MARCH 2000
NO. 313

The American Peony Society Bulletin

POMONA

Hybrid tree peony grown by Bernard Chow (Melbourne, Australia) from seed. An example of the exotic blends that often occur—in place of the anticipated orange—when crossing red and yellow-pigmented hybrids.

Announcing

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

AMERICAN

TREE PEONIES

The AMERICAN TREE PEONY

63 BRILLIANT FULL COLOR PHOTOS

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

Appended cultural notes cover:

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

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

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

$25 Postpaid

Send check or money order to—

AMERICAN PEONY SOCIETY
250 Interlachen Road, Hopkins, MN 55343

AMERICAN PEONY SOCIETY
250 Interlachen Road (612) 938-4706 Hopkins, MN 55343
President.....Robert Wise
Vice President.....Floyd Kimball
Secretary-Treasurer.....Greta M. Kessenich
Bulletin Editor.....Greta M. Kessenich

BOARD OF DIRECTORS

DEPT. OF REGISTRATION

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

Greta M. Kessenich, Secretary

OBJECTIVES

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

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

MEMBERSHIP

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

Single Annual	$7.50	Family Triennial	27.50
Single Triennial	20.00	Life Membership	300.00
Family Annual	10.00	Commercial membership	25.00

Family membership, any two related members in same household .....One Bulletin

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

Contributing	$25.00	Supporting	$100.00
Sustaining	50.00	Patron	250.00

AMERICAN Peony Society Bulletin

March 2000 — No. 313

TABLE OF CONTENTS

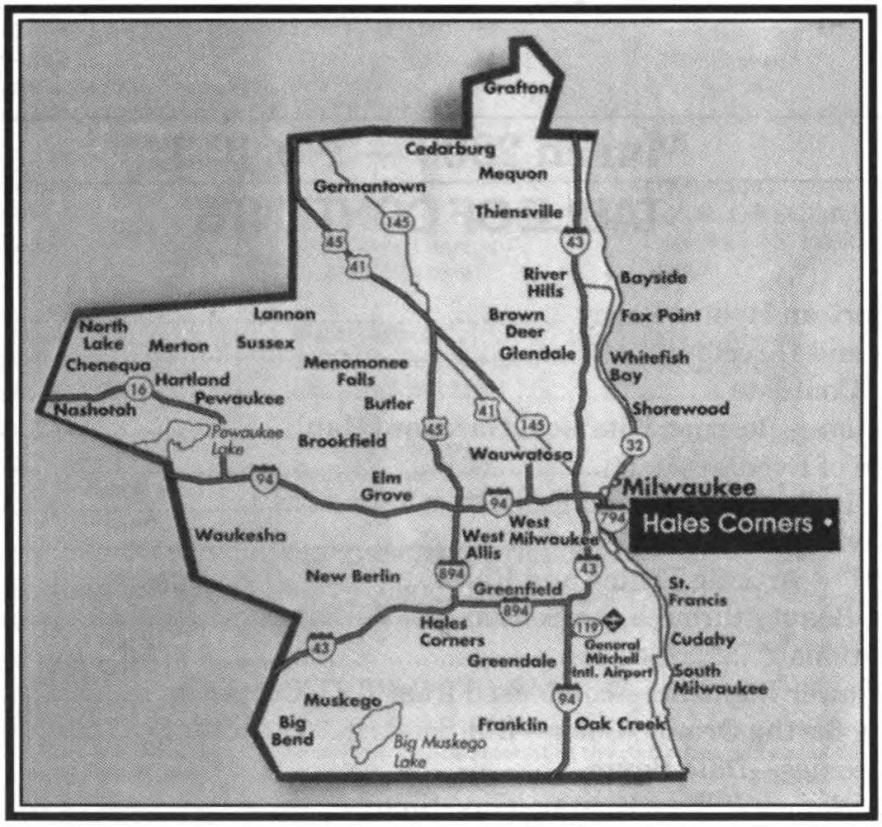
If you cut a tree, plant a tree.
It is nature's replaceable energy.

CONVENTION

Boerner Botanical Gardens

Milwaukee, WI

June 2000



Admission is FREE!

Car parking—$3.50

In and out passes will be issued to all registered show participants.

Sponsored by

Milwaukee Country Park System
Hawks Nursery and Landscape Design
The Milwaukee Journal Sentinel

Conducted by

The American Peony Society

250 Interlachen Road, Hopkins, MN 55343

Soon to straddle the millenniums celebrating 100 years in July, 2004.

Coming to Milwaukee...

MILLENNIUM 2000

95th American Peony Exhibition

June 9, 10, 11, 2000

SCHEDULE OF EVENTS

FRIDAY, JUNE 9

Workshop preparation tent abutting exhibition

Building opens at 7:00 a.m. to bring blooms and prepare for exhibition Saturday morning

SATURDAY, JUNE 10

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

8:00 a.m.—Registration (Entry tags provided)

11:30 a.m. - 1:30 p.m.—Judging

LUNCH ON YOUR OWN!

2:00 p.m.—Exhibition opens to the public, closes at 5:00 p.m.

2:30 p.m.—Seminar, "Garden Peonies." Roy Klehm—Workshop tent

7:00 p.m.—Pallas Restaurant—Annual Meeting

Root Auction—Peony roots to be donated

SUNDAY, JUNE 11

8:30 a.m.—Board of Directors meeting in Workshop tent

9:00 a.m.—Peony Garden Tour by Theresa Griesbach, Iron Ridge, WI

10:30 a.m.—Show in exhibition building opens to the public

5:00 p.m.—Show closes to the public

Reservations

For banquet only on Sat., June 10, buffet style at $17.30 per person. No reservations accepted after Sat., June 3.

Make reservations early for buffet and preparation of service.

Send reservations directly to:

Mrs. Eloise Kimball Telephone (612) 439-7953
4290 Northbrook Blvd. No.
Stillwater, MN 55082-1204

DAYS INN abutting Pallas Restaurant
1673 S. 108th St., West Allis, WI 53214
(414) 771-3399 — Fax (414) 771-0557
Block of 15 rooms reserved; reservations must be made before May 9 (group rate discount)
Rates: Fri.-Sat. $72.99 plus tax; Sun. $53.99 plus tax

GOLD KEY MOTEL
3600 S. 108th St., Milwaukee, WI 53228
(414) 543-5300
Rates: $50.00 plus tax

MIDWAY LODGE
251 N. Mayfair Road (Hwy. 100), Milwaukee, WI 53226
(414) 774-3600
Rates: $109.00 plus tax (to 4 adults)

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 Pages 11 and 12. Division VI — COURT OF HONOR CANDIDATE CLASS.**
14. The best seedling judged by the seedling committee will be displayed on the Court of Honor.

DIVISION 1. Open to all Exhibitors

GROUP DISPLAYS.

One bloom of each variety in separate containers

Class 101 American Peony Society Award
Twenty-five varieties, any color or type

102 American Peony Society Award
Fifteen varieties, lactiflora double, bombs and semi-doubles, only, any color.

103 American Peony Society Award
Ten varieties, herbaceous hybrid only, any type or color

104 American Peony Society Award
Ten varieties, Tree peonies only, any type or color

105 Five varieties, Japanese type lactiflora only, any color

106 Five varieties, single type lactiflora only, any color

LACTIFLORA.

Three blooms of the same variety in one container.

Class

110 Double white
111 Double blush
112 Double light pink
113 Double dark pink
114 Double red
115 Semi-double white or blush
116 Semi-double pink
117 Semi-double red
118 Bomb
118W-White, 118P-Pink, 118R-Red
119 Japanese white or blush
120 Japanese pink
121 Japanese red
122 Single white or blush
123 Single pink
124 Single red

LACTIFLORA. One Bloom,

Class

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
137 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

HERBACEOUS HYBRID or SPECIES. Three blooms of the same variety in one container.

Class			
150	Double or semi-double white, blush or yellow	155	Single white or blush
		156	Single yellow
151	Double or semi-double coral	157	Single coral
152	Double or semi-double pink	158	Single pink
153	Double or semi-double red	159	Single red
154	Japanese, any color		

HERBACEOUS HYBRID or SPECIES. One bloom.

Class			
160	Double or semi-double white or blush		
161	Double or semi-double yellow		
162	Double or semi-double coral		
163	Double or semi-double pink		
164	Double or semi-double red		
165	Japanese, any color		
166	Single white or blush	169P	Single pink
167	Single yellow	169R	Single red
168	Single coral		

INTERSECTIONAL (HERBACEOUS X TREE) HYBRID. This includes the Itoh originations. Three blooms of the same variety in one container

Class	
170	Yellow, any form
171	Any color except yellow, any form

INTERSECTIONAL (HERBACEOUS X TREE) HYBRID.

Class	
172	Yellow, any form
173	Any color except yellow, any form.

TREE (SHRUB) PEONY. Three blooms of the same variety in one container.

SUFFRUTICOSA (MOUTAN). Any country of origin: China, Japan, France, USA...

Class		Single	Semi-dbl	Double
174	White	174a	174b	174c
175	Pink	175a	175b	175c
176	Red	176a	176b	176c
177	Maroon	177a	177b	177c
178	Lavender/Purple	178a	178b	178c

HYBRID TREE PEONY. Any country of origin.

Class		Single	Semi-dbl	Double
179	White, Cream	179a	179b	179c
180	Yellow	180a	180b	180c
181	Blend	181a	181b	181c
182	Pink	182a	182b	182c
183	Red	183a	183b	183c
184	Maroon; Dk. Red	184a	184b	184c
185	Lavender/Purple	185a	185b	185c

TREE (SHRUB) PEONY. One bloom.

SUFFRUTICOSA (MOUTAN). Any country of origin.

Class		Single	Semi-dbl	Double
186	White	186a	186b	186c
187	Pink	187a	187b	187c
188	Red	188a	188b	188c
189	Maroon	189a	189b	189c
190	Lavender/Purple	190a	190b	190c

HYBRID T.P. Any country of origin.

191	White, Cream	191a	191b	191c
192	Yellow	192a	192b	192c
193	Blend	193a	193b	193c
194	Pink	194a	194b	194c
195	Red	195a	195b	195c
196	Maroon; Dk. Red	196a	196b	196c
197	Lavender/Purple	197a	197b	197c

DELAVAYI GROUP. Includes LUTEA species.

198	Any color	198a

DIVISION II: AMATEUR **Open to exhibitors who raise peonies chiefly for pleasure, sell plants or cut flowers only casually, and do not grow more than 200 plants.**

Class 201 American Peony Society Award
Ten varieties, any type or color
One bloom each in separate containers.

LACTIFLORA (unless otherwise stated). Three blooms of the same variety in one container.

Class

205	Double White or Blush	210	Japanese, any color
206	Double pink	211	Single, any color
207	Double red	212	Herbaceous Hybrid
208	Semi-double, any color	213	Intersectional Hybrid
209	Bomb, any color	214	Tree, Moutan, or Hybrid

LACTIFLORA (unless stated otherwise). One bloom.

Class

220	Double white	226	Bomb, any color
221	Double blush	227	Japanese, any color
222	Double light pink	228	Single, any color
223	Double dark pink	229	Herbaceous Hybrid
224	Double red	230	Intersectional Hybrid
225	Semi-double, any color	231	Tree, Moutan, or Hybrid

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
One bloom each in separate container.

LACTIFLORA (unless otherwise stated). Three blooms of the same variety in one container.

Class

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

LACTIFLORA (unless otherwise stated). One bloom.

Class

315	Double, white or blush	320	Japanese, any color
316	Double, pink	321	Single, any color
317	Double, red	322	Herbaceous Hybrid
318	Semi-double, any color	323	Intersectional Hybrid
319	Bomb, any color	324	Tree, Moutan, or Hybrid

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 vari-

eties 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 North Dakota Memorial Award
Five full doubles, named varieties, any color.
One bloom each separate container.
One entry per family.
This Class 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.

All exhibits are one-bloom-per-container.

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

HERBACEOUS HYBRID or SPECIES.

Class		
	610	Double, any color
	611	Semi-double, any color
	612	Single, any color
	613	Japanese, any color

INTERSECTIONAL HYBRID. Includes Itoh originations.

Class		
	614	Yellow, any form
	615	Any other color, any form

TREE PEONY, SUFFRUTICOSA (MOUTAN).

	616	Any origin, color, or form.

TREE PEONY, HYBRID

	617	French "Lutea Hybrids" (FLH)
	618	Any origin (excl. FLH), yellow
	619	Any origin (excl. FLH), any other color

Grand Champion

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

★ ★ ★ ★

TREE (SHRUB) PEONY. Any country of origin: China, Japan, France, USA.... Exhibitors should write a, b, or c after the class number to indicate, respectively, the flower form: single, semi-double, or double. (Ex. 174a, 174b, 174c)).

Three blooms of the same variety in one container.

SUFFRUTICOSA (MOUTAN)		HYBRID T.P.	
Class		**Class**	
174	White	179	White, Cream
175	Pink	180	Yellow
176	Red	181	Blend
177	Maroon	182	Pink
178	Lavender/Purple	183	Red
		184	Black-red
		185	Lavender/Purple

TREE PEONY. One bloom.

SUFFRUTICOSA (MOUTAN)		HYBRID T.P.	
Class		**Class**	
186	White	191	White, Cream
187	Pink	192	Yellow
188	Red	193	Blend
189	Maroon	194	Pink
190	Lavender/Purple	195	Red
		196	Black-red
		197	Lavender/Purple

DELAVAYI GROUP. Includes lutea, potaninii, and crosses between them.

Class	
198	Single, any color; also "b" and "c" if such forms exist.

Class VII **ARTISTIC**

Theme

Reflections On the Peony in Milleniums Past
• Japanese • European • American

From Doris Schwartz, Milwaukee Area Garden Clubs

ARTISTIC DESIGN RULES

1. All artistic exhibits must be made by the exhibitor.
2. Peonies must be used in all design. Peonies need not be grown by the exhibitor. Other plant material may be used in all classes.
3. Accessories and/or bases may be used in all classes.
4. No artificial flowers or foliages are permitted.

While the show management will exercise due caution in safeguarding exhibits, it cannot assume responsibility for injury or loss. Personally owned properties must be claimed immediately after the show closes at 5 p.m. on Sunday, June 11. Qualified judges will be used in the Artistic Division, and the decisions are final.

★ ★ ★ ★

PEONIES...BEAUTY THROUGH THE SEASONS

by C. William Goff, Pittsburgh, Pennsylvania

Peonies are truly a plant to be enjoyed throughout the seasons. This year, in spite of the mid-summer dought, the peonies were glorious in the late Spring and early Summer. I have a large bed of perennials, packed full of daffodils, daylilies, fall asters, and peonies galore. It truly explodes with color, and I have written about this border in an earlier issue of the *Bulletin*. However, I have a smaller garden, rectangular in shape, and roughly 12'x5.' It is edged with old bricks with soft corners, and it is newer than the larger border. In it are placed four peonies to the rear of the garden. In front of them are several splendid daylilies, some Dianthus and a large clump of Siberian Catmint (*nepeta siberica*). Daffodils are planted with abandon in the front of the garden.

These peonies are just coming into their own, having been planted only three years ago, yet they are a joy for me to watch as each year's clump expands and puts forth more and more luscious flowers. True to my likes and dislikes, this border contains only pastel colored peonies. Yes, there are now vibrant reds, shocking pinks, and indeed, the clear yellows in the peony world, but the soft pinks, dark pinks and whites in their varied forms are most enjoyable to me.

To my left, as I stand facing the bed, is a clump of **Krinkled White** (Brand, 1928), a plant which throws oodles of large, single, crepe-paper-white flowers with prominent yellow centers. It is a

lovely thing that goes well with most plants blooming near it, which in my case is a clump of pink, fragrant Dianthus.

Immediately to the right of **Krinkled White** is a large peony known as **Pageant**, a hybrid bred by Professor Saunders in 1941. The roots of this plant were mammoth when I planted it, and though it now reaches 3 ft. in height, I have read it can reach almost 4 ft. tall when mature. Its great, medium pink flowers with huge yellow centers are a delight to the eye, but the unique characteristic of this plant is that the blooms are early...very early! My plant was in full bloom this year on Mother's Day.

Next in the border is **Ann Cousins** (Cousins, 1946), a late double white variety. This peony is very fragrant, and distinctly like that of the rose. It is very full and very double. This year, however, because of the heat of mid-June, the blooms didn't open quite as well for me as in years past. Perhaps next year!

Finally, we come to **Westerner** (Bigger, 1942), a pale pink Japanese variety which was awarded the Gold Medal by the American Peony Society, and with good reason. The soft, clear color of this beauty is a sight to behold.

November has arrived as I write these notes of the past year. It is also clean-up time in the garden when the foliage must be cut down, removed, and discarded. I am reminded of the added bonus of the peony plant with not only its flambuoyant blooms in early Summer, and the rich green of the leaves in July and August, but also the brilliant colors of the plant in the Fall. Many of the peonies turn various shades of orange or bright yellow and, on occasion, a touch of crimson. These Fall colors glow in the gentleness of the low November sun, leaving us with a reminder and a hint of a greater beauty yet to come next Spring.

With the new millennium fast approaching, we need peonies more than ever in our hectic lives. The unhurried-yet steady-growth pattern of the peony has a way of slowing us down, perhaps jolting us back to earlier days, and beckoning us to take the time to admire a plant which is not only faithful, but has lasting beauty. No, the peony is not a plant for the impatient, or for one who wants quick color in the garden, but for the unhasty and determined grower, the peony is truly a plant for all seasons...and all millenniums!

★ ★ ★ ★

I also have a question. We are moving next Spring and it will have to wait until then to dig and pot up my peonies. Most are trees and have been in the ground 2-3 years. I plan on using bushel-basket-size pots and mixing a good amount of finished compost in soil. I know it's risky, but I have no other choice and I can't bear to leave them. Do you have any other suggestions to help?

—**Ms. Delores Wright**,
2809 Waynedale Blvd., Fort Wayne, IN 46809-2355

★ ★ ★ ★

REGISTRATIONS

Jean Erickson (Mrs. Jean Erickson), December 6, 1999. Deep red Japanese. No pollen or seeds, good substance. One bud per stem with numerous side buds. Floriferous, side buds extend bloom time. This deep red Jap has a center the same shade as the outer petals when first opens. As flower ages the staminodes become silver tipped. Strong 38" stems, mid-season bloom, vigorous grower. Photographs. Registration received from Bob Yaremko, Canada.

Blushing Swan (Harry Heineman, 673 Parish Road, Scituate, MA 02066). Semi-double Japanese, white blushed with pink. This plant came from my seedling bed in my garden. It is open pollinated. Excellent stem strength, vigorous, and good attractive foliage. It has good substance, a flat form. Arranged for a commercial man to take over this plant. Photograph on file.

The following eleven Registrations are from Hermann Krupke, 52495, Ljung, Sweden

(From seeds mostly received from Chris Laning, but also some from own crosses, I have raised some interesting plants, most of them singles, but beautiful indeed.)

Anne-Christine, a seedplant after **Nippon Gold**, named after our eldest daughter. Japanese flowers of mid-size, pure white bowl-formed outer petals, intense yellow center, light green pistil, red marked pistil. The plant grows well upright, about 90cm high.

Bingo, a seedling number 88271, **Mikado** open pollinating. Japanese flowers like **White Cap** but midpuff, more pinkish. Flowers keep well, often admired and desired by visitors. Sturdy, strong stems, and healthy plant with dark green leaves.

Bjorn-Olof 86071 US Sanctus x Silver Dawn is a compact growing off hybrid with thick but weak stems, especially when cut. Double champagne tinted pink with enhancing mixed scent of rose and lily. Makes seeds, no stamen nor pollen.

Christina, seeding #85101, single hybrid, between **Otto Frobel** seedling and **Coral Charm** as pollen parents. Flowers single red, average yellow pollen center, light green hairy pistil pink stigma.. Pollen fertile; so far no seeds. Late blooming for a hybrid. A high plant, that makes 3 to 4 sidebuds, which is unusual for red hybrids.

Gold Cheer, seedlings #8218, is a group of plants from a cross *P. off. rosea plena* with pollen from *P. peregrina*. Flowers globular, single red, rich pollen and good fertility. F2 second and third generations are interesting. Some interesting doubles have appeared. Plants, especially leaves, remind of *P. peregrina*, and need some support. High 50-60cm.

Guldsmedsgarden seedling #90124. As a lactiflora, very early blooming. Flowers full double gold yellow intermingled with pollen, strengthening the yellow tint. There is a good spice scent of cloves. Light hairy pistil and red stigma, filaments light. Flowers become 15cm wide, good fertility. Two-three sidebuds, a very lovely and most interesting creation, fertile. Healthy plant of lactiflora-type, about 1 mtr. Good upright growth.

Inger Molin (81033) seedplant from Christ Laning's US seeds **Moonrise**. Flowers in the middle of hybrids and lactiflora, blushing shell pink, globular before opening. Pronounced hairy carpel, red stigma, yellow filaments and anthers. Light fragrance, few seeds. Very healthy and stable growth, only one flower per stem.

Konigsberg (8809) is a cross *P. tenuifolia* **rubra plena** x *veitchii*. Nodding red flowers 8-9 cm wide. Both single and double flowers appear. Outer petals with a very smooth border. Hairy pistil, red stigmas. Blushing filaments, yellow anthers. Few seeds when pollinated with other tenuifolias. Plant almost 1 mtr. high, foliage remains on tenuifolias but more coarse (*about 300 seeds gave 115 plants; only one single of them got wonderful; the rest made only deformed flowers*).

Michen (84044), seedplant from Chris Lanings US cross **LeCharm x Bowl of Cream**—10 seeds gave 4 plants, all were completely double. A healthy plant with perfect upright growth. Strong stems. Most perfectly built flowers, blushing pink outer petals, lighter, great dense ball center. Late, long lasting, good for cutting.

Miss Sweden, seedplant of **Miss America**. Lactiflora healthy plant of average size, strong, sturdy stems. Becomes blushing, full double flowers of medium size when established well. Purer white toward the center intermingled with yellow stamens. Pleasant, fresh, almost daring fragrance.

Snow Angel, seedplant #79061 US seed from **Archangel**, typical widely-grown healthy hybrid plant. Nicely formed pure white semi-double 6" flowers, red stigma, two to three sidebuds. Fresh fragrance, about 70cm high. Fertile.

Basia (pronounced Bosch), (Don Hollingsworth/Dale Heinzman), Seedling #1460. Parentage **Opha**—open pollinated, seed from Gilbert Wile and Son Nursery. First bloomed in 1977. Double form lactiflora, all white, stamens light yellow—pollen and seeds. Vigorous. Midseason to late bloom, large deep green foliage. Height 44 inches, 2-3 buds per stem. Stem is strong but it leans with open flower. Registered by Dale Heinzman, Geneva, NY, January 2000. Named for my wife.

Esther Heinzman (Don Hollingsworth/Dale Heinzman), January 2000. Japanese lactiflora. Parentage—**Polar Star**/ pollen parent, **Cytherea**.

First bloomed before 1980. Guard petals are white, staminodes—medium yellow, flush red at the base. Reliable, good substance, 3-4 buds per stem. Good stem strength, 44-48 inches in height. Mid to late bloom. Seedling # Hollingsworth 1887. Registered by Dale Heinzman, Geneva, NY. Named for mother.

Gloria Jean (Chris Lanning), January 2000. Itoh (intersectional) of unknown parentage. Has pollen but has produced no seeds. Plant is 3 ft. tall and flowers are large, single, dark pink and yellow mix. Vigorous, dark green foliage.

Kristin Joy (Chris Lanning), January 2000. Advanced generation tetraploid hybrid (lobata F 3 or 4). Tall, vigorous plant, dark gree foliage. Flower is large (8 inches), bright red single. Has pollen but very few seeds. Easy to divide and propogate. Blooms mid-season.

David Erickson (R. W. Tischler) 1999. Parentage unknown. Dark red bomb type. Very fine red stammens, tipped with yellow. Excellent foliage 30 to 32" tall. Blooms mid-season. Very colorful.

Echt Klasse (German EKT Klasse) Hollingsworth/Reinermann 2000. Parentage seed, **Karl Rosenfield**; pollen #95 (Officinals XPeregina). First bloomed before 1980. Semi-double, herbaceous hybrid, scarlet red, light yellow anthers. Flat form, twenty or more guard petals. Large flower set close to the bush, 24-26 inches in height. Large flower, medium green foliage, erect stems. Blooms early to midseason. Summer deciduous. Has pollen and stamens. One bud per stem.

Big Boy (E.L. Pehrson) Single herbaceous hybrid. Parentage Seed of unnamed bomb lactiflora, pollen, **Archangel**. White, first bloomed before 1980. Single, flat form, stamens, pollen and seeds. Reliable. One or two buds per stem. Height 30 inches early to midseason bloom. Good stem strength. Registered Don Hollingsworth. January 20, 2000.

★ ★ ★ ★

It is twenty years now, that I have been enjoying the APS. I still read every *Bulletin* with greatest interest. Many more years I have grown peonies. In the meantime, I have seen over 600 different posts.

Here is a Registration of eleven sorts.

At friends in Mid-Sweden I found a sort-of dwarf peony that belongs to an off-type. It seems to be a very old species. Plants 50" high are somewhat similar to **Dutch Dwarf** growth, not entirely so straight upright. Leaf grayish-blue green, roots also of an off-type. Flowers full double lilac, pink 9-10cm in diameter, pistil light green, no pollen. Poor, but agreeable odor. Fertility is not known yet. So far, there is no name known. We call them **ALMA** or (Garden name) **AMELIA**—the lady's name where plants came from long time ago. Only very few plants are known. Do you know some sort like these?

—**Herman Krupke**, Sweden

PEONY FLOWER PIGMENTS

(Selectively condensed from T. C. Cooper's article in APS *Bulletin*, 197, June-Sept. 1970, [reprinted in *APS—75 Years*, p. 141-143] to supplement the article Breeding For The Color Orange.)

I. PLASTID PIGMENTS. These consist of (A) CHLOROPHYL (green) and (B) CAROTENOIDS (brilliant yellow). They are generally water-insoluble and occur within plastids, specialized tiny cells enclosed in the normal plant cells. The carotenoids are found only in *P. lutea* and its hybrids, and are located in the epidermal or outer layer of cells in the flower petals.

II. FLAVONOIDS. This class of pigments is water soluble, and consists of (A) ANTHOCYANIDINS (many colors), (B) FLAVONES (white or pale yellow), (C) CHALCONES (clear yellow), and (D) COMPLEX PIGMENTS.

ANTHOCYANIDINS are located in the sub-epidermal or inner layer of cells in the flower petals, and are dissolved in the cell sap. There are about sixteen in the plant kingdom, embracing yellow, orange, scarlet, crimson, and violet, but only three are found in peonies: (1) pelargonidin, (2) peonidin, and (3) cyanidin.

Pelargonidin (scarlet) appears ONLY in SOME suffruticosa, hence in SOME of the tree peony hybrids with lutea.

Peonidin (crimson) is the major pigment in *P. lactiflora, officinalis, tenuifolia*, many other herbaceous species (but excl. lobata, delavlayi, and many suffruticosa varieties). Depending upon its concentration, it can produce reds varying from blush through black-red. It is dominant over pelargonidin, and can almost certainly mutate to pelargonidin and cyanidin.

Cyanidin (crimson) appears as traces in the above species but as a 50-50 mix with peonidin in *P. lobata*.

FLAVONES are probably found in all peonies, but more yellow in **Oriental Gold**, mloko, lobata, and probably tenuifolia. They provide "body" to the petals of white peonies, cream and ivory in some lactis, yellow color to anthers in general, and to the petaloids of certain Japanese and anemone forms of lactiflora (in the early stages). Improvement in more yellow flavones is unlikely.

CHALCONES are found only in *P. potaninii* var. *trollioides*. Improved more yellow chalcones are a possibility.

COMPLEX PIGMENTS are (1) anthocyanidin combined with flavone to give violet or purple in lactiflora, suffruticosa, and many other species, but usually reddened by excess anthocyanidin, and (2) cyanidin combined with metals to give blue.

BREEDING FOR THE COLOR ORANGE

Bill Seidl, 1732 S. 19th St., Manitowoc, WI 54220

There are reports and rumors, and rumors of reports, that orange-colored peonies are springing up in scattered gardens throughout the world. Maybe such reports are premature. I have no orange peonies in MY garden, and have seen none in the few other gardens visited. However, I do think that reports of "orangish" or orange-tending seedlings are entirely credible. Pure orange colored flowers has been a dream of some hybridizers for many years.

In *Paeonia* (a newsletter for peony hybridizers), articles have appeared on this subject in recent years. For non-subscribers and APS members who might like to join the quest, this article reviews some of the ideas, theories, and experiences discussed so far.

My first awareness of the quest for orange came about 1969-70 when the late Roy Pehrson of Lafayette, Minn. mentioned that he had a *P. lobata* (now called *P. peregrina*) clone that was a particularly bright red-orange, and therefore promising in breeding for orange. He mentioned that petals of it had been analyzed by a Mr. Cooper who, via paper chromatography tests, gave a very favorable report on it. "Favorable" is all I can say about it as I do not recall any of the details. I obtained the Pehrson clone and several other lobata clones. **Sunbeam** was one of these and I thought it equally bright in coloration. Another clone was a more rosy red. All have since died except for the Pehrson clone, which struggles for survival in the dry shade at the base of a Turkish Filbert tree. Alas, my interest in breeding for orange was not so intense that I made many crosses with any of them.

However, Mr. Cooper must be F. C. Cooper of the National Research Council of Canada, and his article on Peony Flower Pigment should ABSOLUTELY be read and studied by anyone seriously interested in this subject. At one point he writes "...chalcones are miscible (mixable) with red anthocyanidins and should give clear orange shades." Now if that isn't a roadmap to success, I don't know what is! But note the word "should." Much of this is theoretical, and it remains for hybridizers to put the theory to the test. (I recall that in daylily breeding, theoreticians had laid out a roadmap to reach the goal of blue daylilies; those breeders that followed the plan arrived at dead-ends.)

Also in the quote appear a couple of chemical names that will be unfamiliar to most people, which tells me that I cannot continue any further without summarizing the Cooper article, a daunting task that I had hoped to avoid. I've written this up as a supplementary article. All I did was to take Mr. Cooper's own Summary of Pigments, already in outline form, and included information from his previous text that seemed significant in understanding the problems to be faced in breeding for orange. Left out are the accounts of how purple, violet, and lavender shades are produced in peonies—even though anthocyanidins for those colors are lacking—and how the color blue might be attained.

Where to begin in breeding for orange? With lactifloras? No, you can breed for orange lactifloras 'til your face turns the complementary color, and you won't come close. Why? Because peonidin, the red pigment in lactiflora, can't do the job. In fact, people with a good eye for color claim that there are really no true reds in any of the lactifloras. (In writing this article, I've developed the notion that peonidin is a "bad" red, and that it's related pigments, pelargonidin and cyanidin, are the good guys.) In the absence of the specific anthocyanidin for orange, the experts seem to think the best route to orange is the interaction of the two reds, pelargonidin and cyanidin—in the absence of peonidin—with one or more of the yellow pigments.

The hybrids of lacti x lobata yield some fine reds because lobata contributes a higher proportion of cyanidin. The higher flavone-content in some lobatas accounts for the brighter red-orange hybrids. And when the lacti parent is white, the salmon-coral colors result because the white lacti contributes a minimal amount of peonidin (that "bad" red again), allowing the flavones and cyanidin to express themselves.

A good example of this is **Coral Charm**, which I believe is the white lacti, **Minnie Shaylor**, x lobata. This is a triploid from a dip x tet cross, therefore sterile and dead-end in hybridizing. Well, not so fast! Prof. Saunders is well known for his statement that all triploids eventually produce a few seeds, so there is hope. More about that later.

High flavone-content in **mloko**, combined with the flavones and high cyanidin in lobata, may aid in developing orange. This is the combination behind **Aurelia** (see back cover, upper right, and p. 4). The photo was sent by Ray Cobb (England) to the Editor who sent it to me for use in this article. The startling thing about this flower is the flares. Herbaceous hybrids do sometimes have flares but never as dark and sharply defined as these, something ordinarily found only in the tree peony section of the genus. The ploidy of the parents, mloko (diploid) x lobata (tet), suggests this, too, is a sterile triploid. Too bad! With line breeding, one might well develop a good orange strain from these genes alone.

(During a "grafting party" at my lot last August, I showed this photo to two knowledgeable peony friends, and both said—independently of each other—it looked like a marigold. Could the British be playing a trick on us?! Of course not, but all three of us had seen a bleeding heart pictured in some of the Chinese tree peony picture books being touted as a tree peony worth $60 per plant! So we had our suspicions.)

With regard to the breeding value of triploid clones, the reason for hope is this—a triploid parent on rare occasions will produce an unreduced gamete (an ovule or pollen grain with three sets of chromosomes) which on rare occasions will meet and unite with a normally reduced gamete (one set of chromosomes) from a diploid parent. Voila!—a tetraploid seed! Over eons of evolution this happens many times in nature. But we can't wait for insects and wind to effect this happy meeting. We have to act as chaperones and make as many hand-pollinations as possible, else we'll not see any such unions in

our lifetime. The most efficient method is to use pollen from a diploid parent on the triploid; the triploid parent need not be bagged to prevent accidental pollination by bees or wind since ANY seed will be most welcome. The reverse cross will require bagging, though time-consuming, to spare you from caring for lots of seedlings not of the intended parentage.

There is a second reason for hope—doubling the chromosomes of a triploid clone (by chemical treatment) would yield a fertile hexaploid. Two or more such conversions, when crossed with each other, could be the start of a hexaploid strain of orange peonies. Several breeders of tet daylilies work diligently to convert superior diploid clones—like **Barbara Mitchell**—to tetraploids, and then incorporate them into their ongoing tet strain. It would be a lot tougher to do this with peonies; professional reseachers may be needed. But this seems more achievable than relying on luck in the reduced-gamete method. Also, the cross of hexaploid x diploid, with normally reduced gametes, would yield tetraploids. The arithmetic is easy. The possibilities are staggering. Reality gets in the way.

During visits to the Reath Nursery years ago, David sometimes discussed the above approaches. He also thought that conversion to hexaploids should be tried with the i-hybrids ("i" for intersectional), assuming they are triploids. (They should be counted, he said.)

David Reath was an early seeker for orange. I don't recall what road map he was using, but he had converted germinating lacti seeds to tetraploids. Some were probably white, with the idea that white lacti x lobata would yield coral hybrids of a fertile, tet constitution. I don't know at what stage progress slowed. In daylilies the first converted or induced tets were not very fertile; peonies might have presented worse problems. To one who had many irons in the fire, there was little time to overcome such vexing roadblocks.

As for orange colors in tree peonies—within the suffruticosas (moutans), I'd say there is little hope. The desired pelargonidin is present in some varieties, but yellow is lacking, discounting the paler flavones, and also discounting **Yao Yellow** as an important reservoir of yellow pigment.

The hybrids with lutea is a different story. Mr. Cooper's view is that the yellow carotenoids of lutea, combined with the red anthocyanidins (esp. pelargonidin) of moutan could be expected to yield orange shades. But not so. In practice one gets "earthy or dusky hues and shades." The reason, Mr. Cooper points out, lies in differences in water solubility and location in the cells, but primarily that the two classes of pigments occupy different cell layers in the petals so that one views one color through the other.

I can attest to those results, having bloomed about 200 "shrub hybrid" seedlings; many descriptions on index cards include the words "dull" or "muddy" blends. However, many are also "beautiful and curious blends and suffustions of yellow with red," quoting Mr. Cooper again. Mr. Bernard Chow (Australia) recently sent a photo of such a flower, **Pomona**, raised from seed produced in my garden.

[Pictured on front cover.] The exact parentage is unknown, having mixed together one or two seeds from several crosses.

However, orange-tending colors ARE appearing. Mr. Chow has sent photos of such flowers in his garden; most are from the seed-parent, #16. His first reports concerned the cross, 16 x **Golden Era**. A later cross, 16 x **Brassy Lady** (#127) turned out to be more productive. Three photos appear on the back cover and are identified on p. 4. Mr. Derek Irvine (NZ) reports that he had received 10 seeds of 16 x 127. Eight germinated; two bore orangy-toned flowers, two had not yet flowered, and four were rose-colored and discarded as he already had so many of that color. Harold Entsminger writes that he has a seedling of lutea from Galen Burrell which is described as orangish. My #16 is from A198 x **Chinese Dragon** and the original description is "Flesh blended rose. Large plant, 9-10 petals. Drips pollen. Small flower. Petioles, very red, esp. near main stalk. Nice leaves." In my mind's eye, it is flesh blending toward rose flares. The original plant was lost when my landlord plowed under that section of the garden, but it was salvaged by grafting. (I don't know why I didn't simply cut it back hard and transplant it, no matter what time of year.) To explain 16's seemingly good breeding potential for orange, I've assumed **Chinese Dragon** contributed pelargonidin to its makeup. So I've checked the list of 28 tree peonies (p. 143, *APS 75 Years*), moutans and hybrids, at the end of Mr. Cooper's article that he had analyzed for pigment content. **Chinese Dragon** appears in a list of fourteen evaluated as having peonidin with no detectable pelargonidin. But Mr. Cooper admits to uncertain results due to minimal amounts of petals available for analysis. So maybe #16 has it, anyway. Also, pelargonidin may be in the ancestry of the Reath yellows,. A198 and **Golden Era** (A199).

The last pigment to consider in tree peonies are the chalcones—found only in *P. potaninii* var. *trollioides* and, I assume, in any other yellow form. (**Tall Yellow** was a clone sold at one time by the Reath Nursery.) Both chalcones and pelargonidin are Class II pigments (Flavonoids) and therefore miscible with each other. Here's where I started; go back to paragraph four. Mr. Cooper opines (this was back in 1970) that trollioides will cross with both moutan and the herbaceous species. Prophetic. In France, 1980, Jean Cayeux introduced **Helene Martin** from trollioides x suffruticosa **Gessekai**, and Roger Anderson (Ft. Atkinson, WI) came with **Unique** from **Martha W.** (lacti, pink) x potaninii **Tall Yellow**. They are basically white and pink, respectively, not orange. For this and other reasons Don Smith, editor of *PAEONIA*, opines (Vol. 28, #3, Summer, 1998) that potaninii will NOT be effective in producing orange. But no matter—**Helene Martin** remains a hot item with hybridizers.

The first true orange color may well appear in the tree hybrids because (1) the most effective pigments, pelargonidin, carotenoids, and chalcones, appear only in the tree peonies, (2) orange-tending flowers have already appeared, and (3) there is a good degree of fertility between them. This latter point is VERY important. It means

amateur hybridizers have the tools needed to raise large numbers of increasingly advanced generation hybrids on which to practice selective breeding. This is the technique used by daylily breeders to develop the existing array of colors, starting with species that were yellow or fulvous in color.

However, herbaceous peonies, especially those with the admirable traits of lactiflora, will be the preferred type among the general gardening public, and so hybridizers will not rest until they transfer orange (and other colors) from the tree peonies to the herbaceous state. So intersectional crosses will be tried in large numbers. Some hybridizers are already at it, but until the sterility barrier is overcome in the i-hybrids, any successful transfer of the three t.p. pigments will not be further refined by selective breeding. During the transfer it might be well to avoid pink and red lactiflora parents because they carry a load of peonidin. One hybridizer says she prefers white lactis like **Minnie Shaylor** and **Miss America** for this reason. She also focuses on suffruticosa parents rich in pelargonidin. At the end of his article, Mr. Cooper lists eleven that fall in the group pelargonidin with minor amounts of peonidin. The only two that I grow are **Shin Kagura** and **Hinode Sekai**. But there are untested varieties out there whose value can be judged visually. Besides breeding moutans rich in pelargonidin, one might also strive for another improved hybridizing tool, a strain of white lactis amenable to the i-cross, by intercrossing the most effective whites we presently have with **Martha W.**, the pink lacti superior for this cross.

To accomplish these goals PERSISTENT EFFORT is needed on many fronts, and there are precious few hybridizers devoted to that end. If peonies could be as easily grown from seed as daylilies, this would not be a problem. Older hybridizers should be willing to share or make available seeds, pollen, plants and information, not only to their peers, but to young, newer hybridizers before their initial interest and enthusiasm wanes and withers away, and before experiencing that first thrill of victory—which hopefully will be addictive.

★ ★ ★ ★

SMALL PEONIES

Providing that form and color are good, large blossom size is often a major factor when winning ribbons at exhibitions or impressing friends with our peonies. Sometimes, however, blooms of small to medium-size can be an asset. **Virginia Dare** and **Phillippe Rivoire** are two of my favorites which fit this category. Each is perfect for that small bouquet suitable for the kitchen table.

Virginia Dare is a small single white of perfect form when freshly opened. Like most singles, after two days in a warm house, it flattens, losing some of its charm. Stems are thin, but strong.

Phillippe Rivoire, introduced in 1911, has small to medium-size double, velvety deep red, very fragrant blossoms. Emerging foliage in Spring is maroon-colored. Stems are thin, but strong.

—**Dale Baum**, Anderson, Indiana

IN MEMORIAM

It is with sadness that we publish the Memorial of **Gus Sindt** of Minnesota. He retired from the Society in 1999 because of ill health. He was one of the stalwarts of the American Peony Society.

He was President from 1970-1972. He was an enthusiast in exhibiting peonies with a definite view that an exhibition be held every year, that peonies be displayed properly, and judged correctly. He was one of the members that had a life-time appointment and that was for judging seedlings. He wrote articles of exceptional interest for the *Bulletin* of which will go down in peony history, as some of the most informative on peony growing.

He was one of the architects that had a major part in writing the permanent Show Shedule, as well as the '*Guide for Judging Exhibition Peonies*.' These two documents will remain in peony history.

An excerpt from '*The Peony*,' by W. G. Sindt (75-Year Book):

When the word "peony" is mentioned, most people think of the full-double type. This is but one of five types generally recognized. The double is, as the name describes, a fully double flower which may be up to eight or ten inches in diameter. The colors are red, white, or pink. The semi-double has stamens prominently showing. These stamens may be scattered among the petals or may appear as a cushion in the center with several rows of petals surrounding them. The stamens are always yellow and the petals may be red, pink, or white. The single has a single row of petals surrounding a cushion of yellow pollen bearing stamens in the center. The petals may be red, pink, or white but the center is always yellow. The Japanese peony has a center of staminoids, which are transformed stamens and nearly always devoid of pollen, surrounded by five or more petals. The petals may be red, pink, or white and the center may also be red, pink, or white. The color of the petals and staminoids may be in any combination. To clarify, singles always have a yellow center with pollen and Japanese have any colored center without pollen.

* * * * *

Wilbert Gustav "Gus," died Dec. 25 at home in Maplewood. He was born in rural Troy Township, Pipestone County, on January 2, 1911. He graduated from Macalester College in 1934, where he lettered in track. He retired from 3-M after 33 years. He had a life-long interest in horticulture, and had been president of the Minnesota Horticultural Society, director of the American Peony Society, regional vice-president of the American Iris Society, and was an honorary life member of the Garden Club of Ramsey County and the Minnesota State Gladiolus Society. He judged agricultural and horticultural exhibits at the Minnesota State Fair every year from 1962 through 1999. He was a past member of the Minnesota State Guard and a long-time member of North Presbyterian Church. He was preceded in death by a son, David Bailey Sindt, brothers and a sister, and his parents. He is survived by his wife, Charlotte, his daughter and son-in-law Claire Ann and Ronald E. Weber at Milwaukee, and grandsons.

Wilbur "Gus" Sindt

1911-1999

Another peony pioneer has joined those gardeners who have gone on before him to stroll through heaven's flower gardens. Gus was a great friend and mentor. It was his kindness and support that inspired us to take a greater interest in growing and showing peonies. He was always there to share his knowledge of peony culture (and gardening in general) and to teach us the basics of showing peonies at local and national shows. To give us added incentive to show, he generously supplied us with divisions of plants that were known to produce winning blooms at the shows.

Through the years we made a number of trips to the national shows with Gus and Char, and in recent years often we would meet them for breakfast or lunch when we were back in Minnesota during the summer. He was always interested in looking at the peony gardens, and we had a good time talking about growing conditions and "the old days" of the peony shows and the Society in general. If it was a breakfast meeting, he would say in jest, "What are we having for lunch?" before we were ready to leave.

When Gus and Char moved to their current residence, he talked to the resident manager about making a small flower bed in front of their apartment. There we planted four of his favorite peonies—**Pico, Etched, Salmon, Yellow Heaven,** and **Red Charm.** It was from that little garden the he sent an entry to the national show in Mansfield last June and won yet another blue ribbon.

His spirit, sense of humor, participation and influence in the world of peonies will be sadly missed.

Floyd Kimball

★ ★ ★ ★

It was a good year for peonies and I saw some lovely new ones when I was visiting various gardens in this area. I love to photograph flowers, and have a huge collection accumulated over the years. This year I added photos of **Big Ben, Cythera, Diana Parks, Friendship, Mackinac Grand, Paula Fay, Pink Hawaiian Coral, Prairie Moon, Red Grace** and **Red Red Rose**. The tree peonies were: **Black Pirate, Canary, Hephestos, Hesperus, Leda, Mystery, Waucedah Princess, Shima Daijin** and **Teni** (slides only). Had several nice seedling appear this year—one was a lovely full double pink tree peony, and a darker toned seedling from Silva Saunders. I added only a couple of new peonies to my collection, but have several pots of seed planted, so am in hopes of some germination in the Spring.

—Larry L. Harder,
P.O. Box 547, Ponca, NE 68770

COMMERCIAL GROWING OF HERBACEOUS PEONIES IN ISRAEL

Itzhak Ran, Field researcher, Haifa, Israel

Results of Three Years' Growing in the Western Galilee Region

The Western Galilee.

This region is located in the northwest part of the country, close to the border with Lebanon. The climate in the upper part of the region, at elevations of 500-700 m' above sea level, is cool during the Winter, with 650 mm annual average precipitation. The Summer is temperate, under the influence of the humid winds coming from the Mediterranean Sea, which is 10-15 miles to the west. Despite this influence there are extremely hot days, with temperatures reaching 40 degrees centigrade.

The soils in the region are mostly Terra Rosa, a typical red Mediterranean soil, with very good structure, high fertility, and low lime content. There are areas with Rendzina soils, with high to very high lime content. In these soils we avoid growing peonies.

The main crop in the region is deciduous fruit trees such as pears, peaches and nectarines in the lower part of the region, and apples and cherries in the upper part. Another crop which farmers have started growing in the last 5 years is the so-called 'flowering plantation.' In this section of the flower business, they produce all sorts of decorative branches, which grow on perennial bushes. In cool areas in the Galilee, they grow mainly Protea species of the southern hemisphere.

The success of growing apples, with large high quality yields, encouraged us to start growing herbaceous peonies commercially, assuming that their 'chilling demands' would be filled almost completely in an average Winter.

The introduction of herbaceous peonies to Israel.

The country is divided into three main climatological regions, namely:

1. The southern part, which is an arid and semi-arid zone (more than 50% of the country's area);
2. The central part—the coastal plain, which is a temperate zone;
3. The northern part, including the inland valleys and the Galilee.

There is one place in Israel in which the herbaceous peony grows in nature. It is located in the Upper Galilee, at an elevation of 1100 m' above sea level. This place is the southernmost spot in the northern hemisphere in which the species *p. masculata* grows to a medium-size bush, with dark green foliage and a marvelous violet single flower.

The flowers grow in a small nature reserve and they flower usually at the beginning of Spring (during April, depending on the weather of a particular Winter).

The first introduction of commercial herbaceous peonies into Israel was accomplished about 18 years ago, by Y. Ozeri, a researcher in the Flower Department of the Volcani Agricultural Institute. He brought some of the known cultivars from Holland and planted them in an

experimental farm near Jerusalem at an elevation of 800 m.' This introduction did not succeed. About 8 years later, Prof. A. Halevy from the Agricultural Faculty of the Hebrew University in Rehovot, together with the team of the Aven Eitan Experimental Station in the Golan Heights, successfully developed an agrotechnique which enabled our farmers to produce early Spring flowers of two commercial varieties: **Duchesse de Nemours** and **Sarah Bernhardt**.

After the success in the experimental station, some farmers from the Golan Heights, together with two farmers from the Western Galilee, planted commercial areas of herbaceous peonies, buying the crown in Holland.

The agrotechnique developed to produce early flowers.

The main principle which was used to develop the agrotechnique is based on the assumption that the crowns in the soil, accumulate enough chilling during the period between the beginning of November to the beginning of February. Prof. Halevy assumed that the exposure of the crowns to this amount of chilling would make the peony's buds ready to break dormancy and start growing. Then when we cover them with polyethylene (in tunnels), we force them to bloom around 2-3 weeks before their natural blooming would occur.

The principle of chilling accumulation was taken from a model developed by Prof. A. Erez et al. from the Orchard Institute of the Volcani Agricultural Institute, for the forecasting of dormancy breaking in peach trees. This model is used now in peonies in Israel to determine the date of covering the tunnels, but it is still in its trial and error stage.

The market for peony flowers.

The main market for peony flowers is the Dutch auctions, and last year (1998) nearly 14 million peony flowers were sold. Around 70% of the flowers are sold during a period of a month, from the middle of May to the middle of June. In that year nearly 45% of the flowers were **Sarah Bernhardt**.

The economic value of early flowers is very significant, since the Dutch growers cannot produce big quantities in this period, unless they grow the peonies in heated greenhouses, which are quite expensive to install and maintain.

This situation makes it very attractive for our growers to take advantage of the combination of a reasonably cold Winter together with an early Spring. But...we still have much to do, as I shall describe later.

Three seasons of growing herbaceous peonies commercially in the Western Galilee.

In the Winter of 1994/5 two pioneering farms in the region bought crowns of peonies in Holland. The first, in Moshav Shomera, started with 1.2 dunams (one dunam=a thousand square meters=a tenth of a hectare) of **Duchesse de Nemours**, some rows of **Sarah Bernhardt** and small plots of **Charlie's White**, **Shirley Temple** and **Karl Rosenfield**. The crowns had 3-5 buds and were planted according to standard recommendations, except for the density, which was 25,000

per hectare. The plot was maintained regularly and started yielding in the Spring of 1997. The tunnels (10 m' width x 60 m' length) were covered with plastic sheets, at the beginning of February, and the growers started picking the **Duchesse** and **Charlie's White** in the third week of April. **Karl** was picked 5 days later, and **Shirley** and **Sarah** 8 and 14 days respectively, after the **Duchesse**.

The yields per hectare were as follows (the numbers in parenthesis are the 'active' plants): **Duchesse**—265 thousand (2040), **Sarah**—272 (12), **Shirley**—163 (37), **Karl**—383 (36) and **Charlie's White**—48 thousand (27).

The yields of all the varieties (besides the **Charlie's White**) were excellent, considering the fact that the crowns were only two-and-a-half years in the ground. In Holland, the yield of this year is not considered 'commercial,' and usually growers do not pick the flowers.

The flowers' length and the size of the flower heads of the **Sarah** were the best, and the stems of this old and famous cultivar were quite stiff. The flowers of the **Duchesse** were shorter than those of the **Sarah**, with the heads smaller and the stems much more flexible. We found that the way the **Duchesse** flowers opened was quite different from all the other varieties. On hot days the flowers opened much more quickly, so the growers had to pick twice a day in order to have them picked at the proper opening stage for export. The flowers were the most fragrant of all the varieties.

Shirley's flowers were the shortest of all, but with big heads and nice red margins around the white petals. The red **Karl** flowers were about the same length as those of the **Sarah**, but their flower heads were the smallest of all. **Charlie's White** was less floriferous than all others. The flowers were high and stiff, but many were with 'bull head,' a fact that prevented them from being exported.

The second crop (fourth year of the plants) were also very good. The **Duchesse** decreased to 223 thousand flowers per hectare, whereas **Sarah, Karl** and **Charlie's White** increased to 337, 465 and 342 thousand flowers, respectively. In that season, the ripening of all the varieties began a week earlier, the demand for the flowers was good, and they got nice prices in the auctions.

The third crop (fifth year) showed a decline in yield of all the varieties. It seems that the heavy yield of the previous year had a negative influence on the plants. The reason for this decrease is most probably the fact that the growers try to pick long flowers, so there are not enough leaves left to photosynthesize sugars for the next crop. The yields of this year were **Duchesse**—188, **Sarah**—158, **Charlie's White**—150, and **Karl**—300 thousand flowers per hectare, which is still a very good yield.

Two years after the first plot was planted, the growers enlarged the area by planting another 1.2 dunam, of **Sarah** and **Duchesse**, and a year later 0.6 dunam of **Sarah**. So, this coming Spring of the new millennium, they will pick flowers from a 3.0 dunam 'peony farm,' which is a nice commercial area, especially for a new flower crop in Israel.

The second farm, in Moshav Zarit (about 650 m' elevation), started planting the same year, on an area of one dunam in two tunnels, with more than 60% of the area **Sarah**. The results till now are not satisfactory, especially with the **Sarah**. The **Duchesse** gave better results, but far inferior to the other farm.

The weather in the present Winter in our country is very unusual. There has been a shortfell of nearly 80% in precipitation, as of the end of December (compared to an average year), and according to temperature measurements, there has been nearly no accumulation of chilling. We do not know yet what will be the influence of such weather on the emergence of the peony buds and their development to marketable flowers. We hope that the damage will be expressed only by postponement of the blooming and not in the yield or the quality of flowers.

Summary, and the future of commercial growing of herbaceous peonies in Israel.

Peonies are plants that grow naturally in a cold to very cold climate zone, so they are grown as garden favorites in cold areas like China (where they are considered the national flower), the U.S.A., and Europe. In these areas, people successfully grow herbaceous peonies as cut flowers.

The demand for peony flowers in the Dutch auctions has been stable in the past few years and the buyers are ready to pay high prices for early season high-quality flowers. We, in Israel, have taken advantage of the climate of our cool regions, namely, a cool Winter, with an early Spring, and developed an agrotechnique that enables our growers to pick early, good quality flowers. Commercial growing of herbaceous peonies in Israel has been developed in three regions:

1. The Golan Heights, in the central and southern part of the region (400-550 m' elevation above sea level);
2. The upper part of the Western Galilee (500-700 m' elevation);
3. And the upper part of the central Samarian Hills and southern part of the Judean Hills (600-800 m' elevation).

The total commercial area in all the regions (as of the end of 1999) is 3.5 hectares, half of which are young plots of less than two years in the ground.

Mainly two varieties were planted commercially: **Duchesse** and **Sarah**, with some small plots of: **Dr. Alex Fleming** and **Shirley Temple**. The **Duchesse** is functioning very well, as was described in Moshav Shomera and also in two farms in the Golan Heights, but the **Sarah** has given very low yields, up till now (except in Shomera, in a small plot). It seems that the problem with this variety is its sensitivity to high temperatures during the emergence and first stages of growth (the time when the tunnels are held at the proper temperature in an early 'spring regime').

Future research.

Since we consider peonies to be a crop with a high economic potential, we are making efforts to understand some basic processes which occur with the agrotechnique that was developed. We also try

to give immediate answers to the urgent problems that arise, such as the low yield of the **Sarah**, expanding the assortment of cultivars by bringing crowns of selected cultivars from Holland, and studying the optimal temperature regime in the tunnels all year round; then we apply the results in the farms. Meanwhile, our extension officers, who are working together with the research team are functioning well, and every season publish a leaflet with useful instructions.

We hope that the common effort of growers, extension service officers, and researchers from the Volcani Institute, from the Faculty of Agriculture in Rehovot and from Northern R&D, with the financial aid of the government, will give Israeli flower growers in cold mountainous areas a new profitable crop.

★ ★ ★ ★

A GRANDFATHER'S LEGACY

by Ann Howel, Missouri

My husband's grandfather, Harry L. Smith, had a passion for peony flowers. He filled his backyard in Redkey, Indiana with hundreds of different colors and varieties of peony flowers. My mother-in-law recalls the hours that he spent in his flower garden when she was growing up. He took such care in pruning, dividing, and weeding his flower garden. He hybridized several varieties himself, naming them after fellow family members and friends, and placing them on the National Peony Register. Fifty years later, one of those varieties is still on the market at a nursery in Canada.

Grandfather passed away before my husband was even born, but he visited his grandmother's house every Summer while growing up. His grandmother and uncle kept the flowers alive and growing, but never with the passion or attention to detail that his grandfather had shown. A few summers ago, his uncle and grandmother passed away within months of each other. With no relatives left in town to maintain the house, the house was put up for sale. Of all the antiques and furnishings that the relatives were squabbling over, the only thing we wanted was the peonies in the backyard. No one put up a fight.

We drove our pick-up truck from Kansas City to Indiana one Fall weekend to dig up all the 50-year-old peonies from the backyard of his grandparent's house. We saved over a hundred plants and planted them in our backyard in Kansas City. It usually takes peonies a few years before they will bloom after being transplanted, but many of them bloomed the next Spring.

Even though my husband never knew his grandfather, they seemed to have a special connection through the peony flowers. It seems the passion for gardening has skipped a generation in this case. To touch and feel the very same flowers that his grandfather created with his own hands is a remarkable thing. What better remembrance of where you came from than to look out from the breakfast table at the peony garden every Spring!

★ ★ ★ ★

WHY PEONIES?

by Jack Nordick

The tradition of planting peonies in yards and gardens seems to change with the years. At one time, no homestead would be found without them. In more recent years, at least in this locality, peonies have gone out of fashion. Several gardeners have dug plants up, and thrown them away. A few were thrown my way. The local cemetery here has been known for its extensive plantings of peonies, but they are rapidly failing due to neglect and abuse. When I suggest peonies for landscape plantings, people look at me with some sort-of odd glance, as if I just put in an extensive planting around a ballfield. I suggested a mixed planting of roses, coreopsis, potentilla, monarda, coneflower, and, of course, peonies. They planted all roses. So why have I become such an avid grower and collector of peonies?

It all goes back to my own roots. The farmstead where I grew up was decorated with peonies, as well as orange day-lilies, species irises, tiger lilies, and chamomile. They had been planted by my Grandmother sometime between 1925 and 1933. They were all as native to me as quackgrass and Canadian Thistles. It seemed none of them ever needed any care. I remember each year in the Spring, as the plants emerged, my Dad would apply manure around the outside (I'm not sure if he learned this from his mother, or if it was just a natural instinct) and never directly on the plants or crowns. In mid-summer he made a round pulling out all of the grass that grew up with them. Outside of that, they all thrived on neglect. About 1955, some of the peonies were divided and given to an Aunt of mine. Otherwise, they were totally neglected. Or, should I say, they were tolerated on the part of my mother? She hated the chamomile, though. They had been part of my Grandmother's herb garden. Other remnants of that, like Wormwood, Motherswort, and Catnip, still grow wild in every available cranny. But by 1960, the Chamomile had been eradicated. It seems that their smell reminded my mother of her in-laws. They never got along very well.

I think, though, it was also because of the memories that my Dad provided some care for them. When he moved off of the farm in 1977, he took a division with him, to add to what was already growing at his new house. That house was previously occupied by his own Aunt, and I think his Mother and his Aunt got their peonies from the same source.

There were three varieties of peonies on our homestead. One was the beautiful and floriferous, but tall and straggly, light rose-pink that I identified as **Mons Jules Elie**. Another is a large bouffant light pink that was probably **Sarah Bernhardt**, though I am not yet 100% certain. The third was a fully double mid-season dark mahogany red with silvery tips, yellow stamens throughout, and the most intense fragrance I have found in any peony. I have not yet identified this variety, although I am considering some possibilities. When I think of peonies, this is what comes to my mind, since these are the plants and

the fragrances that I remember from earliest childhood.

I knew there were other colors of peonies. Bouquets in church had pure white blossoms, or white with red flecks, or some of a more reddish hue—but none of these grew in our garden. My mother complained that we had no white peonies. It was the soil, and she said: 'nothing white would grow on that soil!' I remember a friend bringing a plant that she said was white. Oh, but how my Mother whined when the blossoms opened, not white, but a pink blush. This, it turns out, is the variety **Nick Shaylor**. Likely my Mother was at least partly right. In more acid soil they would be a lighter color. But with high ph, they were as pink as they might ever be. But my Mother almost acted as if this ground which had been used by her mother-in-law, had been bewitched!

In those early years of my life (I was born in 1947), I paid little attention to the peonies. I always enjoyed gardening, but the peonies seemed to be like the oak trees; they just were there. I remember that sometime back then I moved one peony to a barren spot, but it never bloomed, and showed little vigor.

Following college I went off for a different career, not thinking that I would ever return there again. But in 1971 I came back to take over the operation of the farm. I also worked off the farm, so there was little time for gardening. When I started with a garden it was all vegetables, and I did little with the flowers. They simply continued on their merry way. In 1986 I left again for graduate school and a new career. Even though I had bought 1/2 of the old homestead in the previous years, I thought I would probably sell the place, and so the gardens were even more neglected than before. With the Summer of 1992 came a new position and new opportunities. I started to clean up the old gardens and make new ones. In what had been grassy and weedy areas, I planted tulips and perennials.

I thought I would like a patch of Hybrid German Irises, so planted several of those. When I decided to add a 20x30 greenhouse to the south side of the farmhouse the following Spring, they had to be moved, and two very wet Summers in addition to the inappropriate moves, spelt doom for them. Most rotted, even though the species Irises that I had moved at the same time fared very well. It seemed my soil was too heavy for the Irises, so I tried Lilies next. The Asiatic Lilies did well, but the Orientals dwindled.

Most disappointing of all was that the area which lies just at the edge of the tree line above the Yellowbank River, had become a deer haven. Deer love Lilies and did considerable damage before I found any means to thwart them at all. They also picked blooms off of the Irises that did survive. In setting this up I had moved a few of the old peonies. I found that a few of them had surpassed 5 feet in diameter. They had died out in the centers, but now encompassed a large ring of plants. I did some reading about garden plants and ran across the information that peonies would not bloom if planted too

deeply. Just on a hunch, I dug up the plant I had moved years before and found the eyes 6 inches below the top of the soil. The following year it bloomed for the first time.

It seemed that of all things I had planted, the peonies were growing the best, so I thought I would try a few different varieties I saw in the catalogs. I thought that **Kansas** and **Festiva Maxima** would make good additions. In the meantime, we were still complaining about not having any white peonies, so another of my Dad's aunts gave us a division that did turn out to be a pure white. However, I have no idea what variety this is.

Unfortunately at the time, I never wrote any of this down, nor marked any of the plants, so I quickly forgot what was planted where.

The next year, in paging through catalogs, I saw a yellow peony (**Yellow Crown**). I couldn't believe it! It was terribly expensive, but awfully beautiful. Later, I saw the same plant offered at a smaller price, and I ordered it. I also did more investigation about peonies. I found many varieties I had not seen before. I checked with the University of Minnesota to see if Tree Peonies would grow in western Minnesota. They said they should, especially in a somewhat protected area. So I tried five of those, the cheapest ones I could find, just in case they were not able to stand the Winter. But the location I have is about as good as can be. It is very rich alkaline soil with trees and buildings protecting from harsh winds on three sides. Only the South side is clear and open. Even though the soil is heavy, water never stands, and the hydrant is nearby for irrigation, if necessary.

The Tree Peonies survived that first Winter in marvelous shape. I put a plastic mesh fench all around them, and when the ground freezes, fill it with leaves. When the ground starts to thaw, it is all removed. This seems to have given enough protection so that few, if any, of the buds, freeze. It also protects them from the marauding deer. Even though they are not supposed to eat Peonies because of their bitter taste, I have lost some buds and branches when they were exposed above an otherwise bleak snowscape.

Since then, I have gotten a bit crazy over Peonies. In the past recent years I have put in new plantings, and divided and moved most of the old. I have noted and cataloged all of the seedlings and kept good plat maps of all of the gardens. Fortunately, I kept all of the older invoices so I was able to go back and identify those plants.

Every year now, I think that the plantings should last for five years or more before needing to be divided again. However, the rapid growth they make cuts that time in almost half. Three plants of **Scarlet O'Hara** that were only three-eye divisions three years ago, were a foot in diameter this Fall and yielded 7 6-10-eye divisions. I was forced to start an entire new planting for all of the plants that needed to be moved. Many had gotten overcrowded, and several of the seedlings were large enough for their own spot.

My plans for the next ten years include the following: I hope to

positively identify the one heritage variety about which I am still unsure. I want to gather one of the largest collections of yellow Peonies in the State of Minnesota, and when they are of adequate size I want to put them in their own separate bed and work to hybridize a large yellow herbaceous Peony; I hope to continue to collect the fifty or so other varieties that I have decided I would also like to grow—I will decide for myself which is truly the best "red" variety; I will be selecting from the seedlings that I have grown, and perhaps find one or two that will be of sufficient merit to register and introduce to commerce—there are a couple that have gotten my attention, but they will need to be divided again before I am sure; I also will keep talking about Peonies to anyone who will listen—it seems that the wide variety in colors and plant habits that are available in Peonies today is not widely known, and I really would like to see more Peonies in every garden.

I now have very exact plat maps and a record of all the plantings. I make a record of each plant when it blooms with the date it opens, and a short description of the size of blossoms and the vigor of the plant. Just this takes a good deal of time, but more pleasant time than those days amid the blooming Peonies I could never spend. I have to wonder when I get to heaven, if God will have a golf course or a Peony garden for me. Perhaps, if I am very lucky, it will be Augusta National with Eternal Peonies instead of Azaleas!

Every other year, I fertilize the beds with a mixture of very well composted manure and composted wood ashes. This seems to suit them very well. I have fences, sirens and flashing lights, and a radio with a motion detector to keep the deer at bay, and have almost been successful. They still want to sniff and paw at freshly turned ground, and they seem to risk anything to do this. Sometimes they stomp on the new plantings, and they have to be planted over. But the Peonies are beginning to have the advantage.

Besides the incomparable beauty of the flowers, the plants mean much more to me. The first shoots of Springtime remind me that seeds of hope can survive even the bitterest of family feuds. They remind me of my father who cared for them, now that he has gone from this earth. They remind me of my Grandmother who first planted them, even though she died before I was born. And they remind me of my German ancestors who thought enough of art and beauty to carry Peony roots with them across the country. It makes me think to rephrase an ancient Arabic proverb: "If I had but two loaves of bread, I would sell one to buy a Peony, for Peonies are food for the soul."

At the present time, my collection numbers over 250 plants comprising about 50 varieties of herbaceous, as well as 10 varieties of tree peonies and some 50 seedling plants. If they continue to double every three years, in ten years I will have about 1500 plants, which just might be enough even for me.

★ ★ ★ ★

Bartzella—The Yellow Peony

Merle Palmiter, Avon, NY
Palmiters Garden Nursery

My earliest memore of peonies goes back over 50 yeas ago when living with my grandmother. She would cut big bunches of them to take to church. I'd have to get in the back seat of the old car and she would hand me this huge armload of peonies to hold until we got to the church. The beauty and fragrance of those flowers left an indelible impression on me.

I wish I could say I spent the rest of my life growing and hybridizing peonies like some of the people I have read about, but other plants and animals also caught my interest and I've had other obsessions along the way. I've never done anything but farming and nursery work.

The first peony I bought was Gauguin, in 1966, about 2 years after I got married and finally settled down. A $50.00 peony in those days was quite a purchase when you're a $1.50 an hour farm hand. My wife's parents were very disturbed with me to say the least. To make a long story short I bought Black Pirate the next year, Banquet the year after that and so on until I had a nice collection. Then came a number of years when I didn't add any, didn't have a place for them and not a lot of time for gardening. The last few years I've been able to make more gardens with the help of my daughter, and have been adding to my peony collection. I now have about 55 varieties of tree peonies, 25 herbaceous and 9 intersectional. All that plus over 200 hostas, 200 daylilies and hundreds of other perennials.

My wife and I have had a small retail nursery here for over 25 years. The gardens are sort of an extension of it. Customers roam all over the place. In 1993 I bought Bartzella and no other plant on the place has caused such a stir. Everyone loves it, "That yellow peony," and I have many other yellow tree peonies. Last eyar Bartzella was four feet high and four feet wide with over 80 blooms. People go home to get their cameras, or to bring back their friends and family to see it.

I've been very fortunate to have spent all these years here just 10 miles from the Gratwick estate and its famous peonies. This is tree peony country around here, and the highlight of the peony season for me is getting together with Lee Gratwick and Nassos Daphnis and visiting each others gardens, and other gardens in the area.

For several years my wife and I have been able to get away for cross country trips in the summer. We seldom go on the expressways. We prefer the backroads and small towns, occasionally a small city. In 1999 on our way out west we explored the Northeast corner of Iowa. Anyone who thinks the midwest is all flat and boring should visit that area. They'd be pleasantly surprised.

One city we did get into was Dubuque, Iowa. One of their main roads, Grand Avenue, I think, has a wide boulevard down the center planted with trees, shrubs and flowers, both annual and perennial, including large groups of peonies. This planted median must be over a mile long and had hundreds of peonies. It was August when we were there, but I could imagine what a sight it must have been in the blooming season!

I've seen many attempts at civic beautification, some quite good, some more or less a failure, but this avenue in Dubuque was the best that I've seen. It was very well maintained. The peonies looked wonderful. Peonies are seldom seen in such a setting. Being that this is almost in your neck-of-the-woods, I wonder if you know how this huge planting of peonies came to be and who is responsible for their care. Maybe a member there would know.

Thanks for the good work you do for the society and the Bulletin.

★ ★ ★ ★

Chris Lanning, Kalamazoo, Michigan

Ludlowii—1998

—7 feet tall—unbranched stems
—Freezes back to the ground here in Michigan
—Flowers only on terminal tips of branches
—Hardly probably in Zone 8 or on west coast
—Flowers larger than on lutea
—My Ludlowii have increased to many stems
—Potted plants held in potting shed survive and flower—also set seed which are fertile. Temperature in shed drops below freezing but not below 20ºF
—Hybrids not known to me
—Maybe unheated attached garage will do
—There are usually 5 blooms per stem

Ludlowii—1999

Ten plants growing in the garden have failed to bloom even after many eyars of tender loving care. Each spring they send up abundance of shoots that later form flowering buds. By fall the stems stand six to eight feet tall and seem to offer a beautiful treat, then all are killed to the ground due to the Michigan winters. To circumvent the inevitable, a plant of this collection was dug up and wintered in the potting shed where temperatures don't get colder than 20ºF. In May, every stem of this potted Ludlowii bloomed well. The sixty four blossoms were pollinated with a mixture of very early tetraploid (herbaceous) and suffruticosa (T.P.) pollen. This shot-gun approach may offer surprising results.

Two years ago a potted plant of Ludlowii produced only five seeds, all self-pollinated and germinated. I suppose though that they too will need protection just like their parent.

This much I have learned—temperatures lower than 20ºF kill both flower buds and stems, but potted plants withered and held in a protected place develop fertile seeds.

Pollen of P. Potanini from Galen Burrell was used on several flowers of Ludlowii this year!!

Ludlowii xP. Potanini produced 21 seeds in 1999, 2 of which are sending out radicles at present (January 15). The other seeds look to be in very good shape.

Of Weeds and Ludlowii:

Advanced generation weeds with hybrid vigor have challenged

the hybridizing of peonies and have won!! Very few rows of peonies can be seen underneath free-loading unwanted competitors. The removing (weeding) of these intruders only makes room for their progeny, and this process continues and even accelerates no matter how many weeds are relocated (pulled out).

Gardening is exercise, but there comes a time when thoughts come to mind, wishing that Adam (in paradise) had not eaten the apple! (sigh)

★ ★ ★ ★

SOME OF CHRIS' PHILOSOPHY

Explanations take the joy out of mysteries. (Chris says)

Never explain: your friends don't need it and your enemies won't believe you anyhow. (Somebody said)

The efficacy of a triple strength placebo in controlling the weight of an obese ego has as yet not been demonstrated—so it adds up to nothing.

Somebody said: if at first you do not succed, try, try again. I say, if at first you do not succed, take the rest of the day off.

A friend said: If you do not succeed, let the other guy do it.

Chris says: I am absolutely and positively sure that I may be right, but I doubt it.

What comes after success?

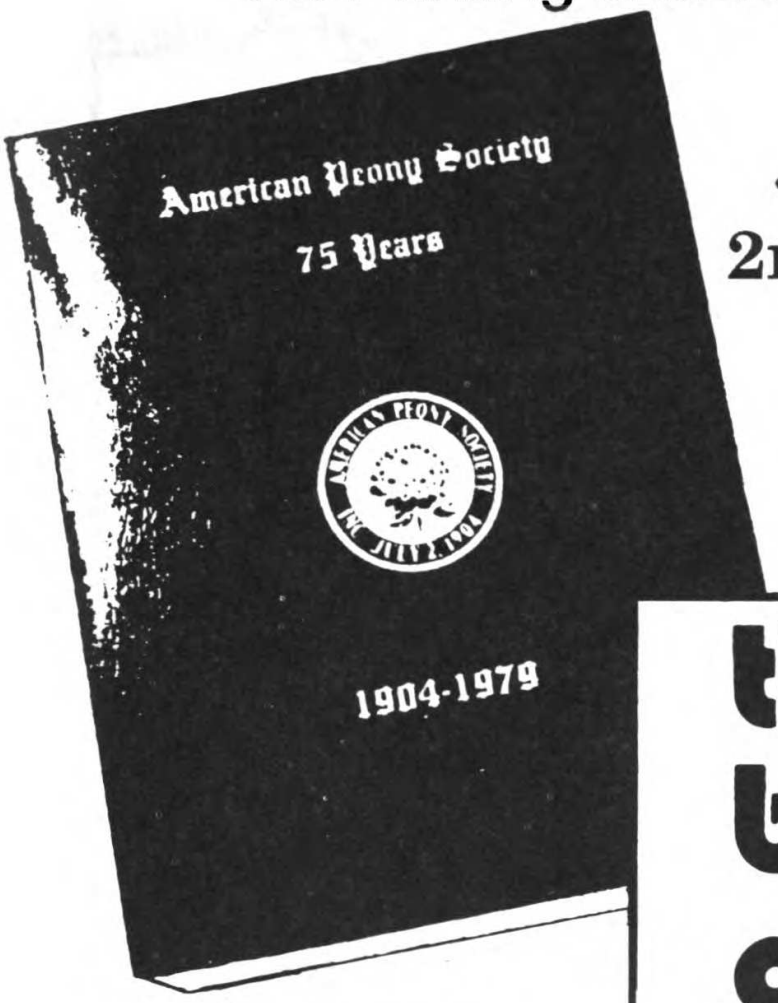
Generally, if you have a happy wife, you'll have a happy life.

Riches often interfere with happiness.

Being considerate and helpful results in more than minimum wage.

★ ★ ★ ★

1st Printing a SELL-OUT!



. . . Now — 2nd Printing

the best of 75 years

Compiled and edited by Greta M. Kessenich. 81/2x11, 232 pages, and still priced at just . . . $15.

Where but through the efforts of the APS can you avail yourself of EVERYTHING there is to know about PEONIES . . . culture, history, exhibitions, ratings, nomenclature and propagation techniques all excerpted from APS BULLETINS since 1904! Articles by such peony "greats" as Saunders, Auten, Peyton, Wister, and Gayle are joined by contemporaries such as Krekler, Wild, Hollingsworth, Lienau, Karrels and scores of others. Get your copy of *"The Best Of 75 Years"*—there's nothing in the world like it!

AMERICAN PEONY SOCIETY
250 Interlachen Road, Hopkins, MN 55343

1st Edition
SOLD OUT!

2nd Printing

THE PEONIES

BY

JOHN C. WISTER, EDITOR

Prepared under his editorship by M. D. Bigger, M. C. Karrels, W. H. Krekler, G. W. Peyton, P.P. Pirone, Silvia Saunders, G. S. Wister, H.E. Wolfe

TYPICAL CHAPTER TREATMENTS INCLUDE:

- **SPECIES** descriptions by famous authority Col. Frederick Stern
- **HISTORY** of hybrid varieties
- **DISEASE CONTROL** and proper plant husbandry
- **TREE PEONIES** and propogration through grafting of scions to herbaceous root segments
- **LISTING OF VARIETIES** favored throughout the decades
- **LOCATION** of peonies in public and private gardens
- **APS HISTORY** as it nears a 100th anniversary

PEONY GARDENERS will welcome this classic work just reprinted, "THE PEONIES" by J. C. Wister

THE PEONIES treats every facet of peony culture from flashbacks through a 2,000 year herbaceous and tree peony culture to modern propogration and hybridizing techniques. It also includes hundreds of listings for recommended varieties plus thumbnail descriptions of old standbys—a truly remarkable work highlighting a remarkable flower.

HARD COVER EDITION

225 Pages

6 1/2" x 9"

Postpaid, just—

$22.50

Send your order to:

AMERICAN PEONY SOCIETY

250 Interlachen Road

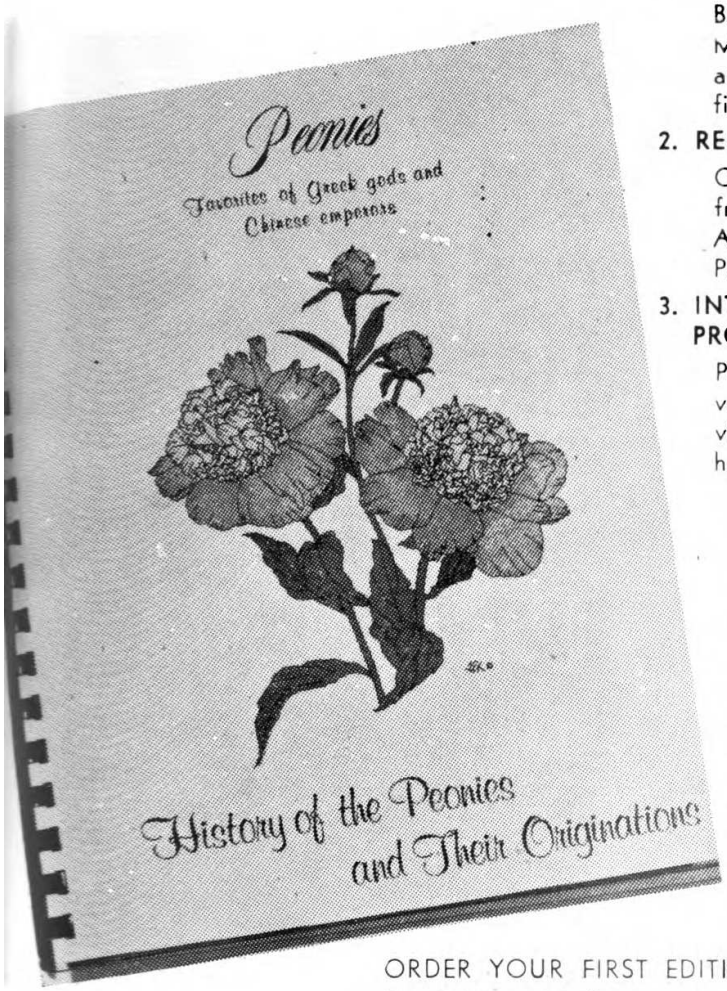
Hopkins, MN 55343

IRST EDITION . . . .

PEONIES

A HISTORY OF PEONIES AND THEIR ORIGINATIONS

ompiled and edited by Greta M. Kessenich in cooperation with the nomenclature committee of the American Peony Society



In Three Parts

1. VARIETY CHECKLIST

Based on a list compiled and edited by Mr. & Mrs. Byron Gist, completed in 1956 and kept on file at Kingwood Center, Mansfield, Ohio.

2. REGISTERED PEONIES

Compiled and edited by Greta M. Kessenich from bulletins of the American Peony Society. All varieties registered with the American Peony Society are listed.

3. INTRODUCERS OF PEONIES AND THEIR PRODUCTIONS

Peony varieties listed by growers and developers with emphasis on information provided by George W. Peyton during the years he was secretary and editor.

5,000 INDIVIDUAL ENTRIES

Peony growers who have had to rely on fragmented sources for tracking down peony varieties and their origins can now avail themselves of this magnificent work —a spiral bound, 9x12 inch book which lists and presents a capsule history of all varieties in commerce. It is the result of a monumental research, compilation and editing effor tby Greta Kessenich and the nomenclature committee consisting of three American Peony Society past presidents: Roy G. Klehm, Marvin C. Karrels and Clarence O. Lienau.

ORDER YOUR FIRST EDITION COPY NOW!

You'll enjoy this fine companion to your interest in peonies and will refer to it many times during the course of your peony gardening activity. It bears a beautiful color cover, contains 162 pages and is printed on fine stock. Cover and all artwork contained inside is the work of artist Joseph F. Kuczek.

Price per copy $20.00

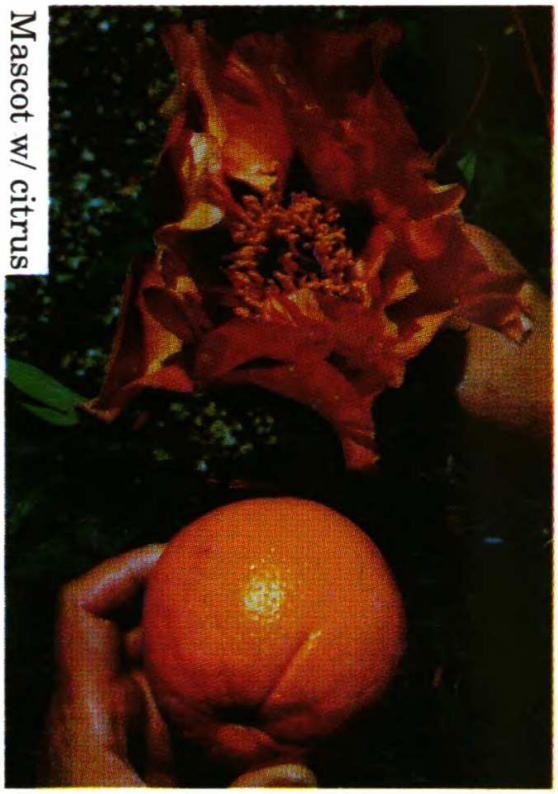
American Peony Society
250 Interlachen Road
Hopkins, Minnesota 55343

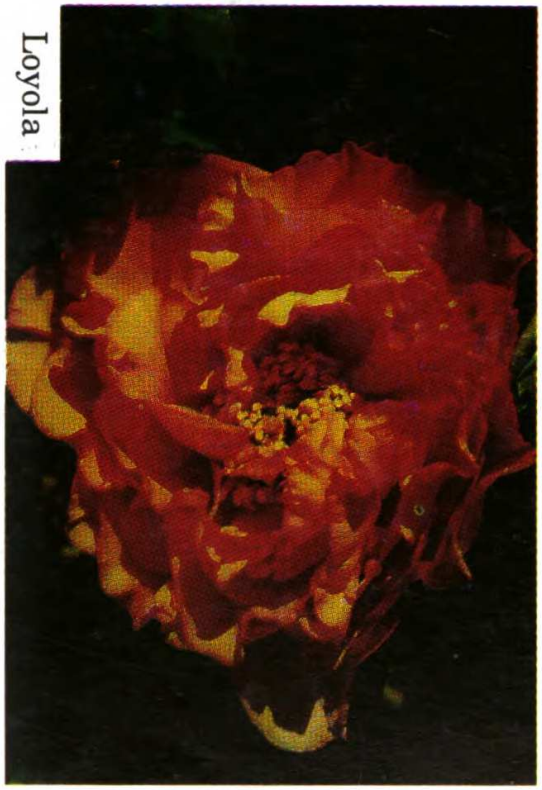
Please send me _____ copies of "The History of Peonies and Their Originations" at $20.00 per copy for which I enclose $_____.

Name .....

Address .....

City ..... State ..... Zip .....





AURELIA, an herbaceous hybrid grown by Ray Cobb (England) from P. mlokosewitschii x P. peregrins (but "not sure")

The other three photos, clockwise starting at lower right, are hybrid tree peonies raised by Bernard Chow. **LOYOLA** and **IOWA**, sibling from Seidl seedling #16 x BRASSY LADY, and **MASCOT** (with citrus) from #16 x GOLDEN ERA.

(These photos illustrate the article Breeding for the Color Orange in this issue.)