filled with a well-mixed, "potting soil" blend of one-third good topsoil, one-third sharp, washed, masonry sand, and one-third humus. This humus component may be partially sphagnum peat moss, but is usually and primarily well-aged compost. The compost is originally made from shredded tree leaves, stump grindings (from our local tree trimmer), pine needles, and horse manure. An eight-horsepower, counter-rotating power tiller is used to homogenize the various soil components.

Our "double-digging" intensive method may seem to be quite arduous, but the vigor of our flowers (and weeds) demonstrate that it's well worth it. It is almost a pleasure to cultivate and weed in such loose, organic soil. When you pull a weed, you can usually be sure that you are getting the entire root system—sometimes with taproots 2 feet long. One healthy person ("with a strong back and a weak mind"—they say!) can easily restore or improve 100 square feet of garden to a depth of 30 inches in one day. Over the last sixteen years, little by little, we have manually "double-dug" over 4,000 square feet of our large corner lot. (I am a school teacher, so I've had entire summers to do this laborious work.) This also means that we have physical-



ly removed at least 6,000 cubic feet or 150 pick-up loads of clay dirt and replaced it with an equivalent amount of mainly humus and sand.

Deep-soil preparation is definitely the most important aspect of successful perennial flower gardening—mainly because such soil restoration improves the porosity and drainage of the soil. Like many of you, the Meyer's are avid plant collectors and some of the peony, daylily, and hosta cultivars we purchase each year are worth 25 dollars (and more) apiece. We refuse to plant an expensive, prize specimen in a one-dollar hole! After seeing our spectacular results with deep-soil improvement, many serious gardeners in the Nebraska Panhandle are now using similar intensive techniques.

The main point I'm trying to make is that for many of us peony lovers who try to garden on a subdivision lot that conceals a foot or more of excavated, compacted "dirt," the favorable planting of a peony division cannot just involve digging a hole in unprepared ground or sod "just large enough for the root to go in, with some little space to spare all around it." Doing just this, is probably a primary reason why so many homeowners in relatively newer housing developments or suburbs have little "luck" with peonies and other herbaceous perennials.

What works for trees, shrubs, and other woody plants is not usually successful for soft-stemmed peonies. Many professional nurserymen in the Rocky Mountain region, at least, now endorse a minimum amount of soil preparation and amendments in the planting of trees and shrubs in order to encourage root penetration into the surrounding, unmodified soil. However, we have found that, like the roots of peonies, tree roots will scarcely penetrate this layer of basement-excavation clay. From our many "digs" in our yard, we have found that tree roots are mainly located in the sod layer above the dense clay and in the native subsoil under it.

\* \* \* \*

My family and my in-laws enjoyed every aspect of the National Peony Convention in June. The show was breath-taking—the forums were friendly and informative, and the tour on Sunday was a big bonus. To meet Sir Peter and see his striking photographs was an honor. The Goulandris paintings exhibited at the Bell Museum were beautiful. My thanks to the peony people of Minnesota for such a rewarding Convention.

This Fall I had the opportunity to plant a public display of peonies, daylilies, and Siberian iris at the new library at Menominee, Wisconsin, on the shore of Lake Menominee. Although it rained buckets all through September, I did finish the task, planting forty of the very best peony varieties. Vice-President's wife was the guest of honor at the dedication ceremony, and in her remarks she compared building libraries to planting peonies, namely, that they are tasks done with future generations in mind. In three or four years, this planting will reach an age for visitations.

-Tom Richards, Boyceville, Wisconsin



### IN MEMORIAM

# ANNA SMIRNOW, written by Dr. Robert Smirnow

"Anna Smirnow was one of the most empathetic people that I have ever known. She loved peonies almost as much as she loved her music and family. I suppose, living with her people instilled in her a very keen sense of humor, as well as the instinctiveness to utilize it at the most appropriate time. I recall, in particular, one day when she was driving through a very heavy rush hour traffic jam; as luck had it, her car stalled and she had some difficulty in starting it. As she sat there struggling with the machine, the fellow in the car in back of her began to blow his horn. Annie got out of the car, marched up to this lout and said to him, 'Here, you start my car and I'll sit here and blow your horn.' She was a devotee of the symphony, and particularly the opera. During the depression, when I was a small child, I can still remember her planning to go to Carnegie Hall on Friday with the twenty-five cents that she had saved during the week. I respected my mother for her intellect and loved her for her kindness and compassion."

\* \* \* \*

In loving memory of LAURA KARRELS, Milwaukee, Wisconsin, who passed away in December, Obituary will be in a later Bulletin.

# \*\*\*\* REGISTRATIONS

CASCADE GEM (Walter Marx), registered by Caprice Farm Nursery, Jan. 5, 1987.

This peony was first published in the Walter Marx catalog in 1957 as Water Lily; again in the catalog of Caprice Farm Nursery in 1986. The name was not accepted for registration because of near-name duplication. The name has been changed to Cascade Gem.

Parentage unknown, lactifolia, first bloom 1957. White, cream, yellow center, anemone. Excellent stem strength, 36-38" in height, midseason, very reliable, rugged with dark green foliage.

NAME CHANGE, formerly Lady of the Lake, Bulletin #259.

To: LILITH (William Gratwick, Nov. 19, 1986).

Seedling previously known as Chugi pink and New pink. Single Moutan tree peony with great degree of Moutan blood. First bloomed about 1980. Light airy and fluffy vivid pink Moutan, with darker flares. Blooms early, 48", vigorous, excellent amount of bloom with good stem strength holding flowers upright above the plants foliage. NAME CHANGE, formerly Mistress of the Monastery, Bulletin #255. To: EZRA POUND (William Gratwick, Nov. 19, 1986).

Parentage, Moutan tree peony x unknown. Color similar to Guardian of the Monastery, only lighter pink and purple hues. Very floriferous, good strong grower, 5' height, waxy deep green foliage. Blooms with other Moutans. -8

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BURNING BRIGHT (Goldsmith), registered by Caprice Farm Nursery, Dec. 26, 1986.

Seedling #179, hybrid single, fluorescent pink-red, reliable 34", early midseason.

Parentage—obtained by Roy Leighton, Seattle, Washington from Prof. Saunders, in a non-blooming block of seedlings in 1940. Later, all peonies and seedlings were sold to Goldsmith in 1952. Peggy Goldsmith gave this outstanding labata seedling #179. It first bloomed in 1953. Rogers of Caprice Farm Nursery bought it from Goldsmith in 1978.

MURAD of HERSHEY BAR (William Gratwick, Nov. 11, 1986).

Parentage, Choni X Dark of the Moon.

Single Moutan tree peony. First year bloomed 1978. Dark maroon on strong medium green stems and foliage, very early, 5' height, reliable and consistent. \* \* \* \*

# **GRATWICK**

ALL TREE PEONY INFORMATION from a catalog of William Gratwick of several years ago, no date recorded. His work and development in the production of the tree peony, is a very great accomplishment and now his talent is acclaimed as a sculptor. For many years, he has studied this art, and recently his work was exhibited in the art gallery of the State University of New York, at Geneseo.

His accomplishments are many, but not without tragedy. In 1973, his rambling mansion was almost destroyed by fire. He lost his collection of books, colored slides, a vast collection of carriages, and sculpture work that he had created. At 83, he lives alone on his 350-acre estate; his interest is sheep, horses, and the exotic tree peony. His achievements have brought him recognition, but neither fame nor fortune.

TREE PEONIES

The Tree Peony is a royal plant from the Orient where it has been cultivated for a least 1400 years. Known as the "King of Flowers," or the "Flower of Riches and Honor," it has been held sacred in the gardens of monasteries and temple courts, or grown as an exclusive treasure of the Imperial Palaces. To the great artists, it has always been a favorite subject, whether in painting, poetry or ceramics, and it was traditionally embroidered on the trousseaux of princesses.

In America, though still a rarity, it is fast becoming the outstanding aristocrat of flowering plants—a treasure no "self-respecting" gardener can be without. Few plants can vie with the magnificent size of its bloom—up to 12" across. None have a wider color range—from white, pink, crimson, purple mahogany and deepest black-red of the Moutan group, to the yellows, oranges, and variegated hues of the Lutea hybrid group. But what puts the Tree Peony in a class by itself is the "sculptured delicacy and wavy elegance of its great translucent petals, crimped and glistening like a huge parrot tulip fashioned out of Oriental silk."

Tree Peonies differ from the common herbaceous peony in two conspicuous ways: (1) they develop rough-barked, woody stems which, in-



stead of dying back to the ground each winter, continue to grow year after year so that a bush [not a tree] is formed four to six-feet-tall and as many feet across; and (2) they bloom about two weeks earlier. Tree Peony flowers are also much larger than the herbaceous kinds.

A Tree Peony is usually the most notable plant in a garden and may well be given the place of honor. A single specimen can hold the focal point in an intimate design; two look well as accents on each side of steps or the entrance path; four can be used in a balanced design at the corners of a flagged area reflected in a pool; or a group of Tree Peonies is perfectly adapted as a middleground for the flower border with lilacs in full bloom in the background. When not in blossom, Tree Peonies are still extremely handsome and an addition to any garden composition for the beauty of their leaves, the gesture of their branches, and rich autumn color.

A single flower floating in a bowl is more beautiful than the most elaborate floral arrangement. Cut the blossom early with its stem not over an inch long and watch the petals unfold and grow for almost a week. Flowers grown thus—protected from sun and wind—often become larger, and even more beautiful, than those left on the plant.

#### **CULTURE**

Under good garden conditions, the Tree Peony is easy to grow, extremely hardy, and long-lived. If you have had success with roses, lilacs, and other shrubs, then you should run into no trouble with it. It is a shrub of convenient size—three to six-feet-high, and as much across—though in age, many reach much larger dimensions. Space your plants accordingly. Tree Peonies do best in places which, though sheltered from heavy winds, have a free circulation of air. Good drainage is a necessity. The competition of heavy-feeding tree roots should be avoided, but partial shade will lengthen the life of the huge blooms. Planting is done in the Fall [never where an old peony clump has been growing, nor in strongly acid soil], where the graft line is placed at least four or five inches below the ground level. Dig a "tendollar hole" for each plant; this means prepare the soil to a depth of two feet, and a width of three feet, mixing in about a bushel of wet moist peat moss or leaf mold, and about two pounds of bone meal.

Plants should receive some protection during the first winter to avoid alternate freezing and thawing. Some phosphate, potash and lime can be used after the first year, but not too much nitrogen. An annual feeding of a couple of pounds of bone meal is enough under most circumstances. The roots and stem should never be in contact with manure. Being woody plants, Tree Peonies should not be cut back in the Fall, but all dead branches should be removed.

Japanese Tree Peonies begin to bloom about two weeks ahead of the common peonies (which in our area is about the end of May), and are followed about a week later by the Lutea hybrids—in all, a threeweek blooming season. In mid-day, the huge flowers will appreciate a bit of shade (either from nearby trees or a lath-made shelter), to preserve the subtlety of their color, and the lovely goblet shape of their great flowers. Give them several good soakings during the blooming season if the weather is dry.

Tree Peonies are not subject to insect injury. The only serious dif-



ficulty experienced in growing them is the occasional wilting and dying back of branches, generally caused by botrytis blight. If this occurs, the affected part should be cut out and burned, and a new shoot will almost surely come up from an underground bud to take its place. If the condition becomes so serious that the new shoots keep dying back, then the plant should be dug up in the Fall, thoroughly cleaned of all diseased conditions and replanted in new clean soil. Some authorities recommend three sprayings with a good fungicide like Bordeaux, fermate or captan—once before the flowers open, twice afterward.

Sometimes Tree Peonies will grow and flourish for years without a bit of trouble, and sometimes not! We believe it is only fair to say so; but we also believe that American gardeners are skillful enough to grow them, and that each year more of us will share with the Orient the satisfaction of growing the "King of Flowers."

#### **COLOR IN JAPANESE TREE PEONIES**

#### **PINK**

Most collections of Tree Peonies have a goodly representation of the pink varieties, and with so many shades of this color available—from the palest to the deepest—it is not hard to understand their popularity. Some, almost white, with only the faintest tinge of warmth, have a translucent quality which is found in no other flower. Some of them, opening with a clear rich hue, fade to soft silver, so it looks as if two varieties were blooming on the same plant. And, of course, there are the more common dark pinks.

WHITE

White Tree Peonies are in a class all by themselves. Some of us consider them the most beautiful of all. The single ones are star-like in their purity. The semi-doubles, though enormous in size, have a delicacy of form which is unique, and a way of unfolding their great transparent petals which is akin to magic. When planted alone, a white Tree Peony is a queen in her own right, and can dominate any garden setting. When planted among the pinks and reds, the contrast creates a new brilliance which defies description.

RED

In this group are some of our rarest and finest flowers, ranging from the soft brick red of "Ashs of the Setting Sun" through the brilliance of "A Pavilion of Radiance," to the deep richness of Kin-Kaden. These exciting reds give a Tree Peony collection an elegance which no other flowering plant can rival. The whites are very beautiful; the pale pinks are most lovely; but don't omit the reds. It is the contrast which they create that makes a planting of Tree Peonies truly breathtaking.

#### BLACK, RED AND PURPLE

If you don't have any Tree Peonies you probably won't start with this group, but we hope you won't neglect them entirely. No collection would be complete without them. The black-reds are not particularly showy by themselves, perhaps, but when you see one combined with the big whites, or some of the yellow hybrids, the contrast is unforgettable.



# **CAPRICE FARM NURSERY, Sherwood Oregon**

By Robin Blue

Hi! Here at Caprice Farm Nursery in Sherwood, Oregon, we're finally able to take a few relaxing breaths after all the Fall peony digging and shipping. Now all we have to do is get the catalog ready to be sent to the printers, proof it, and get it mailed out, and the cycle starts all over again.

Maybe you'd like to know a little bit about our nursery and who does what. My Dad and Mom, Al and Dot Rogers, live at, and own, the business. Dad is the head honcho and does a lot of everything. He plants, digs, divides, hybridizes and makes lists to keep us all in line. Mom works in the office; does payroll, bookkeeping, answers the phone, and keeps things running smoothly. Public relations, including Garden Club lectures and seminars, take much of their spare time.

Rick lives in Tigard and works here full time. He's just announced his engagement to Tomi, his girlfriend of many years. Rick does all the rototilling, spraying and fertilizing, and much of the digging, dividing and planting. He's also responsible for the field work.

I live 15 miles away with my husband and 3 daughters who are 11, 9 and 2. Working here three days a week is all I can manage until my youngest starts school. I'm responsible for the mailing list and plant inventories. My motto is: "To err is human, but it takes a computer to really mess things up." I also work outside when they need help. Dad, Rick and I lined out 2500 peonies this Fall.

Cyndi, another daughter, and her husband, Charlie, have just started a nursery down in Murray, Kentucky.

We are registering two peonies this year. The first is CASCADE GEM, hybridized by Walter Marx and introduced as WATERLILY in 1957 for \$10.00—(that year FESTIVA MAXIMA was selling for \$1.25). It was so popular that the Marx's sold out completely. Years later, they finally got a piece back from a customer. We re-introduced it last year as MARX WATERLILY, but since the name was invalid, we have changed it to CASCADE GEM.

The second one is BURNING BRIGHT, probably the most coveted peony of our garden visitors. To increase stock, we've had to cut all the buds so people wouldn't beg us to "spare just one." It has a fluorescent quality that pictures can't capture but stands out in a sea of flowers in the field. This seedling "179" came the long way around from Professor Saunders to the Leightons in Seattle as an unbloomed seedling, grown for many years in the revered Goldsmith Nursery in Edmonds, WA, and finally to us in 1978. As far as we know, A & D Peony Nursery and we, are the only ones who have it.

Ben has been in and out of the hospital all summer—heart and stomach ailment and in addition, he broke his hip. He walks with a walker. He did not do anything in his garden all year.

-Mrs. Ben Gilbertson, Kindred, ND

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# IN APPRECIATION OF THE UNUSUAL PEONIES

By Keith Goldsmith (Submitted by Don Hollingsworth)

One likes to think he's doing something really important whatever he's doing. We have thought it important to keep all those lovely hybrid varieties available. We're pretty sure that it would be better business to grow more of each of a few varieties on our limited space, but we couldn't bring ourselves to cull any of them. (There are some that have a terribly exasperating habit of root growth, and I curse them as enthusiastically when I try to find a decent division in the Fall and I praise their exquisite flowers at blooming time — I just planted a whole bunch of Rose Diamond, Ludovica and Laura Magnuson thinking how nice it would be if they grew nice roots like Mercy or Picotee or Early Windflower. Is it our growing conditions that cause the crowns of the first three mentioned to sort of dry-rot away, leaving all those healthy pieces to sprout up masquerading as a fine clump? Only occasionally do we get a really good "normal" root on any of these three.)

To get back to my point—we got the idea from reading other growers' lists, that perhaps we have the only available stock on many varieties. If that is true, it worries me, because we won't be here forever. David Reath's remarks had their emphasis on preserving varieties useful in hybridizing—I would go further, having mourned the loss of a good many excellent lactiflora varieties from the market over the past 25 years.

In general, our local customers are of two types-former midwesterners who buy peonies more from nostalgia than any keen interest in the species' intrinsic qualities, and younger people who more or less stumble onto us and are victims of love at first sight. Very few Pacific Northwest gardens have much suitable space for peonies since the emphasis is more on rhododendrons, azaleas, camellias, heathers, fuschias, and begonias, rather than on snowballs, lilacs, peonies, lilies, iris, delphinium, etc. We do have a strong interest in the area of flower arranging, however, and flower arrangers with oriental influence find the single hybrids ideal for their purposes, which leads me to the other really important thing that we are doing—(I should say that Peggy is doing)—with the peonies. Most of our selling is done during her marathon display of peony arrangements in our (what we still call "the shed") showroom. She is masterful in displaying hybrid peonies! Her use of other materials about the place to draw attention to the subtle shadings of petals, the filament color, details of stigma, carpel and necklace, form, and so on, seems inspired. I'm sure that no one can walk by any peony in any set of circumstances without taking another look, but it's very difficult to avoid studying the details of the arrangement and of the flowers in Peggy's peony arrangements, and remembering them with pleasure. She is providing our visitors an aesthetic experience and inspiration that is highly valued. (Our 'farm'



is a mile away from our place of doing business, and we do take people down to see the plants if plant form is important to them in making selections.)

In this connection, let an 'outsider' to hybridizing circles make some comments. Red Charm has to be one of the finest red flowers of any kind ever seen, but I wouldn't want to see a search for such perfection in doubling, fastness of color and precise form, not to mention foliage, stem stiffness and rigor of plant, make us undervalue the less 'perfect' but more detailed and subtle varieties. The crooked stem of an unstaked "Red Red Rose" gives it a use as a cut flower, for instance, that Red Charm with its stiff stems can't fill; the fading quality of Rosy Wreath (what a pink!) or Cecelia or Rose Diamond gives a quality of the way things are in life. That red stigma on Horizon is worth a thousand red stigmas on a double.

I like them all and if someone will come up with a semi-double of (say) Daystar color, foliage, plant form and time of bloom that will hold for a good two weeks, and get such beautiful seed pods and whose foliage will turn even more spectacular in the Fall, I'll add it to my collection—if I can afford it—but I'll keep Daystar, too.

# PEONIES IN THE WAKATIPU BASIN, SOUTH ISLAND, NEW ZEALAND

Dorothy Hamilton, Lake Hayes, New Zealand

Although New Zealand is a very small country [we would fit it more than comfortably into half the length of Californial, we do have a great variation in climate and topography. New Zealand lies in the latitude of the "roaring forties," and it's the westerly depressions which can give sudden changes in our weather pattern. We live in the Wakatipu Basin in the south of the South Island and do, by Minnesota standards, have a very temperate climate. The northern areas of the North Island are too mild for peonies in the wintertime, not giving them the complete dormancy they require, but in some of the central areas, and certainly in about 90% of the South Island, peonies can be grown most successfully. We live well inland, and have really quite a different climate to the coastal areas where Timaru and Christchurch growers are. Our summertime temperatures would be much the same, but our winters are much more severe with frosts, maybe 4-5 inches into the ground, and it can stay frozen like that for several weeks at a time. We have very little snow lie, although we live where we can see [with the use of binoculars] skiers on two ski fields on either side of us. We live at approximately 1100 ft. above sea level, with Coronet Peak Ski Field at a height of 5400 ft., and the Remarkables Mts. at 7688 ft. only a few miles away from us.

Our average rainfall is approx. 27 inches, but we do tend toward a winter minimum. Summer temperatures can reach the low to mid 30C, but it is cold in winter with ground frosts on most days, and air frosts occurring on half to two-thirds of each month.



Our soil type is derived from mica schist, is very fertile, high in mineral contents, but low in humus. We have found in the Springtime some yellowness in the peony foliage which was quickly corrected with an application of nitrogen.

We have been really pleased with the seed sown from the A.P.S. seed pool. Seed sown in early December has sprouted to the single leaf stage by February, three months later. We have several hundred plants coming on from our first lot of seed, which will provide us with a lot of interest.

This year, we had our first real flowering from plants we imported from The Klehm Nursery in 1984, and the reaction from people seeing them was really exciting—Coral Charm and Coral Sunset. Coral and Gold are colors just not seen here, as were Sophie, Cytheria, Constance Spry and Paula Fay. I really couldn't remember having seen Coral Charm and Coral Sunset quite so vivid in color. Burma Ruby, Prairie Moon, Buckeye Belle and Miss America were quite spectacular. I think if I could only choose one it would have to be Prairie Moon, but I surely would hate to be put in that position.

In the smaller growing varieties, For Heavens Sake and Quality Folk were really lovely, but the finely-cut foliage of the fernleaf double, Early Bird and Early Scout drew a lot of comment.

In the tree peonies, Yellow Emperor, Gauguin and Savage Splendour were much admired but didn't flower as well as Golden Hind, Boreas, Age of Gold and Renkakau. I suppose next year the season could be different, and plants will be more settled, and we will have lots of others that are better—or worse!

Bringing seed into the country is no problem, but the tubers we have to quarantine for one growing season. We can do this on our own property, provided they are 300m from any other like plant. Our biggest problem seems to be to get them through customs—quite rightly they must have the correct documentation. They are inspected at the port of entry into New Zealand, dipped in Benlate, and then released to the grower. The last batch of plants were dispatched from Klehms on the 1st of October, and we had them planted by the 16th of October. We have lost only two tree peonies (I wasn't prepared for slugs eating the new growth), and one peony tuber out of 600-odd plants, so they do transfer very readily.

Peonies have become very popular as a cut flower for the export market, and I know of several growers who are importing peonies for this purpose. We also have two growers who are drying peonies—the very low humidity makes this an ideal situation for dried flower production.

\*\*\*\*

Put this garden on your list to visit: Pearl E. Jones garden, 120 Rosewood Drive, Dayton, Ohio. Pearl and her husband grow over five-hundred peonies at the present time. Her yard is always in bloom with all kinds of perennials. In the sun grows many daylilies, and in the shady areas are gems of colorful hosta.



# THE 1986-87 SEED COUNTER: CLOSING DOWN . . .

Bill Seidl. 732 S. 19 St., Manitowoc, Wisconsin 54220

Down for this season, that is, resting up for the next! Most all seeds have been distributed. If somebody still wants mixed *lacti* or mixed herbaceous hybrid (HH) and *lacti*, there are some left. By mid-April, it will be dispensed somehow, perhaps to those who requested large amounts and have lots of garden space.

A few requests could not be met because they were received too late for the kinds of seed requested. This was not the senders' fault as my December Bulletin article did not specify any cut-off date for ordering. However, most orders went out by Christmas (the P.O. lines weren't TOO long!) in order to accommodate those ordering from Australia and New Zealand. (Down under, Nov.-Dec. is an ideal time to plant fall-harvested seed from up here as it undergoes a long warm period right away, then cold, and is ready to pop out of the ground in Sept.-Oct. this year, 1987.) So if you order again, please do so within 10 days of the December Bulletin's arrival. You can order any time earlier if your request is in general terms (lacti, yellow HH, red HH, tenui HH, suffruticosa...) and I'll pick out appropriate seed.

Suffruticosa (Tree Peony, TP) seed was the most requested. My tenui HH seed went fast; there'll be more this coming season. This seed is from red, single-flowered LADDIE seedlings with narrow, divided foliage but not as ferny as the species. Yellow HH (Moonrise, Roy and Chris's Best Yellow) was often requested. MISS AMERICA was the most requested lacti parent. Several orders included yellow TP's; those would be tree hybrids and the seed too rare to be donated, or given away.

For those thinking about donating seed, keep in mind that most people probably don't want to grow 80% singles; so try to collect seed from semi-doubles, doubles, Jap forms, or, if singles, hand-pollinate with pollen from doubles. Do it just as the bud is about to open, before insects get to it, or before it selfs. Cover the stigma liberally. You don't have to bag the bloom or ruin the flower for viewing. Most of the seed will be from the intended pollen parent. (One order was too specific to fill: *lacti* seed to produce white doubles tinted yellow, similar to BOWL OF CREAM, CHEDDAR CHEESE, etc.) Maybe some donor could make a suitable hand cross (as in above paragraph) using, say, BC pollen on CHARLIE'S WHITE, MISS AMERICA, PICO, STARDUST, etc.

The title of the December Bulletin article was intended to read Seed Counter, i.e., a table over which goods are handled, but it came out Corner. A friend said, "Just as well, counter implies you're going to count the seed." Well, as a matter of fact, I did—7,300 seeds were distributed. But the measure of success of this project should not be



by the amount of seed but by the quality of the seed and resulting seedlings. So the jury will be out for quite awhile.

The current (1987) Thompson & Morgan seed catalog lists some peony seed. Mlokosewitschii, 5 seeds, \$2.95; officinalis, 3 seeds, \$4.95; Border Mixture, chosen from the best singles and semi-doubles, 5 seeds, \$2.95. (Presumably, these are lactiflora.) They also list two tree species but not the number of seeds per packet: delavayii, \$2.15 and lutea ludlowii, \$2.45—pages 126 and 220.

### **FIRE ISLAND**

By Vernon Kidd, New York, New York

Last time I wrote, Fire Island was recovering from Hurricane Gloria's devastation. We were concerned for the peonies; needless to say, Spring was more glorious for their beauty. The effect of the "storm-borne salt-bath" which defoliated all vegetation on the island, was that of a gigantic insect spray, so that everything seemed to outdo itself in an effort to reproduce. The Beach plums were so prolific and bug-free, nobody seemed to recall a heavier crop or tastier jellies and jams.

The peonies were extra vivid in their color, and again my yard became sort of an unofficial stop on the tourist circuit. Friends would stop by with visiting friends or relatives and say, "Is the Garden still open?"

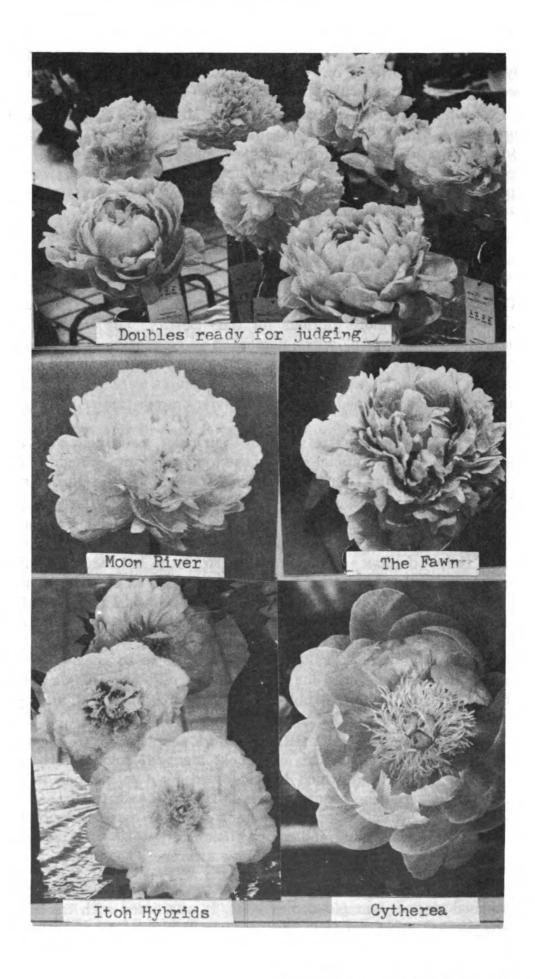
The yard doesn't have ideal soil, and the peonies share the area with dwarf fruit trees, grapes and blueberries, as well as roses, iris, daffodils, tulips, dahlias and hemerocallis. Any spot left over has either strawberries or a few vegetables, and I have tried to keep the peonies as far from the trees and other plants as space allows. This past Fall, I raised the peony bed, transplanting some roots away from competition, while adding more top soil. It was exciting to see all of the healthy eyes and roots waiting in the wings, so to speak, for the Spring. It is strange how one gets to appreciate every single peony [and we have our favorites], but each peony I grow brings an intake of breath at the sheer wonder and beauty of the flower.

Again, I mention RED GRACE. More people seem to know its close cousin, RED CHARM, of almost identical color, which was developed earlier, and which has bloomed for two seasons in my garden. It is a glowing beauty; however, RED GRACE takes the final honor for its stunning form. Watching these tremendous ruby-red bombs unfold a seeming endless profusion of petals, while growing more beautiful each day, brings sublime awareness to our life.

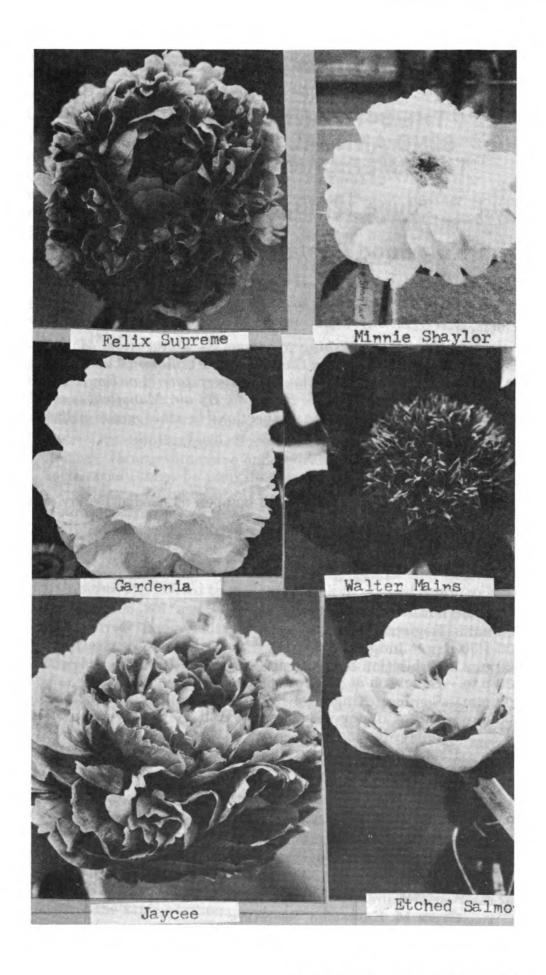
... By the way, we have one old peony bed that has never been disturbed since it was planted in 1891. It was listed with the house plans of that year and that one peony still blooms every year (we bought the house in 1961). All it gets is a little fertilizer every Spring. The Vermont winters have not phased it.

-Helene Toolan, Old Bennington, Vermont





Photographs - Edward Lee Michau



 $Photographs-Edward\ Lee\ Michau$ 

# THE 84TH ANNUAL MEETING 82ND ANNUAL EXHIBITION OF THE AMERICAN PEONY SOCIETY

June 12, 13, and 14, 1987

# Kingwood Center, Mansfield, Ohio

#### SCHEDULE OF EVENTS

For the benefit of those wishing to attend the Convention, Mansfield, Ohio is about halfway between Cleveland and Columbus, and can easily be reached from the north or south via Interstate 71 or Route 13, and from the east and west via U.S. Route 30. By air, Mansfield is served by North Western Airline, with connections to other major airlines at Cleveland or Columbus.

#### Friday, June 12

Center opens at 8:00 a.m.

Prepare show entries—work area will be open as needed Friday evening.

8:00 p.m.—Board of Directors meeting

#### Saturday, June 13

7:00-11:30 a.m.—set up and enter exhibits

8:00 a.m.—Registration

11:30-1:30 p.m.—Judging

1:30 p.m.—Exhibition opens to public. Closes at 5:00 p.m.

1:30 p.m.—Luncheon at Kingwood Hall, Assembly Room

3:00 p.m.—Seminar, Kingwood Hall—See Don Hollingsworth.

7:00 p.m.—Buffet Banquet, Kingwood Hall, Assembly Room

**Annual Meeting** 

Root Auction-Peony roots to be donated

#### Sunday, June 14

9:00 a.m.—Board of Directors meeting, Kingwood Gate House

10:00 a.m.—Show opens to public

5:00 p.m.—Show closes to public

Registration includes lunch and Banquet on Saturday, \$15.00, June 13.

Send reservations directly to:

Greta M. Kessenich, Secretary 250 Interlachen Road Hopkins, Minnesota 55343



### HOTEL ACCOMMODATIONS

June 12-13-14, 1987

#### **HOLIDAY INN**

116 Park Avenue West Mansfield, OH 44902 (419)525-6000

**Contact Alice Chambers** 

Rates: \$57.00 single; \$62.00

double

#### TRAVELODGE

137 Park Avenue West Mansfield, OH 44902

(419)522-5142

Contact Bonnie Haffner

Rates: \$38.00 single; \$46-52.00

double

Ohio Tax on all rooms, 7.5%.

Again, we will be competing with the Miss Ohio Pageant for hotel rooms. Every room within fifty miles of Mansfield will be booked this weekend. You are urged to send in your reservation NOW.

#### RULES FOR SPECIMEN EXHIBITS

- 1. All entries must be completed and in place by 11:30 a.m. on opening day.
- 2. All entries must have been grown by exhibitors.
- 3. Entry tags supplied by the Society must be filled out completely as to class, variety, and name and address of exhibitor. In addition, each variety must be identified with a small wood tag with the variety name legibly printed thereon. Entry tags may be obtained in advance from the secretary of the American Peony Society. The exhibitor or his agent shall be responsible for proper completion of the entry tags.
- 4. Stems should be approximately 12" long (tree peonies excepted.)
- 5. Exhibitors are limited to one entry each in classes 101, 102, 103, 104, 105, 106, 201, and 301. In all other classes up to two entries of each variety are permitted; however, any number of different varieties may be entered.
- 6. The show committee may combine or divide classes if the number of entries warrants it.
- 7. Correct varietal labeling is mandatory in the Open and the Amateur classes. It is recommended in the Novice classes, but no entry shall be disqualified for failure to identify.
- 8. Standard containers will be furnished by the show committee and must be in all classes.
- 9. The American Peony Society Handbook will govern bloom types and color.
- 10. Anemone types such as Gay Paree shall be shown as Japanese.
- 11. Awards need not be given to unworthy exhibits.
- 12. Flowers are to remain as placed on the show tables by the exhibitor, moved only when necessary, and then the exhibits must be kept in the same position.
- 13. The decision of the judges is final—NOTE: See Page 26. Division VI—COURT OF HONOR CANDIDATE CLASS



# DIVISION 1. Open to all Exhibitors.

D1 1 1010	14 1. O	ber of an aminocon
Class	101	American Peony Society Award Twenty-five varieties, any color or type. One bloom each in separate containers.
	102	American Peony Society Award Fifteen varieties, herbaceous only, any type or color One bloom each in separate containers.
	103	American Peony Society Award Ten varieties, herbaceous hybrid only, any type or color One bloom each in separate containers.
	104	American Peony Society Award Ten varieties, Tree peonies only, any type or color One bloom each in separate containers.
	105	Five varieties, Japanese Type lactiflora only, any color One bloom each in separate containers.
	106	Five varieties, single type lactiflora only, any color One bloom each in separate containers.

Three Blooms, one variety lactiflora only, in one container.

Class		117	Semi-double red
110	Double white	118	Bomb any color
111	Double blush	119	Japanese white or blush
112	Double light pink	120	Japanese pink
	Double dark pink	121	Japanese red
	Double red	122	Single white or blush
115	Semi-double white or	123	Single pink
	blush	124	Single red
116	Semi-double pink		-

# One Bloom Lactiflora Only

Class

137

130	Double white
131	Double blush
132	Double light pink
133	Double dark pink
134	Double red
135	Semi-double white or
	blush
136	Semi-double pink

Semi-double red

138	Bomb white or blush
139	Bomb pink
140	Bomb red
141	Japanese white or blush
142	Japanese pink
143	Japanese red
144	Single white or blush
145	Single pink
146	Single red



# Three blooms, one variety Herbaceous Hybrids or Species in one container.

#### Class

150	Double or semi-double wh	ite, blusl	h or yellow
151	Double or semi-double	155	Single yellow
	coral	156	Single white or blush
152	Double or semi-double	157	Single coral
	pink	158	Single pink
153	Double or semi-double	159	Single red
	red	159A	Itoh, hybrid any color
154	Innanasa any color		

154 Japanese, any color

# One bloom Herbaceous Hybrid or Species Class

- 160 Double or semi-double yellow
- 161 Double or semi-double white or blush
- 162 Double or semi-double coral
- 163 Double or semi-double pink
- 164 Double or semi-double red
- 165 Japanese, any color

166	Single yellow	169	Single pink
167	Single white or blush	169A.	Single red

168 Single coral 169B. Itoh hybrid, any color

# Three blooms, one variety, tree peonies only, in one container. Class

170a	Japanese (Moutan) White, Single		
	170b semi-double	170c	double
171a	Japanese (Moutan) Pink, Single		
	171b semi-double	171c	double
172a	Japanese (Moutan) Red, single		
	172b semi-double	172c	double
173a	Japanese (Moutan) Violet single		
•	ly purple lavenders) 173b semi-double	173c	double
174a	Japanese (Moutan) Maroon single		,
	174b semi-double	174c	double
175a	Lutea Hybrid, white to cream, single		
	175b semi-double	175c	double
176a	Lutea Hybrid, yellow, single		
	176b semi-double	176c	double
177 <b>a</b>	· · · · · · · · · · · · · · · · · · ·		
4.50	177b semi-double	177 <b>c</b>	double
178a	Lutea Hybrid, pink, single	450	
4.00	178b semi-double	178c	double
179a	Lutea Hybrid, red, single	450	
	179b semi-double	179c	double
180a	Lutea Hybrid, dark red, single		
	180b semi-double	180c	double





One bloom tree peony only.

Class

Cioless				
185 <b>a</b>	Japanese (Moutan) w	0		
	1	85b semi-double	18 <b>5c</b>	double
18 <b>6a</b>	Japanese (Moutan) pini	k. single		
		6b semi-double	18 <b>6</b> c	double
187a	Japanese (Moutan) red	l, single		
		7b semi-double	187c	double
188a	Japanese (Moutan) viol	let, single		
	18	8b semi-double	188c	double
18 <b>9a</b>	Japanese (Moutan) mar	oon, single		
	18	9b semi-double	18 <b>9</b> c	double
190a	Lutea Hybrid, white to	o cream, single		
	19	0b semi-double	<b>190</b> c	double
191a	Lutea Hybrid, yellow,	single		
	19	1b semi-double	191c	double
192a	Lutea Hybrid, blend, s	•		
	<del>-</del>	2b semi-double	192c	double
193a	Lutea Hybrid, pink, sir	~		
		3b semi-double	193c	double
194a	Lutea Hybrid, red, sing			
	<del>-</del> -	4b semi-double	194c	double
195 <b>a</b>	Lutea Hybrid, dark rec	, —	105	
196c	European tree peony	5b semi-double	195c	double
DIVISIO	N II AMATEUR: Op	en to exhibitors who r	aise peo	nies chiefly
	for	pleasure, sell plants	or cut f	owers only
	Cas	ually, and do not gr	ow mo	re than 200
	pla	nts.		
Class	201 American Peony	Society Award		
	Ten varieties, a	ny type or color		
	One bloom each	in separate contain	iers.	

Three blooms, one variety lactiflora only, unless otherwise stated, in one container.

Class	205 Double white or I	olush	
206	Double pink	210	Japanese any color
207	Double red	211	Single any color
208	Semi-double any color	212	Hybrid any color
209	Bomb any color	213	Tree any type or color

One bloom lactiflora unless stated otherwise.

Class	220	Double white	225	Semi-double any color
	221	Double blush	226	Bomb any color
	222	Double light pink	227	Japanese any color
	223	Double dark pink	228	Single any color
	224	Double red	229	Hybrid any type or color
			230	Tree, any type or color



# DIVISION III NOVICE: Open to all amateur gardeners who exhibit peonies only at local shows.

Class 301 American Peony Society Award

Five varieties any type or color in separate containers.

Three blooms one variety lactiflora, unless otherwise stated, in one container.

Class 305 Double any color

306 Semi-double, any color 308 Single, any color 307 Japanese, any color 309 Hybrid, any color

One bloom lactiflora, unless otherwise stated, in one container.

Class 315 Double white or blush

316 Double pink
320 Japanese any color
317 Double red
321 Single any color
318 Semi-double any color
322 Hybrid any color
319 Bomb any color
323 Tree any color

#### DIVISION IV: Seedlings and New Varieties.

Class 401 Seedlings.

Three blooms, one variety in one container, not currently introduced.

Variety must have been divided at least once. Must be shown under name or seedling number.

402 New Varieties:

Three blooms, one variety in one container. Limited to varieties named and registered with the American Peony Society and introduced no earlier than five years prior to show date.

Awards given in the two preceding classes may be Certificates of Merit or Honorable Mention at the discretion of the judges, but no ribbon awards. Varieties having won either award in previous competition may not be shown again in that class, except that varieties shown in class 401 may be shown again in class 402 regardless of awards.

403 Seedlings:

One bloom. This class is for display only.

No awards will be given and any seedling entered in class 401 is ineligible.

DIVISION V: Special Entries.

Class 501 Commercial Exhibit.



Collection by commercial grower of 25 to 50 varieties in separate containers. A placard approximately 9" x 14" may be furnished by the exhibitor to identify his display.

502 Visitor from greatest distance.

Five different varieties any type. Mileage verified on entry tag.

503 Multiple bloom.

Single stalk not disbudded. Must show at least three open blooms.

Class 504-505 North Dakota Memorial Award

One bloom each separate container, any color, only named varieties. One entry per individual family.

Class 504—Tree peonies, Lutea and Japanese. Herbaceous hybrid, double and single.

Class 505—Lactiflora, Double, semi-double, single, Japanese.

These two classes are not considered for Class VI.

#### **DIVISION VI: Court of Honor Candidate Class**

Court of Honor blooms will be selected from this Division. Exhibitors are urged to enter their best bloom and are limited to two in each class.

Judges may select two blooms from the floor in addition to placements, for consideration of Grand Champion on the Court of Honor.

#### One bloom Lactiflora

Class 601 Double white

602 Double blush 606 Bomb any color

603 Double light pink 607 Semi-double any color

604 Double dark pink 608 Japanese any color

605 Double red 609 Single any color

#### One bloom Hybrid or Species

Class 610 Double any color

611 Semi-double any color

612 Single any color

613 Japanese any color

#### One bloom Tree

Class 614 Lutea any type or color

615 European any type or color

616 Japanese any type or color

Class 617 One bloom Itoh Hybrid any color.

#### **Grand Champion**

The best flower in the show will be selected from all named entries in the show.



### **ARTISTIC DIVISION**

#### DIVISION SEVEN ARTISTIC CLASSES

#### Section A VACATION TIME

- 1. A HIKE THROUGH THE WOODS—a naturalistic design using weathered wood.
  - 2. TAKE ME OUT TO THE BALLGAME—designer's choice.
  - 3. AT WATER'S EDGE—a design featuring water.
- 4. TREASURES OF THE SEA—a design incorporating treasures of the sea.
- 5. A TRIP TO CHINATOWN—a design in the oriental manner using one peony.
- 6. A DAY AT KINGWOOD CENTER—a design using a figure or other accessory suggesting Kingwood Center.
- 7. A JUNE WEDDING—a mass arrangement with peonies predominate; other flowers may be used.
- 8. COMPANY COMING—an exhibitional table segment for a luncheon; in an off-white niche 40" h. x 32" w. x 30" d.; no flatware should be used.

\* \* \* \*

A Grand Champion rosette will be awarded to the best in the show.

A Reserve Champion rosette will be awarded to the second best.

# **ARTISTIC DIVISION RULES**

- 1. An exhibitor may make only one entry per class. All must be the work of the exhibitor.
- 2. Peonies should be featured in all arrangements. Peonies need not be grown by the exhibitor, and some will be available from the committee.
  - 3. Accessories and/or bases may be used in all classes.
  - 4. No artificial flowers or foliage are permitted.
  - 5. A minimum of treated plant material is permissible.
- 6. Entries must be placed from 8 a.m. to 5 p.m., Friday, June 12, and from 7 to 11 a.m., Saturday, June 13, in the Kingwood Meeting Hall.
- 7. While the show management will exercise due caution in safeguarding exhibits, it cannot assume responsibility for injury or loss.
- 8. Personally-owned properties must be claimed immediately after the show closes at 5 p.m. on Sunday.
- 9. Reservations are requested for class 8 only. Contact the Kingwood Center receptionist (900 Park Avenue West, Mansfield, Ohio 44906, or 419/522-0211) by June 8.

**Bill Collins** 



### **PEONIES ARE PRACTICAL**

Anthony De Blasi, West Newfield, Maine

"So what do you do with them? You can't eat them!" That was my father's opinion of flowers—but when I chose to plant peonies instead of tomatoes, he gave me a helping hand instead of a lecture.

So, the first thing peonies are good for is the fellowship of digging, an enterprise that prospers with the sharing of arms, legs, backs, and minds. Make the most of the time spent in planting a noble root in good soil. If possible, include at least one companion, of any age, in your plan. This activity draws children like magnets; digging is natural to them.

Next, in judging the practical merits of a peony, consider the dividing and replanting you won't be doing, the unnecessary pruning, the outstanding flowers you'll get from a minimum of horticultural effort and skill—the bonanza!

I mean, armloads of gorgeous flowers to bring to shut-ins, to those in the hospital, to places of worship... frames-full of pictures to take, paintings to do... hours of non-electronic entertainment as you watch these perennials explode into leaf and flower in the Spring... memories of shimmering colors, silken textures, haunting perfumes—to spice the doldrums of winter—mental vignettes of places and faces where this annual bonanza was shared.

The one thing not practical about the peony is the tendency it has to invade one's tranquility, especially at blooming time, and infuse one with an obsession to have "one of each" he/she sees. The feeling on unequilibrium is hardly distinguishable from falling in love, and though it comes and goes, it sometimes makes us buy and plant too many peonies.

Of course, what is too many for some is just a start for others; which brings me to my penchant for calculating. Consider this—a dozen established peonies can produce between 200 and 1000 flowers a year. In ten years, such a modest planting will produce between 2000 and 10,000 blooms. Now, we're not talking about daisies, but blossoms, at least equal to roses in beauty. All this for a significantly smaller investment in time/effort/money than any other flower that can compete in its class. (I will not argue with those who say there is no competition.)

Ultimately, the joke was on my Dad. The fact is that you do "eat them." In China, peonies are so practical that they are used in medicine and are now even an ingredient in a cola-like beverage.

Even if I could, I would not defend peonies against tomatoes, but there should be no question of what they're "good for."



# **PLANNING PEONY CROSSES TO MAKE IN 1987**

Don Hollingsworth, Kansas City, Missouri

Sometimes the most difficult aspect of amateur plant breeding, as I experience it, is to follow through on the work plans that have been made. It is not difficult to envision a program of matings, for example, while things are quiet, but when flowers are bursting out all around, getting the visions converted into reality is sometimes an entirely different matter. For one thing, I find that it is not always possible to take off from my job at the times most convenient to the purposes of the peony breeding project.

In the second place, being located in Missouri, on the early season side of the peony growing "belt," means that I have only a limited opportunity to acquire pollen from other growers for use during the current season. Thus, I must pretty much make do with pollen sources that are available locally. If the desired pollen is not on hand when it is time to make the planned crosses, they don't get made. In the absence of advance preparation and when a sudden warming trend brings out a lot of flowers in a short period, good intentions can pretty easily get reduced to a shambles. Therefore, I am compelled to place a high priority on gathering pollen.

Collecting pollen and drying it for later use is a simple matter, except for one thing—the bees. One needs to be excited enough about the project to get ahead of the bees. See the buds everyday. Have some small paper bags or other covers ready. Cover buds at least by the time they appear at risk of opening. Next visit you pull the covers, pinch out the anthers which carry the pollen; fold them in a previously-labeled paper. Then take them indoors to a still place, preferably a little warm, as on top of your water heater. Open the paper for the anthers to dry. Pollen can be used immediately without drying. After thoroughly dry, it can be stored and will remain usable for the whole season. In fact, sealed in a container and frozen, thoroughly dried pollen can be kept usable into the following year.

One thing which will reduce the chances of bumbling through a flowering season with nothing purposeful to show for it, is to have several different lines of breeding going. Just what these might be for a particular person depends on what kinds of flowering-age peonies are on hand and what interests or objectives the person holds. Perhaps the most important objectives which contribute to the eventual production of unique new peonies are the intermediate ones. These are the learning objectives. For example, one might produce some seeds just to have them for germination studies or make certain crosses just to get a better look at what the parent plants may have to offer in a breeding program. Will they produce seeds, easily or with difficulty? Do the seeds germinate reasonably well? Are at least some of the seedlings vigorous? This type of effort leads to the sorts of knowledge that gives future control of desired outcomes.



There are some general principles which guide my breeding decisions that are, no doubt, close to the principles followed by other persons who have similar interests:

- 1. Aim to produce or acquire at least some seeds every season, whether or not specific progress is made on the chosen priorities. Use them for testing ideas and techniques, for comparing with seedlings of the controlled crosses as a basis of estimating whether the latter are genuinely of the desired cross, or simply for trading stock.
- 2. Have at least one line that is easily produced such as Tree Peony x Tree Peony, Lacti x Lacti, Advanced Generation Hybrids, or Lacti x Little Reds, Hybrids and Lobata. Add to this, one or more of the known promising lines of effort that are more difficult, where progress is likely to be slower. The latter has greater potential to yield the unusual, but the former is more certain.
- 3. Then, aim to keep trying new experimental approaches. On the one hand, test new techniques in an effort to make the difficult lines easier. One the other, try new crosses; attempt to open new lines.

Below are some crosses that have interested me and they will illustrate what I've tried to say above.

Lactiflora (Chinese) Peonies x Good Cheer: One of the Saunders Little Reds Hybrids, Good Cheer, has proven its ability to impart doubling to a few of the progeny when crossed on double or Japanesee flower types. Happily, the cross takes easily and makes about as many seeds as if one has used Lactiflora pollen! Others of the Little Reds cultivars and species Peregrina are just as easy to cross on Lacti peonies.

Lacti x the Garden Hybrid cultivars, called a backcross when the hybrid has Lacti as one of its parents. Not all of the hybrids produce fertile pollen, so use several different, unless you have information from previous tries. Cytherea, Carina, Red Red Rose and Clair de Lune have worked in this type of cross for me.

Garden Hybrids x Garden Hybrids. Not all are fertile and those which are may have a low incidence of fertility. Many will average one good seed for every ten flowers pollinated. But you may get a usable offspring from just a few progency, precisely because they are rare, whereas you might have to grow a thousand Lactiflora seedlings to get something that is enough different to be worth bringing out.

Paula Fay x Moonrise, or the reverse. Leave on any sidebuds so that you may have a few late flowers, after there has been time to have the desired pollen ready. These two are producing some fabulously colored flowers among the progeny—pastel tones of pink, yellow, ivory, white and blends. And, some of the flowers are quite large. Use Moonrise with most anything for that matter. If you find a fertile cross with it, you are likely to get something very interesting.

Advanced Generation Hybrids crossed among one another.



Above, I have talked about crosses that can be made using garden varieties which have been around long enough that many people have some of them. By getting acquainted with persons who have been doing this for the last couple of decades, since interest in peony breeding has picked up again, you can accumulate some of the rarer materials that will get you a generation or two ahead. But, you might not do any better than you can with the above, as far as quality of progeny is concerned. You might easily put together some much more fertile parent stock, cowever, which will let you create progeny more rapidly—in higher volume.

In this day of expecting "instant gratification" almost anyone is touched by the appeal of speeding matters. However, peony growing tends to require a little patience before the highest rewards can be obtained, and I feel that the anticipation of creating something really unusual through peony breeding is well worth the time it takes. So far, the surface has been barely scratched in finding the rewards available in the presently available gene pool for breeding new peonies. The beginner can easily compete with the most experienced!

### PAEONIA MUMBO-JUMBO

Bill Seidl, Manitowoc, Wisconsin

No, this is not a new species but a rather old one. It's never been officially recognized by the botanists but is familiar to all peony enthusiasts. In fact, it is one of the first to be encountered in one's love affair with the peony and the least appreciated.

The title of this article came to me when a lady at the last convention said to me, "Bill, why don't you write an article about the different kinds of peonies? Whenever I ask ---- (1) he tells me more than I want to know and I get confused. Please explain it without the mumbo-jumbo so a beginner like me can understand it."

Well, this lady is not exactly a beginner but I can appreciate her confusion, having faced the same complexities in peony history and nomenclature. This explanation is divided into two parts. Although the first part is amply detailed and may tell you more than you want to know, it is done with an avoidance of ambiguous, confusing nomenclature and hybridizers' lingo, i.e., mumbo-jumbo. That is saved for the second part.

PART I: WITHOUT THE MUMBO-JUMBO. The growth habit of peonies is either herbaceous or woody. In the herbaceous kinds the top growth dies completely to the ground at the end of each growing season and is renewed each spring from underground (or ground-level) eyes (stem-buds). In the woody kinds, exaggeratedly called "tree" peonies, the stems survive most winters (the leaves are deciduous) and new growth commences each spring from buds on the old wood. If these woody stems die back or are removed for any reason, new growth will usually begin from basal buds or underground eyes. Since this is not their normal growth habit these new stems are late to develop in



the spring and are not likely to bloom that season. Some plants may not respond in this fashion and will be lost.

My first exposure to peonies was to the herbaceous kinds, the tree kinds being something I read about or saw pictured in garden magazines. This parallels the experience of most gardeners.

In peonies, as well as many other ornamental garden plants, it is necessary to distinguish between species, species selections, and hybrids. Species are the natural (wild) forms that have evolved without any human interference. I'd include here certain forms or clones selected by man for propagation, such as the double red forms of tenuifolia and officinalis. Species selections are human selections of "superior" plants from a population of seedlings. The seedlings could result from either open (natural) pollination (insect, wind, self) or hand pollination. These superior plants are used to raise another population where selection of the best continues. None of these improved cultivated varieties (cultivars) are hybrids since they are derived from a single species, even though the improved varieties, after many generations of selective breeding, bear little resemblance to the original parent species. Hybrids are the result of crossing two species. There are wild (natural) hybrids and, of course, man-made hybrids. They are not automatically of increased vigor or quality. It usually takes further breeding and selection beyond the F<sub>1</sub> (first filial) generation to combine the best qualities of the ancestral species in a desirable garden plant.

The genus *Paeonia* is truly remarkable in that it contains two species that, through selective breeding within each species, have been improved and transformed so much and for so long that the original species-forms are practically unknown. They are the *lactiflora* species (herbaceous) and *suffruticosa* species (tree). Sir Peter Smithers refers to the *suffruticosa* tree peony as "a candidate for the title of the world's earliest systematically bred ornamental flowering plant." Historical references dating back to 536 A.D. even then refer to it as a plant long cultivated.

In the herbaceous kinds there are many species but P. lactiflora dominates in terms of popularity, number of cultivars, and history of development. It is native to temperate areas of China and the surrounding land mass; its cultivated varieties come in many shades of the white-pink-red color range. Original species flower-forms were undoubtedly single but centuries of selective breeding by the Chinese (2), then the Japanese, Europeans, and Americans produced other forms: semi-double, double, bomb-double, Japanese, and anemone. Doubleness is caused by transformation of the stamens into petals, the degree depending on whether some, most, or all are transformed. In some doubles even the carpels are transformed and, if they normally would have had red-tipped stigmas, the corresponding petals may be red-edged. Some doubles may still have stamens hidden among the petals, very good pollen sources for breeding doubles. The bomb-



double (or just "bomb") has large outer collar petals which, when flaring back, give the flower a bomb appearance if viewed upside down and in profile. There are degrees of stamen-transformation. In the Japanese form (presumably first selected and admired by Japanese breeders) the stamens have been transformed into narrow stamenodes; in the anemone form, petaloids (wider but still comparatively small petals). This central tuft, ball, or mound of smaller petals is often of a contrasting color to the surrounding guard or collar petals. They frequently retain the yellow stamen color on opening, then fade to cream, causing some people to describe them as yellow peonies, but they are not true vellows. Naturally it is often difficult to determine where one form ends and another begins; experts will disagree. Western breeding of lactiflora began in Europe soon after importation from China in 1805 and by the 1850's was proceeding by leaps and bounds, spreading to America where it was pursued with equal fervor. When the APS was founded in 1904, its most pressing objective was to bring order out of chaos in the naming of peony varieties, primarily lactiflora. During the ensuing attempt the test garden set up at Cornell University (Ithaca. NY) received the variety 'Edulis Superba' under 23 different names, the worst example of the reigning confusion. Order was restored and has been maintained to this day. Some varieties bred in France 130-160 years ago are still grown today. American-bred varieties by Auten, Brand, Klehm and many others are widely distributed. It is the peony most widely used as a cutflower and in peony exhibitions, for which purpose many hours are spent disbudding in order to develop larger terminal flowers. The multiple-buds-per-stem is an outstanding characteristic of this species.

There are 38 other herbaceous and botanical varieties, some of the most important being officinalis, peregrina (lobata), tenuifolia, anomala, mlokosewiischi, wittmanniana and its variety macrophylla, daurica, emodi, and coriacea. The first three named are relatively easy to find in gardens and nursery catalogs. Little has ever been done, to this day, to develop superior selections within these species, especially when compared to the monumental efforts expended on behalf of lactiflora. In this regard lactiflora is the dominant or major herbaceous species and all the rest are lesser or minor species. In the APS show schedule there is a section for lactiflora cultivars; all the other minor species are shown in the section for "Herbaceous Hybrids and Species," meaning species-other-than-lactiflora... and suffruticosa. Many species bloom so early that few are seen at shows, and then they have a tough time competing against their own improved showier hybrid children. (3)

The herbaceous hybrids are the results of hybridizing between the minor species and/or with *lactiflora*. These hybrids have lengthened the bloom season (on the early end) and extended the color range to include light yellow or cream, more orangy reds, salmon, warmer pinks, a few very early lavenders, and darker flares or veining at the center of



the flower. Some of the hybrids involving lactiflora have been backcrossed to lactiflora, making them 75% lactiflora and very similar in appearance to pure lactiflora varieties. Are they still hybrids? Technically, yes; practically, no. For show purposes, Don Hollingsworth, who has originated some of these, says they ought to be called lactiflora if they look like lactifloras. His list describes them as "lacti type, hybrid origin." Hybrids were first raised in Europe but the bulk of the breeding has been done by Americans (Saunders, Glasscock, Auten...) beginning in the 1910's and 1920's, with the Saunders originations coming from extremely diverse sources, some having four species in their ancestry.

In the woody or tree kinds of peonies there is a strong parallel to the herbaceous kinds in that one highly developed species dominates the rest. As mentioned earlier, this is suffruticosa (sah-fruit-i-KOSEah, which means "somewhat like a shrub") whose beginnings as a cultivated plant originate in ancient China well before the earliest (536 A.D.) historical records. Native to temperate mountainous regions of northwestern China, its improved cultivated selections produced huge double flowers in the white-pink-red-purple color range. The Chinese called it the "King of Flowers" and, starting in the early 600's, was grown in the imperial garden. For several centuries, by royal decree, it could only be grown on the grounds of imperial palaces, their noble flowers and regal carriage (probably helped along by some staking) deemed too good for the gardens of unworthy peasants. Westerners in China first saw the cultivated plants in 1656. In 1787 the first plant (singular) was imported into Europe and called 'banksi.' More followed throughout the 1800's, especially 1846. These Chinese importations, along with European originations bred from them, reached their greatest heights of popularity in the 1860's through 1880's. Meanwhile, back in the 6th century, Buddhist monks had brought improved suffruticosa varieties from China and Korea to Japan where the Japanese pursued separate development and held them in equally high esteem. Some of these reached Europe in 1844 but with little effect until a new influx in the 1890's.

The wild, unimproved, suffruticosa species was considered to be a single or semi-double white with purple spots at the base, first sent to England in 1802. But it was not until 1910 that the true species was discovered in its natural habitat by Wm. Purdom. In 1914 Reginald Farrer found it in Kansu and described the event in his book, On the Eaves of the World. His poetic account (quoted in The Peonies, Wister, pp161-162) captures the imagination of those who want to vicariously experience the thrill of the plant hunter's first encounter with this rare plant. He had climbed a wooded hill and, looking down the hillside, espied at a distance certain white objects thought at first too big to be flowers. Plunging down the coppiced slope, with bated breath and growing excitement, he at last set eyes on the wild suffruticosa species. (By this date, other species had been discovered in the wild



and imported to Europe.) There in the brushwood and the twilight glow of evening, he worshipped "... that amazing flower, the most overpoweringly superb of hardy shrubs . . . that enormous blossom, waved and crimped into the boldest grace of line, of absolute pure white, with featherings of deepest maroon radiating at the base of the petals from the base of golden fluff at the flower's heart." Living-room plant hunters can better appreciate Farrer's excitement by stepping out the door into their backyard and viewing 'Rock's Variety'; it is almost identical. Joseph Rock in 1932 collected seed in a Lamasery (Tibetan monastery) of what he believed to be a wild peony from Kansu. The seeds were distributed in several western countries and the resulting plants flowered about 1938. They were like the original botanical description of suffruticosa except that the sheaths enclosing the carpels were white, not purple. Farrer later wrote that in northern Kansu the suffruticosa tree peony was magenta and that wild types of other colors probably existed. Political turmoil, however, ended further exploration.

As with the herbaceous section, the tree section of Paeonia has its minor species. They form a very small group consisting of three species, delavayi (maroon flowers), lutea (yellow), and potanini (maroon, yellow, white), and two botanical varieties, lutea ludlowi and potanini trollioides. All three are enough similar to be classed as one group, the Delavayi Group. (Some botanists, the "lumpers" as opposed to the "splitters," would consider them as a single species, delavavi.) Compared to suffruticosa, all have a more stoloniferous habit, the flowers smaller, several to a stem, without a sheath around the carpels, often poorly held and hidden in the foliage, with leaflets narrower and more deeply and finely divided. The French Jesuit missionary, Father Jean Marie Delavay, discovered both delavayi and lutea in Yunnan (southwestern China). Delavayi was collected in 1884 and exhibited in Paris, 1892; lutea was discovered in 1883 in spruce forests at 11,000 to 13,000 feet and sent to France in 1886 where it flowered in 1892. At which time Prof. Maxime Cornu exhibited it and said of the insignificant yellow flower, "This will never amount to anything!" In one of the ironies of horticultural history he did not live to see the beautiful tree hybrids bred from it, including the one named in his honor and originated by his colleague, Prof. Louis Henry of the Paris Museum of Natural History.

Since yellow did not occur in the suffruticosa species, the great father-son plant breeders, Victor and Emile Lemoine of Nancy, France, like Prof. Henry, were quick to cross-breed the two species. Delavayi was also used. The first to be named were 'L'Esperance' and 'La Lorraine'. There seems to be some uncertainty whether they flowered before Prof. Henry's introductions (one being named 'Souvenir de Maxime Cornu'), about 1897. These first tree hybrids began arriving in this country about the time of World War I. Prof. A. P. Saunders quickly recognized their significance and began to make many similar



crosses, naming and introducing over 75 varieties, starting with 'Argosy' in 1928. His breeding stock was turned over to William Gratwick (Pavilion, NY) in the 1930's for further development. A NYC artist, Nassos Daphnis, collaborated with Gratwick in raising more advanced-generation hybrids. He went on to make backcrosses to the suffruticosa varieties and as a result there now exist hybrids (Leda, Zephyrus) that are 75% suffruticosa. Just as some of the herbaceous hybrids are becoming more lactiflora in appearance, these tree hybrids are becoming more suffruticosa in appearance. However, one such backcross hybrid, bred by Ben Gilbertson (ND) and named for his wife, although 75% suffruticosa, retains the yellow color of its lutea grandparent. Some of the tree hybrids are a black-red color derived from either delavayi or very dark suffruticosa cultivars, but the majority are yellow or blends of yellow-suffused-red.

The newest type or class of peony is the Itoh hybrid. Originated in Japan, the first one brought to this country by Louis Smirnow (NY) were developed by Toichi Itoh. He made the actual pollinations in 1948, and the first plants offered for public sale were in 1967-68. (A Mr. Higuchi also made similar crosses but Mr. Itoh's plants were the first to reach this country.) These are the first hybrids between the herbaceous and tree sections of the genus and the first major breakthrough in peony development since the advent of the tree hybrids in the 1890's. Many generations of gardeners had attempted the union of the herbaceous with the tree peony without success. It is interesting and fitting that the Itoh breakthrough was made possible by the 1890's-breakthrough, for a tree hybrid (rather than a tree species) was the tree parent. That hybrid is the double yellow 'Alice Harding' (Lemoine, 1935). 'Kakoden' was the lactiflora seedparent. Itoh's success (like the breaking of the four-minute mile barrier) encouraged others to make and succeed with similar crosses. Other tree hybrids such as 'Golden Era' (Reath, 1984), seedling #A199) are proving to be more potent pollen parents. For lack of a better word, the Itoh name has been applied to all hybrids between herbaceous and tree peonies. In peony shows, they are shown in their own separate class. They are herbaceous in growth habit; above-ground buds seldom winter over and, when they do, do not bloom well. And since they are also hybrids, they could be classed as "herbaceous hybrids" but that would deny half of their true ancestry. The only major breakthrough remaining in peony-breeding is developing advanced generations from the F<sub>1</sub> Itoh hybrids.

This concludes Part I. Since it is quite lengthy, a summary seems in order and is provided at the end of the article.

PART II: WITH THE MUMBO-JUMBO. The one-page summary of Part I should give the reader a quick over-all view of the peony land-scape (4) and a better understanding of the confusing mumbo-jumbo coming up. The species names used throughout Part I are in accordance with the classifications described by the botanist Frederick Stern



in his monogram "A STUDY OF THE GENUS PAEONIA" published in 1946 (Wister, pp17-31). But the professional botanists have added to the confusion by changing scientific names, sometimes because of an inflexible adherence to their "Rule of Priority."

Between 1788 and 1946 the lactiflora species was called albiflora (5). During this period, usage of the name chinensis (also spelled sinensis) or Chinese peony crept in. In fact, for all of the 39 herbaceous species and botanical varieties, Stern finds 240 synonyms in past literature. Although some say this is an exaggeration (he counted as synonyms names that many would regard as identifying a lactiflora clone rather the whole species), it does indicate the confusing state of affairs in peony nomenclature.

Names associated with national origin can lead to lots of confusion. The name "Chinese peony" for lactiflora is widely used by those wishing to avoid the scientific (botanical) name. It is appropriate in that it originated in that part of the world and its improvement began in China. But so did suffruticosa. And, indeed, the large heavy double suffruticosa flowers favored and bred in China are called Chinese type ("style" or "fashion") tree peonies. When these were brought to Europe, new cultivars of similar form were bred from them and called European tree peonies. Some Chinese cultivars were renamed with European names. All are often lumped together as Chinese-European tree peonies. Meanwhile, back in Japan, a different "style" was developed with lighter, less double flowers better held above the foliage. These were imported into Europe and America beginning in the 1890's and became so widely distributed and popular (displacing the C-E varieties) that the name "Japanese tree peony" became synonymous with suffruticosa. But these are not to be confused with the Japanese form of certain lactiflora blossoms. In fact, Japanese TP's (tree peonies) come in single, semi-double, and double flowerforms but never in a Japanese form. One must also realize that the yellow tree hybrids exported from Japan are the French tree hybrids with Japanese names (KINKO, KINKAKU...) And what are American TP's? To answer that question, one must address the term "tree peonies."

Up until about 1900, "tree peonies" could only refer to the suffruticosa varieties; there were no others known. But then the minor species (lutea...) and subsequent hybrids came on the scene, so now the term could include them also. If someone uses the term "European TP," one is not sure whether he means just suffruticosa varieties or wishes to include the tree hybrids. The term "Japanese TP" still means (for now) just suffruticosa, since Japanese-bred hybrids (if there are any) are not being distributed. So what are "American TP's"? It should include both suffruticosa and hybrids originated in this country but, if someone uses that term, he probably means just the hybrids (Saunders, Daphnis...) since there is a large block of them and very few named suffruticosa cultivars (several by Gratwick, one by



Domoto). If that is the case, then the term used should be "American tree hybrids."

In typing this article it has taken considerable will-power to persistently spell out "suffruticosa" without abbreviating (suff'a, suffa.) and knowing that the short word "moutan" (MOO-tan) has been a snyonym in long and frequent use. On that Kansu hillside in 1914, Farrer worshipped Paeonia moutan, not suffruticosa. The name comes from the Chinese Mow tan (Muh tang, Mew tang). Its brevity, history, and Oriental flavor (though I don't know the translation) recommend its usage in preference to the Latin name. (The Japanese corrupted the name to "botan." Other names used have been arborea, papaveracea, or various combinations of the four mentioned. Stern uses the word "MOUTAN" to name the entire woody section of the genus, not just suffruticosa. ("PAEON" is used for the herbaceous section.)

Some imprecise terms start off as understandable appellations, then become inappropriate or corrupted with time. "Lutea hybrids" is such a term and should be replaced by "tree hybrids." As soon as the minor tree species bloomed in Europe, the hybridizers Henry and Lemoine in France, then Saunders in this country, strove to combine the yellow color of the lutea flower with the superior plant and flower traits of the suffruticosa cultivars. The first hybrids displayed sensational yellow and yellow-red blended colors (6) and were dubbed "lutea hybrid" tree peonies in recognition of their lutea color and parentage. Some of the later hybrids came in non-yellow colors, even black-red (from delavayi parentage and/or black-red moutan cultivars), but continued to be called "lutea hybrids"—now no longer a very apt name. Since suffruticosa always was one parent (50%) in these crosses, the name "suffruticosa hybrid" or "moutan hybrid" could equally apply. Backcrosses to moutan are 75% moutan, so the name "lutea hybrid" is even less appropriate. Some propose the name "Delavayi hybrids" since all the minor species belong to the Delavayi Group. Others use the grex (hybrid group) name "Paeonia x lemoinei." "Tree hybrids" nicely covers the group (for now) and parallels the accepted usage of the term "herbaceous hybrids" for their counterparts in the herbaceous section. (There are no introduced hybrids solely within the minor tree species but if such ever becomes the case, and they are deemed worthy of the name "hybrid," then the term "tree hybrid" would include them also. They would not deserve a hybrid status if inter-fertility within the minor species caused botanists to declare them all of one species.)

Imprecise terms contribute to the mumbo-jumbo aspect of peony nomenclature. Some have been used so long that they are imbedded in peony literature (even the APS show schedule) and difficult to root out. They are taken for granted by older members but new members, with no preconceived notions and knowledge of peony history, take these terms at face value and become confused. The APS show schedule has two sections for herbaceous peonies, called "Lactiflora" and "Herbaceous Hybrids...," and two sections for tree peonies, but



these latter two are not called "Suffruticosa" and "Tree Hybrids"—which parallels the precise usage in the herbaceous section. Instead, they are called "Japanese (Moutan)" and "Lutea Hybrid," and these titles are repeated for each class, giving the name "Japanese" the same relative location or position on the printed page as when it refers to the Japanese flower-form of certain lactiflora cultivars. This invites confusion. The schedule also has a class for "European tree peony" and the winning entries, if any, are always ALICE HARDING, SOUVENIR DE MAXIME, CORNU, or similar French tree hybrids, which description would be a more precise title for the class. Chinese-European moutans, Japanese moutans, and American moutans can all compete in the same "suffruticosa (moutan)" classes; they are too early anyway to appear at shows in any but meager numbers. The show section for "Tree Hybrids" (now "Lutea Hybrids") would have to say "American Tree Hybrids" to prevent ALICE HARDING, et al, being entered there also. This could be avoided by simply forgetting that ALICE HARDING & Company are French and forcing them to compete with American-bred tree hybrids on equal footing. Or unequal, for American double hybrids aren't as impressive. More power to ALICE! At present, there are three tree classes in the Court of Honor, labeled (1) lutea, (2) European, (3) Japanese, all followed by "any type or color." A more precise wording would be (1) American hybrid, (2) French hybrid, (3) Suffruticosa (moutan), all followed by "any form or color." (My proposed revised schedule calls for Hybrid-yellow, Hybrid-AOC, and Suff'a. One might add "yellow blend" to the "yellow" to prevent the yellow-red and yellow French hybrids from sweeping both hybrid classes.)

Other peony mumbo-jumbo is hybridizers' lingo surrounding the theories and mechanics of plant breeding. To the uninitiated, it must seem that these are dark mysteries and sacred rites within an inner sanctum. If you would intrude there, first study a textbook on plant breeding and also the pertinent chapters in THE PEONIES, Wister, and the APS 75 YEARS, especially Prof. Saunders' articles. Most of this is outside the scope of this article, but a few things bear mentioning...long species-names are shortened to lacti, offici, mloko, macro. tenui, etc. "Quads" are herbaceous hybrids derived from four species (the first four just mentioned). F<sub>1</sub>, F<sub>2</sub>, F<sub>3</sub> refer to plants of the first, second, and third filial generation (the number is usually written as a subscript but is inconvenient to type that way). "Quad F3" then is a third generation hybrid-plant descended from a quad. If one crossed a Quad F<sub>3</sub> with the tenuifolia species, the resulting plants could be called Quad F<sub>4</sub>'s or, starting over, Tenui F<sub>1</sub>'s. Peony species are naturally diploid or tetraploid. Crosses between the two are usually triploid and largely sterile. Example: RED CHARM, a cross between lacti (diploid) and offici (tet). Crosses between diploids may be difficult if the species are very dissimilar. The resulting hybrids are largely sterile. Three examples: (1) CLAIRE DE LUNE, lacti x mloko; the hybrid is a light yellow color derived from the yellow mloko species; (2)



Tree hybrids ALICE HARDING, AGE OF GOLD, etc. are from two diploid species, lutea and suff'a; and (3) Itoh hybrids YELLOW EMPEROR, GARDEN TREASURE, BARTZELLA, etc. descended from three diploid species, lacti, lutea, and suff'a.

Paeonia mumbo-jumbo is never likely to become extinct. Its natural habitat, past literature, and unquestioning minds is not going to be destroyed. But we can at least make it an endangered species.

#### **FOOTNOTES:**

- (1) A well-known peony expert, hybridizer, and ex-APS President.
- (2) White and red varieties were known in China in 536 A.D. How improved they were, if at all, is not clear from the literature I've read. Accounts of that time describe the tree peony (suffruticosa) as already long cultivated and it seems unlikely that the Chinese would ignore similar attempts at improving the lactiflora species. On the other hand, some of them apparently believed past generations of Chinese gardeners with their great gardening skill had produced the tree peony from the herbaceous kinds. Believing this, they may have regarded it as a step backwards to try to improve the lactiflora species. Nevertheless, by the late 1500's, improved varieties did exist in Chinese nurseries, the first reaching Europe in 1805. The Japanese also acquired plants in the distant past and made their own improvements; their mark in hybridizing lactiflora was overshadowed by their accomplishments with the suffruticosa varieties.
- (3) Of these minor species, officinalis is the most important; the natural double red form is widely grown, has a long history, and is the parent (especially when crossed with lactiflora) of many hybrids, the subject of the next paragraph. It was grown in Virginia as early as 1771 (from accounts in Thomas Jefferson's Garden Book) and was grown in English gardens probably as early as 1150. Native to Europe, it was the first peony named by Linnaeus (1753) and its name means "of practical use to man" because it reputedly had many kitchen uses and medicinal values. Pliny described it in his Natural History (about 77 A.D.) and there is a lot of Greek mumbo-jumbo about its magical powers and mythical origins.
- (4) To complete the picture, one should mention two American species, brownii and californica, native to mountainous regions of the western coastal states and Nevada. They are similar to each other, bear brownish-red flowers, and, although herbaceous, the botanist Stern puts them in a separate section, ONAEPIA. Their seeds germinate easily but plants do not survive long outside the climate in which the species evolved. They have never been successfully used to develop hybrids.
- (5) This is a horticultural horror story. History was made in 1776 when the botanist Pallas identified and named an herbaceous species "lactiflora." Twelve years later he failed to remember or recognize this while working with some different dried herbarium specimens, and



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renamed the same species "albiflora"-(Recall that the first living plants of lactiflora were not received from China and grown in Europe until 1805). This name stood from 1788 until 1946 at which time the botanist Stern decided that the prior name should be reinstated because, being the first name given, it was the legitimate name. In "correcting" Pallas' honest error, Stern was uprooting 158 years of continuous usage in the literature and by gardeners of a universally accepted scientific name. Of course, you can't change the old literature, so new gardeners have to recognize that albiflora is a synonym for lactiflora, this travesty of common sense having been foisted upon all of us. I wonder if concerted effort by the APS, the gardening media, and nursery associations to ignore the new usage might have forced some botanical congress to reconsider and reverse this opprobrious decision. One assumes the Rule of Priority was designed to give the original discoverer and/or identifier of a new species the credit due him; but in this case the same man. Pallas, concocted both names and so there was no injustice to right. When the Rule of Common Sense should have ruled the day, the botanists' mumbo-jumbo held sway. APS members of that time must have wondered: Would Paeonia albiflora by any other name smell as sweet?

(6) Most of the French tree hybrids (S.D.M. CORNU, ALICE HARDING...) have heavy double flowers which hang hidden in the foliage. This is due to the heavy double flower of the Chinese-European style moutan parents compounded by the short down-curved flower-stem inherited from the lutea parent which also has leaves on long petioles arching above the flower. This was partially overcome by Prof. Saunders' use of Japanese style moutan parents with single or generally less-double flowers. Backcrossing the hybrids to a moutan parents is designed to overcome this fault still further. It should also be helpful to use selected lutea clones (like L14) and lutea ludlowii that have uprightly-held flowers. With regard to doubleness, double moutans usually have a visible well-defined center of carpels and stamens whereas double lactifloras are completely filled-out or closed in the center.

#### **SUMMARY OF PART II**

or SCIENTIFIC NAME	CHOICE	to be avoided.
lactiflora	Chinese peony	albiflora, chinensis (sinensis)
suffriticosa	moutan	Japanese TP, Chinese-European TP, arborea, papaveracea
tree hybrids	moutan hybrids, suff'a hybrids, x lemoinei	lutea hybrids, delavayi hybrids, American TP's
Itoh hybrid	herb's-tree hyb., x Itoensis (?)	_
tree peony	woody peony, shrubby peony	MOUTAN SECTION (Stern)
herbaceous peony		PAEON SECTION (Stern)
browni and californica	American species	ONAEPIA SECTION (Stern)

FIRST-CHOICE TERM

OTHERS. Generally

#### **SUMMARY OF PART I**

#### I HERBACEOUS PEONIES

#### A. SPECIES.

- 1. Major or dominant: lactiflora. White-pink-red improved varieties in single, semi-double, double, bomb, Japanese, and anemone flower-forms. Selective breeding extends back 400 years (plus) to China. American-bred varieties by Auten, Brand, Klehm, and many others are widely grown.
- 2. Minor: officinalis, peregrina (lobata), tenuifolia, anomala, mlokosewitschi, wittmanniana and its variety, macrophylla, daurica, emodi, coriacea... and 28 others.
- B. HYBRIDS. Development began in Europe but most widespread advances occurred in U.S. by Saunders, Glasscock, Auten, and many others. Some hybrids contain four or more species in their ancestry; some backcrosses to *lactiflora* are 75% *lactiflora*.

#### II TREE (WOODY) PEONIES

#### A. SPECIES.

- 1. Major or dominant: suffruticosa. White-pink-red-purple improved varieties in single, semi-double, and double flower-forms. Selective breeding extends back 1500 years (plus) to China. Japanese-bred cultivars are widely grown.
- 2. Minor: delavayi, lutea, and potanini.
- B. HYBRIDS. Development began in France (Henry, Lemoine) in the 1890's after introduction of the yellow *lutea* species. In the 1920's, Saunders began his own line which was continued by Daphnis, in association with Gratwick. Some backcrosses to suffruticosa are 75% suffruticosa.
- III ITOH (ee-toe) or ITOH HYBRIDS. Unites I and II above. Herbaceous growth-habit. Original cross was KAKODEN X ALICE HARDING, a white *lactiflora* pollinated by a double yellow tree hybrid from *lutea x suffruticosa*.



# TREE PEONIES: A SIGHT TO BEHOLD! Tips offered on growing these beautiful bloomers

By June Hicks, The Detroit News, Detroit, Michigan, May 25, 1986 It's a sight to behold—tree peonies in full bloom.

For those who've never had a chance to see any, there are currently about 50 different varieties flowering at the Congregational Church of Birmingham, located at 1000 Cranbrook, Bloomfield Hills.

And if the rains finish these off before visitors have a chance to see them, the herbaceous types are coming right along and the church garden boasts some 100 different varieties of these.



"SO WHAT'S the difference?" some beginning gardeners may be asking.

A talk with Harris Olson, of Birmingham, who oversees the grounds and gardens around the church, reveals that there's plenty.

The tree peonies which boast woody stems and branches actually look like large shrubs and usually bloom about two weeks before the herbaceous types which have green stems that die back to the ground each winter and come up again the next spring.

People go bananas over the "tree" types because of the unusual large blooms they produce (anywhere from eight to 10 inches in diameter on up to 12), the size of the shrubs which can go as tall as four feet and almost the same around and the foliage which differs greatly from that of their cousins. Leaves with jagged edges show much more character.

The fact that many tree peonies also boast wonderful fall colors is another plus for their use in the landscape.

"One of my favorites," says Olson, "is Gauguin." Small wonder. Although blooms seem small compared to the others, colors prove magnificent—an unusual combination of red and gold.

THEN HE rushes to the beds with the herbaceous types just coming into flower. He has favorites here, too, and it turns out like Clare De Lune, which is yellow, and Cytherea, a lovely single pink. He nods at Red Charm as he passes which proves to be popular with most gardeners. A few tips from Olson on growing peonies (which are generally planted in the fall); they need to go in a sunny location and must have good drainage in spite of the fact that they prefer heavy soil.

Why do ants climb on the blossoms? Because there's sugar present, explains the expert. Actually, they won't do any damage unless they accidentally carry some disease spores from one plant to another. But since the wind also spreads the dreaded botrytis blight, Olson doesn't think the ants make that much difference.

But because this blight can be a problem with peonies, Olson cuts all the stalks of the herbaceous types when they turn brown in the fall and burns them. One must not cut back the woody stems of the tree peonies so he uses a blower to force all the leaves out in late fall. Then these are raked up and burned, too. Then he sprays in the spring with a fungicide.

OLSON DOESN'T fertilize his peonies except for some bone meal every now and then to encourage flowering. He doesn't want them growing tall and flopping over.

Nor does this expert support or disbud them. He points out that many of the newer varieties have been hybridized for use in the land-scape and don't fall over as much as the older types which were grown primarily for cut flowers. -43-



Since he's not showing blooms in a show, Olson skips the disbudding step (where smaller side buds are removed to encourage the central one to grow larger) and allows all flowers to develop.

And Olson does something entirely different from most peony growers—he allows both types of plants to go to seed. Tiny seedlings then pop up in the ground below and he transplants them into new beds.

"I just let the bees do the hybridizing," he cheerfully explains. Most hybridizers use a paint brush, but patience is required either way. It's about five years before the herbaceous types start blooming when grown from seed, and around seven or eight for tree peonies.

The public is invited to visit the gardens and grounds anytime. For those who miss the peonies (or would like to come back again) in about 10 days the bearded irises should be staging their show followed later during the summer by the day lilies. The grounds committee will plant some 70 flats of annuals soon.

As if all this isn't enough, the annual Flower and Art Festival will take place at the church starting June 27th and running through that weekend.



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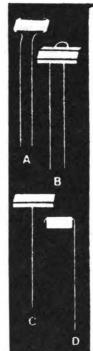


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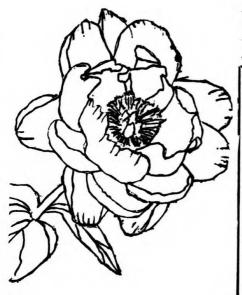
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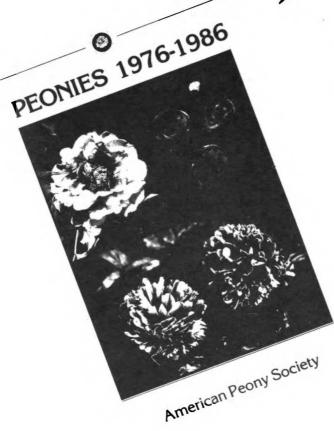


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